User Manual

CamIQ® 9 Satellite

14.10.2025 / 9.5.33

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Errors, changes and omissions excepted.

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1 INTRODUCTION

1.1 PRODUCT FEATURES

Thank you for choosing this high-quality video management system which allows you to capture, analyze, and record images from multiple sources like cameras and camera servers. This product leverages extensive expertise and years of experience in video surveillance to deliver a user-friendly solution, striking an ideal balance between ease of use and functionality.

The software enables multi-user concurrent access, providing real-time live image display, evaluation of permanent tracks, and review of alarm entries. The system supports a wide range of camera types and camera servers, including tilt/swivel camera models. A patented panel control field is seamlessly integrated to provide intuitive control and setup of standard network cameras.

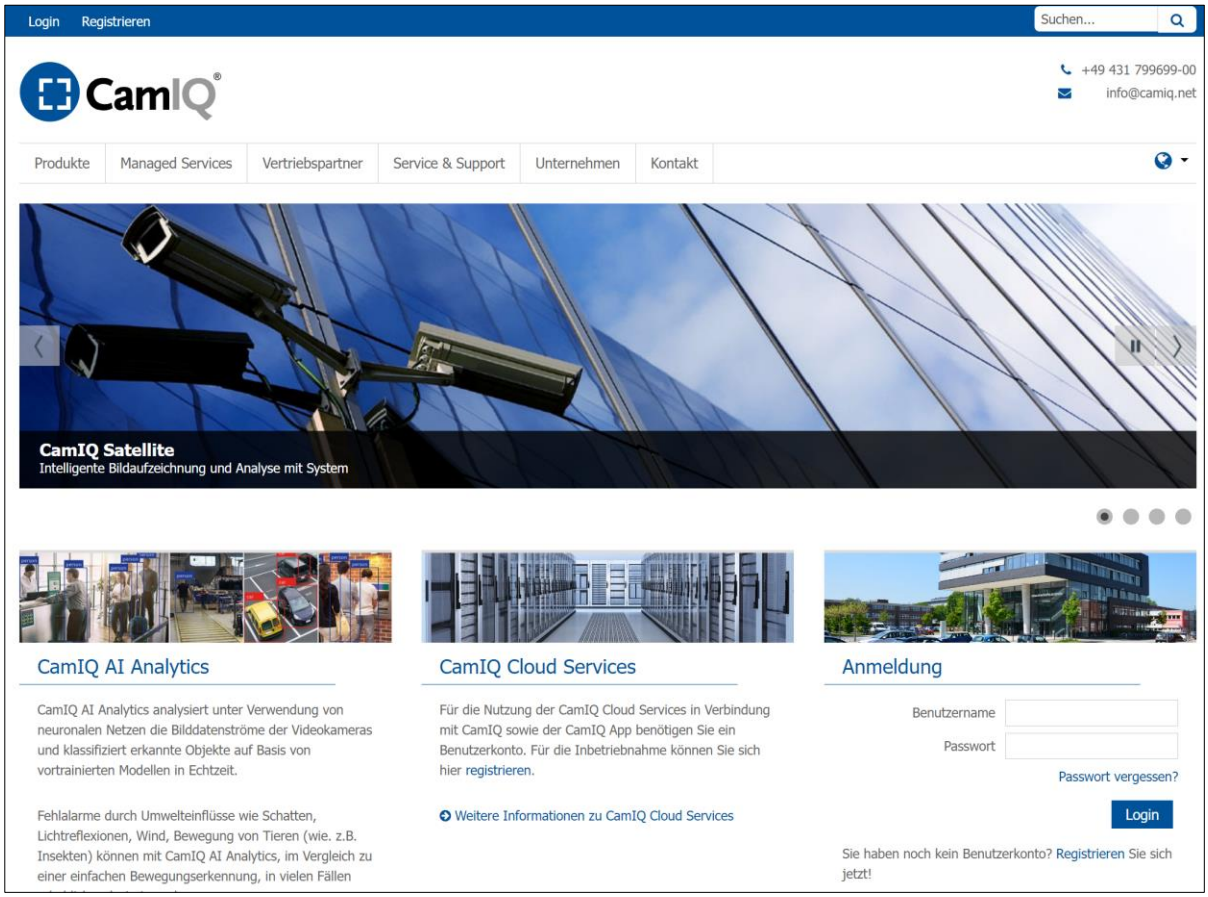
The software offers a comprehensive portfolio of features which include but are not limited to:

- Live Image View
- Real-time Image Analysis
- Advanced Alarm Management
- Motion Detection
- Relay Control
- Advanced Recording Management
- Manual Recording
- Network Bandwidth Optimization
- Multi-User Access
- Broad Compatibility of Cameras Models and Features (ONVIF, PTZ)
- Intuitive Configuration Control Panel
- Camera Configuration Assistant
- Neighbor Cameras
- Calendar Profiles
- Profile-driven Action Management
- E-Mail Notifications
- Privacy & Data Compliance Features
- Integration with CamIQ AI Analytics

In the following sections the software's capabilities and configuration steps are described.

1.2 SYSTEM REQUIREMENTS

Minimum and recommended requirements vastly depend on the configuration / cameras and activated modules / options.
Information about system & hardware requirements as well as compatibility can be found in the FAQ area on our website: **www.camiq.net**



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1.3 TECHNICAL SUPPORT

If you have any questions or do you need help for the installation, do not hesitate to contact our technical support.

E-Mail: support@camiq.net

Serviceline: +49 (0) 431 799 699-20

2 USER GUIDE

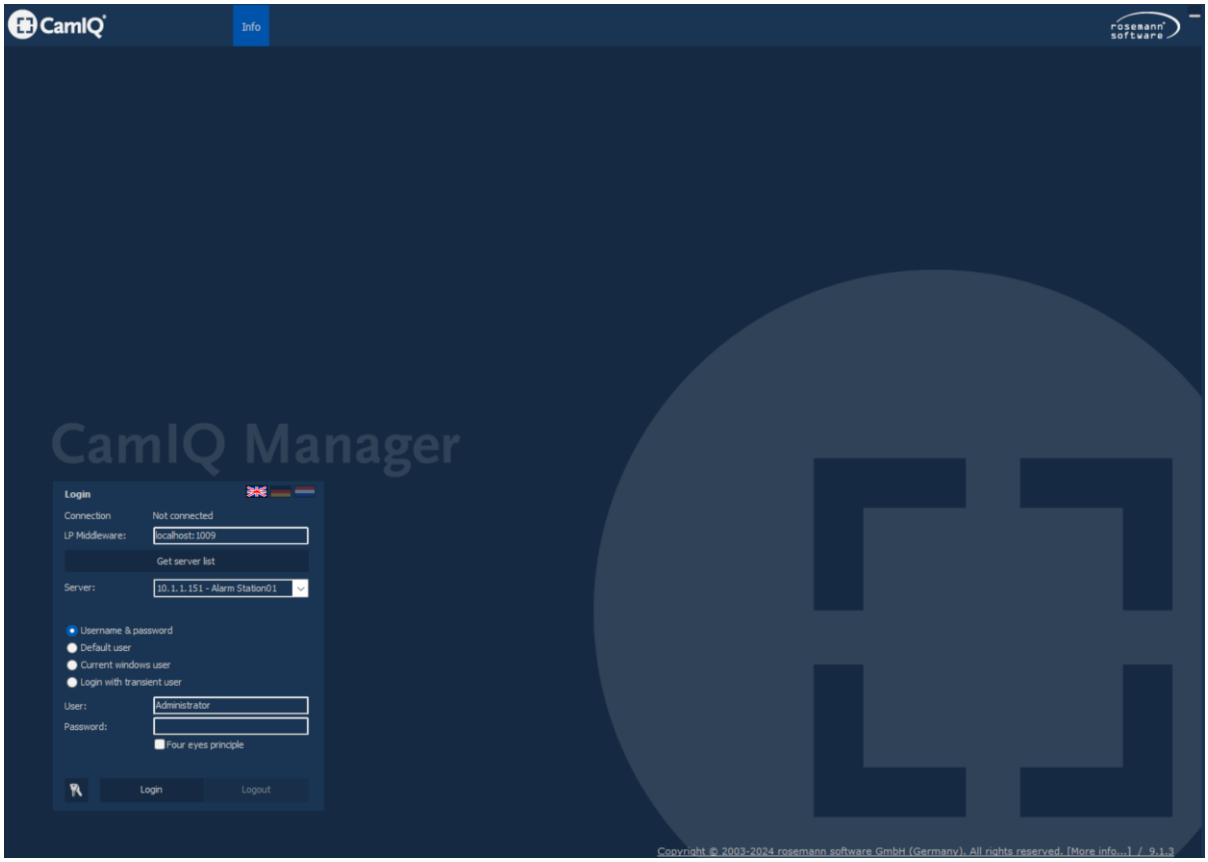
This chapter guides end users through CamIQ's core features. It assumes the system is already configured and fully operational. For detailed instructions on configuring CamIQ, please refer to the dedicated configuration chapters.

2.1 Login

To login in CamIQ, please follow these steps:

- **Start the App**: Start the CamIQ Manager application by right-clicking the shortcut link on the desktop.
- **(Optional) Select the Server**: If you are using multiple servers, please click on "Get server list" and select the CamIQ server you want to connect to.
- **Login**: Enter the login details according to your setup and click on the login button.

  After 10 incorrect login attempts, the login function will be temporarily locked for 15 seconds. Please wait before trying again.



2.2 Live Image

In the *Live Image* tab the users can access many core functions and see the live images. Interact with the live view using the control buttons, the lists in the left column, and the right-click context menu.

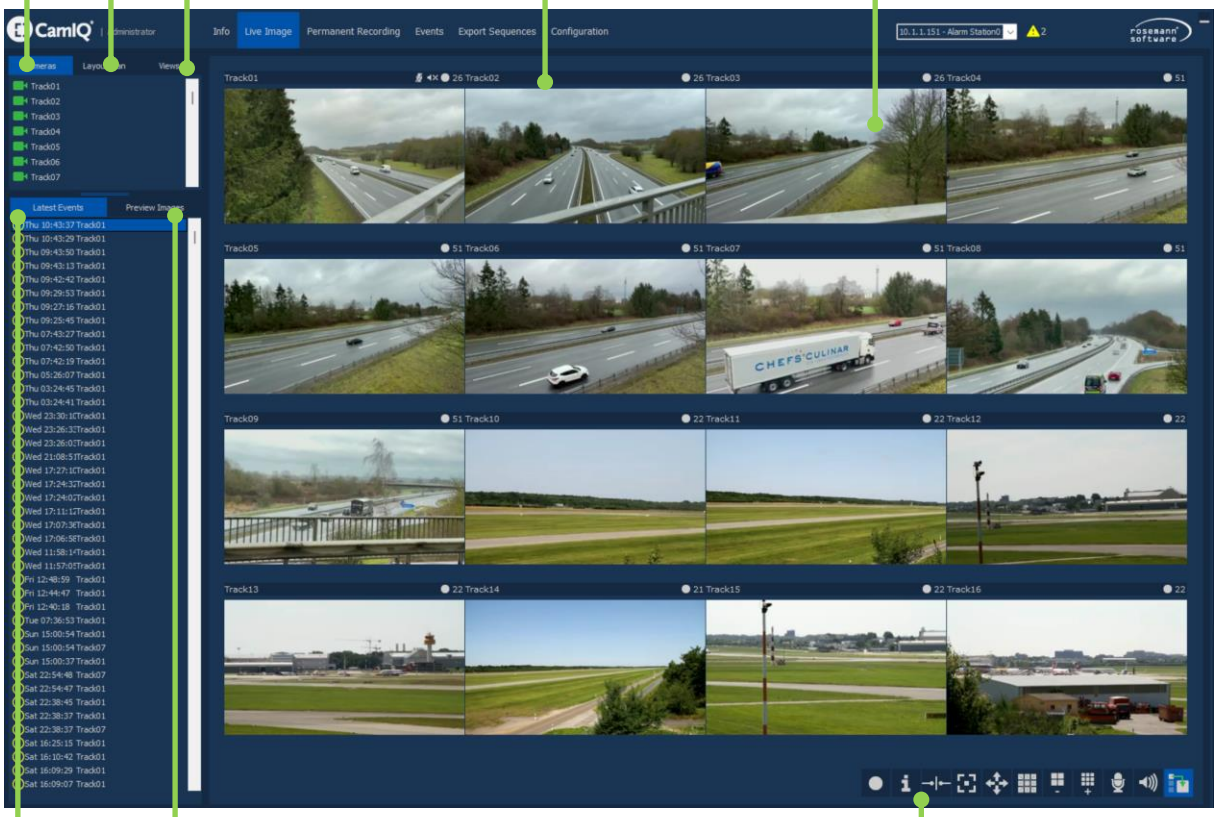
Cameras
List of all the cameras

Layout Plan
Shows pre-configured Layout

Views
List with pre-configured views

Camera Information
Displays the camera name and the buttons belonging to it

Monitor
Live images are displayed in the monitors



Event List
List of Events

Preview Images
Shows preview images of Events

Toolbar
Tools for editing and navigating live images

2.2.1 Toolbar

Use the plus button to switch view and see more cameras at the same time, e.g., from single view (1x1) to quad view (2x2), etc., up to 64 (8x8), which is the maximum. Using this button while in the 8x8 view will switch to single view.

Use the minus button to switch view and see less cameras at the same time. Using this button while in single view will switch to 64 (8x8) view.

Use the grid-view button to display a view showing the configured neighbor cameras for your currently selected single-view track. Using this feature while in multi-camera view will show the neighbor cameras associated with the first track.

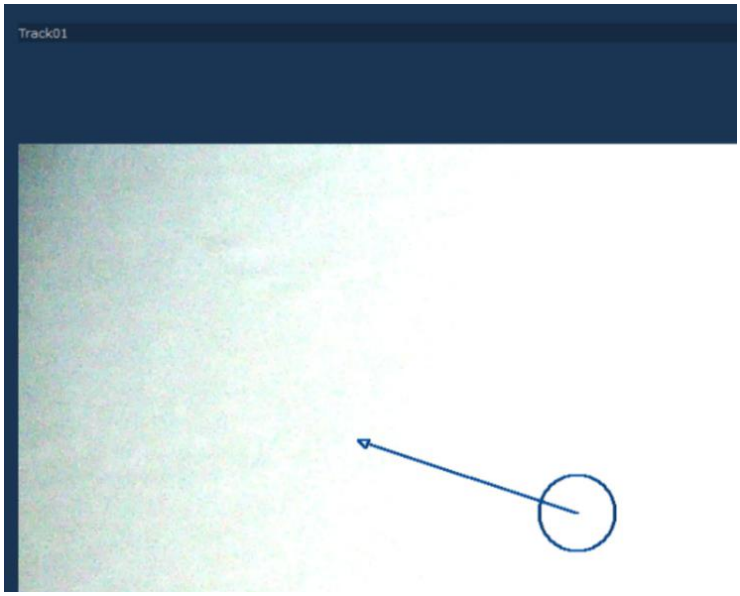
Use the Fullscreen button to switch in Fullscreen mode. To return to normal window view, use your mouse to click anywhere on the screen, then press the Esc key.

Use the PTZ button to toggle the PTZ Panel. This button will only work if the PTZ camera function has been correctly configured.

Upon activating the PTZ panel, the user can use the mouse or a pre-configured joystick to orientate the camera. Simply click on the central pointer with the mouse and while holding it, drag it in the desired direction (left picture). Alternatively, the user can also use the mouse directly in the live view camera screen as a directional pointer (right picture). This feature only works while the PTZ panel is open. To move the camera to a preset position, press buttons 1 to 8 in the position panel.

If PTZ has been configured with ONVIF, and the presets have already been assigned directly in the camera web-interface instead of using the CamIQ PTZ Cameras UI in Extended Settings, in order to see which preset corresponds to what number in CamIQ, refer to the *driver.log* file within the folder *C:\CamIQ\Server\logs\driver*. Search there for the entry "*Available PTZ presets*" associated with your configured device id.

The zoom function is controlled using the "–" and "+" buttons, allowing you to zoom out for a wider view or zoom in for a closer look. The focus can be automatically adjusted by pressing the "Auto" button to ensure a clear and sharp image at any zoom level.



Use the I/O Relay button to toggle the state of the configured relay. This only works while in single camera view. The current state of the relay will be shown in the top right corner of the image when the info text is visible. A red dot 

means that the relay is either physically or logically connected, otherwise a white separation line 

means it is disconnected.

Use this button to activate audio, so that when a camera with an assigned audio stream is displayed on the main monitor, the audio playback will start automatically. The button is normally blended out - it will become visible only if the feature is supported and has been correctly configured.

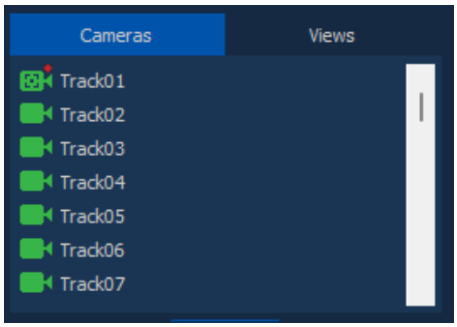
Press and hold the microphone button to send audio from your local input device to the camera.
If you prefer to stream audio continuously, without using push-to-talk, you can disable this feature by unchecking the corresponding option in the Manager Client Settings -> Local Client Settings -> Configuration. The button is normally blended out - it will become visible only if the feature is supported and has been correctly configured.

Use the recording button to trigger instant recording. This is useful to trigger recording for tracks which have otherwise recording deactivated.

Use the assign to 1st monitor button to show the selected track alarm on the 1st monitor.

2.2.2 Cameras

The Cameras list displays all available tracks and their current statuses.



The list uses symbols and colors for easy identification:

Camera is available (green)

Alarm or a loss of camera signal (red)

Camera is a PTZ camera

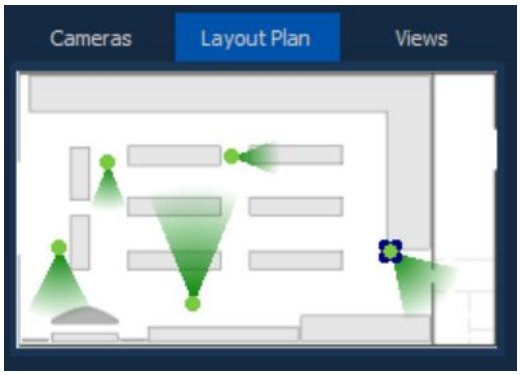
Camera is recording (red dot)

No camera attached (gray)

If the *"Group Virtual Camera Unit (VCUs) in live image mode"* setting is enabled in Manager Client Settings → Local Client Settings, the cameras in the camera list will be displayed as groups, allowing you to view and manage them in an organized, group-based format.

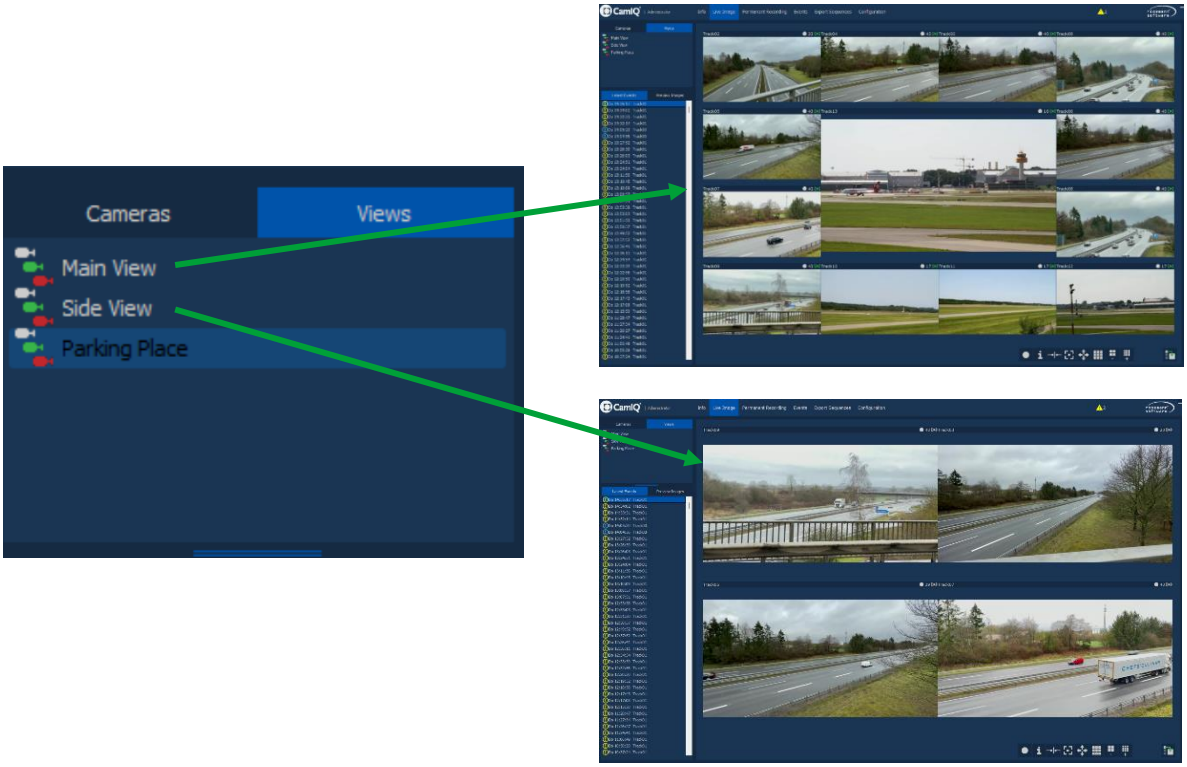
2.2.3 Layout Plan

The layout plan displays the floor plan along with the positions and orientations of the cameras, and is only visible if enabled in the Manager (global) settings. You can drag and drop cameras directly from the layout plan on the monitor live view.

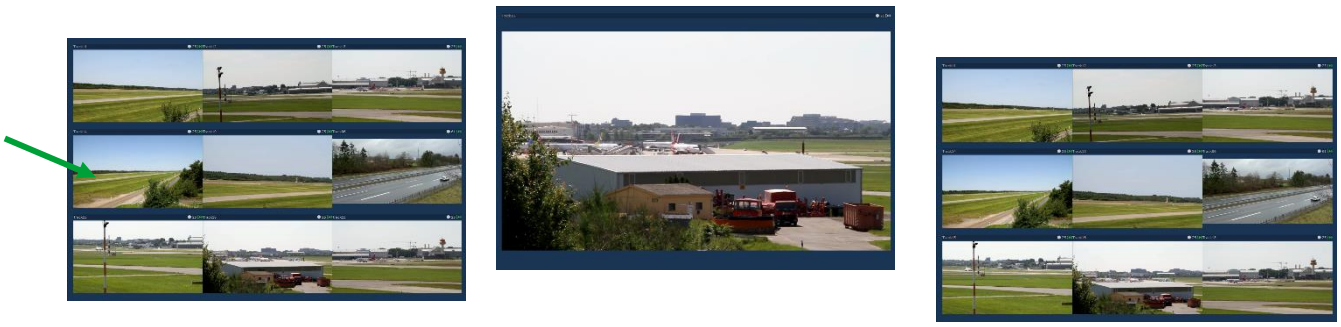


2.2.4 Views

This list shows the pre-configured camera views. By double-clicking on a view the system will switch to it. This is very practical to switch between groups of cameras.



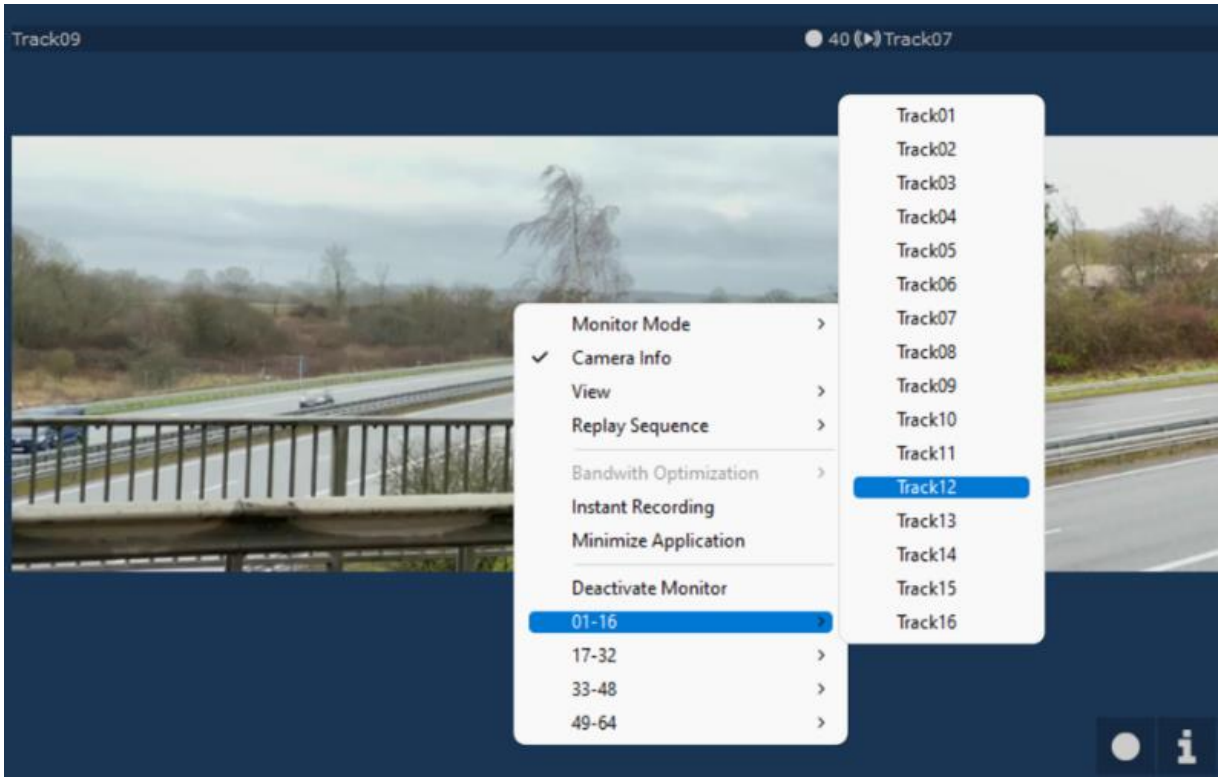
You can toggle between a multi-camera view and single-camera view with a double-click. Double-click again while in single-camera view to return to the original multi-camera view.



2.2.5 Monitors & Switching Cameras

To switch between cameras in live view, simply double-click on the desired track in the cameras list. You can also drag and drop a track onto a monitor to display it.
Alternatively, the user can select a live view monitor and right click on it to open a menu which allows to select the assigned track. This menu allow access to other features as well, like instant recording or replay sequence.

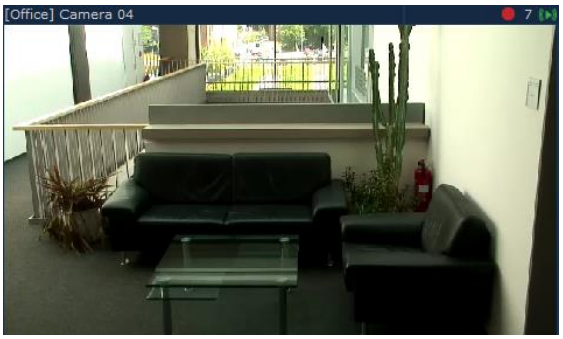
When you hover the mouse over the image, you can zoom in and out the image using the mouse scroll wheel.



2.2.6 Camera Info

With a click on the "Camera Information" button, you can activate or deactivate the camera information bar - including the monitor symbols for the individual monitors in the upper margin.

Without camera information



With camera information

Track Name:

The name of the track. An alarm will highlight this field in red 

. Double click to acknowledge the alarm.

Recording Status:

Shows if the video footage of the camera is being currently recorded ( red) or not ( white). You can use this icon to toggle recording, mirroring the toolbar button.

Relay Status:

The status of the relay. Depends on the configured I/O driver. You can use this icon to toggle the state, mirroring the toolbar button.

Loudspeaker:

This icon indicates whether live audio playback for the track is active. When the audio is inactive, the icon will display a cross () instead. You can click on it to toggle audio on or off, mirroring the functionality available in the toolbar. This icon is only visible if the camera supports audio and has been properly configured.

Microphone:

This icon indicates whether the microphone is active or not, i.e., if audio is being sent to the device or not. When the microphone is inactive, the icon will display a crossed microphone instead (). You can click on it to toggle the microphone on or off, mirroring the functionality available in the toolbar. This icon is only visible if the camera supports audio and has been properly configured.

FPS:
The frame per second of the current live stream. This number is color coded:

– W**hite/Gray:** Standard stream

– **Orange:** Fallback stream

– **Red:** No stream available

Error:
There is an error for this track. Hover the symbol to read the error message.

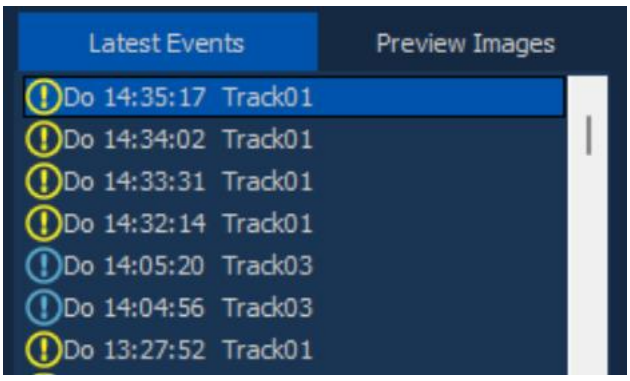
PTZ Panel:
A PTZ (Pan-Tilt-Zoom) panel has been configured and is available for this track. Double click this to activate the panel.

2.2.7 Latest Events

This list shows the latest events / alarms in chronological order. Double clicking on an entry in this list will switch the user to the **Events** tab.

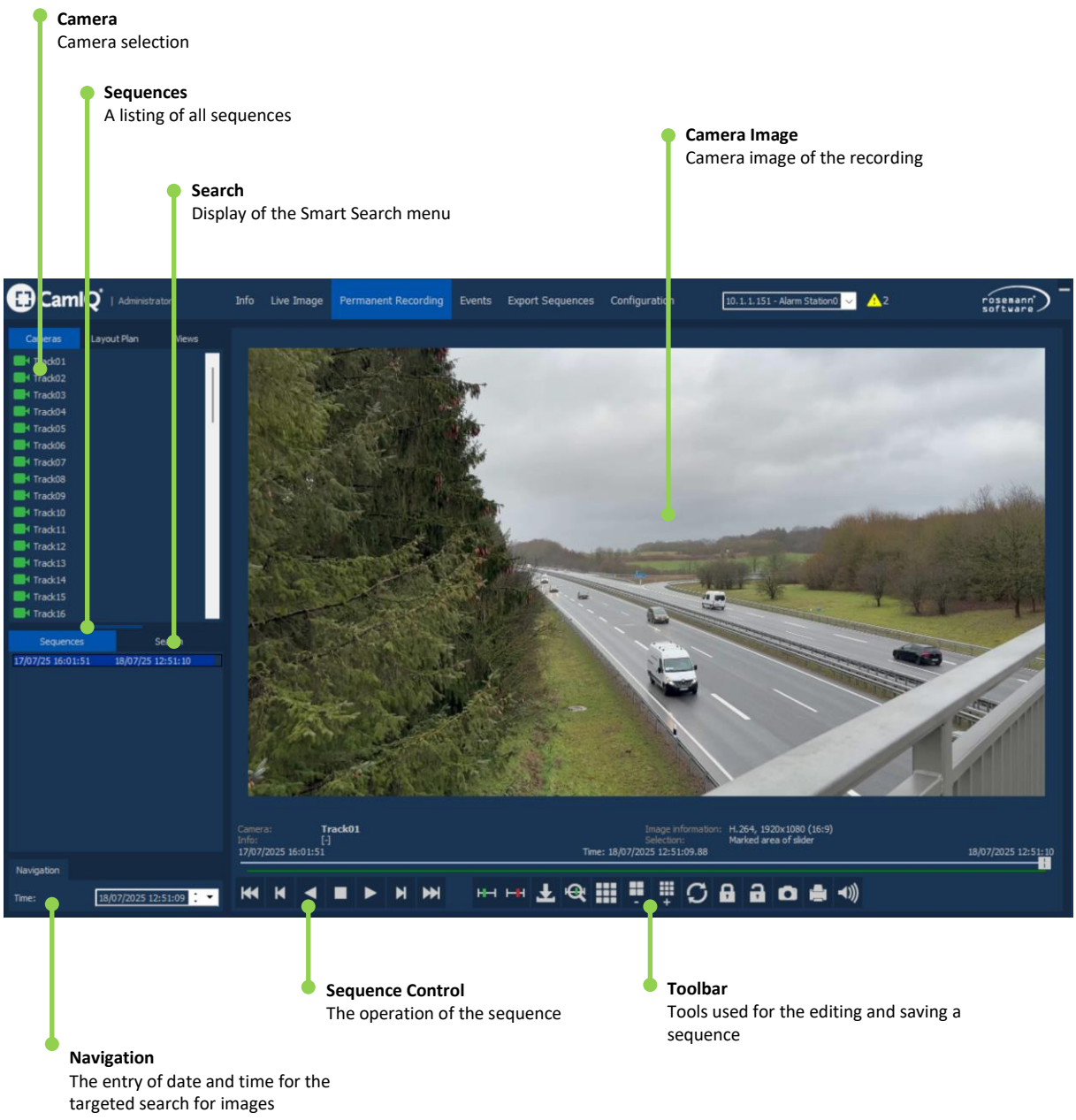
2.2.8 Preview Images

This list shows snapshots of sequences that have triggered alarms. Please note that not every alarm event will necessarily have a snapshot associated with it.



2.3 Permanent Recording

In *Permanent Recording* you can access your stored video data and select sequences to export for sharing or backup purposes. Additionally, here you can lock important video sequences to prevent them from being overwritten by newer data and perform ROI-based video analysis.



2.3.1 Camera

You can select the camera whose recordings you would like to see in the list box of the "Camera" item.

2.3.2 Sequences (Time Intervals)

The left column displays the start and end times for the selected camera, including any locked sequences.

The example illustration shows camera data available from 13:35:23 to 14:00:10. The sequence from 13:33:12 to 13:33:24 has been locked and remains accessible even though it falls outside the timeframe.

Remember that while locked sequences are protected from being overwritten by new data, they consume storage space. For example, if your track is configured to store approximately 72 hours of data, but there are three 1-hour locked sequences from previous week's events that still require review, only the last 69 hours of data will be available.

2.3.3 Navigation & Sequence Control

To access a specific track or view, select an item from the **Cameras** or **Views** list on the left side of the screen. Use the playback buttons or the slider bar to pinpoint the desired time within the recording, or directly enter a specific time into the box located at the bottom of the left column.

 Jump to the first image of the sequence

 Go backward one image

 Play backward (click again to increase the speed)

 Stop the playback

 Play forward (click again to increase the speed)

 Go forward one image

 Jump to the last image of the sequence

2.3.4 Camera Image

When you hover the mouse over the image, you can zoom in and out the image using the mouse scroll wheel.

2.3.5 Toolbar

Use the recording toolbar to perform actions on the recorded sequences.

Set Sequence Start: Click this button to designate the current point in time as the beginning of your partial sequence.

Set Sequence End: Click this button to designate the current point in time as the end of your partial sequence.

Export Sequence*:* Click this button to include your currently selected sequence in the *Export Sequences* tab list. This step only prepares the sequence for export, it does not export your data.

Interval Window Zoom: Use this feature to adjust the time window represented by the slider, distributing the currently selected sequence evenly across the full length of the timeline bar.

Neighbor Cameras: This button will switch to a 3x3 view to show all pre-configured neighbor cameras for the selected camera.

Decrease View: This button will rotate backwards between the following views: single, 2x2, 3x3. Useful for exporting multiple cameras simultaneously.

Increase View: This button will rotate forward between the following views: single, 2x2, 3x3. Useful for exporting multiple cameras simultaneously.

Repeat Sequence: Tap to replay the current sequence continuously. When deactivated, the device automatically advances to the next sequence.

Lock Sequence: To protect a sequence (or a portion of a sequence) from being overwritten, you can lock it. Locked sequences are indicated by red text in the sequence list

Unlock Sequence: Unlock the selected locked sequence, freeing the reserved space. If the sequence is older as the last normally available frame, the sequence will be immediately deleted.

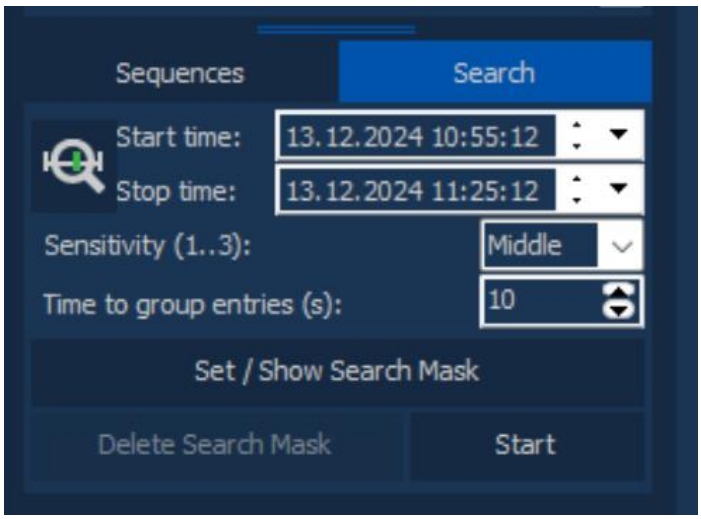
Store Image: Add the selected image to the *Export Sequences* tab list. This step only prepares the image for export, it does not export it yet.

Print Image: Click this button to print the currently displayed image. Ensure a printer is connected to your device before using this function. A comment box will appear, allowing you to add a brief note that will be printed below the image on the printout. After a window with printing options will open. These vary depending on the type of printer you have installed. Printout will include server IP address, user, camera name, date, and comment.

2.3.6 Search (Region-of-Interest)

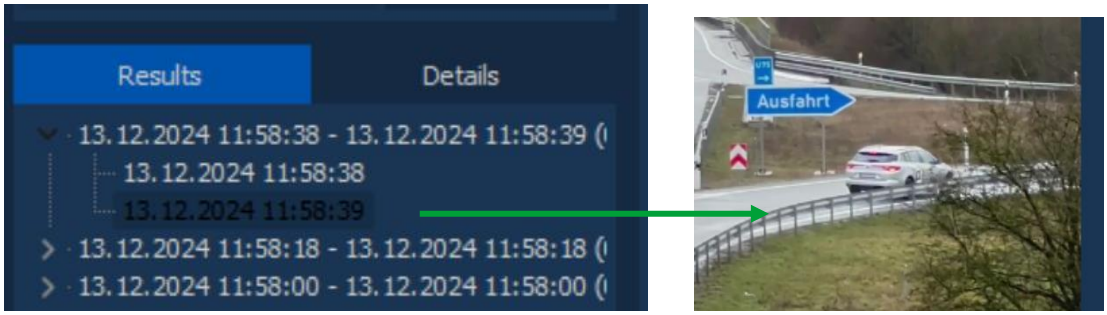
Region-of-Interest video analysis lets you define a specific area within a video frame. The software then automatically analyses this region detecting events that occurred within it. This simplifies video review and saves considerable time when looking for a specific event.

1. Select the “Search” window next to “Sequences” and click on “Set / Show Search Mask”.



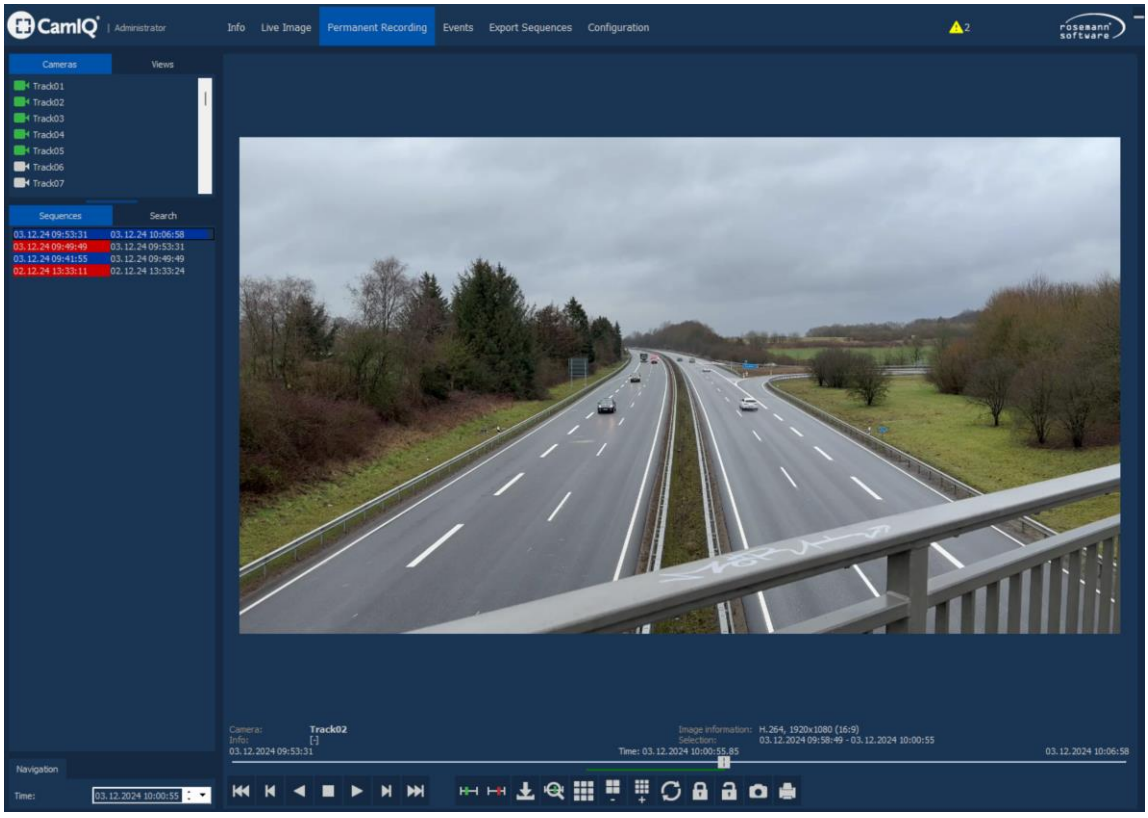
2. This will activate a grid layout over the image. Use the cursor to select a region of interest.

3. Select a start and end time for the search.
4. Choose a sensitivity setting appropriate for your scenario and image data. This setting determines the magnitude of pixel change required within the region to register an event.
5. Click on the “Start” button to start the search.
6. Review the results by double clicking the entries.



2.3.7 Locking sequences

1. Select a starting time using the slider
2. Define the sequence start by clicking on the set sequence start button
3. Select an end time using the slider
4. Define the sequence end by clicking on the set sequence end button
5. Lock the sequence using the lock button
6. The locked sequence will be displayed in red in the left column



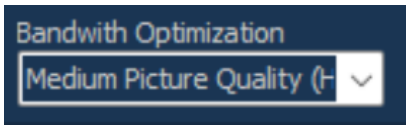
2.3.8 Add Sequence to Export

1. Select a starting time using the slider
2. Define the sequence start by clicking on the set sequence start button
3. Select an end time using the slider
4. Define the sequence end by clicking on the set sequence end button
5. Add the sequence to the list of sequences to export using the export button

The sequence has not been exported yet! Exporting is a two steps process. In the Permanent Recording tab the sequences to export are selected and added to the export list. Actual exporting takes place in the Export Sequences tab.

2.3.9 Bandwidth Optimization

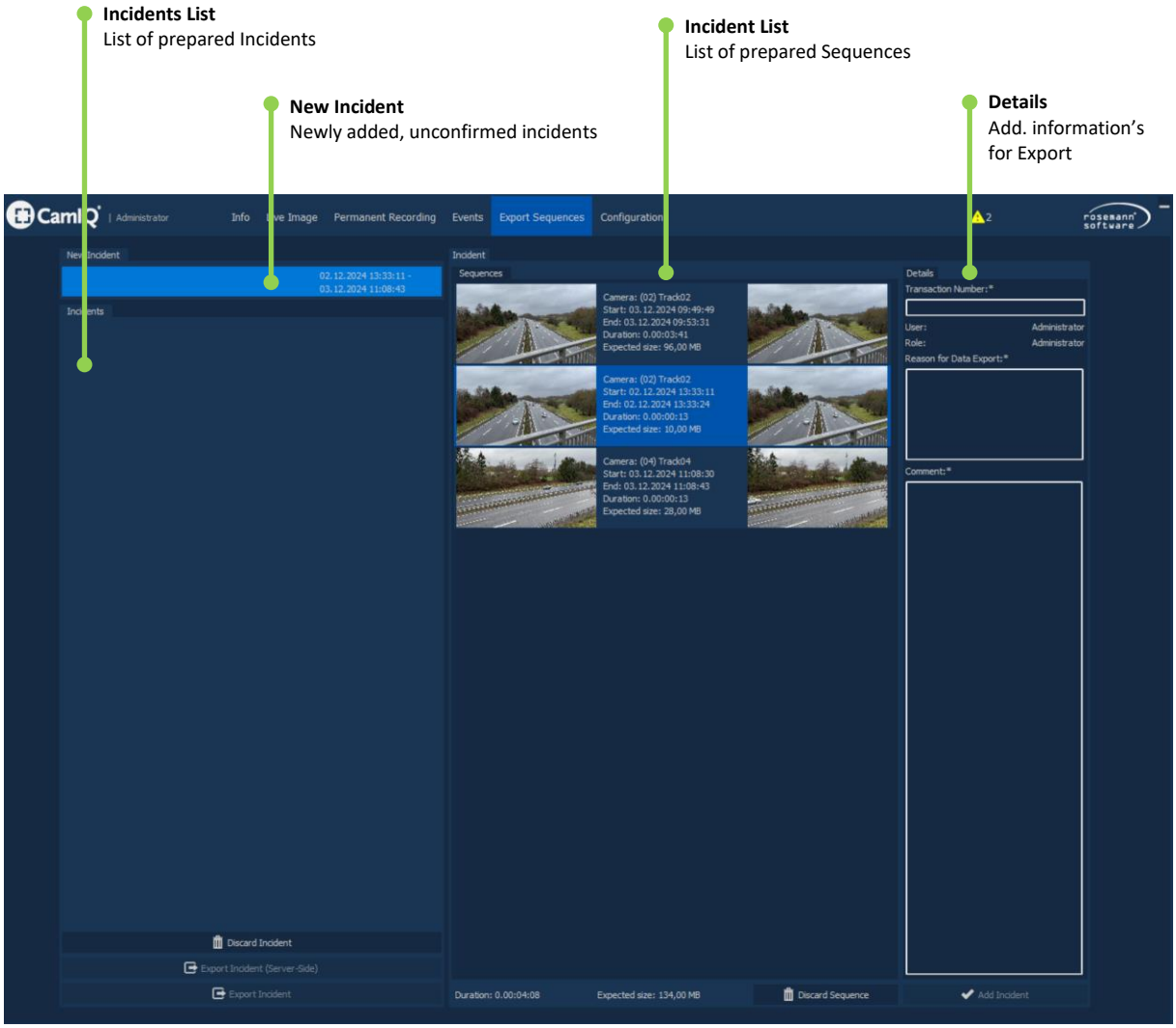
When bandwidth optimization is enabled, a drop-down menu will appear in the lower right corner. Use it to select a stream quality appropriate for your network capabilities.



Options: Original / High / Medium / Low Picture Quality

2.4 Export Sequences

The *Export Sequences* tab allows you to export your sequences. We've designed this feature to help you meet the requirements of various privacy and data protection laws.



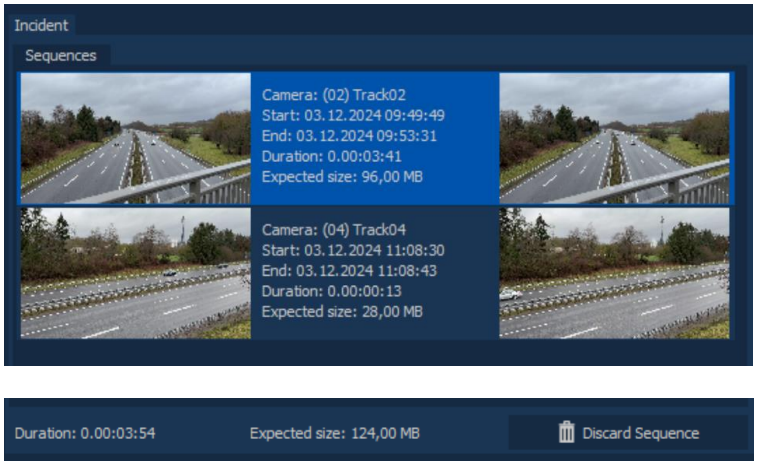
Exporting sequences requires previously selecting in the *Permanent Recordings* or the *Events* tabs the data to export.

2.4.1 New Incident

Newly added sequences, yet to be confirmed, will be listed in the “New Incident” section.

2.4.2 Incident

In the “Incident” section you can view the total duration of the sequences for the selected incident, as well as the estimated export file size. You can also remove any irrelevant sequences from the list using the “Discard Sequence” button.

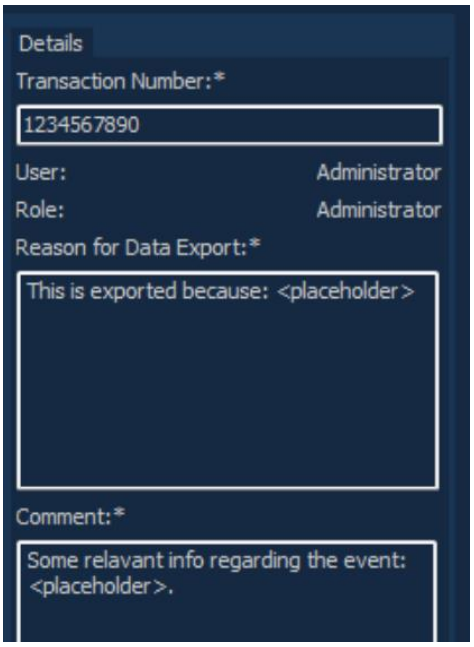


A single incident may encompass multiple sequences, and you can select sequences from different camera tracks. This feature is especially valuable because it allows you to comprehensively document an event by including footage from various perspectives.

The incident list displays image previews of the start and end frames for each sequence. If a preview is missing, the sequence may no longer be available in the storage data. To ensure a sequence remains accessible for export, either perform the export immediately, or use the lock feature in Permanent Recordings. If you lock sequences for exporting, be sure to unlock them once the export is complete. This will release the allocated space and prevent potential storage issues.

2.4.3 Details

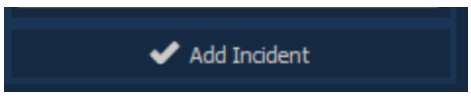
For each separate incident, provide the following mandatory fields in the 'Details' column:



- **Transaction Number**: A unique ID number
- **Reason for Data Export:** Export reason
- **Comment**: Additional relevant info, e.g., events, witnesses

The name and role of the logged-in user which is performing the export are automatically recorded.

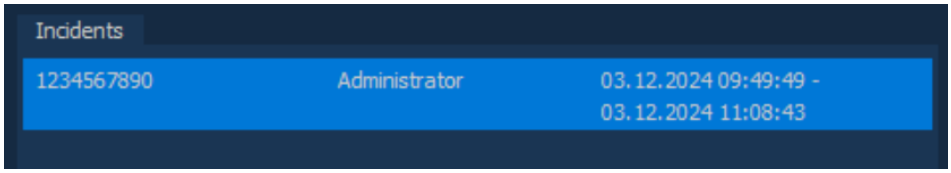
After filling in all required fields, click the "Add Incident" button.



The button will be grayed out until all fields are completed.

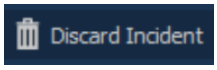
2.4.4 Incidents

Once an incident has been added, it will appear in the incidents list.



Review the incident and modify the provided information if required. Click on “Save” after the modifications.

The user has now several options:



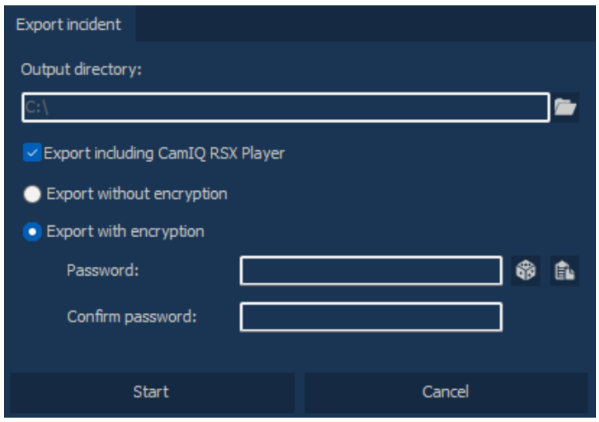
Click this button if you wish to remove the incident from the list. This will only discard the incident - related locked sequences are unaffected.

Mark the incident with a flag to tag it.

Click this to export the incident on the PC where the CamIQ Server is running. This option does not export audio. Use the standard export incident and select a local folder to export audio.

Click this to export the incident on the local PC.
Exporting incidents require special rights which are set up during the configuration process.

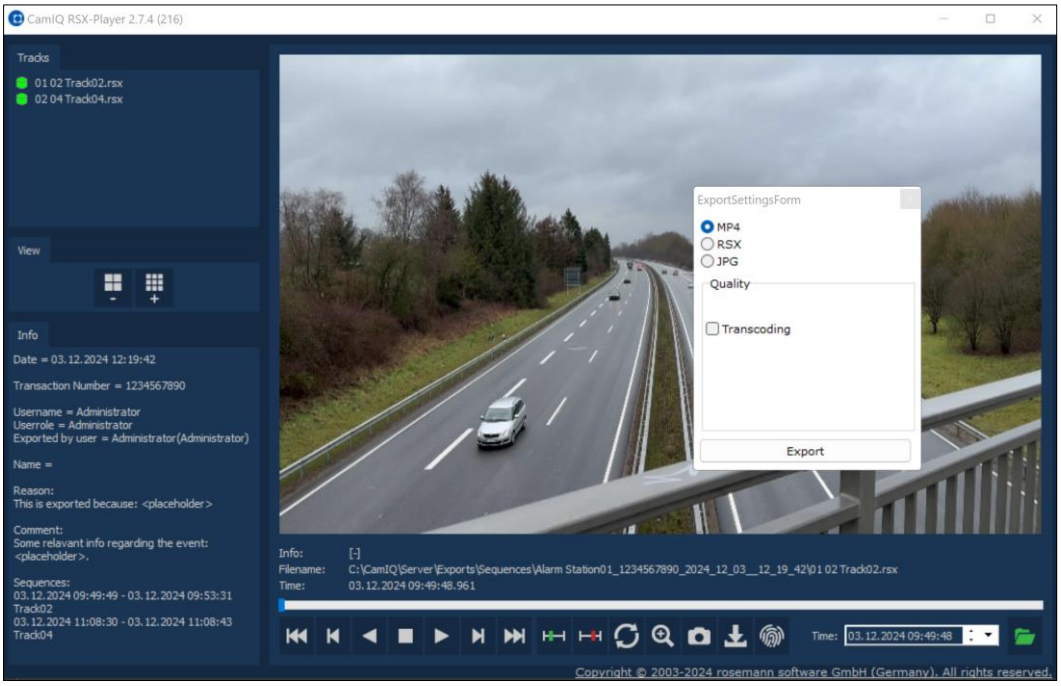
Upon exporting, a pop-up dialog will ask the user to specify the following:



- **Output Directory**: This will only be asked when exporting locally. Server-side exports will automatically export in the predefined folder on the server PC.

- **CamIQ RSX Player**: This will only be asked when exporting locally. It gives the user the possibility to include along with the exported data the player which is able to play it.

  CamIQ exports video data in its proprietary RSX format. You can use the RSX Player export function to convert this data into MP4 format.

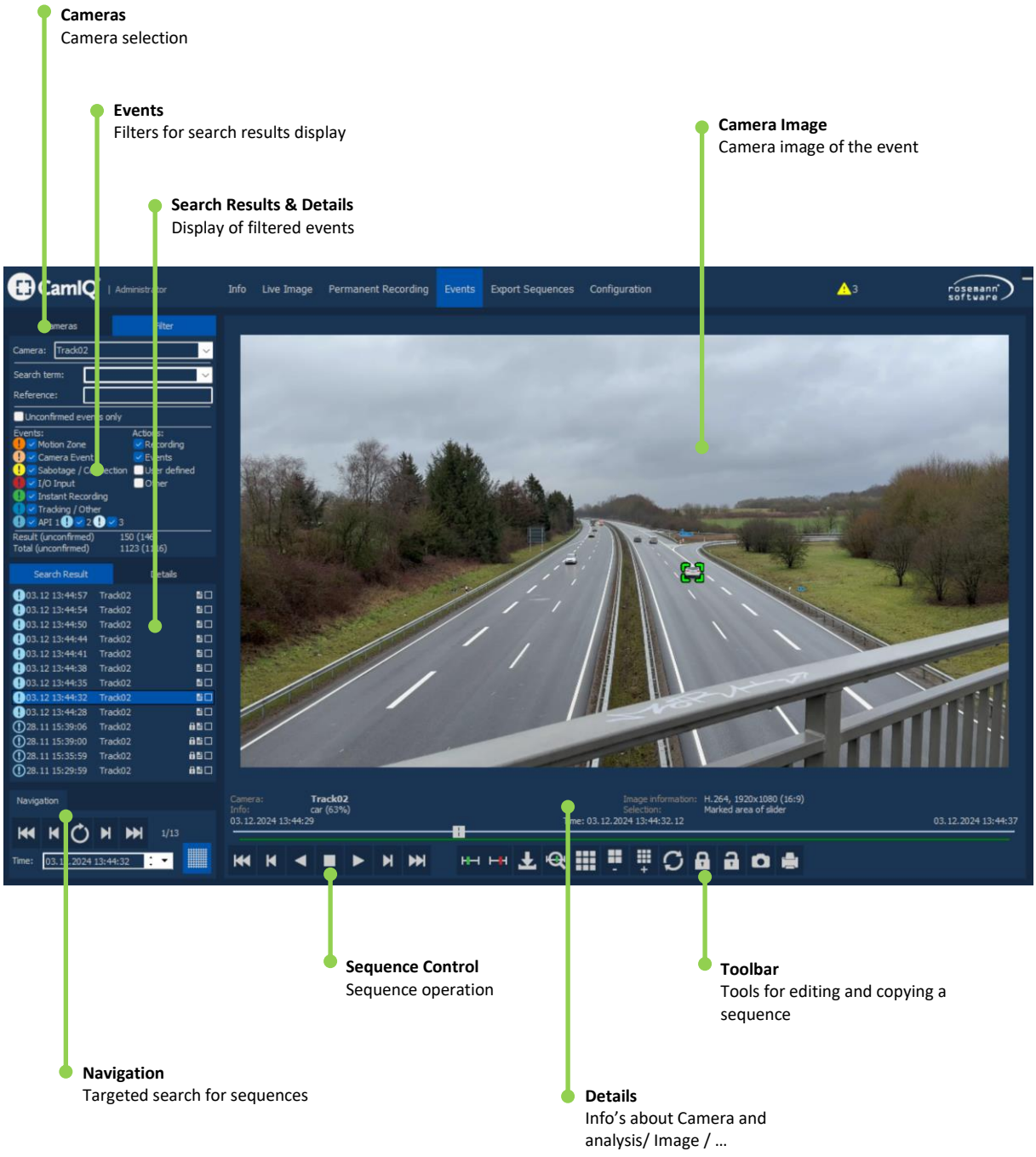


- **Encryption**: Choose whether to export your data with or without password protection. If you select password protection, the video data will be encrypted and you'll be prompted to enter the password when you access the data with the RSX Player. The button will generate a random password. The button can be used to copy the password to the clipboard.

2.5 Events

In the *Events* tab the user will be able to see and review all events (also referred as alarms), as well as add sequences to be exported.

The user can filter events either by source camera or by specifying a custom filter.

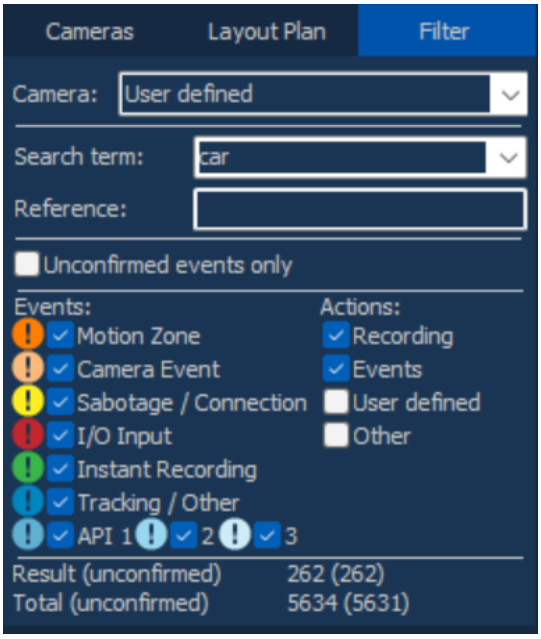


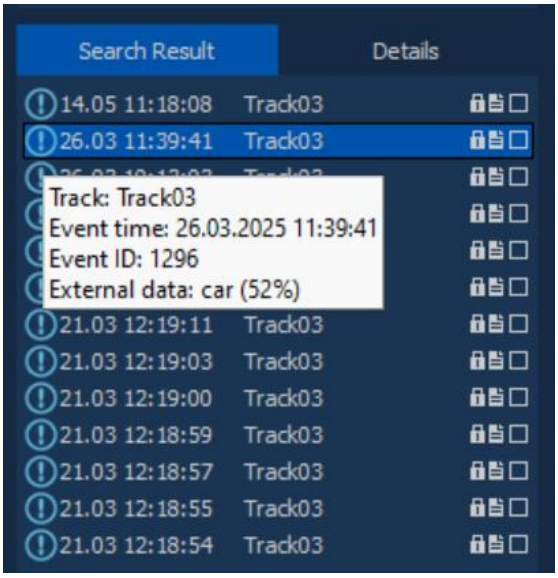
2.5.1 Events

Events are listed in the left column and are color coded for easier identification and filtering:

2.5.2 Filtering Events

To filter events select a camera and give a search term or reference.



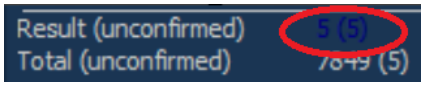


Camera: This setting allows you to specify which camera(s) will be affected by the filter. Use the dropdown menu to select a specific camera, or choose "All Cameras" to apply the filter globally.

Search term: Type or select from the drop-down menu a search term which will filter the images according to their metadata tag. The drop-down lists all available CamIQ AI Analytics classes. CamIQ AI Analytics must be installed and configured appropriately for this search to produce meaningful results.

Reference: Type a manual reference which will filter the images according to this tag. A reference is a user-defined parameter assigned to a custom API alarm.

Confirm All Events:

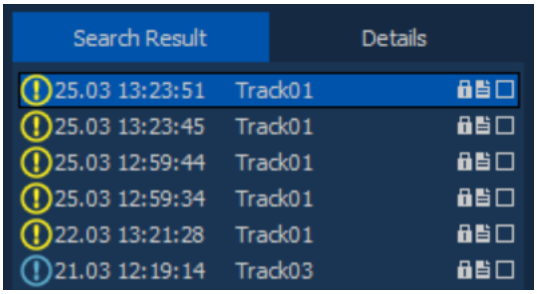


To confirm all events simultaneously, hover your mouse over the "Result (unconfirmed)" number value and click. A warning message will appear; click on "Yes" to mark all events as confirmed.

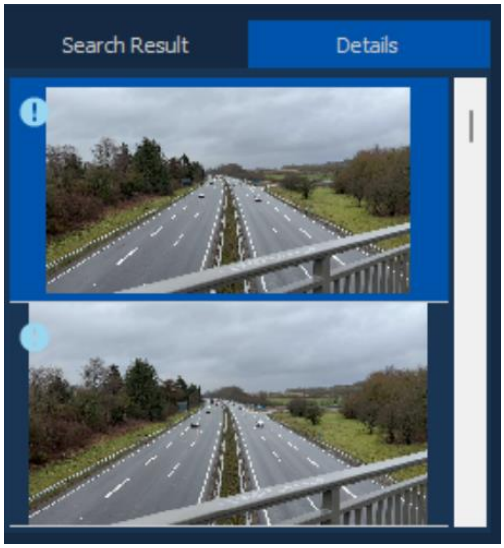
2.5.3 Search Result & Details

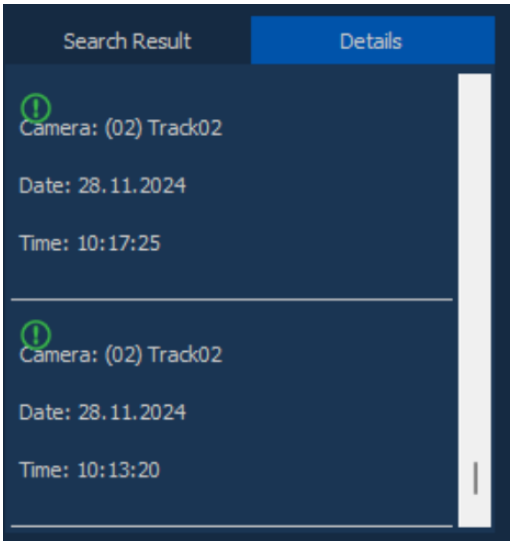
Hover an event in the “Search Result” window for more information:

- **Event ID**: Unique CamIQ intern identifier for the event
- **Event time**: The timestamp of the event
- **Track**: The name of the track
- **External data**: The associated metadata tag



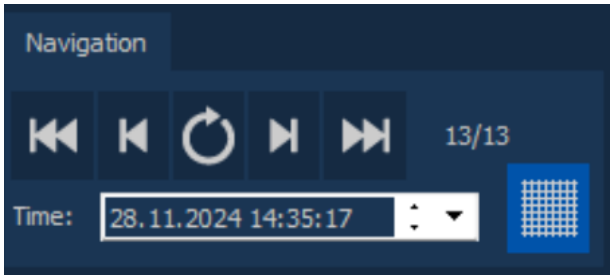
The "Details" window displays image previews whenever possible (see left picture). Image previews are only available if the corresponding data is still present in the permanent recordings. If the data is no longer available, the event list will include metadata for reference, but without any attached images (see right picture). Reviewing and exporting video data will be unavailable in these cases.





2.5.4 Navigating Events

To navigate events use the navigation bar.




Jumps to the latest event (chronologically)


Show the events of the previous page (newer)


Refresh the page (e.g., to show new events)


Show the events of the next page (older)


Jumps to the oldest event (chronologically)

Time: You can adjust the time directly by manually entering a value in the field. The list will automatically jump to the event closest to the selected time.


Visualize any configured motion zone directly in the monitor view.

2.5.5 Sequence Control


Jump to the first image of the sequence


Go backward one image


Play backward (click again to increase the speed)


Stop the playback


Play forward (click again to increase the speed)


Go forward one image


Jump to the last image of the sequence

2.5.6 Toolbar

Use the recording toolbar to perform actions on the recorded sequences.


Set Sequence Start: Click this button to designate the current point in time as the beginning of your partial sequence.


Set Sequence End: Click this button to designate the current point in time as the end of your partial sequence.


Export Sequence*:* Click this button to include your currently selected sequence in the *Export Sequences* tab list. This step only prepares the sequence for export, it does not export your data.


Interval Window Zoom: Use this feature to adjust the time window represented by the slider, distributing the currently selected sequence evenly across the full length of the timeline bar.


Neighbor Cameras: This button will switch to a 3x3 view to show all pre-configured neighbor cameras for the selected camera.


Decrease View: This button will rotate backwards between the following views : single, 2x2, 3x3. Useful for exporting multiple cameras simultaneously.


Increase View: This button will rotate forward between the following views : single, 2x2, 3x3. Useful for exporting multiple cameras simultaneously.


Repeat Sequence: Tap to replay the current sequence continuously. When deactivated, the device automatically advances to the next sequence.


Lock Sequence: To protect a sequence (or a portion of a sequence) from being overwritten, you can lock it. Locked sequences are indicated by red text in the sequence list

Unlock Sequence: Unlock the selected locked sequence, freeing the reserved space. If the sequence is older as the last normally available frame, the sequence will be immediately deleted.

Store Image: Add the selected image to the *Export Sequences* tab list. This step only prepares the image for export, it does not export it yet.

Print Image: Click this button to print the currently displayed image. Ensure a printer is connected to your device before using this function. A comment box will appear, allowing you to add a brief note that will be printed below the image on the printout. After a window with printing options will open. These vary depending on the type of printer you have installed. Printout will include server IP address, user, camera name, date, and comment.

3 CONFIGURATION GUIDE

This section will guide the users or the distribution partners in the installation and configuration steps. It will also provide some background about selected CamIQ modules and their functionalities.

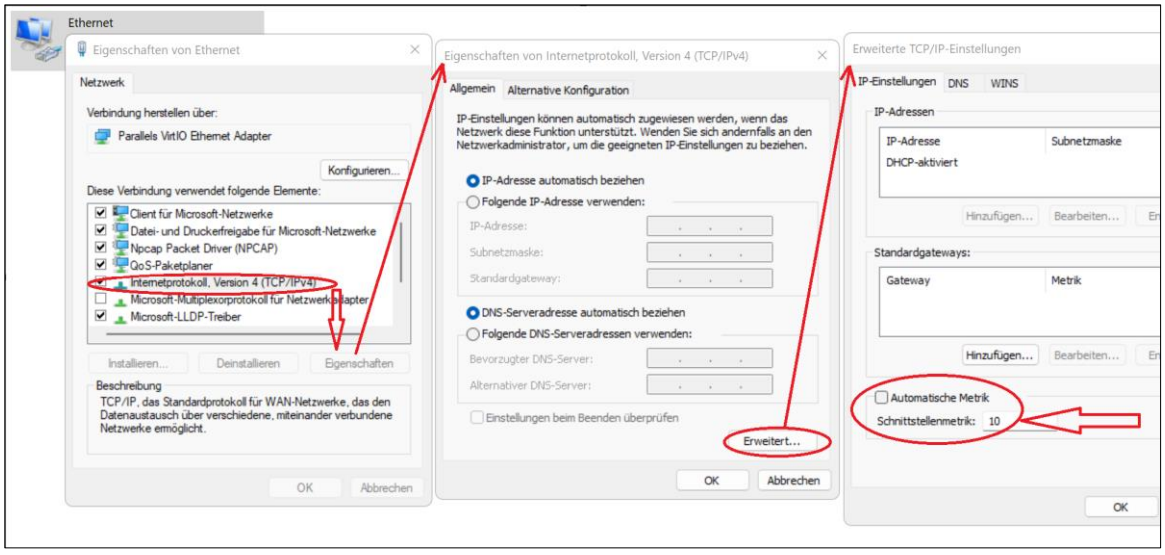
3.1 Preparation

If you are installing CamIQ on a computer with multiple network adapters, there are settings you need to adjust to ensure CamIQ connects to the correct adapter. Network adapters can be assigned a priority level, also known as "Interface Metric". The adapter CamIQ should use needs to have a higher priority than other adapters. To view the current priorities of your adapters, you can use the PowerShell command `Get-NetIPInterface`.

```
PS C:\Users> Get-NetIPInterface

ifIndex InterfaceAlias                AddressFamily NlMtu(Bytes) InterfaceMetric Dhcp     ConnectionState PolicyStore
------- --------------                ------------- ------------ --------------- ----     --------------- -----------
8       Ethernet                      IPv6                  1500              15 Enabled  Connected       ActiveStore
1       Loopback Pseudo-Interface 1   IPv6            4294967295              75 Disabled Connected       ActiveStore
8       Ethernet                      IPv4                  1500              15 Enabled  Connected       ActiveStore
1       Loopback Pseudo-Interface 1   IPv4            4294967295              75 Disabled Connected       ActiveStore
```

To set the priority of a network adapter, access its network properties under Properties -> Advanced and change the metric. **A lower metric value indicates a higher priority.** Typically you can assign the CamIQ adapter a metric value of 10, and the other adapter a value of 20.



Alternatively, this can be done with PowerShell using the command line (example values):
`Set-NetIPInterface -InterfaceIndex 8 -InterfaceMetric 10`.
Review your changes using the `Get-NetIPInterface` command.

If you installed CamIQ previously to this change, after the system's IP changes, you must perform an "unbind" procedure using the script "Unbind.exe". This script is located within the "C:\CamIQ\Dispatcher Client" folder. Running the script will remove the existing IP assignment from the configuration, allowing for a new one.

3.2 Installation

Please download the latest CamIQ installer from the website (www.camiq.net) and follow those steps to complete the setup.

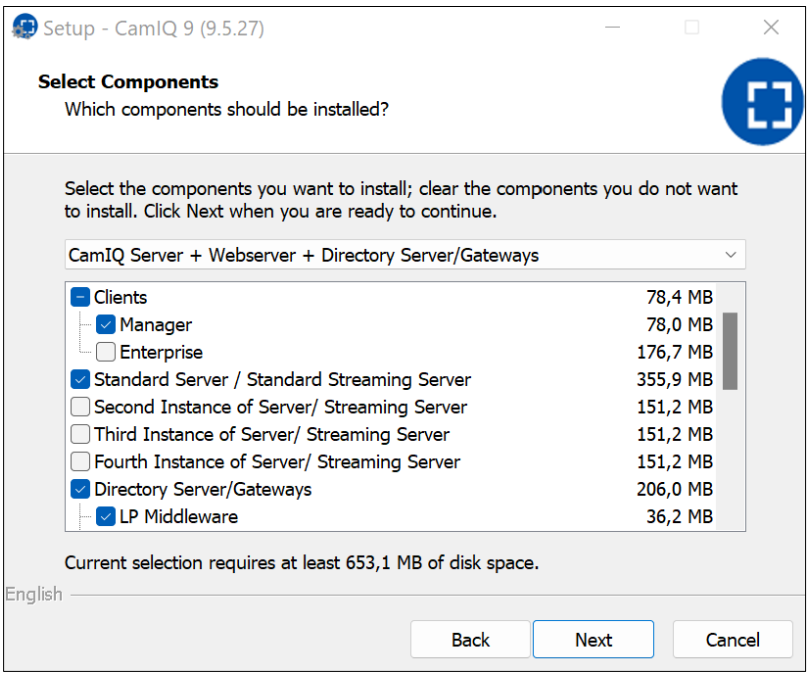
1. **Run the Installer**
   Double-click the downloaded installer file to launch the setup wizard.

2. **Accept the License Agreement**
   Carefully read through the CamIQ License Agreement and click "Agree" to proceed.

3. **Choose Installation Folder**
   By default, CamIQ will be installed in the *C:\CamIQ* folder. You can change this location if desired.

4. **Select Installation Type**
   Use the dropdown menu to choose the installation type that best meets your project's requirements:

   - **Pre-Configured:** Installs the modules required for the selected use-case
   - **Custom:** Allows advanced users to select specific modules and add-on services. This option should only be used by technically proficient personnel.



5. **Application Shortcuts**
   Select whether you want desktop and Start menu shortcuts created for easy access to CamIQ.

6. **Service Scripts**
   Choose if you want to install service scripts. These scripts can automate tasks like backups or automatic starting/stopping of CamIQ services.

7. **Firewall Rules**
   Decide whether you want CamIQ to automatically configure standard firewall rules. This option also requires the installation of necessary service scripts.

8. **Begin Installation**
   Once you have reviewed your selections, click the "Install" button to start the installation process.

When installing multiple, non-independent CamIQ systems across several PCs within the same network, remember that the "CamIQ Dispatcher Server" service, which acts as the CamIQ systems' administrator, should be installed on only one computer.

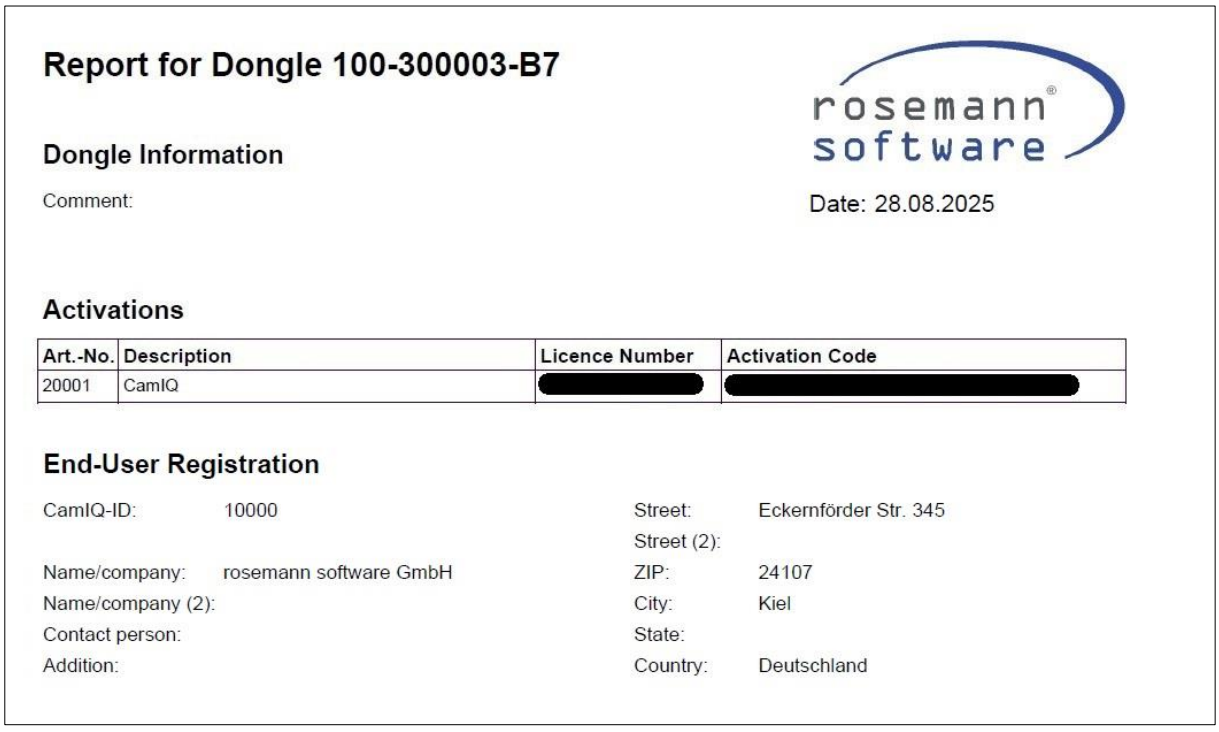
3.3 Licenses

To use CamIQ you need a valid license. This is automatically generated during the order process. Upon delivery, you'll receive a detailed breakdown of your license features in PDF format alongside a license activation file in XML format. The XML file is required to activate your local CamIQ installation after initial setup. This process varies depending on your license type.

CamIQ licenses can be either:

- **Dongle licenses:** Tied to a physical USB dongle.
- **Online licenses:** Require an active internet connection.

Please refer to the following sections for step-by-step instructions.



Report for Dongle 100-300003-B7

rosemann software

Dongle Information

Comment:

Date: 28.08.2025

Activations

Art.-No.	Description	Licence Number	Activation Code
20001	CamIQ	[redacted]	[redacted]

End-User Registration

CamIQ-ID:	10000	Street:	Eckernförder Str. 345
		Street (2):	
Name/company:	rosemann software GmbH	ZIP:	24107
Name/company (2):		City:	Kiel
Contact person:		State:	
Addition:		Country:	Deutschland

3.3.1 Dongle Licenses

This is the standard CamIQ license and utilizes a physical USB dongle for hardware-based verification. This licensing method is ideal for projects deployed on closed networks without internet connectivity.

To apply the license, launch CamIQ Manager and go to the **Licenses** section within **Basic Settings**.

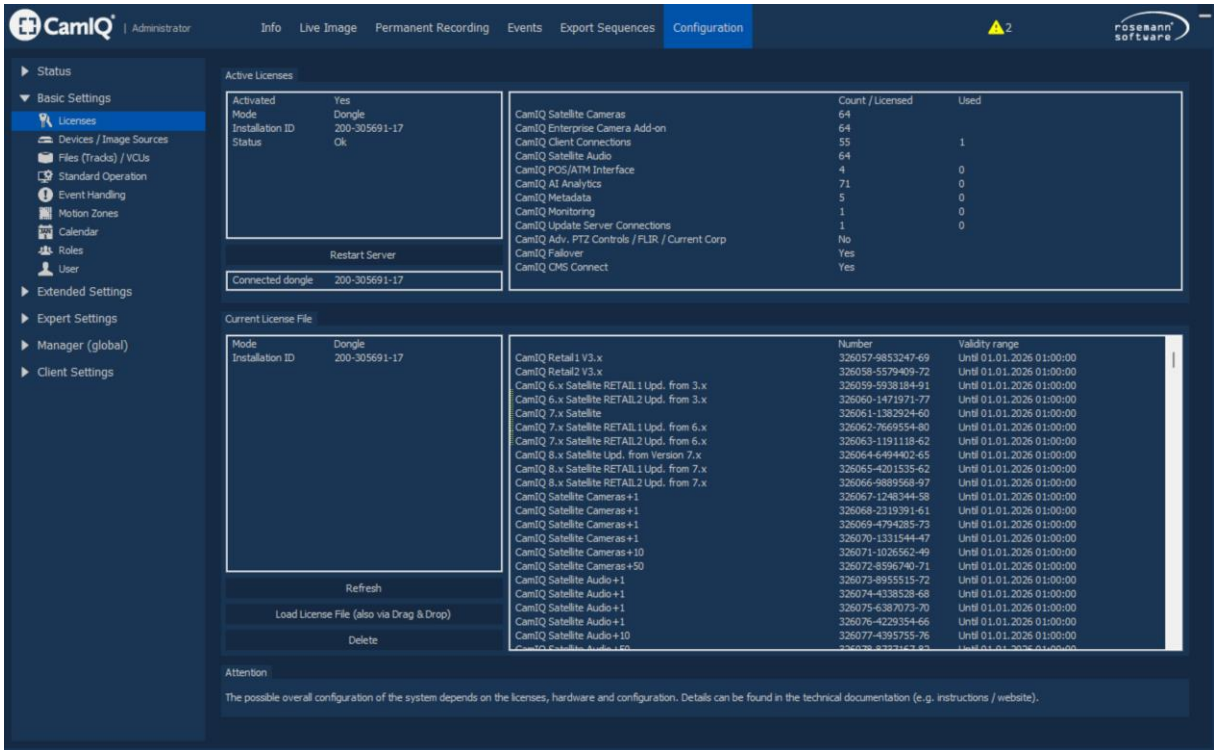
1. **Dongle Connection**
   Verify that the connected USB dongle is recognized by CamIQ. If the dongle is not visible, please check and update the USB drivers, unplug the dongle, wait a few seconds, and plug it back in. Click on the *Refresh* button to see if the dongle is now visible.

2. **Check Dongle Number**
   The displayed dongle number should correspond with the number and name of your license activation file.

3. **Activation File**
   Drag&Drop your XML activation file (not the PDF) or click on the *Load License File* button and select the file.

4. **Server Restart**
   The server needs to be restarted after applying a new license file. Either use the pop-up window or manually restart the server using the in-built button.

Ensure that the CamIQ version of your license file matches the version of your installed software. For example, a CamIQ 8 license will not work with CamIQ 9.



Before importing a new license, please delete the old one using the *Delete* button.

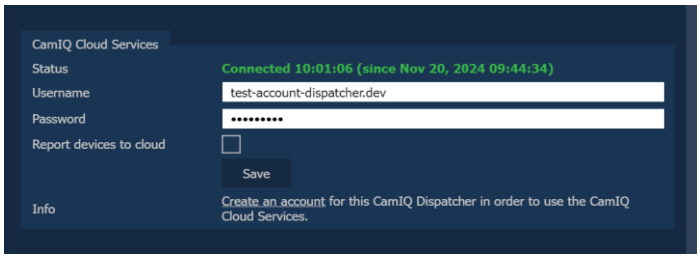
In the window you can see general information regarding your license:

- **Activated:** If the license is active and correctly registered in your local CamIQ installation.
- **Mode:** Whether is a dongle or online license.
- **Installation ID:** This is the currently registered license / dongle number. Should match the connected dongle and license file.
- **Status:** The status of the applied license, for example: “Ok”, “New license required, or “Restart required”.
- **Connected Dongle:** The current USB-dongle recognized by the system.
- **License features count:** This list displays the total license count for each feature / module. When applicable, it also shows the current number of licenses for that feature which are in use.
- **Validity range:** Displays when your license / features lose their validity. To continue using CamIQ or a CamIQ feature, import a new license file before the expiry date. If a valid license for CamIQ or a CamIQ feature is not detected, after a short grace period, it will stop working.

3.3.2 Online Licenses

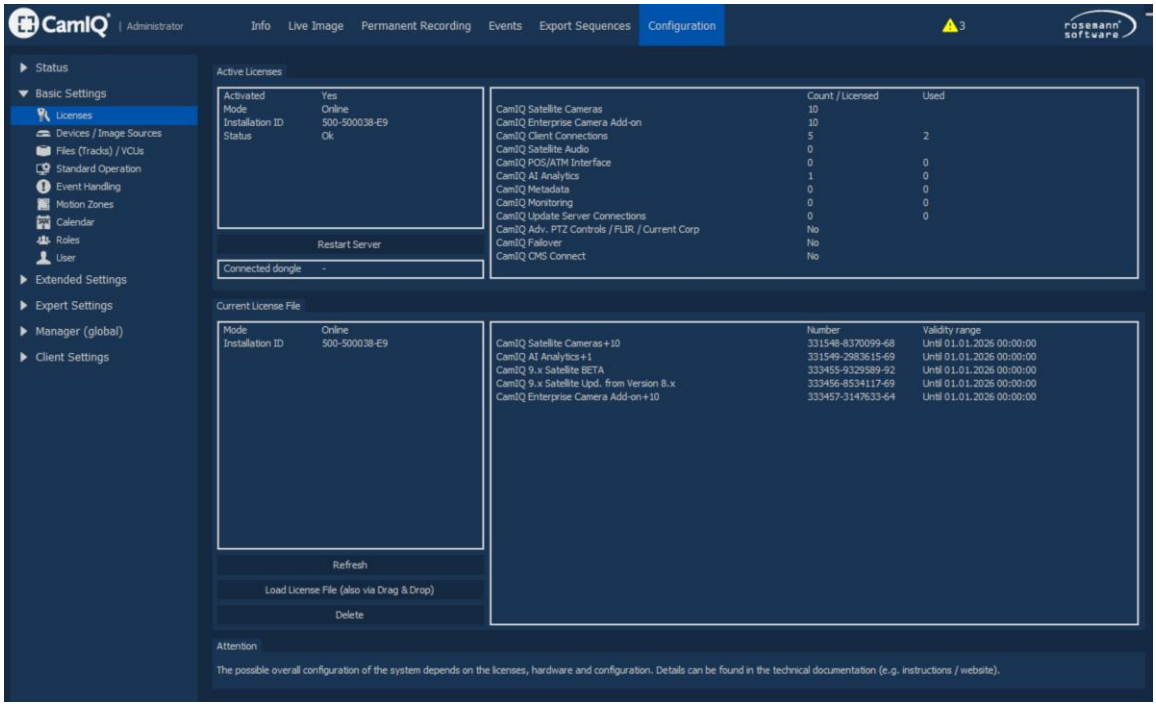
In addition to dongle-based licensing, CamIQ offers convenient online licenses. Online licenses are not applicable to the CamIQ Enterprise client. Please note that this method requires an internet connection. Once your license is activated, brief network interruptions won't affect CamIQ's operation due to built-in tolerance mechanisms. However, prolonged disconnection from the internet will result in CamIQ automatically shutting down.

Furthermore, a CamIQ Cloud account is required. Information about the setup can be found in the next chapter “CamIQ Cloud Services”. The user must login in the *CamIQ Cloud Services* section of the CamIQ Dispatcher using this account information. The CamIQ Dispatcher is a background service which can be reached either using the *CamIQ Gateway Configuration* shortcut on the desktop or alternatively at the local address *http://localhost:8088*.



Online licenses can only be activated in CamIQ Manager after you have successfully established a connection to the cloud services. Attempting to import a license before this step will display an error message.

Please Drag&Drop the license file (the XML, not the PDF) in the *Licenses* section of CamIQ Manager under *Basic Settings* and restart the server. Your licenses are now loaded and you can start configure.

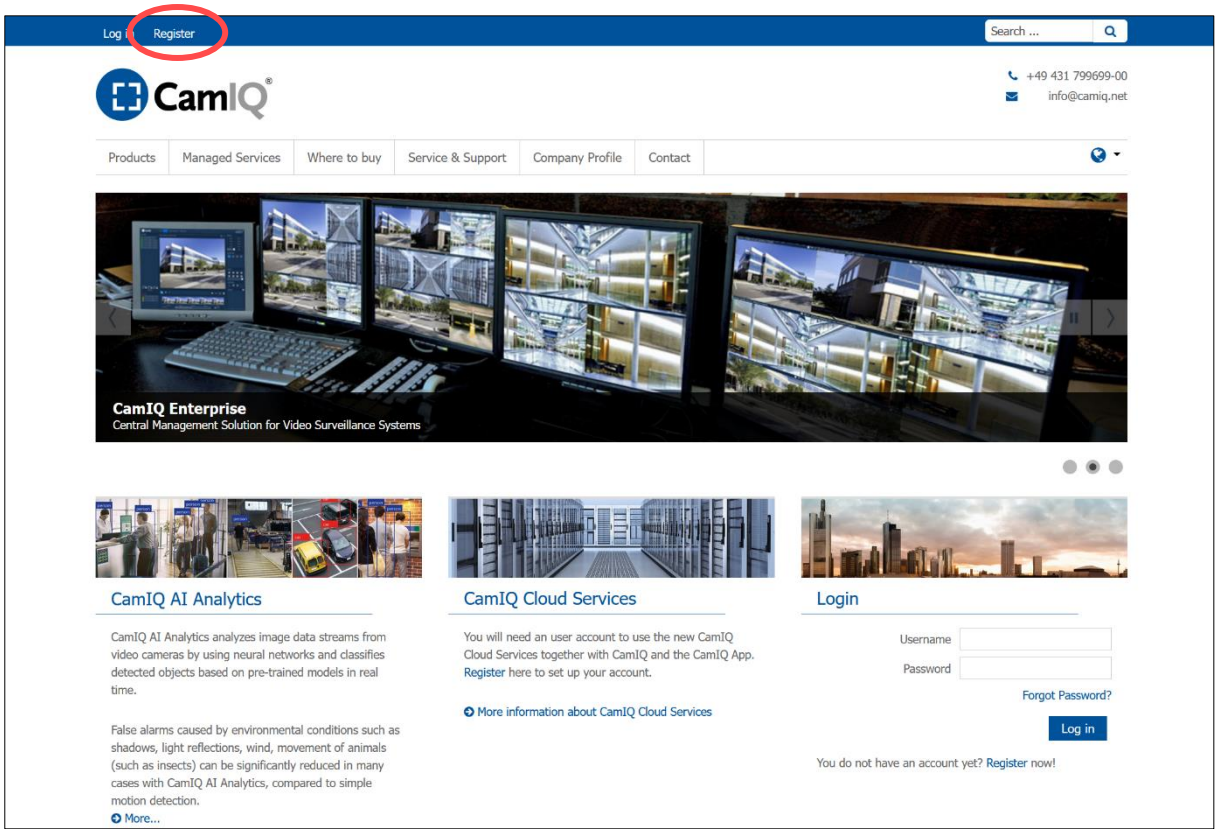


3.3.2.1 CamIQ Cloud Services

To use online licenses, a cloud account is required. This section provides step-by-step instructions to help users creating and activating a cloud account for that purpose. For additional scopes, such as setting up the CamIQ App, please check the FAQ section of the website.

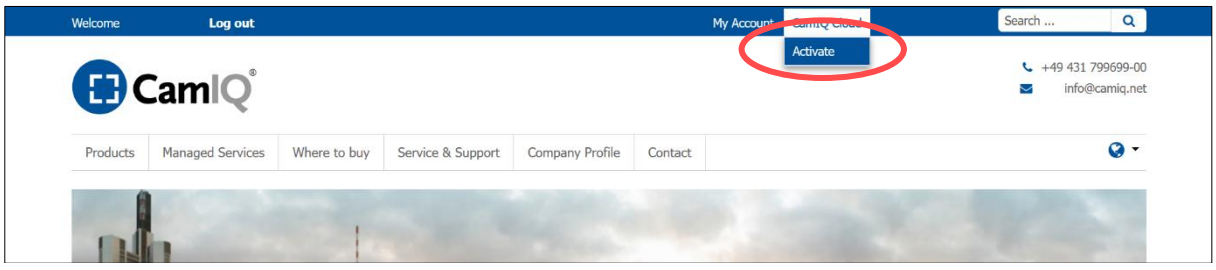
1. Register Account

Access the website **www.camiq.net** and click on the registration button. Carry out the registration process and log on to the website with your new credentials.

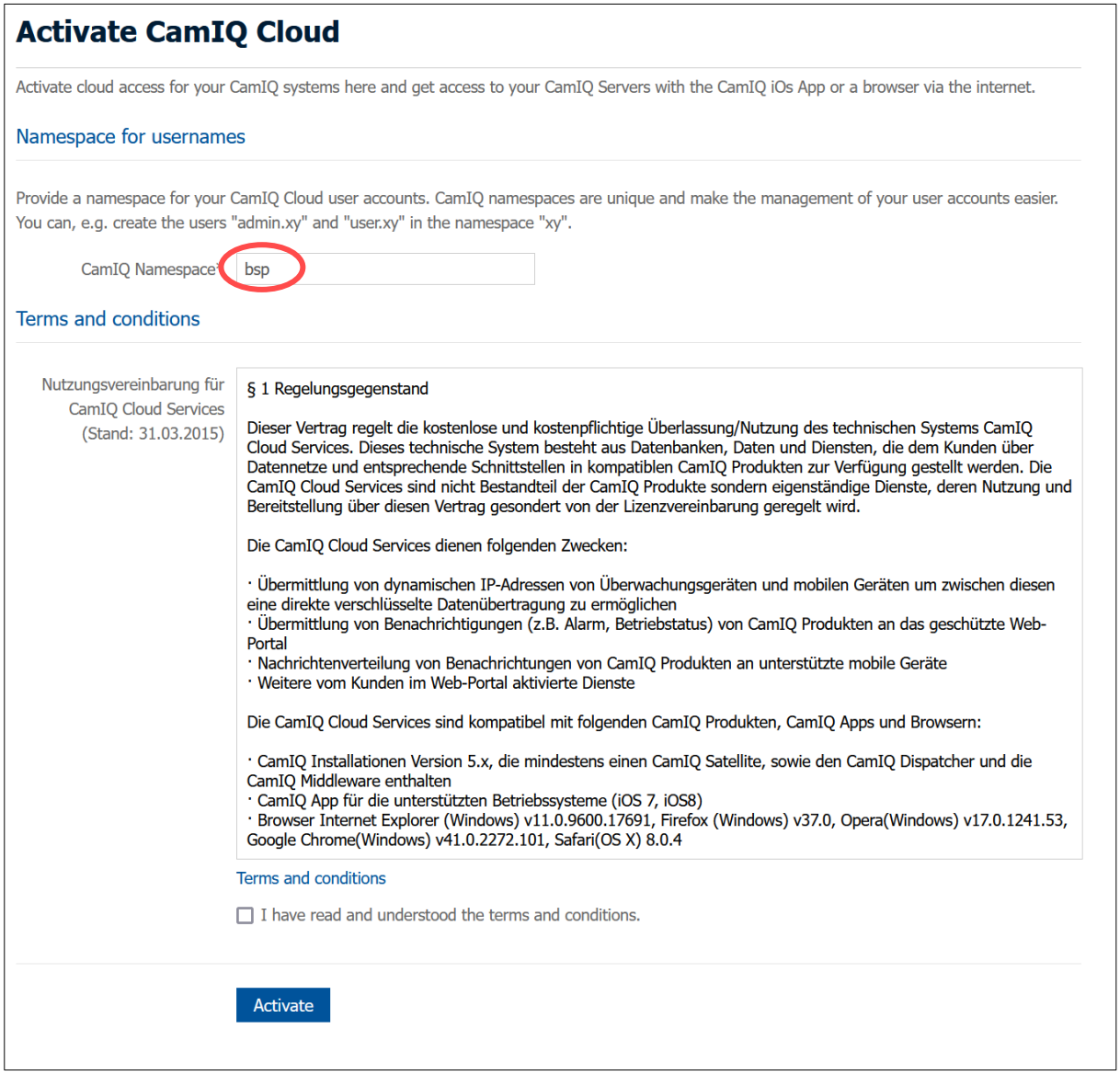


2. Activate Cloud

Select “CamIQ Cloud” in the header and click on “Activate”.



Choose a CamIQ namespace and confirm the CamIQ Cloud terms of use. In this example the namespace “bsp” (from the German word “Beispiel”, meaning example) is chosen.



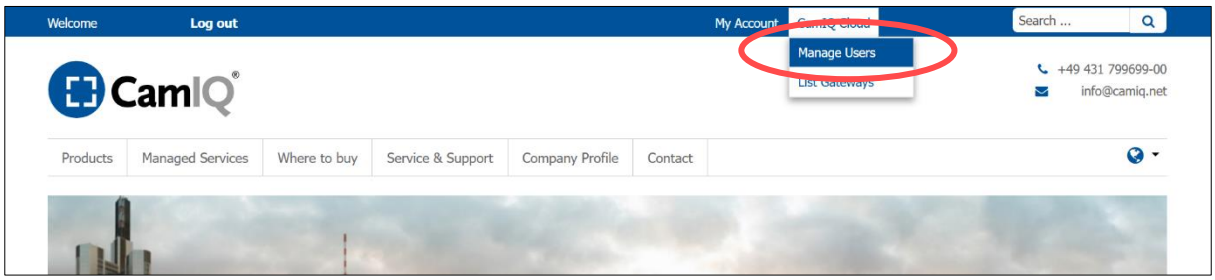
The cloud account is now set up and functional, but in order to use online licenses, further steps are required.

3. Create a “Dispatcher” user

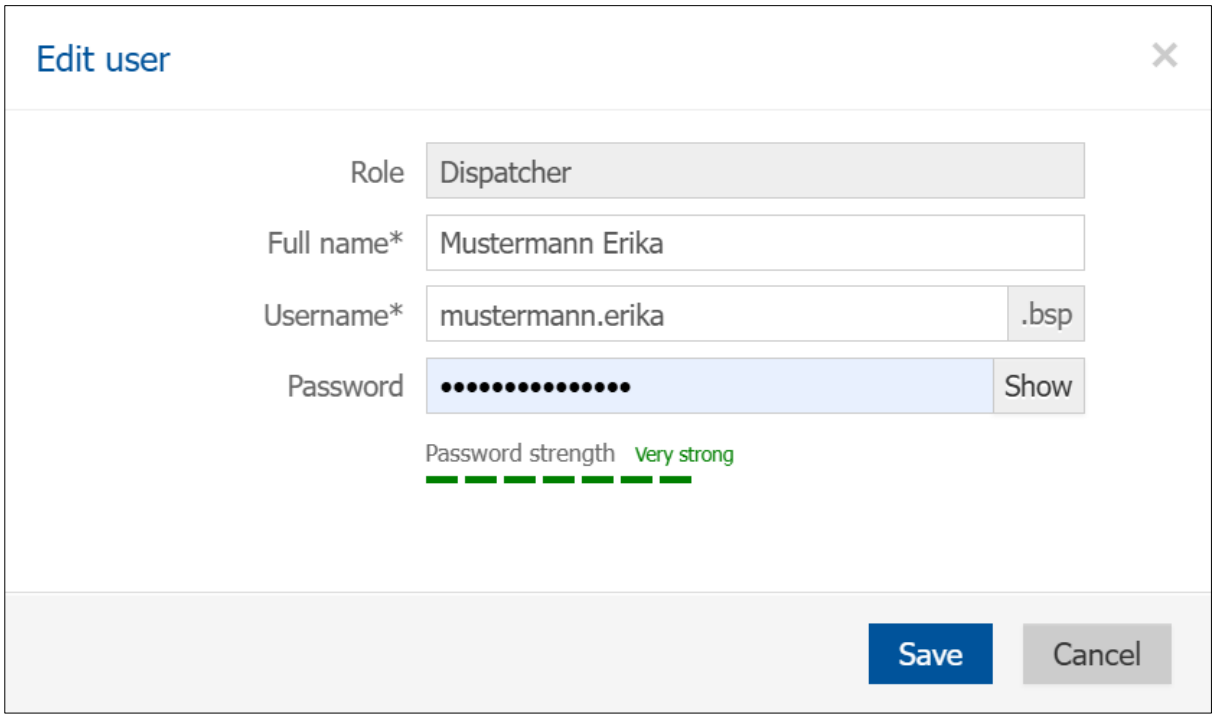
After activating a cloud account, a “Superadmin” user is automatically set up using standard account information (name, email-address).

However, a special “Dispatcher” user is necessary for communication between your local CamIQ system and the CamIQ Cloud.

Open the user administration component of your cloud account by clicking on the header “CamIQ Cloud” and select “Manage Users“.



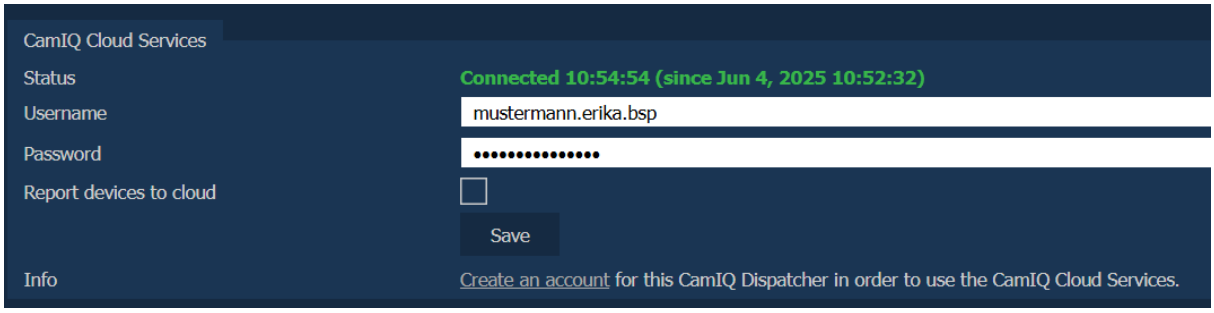
Click on the “Create user” button, and select the role of “Dispatcher” for the new user. Enter a display name, a user name, as well as a password and confirm the process by clicking on the Add/Save button.



After creating the new user, this will be visible in the “Manage Users” list.

4. Connect to the Cloud.

Connect to the cloud in the CamIQ Dispatcher (accessible via the “CamIQ Gateway Configuration” link on the desktop) and enter the newly created Dispatcher user within the “CamIQ Cloud Services” window.



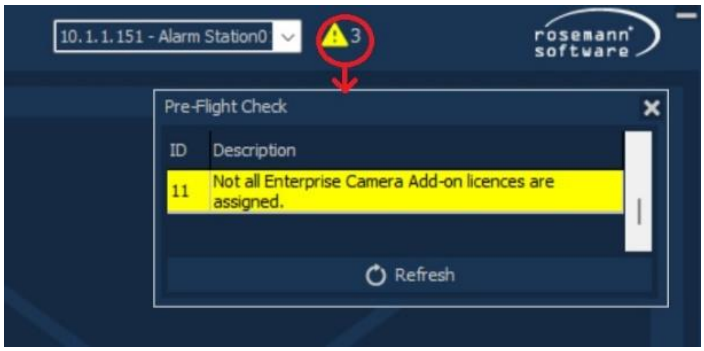
You are now able to use online licenses in CamIQ Manager.

3.3.3 License Notifications

When license changes occur or license issues are detected, the system will notify you. Some notifications are automatically triggered and displayed as pre-flight checks, while others are configurable as e-mail alerts.

3.3.3.1 Pre-flight Notifications

Pre-flight notifications are displayed in the upper-right corner of the Manager. Right-click the warning icon to view the notification messages.



In the pre-flight section you will be notified about licenses when:

- The license status has changed, and a server restart is necessary. This may occur when the license expires, a new license is manually applied, or the server restart tolerance is counting down.
- The system time on the licensed PC is invalid, requiring a server restart. The user will be notified 2 days in advance.

Additionally, for online-licenses only, a message will be displayed when:

- E-Mail notifications for license changes are not configured.
- The hardware ID of the PC where the server is running has changed. This will cause the server application to shut down. The user is warned 15 minutes in advance.

3.3.3.2 E-Mail Notifications

E-mail notifications can be configured in the *Message Sending* tab. You can configure to send an alert when:

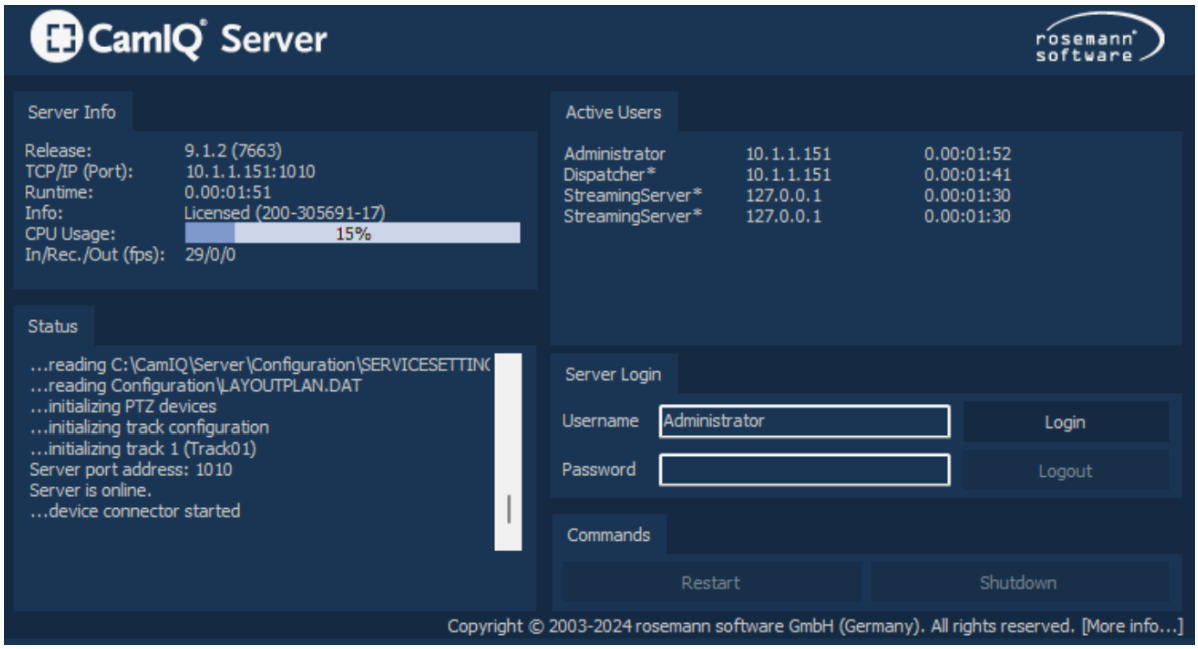
- The server has been restarted.
- The license check has failed. This occurs when license verification is not possible for an extended period of time.
- The first successful license check, after a license fail.

E-mail notifications include the dongle number of the impacted server.

3.4 CamIQ Server

The CamIQ Server acts as the backbone component of the system. Its primary functions include receiving the raw video data from the cameras, decoding, recording, and distributing it to connected client devices.

The CamIQ Server is typically installed as a Windows service and its visual interface is hence hidden. However, it is possible to manually turn off the service and start it as a GUI application. Generally, you do not need to access the server UI. All necessary information is available through the manager UI or can be accessed within the *CONFIG.INI* file located inside the folder *C:\CamIQ\Server*.



Server Info: Information concerning the current operating status of the server:
- The software version of the server application
- The TCP/IP address and the port in use
- The operating time (runtime)
- The current processor workload
- The number of pictures the server receives, records and forwards to client systems

System Status: This section displays the processed configuration files and their associated protocols.

Active Users: Lists all currently connected clients, including their IP and connection durations.

Server Management: In the "Server Login" section you can log in to perform actions such as restarting or shutting down the server.

To analyze server issues, we recommend setting the “LogLevel=” parameter in the CONFIG.INI file to "debug". By default, this parameter is either empty or set to "info". Doing so will generate a more detailed log of application events, including potential issues, which are recorded in the app.log file located at C:\CamIQ\Server\logs.

3.5 CamIQ Manager

The manager is the primary interface to the CamIQ Server, acting as a configuration client as well as a data consumer and visualizer.

3.5.1 Login

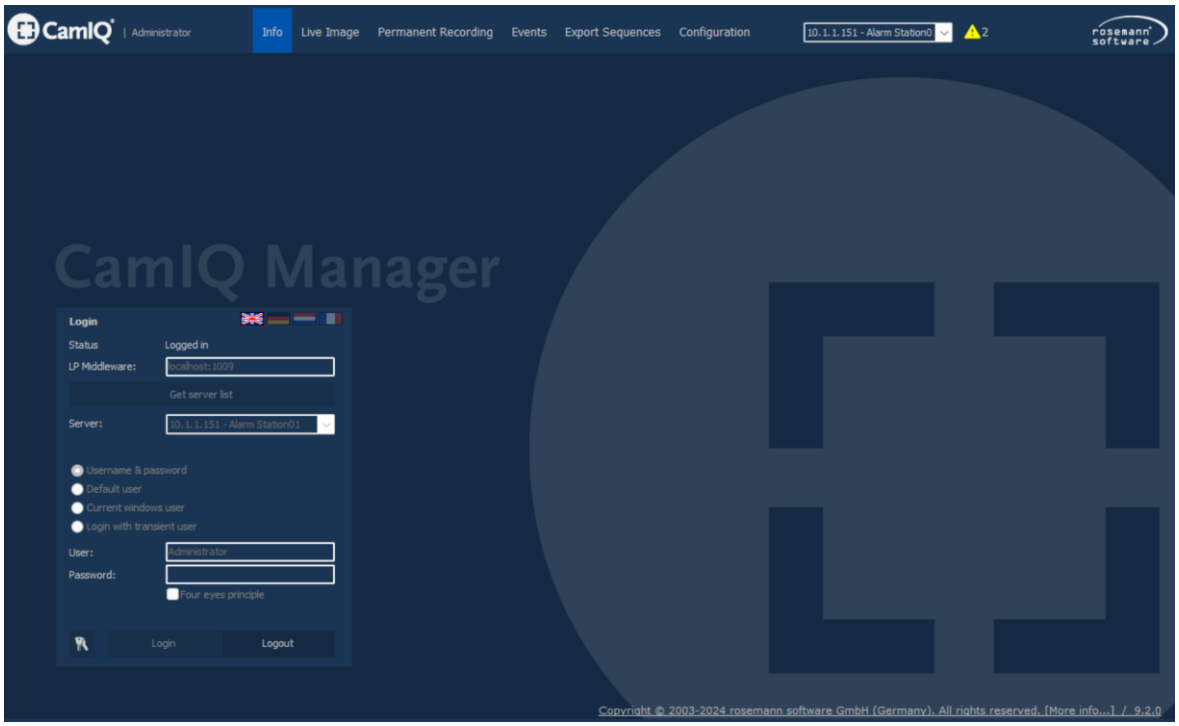
To login in CamIQ Manager in the Info tab:

1. **Language**
   Select your preferred language (German, English, or Dutch) by clicking the corresponding flag.

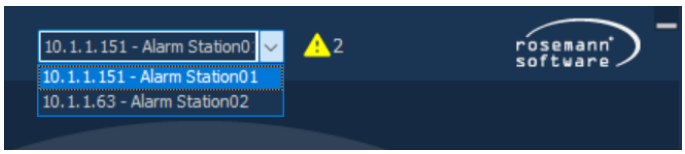
2. **Connect to LP Middleware**
   Under *Connection*, enter the IP address and port of the LP Middleware.

   Typically the LP Middleware is reachable at the address localhost:1009, but this may vary depending on your setup. You can verify this by accessing the CamIQ Gateway Configuration and see the details for the LP Middleware.

3. **Pick a Server**
   Now click on "Get server list" and select the CamIQ server you want to connect to.



You can also select a different server anytime by using the drop-down menu on the right corner.



4. **Bandwidth Optimization (Optional)**
   If enabled in the CamIQ Manager Local Client Settings (by default is disabled), this option optimizes Manager usage for networks with limited bandwidth.

   Only activate the bandwidth optimization in a WAN. It should remain deactivated in a LAN because the picture quality will be reduced.

5. **Password** (Optional)
   By clicking on the keys symbol left of the login button you can change your current password (provided you have been granted the necessary permission).

   After a fresh installation, you can log in using the username "Administrator" without a password. For security reasons we strongly recommend changing this default empty password immediately by navigating to Configuration -> Basic Settings -> User -> User List.

6. **Standard Login**
   Enter valid account credentials in the *User* and *Password* fields and click on the login button. After 10 incorrect login attempts, the login function will be temporarily locked for 15 seconds.

   The Manager supports the four-eye-principle which can be activated by clicking on the corresponding button. When using the four-eye-principle, two passwords are needed in order to connect. The use of this function requires that the user account in question has been configured with a corresponding four eyes password.

   Alternative Login Methods:

   - **Default User**: To login automatically with a standard, pre-configured username, modify the value "*StandardUserName=*" in the CONFIG.INI file in the manager's configuration directory at the address *C:\CamIQ\Manager\Configuration*.

   - **Current Windows User**: Use the active Windows login to authenticate using Windows Active Directory (AD). The application will require access to an AD server (requires an additional CamIQ license and compatible Windows versions). For more information please contact CamIQ Support.

   - **Transient User**: This type of login makes it possible to login using an ABI transponder. The prerequisite for this is a compatible ABI installation and add-on module. For more information please contact CamIQ Support.

If another user with server configuration rights is already logged in, you will receive a warning message. While multiple users can be logged in simultaneously and perform actions without restricting each other, it is recommended that they coordinate their activities. This helps prevent conflicting configuration changes that could inadvertently lead to unintended results.

Start Configuring! Once you are logged in, you can use the various tabs available to navigate to other Manager areas. To open the Manager's configuration section, select the "Configuration" tab.

3.5.2 Active Directory

Active directory is a service developed by Microsoft for domain-based access and can be used to login into CamIQ.

After configuring Active Directory, you must proceed with the following steps:

1. **SPN**
   Register a new Server Principal Name (SPN) for the user intended to utilize the AD login feature. This registration should be performed on the PC where the CamIQ system is running. Execute the following command line from an administrator command prompt, adjusting it with your specific data:

   setspn.exe -S CamIQ_Server_Service/<NameOfPC> <NameOfDomain>\<NameOfUser>

   You can find the name of the PC in the PC-Info section under device specifications. The name of the domain and the user depend on your network configuration and which users you have set up in active directory.

   To check that the SPN has been added correctly, you can run the command:

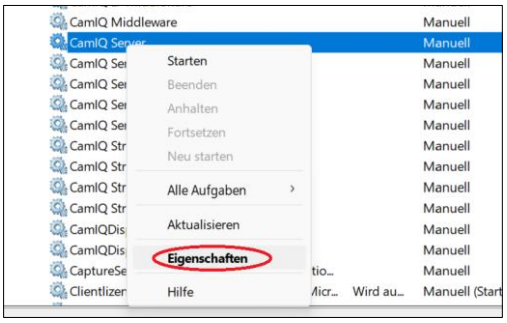
   setspn.exe -L <NameOfTheDomain>\<NameOfTheUser>

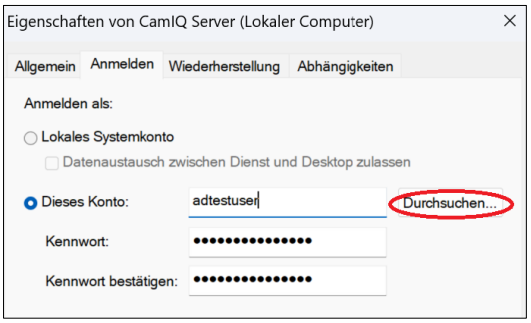
   which will list all SPN for this domain / user.

2. **Server Config**
   The “SPNName=” parameter within the file “CONFIG.INI” found in the server folder (“C:\CamIQ\Server”) must be adjusted with the name of the service and PC:

   [DirectoryService]
   SPNName=CamIQ_Server_Service/<NameOfPC>

3. **Service Login**
   The login configuration of the CamIQ Server service must be adjusted in the services tab. Open the services, select the CamIQ Server service and click on “Properties”.

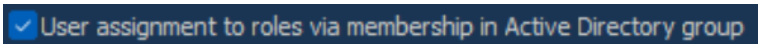




Within the properties, access the Log On tab, select “This account”, and add the Active Directory user. You can use the “Browse” button to help you find users. Additionally, provide the password for this user.

Ensure that the user has enough rights to access the files within the server folder. If the server configuration files are not accessible because of insufficient permissions, the service will not operate properly when using this login method.

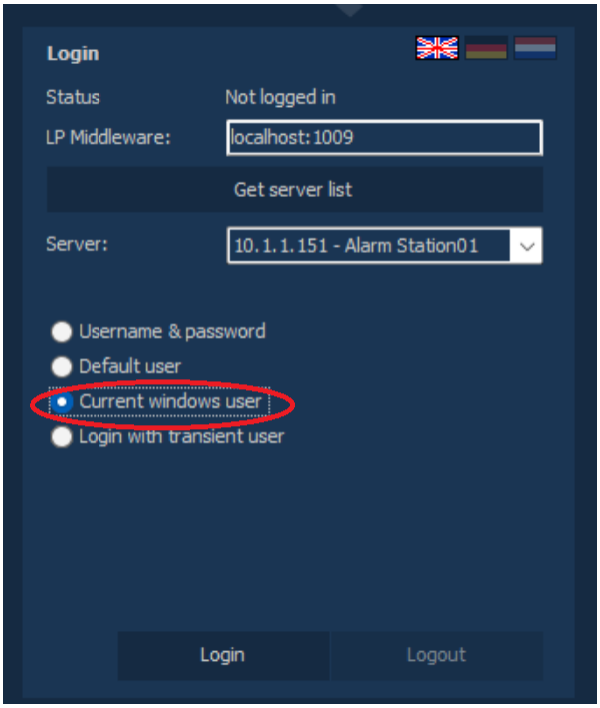
4. **CamIQ Role**
   In CamIQ Manager's Roles tab, add a new role and name it after the Active Directory Group under which the new AD user was registered. Successively tick the checkbox “User assignment to roles via membership in Active Directory group”.

   Upon ticking this checkbox, the manager checks if this is a valid user group. If is valid, the standard  symbol will be displayed, otherwise a warning symbol  will be shown.

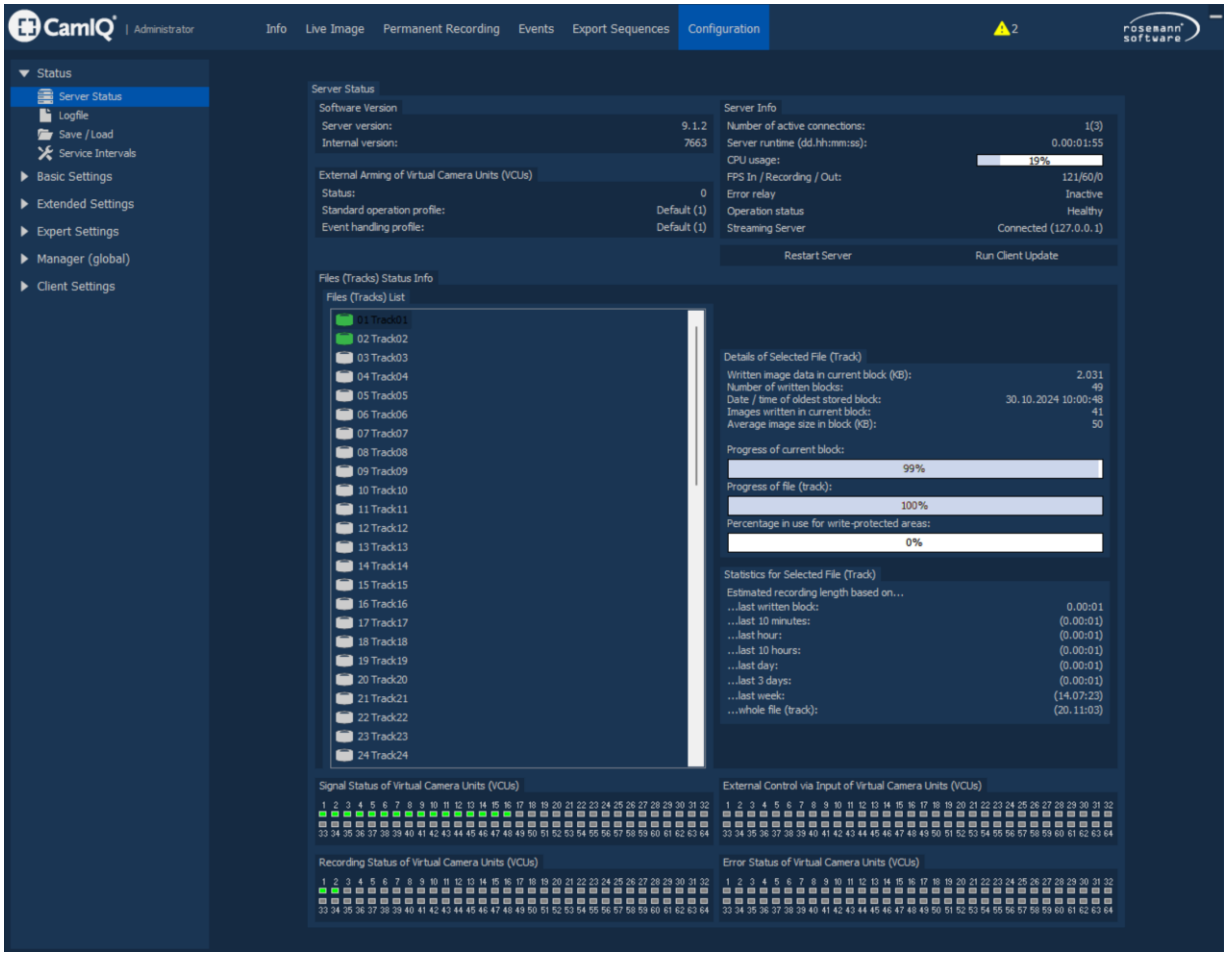
5. **Restart**
   It might be necessary to wait some time or force an update for the changes to take effect. Additionally, restart the AD directory server and local PC after applying the changes.

6. **Login Mode**
   In the login mask of CamIQ Manager, select the option “Current windows user” and click on “Login”.

3.5.3 Server Status

To access server status information, click the *Configuration* tab in the top navigation bar. This will open the *Server Status* menu under the *Status/Info* function group. The *Server Status* menu provides valuable diagnostic information about the server.



- **Server Application Version**
  Version information of the connected server.

- **External Arming**
  This section displays the current status of the external arming. If the status is 0, no arming has been detected, if the status is 1, an arming contact has successfully been established. Additionally, the current standard operation profile and event handling profile are shown.

- **Server Information**: This section displays key information about the server's status

  - **Number of Active Connections**
    Shows the number of users actively logged in. The number outside the parentheses indicates licensed users (those with individual user logins), while the number inside the parentheses represents the total number of logged-in users, including CamIQ system users who are exempt from licensing requirements.

- **Server Runtime**
  Displays the duration for which the server has been running.

- **CPU Usage**
  Indicates the percentage of the CPU's processing power currently being used.

- **FPS In/Recording/Out**
  Shows the number of images the server is simultaneously receiving, recording, and forwarding to connected clients.

- **Error Relay**
  Shows the status of the error relay (Active / Inactive).

- **Operation Status**
  Displays "Healthy" if no server-side track write errors have occurred, and "Unhealthy" if errors have been detected.

- **Streaming Server**
  Show if there is a successful connection to the streaming server.

- **Files (Tracks) Status Info**

  - **Files (Track) List**
    All established tracks. Active tracks are displayed in green.

  - **Statistic information** about the select track will be displayed:
    - The amount of image data in the current block in kilobytes
    - The overall number of blocks written to in this track (up to now)
    - The oldest unlocked image entry in the track
    - The number of images written per block in the track
    - The average block size in the track in kilobytes
    - The number of the current block
    - The progress made writing the current block
    - The progress made writing the current image
    - The amount of the locked areas in proportion to the total track
    - Statistics which evaluate the track's current recording duration and estimate the recording length. The longer the measuring period, the more exact the estimation.

- **Signal Status**
  This indicator displays the signal status of the Virtual Camera Units (VCUs). A green signal indicates a functional analog connection for the corresponding track.

- **Recording Status**
  This indicator shows the recording status of each track. Green tracks are actively recording, while gray tracks are not currently recording.

3.5.4 Logfile / Protocol

The *Logfile* function menu logs many server processes, configuration changes, and status warnings.

- **Filter and navigate** through the protocol pages using the buttons in Navigation

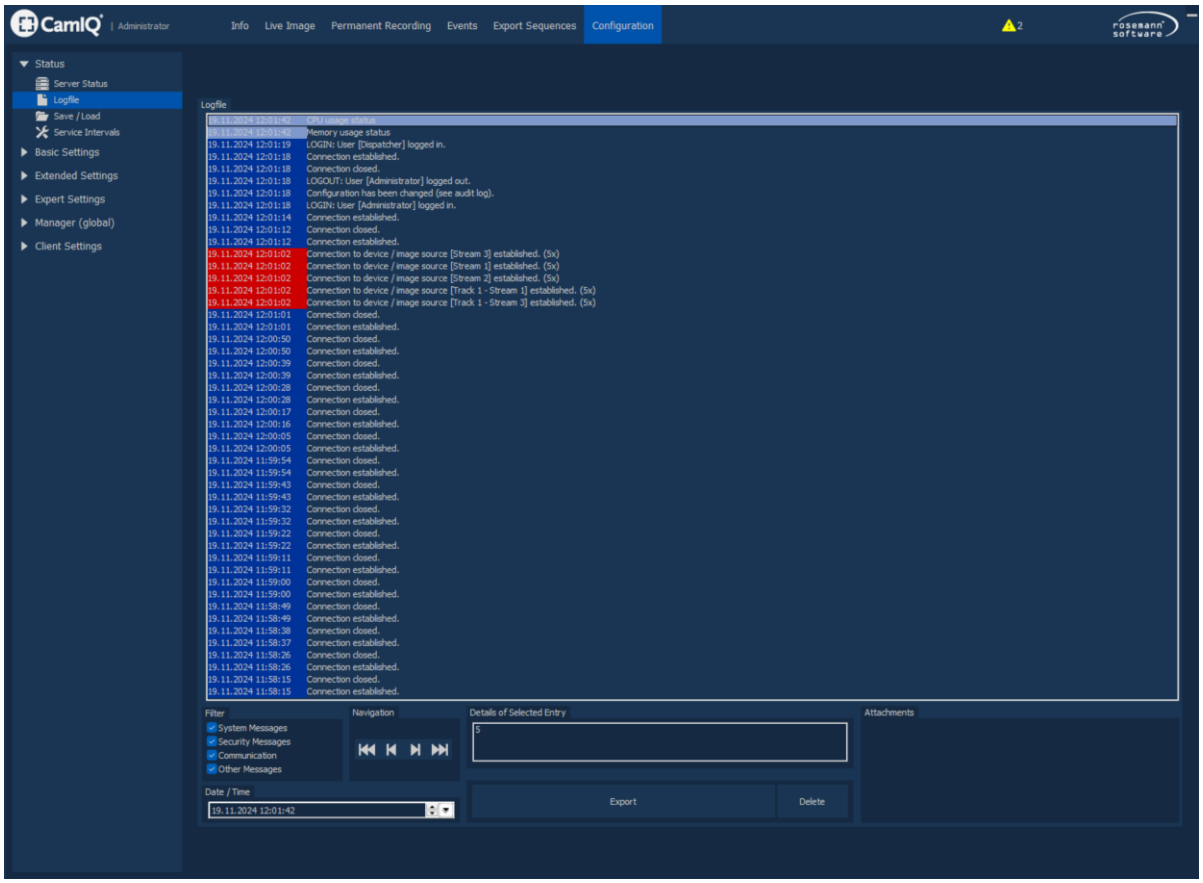
 To the last protocol page (the newest entries)

 One page backward

 One page forward

 To the first protocol page (the oldest entries)

Alternatively use the *Date / Time* field to select a time of your choice to jump to that point in the logs.



- **Logfiles**
  There are several types of log entries, distinguished by color:

- **System messages** (red) indicate actions to the system and connected devices, e.g., starting and shutting down the server.

- **Security messages** (blue) deal with CamIQ internal communication and data security such as the locking or deletion of image data.

- **Communication messages** (green) report the communication to other sites, e.g., the sending of e-mails.

- **Miscellaneous messages** (light blue) do not belong to any of the categories listed above and represent status messages, e.g., CPU and Memory usage.

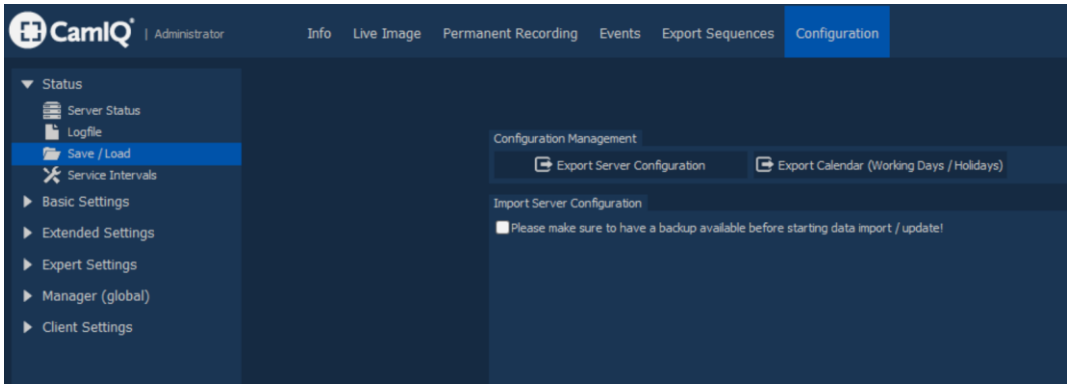
- **Export**
  This button will export the protocol as a text file in a folder of your choice.

- **Delete**
  Delete all the current protocol entries. The deletion of the protocol in itself will be logged and will be the first entry of the new protocol.

To analyze manager issues, we recommend setting the "LogLevel=" parameter in the CONFIG.INI file to "debug". Doing so will generate a more detailed log of application events, including potential issues. The logs are recorded in the app.log file located at the address C:\CamIQ\Manager\logs. This file potentially offers more information than the protocol details displayed in the Logfile menu.

3.5.5 Save / Load

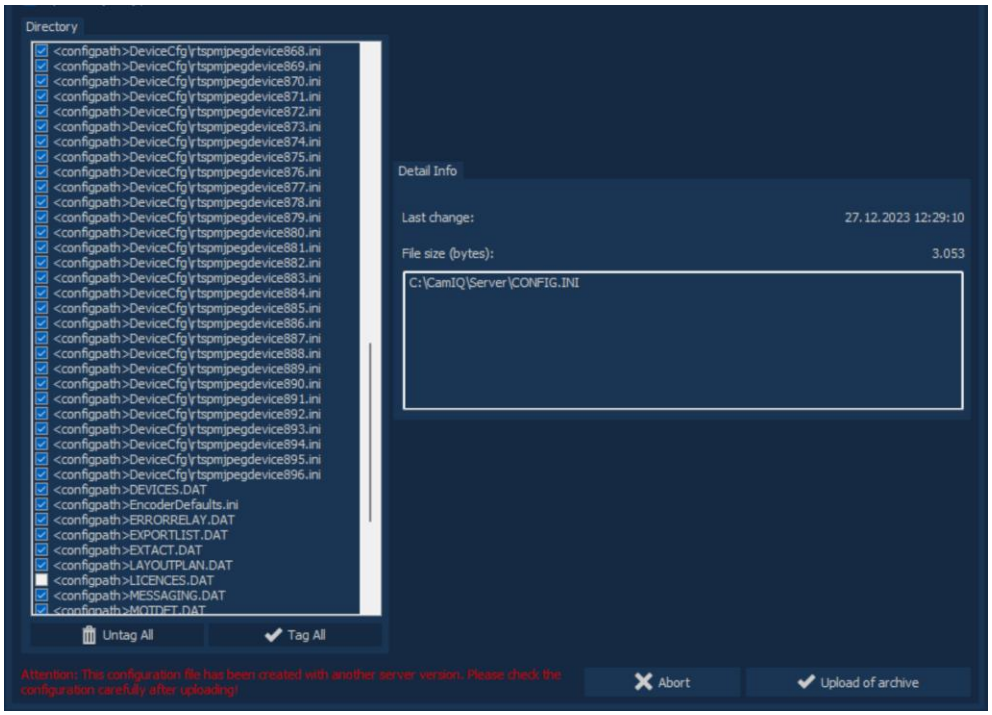
In the *Save/Load* menu, you can export and import the server configuration.



- **Export Configuration**
  Click on the *Export Server Configuration* button and specify the directory and the file name. The exported file will be in CSC format.

- **Export Calendar**
  Click on the *Export Calendar (Working Days / Holidays)* button to export exclusively the calendar settings. A standard CSC will be generated with only calendar info.

- **Import Configuration**
  We advise to export the current configuration before importing a new one. Tick the checkbox “Please make sure to have a backup available” and then click on the "Load Archive" button and select a compatible CSC file. You can select which elements of the imported configuration you wish to really apply and which are to be ignored.



Not all server configurations from previous versions of CamIQ are supported. Using incompatible configurations may result in errors and / or data corruption.

Here is a list of the most common configuration components:

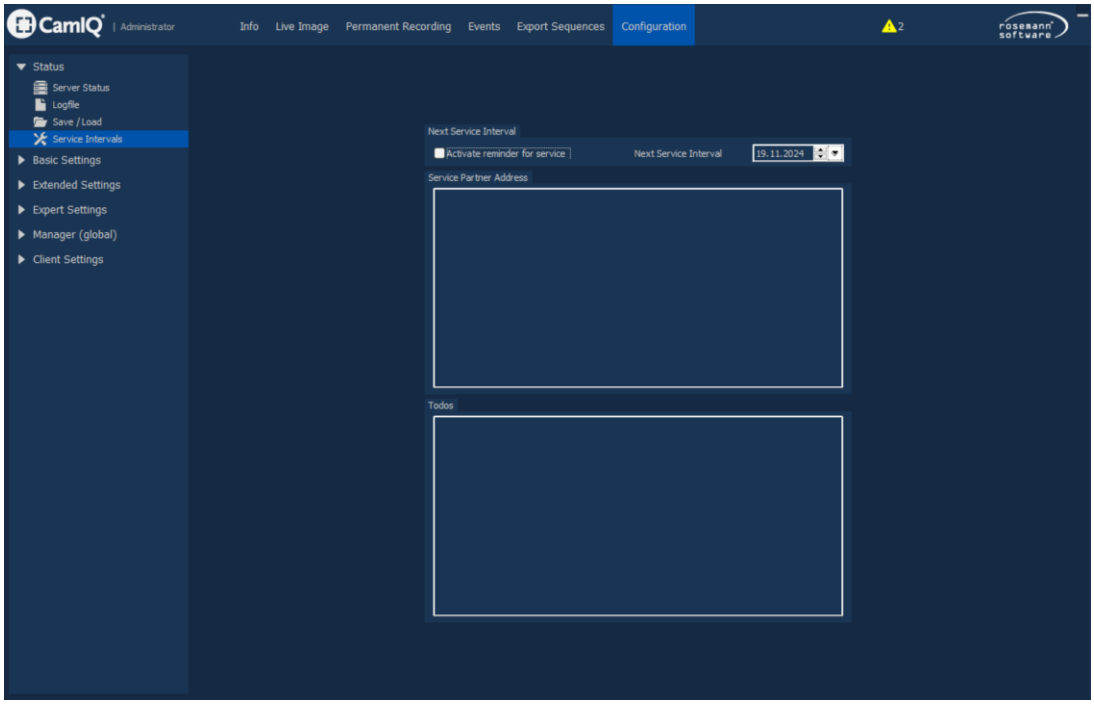
ACCONFIG.DAT:	Configuration for establishing the active connection
ALARMCFG.DAT:	Event handling
CALENDAR.DAT	Calendar
DEVICES.DAT:	Devices/Image sources
ERRORRELAY.DAT	Error relay
EXTACT.DAT:	External arming
LICENCES.DAT:	License *Make certain that you deactivate this entry if you plan to use the configuration file on a device other than the one on which the configuration file was generated!* *This file is linked to the dongle. If another dongle is connected to the computer, the licenses will no longer be accepted!*
MESSAGING.DAT:	E-Mail
MOTDET.DAT:	Alarm zones
PERMANENT.DAT:	Standard operation
PRIVACYZONES.DAT:	Private zones
PTZSERIAL.DAT:	Standard network cameras and tracking
SERVICESETTINGS	The menu service
TRACKADV.DAT:	Further track settings
TRACKS.DAT:	Basic track settings
USER.DAT:	Users

Make sure to always load the files DEVICES.DAT and USER.DAT together! Both files are dependent upon each other for technical reasons. Loading only one of the two files can lead to a corrupted system state!

- **Restart**
  A server restart is required after updating the configuration. Do not shut off the computer while CamIQ is restarting.

3.5.6 Service Intervals

Smooth performance can be guaranteed only when hardware maintenance is carried out regularly. For this reason, the Manager offers you the option of entering the next service appointment along with a description of the work that is to be carried out; the user will be notified when the appointment date has arrived.

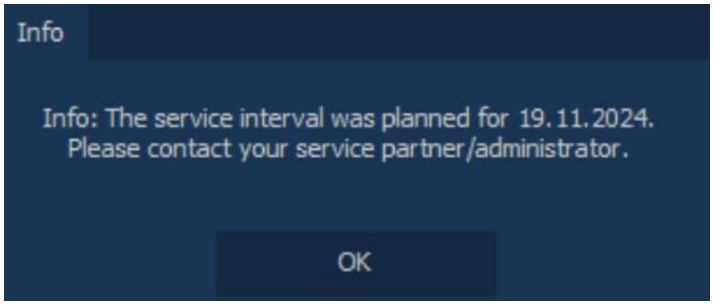


1. **Activate** the reminder function in the *Next Service Interval* field as well as enter the appointment date. When the service appointment is due or exceeded, the date display turns red.

2. **Enter the address** of the servicing company that will be doing the maintenance work in the *Service Partner Address* field.

3. **Enter the actions**, to specify what type of work should be carried out. This way the technician in charge knows precisely what is to be done and can undertake comprehensive maintenance.

A reminder message will appear on the due date after the user has logged in.



3.5.7 Device Configuration

Connecting your cameras to CamIQ requires configuring the devices. They establish the link between the software and your physical camera hardware.

To configure the devices go to *Configuration -> Basic Settings -> Devices / Picture Sources*.

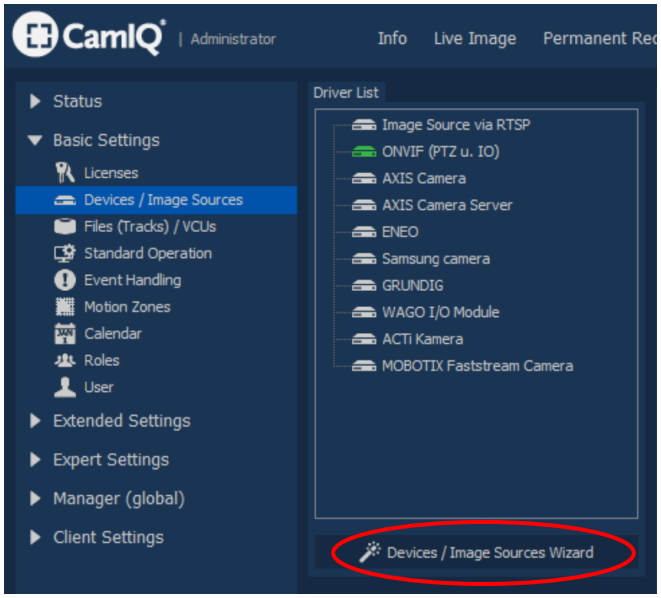
Devices can be configured manually, or semi-automatically using the CamIQ Camera Wizard assistant.

Before configuring the camera devices, please make sure that the cameras are reachable in the network and that they are configured to accept incoming connections over the desired protocol. This can usually be tested by accessing the camera web interface from the computer where the CamIQ Server is installed.

3.5.7.1 Automatic Configuration: CamIQ Camera Wizard

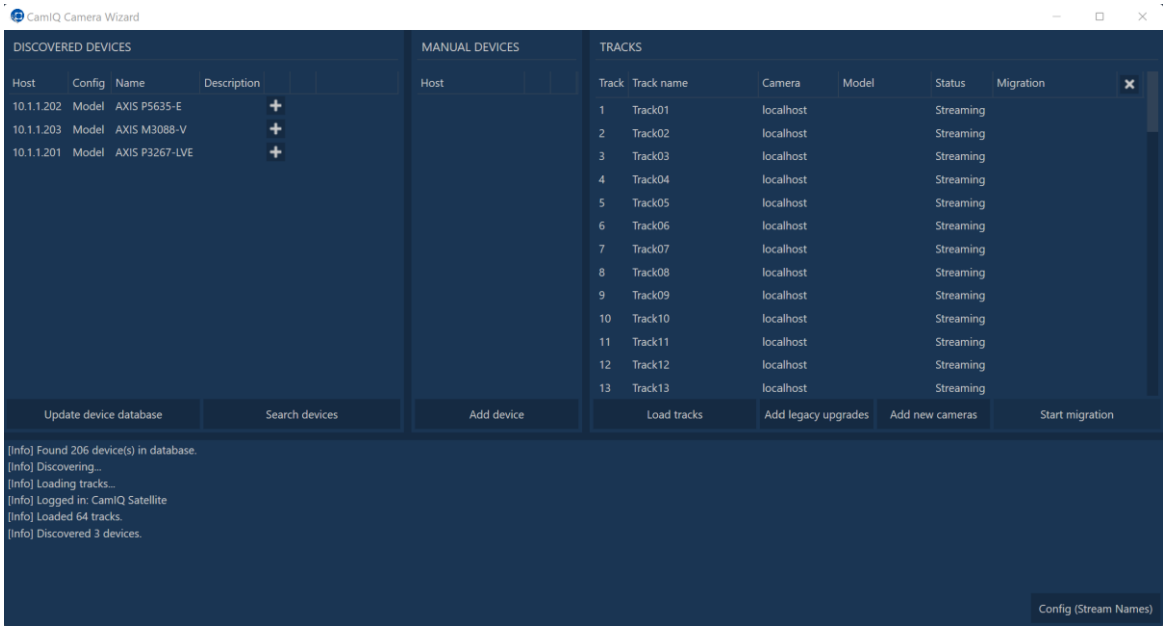
The CamIQ Camera Wizard guides you through the process of configuring your cameras and migrating them into the CamIQ environment. The tool offers a convenient and intuitive way to setup all devices and their track assignments in a single, coordinated configuration step.

- Click on the **Devices / Image Sources Wizard** button under the *Configuration -> Devices/Image Sources* menu to open the Camera Wizard.

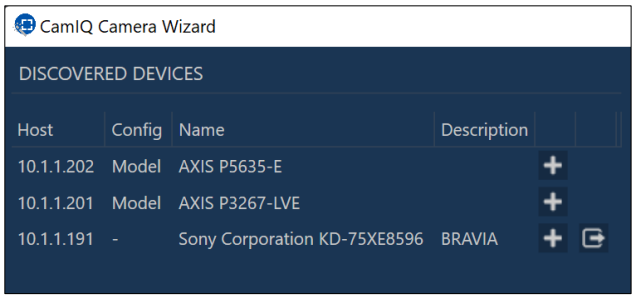


- The Camera Wizard automatically searches the network for available cameras. Please note that only cameras that support SSDP (Simple Service Discovery Protocol, activating UPnP might be required for this to work) or WS Discovery (Web Service Discovery) can be discovered. If a camera doesn't appear in the list, check its network settings to ensure it is properly configured for discovery.

The Camera Wizard is divided into 3 sections: discovered devices, manual devices, and tracks. Additionally, at the bottom of the window, a log of the performed operations is shown.



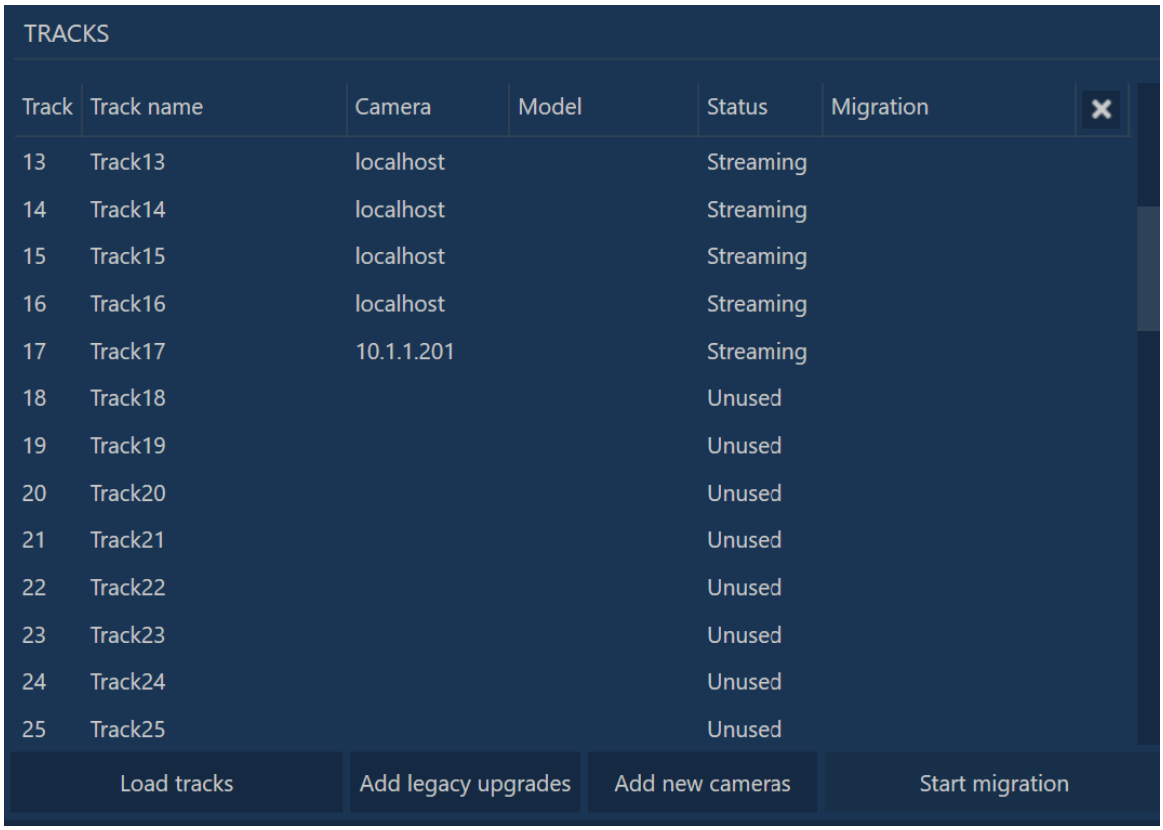
- In the section *Discovered Devices* the following parameters are shown:



  - **Host:** The IP address of the device
  - **Name:** The name of the device
  - **Config:** Reports whether the device is known and present in the database
    - "Model": A configuration is available for this specific model.
    - "Vendor": A generic manufacturer configuration is available, but not for the specific model
    - "-": No configuration is available.
  - **Description**: The device description.

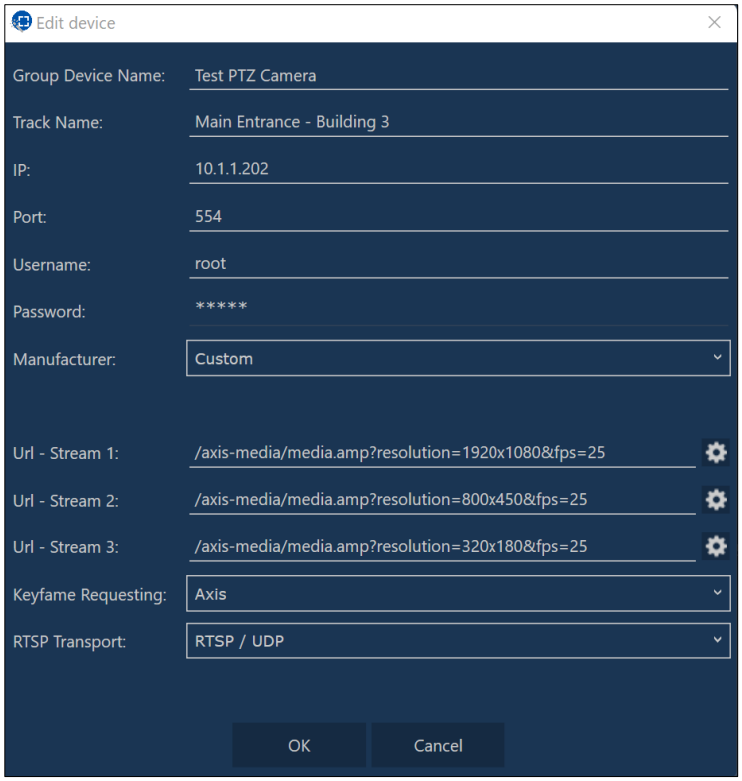
- In the section *Manual Devices*, the user has the possibility to add and configure a device which was not found by the discovery process. Simply click on the “Add device” button and enter all the information. This option provides the highest level of customization, allowing you to name the track and group, as well as adjust the RTSP parameters of all streams.

- In the *Tracks* section, the available tracks alongside their current configuration and camera assignment are shown.



  - **Track:** The number of the track
  - **Track Name:** The name of the track
  - **Camera:** The IP address of the camera to be configured.
  - **Model:** The model of the camera to be configured
  - **Status:** The current status of the track
  - **Migration:** The current migration scenario to be performed

- **Adding Cameras**: Click on either the + button in *the Discovered Devices* section or the "Add device" button in the *Manual Devices* section to configure a new camera



1. Enter a descriptive **Group Device Name**. The name of group representing different resolution streams from the same camera source.

2. Enter a descriptive **Track Name**. This is the name that will be assigned to the track. Default is Track01 for the first track, etc.

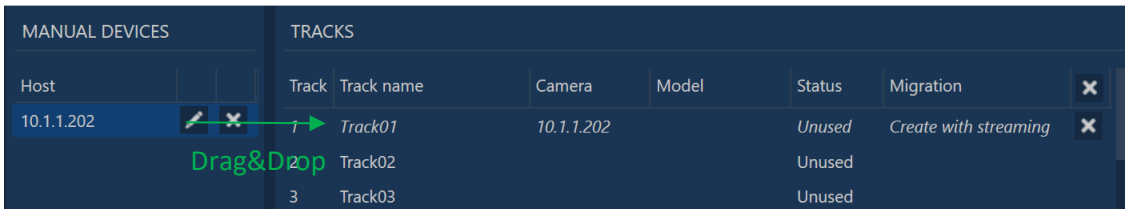
3. Enter the **camera details**: IP Address, port, username, password.

4. **URL Request Strings:** Confirm pre-selection, edit, or create new custom URL request strings for your camera. Use the manufacturer and model dropdowns to find pre-configured options matching your camera. You can use the ⚙ button to open the RTSP Universal Config tool and check the request strings.

5. **Transport Method:** Confirm or modify the transport method to be used for the video streams.

6. **Check and Save:** Control your input and click "OK" when you are done. Please note that if configuration information is missing or deemed unusable the OK button will not be clickable. The new device will appear in the manual devices section.

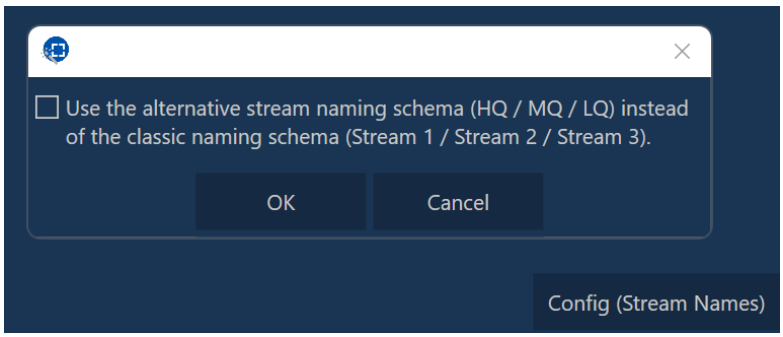
7. **Track assignment:** Drag&Drop your newly generated device to the desired track within the Tracks section.



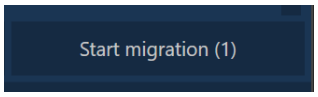
In case of a mistaken Drag&Drop, e.g., wrong track, please select the ✖ *button to cancel and reset the assignment.*

8. **Repeat for all cameras:** Configure all cameras as required.

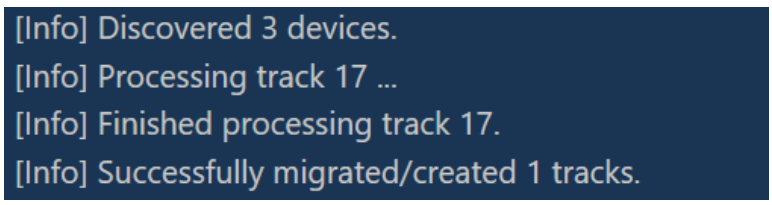
9. **Naming style:** By default the Camera Wizard creates the streams with the naming schema "Stream 1", "Stream 2", "Stream3". If you would rather use the schema "HQ", "MQ", "LQ", please tick the checkbox offered by the button *Config (Stream Names)* at the right bottom corner of the interface.



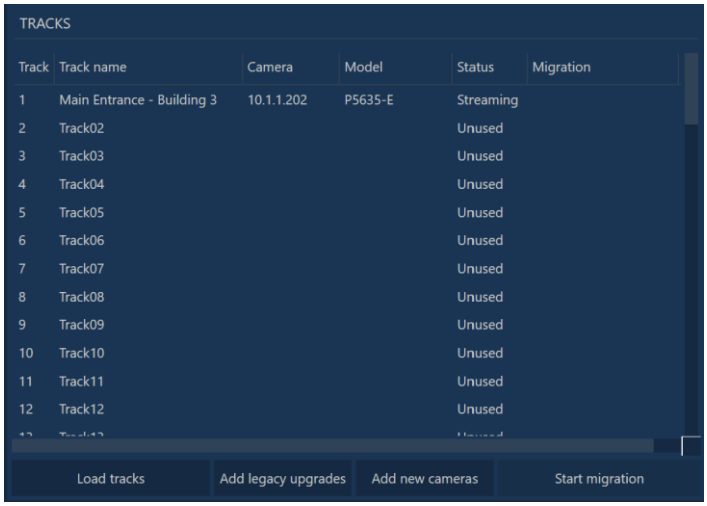
10. **Apply:** Click on the "Start Migration" button to apply all the configured devices to their respective tracks.



11. **Check the log:** All operations are recorded in the log section at the bottom of the interface. Check the status of the migration in the log window and wait till is completed.



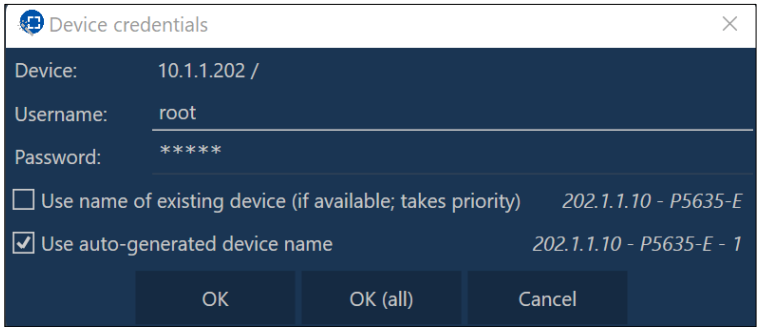
12. **Check the tracks:** Click on the *Load tracks* button and check the newly created tracks assignments.



13. **Close**: To go back to the CamIQ Manager window it is necessary to close the Camera Wizard, as otherwise the Manager UI will not be interactable.

14. **Done**! : The Camera Wizard created the devices and also the track assignments.

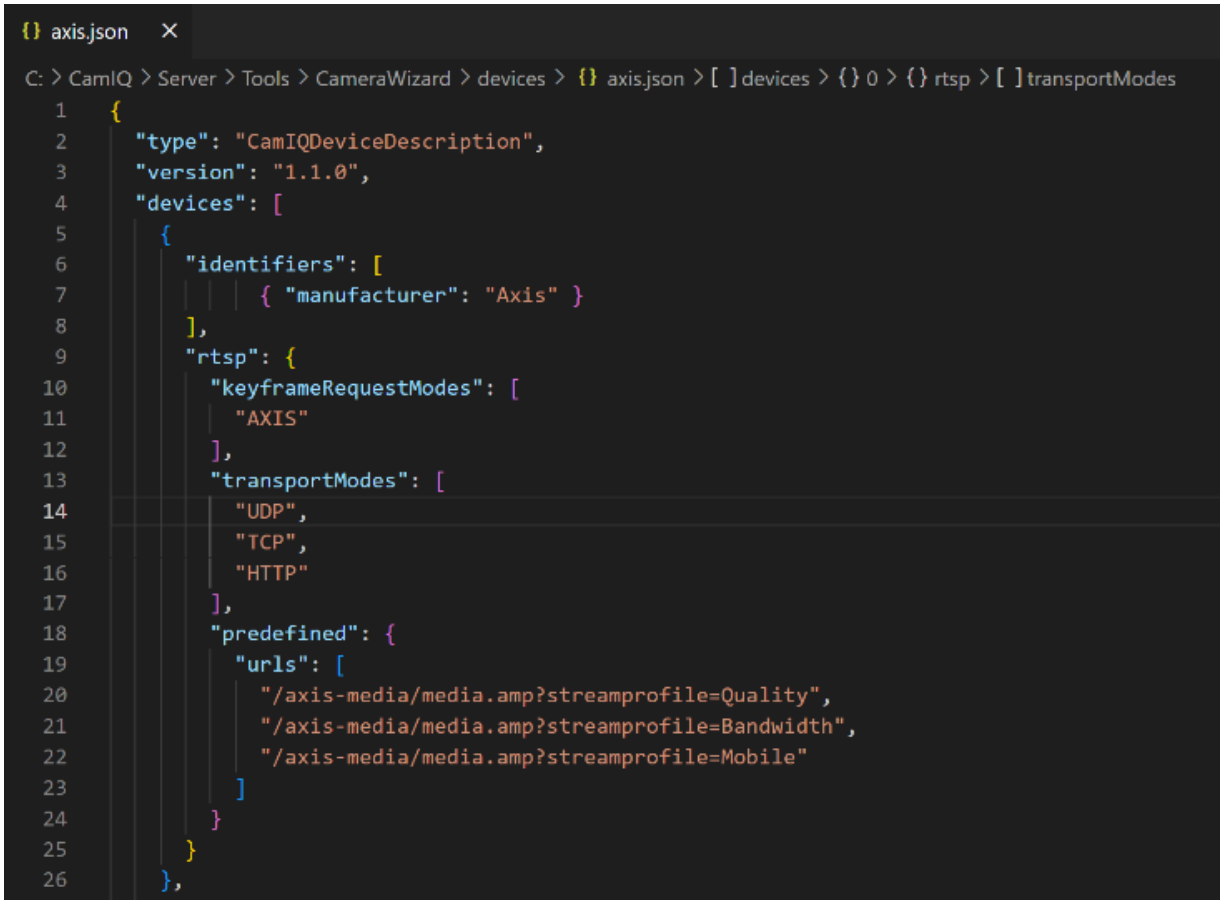
Alternatively, for cameras which have known configuration, steps 1-6 can be skipped. Simply drag a camera from the Discovered Devices list and drop it directly onto the Track where you want to place it. If you chose for this alternative method, the system will automatically create a default group and track name based on the camera's reverse IP address and model (e.g., 202.1.1.10 – P5635-E, Track01). Default RTSP request strings will also be applied. The camera credentials will be requested by a popup window upon starting the migration.



- If all of your configured cameras scheduled for migration share the same login credentials, you can use the “OK (all)” button to automatically set the login details for all devices.

The Camera Wizard builds on a database of pre-configured camera settings to help you configure your camera devices. The dataset is divided into general devices, located in folder *C:\CamIQ\Server\Tools\CameraWizard\devices*, and project-specific devices, located in folder *C:\CamIQ\Server\Tools\CameraWizard\devices-custom.* Provided you have access to an active internet connection, you can update the general devices using the "Update device database" button. Advanced users can add additional devices or edit existing ones in the project-specific folder. The settings in the devices-custom folder have priority over those in the general devices folder. Any modifications should be made in the custom folder and not in the general folder, as otherwise they will be overwritten when the database is updated or CamIQ is upgraded to a newer version.

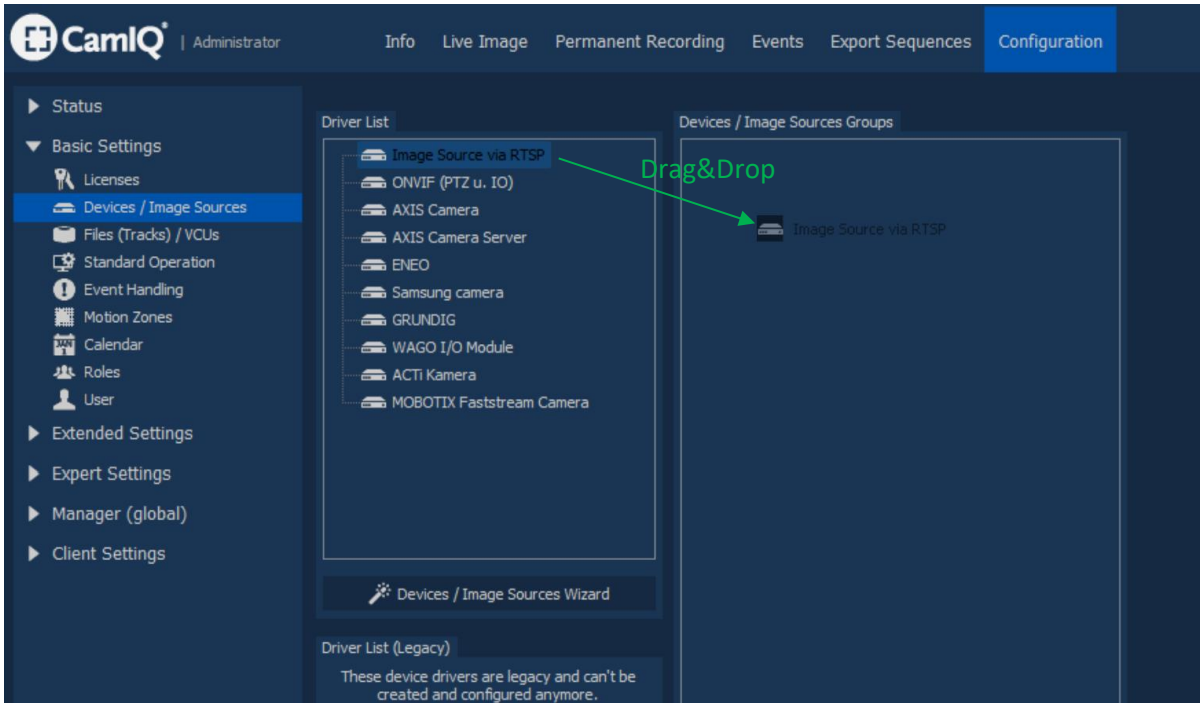
[Advanced User] *To create a new entry for a camera which is not present in the database, please add / copy-paste the JSON structure and modify the fields according to your preferences. The predefined URLs list shows the streams in order, i.e., from 1 to 3. A new file JSON must be created if the manufacturer is not known. It is advised to separately test the request strings with the RTSP Universal Config tool in advance to verify that they work.*



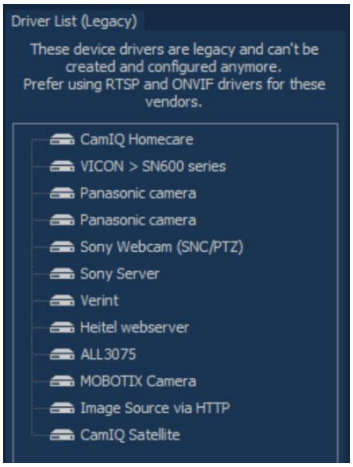
3.5.7.2 Manual Configuration

While the Camera Wizard offers a quick and easy setup process, manually configuring your device allows for more precise control over settings and features. However, this method requires a deeper understanding of camera parameters and may take longer to complete. In some cases, the Camera Wizard may not support all devices or camera features, making manual configuration necessary.

To configure a device select a driver from the *Driver List* and drag & drop it with the mouse in the *Devices / Image Sources Groups*.



For most standard cameras, selecting **Image Source via RTSP** (Real-Time Streaming Protocol) is recommended. However, depending on your camera's manufacturer and desired features, a different type of driver may be necessary. Upon creating a new driver, a configurable window will appear on the right.



Some drivers are listed as legacy. Legacy drivers are no longer supported for configuring new cameras but remain accessible for existing setups.

Even if your camera manufacturer is specifically listed with its own custom driver, it does not mean that you should use that driver to configure your camera. The driver to be used depends on the desired feature. For instance, to setup a new AXIS camera for standard video data, select the Image Source via RTPS driver. However, if you require PTZ or I/O functionality, use either the AXIS Camera driver or the ONVIF (PTZ u. I/O) driver. The standard Image Source via RTPS driver does not support these features.

The following will explain the setup options of the Image Source via RTSP driver.

The *Basic Settings* window shows the following configurable information:

1. **Active**: Toggle this to activate the device after completing the configuration process. Only when active will the device connect to the camera and retrieve video data.

2. **Device ID**: This is a unique, system-generated identifier for the device. It serves as a reference within the system.

3. **Device / Image Source**: Assign a descriptive name to the physical device it belongs to, e.g., “Storage Room” or “Entrance - Main Building”.

4. **Name**: Provide a descriptive name for this specific camera stream, e.g., “Full HD – Rec”.

   The same camera / video source is typically configured with two or three streams of different resolutions and configurations. Those streams server different purposes, e.g., one for recording and another one for polling and detection.
   It is highly advised not to use a single stream for everything because this would overburden the CPU and deny the possibility to resort to a fallback stream should the main stream become unavailable.

5. **TCP/IP address**: Enter the IP address of the device. If a port is necessary, you can add this to the IP address by using a colon, e.g., 192.168.0.1:80.

6.  : This button opens a link to the web interface of the device. The username and password of the device must be entered separately by the user in the web browser interface.

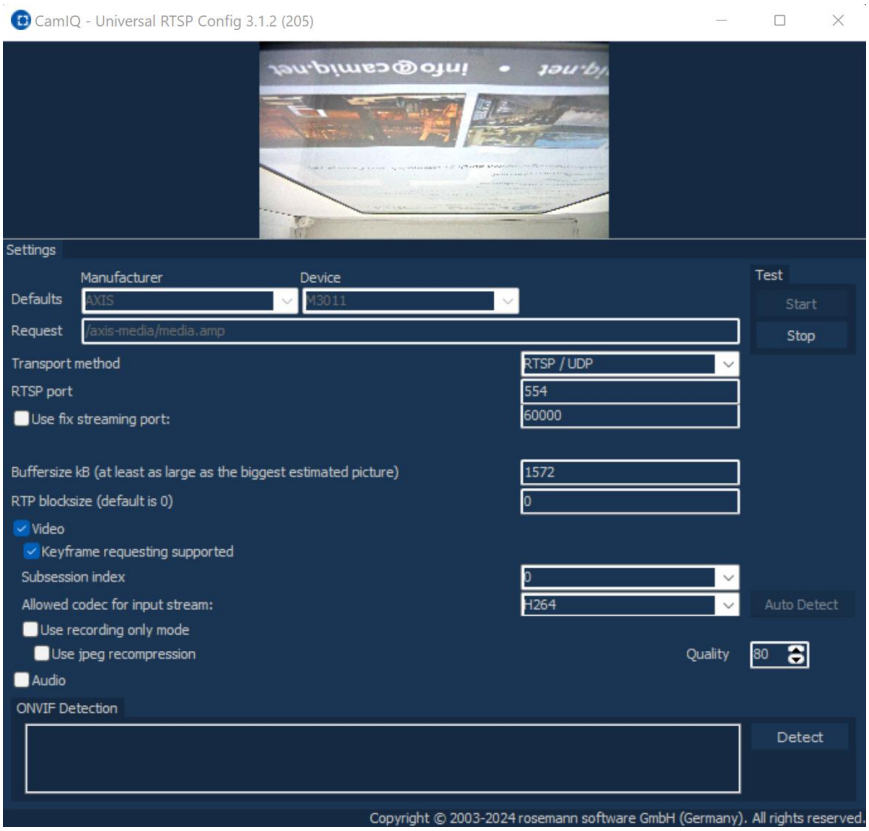
7. **User**: The username of the camera user. This is the same username that is used to login within the camera web interface.

8. **Password**: The password of the camera user. This is the same password that is used to login within the camera web interface.

9. **Continuous check device availability**: Check this if you want the device to be constantly monitored.

10. **Device / Image Source Setup**: This button opens the **CamIQ Universal RTSP Config tool**. The tool is used to configure the request string and other parameters which are required to retrieve data from the physical device.

    The tool will only work if the IP, username and password are entered correctly, otherwise it will be unable to connect to the device.



Defaults: The **Manufacturer** and **Device** fields include predefined request strings to help with the initial setup if the device's RTSP URL is unknown.

Request: The CamIQ Universal RTSP Config tool interacts with compatible devices through this field, which specifies the RTSP URL string needed to access device data and functionality.

The request string is not defined by CamIQ, rather by the API of the camera manufacturers. For example, many devices produced by the camera manufacturer AXIS have a base request string with the following format: "/axis-media/media.amp". This base AXIS-specific string can be extended by listing several parameters, e.g., resolution and frame per second, giving as result the string: "/axis-media/media.amp?resolution=1920x1080&fps=25". The extensions are also defined by the camera manufacturer.

Different manufacturers have different request strings. Please search in the online documentation of your camera manufacturer for more information about the RTSP URL request string of their cameras and how to configure them.

Transport Method: Select the protocol and security level which should be used to connect to the camera. Depending on the choice of transport method it might be necessary to adjust the camera network settings in the camera web interface.

RTSP port: Specifies the port used for the RTSP connection. The default port number varies depending on the selected transport method. You can adjust this setting according to your network configuration.

Buffersize: This setting determines the amount of memory allocated for temporarily storing picture frames. Set this value to at least the size of the largest expected frame. The unit is kilobytes (kB). The default value is 1572 kB.

About the buffer size:

- If the buffer size is too small, you may experience artifacts, such as visual distortions, in the lower portion of the image (as shown in the left picture). This occurs because the buffer doesn't have enough space to process the entire image.

- If the buffer is too high, this will consume unnecessary resources.

The buffer is stream specific; this means that if you experience artifacts in your recorded video is likely sufficient to adjust your top resolution stream.

Video: By default on, this option allows you to capture video data. If your device serves a different function, you can disable it.

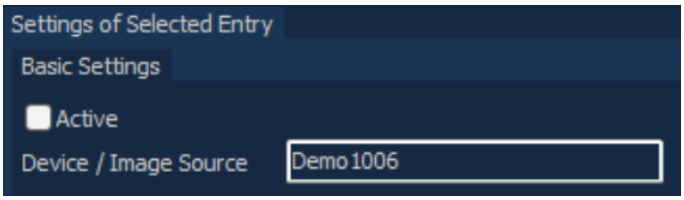
Allowed codec for input stream: This field specifies the codec for the input stream, e.g., H264 or JPEG. The *Auto Detect* button can be used to automatically detect the codec used by the stream.

Use recording only mode: This flag serves for internal optimization purposes and should be toggled on for all streams which are not directly used for Polling / Detection.

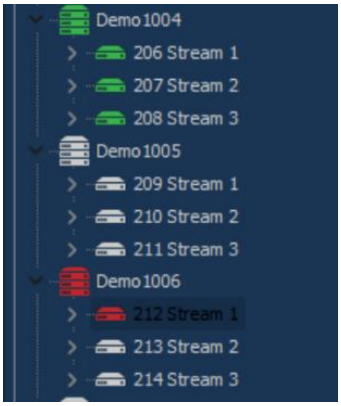
ONVIF Detection: If the camera supports ONVIF, is possible to call the ONVIF API to retrieve ONVIF-standard video request strings using the button **Detect**.
ONVIF stands for Open Network Video Interface Forum and is an open industry standard that promotes a common data framework and development interface between camera devices from different manufacturers.

Use this option if you cannot access the stream using the manufacturer's specific RTSP URL. Clicking "Detect" will generate a list of ONVIF-compatible video request strings. Double-clicking on a string automatically imports it into the Request field above.

After the configuration is complete, close the RTSP Universal Config Tool. Activate your driver by double-clicking its icon or selecting the "Active" checkbox.



Device drivers will display the following colors:



Green: Device is active and physical device can be pinged.

Red: Device is active but the physical device cannot be pinged.

Gray: Device is inactive.

A green status indicator only means the device is reachable on the network. It does not guarantee proper functionality!

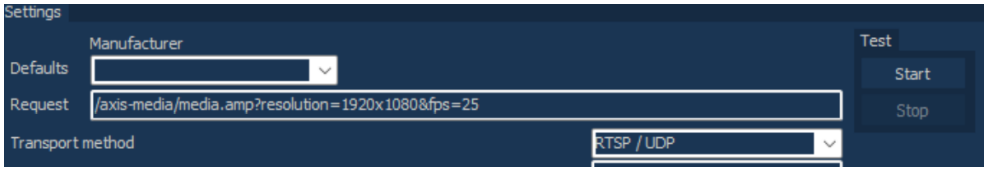
3.5.7.3 Example: AXIS P5635-E Camera with 2 streams and ONVIF PTZ

1. Drag&Drop the *Image Source via RTSP* driver in the devices list

2. Configure the Basic Settings
   - Enter a descriptive Device / Image Source group name, e.g., “Main Entrance”
   - Provide also a stream-specific name, e.g., “HR – Full HD”
   - Enter the details of the camera (IP address, username, password)

3. Click on Device / Image Source Setup, which will open the Universal RTSP Config tool

4. Type in the field Request the string */axis-media/media.amp?resolution=1920x1080&fps=25*

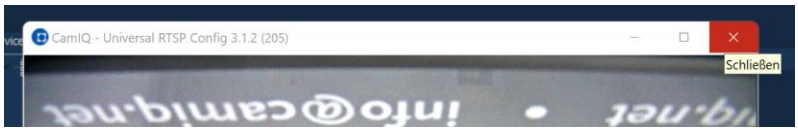


5. Press the Auto Detect button to determine the codec (H264)

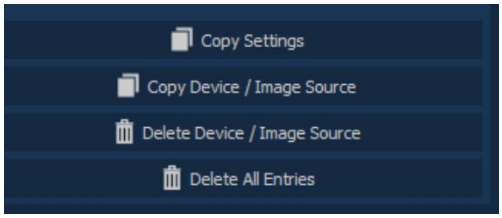
6. All other parameters are left to the default values

7. Click on Start to verify if the stream works correctly

8. Close the Universal RTSP Config tool. CamIQ Manager will not respond to other commands till the tool is closed!

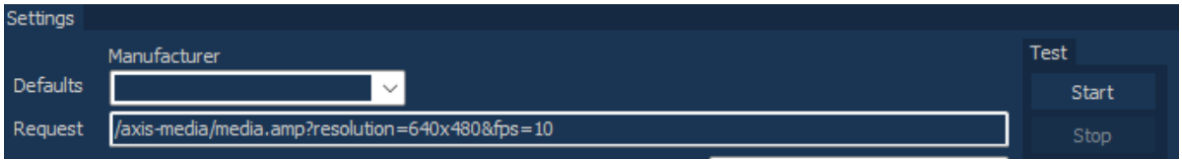


9. Select the entry and click on the button *Copy Device / Image Source*. This is to save time and not type again the same camera details and other shared settings



10. Select the new, copied driver and rename the stream to “LR – 480p”

11. Open the Universal RTSP Config tool and modify the string with a 640x480 pixels resolution and 10 frame per second: */axis-media/media.amp?resolution=640x480&fps=10*

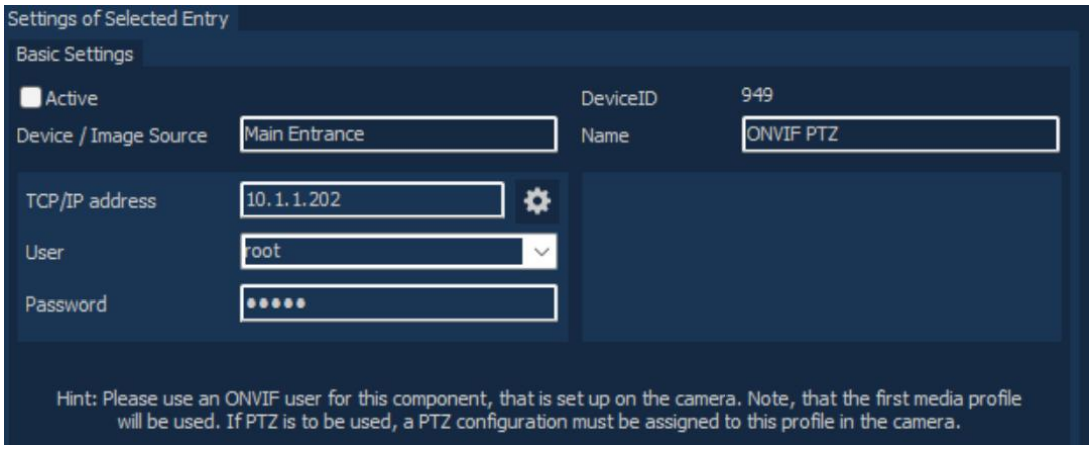


12. Verify that it works and close the tool

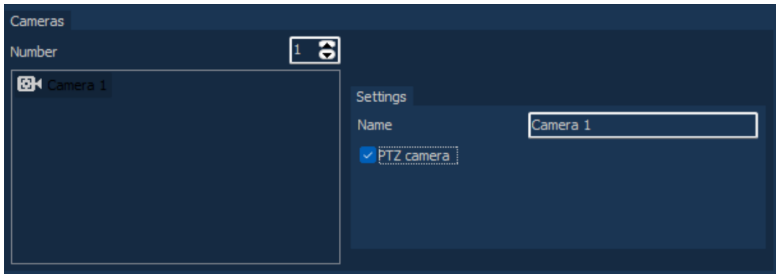
13. Drag&Drop an ONVIF (PTZ u. IO) ONVIF (PTZ u. IO) driver from the list

14. Assign the same “Main Entrance” group name and use the “ONVIF PTZ” for the stream name

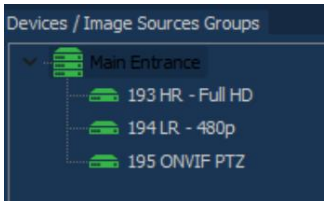
15. Enter the camera details (IP address, username, password)



16. Toggle the PTZ camera checkbox



17. Double click on the device group to activate all three drivers



18. The configuration steps of the devices are concluded! Two streams with two different resolutions and a PTZ driver have been setup.

While the configuration of the devices is completed, there are still no images to see or functionalities to use because the devices have not yet been assigned to a track. Please refer to the Track Configuration section for how to proceed after these steps.

3.5.7.4 Example: AXIS Q1635 Audio Driver

To configure a driver for an AXIS Q1635 camera which is able to capture audio, follow the standard steps for the image drivers, and additionally create a separate audio driver:

1. Drag&Drop the *Image Source via RTSP* driver in the devices list

2. Configure the Basic Settings

3. Click on Device / Image Source Setup, which will open the Universal RTSP Config tool

4. Type in the field Request the string */axis-media/media.amp?videocodec=h264&audio=1*

5. Deselect the Video checkbox 

6. Select the Audio checkbox 

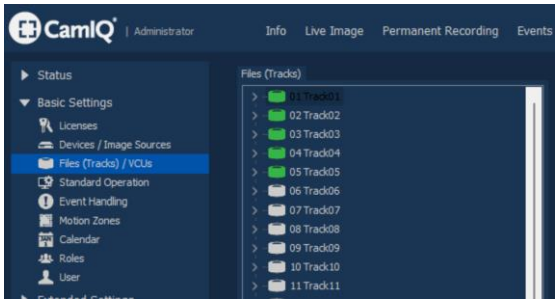
7. Press the Auto Detect button to determine the codec (H264)

8. Click on Start to verify if the audio stream works correctly (only audio, no images)

Additional steps in the Tracks and Standard Operations sections are required for the audio function to work.

3.5.8 Track Configuration

In the *Files (Tracks) / VCUs* tab the user can setup the tracks / VCUs. A virtual camera unit (VCU) handles the various aspects of video processing within the software, including managing different video streams and accessing camera functions. This is a fundamental step and is required to access, store, export, and manage the video data.

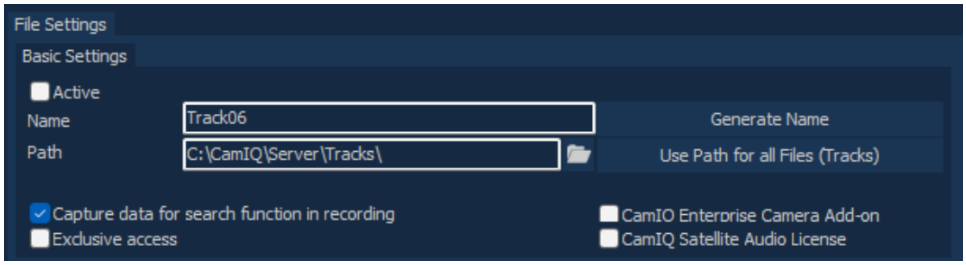


Your CamIQ license includes a set number of tracks, up to 64 per server. You can view and manage these tracks in the Files (Tracks) window.

Tracks are color-coded. Active tracks will be displayed In green, inactive tracks in gray, and tracks which are set to active but are currently inactive, in red.

To set up a track:

1. **Basic Settings**:



Name: Give your track a descriptive name. If devices are already assigned to it, click on the "Generate Name" button to automatically name the track based on the devices assigned.

Path / Storage: Select a path where to store the video data using the  button. This is typically an external hard drive.

Track paths can only be modified using a local Manager instance running on the same machine as the server. The changes will take effect only after the server is restarted.

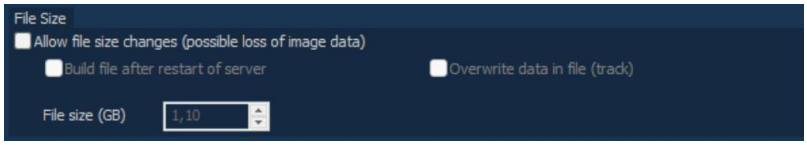
Capture Data for Search Function: Enable this option to use the search function in Permanent Recordings. By defining a region of interest (ROI) within an image, you can initiate a search that will identify and display all instances of activity occurring within that selected area. This significantly simplifies video review and analysis.

Exclusive Access: Enable this flag to restrict access to the selected track to users with exclusive access permissions configured in their user settings.

CamIQ Enterprise Camera Add-on: Enable this option if the track should also be used in the Enterprise client.

CamIQ Satellite Audio License: Activate the audio functionality for this track. For this purpose, an additional license and corresponding compatible audio-capable device (intercom, for example) will be needed.

2. **File Size**:



Allow file size changes: This checkbox is there to prevent accidental mis-clicks or unplanned changes to the video track size. Adjusting the track size can result in the loss of video data. Please carefully consider your changes before proceeding.

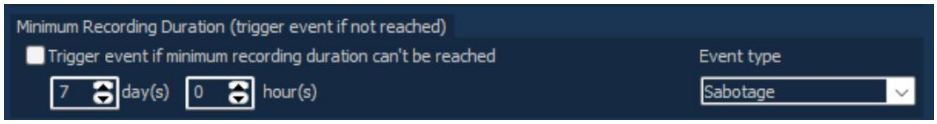
Build file after restart of server: Selecting this option will perform a quick format of your track. This process erases existing image data and rebuilds the track upon server restart. The checkbox will automatically unselect itself after the restart.

Overwrite data: Use this option together with the previous rebuilt track option if you want to thoroughly overwrite the current track video data instead of just quickly reformatting it.

File Size: Define a file size for your track. This will determine how many gigabytes will be made available for saving the data of the selected entry. A value between 0.1 and 2048 GB must be selected. Make sure to not assign a value exceeding the available hard drive space.

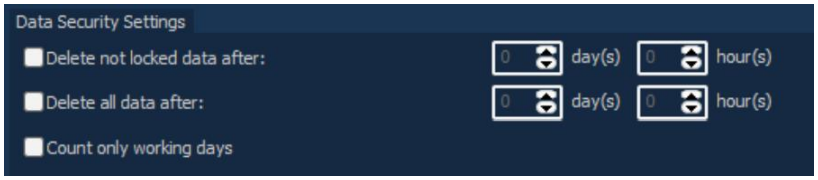
This system uses a ring buffer storage method. When the allocated storage reaches its limit, older data will be automatically overwritten to accommodate new recordings. To prevent loss of important data, set an appropriate file size limit for your track.

3. **Minimum Recording Duration**:



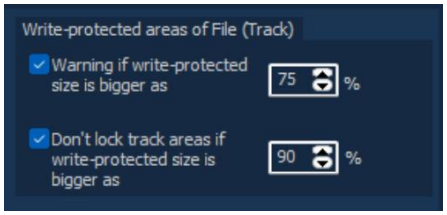
Enable this option to receive a notification when your current track size settings are insufficient to store recordings for the specified duration. You can configure an alarm for this event, allowing you to respond promptly and adjust the storage settings accordingly.

4. **Data Security Settings**:



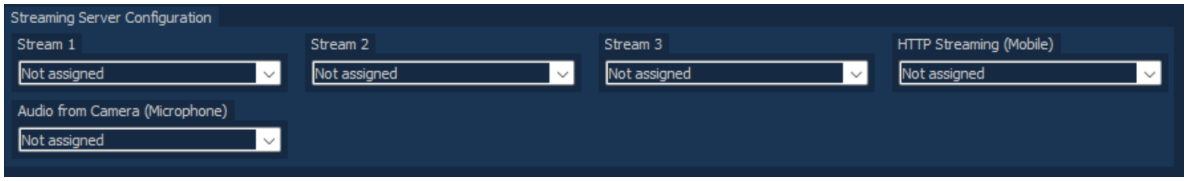
This feature helps you comply with privacy and data security regulations. Enabling this option allows you to automatically delete stored data after a predetermined period. You can define if all weekdays or only working days should be taken into consideration.

5. **Write-Protected Areas**:



Enable this option to limit the locking of image data. Locked track areas are no longer available for storing new data (ring buffer storage). If the configured locking level is reached, the warning will be visible in the Live Image. This safeguard prevents excessive locked areas, which can hinder normal storage operations.

6. **Streaming Server**:



In this window you can define camera streams for the streaming server. Only cameras supporting the H264 codec over RTSP are compatible and should be configured here. The streaming server does not support older cameras that offer only JPEG streaming.

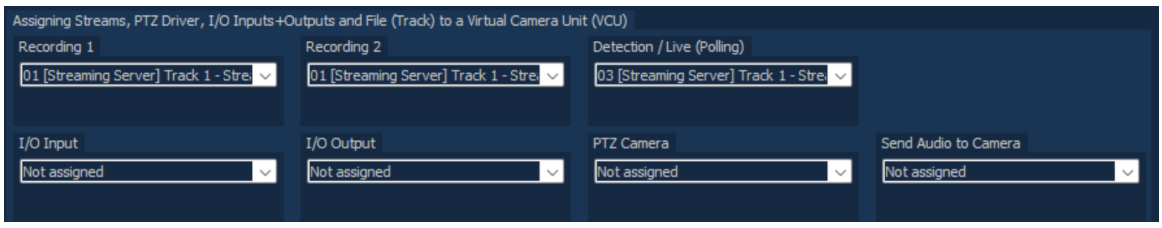
What is the Streaming Server? It is a CamIQ module used to bypass camera hardware and network limitations. It allows for more simultaneous streams than the camera natively supports, providing both computational and functional benefits.

For instance, imagine two separate modules requiring access to the same camera feed. Typically, each module would need its own direct connection to the camera. However, with CamIQ's streaming server architecture, the camera only establishes a single connection to the server. The server then efficiently distributes the required data to all connected modules, eliminating redundancy and optimizing resource usage.

Right click on the field or use the drop-down menu to select a device. It is not necessary to configure all streams. Configure them from the highest to the lowest resolution, e.g.:

	Example 1	Example 2
Stream 1	*1920x1080 (Full HD) pixels*	*1920x1080 (Full HD) pixels*
Stream 2	*640x480 pixels*	*640x480 pixels*
Stream 3	*320x240 pixels*	*Empty*
HTTP Streaming (Mobile)	*320x240 pixels*	*Empty*
Audio from Camera (Microphone)	*Audio driver*	*Empty*

7. Assign:



In the "*Assigning Streams, PTZ Driver, I/O…*" section assign the devices and streaming server drivers to a VCU.

Recording 1: Select the device driver to be used for recording. Typically, this is the 1st streaming server stream, or the highest resolution JPEG stream.

Recording 2: Select the device driver to be used for alternative recording. Alternative recording can be activated using the calendar or the external arming function.

Detection/Live Polling: Select the device driver to be used for detection and live polling (the fallback stream). Detection is required for the search function in permanent recordings. This stream should have a relatively low resolution, as otherwise it might overburden the CPU. It is suggested a resolution of 640x480 or lower. For an ideal compromise between search accuracy and computational efficiency a resolution in the order of 320x240 is ideal.

It is mandatory to assign the Recording 1, Recording 2, and Detection / Live (Polling) streams. If you are not interested in alternative recording, please select for this field the same stream used for standard recording.

I/O Input: Select the device driver to be used for the alarm input. An appropriate device driver with I/O capabilities (e.g., ONVIF) and one or more pre-configured inputs must have been configured in the devices.

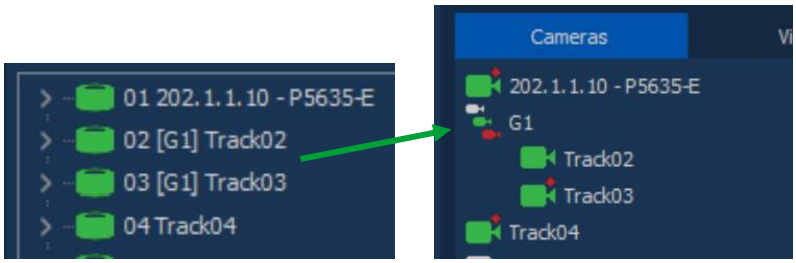
I/O Output: Select the device driver to be used for the relay output. An appropriate device driver with I/O capabilities (e.g., ONVIF) and one or more pre-configured outputs must have been configured in the devices.

PTZ Camera: Select the device driver to be used for the PTZ function. An appropriate device driver with PTZ capabilities (e.g., ONVIF) and a PTZ camera must have been configured in the devices.

Send Audio to Camera: Select the device driver that is to be used for sending audio data to the device. Not all devices are compatible or support this feature.

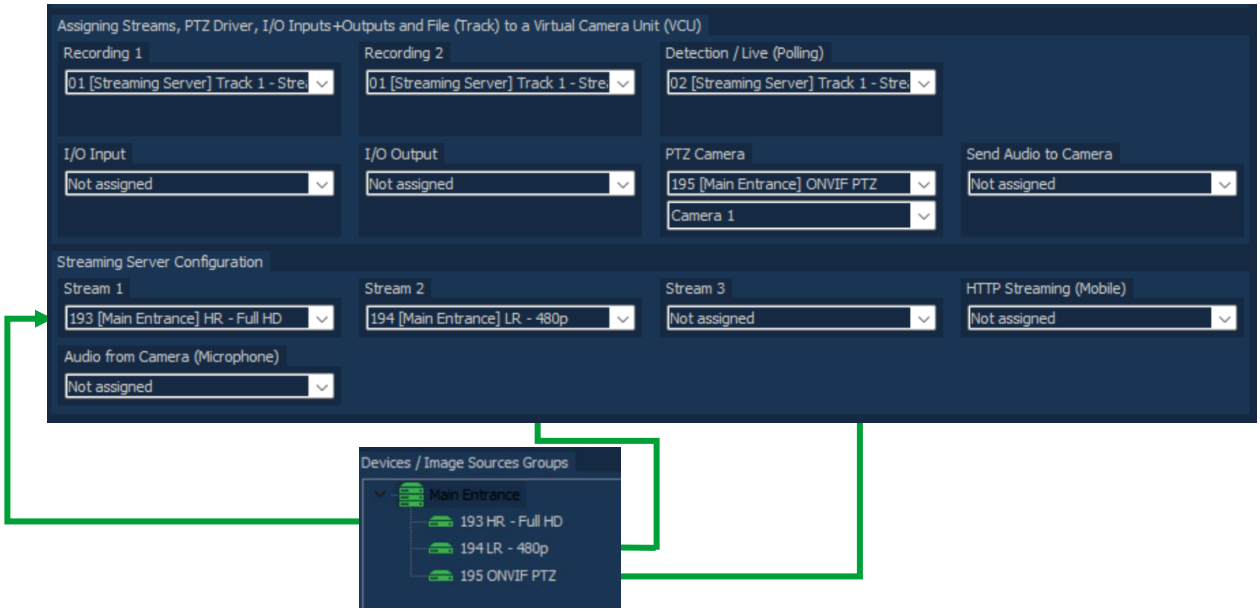
After changing track settings a server restart is required. During the brief time that the server is restarting, video data will not be available.

Grouping (Live Image): To group tracks together in live view, assign them an identical tag enclosed in square brackets at the beginning of the track name.



3.5.8.1 Example: AXIS P5635-E Camera with 2 streams and ONVIF PTZ

Assuming the devices have been configured as in the example in the device configuration section, the track could then be configured as follows:



Configuration steps:

1. **Stream 1**: Assign the highest resolution device driver “HR – Full HD” to the 1st stream of the streaming server.

2. **Stream 2**: Assign the lower resolution device driver “LR – 480p” to the 2nd stream of the streaming server.

3. **Recording 1**: Select the 1st streaming server stream to be used for recording.

4. **Recording 2**: Select the 1st streaming server stream to be used for alternative recording.

5. **Detection / Live (Polling)**: Select the 2nd streaming server stream to be used for detection and live polling.

6. **PTZ Camera**: Assign the ONVIF PTZ device driver to be used for the PTZ function. Additionally select a camera from the drop-down menu (Camera 1).

This configuration offers the following features:

- Full HD recording. The video data is saved in high resolution (1920x1080@25fps) in a video file and accessible in the permanent recordings section.

  Recording will only take place if the recording function is enabled, the track is set to active, and an appropriate path and track size are selected. If the currently active profile does not have

recording enabled for this track, no data will be stored. You can modify profile settings in the "Standard Operations" and "Event Handling" sections.

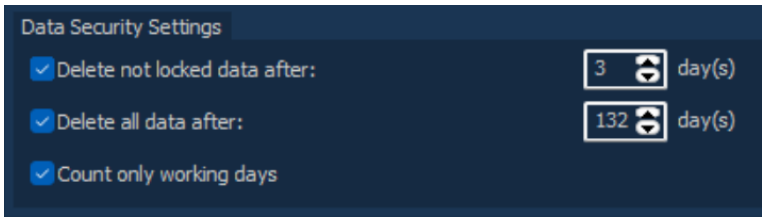
- A second stream with a lower resolution (640x480@10fps) for detection, live image, and polling. This ensures a reliable ROI-based search function without overburdening the CPU. It also serves as a fallback option. Additionally, it enables a more efficient multi-view experience. Viewing 64 simultaneous full HD streams (in an 8x8 multi-view) would place excessive strain on hardware resources.

- A PTZ stream to adjust the direction of the camera. Enable the PTZ function within the "Live Image" section to control pan, tilt, and zoom movements.

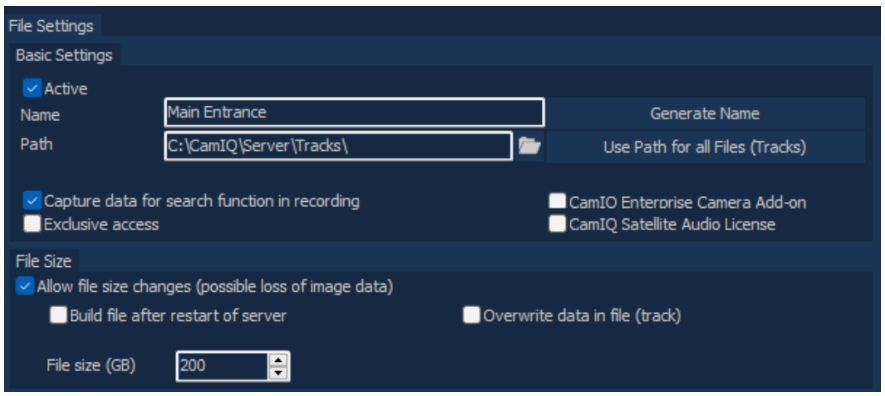
- No I/O or audio features have been configured for this camera.

To comply with data regulations, the follow settings are chosen:

Delete non-locked video data after 3 days, and locked video data after 6 months (132 working days, equivalent to 180 calendar days, since only workdays are included).



Additionally, a track name, a storage path, and a file size are defined. The track is set to active.



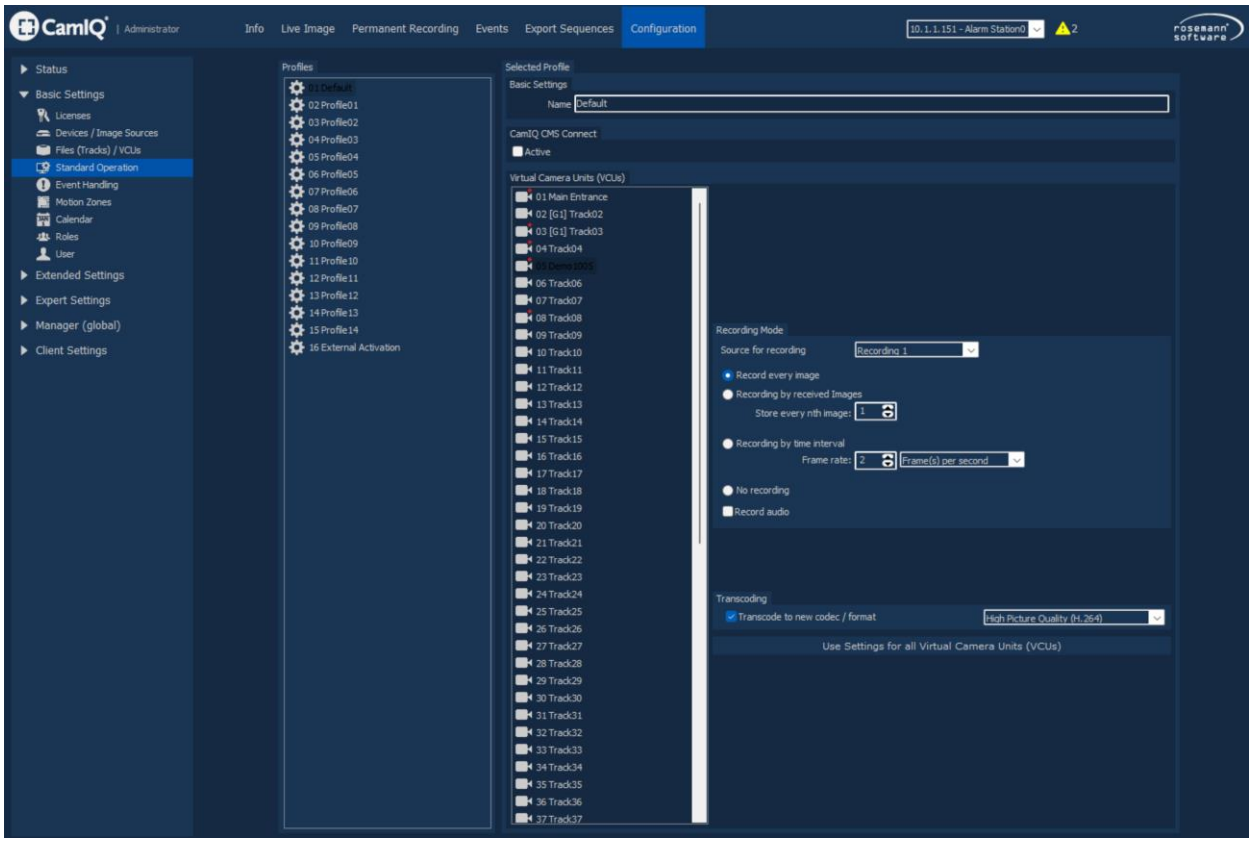
Once these steps are completed, restart the server. The track is now fully configured and accessible for both live viewing and playback from permanent recordings.

3.5.9 Standard Operation

Within this window you can define profiles to customize the behavior of operations. You can then toggle which profile is active using the "Calendar" or via external arming.

Profiles enable you to tailor system settings for specific situations. For instance, you could create distinct profiles for daytime and nighttime operation, or for when the store is open or closed. Each profile allows you to configure unique video settings (such as resolution and frame rate) and customize alarm behaviors. For example, leveraging CamIQ AI Analytics, you can set a "person in store" alarm only during nighttime hours and activate the "person counter" feature during the day, all within separate profiles.

Alarm customization also requires configuring "Event Handling". By default, the system will use the first configuration unless otherwise specified in calendar.



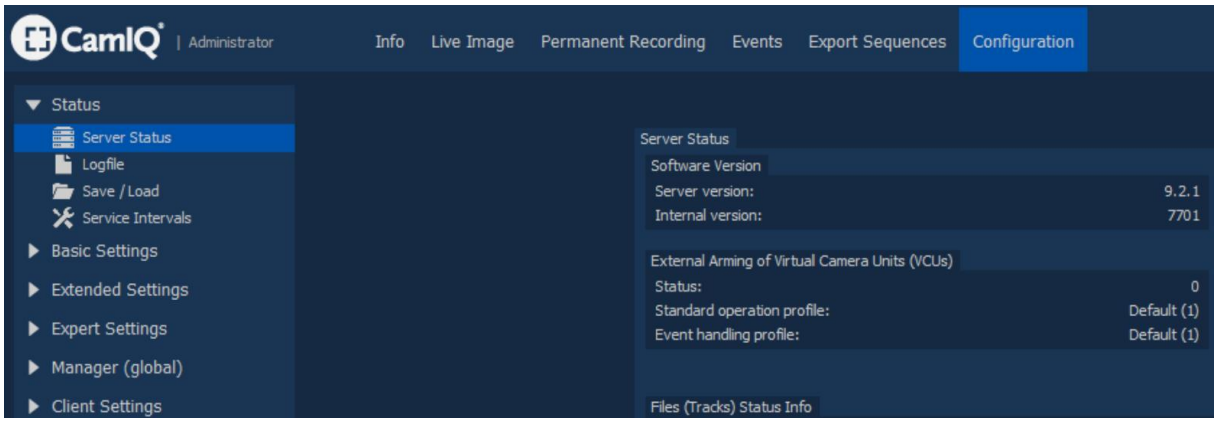
To configure a profile:

1. Select a configuration in the "Profiles" section, e.g., "Default".
2. Give this setting a name under the "Basic Settings" section, e.g., "Store Open".
3. Select a track to be configured from the "Virtual Camera Units (VCUs)" section.
4. Configure the options in the "Recording Mode" area:

- **Recording Source**: Select here the stream that is to be used for the recording.
- **Record Every Image**: Select this option to always record every received image.
- **Record by Received Images:** Every nth number of all received images will be recorded (a value of 1 would mean every image would be recorded).
- **Recording by Time Interval:** Enter how many images per second, per minute or per hour should be recorded.
- **No Recording:** Select if you want the track to not record permanently.
- **Record audio:** Select this option to record the assigned audio stream. Please note that an additional license is necessary for this.
- **PTZ**: If the selected camera is a PTZ camera, you can select the "Preset Tour active" button in the "PTZ Camera" field. If you do so, the camera will begin running through a preset tour (to be configured separately).
- **Transcoding**: If your device driver uses JPEG encoding, you can enable transcoding. Under the "Transcoding" section, check the box for "Transcode to a new codec/format". This allows you to select transcoding options and convert your stream to the H264 format.

5. Repeat for all tracks and profiles. Use the “Use Settings for all Tracks” function to facilitate the setup.

You can check what profile the system is currently using in the *Server Status* tab.

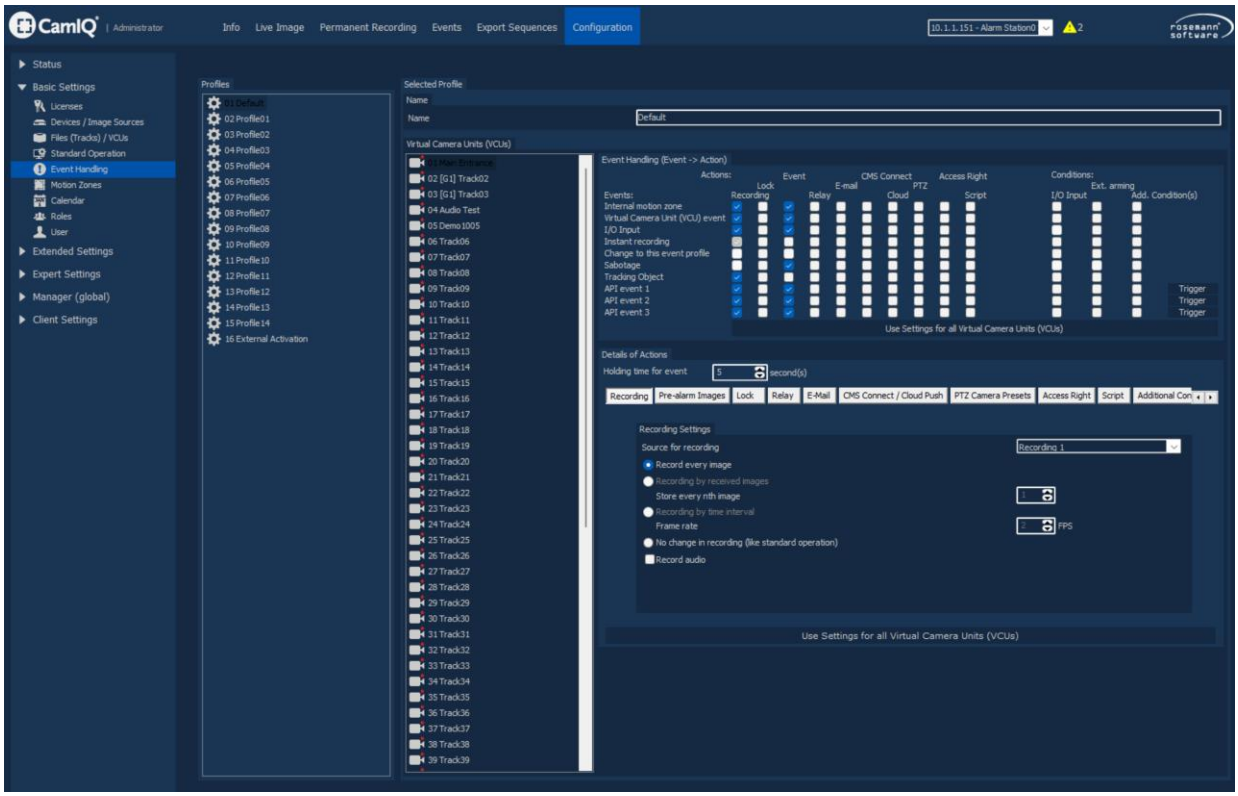


3.5.10 Event Handling

In the *Event Handling* tab you can customize how the server should react to various events. Up to 16 configurations profiles can be setup to cover many different scenarios. You can then toggle which profile is active using the "Calendar" or via external arming.

Profiles enable you to tailor alarm settings to the specific requirements of your project. For instance, you can configure varying responses to a particular alarm type depending on the time of day (e.g., daytime versus nighttime) or the camera source. This allows for distinct alarm configurations; for example, Track2 could have entirely different settings than Track1.

By default, the system will use the first configuration unless otherwise specified in calendar. You can check what profile the system is using under Status -> Server Status -> Standard operation profile.



To configure event handling:

1. Select a configuration in the "Profiles" section.

2. Give this setting a name under the "Basic Settings" section.

3. Select a track to be configured from the "Virtual Camera Units (VCUs)" section.

4. In the "Event Handling" section you can configure how the selected track should react to events. There are different types of events:

- **Internal Motion Zone:** When an alarm zone is defined and something moves within this zone

- **VCU event:** A VCU device reports an alarm
- **I/O Input:** An alarm signal is received via an alarm input
- **Instant Recording:** Manual image recording is activated by a logged in user
- **Change Event Profile:** This triggers when the event handling profile changes
- **Sabotage:** The server detected that a VCU has had its connection severed
- **Tracking Object:** When the tracking option is activated and an object has been detected
- **API event 1 / 2 / 3:** Events that are sent to the server over the CamIQ API interface

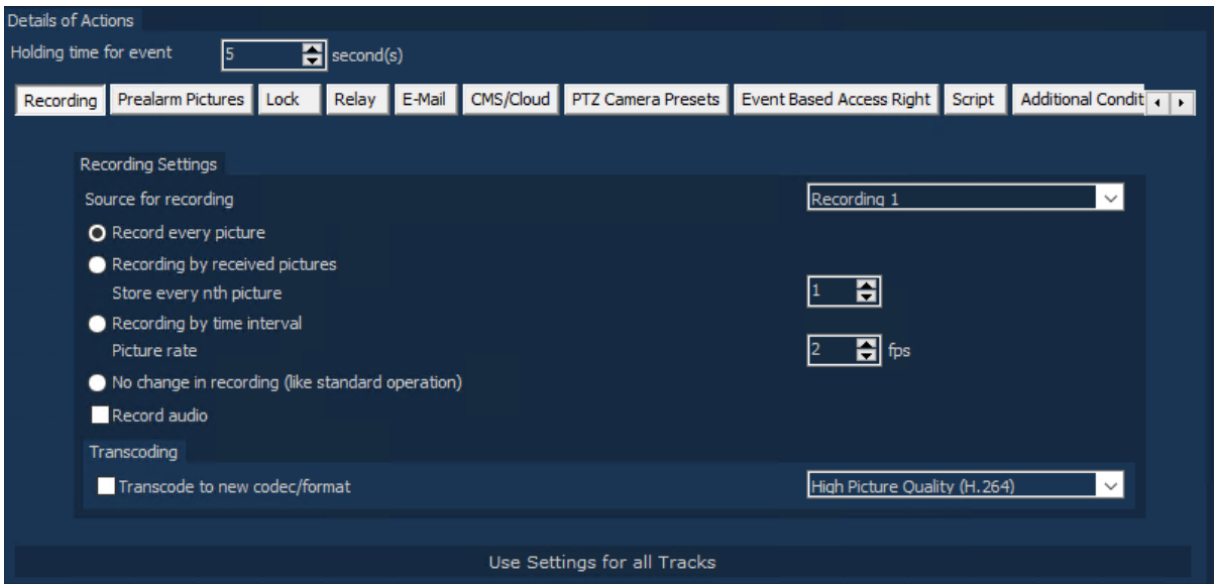
Additional conditions (last three columns) can be applied to the events / actions, namely:

- **I/O Input:** The action will only be carried out if the related I/O input is active.
- **External Arming:** The action will only be carried out if the External arming input is active. This needs to be defined under “Extended Settings” -> "External Arming".
- **Additional Condition**: The action will only be carried out if the custom configured requirement is met.

Configure an action. For each event one ore more actions are configurable (e.g., e-mail, script, etc..). Following subsections will go through all possible actions.

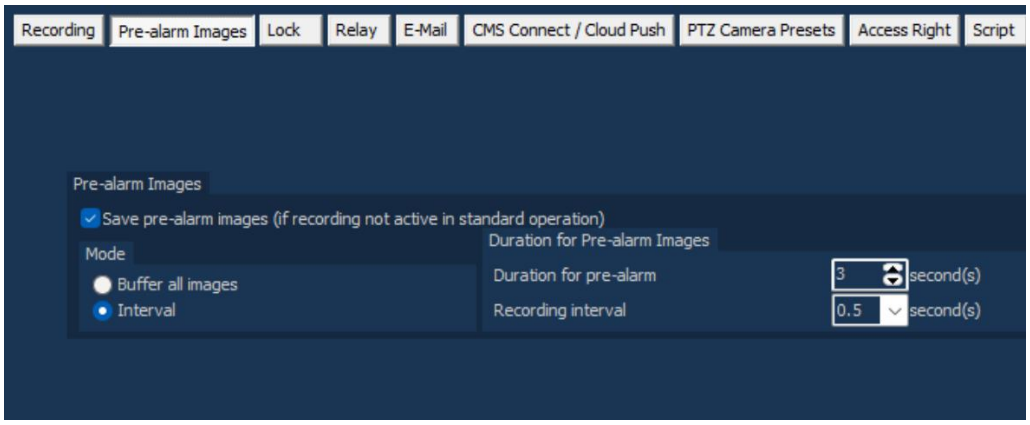
3.5.10.1 Recording

In the "Recording" section, you can configure how the system should record the sequence that triggered the alarm. Choose between recording all images, no images, or custom partial recording. Additionally, you can choose whether to include audio in the recording and if the data should be transcoded.



3.5.10.2 Pre-Alarm Images

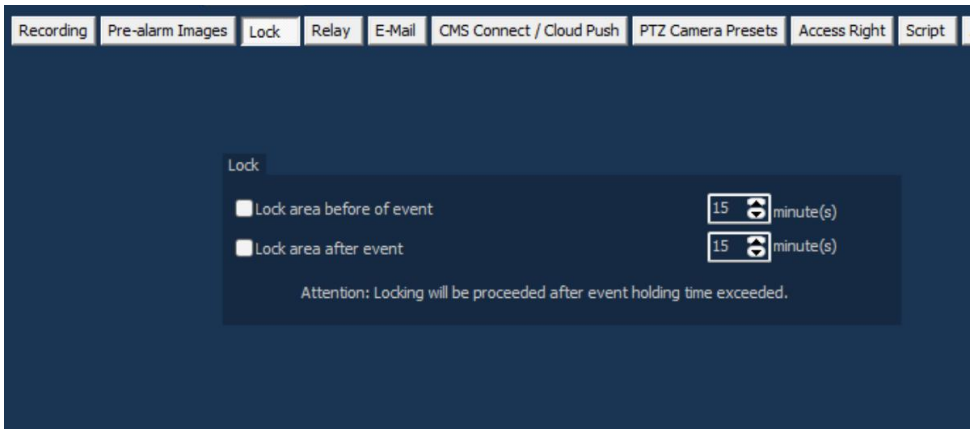
Pre-alarm pictures provide crucial context for understanding the events that lead to an alarm. Click on the "Save pre-alarm pictures" button to enable pre-alarm images.



Select “Buffer all pictures” or “Interval” and specify a duration for the selected option. Buffer all pictures will save all images for the pre-defined duration leading up to the event, while interval will only save an image every defined interval. The interval option is only available for JPEG recordings.

3.5.10.3 Lock

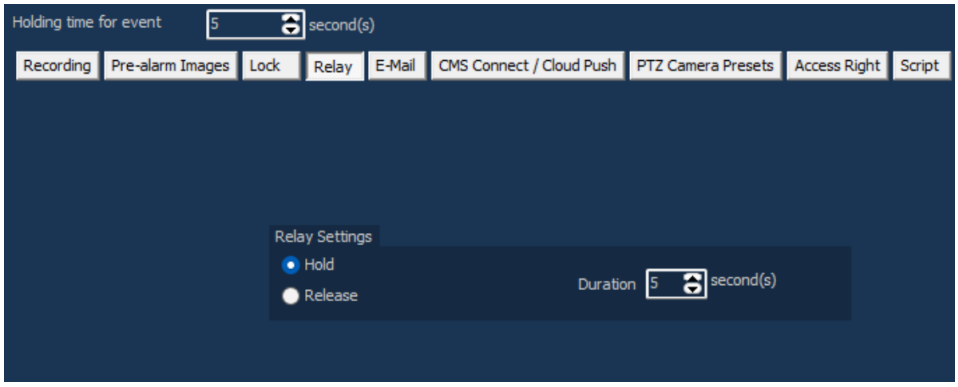
This option allows the automatic locking of events in the permanent recordings. This prevents the events from being overwritten. Please note that locking track segments reduces overall recording capacity.



In the "Lock" section, you can specify time periods near an event to be protected. Select the "Lock area before of event" and/or "Lock area after event" buttons to activate this feature. After clicking a button, enter a duration between 1 and 120 minutes. This duration represents the locked period on the permanent track. Locking will only take effect after the holding period of the event.

3.5.10.4 Relay

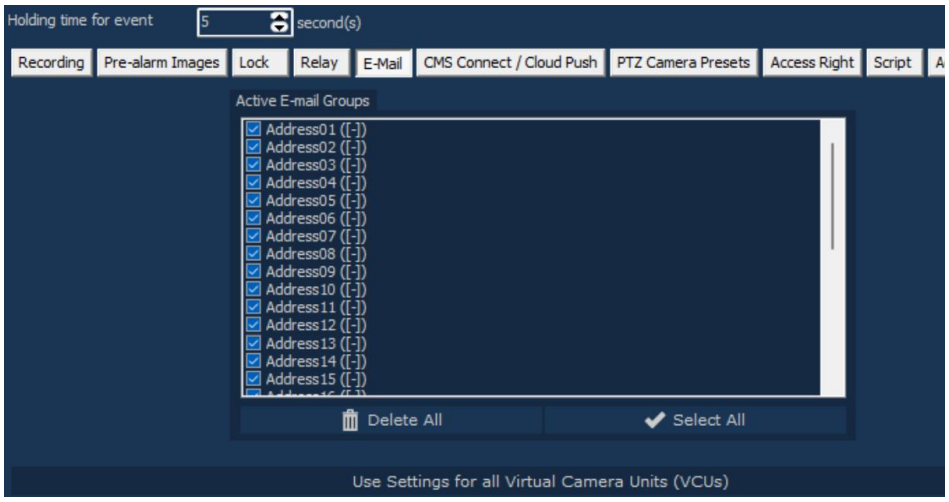
This option allows you to control how the relay assigned to the current track reacts to an event.



In the "Relay" section, configure the relay's behavior upon an event: select whether it should "hold" or "release". Determine how long the relay will maintain its activated state before returning to its original condition using the "holding time" parameter.

3.5.10.5 E-Mail

This option allows you to automatically send emails in case of an event. Please see the *Message Sending* section for information concerning the configuration of e-mail transmission. In this window you can assign e-mail users to specific tracks.



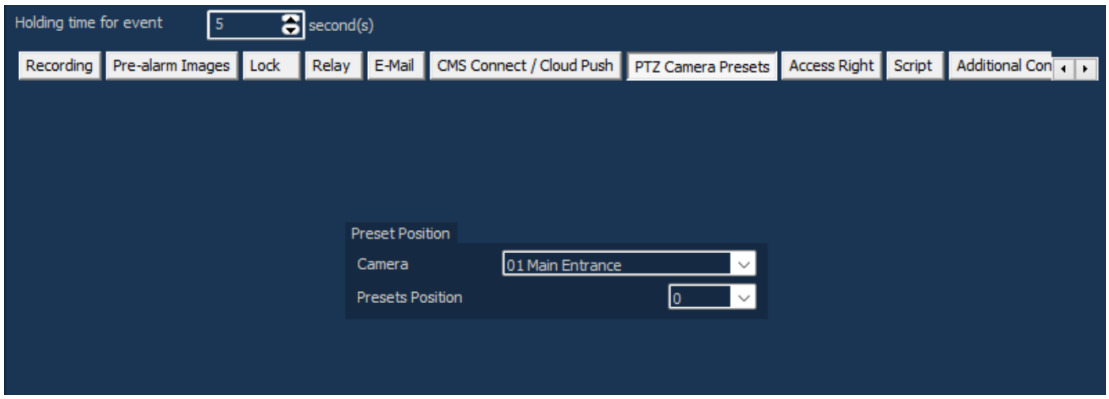
In the "Active E-Mail Groups" section, select which e-mail recipient should receive a message by clicking on the corresponding address. You can deactivate all addresses with the "Delete All" button. With the "Select All" button**,** you can activate all addresses.

3.5.10.6 CMS/Cloud

In this section, you can customize the alarm text for the CMS/Cloud event forwarding function. When an event is triggered, this function sends a push message through the server to your associated cloud account. The message is then forwarded to authorized mobile devices or central monitoring stations. The default alarm text is "Event: [Track Name] ([Alarm Type])". To use a different alarm text, simply add it behind the corresponding event.

3.5.10.7 PTZ Cameras Presets

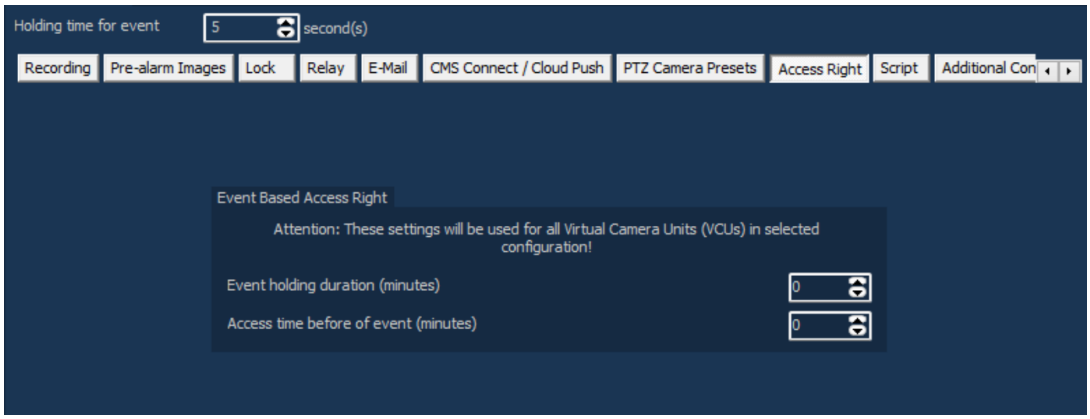
This section enables you to configure a PTZ camera to automatically move to a predefined preset position when an event is triggered. This functionality requires a properly configured PTZ device driver.



- Select the track associated with the PTZ camera from the "Camera" list.
- Select from the "Preset Position" list the preset position that the camera should be set to in case of an event. These presets can be customized within the camera's interface. The first preset has index 0.

3.5.10.8 Access Rights

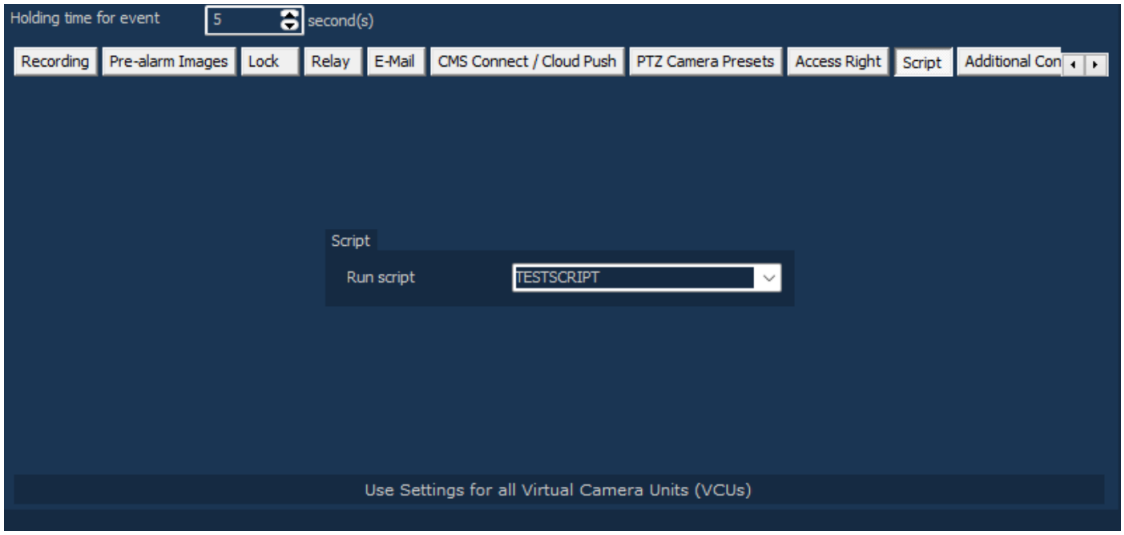
This section allows administrators to configure temporary viewing rights for users who typically lack access to video data. These rights enable authorized users (authorization is to be configured in the *Roles* tab) to review images associated with triggered alarms for a limited duration.



- **Event holding duration**: Define here the time period during which the user with limited access can evaluate the occurring alarm.
- **Access time before of event**: Select the time period preceding the alarm which will become available to be reviewed by the user with limited access.

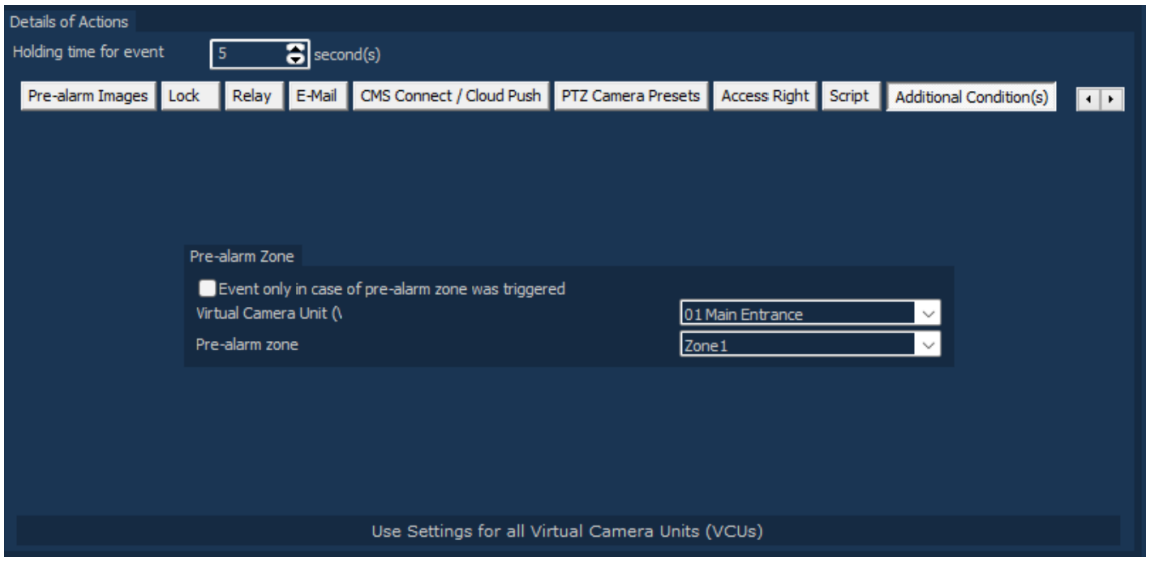
3.5.10.9 Script

This section allows you to configure a predefined script to execute when a specific event occurs. Scripts must be configured individually within the *Scripts* tab, located under *Expert Settings*.

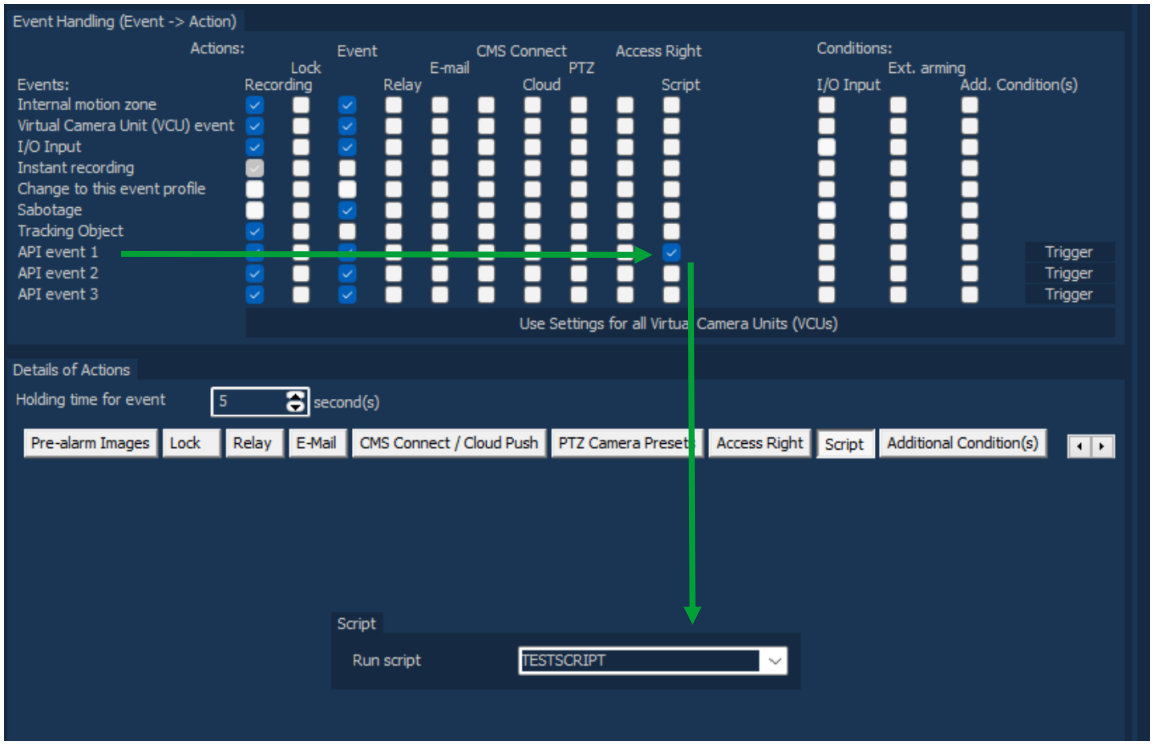


3.5.10.10 Additional Conditions

This section allows you to configure a pre-alarm zone alarm as condition that must be met before actions are triggered by events. Activate the checkbox, select a camera and a pre-alarm zone. Pre-alarm zones are defined in the *Motion Zones* tab.



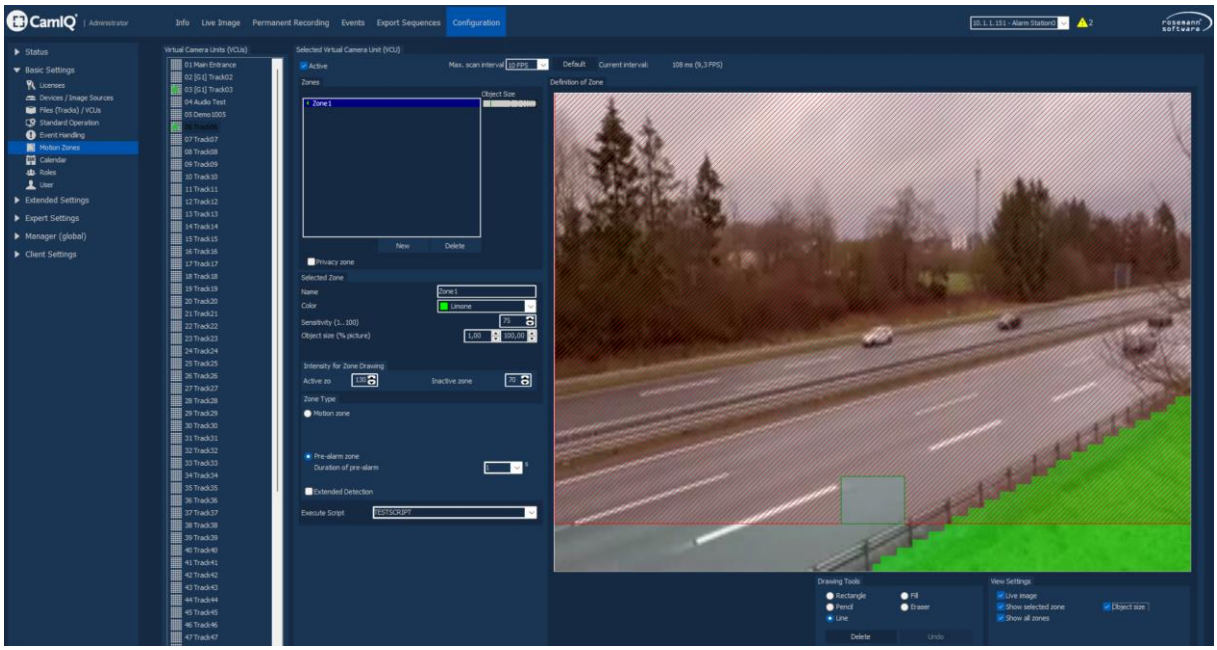
All actions and configurations only apply if their corresponding checkboxes are selected in the event mask. In example below the "TESTSCRIPT" will trigger only when for the selected track an API event 1 alarm has been triggered.


Event Handling (Event -> Action)
Actions:
Event
CMS Connect
Access Right
Conditions:
Lock
E-mail
PTZ
Ext. arming
Events:
Recording
Relay
Cloud
Script
I/O Input
Add. Condition(s)
Internal motion zone
Virtual Camera Unit (VCU) event
I/O Input
Instant recording
Change to this event profile
Sabotage
Tracking Object
API event 1
API event 2
API event 3
Trigger
Trigger
Trigger
Use Settings for all Virtua Camera Units (VCUs)
Details of Actions
Holding time for event
5
second(s)
Pre-alarm Images
Lock
Relay
E-Mail
CMS Connect / Cloud Push
PTZ Camera Preset
Access Right
Script
Additional Condition(s)
Script
Run script
TESTSCRIPT

3.5.11 Motion Zones

Within the *Motion Zones* tab users can define motion, pre-alarm, and privacy zones to enable automatic motion detection, extended detection, or privacy features.

The extended detection feature is preserved for migration purposes only. Its functionality has been effectively replaced by CamIQ AI Analytics. This feature will be removed in future software versions. Starting from CamIQ 9, extended detection requires a CamIQ AI Analytics license. During the migration process, existing setups will automatically receive the necessary licenses. Please note that the CamIQ AI Analytics license counter displayed in the Licenses tab will not reflect usage associated with extended detection.



Configure a Zone

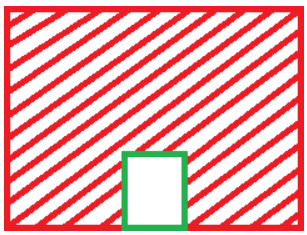
1. Select a track from the “Virtual Camera Units“ list.

2. Define a “Max. scan interval” 

. This is the maximum rate at which the images are scanned for motion.

3. Give a descriptive name and select a color for the newly created motion zone.

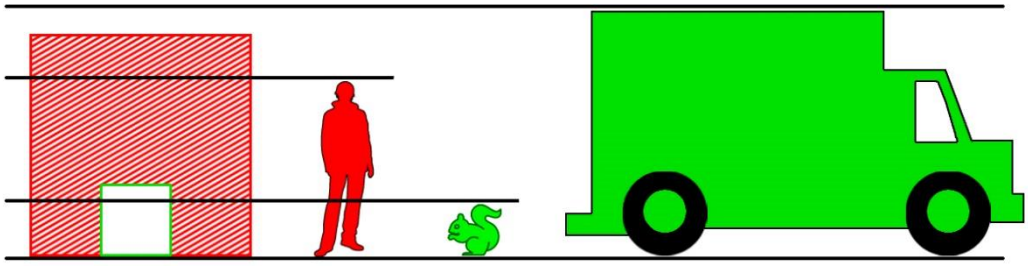
4. If necessary, adjust the values of object size and sensitivity. For better visualization, an auxiliary interface showing the object size parameters is superimposed directly onto the image:



The small green frame is configurable using the left input and visualizes the minimum object size (an object that is smaller than the green frame will not trigger an alarm).
The red frame visualizes the maximum object size leading to an alarm. It is configurable using the right input window.

Object size restrictions help in preventing alarms that would otherwise be triggered by animals or weather conditions, for instance. The area between the minimum and maximum object sizes is cross-hatched in red and indicates the object size which will trigger an alarm.

In the example picture below, objects that are either too large or too small to trigger an alarm are displayed in green. Objects that would trigger an alarm are displayed in red.



The Sensitivity parameter allows you to adjust how readily the sensor responds to movement. Higher sensitivity makes the sensor more responsive to subtle changes.

5. Select an intensity to determine the opacity of the alarm zone in the live image. The first setting controls the "Active Zone" opacity – a zone becomes active when movement is detected within it. The second setting controls the "Inactive Zone" opacity – a zone is inactive when no movement is currently detected. A value of 255 sets the zone to full opacity, completely obscuring the live image behind it.

6. Select what type of zone should be configured.

- **Privacy Zone**: A privacy zone allows you to obscure part of a camera's field of view, blocking it from capturing images in that specific area. Privacy zones can be configured to blur, pixelate or to re-color a selected area. The masked zone will be obscured in both live images and recordings.

  It is strongly advised to configure privacy zones directly in the camera when using H264, as otherwise transcoding takes place, possibly overburdening the CPU.

- **Motion Zone**: When movement is detected within a defined motion zone, the server triggers an event. If pre-alarm zones have been configured for the same track, they will appear next to the motion zone checkbox. You can then link these pre-alarm zones to the motion zone. This setup requires movement detection first in a pre-alarm zone and subsequently in the motion zone to trigger an event. If the motion zone is linked to multiple pre-alarm zones, movement detection in any one of them will be sufficient to trigger an event.

- **Pre-Alarm Zone**: This zone detects changes in the image just like the alarm zone, but it does not trigger events. You can adjust the duration of the movement detection period required to trigger an event in both the pre-alarm and alarm zones using the "Duration of Pre-Alarm" menu. If no movement is detected within this period, no event will be triggered.

If you want to use a pre-alarm zone together with a motion zone to detect the direction of an object, ensure that the space between the zones is as large as the object. Otherwise, this object will trigger an event in the border area of both zones even if it moves in the opposite direction.

7. Draw the zone using the tools offered in the “Drawing Tools“ section.

- The “Rectangle” tool allows you to draw a rectangular zone. To use it, position the mouse pointer where you want one corner of the rectangle to be. Click and hold the left mouse button. While holding the button down, drag the mouse pointer away from the starting point. The size of the drawn rectangle will increase proportionally to the distance you move the mouse.

- The “Pencil“ tool allows you to draw freehand. To create a shape, position the cursor where you want to begin and click and drag while holding down the mouse button.

- Use the “Line” tool to draw straight lines. Use the left mouse button to select the starting and end points of each line. Use the right mouse button to terminate the sequence.

- The "Fill" tool allows you to fill an area by clicking anywhere within it. This tool functions by filling in connected areas of the same type with the zone marking.

- The “Eraser“ tool works similarly to the Rectangle tool, but instead of creating a selection, it removes all pixels within the delineated area.

- The “Distance Calculation”, only visible if extended detection is active, enables you to adjust the A (foreground) and B (background) shift points

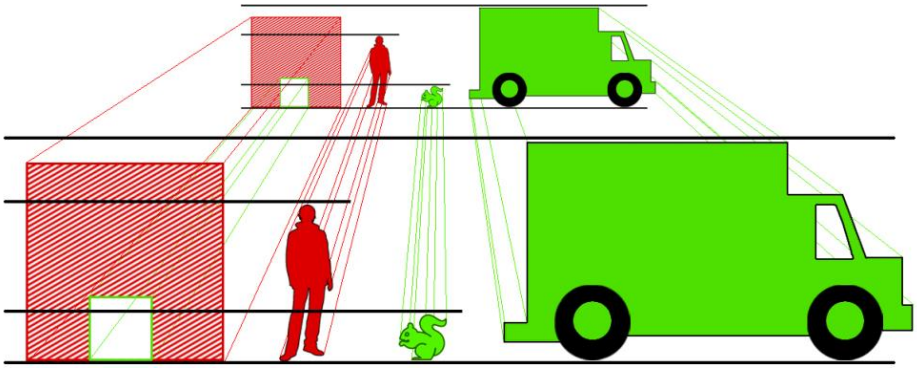
- Use the “Undo” and “Delete“ buttons to erase the last or all drawn areas.

8. Select the desired “View settings”. If the “Live Image“ button is active, the video stream will be shown. If the button is deactivated, only a frozen image will be displayed. By activating the “Show Selected Zone” button, the currently selected zone will be embedded within the image. If the button is deactivated, the zone is hidden. If the „Show All Zones“ button is activated, all zones for the currently selected track are shown. This allows to directly calibrate pre-alarm and alarm zones to one another.

9. Check the “Active” checkbox to activate the zone.

Extended Detection

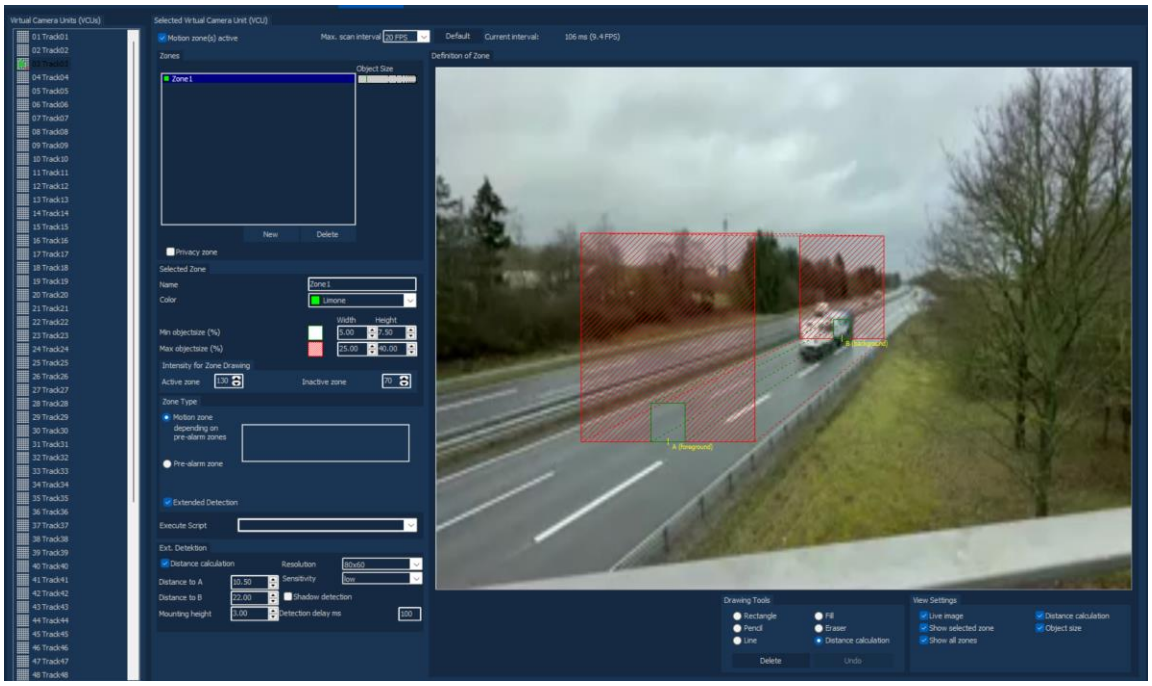
Extended detection is a deprecated feature, replaced by CamIQ AI Analytics, and should only be used in migration scenarios when already pre-configured. This feature will be removed in future versions.
Extended detection performs the usual object analysis but also accounts for the camera perspective.



To use this feature, first set up an alarm zone as described previously.

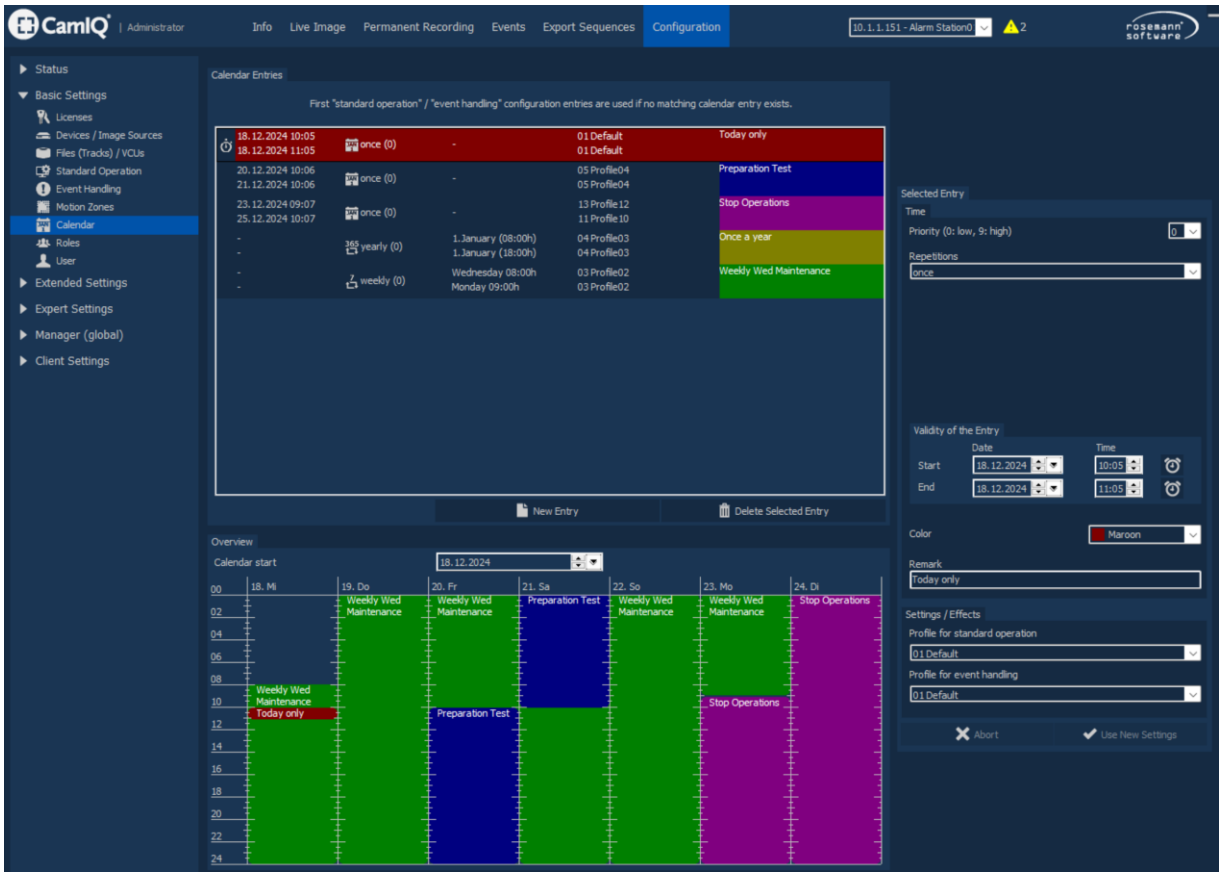
Then, activate the "Extended Detection" checkbox. Under "Ext. Detection," enable "Distance Calculation".

Next, activate the "Distance calculation" tool in the Drawing Tools window and use the mouse to place the A (foreground) and B (background) reference points within the image.
Estimate accurately the reference points by measuring the distances between the camera and point A, and the camera and point B. Enter these distances in unit meter, along with the camera's installation height, into the Distance Calculation settings.
This will allow for more precise detection calculations which take into account the camera perspective and real-world distance.



3.5.12 Calendar

In the *Calendar* tab the user can configure when is which profile active, effectively steering the operations and alarm behavior of CamIQ.
Profiles must be configured separately in the *Standard Operations* and *Event Handling* tabs.



In the "Calendar Entries" section**,** you can create, delete, or review calendar entries. In order to create a new entry:

1. **Create**: Click on the "New Entry" button.

2. **Define Priority**: Assign a priority value, ranging from 0 (low) to 9 (high). This value determines which calendar entry takes precedence if multiple entries overlap within the same timeframe.

3. **Define Repetition**: Determine the repetition pattern for the new entry. Select from the following options: "once," "daily," "weekly," "monthly,", "yearly", “working days”, or “sundays and holidays”. You can decide to limit repetitions within a selected timeframe, e.g., all Wednesdays, but only from July to October.

4. **Define Period**: Define the start and end time of the entry. Depending upon which repetition modus you have selected, different configuration options will be available.

5. **Denomination**: In the "Remark" section you can assign a name to your entry.

6. **Define Profiles**: Select the standard operations and event handling profiles that should apply for this entry.

7. **Save**: Click on “Use New Settings” to save your modifications.

If there is no calendar entry for a time window, the first configuration (default) will be used.

Calendar Example:
Employees at your company work standard business hours: Mondays through Thursdays from 8:00 AM to 6:00 PM and Fridays from 8:00 AM to 3:00 PM.

Continuous recording is required 24/7. Additionally, motion detection with an alarm should be active during non-business hours – nights and weekends (when the building should be empty).

To achieve this setup, you will need the following configuration profiles:

- Standard Operations
  - Recording: This configuration enables continuous recording.

- Event Handling
  - Armed: This configuration triggers an alarm when motion is detected.
  - Unarmed: This configuration records motion without triggering an alarm.

Calendar Setup:
- Weekday Recording (8:00 AM - 6:00 PM): Create a repeating daily calendar entry from 8:00 AM to 6:00 PM and link it to the "Recording" and "Unarmed" configurations.

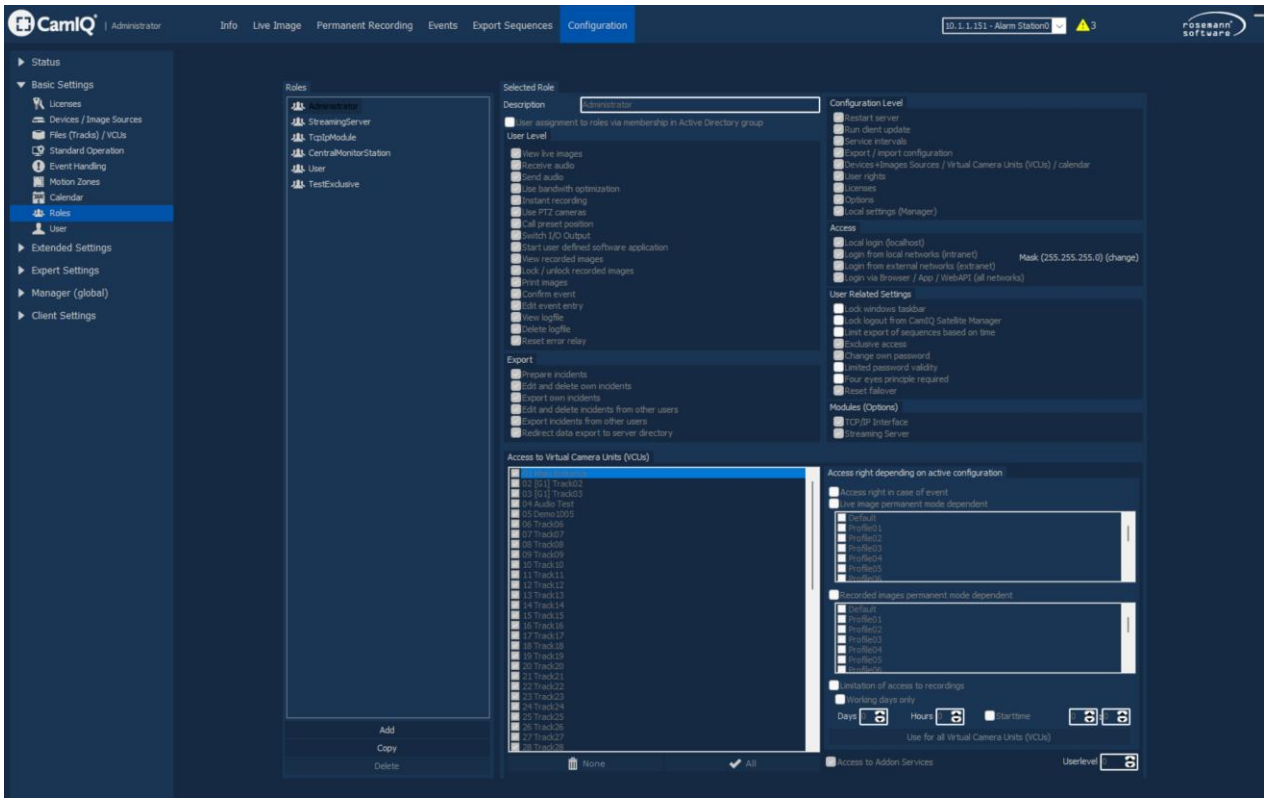
- Night/Weekend Recording with Alarm (6:00 PM - 8:00 AM): Create a second daily calendar entry from 6:00 PM to 8:00 AM and link it to the "Recording" and "Armed" configurations. This ensures motion detection with alarms outside of business hours.

- Weekend Recording with Alarm (Friday 3:00 PM - Monday 8:00 AM): Create a third calendar entry with weekly repetition and higher priority, starting on Friday at 3:00 PM and ending on Monday at 8:00 AM. Link this entry to the "Recording" and "Armed" configurations. This entry will override the weekday settings during weekends, ensuring continuous recording with alarms outside of business hours.

3.5.13 Roles

In the *Roles* tab, you can define custom access rights to the CamIQ system based on a user's role (e.g., detective, store manager, employee). You can create up to 32 roles. Some basic default roles have already been preconfigured and can be edited or deleted (except for the administrator and streaming server roles). Each role can be assigned individual permissions.

The permissions of the "Administrator" role cannot be changed and by definition it disposes of all access rights. You can adjust the permissions of the "Streaming Server" role regarding allowed login types: "localhost", "intranet", or both. By default, "localhost" is selected because the streaming server module usually runs on the same machine as the server. If your streaming server is installed on a different computer than the server, change the login type setting from "localhost" to "intranet".



To create, copy or delete a role use the corresponding buttons. Name your roles appropriately, so that it will be easier to assign them to the individual users in the *Users* tab. The permissions are divided into categories:

- **User Level**: Here you can set the client (CamIQ Manager) permissions, like the ability to view live images, trigger instant recording, confirm events or view the log files.
- **Export**: In this section the you can define if and how the user can export the video data.
- **Access to VCUs**: This section allows you to manage user access to individual camera tracks. You can grant access to all cameras by clicking "All" or deny access to all cameras by clicking "None".

For each track, you can further refine access permissions based on events, the system's current profile, and implement time-based restrictions.

- **Configuration Level**: Here you can assign the permissions needed to configure the server. **Exercise extreme caution when assigning these permissions.** Incorrect configuration changes can lead to serious issues, including data loss, missed alarm events, and other unforeseen problems.

  To allow a user to change their own password, you do not need to grant them "User rights" privileges. This setting provides access to the configuration tab and allows users to change permissions. Instead, simply check the "Change own password" box in the "User Related Settings" section.

- **Access**: This section allows you to control system access based on network location. For instance, you can specify whether users are allowed to log in from the local network or using the CamIQ app.

  A change in the network infrastructure of the system might require reconfiguring the access settings.

- **User Related Settings**: This section allows you to customize role restrictions and requirements. For instance, you can set password expiration policies or grant users permission to change their own passwords. Additionally, you can configure settings such as hiding the Windows taskbar and preventing users from logging out of the Manager application. These options ensure the Manager remains active in the foreground, allowing for immediate recognition of all alarm messages.

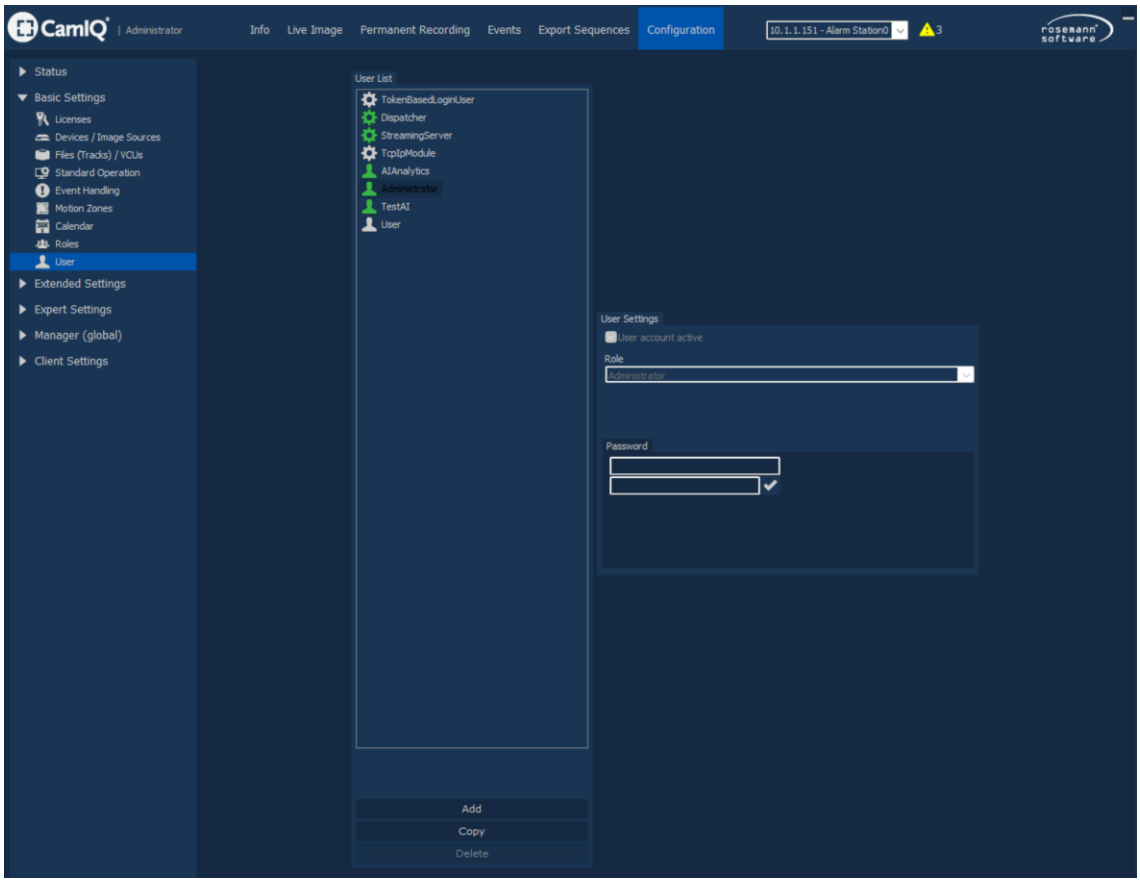
- **Modules (Options)**: Here you can give the role access to the server through the TCP/IP interface or the streaming server. This is necessary if a connection should be established with the module.

Please select the checkbox “User assignment to roles via membership in Active Directory group” if you have active directory access configured.

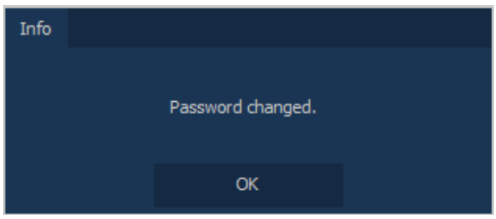
3.5.14 Users

In the *Users* tab you can manage user accounts. This includes creating new users, editing existing ones, activating or deactivating accounts, and deleting accounts. You can also assign roles to users and define their passwords. The system supports up to 32 users. Some default user accounts are preconfigured and can be edited or deleted (except the Administrator and TokenBasedLoginUser). Each user account can be assigned a role that has been previously configured in the system.

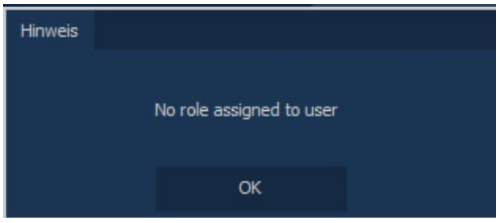
User accounts that have a  *cogwheel as an icon are system users. These are automatically created by CamIQ and should generally not be edited.*



- To activate or deactivate an account select the “User account active” checkbox.
- To modify the password, enter the password twice in the respective fields and confirm using the  button. If the change has been successful, a “Password changed” message will popup. If not, please re-type your passwords as this means that they did not match.

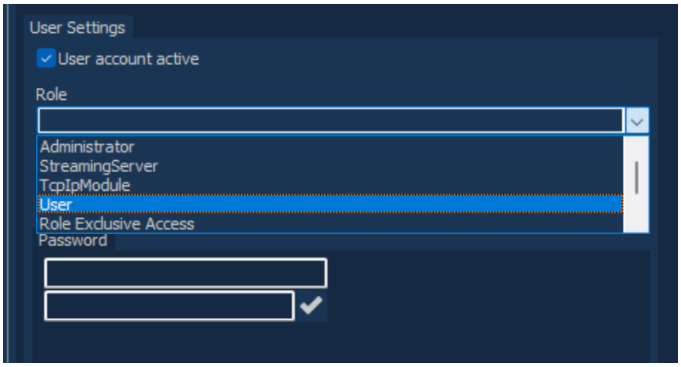


- To create a new user, click on “Add”, enter a new name, and confirm using the button. Newly created users are automatically activated but lack a role and password (they cannot log in yet). Please assign a role using the drop-down menu and a password.



Please be mindful that after creating a new user, the last entry in alphabetical order will automatically be selected. Make sure not to modify this one instead of the newly created user.

- To modify a role, select the Role drop-down menu and chose between the defined roles.

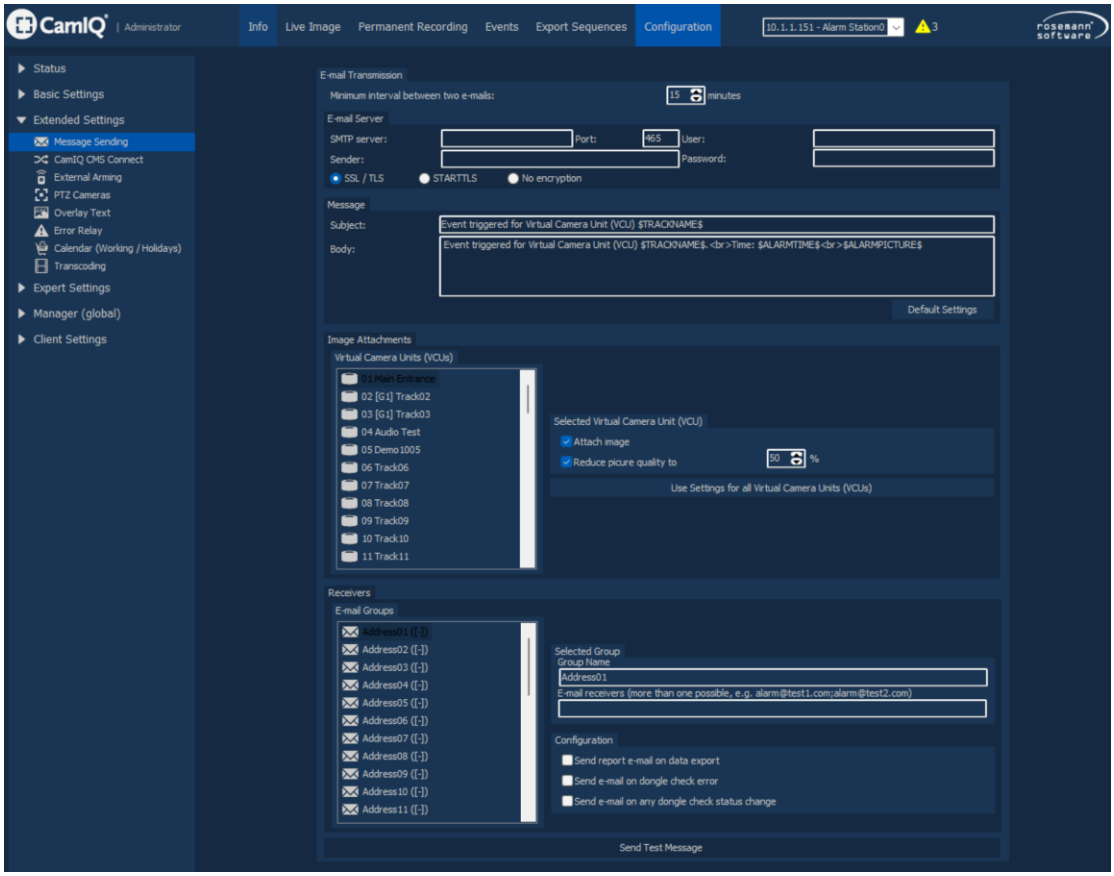


- Modifications will automatically apply when switching user or tab.

The system user account *“TokenBasedLoginUser”* enables temporary login access from a control center / central monitoring station. Its validity period and assigned role are configurable within the user settings. This account is deactivated by default and cannot be used until manually activated.

3.5.15 Message Sending

In the Message Sending tab within *Extended Settings*, users can setup email addresses so that notifications are sent when selected events are triggered.



Configuration steps:

1. Set the "Minimum interval between two e-mails" in minutes. This applies for e-mails that are initiated by an individual track. Other tracks can still send e-mails within this time interval.

2. In the "E-mail Server" section, configure the mail delivery server settings the system will use to send emails. This can be an internet-based mailer service or a local network SMTP server. Enter the IP address or domain name of the SMTP server in the "SMTP Server" field (only if your network supports name resolution). Some mail services require you to specify a sender address in the "Sender" field; if this is not required, you can leave it blank.
   To send emails, SMTP servers (including free mail services) require authentication credentials. Enter your username and the corresponding password in the provided fields. This allows the server to access your email account and send messages. If your email provider supports or requires SSL/TLS or STARTTLS encryption, activate the appropriate option. Otherwise, select "No Encryption".

3. In the "Message" section you can individually adapt the alarm mail by making changes to the "Subject" and "Message" fields. You can use the HTML format for this, but do not change any of

the variables denoted with the $ sign. $TRACKNAME$ stands for the track used by the alarm-triggering camera, $ALARMTIME$ is the point in time in which the alarm takes place and $ALARMPICTURE$ is the designation for the alarm image.

4. Under the "Image Attachment" section, you can choose whether to include a picture with each track's email notification. To reduce image file size, click the "Reduce picture quality to" button and enter a compression percentage. 100% maintains the original image quality without compression. Clicking "Use Settings for all VCUs" applies the current setting to all other tracks.

5. In the "Receivers" section, you can define groups of email recipients. Name your group and enter email addresses into the "Email Receivers" field, separating each address with a semicolon.

6. Under "Configuration" you can select scenarios for which the selected group is to be notified:

- **„Send report e-mail on data export“:** The group will receive two emails with details about the operation and status each time the data is exported. This includes the user who performed the export, the dongle number, and which incident has been exported.

- **„Send e-mail on dongle check error“:** If the license check cannot be performed successfully within a certain tolerance (applies to dongle and online licenses), an e-mail is sent to the defined group.

- **„Send e-mail on any dongle check status change“:** If this option is enabled, an email is sent each time the license check state changes.

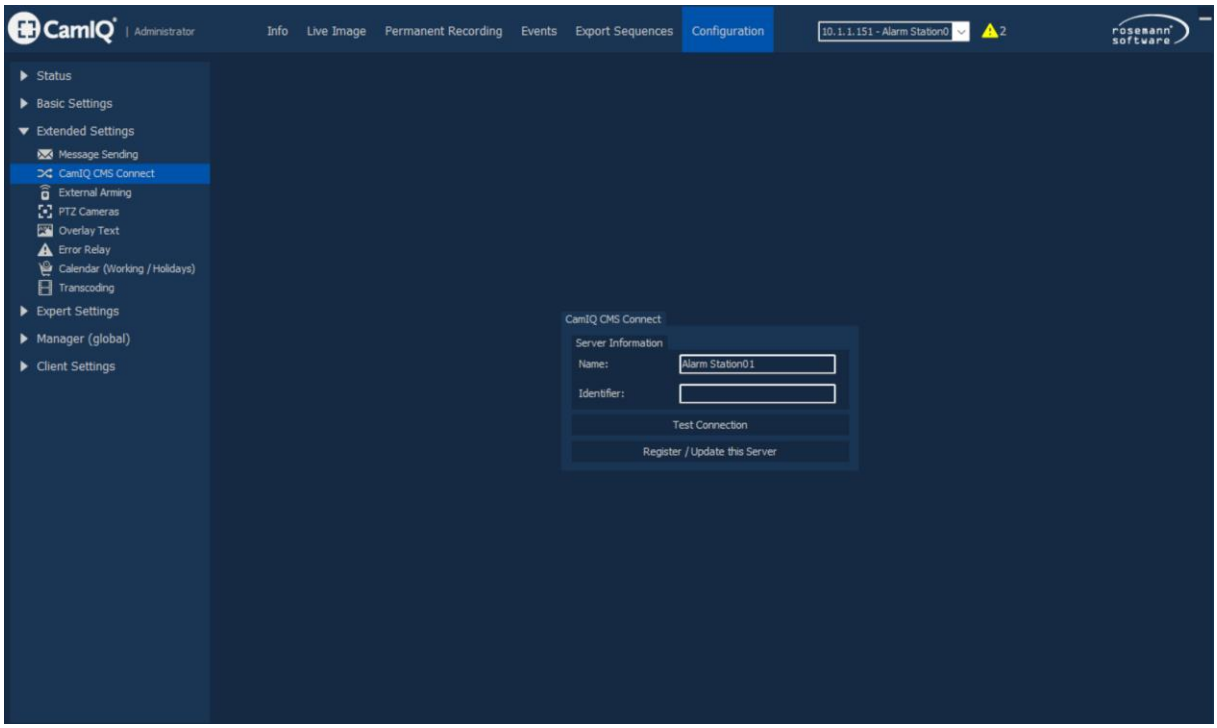
7. Use the "Send Test Message" button to forward a test message and check whether the settings are working correctly.

3.5.16 CamIQ CMS Connect

Using CamIQ CMS Connect, you can send events to a higher-level CamIQ Connect server and define corresponding actions.

In this section within CamIQ Manager the name and identifier of the CamIQ CMS Connect server can be entered to test the connection or to register / update the server.

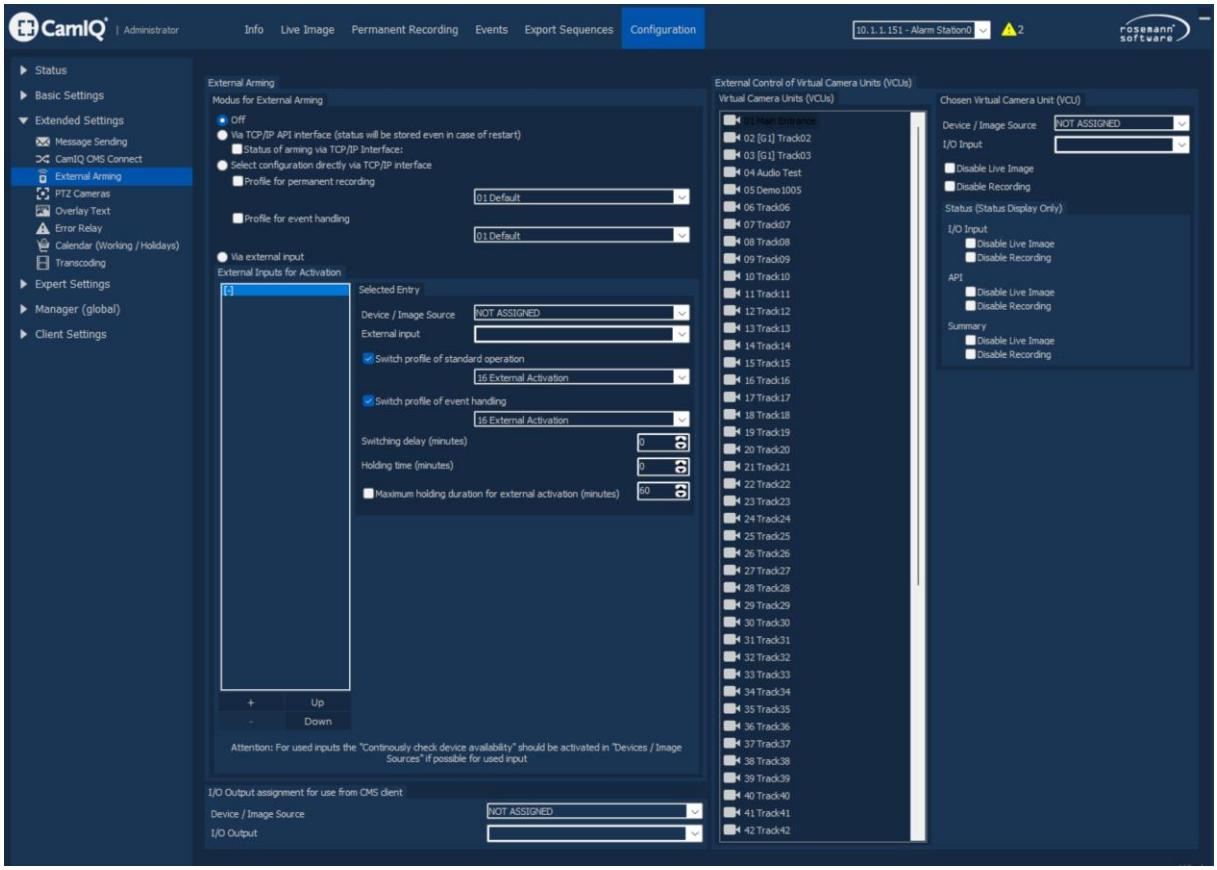
CamIQ CMS Connect is a separate product. Please refer to the CamIQ CMS Connect Manual for more information.



3.5.17 External Arming

The standard operation and event-handling active profiles can be changed using external arming. This should only be used for scenarios / use-cases that the standard calendar activation cannot cover.

Configuration profiles that are activated by external arming have priority over those which are activated by the Calendar.



Select how the operations should be switched based on the external input:

- **Off:** External arming is deactivated. This is the default option.

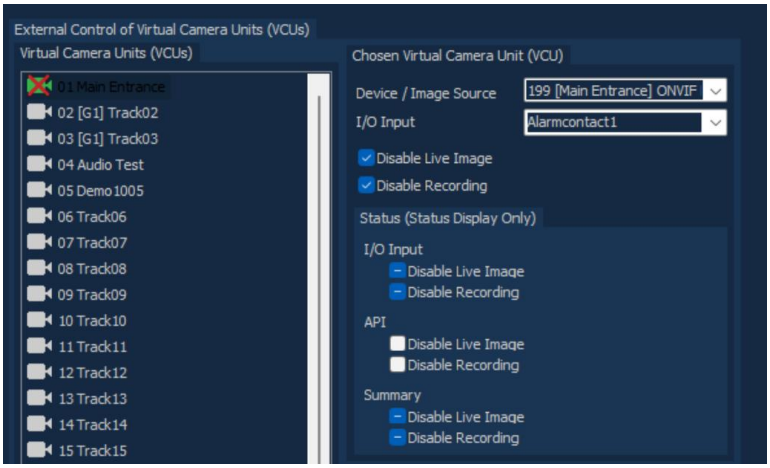
- **Via TCP/IP API Interface:** Select this option to enable profile activation over a TCP/IP connection. Upon activation, the system will transition to the "External Activation" profile (16) for both standard operation and event handling. The checkbox labeled "Status of Arming via TCP/IP Interface" indicates the current status.

- **Select configuration directly via TCP/IP Interface:** This allows to select what profiles will be activated for both standard operations and event handling when the corresponding API command is received. The checkboxes “Profile for…” indicate the status and also allow manual switching to the selected profiles.

- **Via external input:** This option enables you to switch profiles using an I/O device. First, select a preconfigured I/O device with at least one alarm input under the "Device / Image Source" item. Then, choose which alarm will trigger the profile switch under "External input". Select a profile for both standard operation and event handling. These profiles will be activated when the selected alarm input becomes active. You can also set a switching delay and holding time. For example, setting the holding time to 1 minute will ensure that the selected profiles are used for 1 minute even after the alarm input returns to inactive.

Use the option “I/O Output assignment for use from CMS client” to select a device and a relay that you wish to be managed from an authorized surveillance center. This function allows security staff to perform actions such as resetting an alarm state.

Additionally, each camera live and recording operations can be controlled via I/O or with the CamIQ API using the right column menu “External Control of Virtual Camera Units (VCUs)”:



- Select a track from the VCUs overview whose live image/recording is to be deactivated by an external trigger.

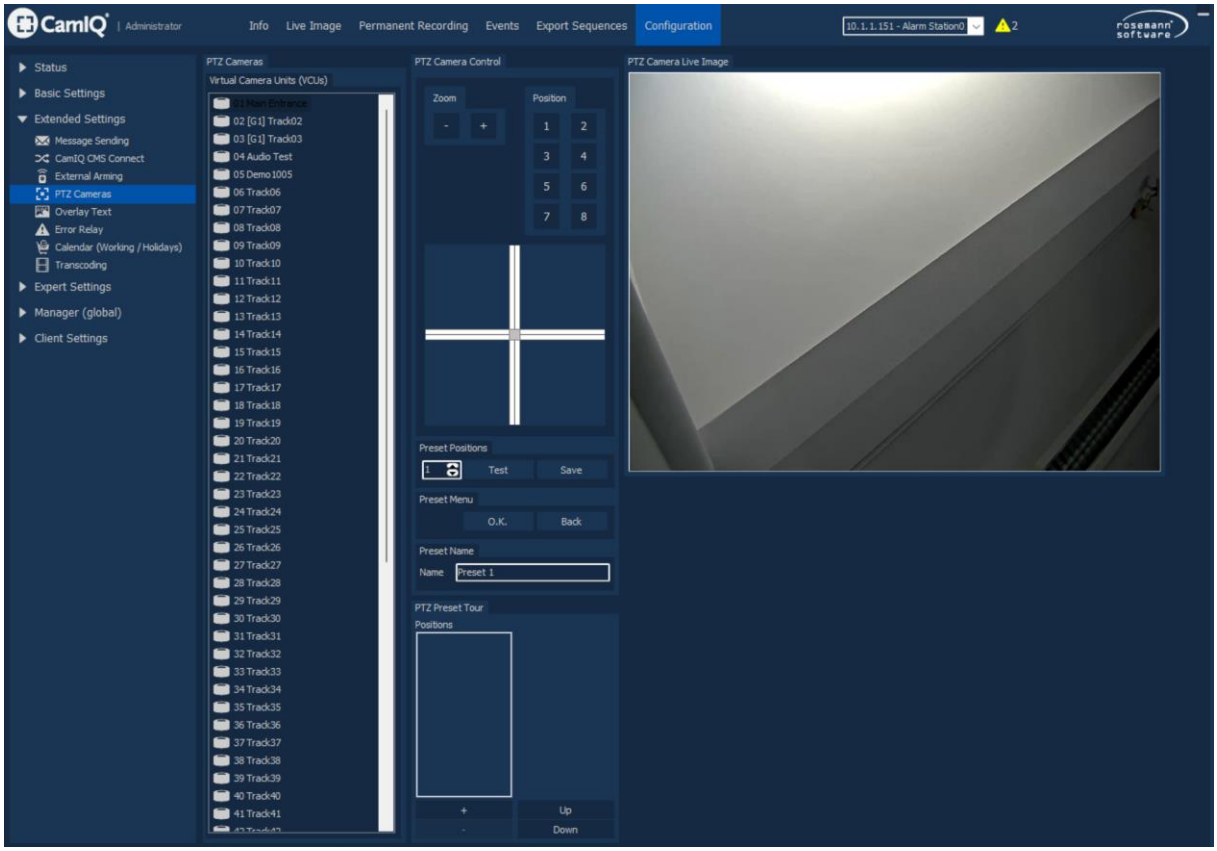
- Select a “Device/ Image Source” and “I/O Output”, select the device and the alarm contact that should be used to deactivate the live image/recording.

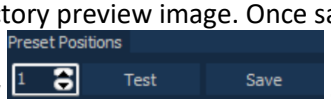
- Check or uncheck the “Disable Live Image” and “Disable Recording” checkboxes to decide whether the live image, the recording – or both – should be deactivated.

- Control the status in the “Status (Status Display Only)” window. These checkboxes are not interactable and merely reflect the status of live / recording for the selected track.

3.5.18 PTZ Cameras

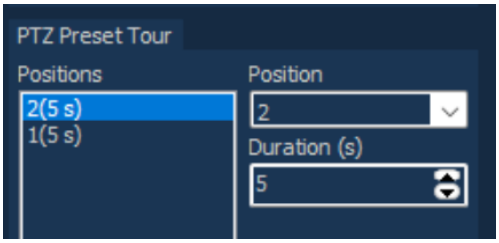
This section allows you to assign PTZ preset positions and define PTZ tours. The user interface for this feature will only be visible if PTZ functionality has been properly configured for the selected track in both the "Devices / Image Sources" and "Files (Tracks) / VCUs" sections.



- **Create or modify a PTZ preset**: Position the camera over your desired area of interest using the cursor and the PTZ Camera Control panel. Adjust the field of view and image sharpness using the zoom controls until you achieve a satisfactory preview image. Once satisfied, select an integer value in the "Preset Position" window 

and press the save button. Optionally, you can assign this preset a specific name (by default is e.g., “Preset 1”).

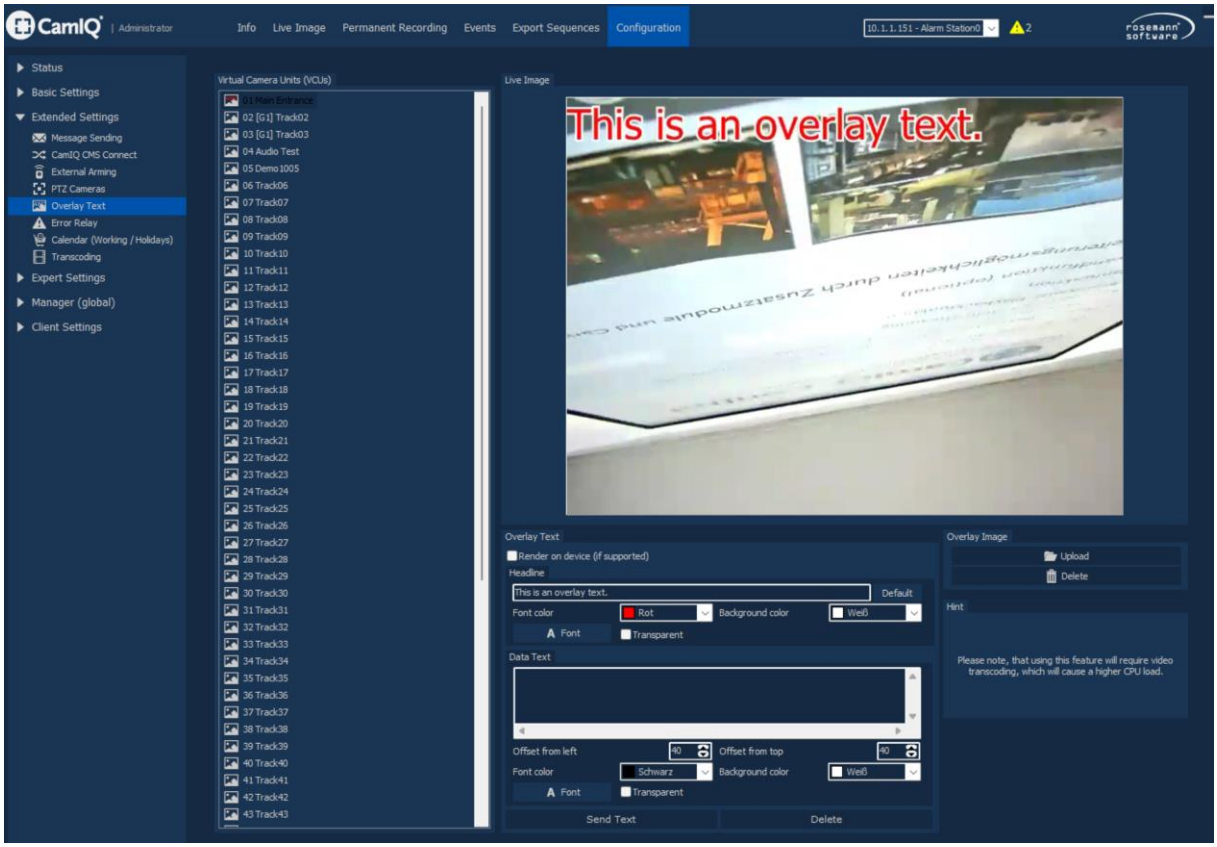
- **Create or modify a PTZ Preset Tour**: After creating the PTZ presets you want to include in your tour, click the "+" button in the PTZ Preset Tour window. Add the desired presets and specify how long the camera should dwell at each position before transitioning to the next. Use the "Up" and "Down" buttons to rearrange presets within the list, ensuring they are executed in your preferred sequence.



The camera remains manually controllable during a tour. The tour will temporarily pause and resume ten seconds after you issue any manual control command.

3.5.19 Overlays

This section explains how to configure text overlays—text messages superimposed over the images.

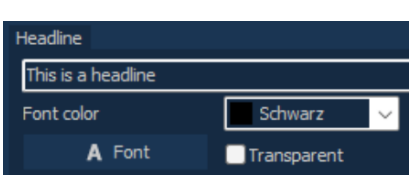


This CamIQ feature should only be used as a last resort if setting overlay text within the camera's UI/web interface is not possible, and no other approach or solution can fulfill your requirements. This is because enabling this feature in CamIQ requires transcoding, meaning images must be decoded, the overlay text added, and then re-encoded, causing significant CPU load.

To set up an overlay text:

- Select the camera you wish to apply overlay to from the "Virtual Camera Units (VCUs)" list. Optionally, if the device supports it, check the option “Render on the device”.

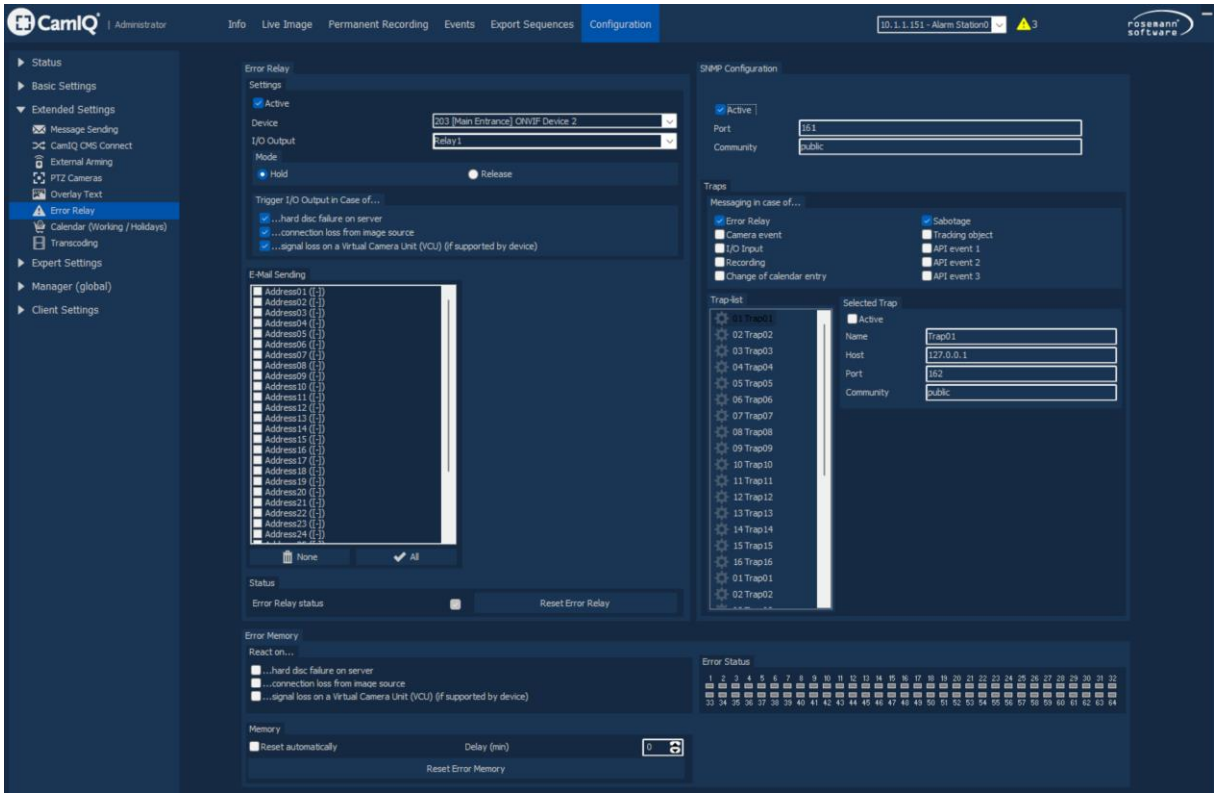
- Enter a headline text and define its font, transparency, and background color. Optionally, under "Data Text", enter additional text which will be displayed below the headline. You can define the position of the text in the camera image by entering values in "Offset from left" and "Offset from top".



Additionally, here you can set an overlay image as a privacy mask (e.g., PNG with transparent areas).

3.5.20 Error Relay

This section guides you through configuring notifications for failure control.



Error Relay
Configure a relay that will activate when failure conditions are met. This relay can be connected to devices such as sirens or signal lights to provide audible or visual alarms.

- Click on the "Active" button to use activate or deactivate this function, and select a driver and correspondent I/O output relay using the drop-down menus.

- Select between the two modes “Hold” or “Release”.

- Select the conditions under which the relay should be activated:
  - Hard disc failure on server
  - Connection loss from image source
  - Singla loss on a Virtual Camera Unit (VCU) (if supported by device)

- The relay's current state is displayed in the "Status" section. After a failure and corresponding relay activation, you can reset it using the "Reset Error Relay" button.

  [Safety Feature] The "Reset Error Relay" button is the only way the status can be reset!

- In the "E-Mail Sending" list you can select preconfigured e-mail addresses that should be notified in the case of a failure.

Error Memory
In this section you can select upon which conditions the failure errors should be logged in the status log and displayed in the Error Status (this is also visible in the Server Status tab). The conditions are the same as for the error relay.

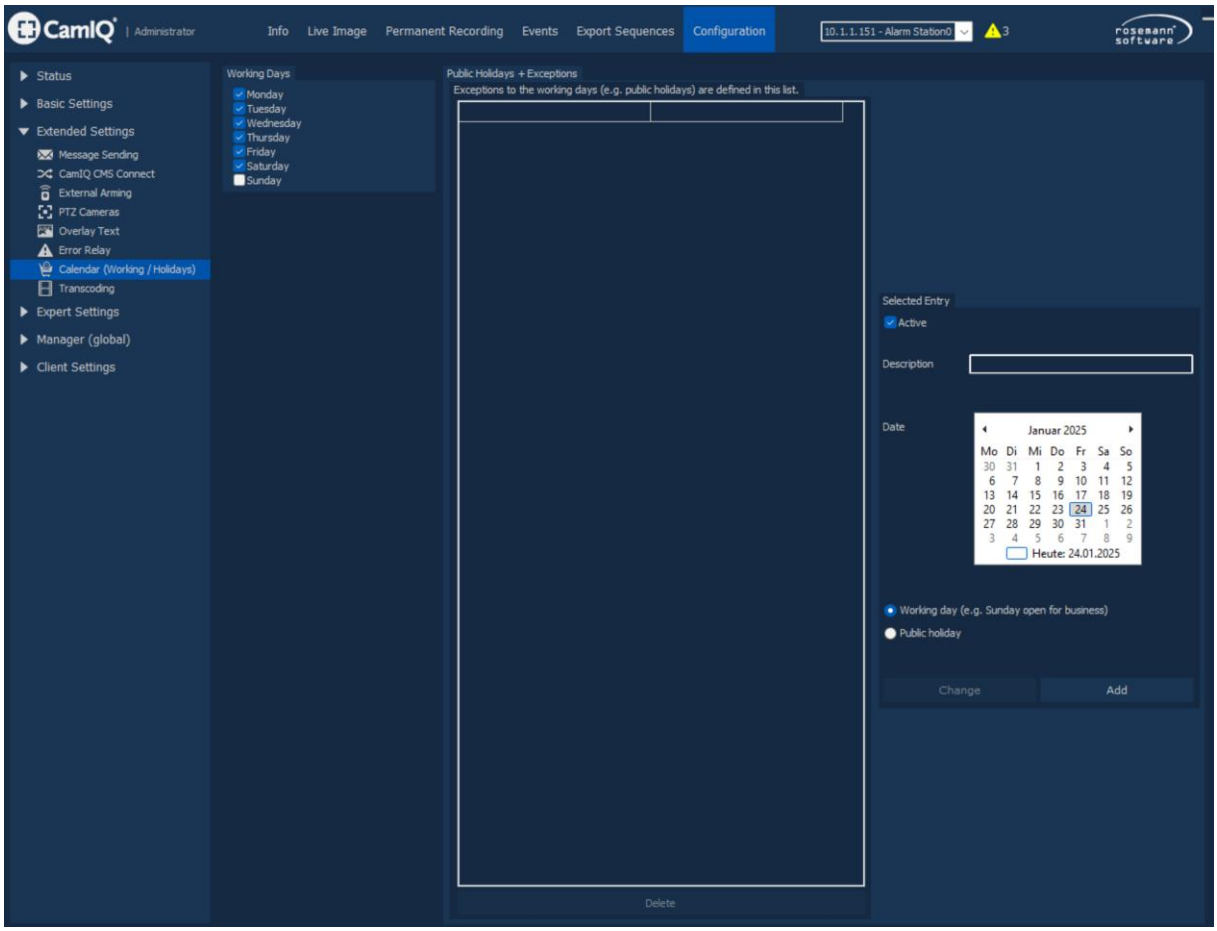
You can decide to reset automatically the error status after a certain amount of time, or to reset it manually using the “Reset Error Memory” button.

SNMP Configuration
Using the Simple Network Management Protocol configuration, you can trigger a special type of Protocol Data Unit (PDU), referred as “Trap”, which sends an unrequested message notification about critical events regarding network devices.

- Set the "Active" checkbox to activate SNMP. Enter a "port" and "community".
- Define which events should trigger a trap message by selecting the corresponding checkbox in the “Messaging in case of…” section.
- Select a trap from the "Trap-list" and enter the SNMP-connection information (Name, Host, Port, and Community) and set the entry to active. If you use several SNMP clients, define additional traps.

3.5.21 Calendar (Working / Holidays)

This section allows you to customize calendar settings by specifying which days are considered working days and by defining exceptions to standard holidays.



Tick a specific day checkbox in the “Working Days” section to consider that day a working day, untick it to consider it a holiday. By default all days except Sundays are working days.

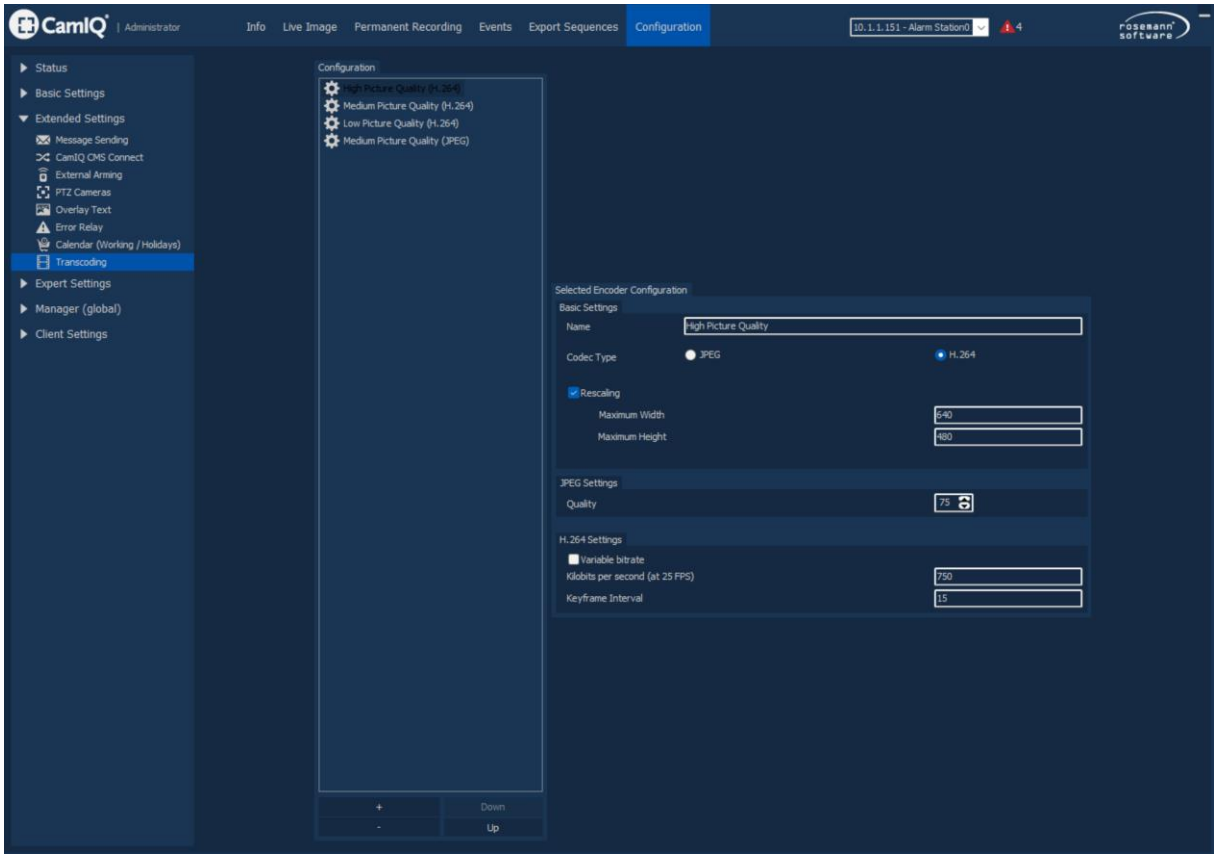
Adding Calendar Exceptions: To create an exception for a specific date, simply select the day on the calendar. Then, indicate whether you want it to be treated as a working day or a holiday.

For example, to make Sunday, January 26th, 2025, count as a working day:

- Select January 26th, 2025 on the calendar.
- Enter a name, e.g., “This Sunday we work!”
- Check the "Working Day" radio button.
- Click the Add button.

3.5.22 Transcoding

Transcoding refers to the conversion of a video stream from one encoding format to another. Transcoding is resource-intensive and should be avoided whenever possible. It involves decoding the original video stream and then re-encoding it into a different format, placing a significant load on the CPU.



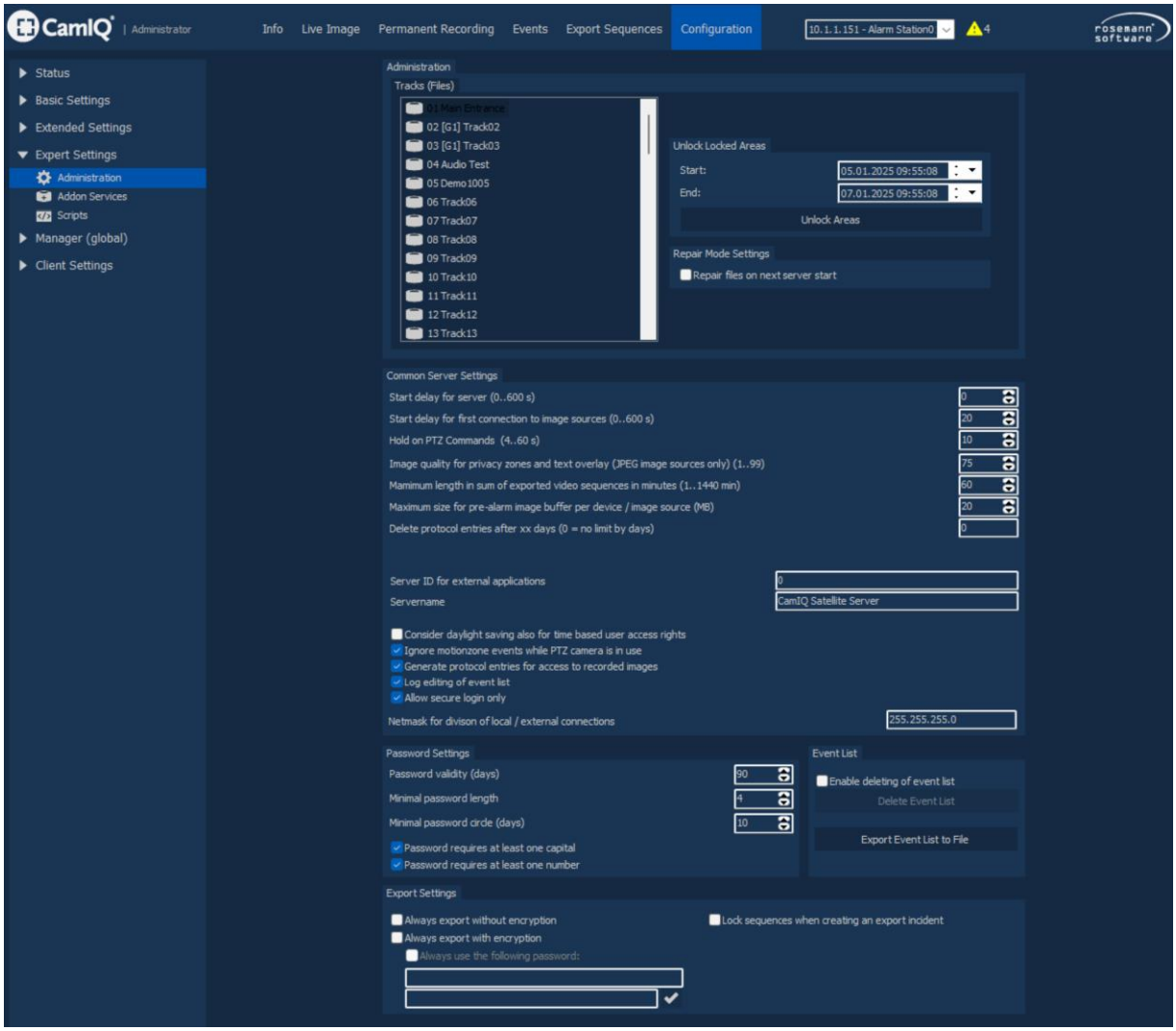
To create ( ) or modify a transcoding configuration:

- Assign a descriptive name.
- Select either JPEG or H.264 as the output codec for your stream. This codec determines the format in which the input stream will be re-encoded.
- Enable rescaling if you wish to adjust the dimensions of the output video stream. If enabled, specify the desired width and height for the re-encoded stream.
- Adjust the quality of the output stream:
  - [JPEG]: Quality in percentage
  - [H.264]: Variable bitrate, kilobits per second (at 25 fps), keyframe interval

A typical use case for transcoding involves converting native camera JPEG stream to H.264, which provides significant storage savings compared to the original JPEG stream.

3.5.23 Administration

The Administration tab simplifies unlocking locked video data and provides options to configure server settings, password validity, and export constrains.



Unlocking: To unlock locked areas and free up storage space, select the desired track from the track list and define a starting and ending time. All locked video data within this timeframe will be unlocked when you click the "Unlock Area" button.

If the locked image files are so old that they would have normally been overwritten through the rewriting cycle, unlocking them will lead to their immediate deletion.

Common Server Settings:

- **Server Startup Delay**: Set a startup delay for the server, ranging from 0 to 600 seconds. This feature allows you to postpone the application's launch after a system or server restart, ensuring that all network services have initialized successfully.

- **Image Source Delay**: This allows you to set a delay before the server attempts to establish connections to the image sources. Set a delay ranging from 0 to 600 seconds

- **Holding PTZ Commands**: This function allows you to set a delay so that when higher priority PTZ commands are given, lower priority PTZ operations are locked out for a defined amount of time.

- **Image Quality Privacy Zones / Overlay**: Use this function to compress excessively large JPEG image files which have been created using fade-out areas functions like privacy zones or overlay.

- **Maximum Length Export**: This option allows you to set a maximum length for exported material. This applies only to users with limited image export rights.

- **Maximum Size Pre-Alarm Buffer**: This option sets the maximum size (in MB unit) pro device / image source that a pre-alarm image can have.

- **Automatic Protocol Expiration**: This option allows you to delete the protocol log entries after a defined number of days. If set to 0, it is considered unlimited.

- **Server ID / Server Name:** Those parameters allow you to set an ID and a name for the server which will be used when interfacing with external applications.

- **Daylight Saving**: This function allows users with limited access rights to bypass time-based restrictions caused by Daylight Saving Time transitions. For example, if 5 hours of video access have been configured, users will retain access to the full 5 hours even when an hour is lost due to the switch to or from summer/winter time.

- **Ignore Motion-zone Events**: Check this option to ignore motion-zones events while the PTZ function of a PTZ camera is in use.

- **Log Recording Access**: If activated, any access to the permanent recordings will be logged in the protocol.

- **Log Editing Event**: If checked, any edit performed on the event list will be logged in the protocol.

- **Secure Login**: If checked, only encrypted logins using digest authentication will be accepted. Outdated/insecure login attempts will be rejected and noted accordingly in the logs.

- **NETMASK**: Set here a network mask to differentiate between local and external connections. This mask will be used for granting login / access rights to users which have the “Login from local networks (intranet)” set In the Roles tab.

Password Settings:

- **Password Validity**: Define the number of days a password remains valid. This setting applies only to users with the "Limited Password Validity" option enabled in their role mask. Once the

validity period expires, the user can no longer use that password to log in. If the user has the "Change Password" permission, they can change their password after the validity period ends.

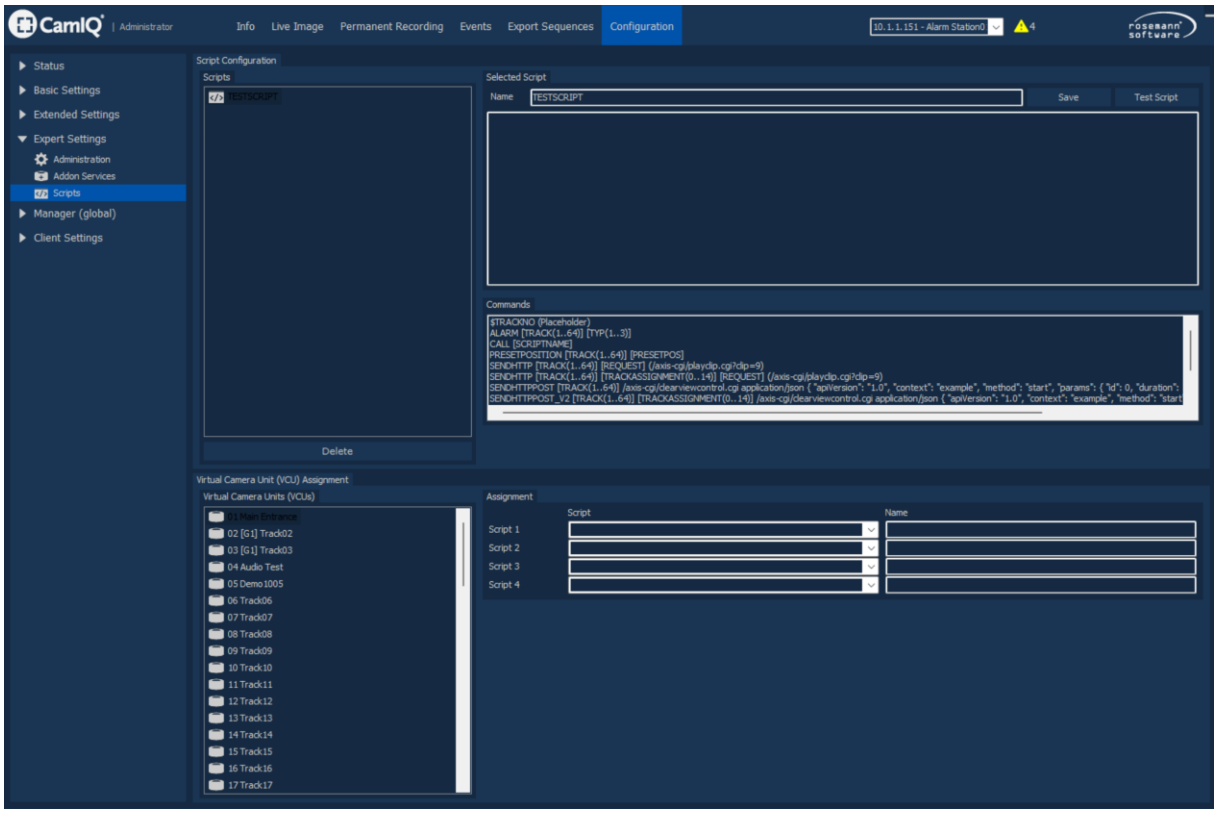
- **Min Password Length**: Define the minimum number of characters a password must have to be allowed**.**
- **Number of password changes before reuse**: Specify the minimum number of days that must elapse before a user can reuse a previously used password.
- **Password requires Capital**: If checked, only passwords containing at least one capital letter will be accepted.
- **Password requires Number**: if checked, only passwords containing at least one digit will be accepted.
- **Minimum Passwords Circle**: Specify the minimum number of days that must elapse before a user can reuse a previously used password.

Export settings:

- **Export without encryption**: This option disables the ability to export data with encryption. All exports will be performed without encryption.
- **Export with encryption**: Selecting this option prevents exporting data in an unencrypted format.
- **Default Encryption Password**: Store a predefined password that will be automatically used for encrypted exports.
- **Lock Sequences by Export**: This option enables automatic locking of exported sequences.

3.5.24 Scripts

The Scripts tab enables users to create small macros, known as scripts. These scripts can be assigned to alarms for automatic execution or, when assigned to a specific camera, manually triggered while in live view.



Perform core script operation:

1. Enter a new or modify an existing name for the selected script in the “Name” field under “Selected Script”.

2. Use the Save / Test Script / Delete buttons to perform operations on the scripts.

3. Saved scripts will be listed in the “Scripts” window.

Scripts Syntax:
Each command must begin with a new line!

- **$TRACKNO (Placeholder)**
  Function: This command enables flexible scripting by replacing the placeholder track number with the actual number of the track that triggered the script. This means the same script can be assigned to multiple tracks, and it will automatically adjust its behavior based on which track initiated it.
  Parameters: None
  Example**: ALARM $TRACKNO 1**

- **ALARM [TRACK(1..64)] [TYPE(1..3)]**
  Function: Triggers an alarm of specified API type for the specified track.
  Parameters:
  - TRACK: The track number, starting from 1 and up to 64.
  - TYPE: The alarm type between API-Event 1,2, or 3.

  Example: **ALARM 5 1**

- **CALL [SCRIPTNAME]**
  Function: Triggers the execution of the referenced script.
  Parameters:
  - SCRIPTNAME: The name of the script to be executed.

  Example: **CALL TESTSCRIPT2**

- **PRESETPOSITION [TRACK(1..64)] [PRESETPOS]**
  Function: Specified track moves to a pre-configured PTZ preset position.
  Parameters:
  - TRACK(1..64): The track number, starting from 1 and up to 64.
  - PRESETPOSITION: The preset position, starting from index 0.

  Example: PRESETPOSITION 2 4

- **SENDHTTP [TRACK(1..64)] [REQUEST] (/axis-cgi/playclip.cgi?clip=9)**
  Function: Sends an http string to the assigned track.
  Parameters:
  - TRACK(1..64): The track number, starting from 1 and up to 64.
  - REQUEST: The http string to be sent.

  Example: **SENDHTTP 2 /axis-cgi/playclip.cgi?clip=9**

- **SENDHTTP [TRACK(1..64)] [TRACKASSIGNMENT(0..14)] [REQUEST] (/axis-cgi/playclip.cgi?clip=9)**
  Function: Sends an http string to the specified track driver.
  Parameters:
  - TRACK(1..64): The track number, starting from 1 and up to 64.
  - TRACKASSIGNMENT(0..14):

0 -> Detection/Live(Polling)	4 -> I/O Input	9 -> Stream 3
1 -> Recording 1	5 -> PTZ Camera	11 -> HTTP Streaming
2 -> Recording2	7 -> Stream 1	13 -> Audio
3 -> I/O Output	8 -> Stream 2	14 -> Send Audio to Camera

  - REQUEST: The http string to be sent.

  Example: **SENDHTTP 2 4 /axis-cgi/playclip.cgi?clip=9**

- **SENDHTTPPOST [TRACK(1..64)] /axis-cgi/clearviewcontrol.cgi application/json { "apiVersion": "1.0", "context": "example", "method": "start", "params": { "id": 0, "duration": 10 } }**
  Function: Sends an http-post string to the specified track.
  Parameters:
  - TRACK(1..64): The track number, starting from 1 and up to 64.
  - REQUEST: The http-post string request to be sent.
  - MIME TYPE: The type of message sent, e.g., application/json.
  - PAYLOAD: The string containing the message itself.

Example: **SENDHTTPPOST 1 /axis-cgi/clearviewcontrol.cgi application/json { "apiVersion": "1.0", "context": "example", "method": "start", "params": { "id": 0, "duration": 10 } }**

- **SENDHTTPPOST_V2 [TRACK(1..64)] [TRACKASSIGNMENT(0..14)] /axis-cgi/clearviewcontrol.cgi application/json { "apiVersion": "1.0", "context": "example", "method": "start", "params": { "id": 0, "duration": 10 } }**
  Function: Sends an http-post string to the specified track driver.
  Parameters:
  - TRACK(1..64): The track number, starting from 1 and up to 64.
  - TRACKASSIGNMENT(0..14):

0 -> Detection/Live(Polling)	4 -> I/O Input	9 -> Stream 3
1 -> Recording 1	5 -> PTZ Camera	11 -> HTTP Streaming
2 -> Recording2	7 -> Stream 1	13 -> Audio
3 -> I/O Output	8 -> Stream 2	14 -> Send Audio to Camera

  - REQUEST: The http-post string request to be sent.
  - MIME TYPE: The type of message sent, e.g., application/json.
  - PAYLOAD: The string containing the message itself.

  Example: **SENDHTTPPOST 1 1 /axis-cgi/clearviewcontrol.cgi application/json { "apiVersion": "1.0", "context": "example", "method": "start", "params": { "id": 0, "duration": 10 } }**

- **SENDURL [URL] (http://user:password@ip-address/axis-cgi/playclip.cgi?clip=9)**
  Function: Sends an http string to a specified network address.
  Parameters:
  - URL: The http string to be executed.

  Example: **SENDURL http://192.168.0.23/axis-cgi/playclip.cgi?clip=9**

- **SENDUDP [HOST] [PORT] [DATASTRING ("%20"=>" ", "%25"=>"%", etc.)]**
  Function: Sends a string via UDP to a destination address.
  Parameters:
  - HOST: Enter the destination address here.
  - PORT: Enter the destination port here.
  - DATASTRING: Define the string to be sent to the destination address here.

  Example: **DATASTRING 192.168.0.1 8080 Hallo%20Welt**

- **LOCKLAST [TRACK(1..64)] [(hh:mm:ss)]**
  Function: Recording locks begin at current time and extend backward to the defined time.
  Parameter:
  - TRACK: The track number, starting from 1 and up to 64.
  - (hh:mm:ss): Enter here - in hours, minutes and seconds - how far back from the current time the recording should be locked.

  Example: LOCKLAST 1 24:00:00

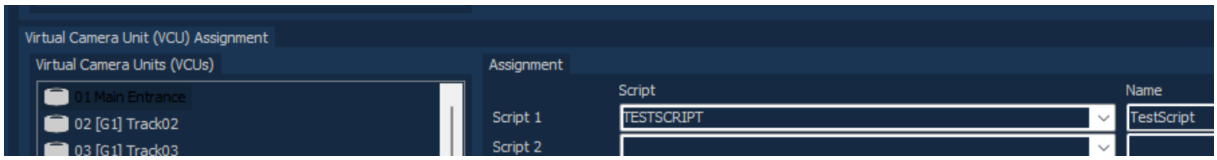
- **UNLOCKLAST [TRACK(1..64)] [OPTIONAL(hh:mm:ss)]**
  Function: Unlock recordings starting from current time and up to to the defined time.
  Parameters:
  - TRACK: The track number, starting from 1 and up to 64.

- OPTIONAL (hh:mm:ss): Enter here in hours, minutes and seconds how far back from the current time the recording should be unlocked. This parameter is optional. If no time is specified, the entire recording will be unlocked.

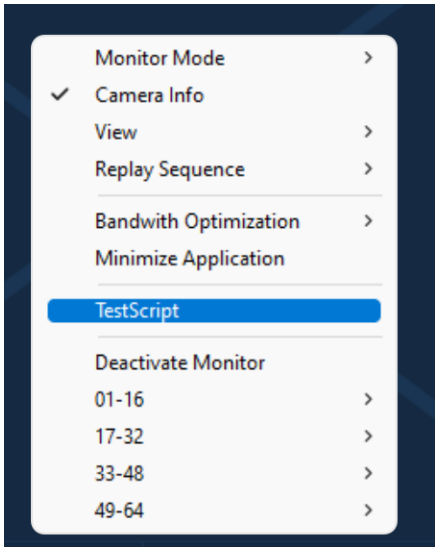
Example 1: **UNLOCKLAST 1 24:00:00**
Example 2: **UNLOCKLAST 1**

Camera Scripts Assignment:
Each track can be assigned up to four scripts, which can be executed with just a few clicks directly from the Live Image.

From the "Virtual Camera Units (VCUs)", first select the track to which you want to assign a script. Then, choose the desired script from the "Script" list. At "Name", enter an appropriate designation for the command button.

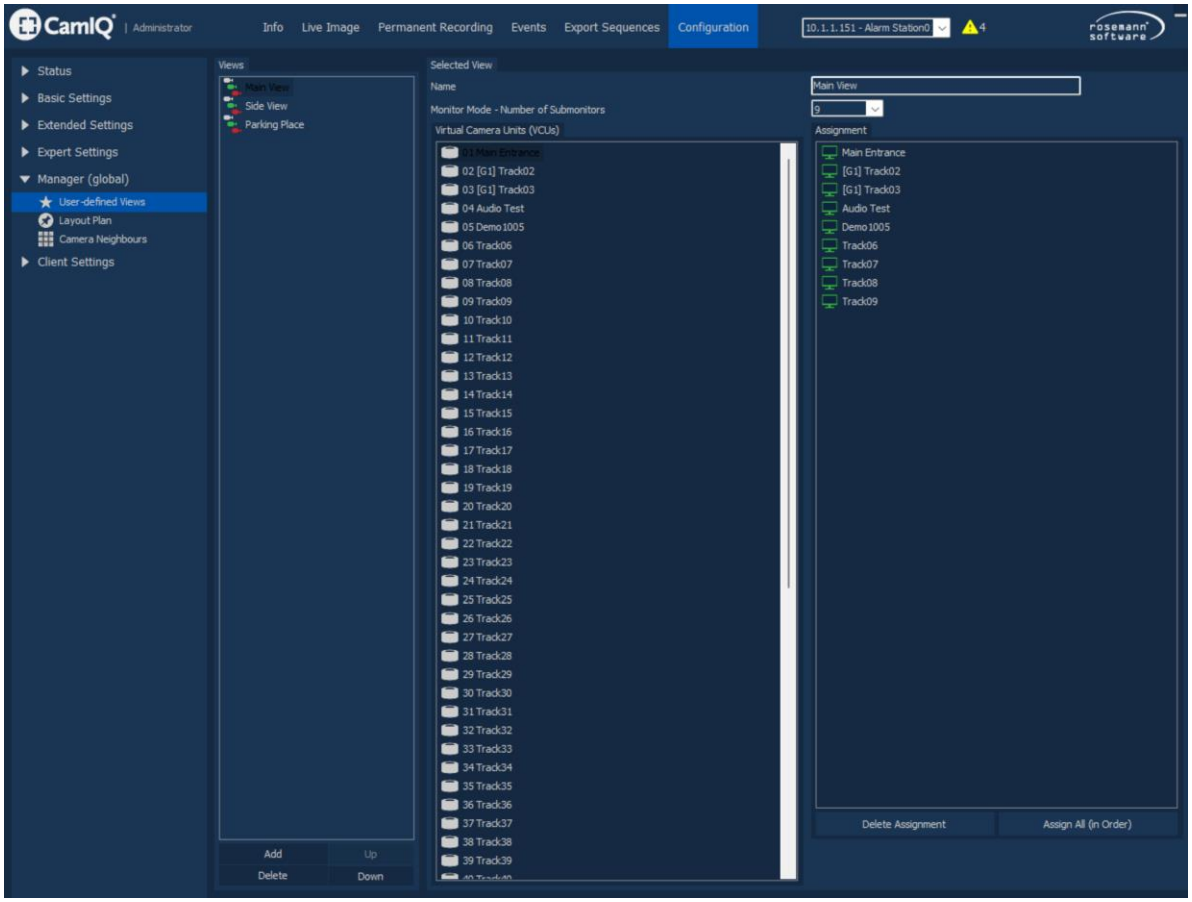


Next, open the context menu in the selected track's Live Image. The script designation will be visible within the context menu. Left-click on it to execute the script.



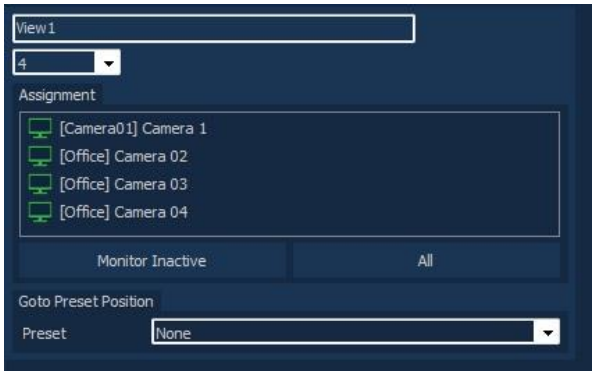
3.5.25 User-defined Views

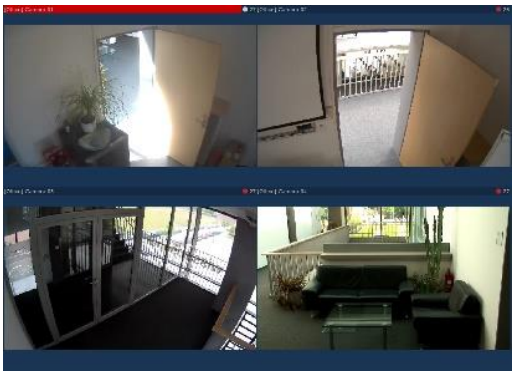
In this tab users can define custom views, i.e., predefined groups of cameras, which can be used in the Live Image tab.



Views: The "Views" window displays all saved views available for use in Live Image. Use the "Add/Delete" button to create new views or delete unnecessary ones. The "Up/Down" buttons allow you to sort your view list as desired. Selecting an entry and clicking these buttons will move it up or down within the list, respectively.

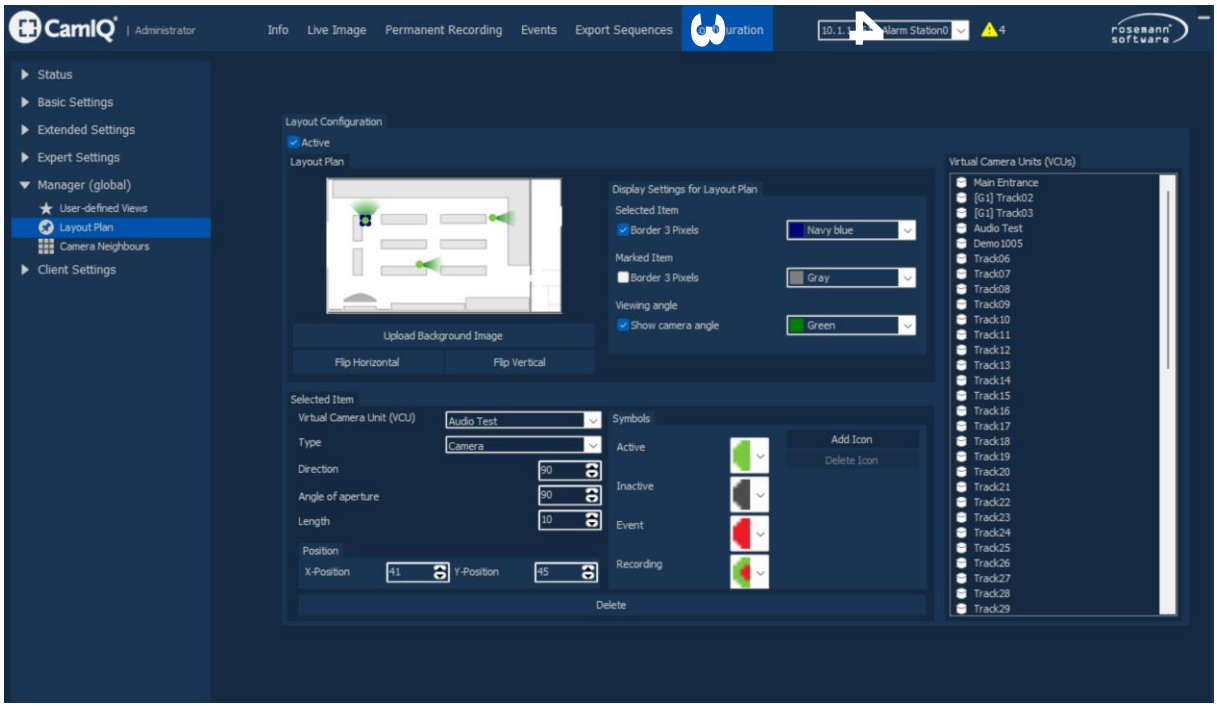
Modify a View: Select the view name under "Selected View". Next, choose the number of tracks you want to display under "Monitor Mode" (e.g., 9 for a 3x3 view). All available tracks will be listed in the "Virtual Camera Units (VCUs)" section. On the right side, the "Assignment" section displays your current track arrangement. Use drag-and-drop functionality to add or reposition tracks.
To delete an assignment and leave the selected camera view unassigned, use the "Delete Assignment" button. The "Assign All (in Order)" button quickly assigns all tracks sequentially, beginning with track 1 and continuing until all available camera views are filled.





3.5.26 Layout Plan

In this tab you can create a layout plan which display the floor plan along with the cameras position and orientation. This layout can also be selected in live view and can be used to automatically setup neighbor cameras.



To create and configure a layout plan:

1. **Layout Picture**: Select a picture of the floor plan of the area under surveillance and upload it using the “Upload Background Image” button.

2. **Add Cameras**: Drag & drop the cameras from the “Virtual Camera Units (VCUs)” list onto the layout plan in the desired position.

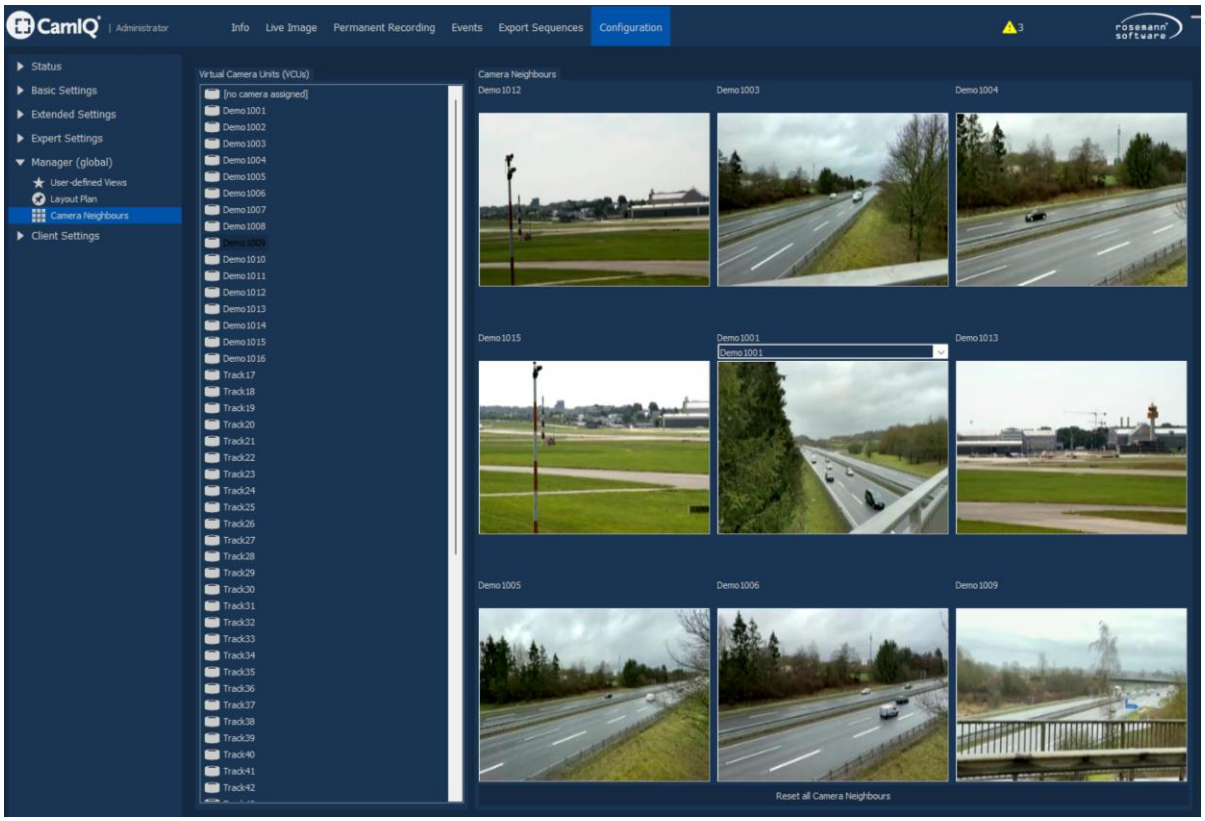
3. **Configure Position and Orientation**: Adjust the cameras' positions (horizontal X-Position and vertical Y-Position), and orientations using the “Direction”, “Angle of Aperture”, and “Length” fields until the layout plan matches your cameras' setup.

4. **Configure Colors**: Customize the cameras' color coding to suit your preferences. The default settings use green for active cameras, gray for inactive cameras, red for events, and a red/green combination to indicate live recording status. This provides an overview of the status of all displayed cameras directly in the layout. It is possible to use a personalized icon by uploading a bitmap (.bmp) file of maximum 8x8 pixels using the “Add Icon” button.

5. **Activate:** Tick the “Active” checkbox to activate the layout and make it visible in Live Image, Permanent Recordings, and Event List tabs.

3.5.27 Neighboring Cameras

This tab allows users to define up to eight neighbor cameras for display within the Live Image, Permanent Recording, and Event List tabs using designated shortcuts.



Configure Neighbor Cameras:

1. **Reference Camera**: Select the reference camera for which you want to define neighbors. You can choose this camera from the dropdown menu or drag the desired camera from the "Virtual Camera Unit (VCUs)" list into the middle camera preview area.

2. **Assign Neighbors**: To define the neighbors for the selected camera, simply drag and drop any camera from the "Virtual Camera Unit (VCUs)" list into the desired neighboring field.

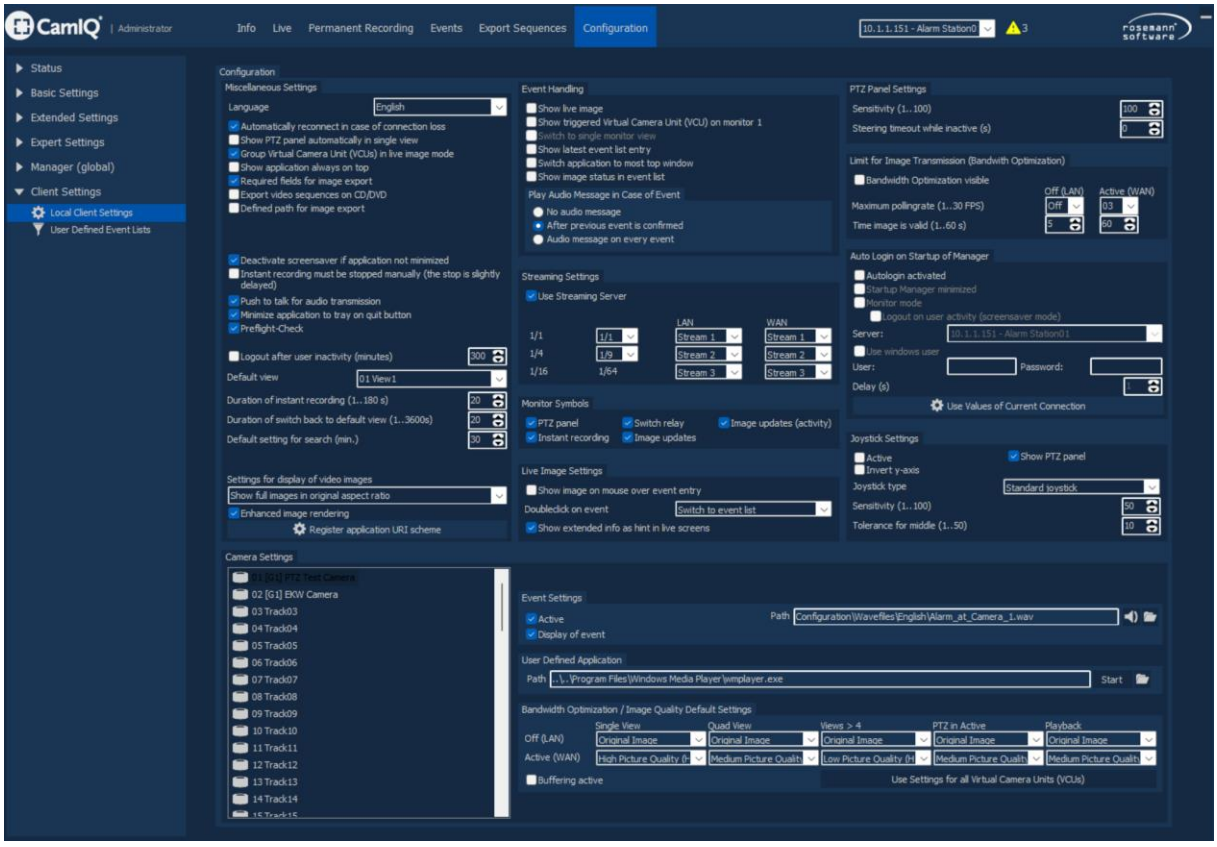
3. **PTZ Preset Positions**: If your camera is a PTZ camera with a configured PTZ driver and stored presets, you can select these presets from a dropdown menu beneath the camera name. The selected preset position will be activated when switching to the neighbor camera's perspective.

4. **Automatic Assignment**: When a layout plan is configured, neighboring cameras can be automatically assigned based on camera positions or fields of view defined within the plan. To perform automatic assignment, use the "Use Camera Positions" and "Use Viewing Areas" buttons. These buttons are only visible when a layout is active.

5. **Reset**: To reset all neighboring camera assignments for a selected track, click the "Reset All Camera Neighbors" button.
6. **Visualize**: You can now view images from neighboring cameras in the Live Image, Permanent Recording, and Event List views using the designated button  .

3.5.28 Local Client Settings

In the Local Client Settings tab contains additional configuration menus specific to the Manager software installed on your computer. Changes made in this tab only affect the local installation and do not impact the Server or Managers running on other machines.



Miscellaneous Settings:

1. **Language**: Select the preferred language in the drop-down menu.

2. **Automatically Reconnect**: The Manager will automatically reconnect to the server if the connection is lost, such as during a server restart.

3. **Show PTZ Panel**: Enable this option to automatically display the PTZ panel when viewing a single camera. This feature only activates for cameras with a configured PTZ driver.

4. **Group Virtual Camera Unit (VCUs) in live image mode**: Turn on the group feature in live view. This function groups cameras sharing a common name prefix (e.g., "[Group1] Camera1", "[Group1] Camera2"). Remember to adjust the track names accordingly within the Track Configuration tab.

5. **Show application always on top**: If enabled, no other program or window will be able to obscure / cover the Manager, except when in configuration mode.

6. **Required fields for image export**: When enabled, users exporting data must provide details, including transaction number, reason, and comment.

7. **Export video sequences on CD/DVD:** Allows the user to export the data on a CD/DVD disk. This only work for local exports, server-side exports do not support this feature.

8. **Defined Path for Image Export:** Specify a path where local exports are to be performed. Server-side exports are not affected by this setting.

9. **Deactivate Screensaver:** Enable this option to deactivate the screensaver when the Manager is not minimized.

10. **Instant Recording must be stopped manually / Toggle Recording:** When selected, Instant Recording, which normally lasts only a few seconds, will continue indefinitely until manually deactivated by selecting Instant Recording again.

11. **Push to Talk:** Audio function activates only when the “Push to Talk” button  is pressed.

12. **Minimize application**: When selected, the top-right corner icon will minimize the manager instead of quitting it.

13. **Preflight-Check**: Enable warnings for potentially missing, incorrect, or misconfigured drivers and settings.

14. **Logout after user inactivity**: Configure the inactivity timeout (in minutes) after which an automatic logout will be performed.

15. **Default view**: Customize which view is set as the default. You can select the default view manually or automatically (timeout) while in the Live View tab.

16. **Duration Instant Recording**: This determines for how long the images are recorded after pressing the instant recording button. You can set a value between 1 and 180 seconds.

17. **Duration of switch default View**: This setting determines the time window after which the system will automatically switch back to the default view from the current view. You can set a value between 1 and 3600 seconds.

18. **Default Search:** This setting determines the default time window, in minutes, used by the permanent recordings search function.

19. **Setting for Display**: This setting allows you to customize how images are displayed in live view. You can choose between different aspect ratios and options, such as stretching to fit the monitor or displaying the original resolution.

20. **Enhanced Image Rendering**: This option enables higher-quality image rendering by means of a more advanced pixel interpolation technique.

21. **Register application URI scheme**: This button registers the application Uniform Resource Identifier (URI) in the Windows registry. This enables surveillance / control centers or external applications to interface or trigger CamIQ.

Event Handling:

1. **Show Live Image**: When an event occurs, the system automatically switches to the Live Image tab.

2. **Show triggered VCU on monitor one**: When an event occurs, the associated camera feed will be displayed on the primary monitor.

3. **Switch to Single View**: Requires previous option. Upon receiving an event, the system will automatically transition to a single view displaying the track which triggered the alarm.

4. **Show latest Event:** When an event occurs, the most recent entry in the "Latest Events" list will be automatically selected and highlighted.

5. **Switch application to most top window**: When an event occurs, and the Manager is minimized and not in Configuration mode, it will switch the app to the top most window.

6. **Show image status in event list**: When this option is active, alarm entries in the Live Image tab will display a graphical indicator showing whether an associated image is available. An empty icon indicates no image is present, while a filled icon signifies that an image is available.

7. **Play Audio Message**: This setting lets you configure whether and how the Manager provides acoustic signals during an alarm. To disable audio playback entirely, select "No Audio Playback". Choosing "Playback Only after Previous Alarm Confirmation" ensures that only the first alarm will be audible. Subsequent alarms will not trigger acoustic alerts until the initial alarm has been confirmed. If you want an audio signal to accompany every alarm, select "Playback With Every Alarm".

Streaming Settings:

1. **Use Streaming Server**: Use this option to enable or disable the streaming server functionality in Live View. This setting does not affect permanent recordings. If tracks are configured to use the streaming server and this option is unselected, Live View will display images using fallback polling instead.

2. **Monitor Views 1/1 to 1/64:** Choose the appropriate streaming server driver for each monitor view. Two to three configurable drivers are typically available (if configured in the Devices and Tracks) and offer varying resolutions. Distinct options are available for Local Area Network (LAN) and Wide Area Network (WAN) configurations.

   For optimal performance, it's generally recommended to use the highest resolution setting for single view and up to quad-view configurations. Utilizing higher resolutions beyond this point can strain the CPU due to the increased processing demands of decoding many high-resolution streams.

Monitor Symbols:
In this section you can select which symbols are visible over the camera images in Live View. Select a symbol to display it, or deselect it to hide it from view.


PTZ-Panel


Switch Relay


Instant Recording

Image Updates


Image Updates (activity)

Live Image Settings:

1. **Show image on mouseover**: When enabled, hovering your mouse cursor over an alarm entry in the Live View alarm list will display the image that triggered the alarm.

2. **Double-click on event**: Choose what to do when double-clicking on an event in live image:
   - Switch to event list
   - Switch to permanent recordings
   - Assign to first monitor

3. **Show extended info as hint in live screens**: When enabled, hovering your mouse cursor over an image will provide additional information, like the status of the IO Input and IO Output.

PTZ Panel Settings:

1. **Sensitivity**: The sensitivity reflects how sensitive the PTZ camera reacts to commands. Adjust the sensitivity of the PTZ panel using a scale from 1 (least sensitive) to 100 (most sensitive).

2. **Steering Timeout**: Set a timeout to prevent unintended and prolonged PTZ movements due to hardware miscommunication.

Limit for Image Transmission:

1. **Bandwidth optimization visible**: Select this option if you want the bandwidth optimization checkbox on the login screen to be visible.

2. **Maximum Polling Rate**: Set how many images per second the fallback polling stream should use. If you don't want any FPS limitations, select the "OFF" option from the drop-down menu. Distinct options available for LAN and WAN configurations.

3. **Time image is valid**: This is the time after which a camera without image updates will be classified as being not available. This setting is expressly recommended for a WAN connection.

Auto Login on Startup Manager:

1. **Autologin activated**: Use this option to automatically login when the program is started. The server and login details must be specified in their respective fields.

2. **Startup minimized**: This option enables you to start the Manager in minimized mode.

3. **Monitor mode**: This option allows you to start the Manager in Fullscreen monitor mode.

4. **Logout on User Activity**: Automatically logs out the user when screen activity is detected.

5. **Delay**: Using the "Delay" button lets you enter the time to pass - in seconds - before the Manager starts after automatic login.

Joystick Settings:

Configure the PTZ Panel to be operated using a joystick. Joysticks can be connected either through the game port or via USB. We recommend using analog joysticks, as they provide 360-degree directional control and recognize movement intensity, translating it accurately to camera movements. Additionally, 4 firing buttons are required: 1-Zoom in, 2-Zoom out, 3-Focus. 4-Focus.

1. **Active**: Activate the joystick's control.

2. **Show PTZ Panel**: Automatically show the PTZ Panel when the joystick is active.

3. **Invert y-axis**: Activate this option to reverse the direction of the y-axis. This means the camera will look downwards when you push the joystick forward, and upwards when you pull it back.

4. **Joystick Type**: Select what joystick type you are using based on the hardware specifications. Available options are:
   - Standard Joystick
   - Standard Joystick with z-axis
   - Special Joystick (CH products)

5. **Sensitivity**: The sensitivity reflects how sensitive the PTZ camera reacts to joystick commands. Adjust the sensitivity using a scale from 1 (least sensitive) to 100 (most sensitive).

6. **Tolerance**: Use this option to compensate for unwanted control signals sent from the joystick. Analog joysticks can develop wear marks with frequent use, often resulting in a control stick that

doesn't stand taut but leans to one side. This leads to unintended signals being sent. The issue can also arise from improper calibration (which is performed within the Windows Control Panel). If your joystick exhibits this behavior, simply increase the tolerance setting. This compensates for the "false" control signals without affecting movable cameras.

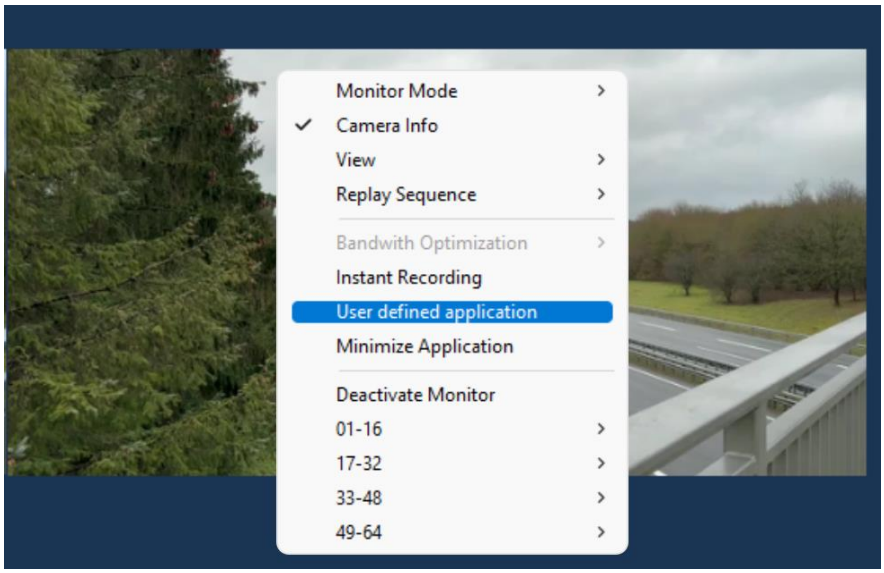
Camera Settings:

1. **Event Settings - Active**: Enable or disable audio message playback when an alarm for the selected track is triggered. Customize audio messages by uploading your files in .WAV format. Preview the audio using the  button.

2. **Event Settings - Display of event**: This option enables to select for each track if alarms should trigger a visual element (red highlight: 

) in the live interface or not.

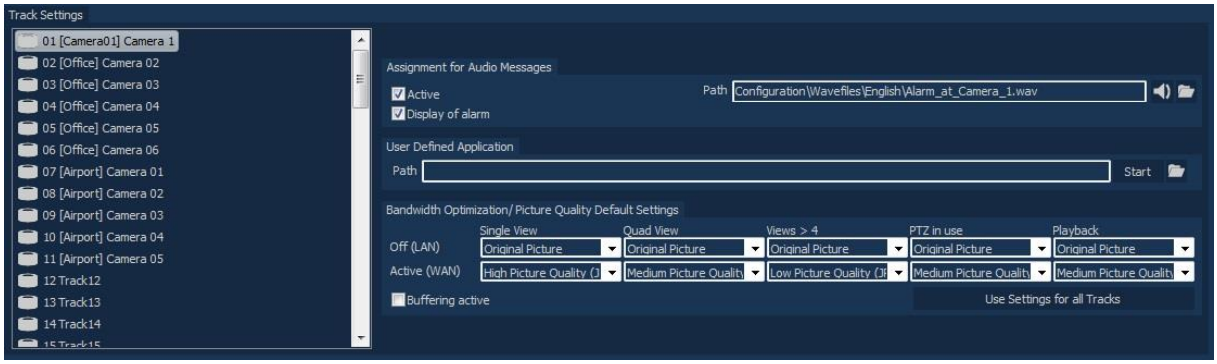
3. **User Defined Application**: Under the "User-Defined Application" item you can enter the file path to an application (.exe) in the "Path" field. To test the function, click on the "Start" button. The option will be selectable in the live view menu window that opens with the right click mouse button.



4. **Bandwidth optimization / Image quality Default settings:** Here you can individually set the image compression rate for different situations.

   These various situations are as follows:
   - **Basic View:** Only one track is displayed in the Live View
   - **Quad View:** Four tracks are displayed in the Live View
   - **Views > 4:** More than four tracks are displayed in the Live View
   - **PTZ Operation:** The controlling of a tilt swivel or dome camera
   - **Playback:** Playback of the permanent track or of event recordings

5. **Settings per Track:** In the "Settings per Track" menu, you can undertake additional settings that affect the alarm reactions and the image compression for the various tracks.



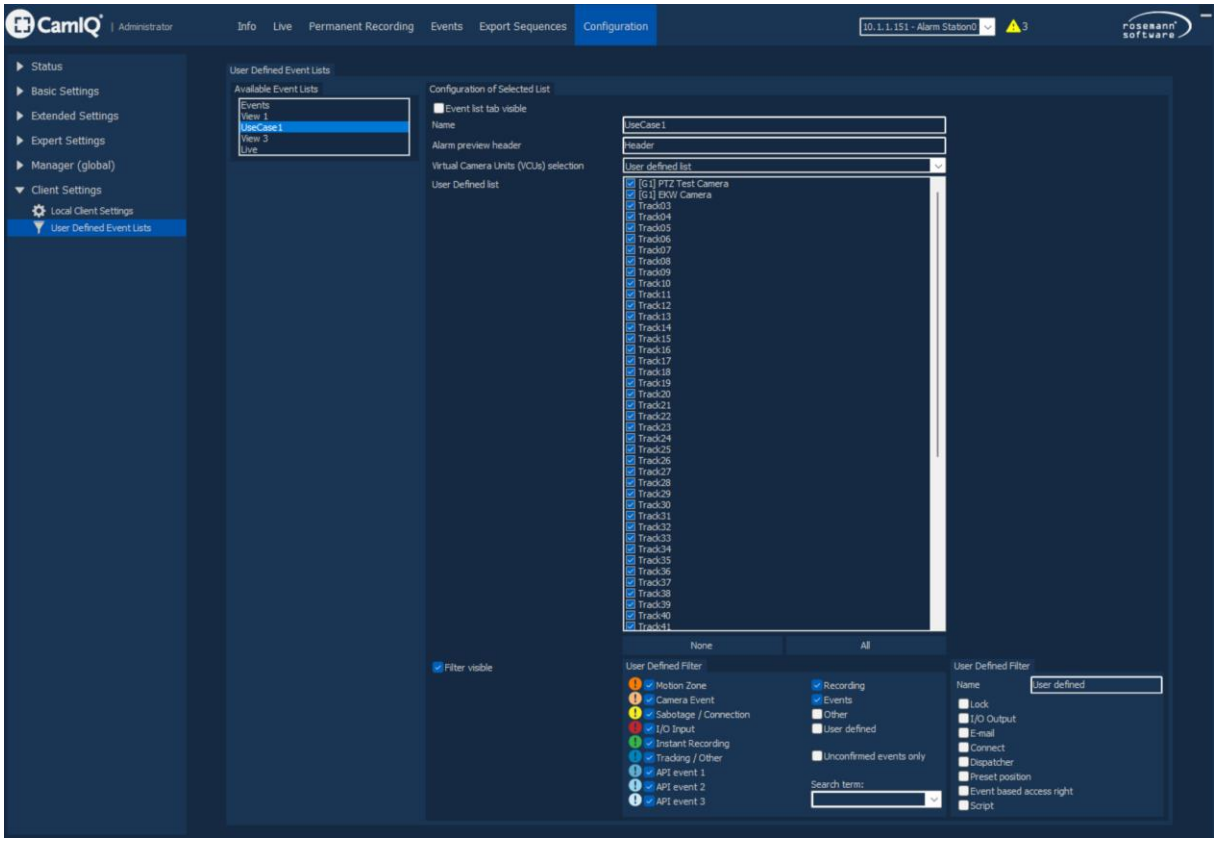
- For every situation, you can set the compression for a LAN or a WAN connection. It will be possible for you to completely turn off the compression, to set the compression to a low, medium or high compression rate, or to activate a code conversion profile of your own.

- If the compression settings should be the same for all levels, click on the "Apply to All Tracks" button to assign them to the rest of the tracks.

- To compensate for frame drops, the live image display is delayed by a 250ms buffering procedure (the buffering procedure is switched off automatically through the control of a PTZ camera). If the buffering feature is not desired, it can be deactivated in the manager for a selected track or with the "Use Settings for all tracks" button" for the complete image display.

3.5.29 User-Defined Event Lists

The *User-Defined Event Lists* tab enables you to create additional tabs with custom event lists, allowing you to filter events relevant to specific scenarios or use cases.



To create a new tab:

1. **Name**: Assign a descriptive name.

2. **Alarm Preview Header**: Enter a name for the alarm preview header.

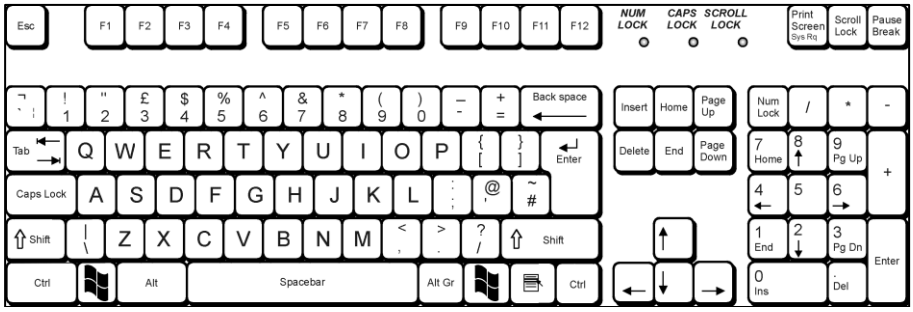
3. **Virtual Camera Units**: Choose the cameras you want to display in this event list. You can select a single camera, all cameras, or create a custom list by ticking the desired cameras using the "User Defined List" option.

4. **Event Filter**: Select which alarm types should be displayed in this event list. You can also select a search term, e.g., “person”. This is used to filter events generated by CamIQ AI Analytics.

5. **Activate**: Tick the checkbox “Event list tab visible”, making the tab visible in the Manager.

3.5.30 Keyboard Control

Shortcuts are key combinations pressed simultaneously to perform specific actions. The Manager software offers a series of shortcuts that allow you to operate it without using the mouse. These shortcuts always consist of the CTRL ("Control") key combined with a key from the keypad (NUM).



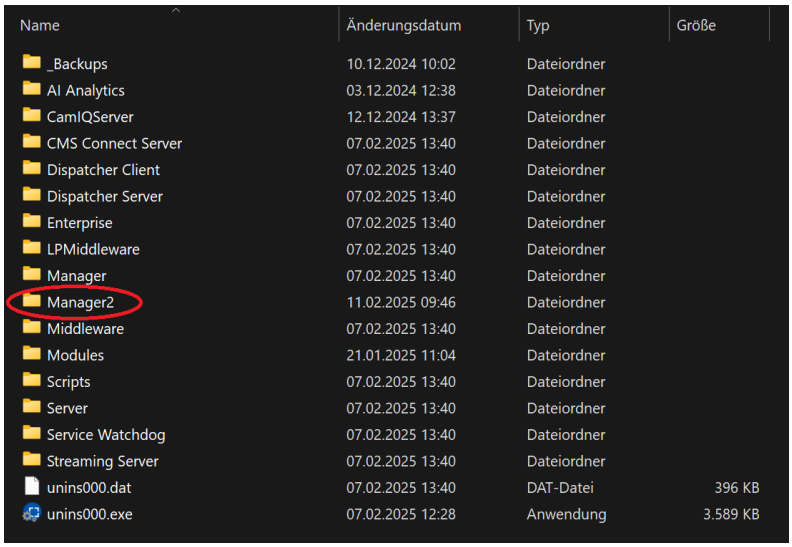
Ctrl +

← Play backward	→ Play forward	↓ Stop
Page Up Previous image	Page Down Next image	
Home First image	End Last image	5 9-fold view
Insert Minimise Manager	Delete Maximize Manager	0 Ins Full-screen mode

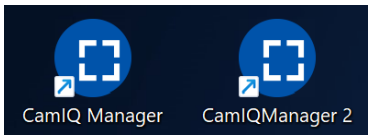
Neighbor cameras

3.5.31 Multiple Clients

CamIQ enables you to run multiple instances of the Manager on the same system. To achieve this, you'll need to create a copy of the directory. Navigate to your installation directory, copy the "Manager" folder using copy-paste, and rename it as desired (e.g., "Manager2").



For convenience, you can create a link directly on the Desktop by right-clicking the Manager executable within the newly created Manager folder and selecting the option “Send to”->“Desktop”. Rename your shortcut accordingly.

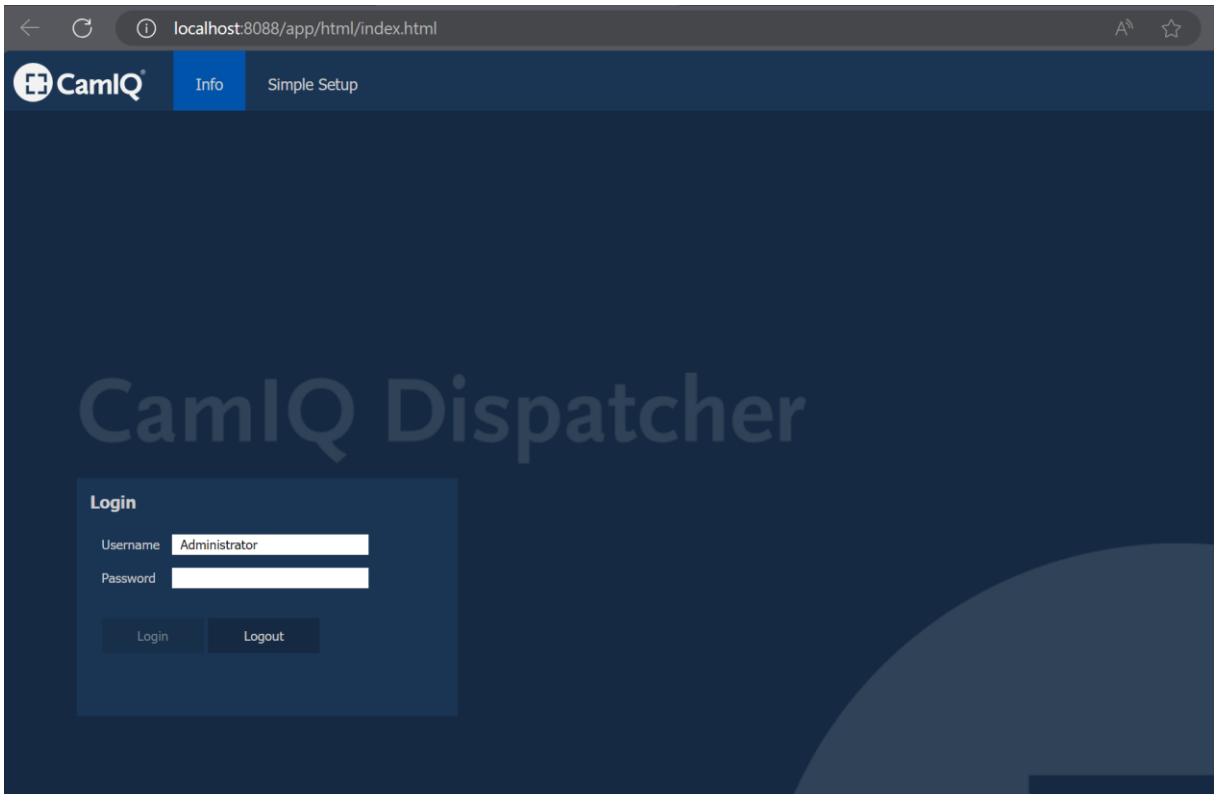


Log in to the CamIQ Server using the CamIQ Manager as you normally would. When logged into the same CamIQ Server with two or more CamIQ Manager clients, you can interact between them using Drag & Drop functionality.

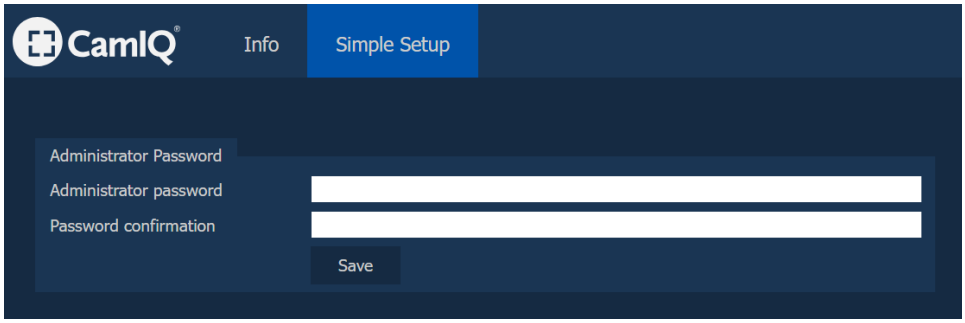
3.6 CamIQ Gateway Configuration / Dispatcher

The CamIQ Dispatcher is a crucial component of the CamIQ architecture, enabling communication between different modules. It operates as a background service and provides a web-based interface for accessing and modifying essential CamIQ network settings.

During installation, unless otherwise specified, a shortcut link "*CamIQ Gateway Configuration*" was created on your desktop, providing easy access to the dispatcher. If you opted out of creating the shortcut, you can manually access the dispatcher by entering the following address in your web browser: *http://localhost:8088*.



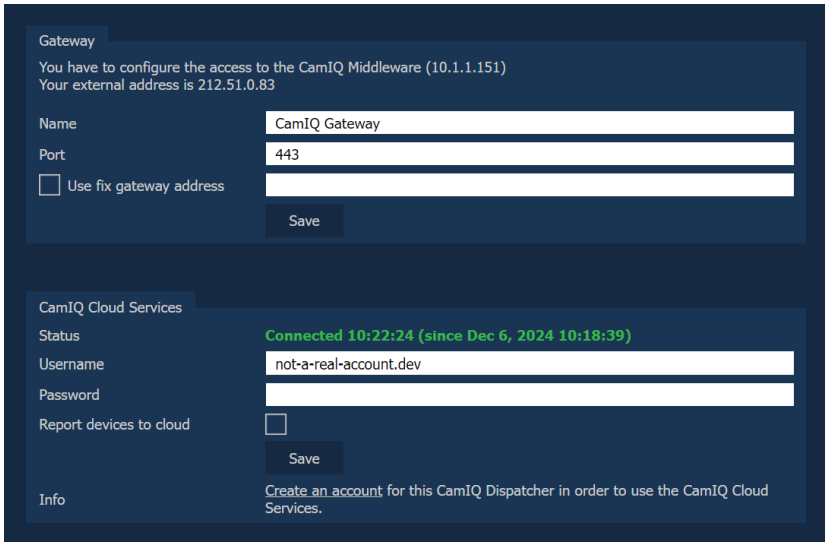
The dispatcher module uses a separate, independent password that is different from the password used to log in to CamIQ Manager. By default, the dispatcher password is empty. The password can be changed in the *Simple Setup* tab.



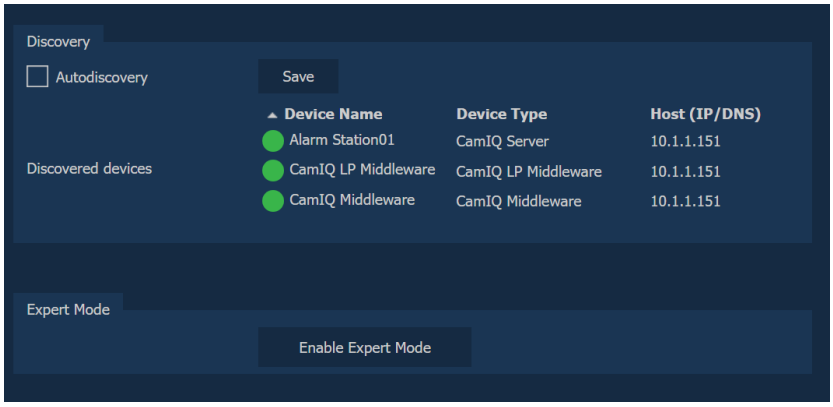
3.6.1 Simple Setup

In the Simple Setup tab you can configure Gateway settings and connect to CamIQ Cloud Services. In most cases, the default Gateway settings need not to be modified. However, if your network requires configuration adjustments, modify the settings accordingly.

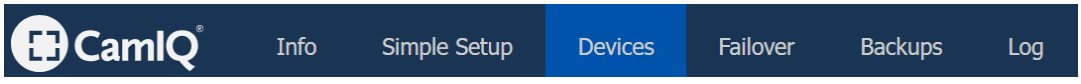
Ensure modifications are reflected in all affected modules. Mismatches between the Gateway settings and the Middleware's configuration parameters (see config.ini file in the Middleware's folder) will prevent successful communication between CamIQ modules.



Finally, the simple Setup tab shows the discovered CamIQ modules and allows access to the Expert Mode tab. In Expert Mode, additional, more complex configuration steps can be undertaken.

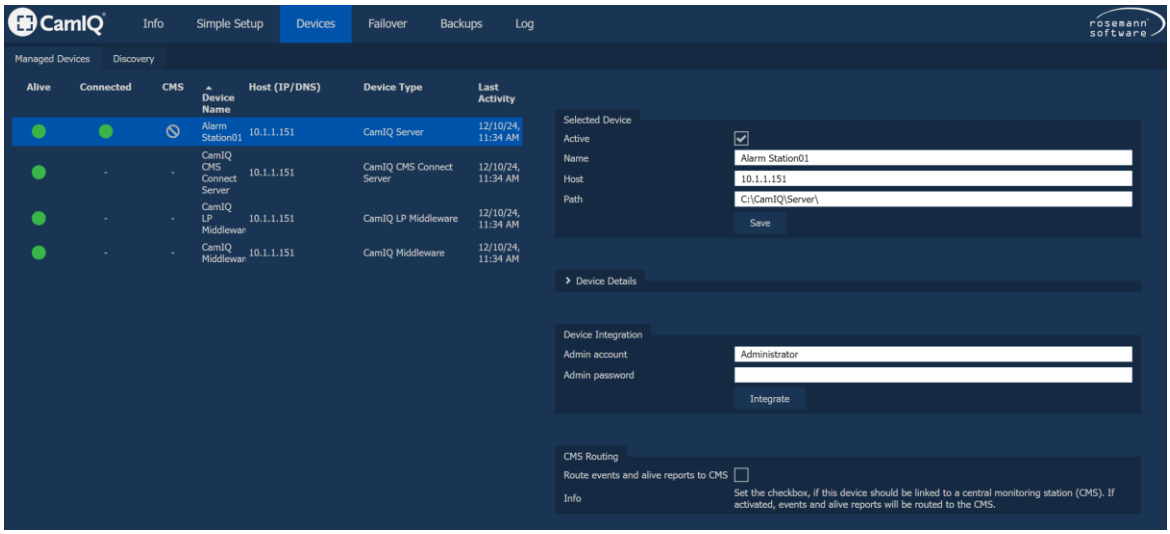


Toggling the expert mode will make several new tabs available.



3.6.2 Devices

In the *Devices* tab all registered CamIQ devices are listed in the “Managed Devices” list. Whenever possible, devices are automatically registered and communicate with the dispatcher. However, depending on the network setup, it might be necessary to discover and add devices manually.



The following information will be displayed in the list for every registered device:

Alive: Green = the device is accessible
Red = the device is not accessible
Connected: Green = the connection is up (necessary for failover and backup)
Red = the connection is down
CMS: indicates if the device being routed to the Central Monitoring Station (CMS)
Device Name: the name of the device
Host: the IP address of the device
Device Type: the type of device (CamIQ Server, Middleware, etc.)
Last Activity: the time the last signal from the device was received

Selected Device: You can change the name, host, and path of a device in the Selected Device box. Confirm the changes by clicking on “Save”, as otherwise will be discarded.

Device Details: Displays information about the currently selected device. This includes the internal device ID/Token, software version, and, if applicable, the dongle number.

Integration: For backup and failover operations, the dispatcher server needs a one-time administrative access to the server through a user account with administrator privileges. Enter the user data and click on “Integrate” (“Connected Status” will change to **green**).

CMS Routing: To route alarm signals from the system to a designated CMS for surveillance, select the 'Route events and alive reports to CMS' checkbox.

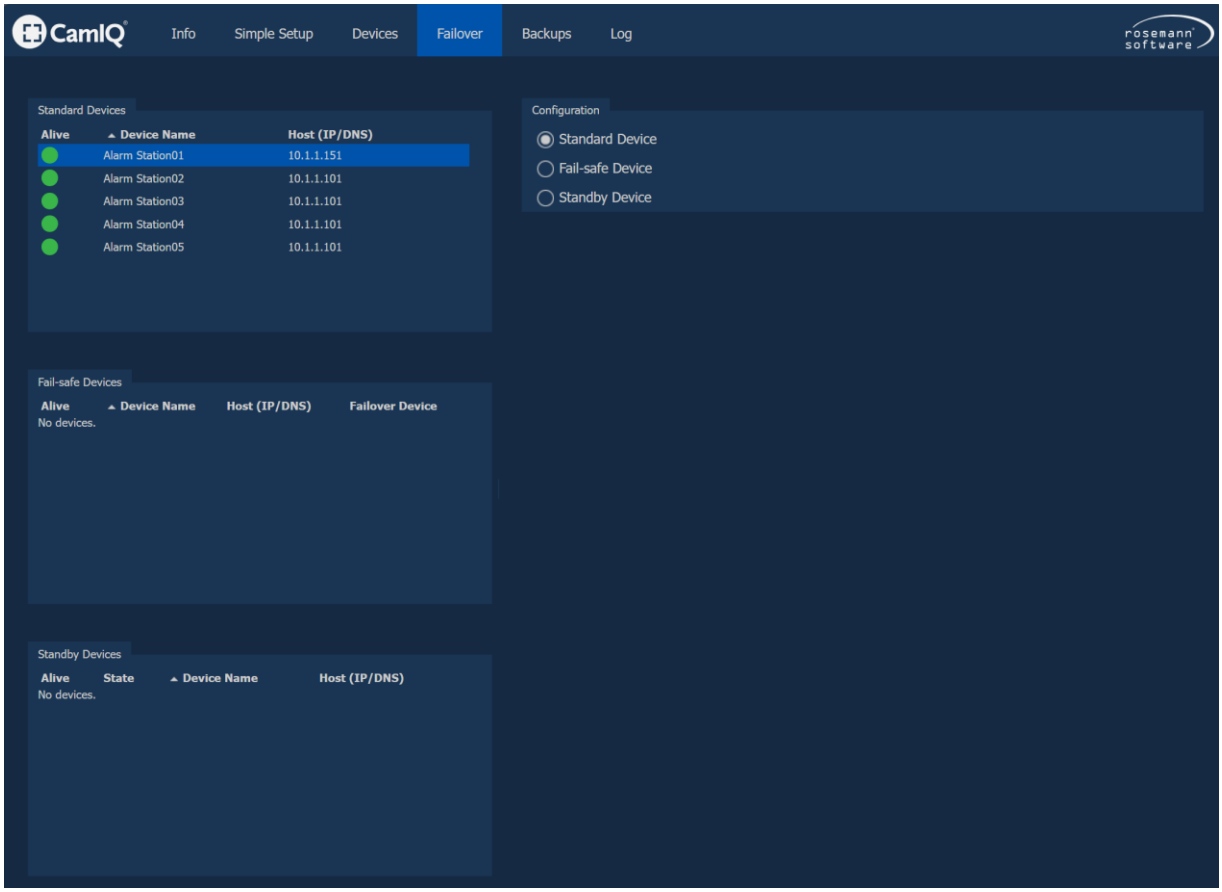
If the system's IP changes, you must perform an "unbind" procedure using the script "Unbind.exe". This script is located within the "C:\CamIQ\Dispatcher Client" folder. Running the script will remove the existing IP assignment from the configuration, allowing for a new one.

3.6.3 Failover

The Failover tab allows you to configure a reserve server (also referred as a failover / standby server) that automatically takes over if the primary (referred as failsafe server) server fails.
To implement failover, you will need at least two CamIQ systems. A dedicated CamIQ Dispatcher Server manages these systems and ensures seamless operation during a failover event. The dispatcher can be installed as part of the standard CamIQ setup on any system within your network.

The CamIQ Dispatcher Server must be installed on only one system within the entire video network. Installing it on multiple systems will result in conflicting settings.
It is advisable to install the dispatcher server on a designated stand-alone failover server PC. Installing it on the failsafe server PC should be avoided. This ensures that if the failsafe server PC experiences a complete hardware or software failure, operations can seamlessly transition to the failover server.
It is also recommended that the dispatcher's operating status be monitored by an independent system (via API queries, for instance).

The configuration of the failover is done in the Failover tab of the Dispatcher Client (localhost:8088).



Device Types:

- **Standard Devices**: All registered CamIQ servers that have not yet been given a failover function are listed in the “Standard Devices“ list.

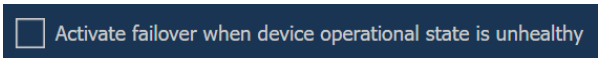
- **Fail-safe Devices**: CamIQ servers that are secured through failover are listed in the “Fail-safe Devices“ list. If one of these CamIQ failsafe servers fails, another (standby) server fills in.

- **Standby Devices**: CamIQ servers that are used to secure failed (failsafe) servers are listed in the “Standby Devices“ list.

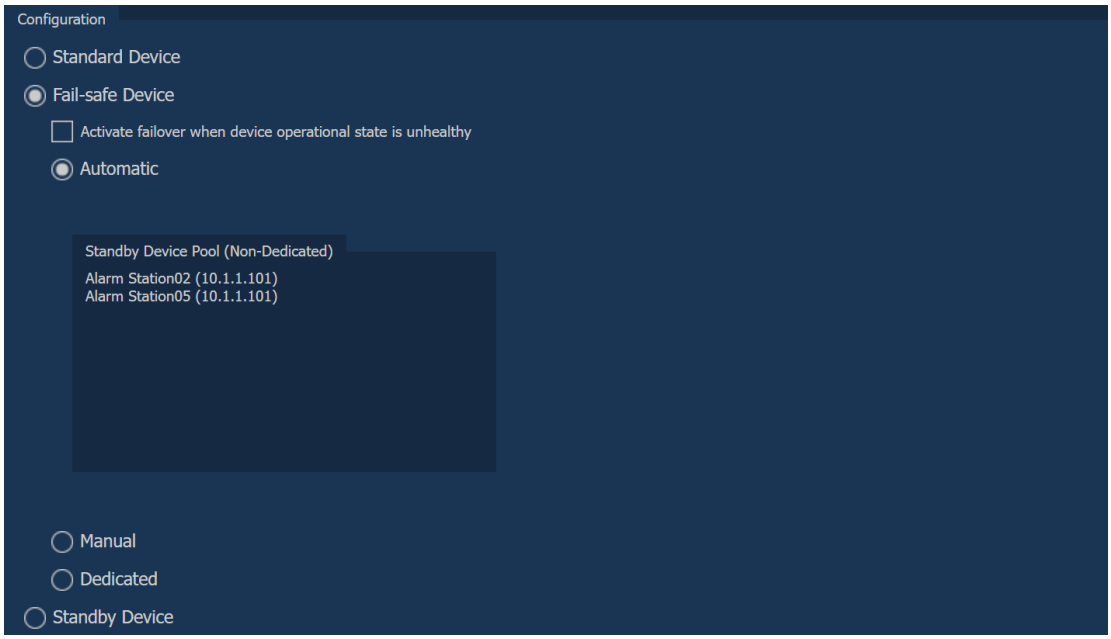
The group to which the selected server should belong is defined in the configuration area. After the setting is changed, the server is automatically moved to the corresponding list.

Fail-safe devices options (define the failover functionality):

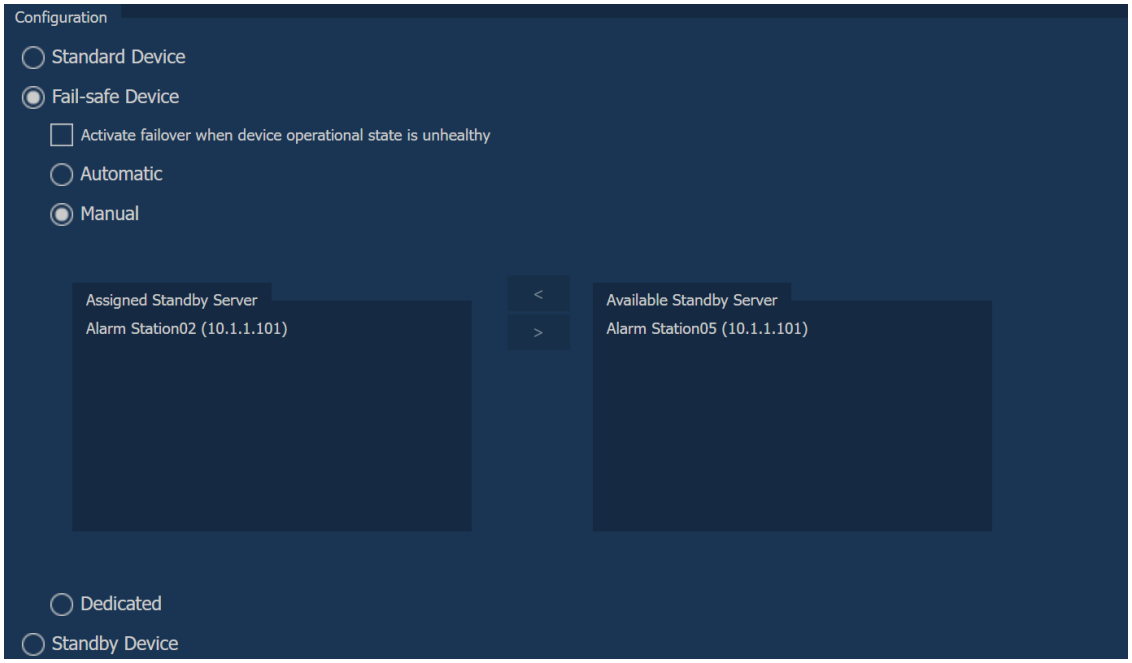
1. **Failover when Unhealthy**: Selecting "Activate failover when device operational state is unhealthy" triggers failover activation if the failsafe server experiences operational issues, even if it remains functionally online. The server's operational status monitors for track-write errors and is displayed in the Server Status tab within the Server Info window. This status can be "Healthy" or "Unhealthy".



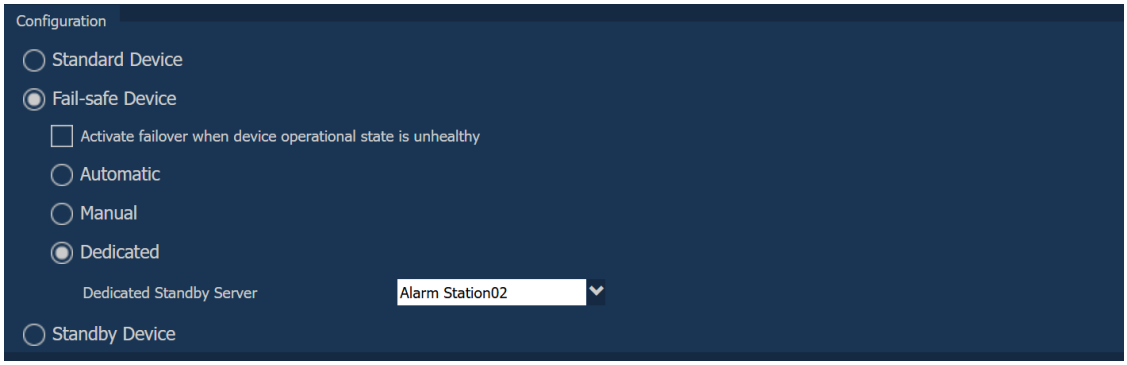
2. **Automatic:** If the “Automatic“ failsafe mode is selected, any available standby device can fill in for the failed server. The list of devices which can take over is shown in the “Standby Device Pool” window.



3. **Manual:** In "Manual" failsafe mode, you can assign or remove any available standby device from the server using the arrow buttons. If the failsafe server fails, one of the servers listed under "Assigned Standby Server" will automatically take its place



4. **Dedicated:** In “Dedicated“ mode, one device is exclusively defined to safeguard a system. The standby server to be used exclusively to secure the given system can be selected in the “Dedicated Standby Server“ list. Only standby servers with the "Dedicated Standby" checkbox option enabled can be selected as dedicated servers

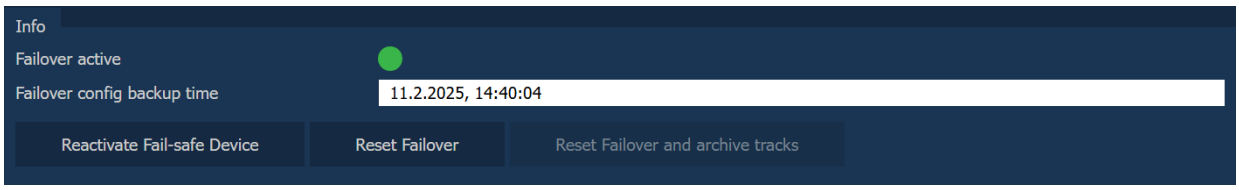


Unlike "Automatic" and "Manual" failsafe modes, which send system configurations to the standby server upon failure, "Dedicated" mode permanently stores configurations locally and synchronizes them every 5 minutes after the last change. In this mode, live images, recordings, and all other configured functions are active and usable on both systems.

Information about the current status is displayed in the failsafe device's info area:

Failover active: Grey = failover is currently inactive (failsafe server is functioning properly)
Green = failover is active (failsafe server failed and standby took over)

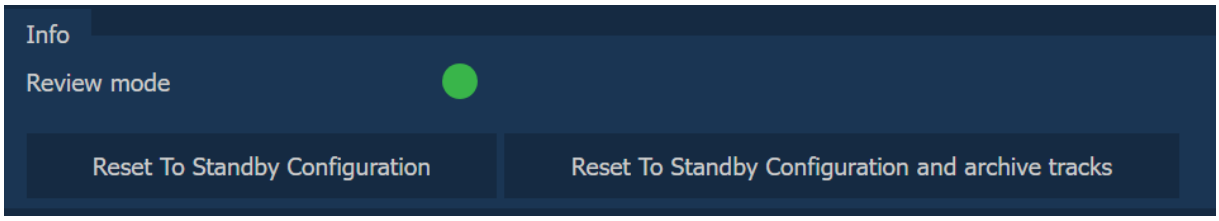
Backup Time: Displays the time of the configuration which was last saved.



Fail-safe server has become inactive and the standby server has taken over. Failover is shown as active (green).

Reactivate Fail-safe Device: By clicking the 'Reactivate Fail-safe Device' button**,** the failsafe device originally used will be reactivated. The failover device is taken out of service and subsequently this device is in 'Review Mode'.

As long as the device is in 'Review Mode' it cannot act as a standby device and safeguard other devices. Click on the 'Reset to Standby Configuration' button to irrevocably reset the failover device and delete all data on the system, or on 'Reset to Standby Configuration and archive tracks' to delete the configuration but keep the video data archived. The parameter "ArchivePath=" within the Server's "CONFIG.INI" file allows to customize the folder in which tracks are archived. Only after this step will the standby server be ready to take over failover operations again.

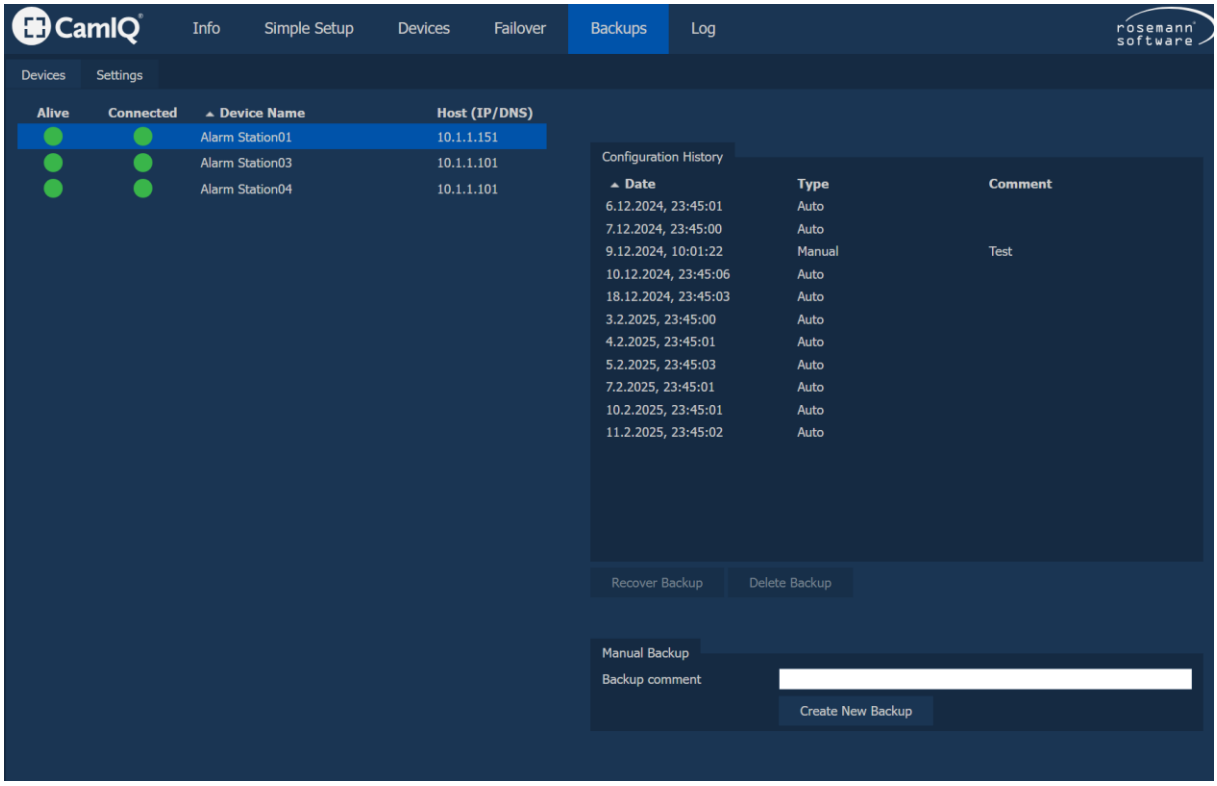


Reset Failover: This button can be used to reset the current failover operation. In doing so, all of the data on the failover device will be deleted.

Reset Failover and archive tracks: This can be used to reset the current failover operation, deleting the configuration but keeping the video data as archive.

3.6.4 Backup

This tab allows users to configure automatic or manual backups for all CamIQ Servers. Please note that only the server configuration is saved, not the video data itself.



The "Devices" list displays all registered servers. For each, the following information is shown:

Alive: indicates the accessibility status of the device
Green = the device is accessible
Red = the device is not accessible

Connected: indicates the connection status (necessary for failover and backup)
Green = the connection is up
Red = the connection is down

Device Name: name of the device

Host: IP address of the device

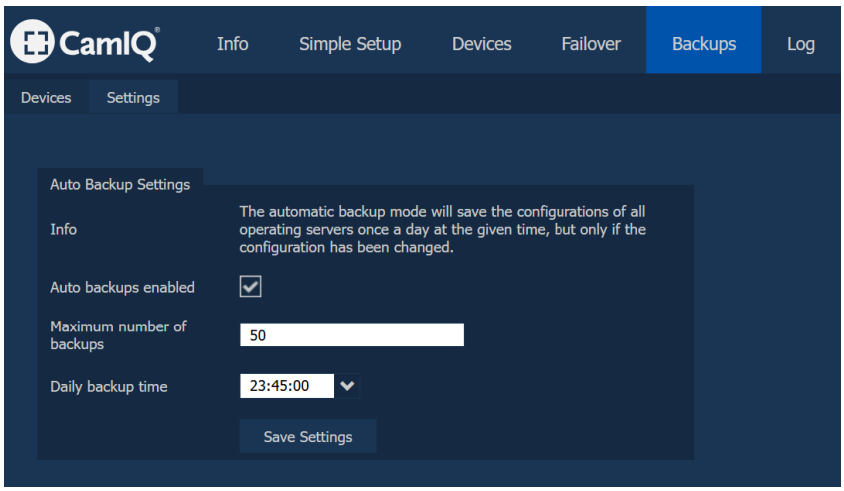
Configuration History: By selecting a device, you can see its configuration history.

Recover: Use "Recover Backup" to restore and apply a selected configuration backup to a device.

Restoring a previous configuration backup will permanently and irrevocably overwrite the current configuration on your system.

Delete: Use “Delete Backup“ to irrevocably delete the selected configuration backup.

Manual Backup: Use "Manual Backup" to manually save the current configuration.
In the "Settings" window, you can configure how often automatic backups should occur and how many backups to store.



Auto Backups: Tick the checkbox “Auto backups enabled“ to toggle the automatic backup feature.

Automatic backups are created only if configuration changes have been made.

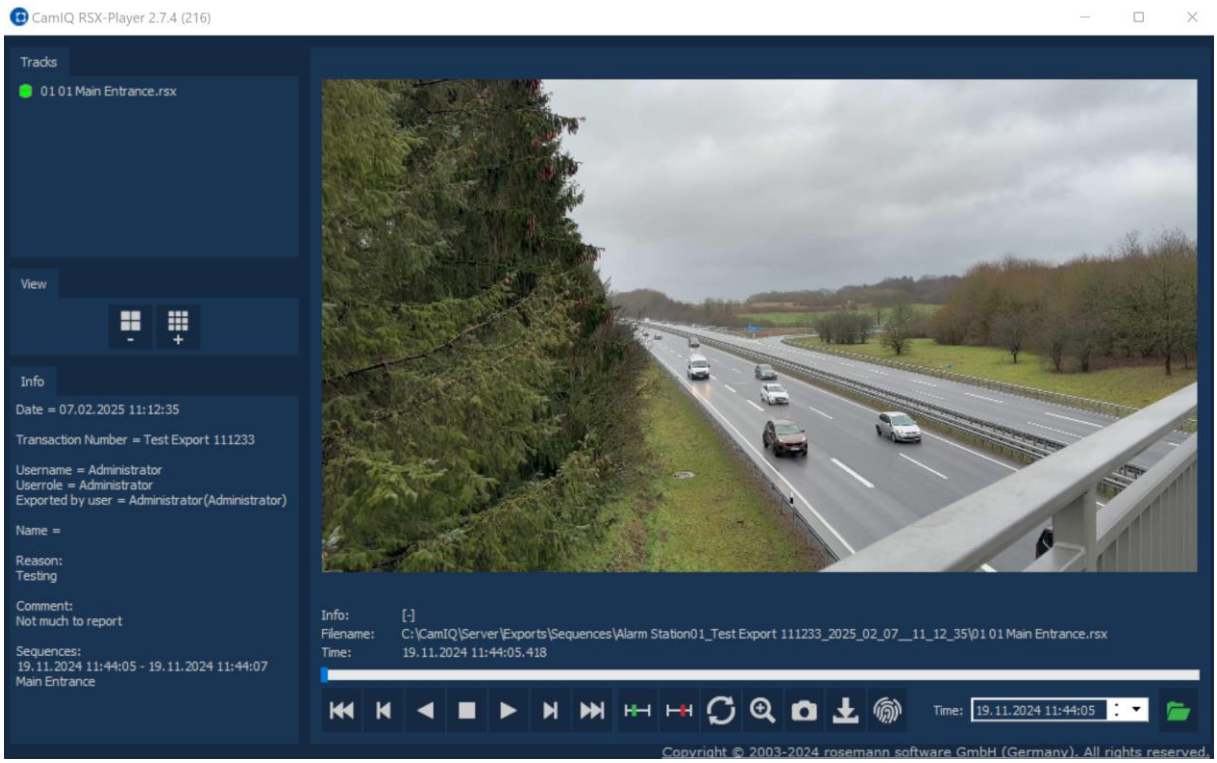
Limit Backups: To limit the maximum number of automatic backups created, adjust the value under "Maximum Number of Backups".

Backup Time: Set the desired daily backup time under "Daily Backup Time".

Save: To save your backup settings changes, click "Save Settings". Any unsaved changes will be lost.

3.7 CamIQ RSX Player

In this section you can read about how to use the RSX Player, a sequence viewer designed specifically for proprietary RSX files, the format used by CamIQ to export and save video data.
It is typically installed at `C:\CamIQ\Manager\SequenceViewer`. You can also choose to include the RSX Player when exporting data from CamIQ.



To open and play a sequence:

1. **Start Player**: Double-click the executable file `RSXPlayer.exe`.

2. **Open Sequence**: To open a file or folder, use the Open File button located in the bottom-right corner of the screen.

3. **Review the Data**: In addition to displaying the sequence, the player can access the metadata of the RSX file, displayed in the “Info” section in the left bottom corner. This allows it to display information such as the CamIQ user who exported it, the track name, the transaction number, the reason for export, and any additional comments.

4. **Navigate:** Use the provided buttons to navigate the sequence (from left to right):

- Jump to the first image of the sequence
- One image backward
- Play backward (click repeatedly to increase the speed)
- Stop the playback

- Play forward (click repeatedly to increase the speed)
- One image forward
- Jump to the last image of the sequence

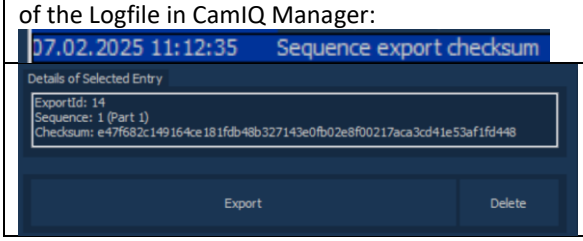
To export a sequence:

1. **Select subsequence**: Optional, if you don't want to export the whole sequence but only a part of it. Use the starting time (t1) and stopping time (t2) button to mark an area in the sequence.

2. **Export**: Then click on the Export button and select an export codec between RSX, MP4 (which can be opened by most video players) and JPEG. Optionally, you can enable transcoding and select a new bitrate and resolution (height and width). Finally, select a destination folder for the file to be exported.

To check the validity of an export:

1. Use the button to calculate and display the checksum of the selected RSX file. Compare this with the checksum that was logged by the server when the file was exported in order to rule out manipulation.

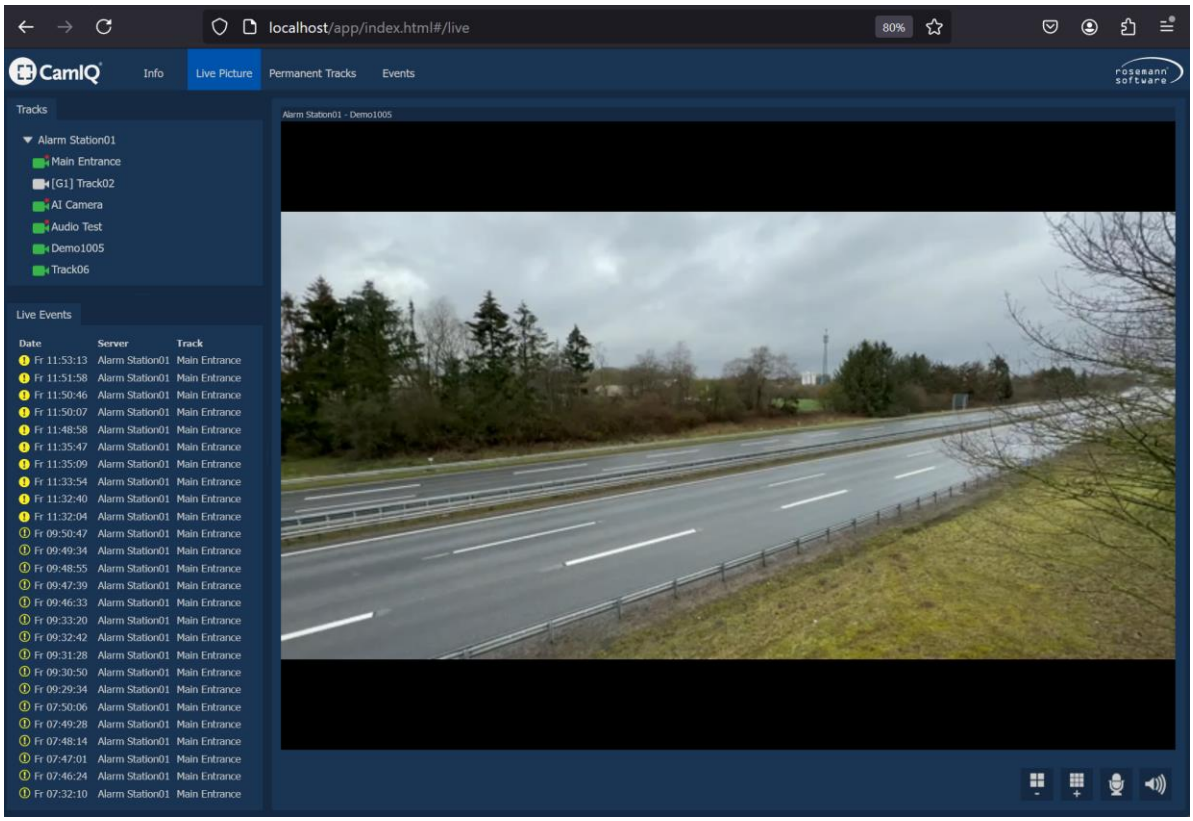
The checksum can be found within the details section of the Logfile in CamIQ Manager:	The checksum displayed by the RSX Player using the button.
	

To export a picture instead of a sequence, once the correct frame is being displayed, simply select the store picture button and a destination folder.

Use the zoom button to zoom in in a selected section of the image. You can also activate playback while zoom is active. To continuously replay a sequence, select the repeat button.

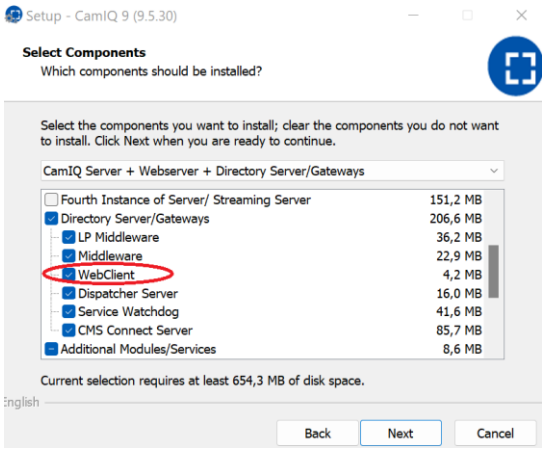
3.8 CamIQ Web Client

CamIQ comes with an easy-to-use web / mobile client whose features work with many standard web browsers and mobile devices. Check the compatibility list on the website for more information. Operating the Web Client is similar to operating the Manager.



It is normally installed by default during a standard installation, otherwise it can be specifically selected during the setup under “Directory Server / Gateways”.

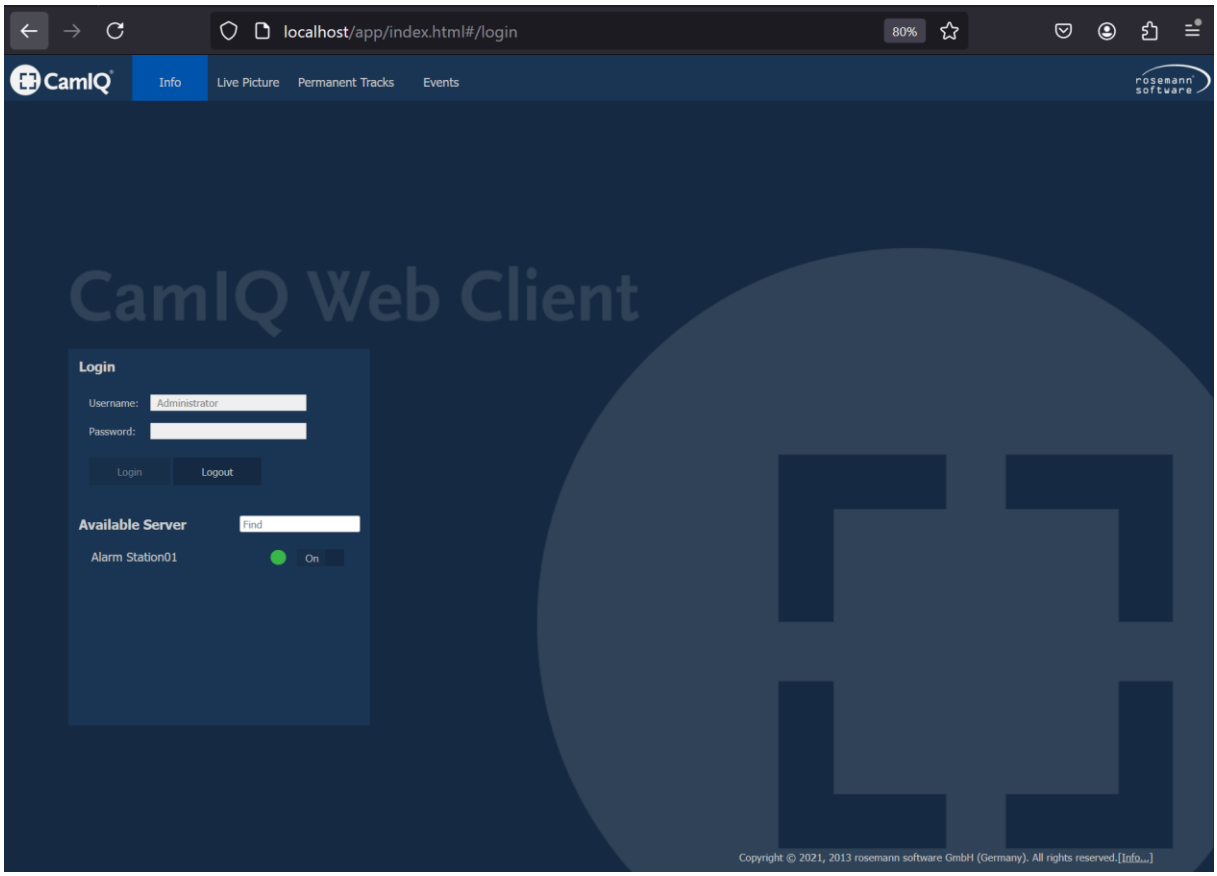
The CamIQ Middleware must also be installed for the CamIQ Web Client to function correctly.



3.8.1 Access the Client

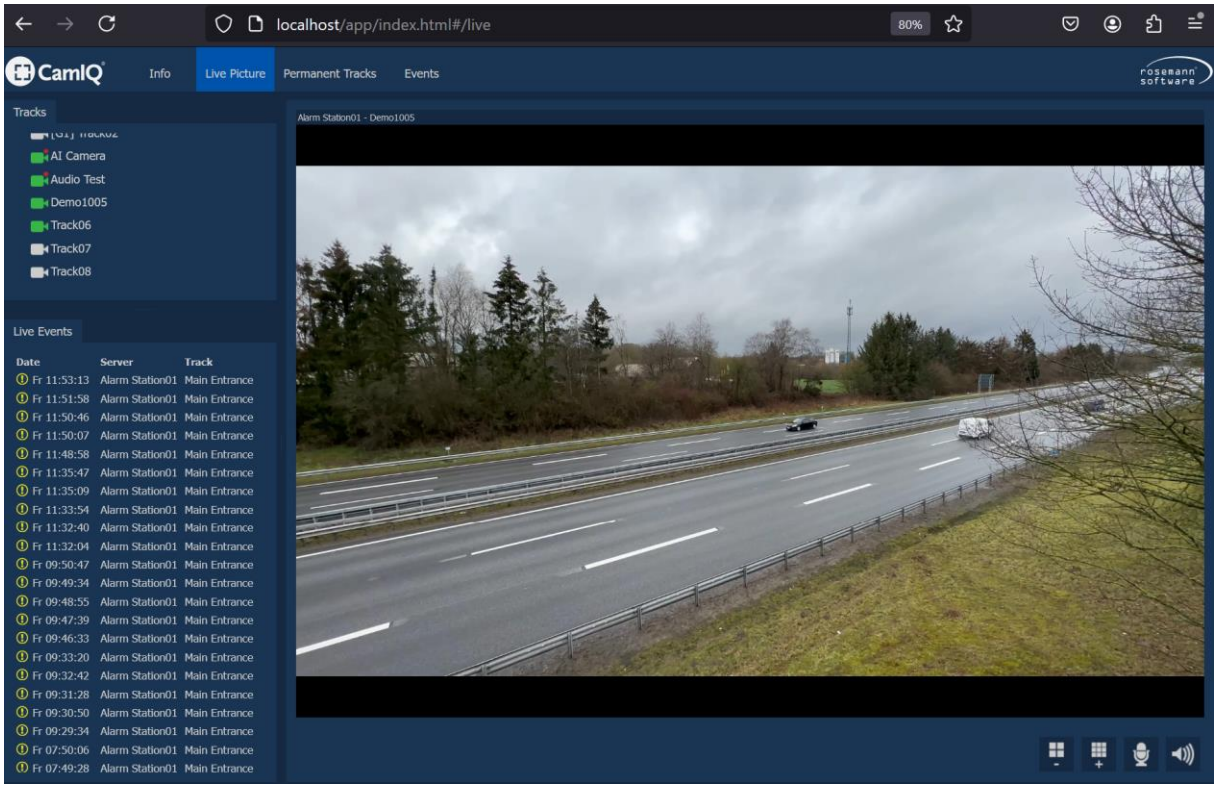
To launch the CamIQ Web Client, open your web browser and enter the IP address of the CamIQ Middleware into the address bar. Sometimes the port (80) must be entered as well (i.e., URL http://[IP-ADDRESS]:80/).

To log in to the CamIQ Web Client, enter the username and password of a valid CamIQ Server user account. The client will then display a list of all available CamIQ Servers accessible through the middleware for which your account has login permissions. To connect to or disconnect from a specific server, click the on/off toggle button next to its name. The connection status is represented by a colored circle: green indicates a connected server, while red indicates a disconnected server. To disconnect from all servers, simply log out of the CamIQ Web Client.



3.8.2 Live Image

Using the web client is very similar to using the Manager. To access live images, select the "Live Picture" tab. The "Tracks" list displays all available cameras from connected CamIQ Servers.



Cameras are represented by symbols in the track list:

- The camera is available (green) [a red dot indicates that recording is active)

- No camera connection (gray)

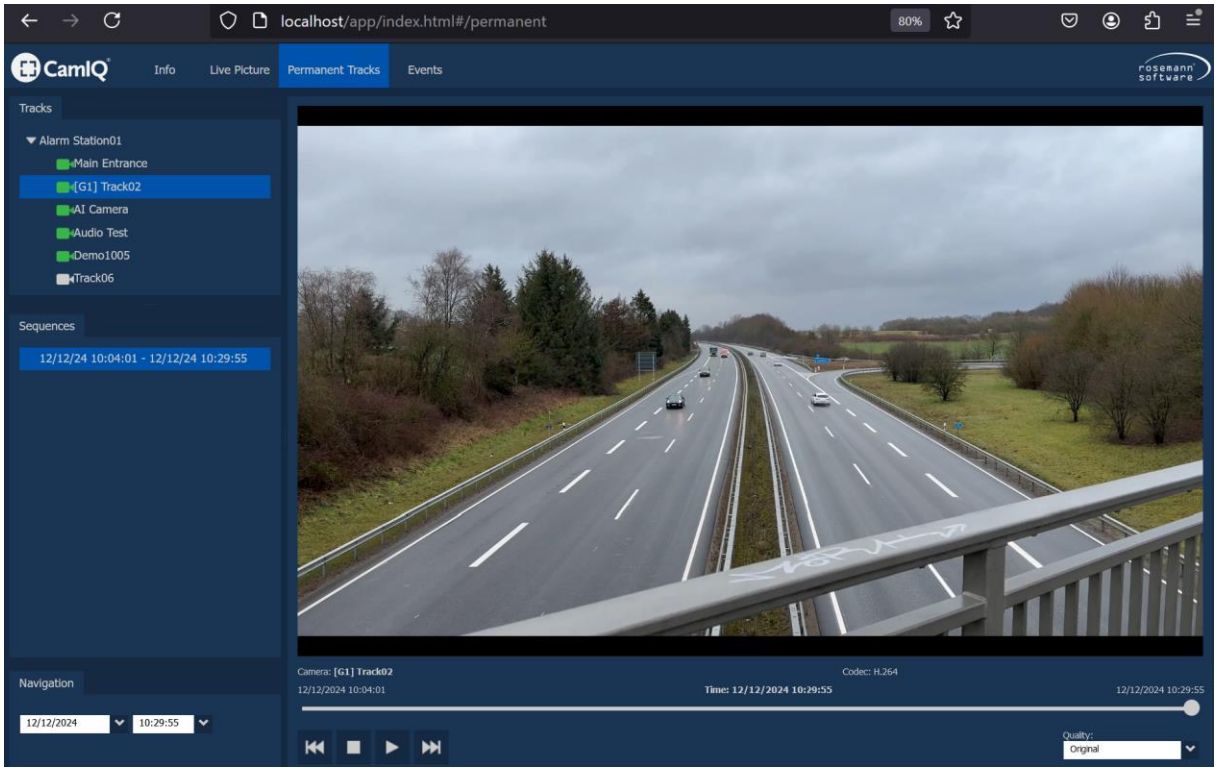
Display: To display a live image, drag and drop a camera into the Live Image Monitor. Adjust the view settings to display up to 16 live images simultaneously in your web client.

Live Events: The event list appears below the camera list. It displays the most recent 100 events from all connected servers. If image material is available for an event, clicking on the entry will take you directly to the recorded event.

Audio: To establish an audio connection with the device, use the microphone and loudspeaker buttons. Please note that audio transmission is only possible if the audio feature has been correctly installed and licensed.

3.8.3 Permanent Tracks

You can review all available camera recordings in the "Permanent Tracks" tab.

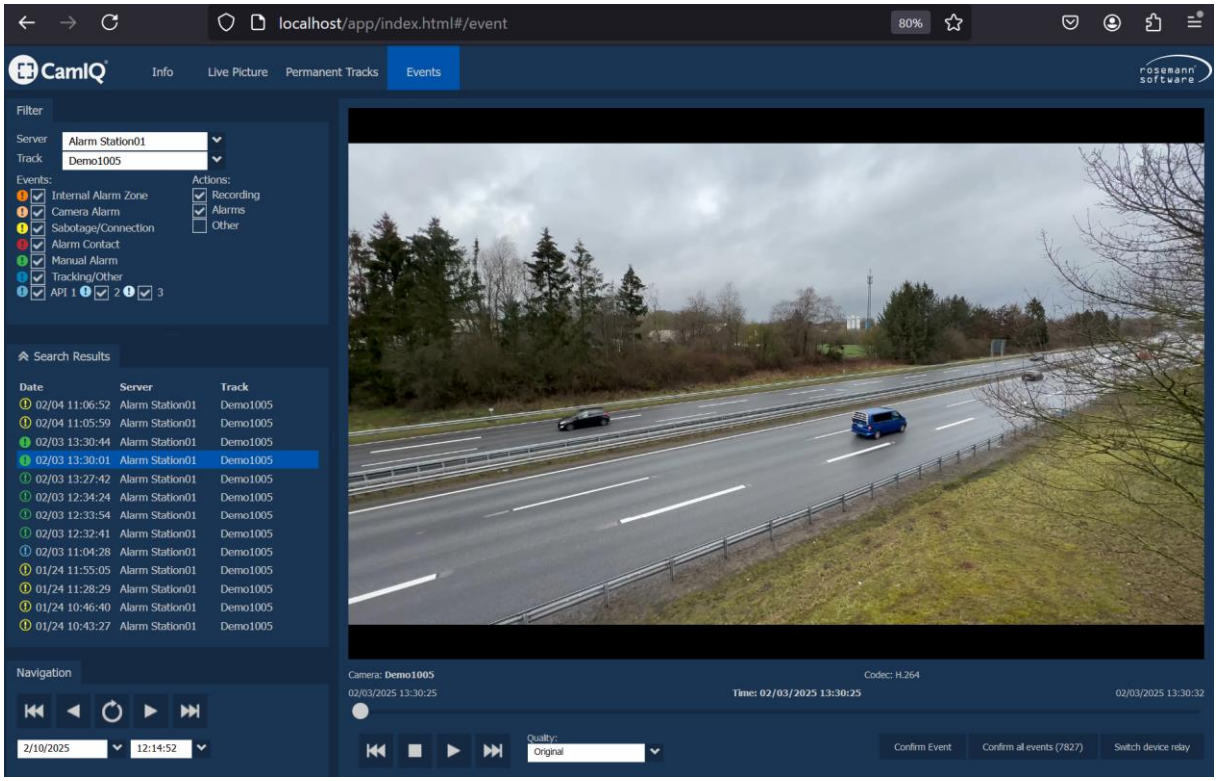


Select the desired camera from the device list. Recorded time ranges will be displayed in the sequence overview. You can navigate within the recording using either the Navigation Bar or the slider. You can also choose from four picture quality settings: Original, High, Medium, and Low.

Selecting a non-original quality reduces the bandwidth usage but requires transcoding. Transcoding takes place on the machine where the Middleware is installed, typically the Sever PC.

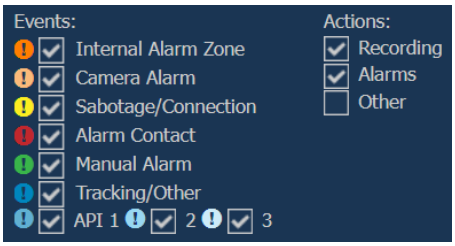
3.8.4 Events

The "Events" tab allows you to filter and evaluate events.



View Events:

1. **Select Server**: Select the desired server from the list.
2. **Select Track**: Select the track or alternatively select the “All tracks” option.
3. **Filter Events**: To customize the displayed alarms, adjust the event filter. Alarms of a specific type will be shown when their corresponding filter option is selected (indicated by a checkmark). The colors used for alarms align with those defined in the Manager.

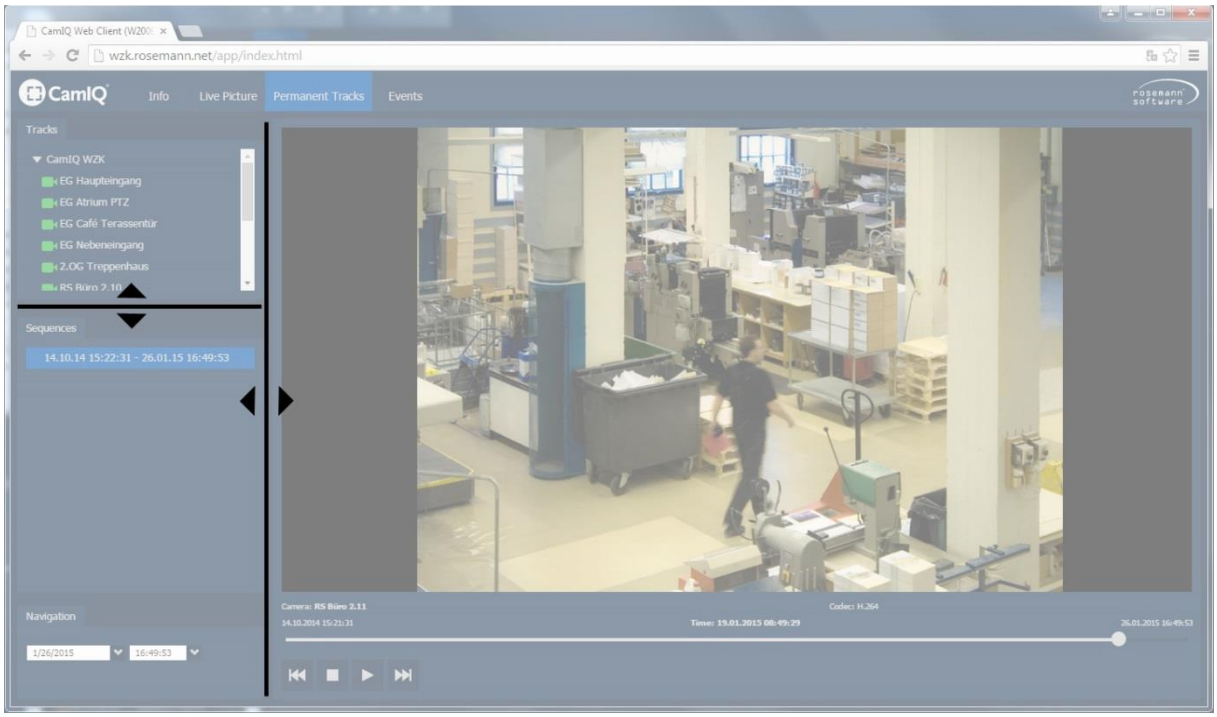


4. **Navigate**: Use the navigation elements to browse the events page page-by-page or to refine your search by starting on a specific date and time.

Additionally, here you can confirm events and switch a corresponding device relay.

3.8.5 UI Customization

Elements within the Web Client interface are designed to be scalable, allowing you to adjust their sizes as needed. You'll notice a dividing line between two scalable elements. Click and drag this line using your mouse to resize the adjacent objects.



To optimize interface resolution, it is recommended to use the web browser in full screen mode. This can be launched using the "F11" key with standard browsers.