Eocortex

Version 4.3

User guide

Introduction

This guide describes the operation process of the **Eocortex** software suite designed for intelligent analysis, processing, archiving and display of video data, and one point to manage cameras in a video surveillance system based on IP cameras.

The guide may contain screenshots of previous versions or other products of **Eocortex** software. In this case it is supposed that the functionality described in these screenshots have not changed in the current version of **Eocortex**.

After the release and publication of the next version of **Eocortex** software the manual can be supplemented with changes. To receive up-to-date documentation, please check the publication date of the **Eocortex** on site.

Eocortex Client

**Eocortex Client** is used for work in the **Eocortex** video surveillance system.

- Launch and Login
- Main Window
- Camera view cell
- Viewing the single camera archive
- Simultaneous viewing of archive of multiple cameras
- Viewing archive fragments
- Video analytics
- PTZ Camera Management
- Alarms in the guard mode
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- Interactive Maps
- Bookmarks in the archive
- Archive export
- Save frame (frame fragment)
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- Print frame (frame fragment)
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- Archive depth report
- User tasks
- Video wall
- Internal chat
- Workplace settings

Launch and Login

Run the application from the Start Menu / All applications / **Eocortex** / **Eocortex**; or using a **Eocortex Client** shortcut on the Desktop.

Note

When using **Eocortex Standalone** click Log in to **Eocortex** button in the start screen to run **Eocortex Client**.
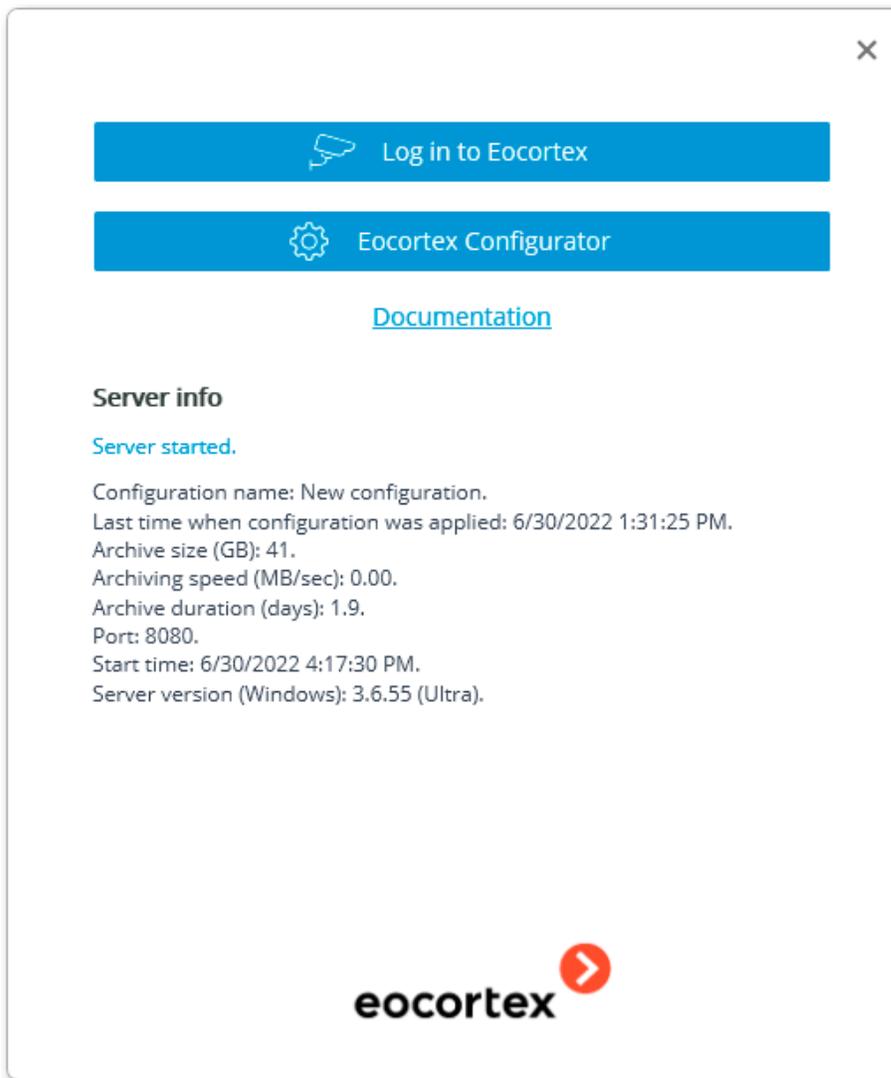
The authorization window will open. It is required to indicate the server address there in the **Server** field (or select the address in the dropdown list to the right of the input field) and the account type (only for **Enterprise** and **ULTRA**), username and password, then press the **Connect** button.

Account type: ⊗ **Eocortex**; ⊞ **Active Directory**.

For **Active Directory** accounts, the user name is specified as: **username@domain**; where **domain** is the domain name, **username** is the name of the user in the domain.

Note

Registration under an **Active Directory** account is available not for all types of licenses.

The secure connection to the server via HTTPS is enabled by pressing 🔓 button located in the left side of the field with the server's address.

Note

Since the capability of a secure connection to the server is set up by the system administrator on the server itself, the parameters of such connection must be obtained from the administrator.

In the cases when it is impossible to obtain the secure connection parameters from the system administrator, it is important to keep in mind that the port explicitly indicated after the two-spot in the end of the connection address line is used for the secure connection. If no port is explicitly indicated, the port **18080** will be used for the secure connection.

Warning

The system administrator can forbid the connection to the server using the insecure protocol. Such servers will always require a secure connection.

Note

A user can be blocked by the video surveillance system administrator. In this case, a window with a corresponding message will open.
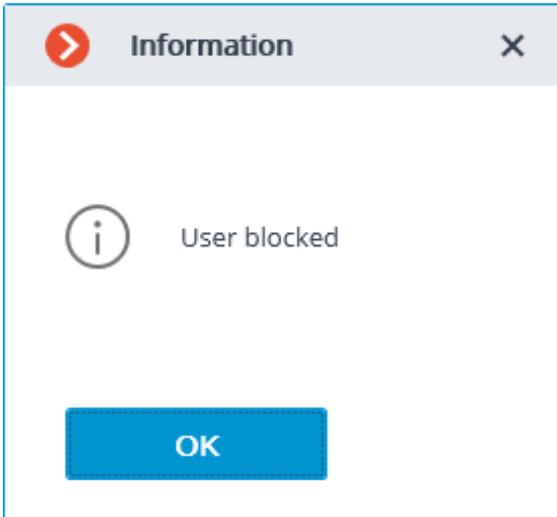
Note

Contact the **Eocortex** system administrator for user name and password, server address and account type.

Note

The opened login window when turning on the computer means that **Eocortex Client** starts automatically.

When logging into **Eocortex Cloud**, it is not required to specify the server address, since it is the same for all users. In addition, the authorization form for the cloud service allows not only logging in, but also registering in **Eocortex Cloud**.

Eocortex Client

e-mail

username@mycompany.com

Password

••••••••

☐ Save   Reset password?

Connect

Register

What is Eocortex Cloud?

eocortex
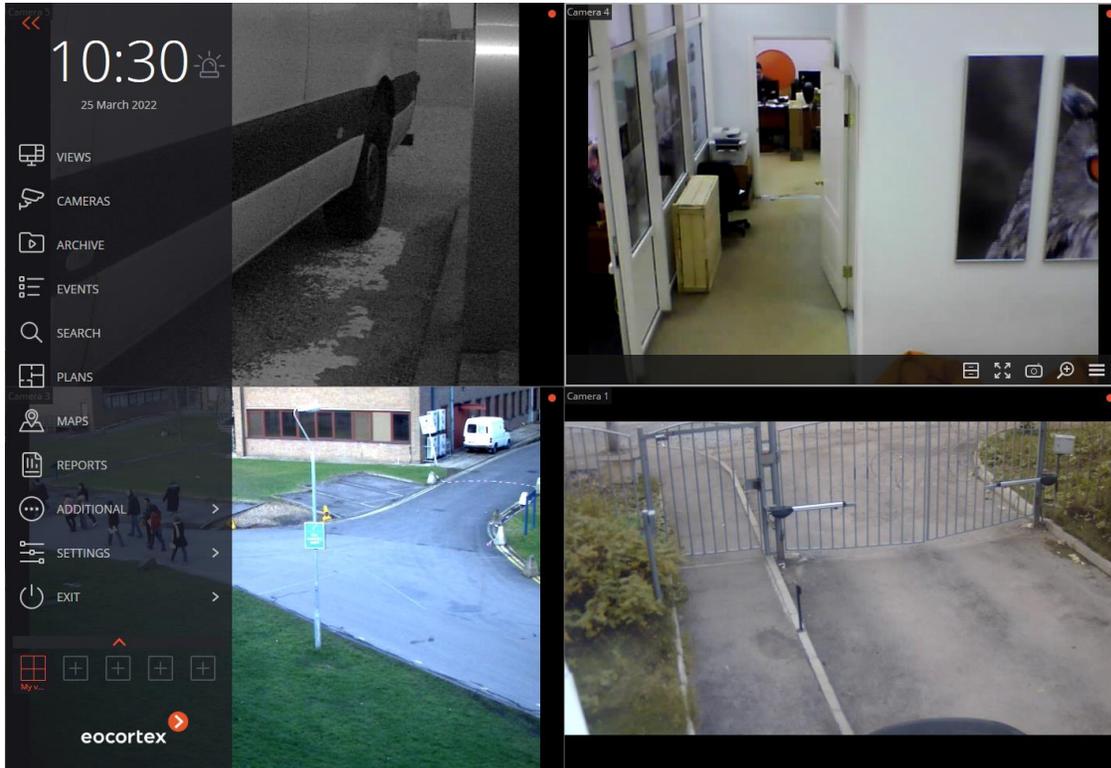
Main Window

Eocortex Client main window consists of the **Workstation** (with the channel grid) and the **Control Panel**. The active cell in the channel grid is framed.

Control panel

To display the control panel, it is required to click on the [>>] button located in the upper left corner of the window.

The clock and the user alarm activation buttons are in the upper part of the control panel. The items of the main menu are under the clock. The view selection menu is in the lower part of the panel.

Note

Some items are only displayed when the corresponding features are available for the user.

The [!] **Alarm activate/deactivate** button that enables/disables the user alarm is to the right of a clock.

Note

The cameras for which the user alarm is enabled, the actions that are

performed upon the activation of the user alarm, and the displaying of the
**Alarm activate/deactivate** button are set in the workstation settings.

Below you can find the description of the control panel items:

 Views opens the **Views** page.
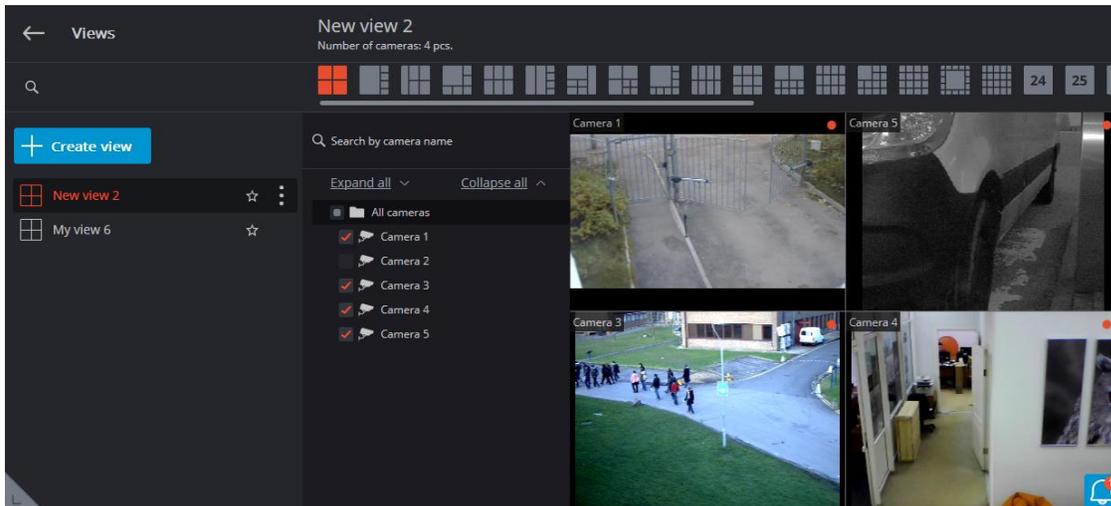
 Cameras item allows you to select the cameras you want to display on the screen.
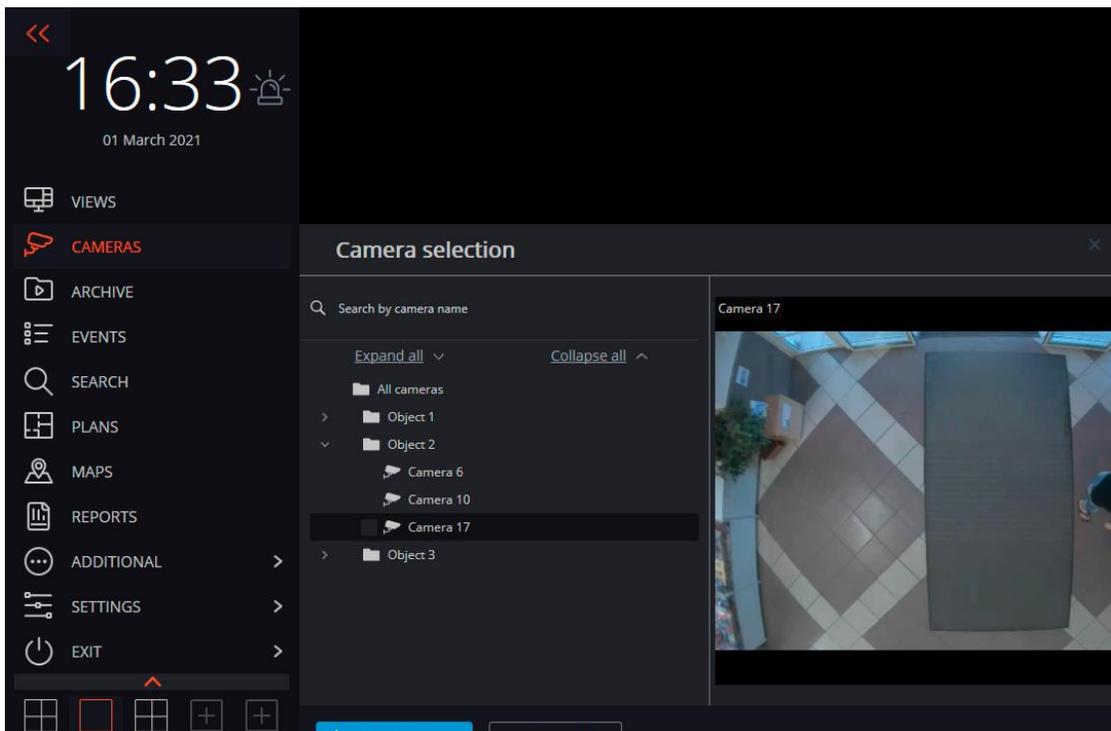
After selecting cameras, press the **Create view** button. That will display the selected cameras on the screen without names, using the most suitable grid.

 Archive opens Simultaneous archive viewing from multiple cameras.

 Events opens Events log.

 Search opens Search for Objects.

 Plans opens Object plans.

 Maps opens **Maps**.

 Reports permits to create reports available for the current user.

 Additional opens the submenu that contains the following items:
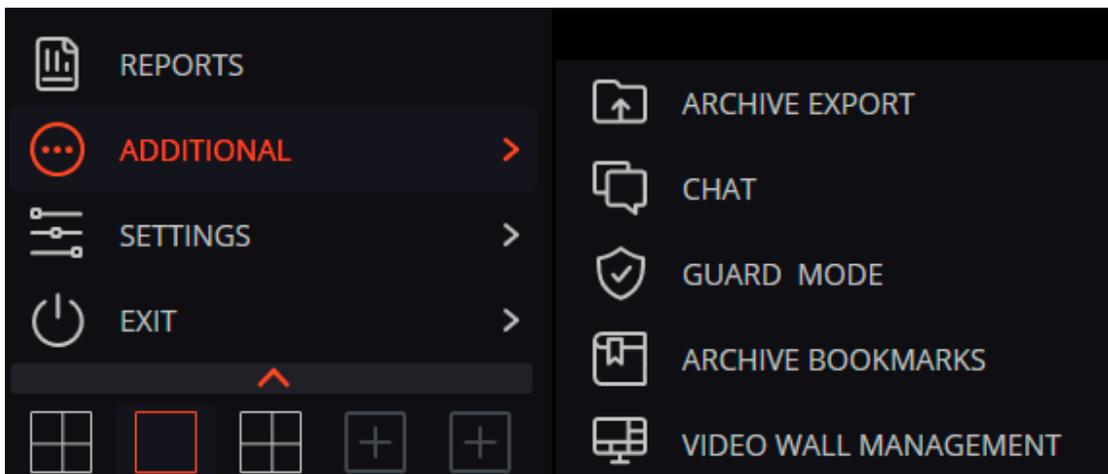
 Archive export performs the export of the archive.

 Chat opens the internal chat.

 Guard mode allows setting up the guard mode.

 Archive bookmarks opens the archive bookmark log.

 Video wall management permits to manage the video wall.

That submenu can also contain items that open the face and license plate recognition databases in case the corresponding modules are used in the system.

**Settings** opens the submenu that contains the following items:
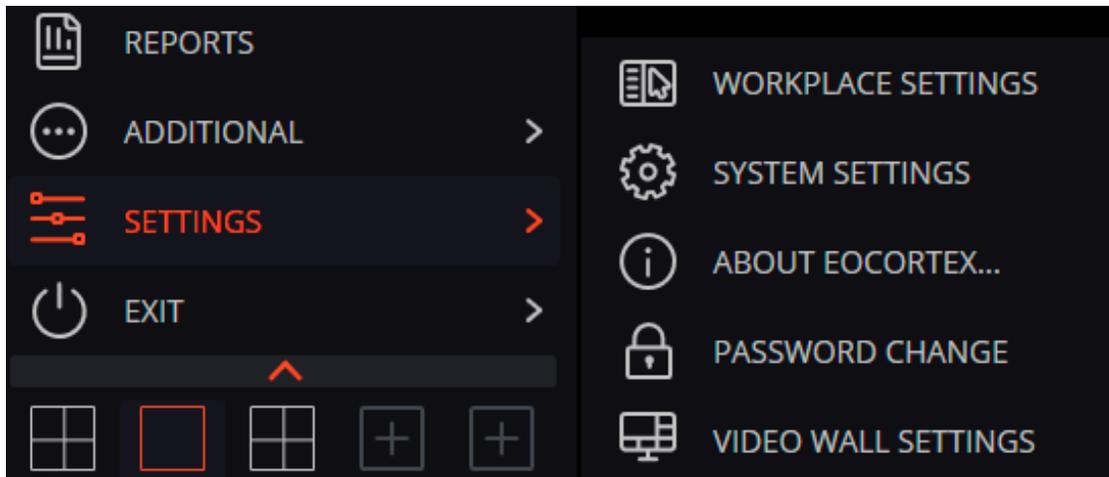
**Workplace settings** opens the Workstation settings.

System settings launches the **Eocortex Configurator** application.

About Eocortex... opens the information window.
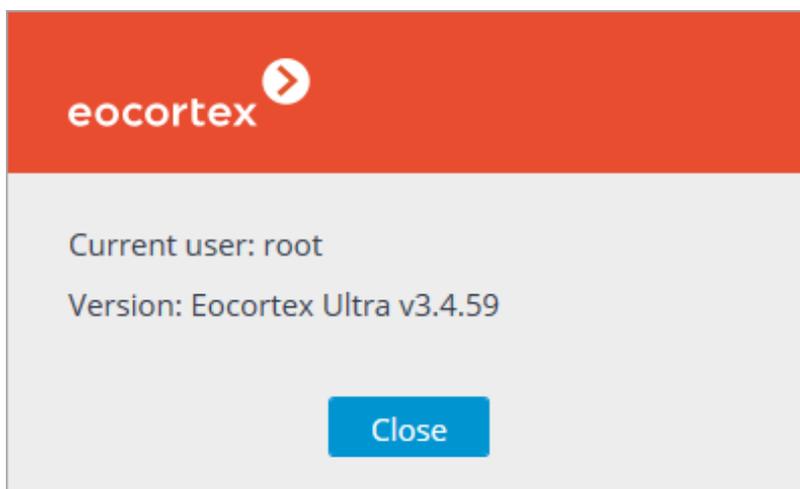
Password change permits to change the password.
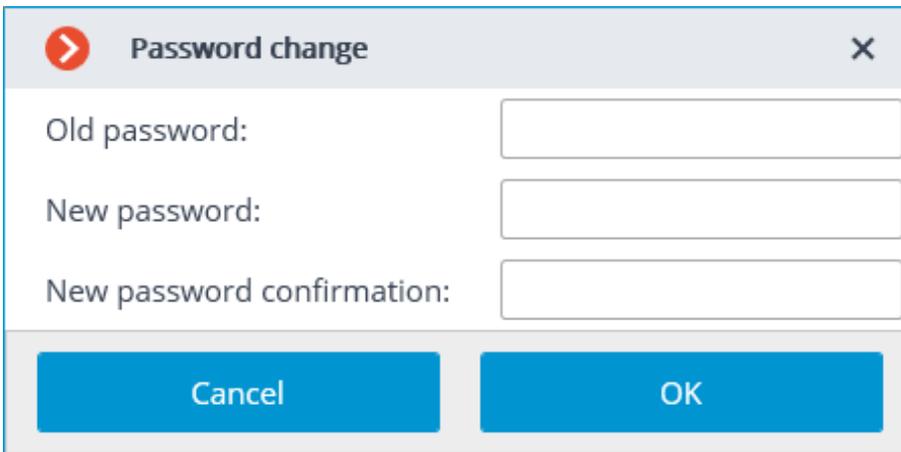
 Video wall settings allows to set up the video wall.

 Exit opens the submenu that contains the following items:
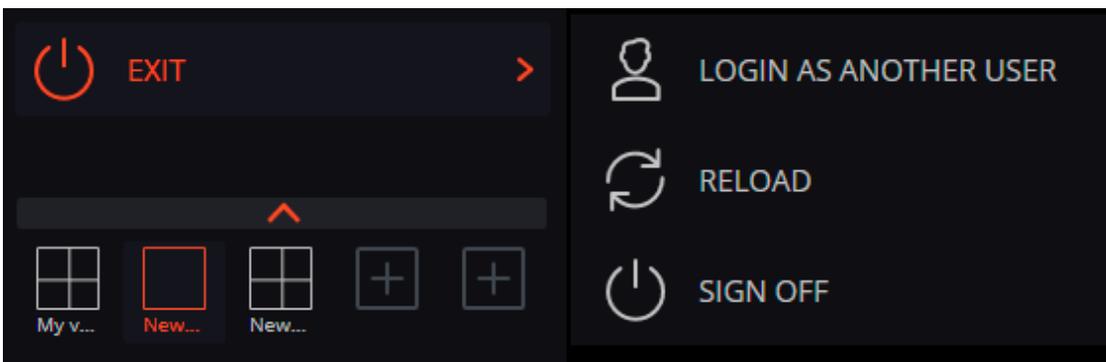
 Login as another user allows changing the user. When you select this item, the main window closes and the authorization window opens.

 Sign off shuts down the application.

 Reload restarts the application without the necessity to perform a reauthorization.

Selection of views

The sidebar displays a tree of views with the ability to filter and search for a specific tree item by name.
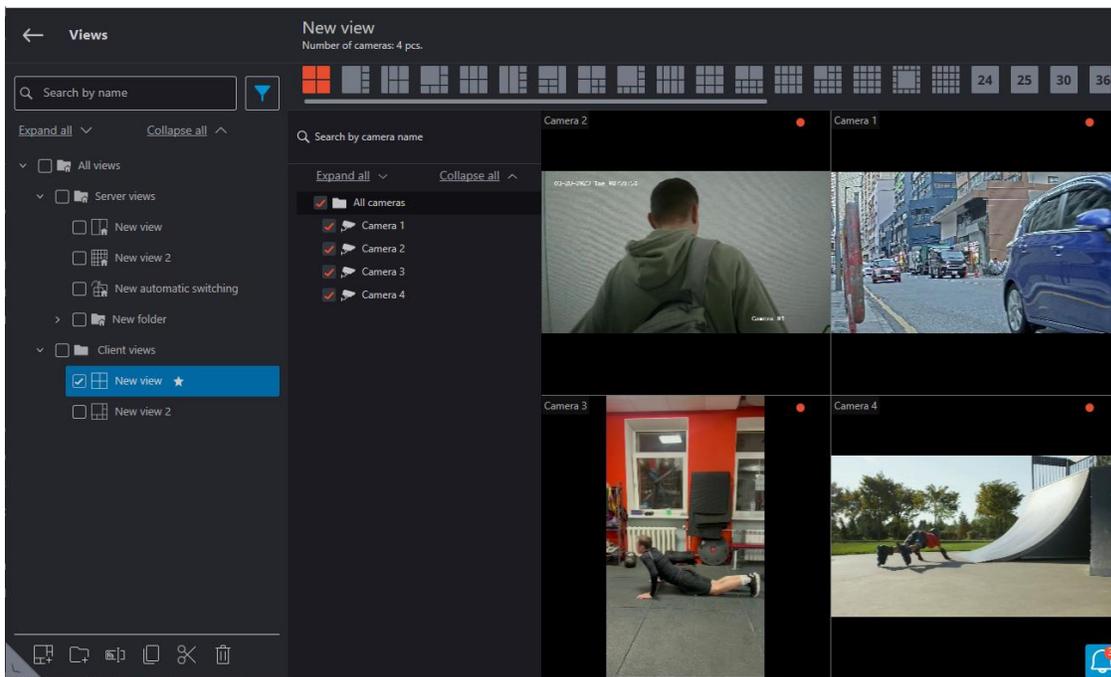
Note

Server and client views are stored in folders of the same name. If there are no views, the corresponding folders will not be displayed.

To change the location of client and server folders relative to each other in the tree, go to the Workplace settings tab.

The view and auto-shift tree includes the following features:

- Display the first nested or previously viewed view or automatic shifting on the right side of the view editor when a folder is selected.

- Drag-and-drop movement of individual views and automatic shiftings through the tree.

- Search by name of views, automatic shiftings and folders.

- Filtering by automatic shiftings and views, as well as by Server, Client and Favorite views folders.

- Toolbar and context menu.

Note

Setting the server views and the automatic screen view switching lists is performed by the administrator of a video surveillance system in the **Eocortex Configurator** application. Set up client views in the view editor.

The commands available for views and automatic shiftings are listed below. These commands can be invoked either from the context menu, from the buttons at the bottom of the page, or from the links on the view and automatic

shiftings page. Individual commands can be invoked in several ways, including using hotkeys.

- **Add view**

- **Add folder**

- **Assign rights**

- **Rename**

- **Copy**

- **Cut**

- **Delete**

For server views and autoshifts, only the **Copy** command is available.

← **Views**

Search by name 🔍   ▼

Expand all ⌄   Collapse all ⌃

⌄ ☐ All views

  ⌄ ☐ Server views

    ☐ New view

    ☐ New view 2

    ☐ New automatic switching

    > ☐ New folder

  ⌄ ☐ Client views

    ☑ New view ★

       Add view
   Add folder
       Rename
       Copy
       Cut
       Delete

When items are deleted from the tree, a corresponding information window is displayed:
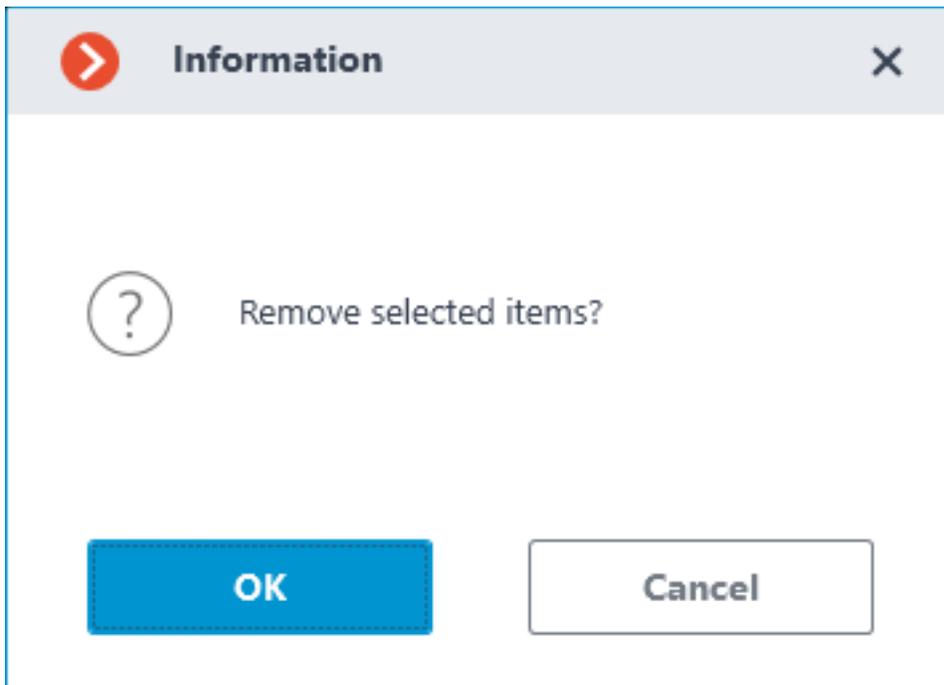
Automatically created views are views created in **Chat**, **Cameras**, **Plans**, **Maps** and **Video Wall** sections.

In order to save automatic views, it is necessary to specify the corresponding sections in the Workplace Settings tab. The automatic view will be labeled with a snowflake symbol in the tree and will be displayed at the bottom of the client views. To save the view, select it and click **Save**.

When the sidebar is minimized, only the preconfigured favorite views and automatic shiftings are displayed.

Note

It is possible to add to favorites when hovering over a view by clicking on the star that appears.

EXIT

«
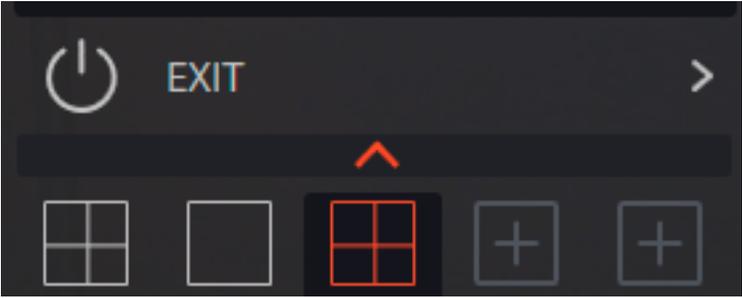
13:38

01 August 2024

Q Search by name | ▼

Expand all ∨   Collapse all ∧

- 📂 **All views**
  - ∨ 📂 Server views
    - 🔲 New view
    - ⊞ New view 2
    - 🔲 New automatic switching
    - ∨ 📂 New folder
      - 🔲 New view 3
      - 🔲 New view 4
  - ∨ 📁 Client views
    - ⬜ New view
    - ⊞ New view 2

Note

This menu does not display views and automatic switches that do not contain any cameras available for the current user.

Current view

You can drag the cameras between the cells of the current view by holding the left mouse button. If the view cell is not empty, the cameras swap their places.

One of the cells of the view can be active. The active cell is highlighted by a frame. To activate a cell, click inside it with the mouse.

By clicking in the empty view cell, it is possible to select a camera in the opened list , or in the camera selection window.
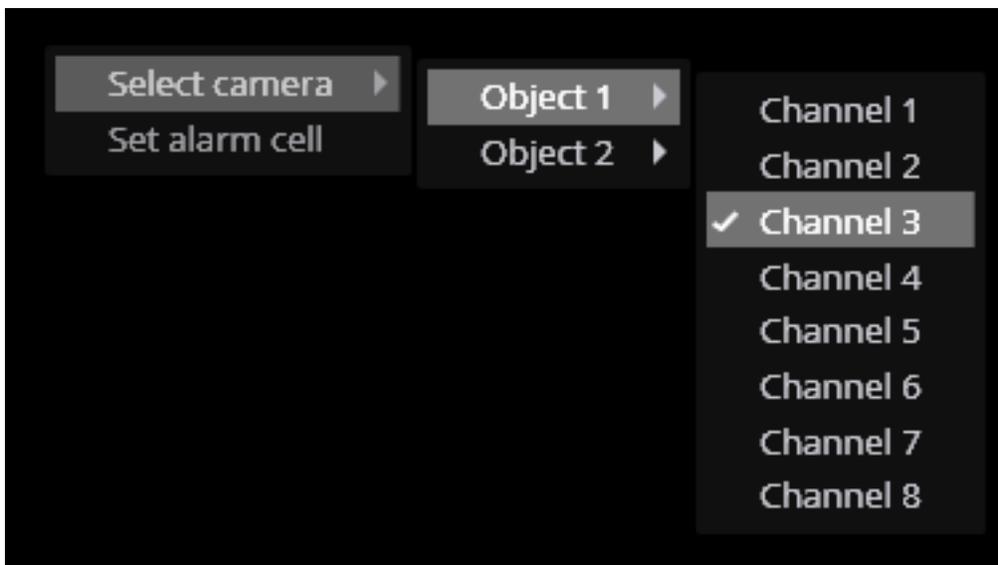
It is also possible to select a camera in the active cell using the context menu by opening it and choosing the **Select camera** item.

Hotkeys

You can assign the following keyboard shortcuts to the main window in the Workstation settings:

- Open views tab
- Open the tab ...
- Open syncrhronous archive
- Open fragment mode
- Open archive bookmarks
- Open archive export
- Open the event log
- Open nearby cameras

- Open maps
- Open reports
- Open guard mode
- Open video wall control
- Open video wall settings
- Open workstation settings
- Open system settings
- Open chat
- Change password
- Change user
- Restart client
- Close application
- Open information about the program
- Show/Hide comtrol panel

To perform many other tasks, it is possible to assign keyboard shortcuts.

Camera live view cell
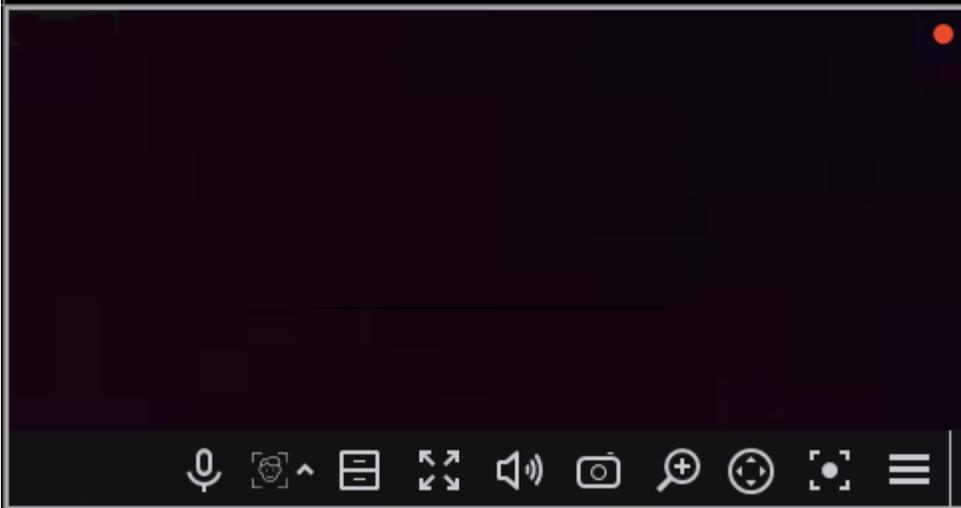
Note

To make the control buttons of the camera cell available, click somewhere inside the cell.

Note

All commands that can be executed by pressing buttons in the interface of the cell, you can perform through the context menu as well.

Cell control buttons ›

Common buttons

In the cell's upper right corner, there is an indicator of the record to the archive: ●.

🎙: enables audio transmission from the microphone of the client workstation to the camera speaker. Two operation modes are available:

- **Holding the button**: The microphone works as long as the button is held down;

- **Switching the button**: Clicking the button turns the microphone on and off.

Note

The system administrator must specify the microphone mode in the settings of the current workstation.

▤: Switches the cell to the single camera archive view mode.

⛶: Expands the cell to full screen.

Note

Switching between grid mode and full screen mode can also be done by double-clicking in a cell.

📷: saves a frame to disk.

🔊: Opens the volume control.

Note

The 🔇 icon appears in the following cases:

- Receiving sound from the camera is not configured.

- Receiving sound from the camera is configured, but no sound is being transmitted from the camera.

- The sound from the camera is being transmitted, but the user has muted the sound in the cell.

: enables the zoom mode. When this mode is enabled, selecting areas of the frame with the mouse enlarges them by the entire cell.

: displays the PTZ control interface in the cell.

: enables the recording of the next 15 minutes to the archive.

Note

If any of the described buttons is not displayed in the cell, the corresponding feature on the camera is either not enabled or not available to the current user.

Analytics buttons

If any video analytics modules are enabled for the camera, additional interface elements of some of them can be enabled using the buttons. The following buttons are available:

: Crowd Monitoring

: Auto zoom

: Clicking the button opens the menu for selecting an analytics module. The icon of the selected module is displayed on the button. The button shows and hides the interface of the selected module.
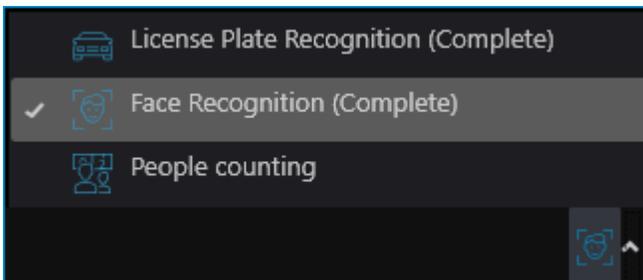
Cell context menu >

The context menu can be invoked in two ways:

- By clicking the icon in the bottom right corner of the cell.

- By right-clicking anywhere in the cell.

Note

The number of menu items may be different from below, depending on the settings of camera, archive, and client workstation.
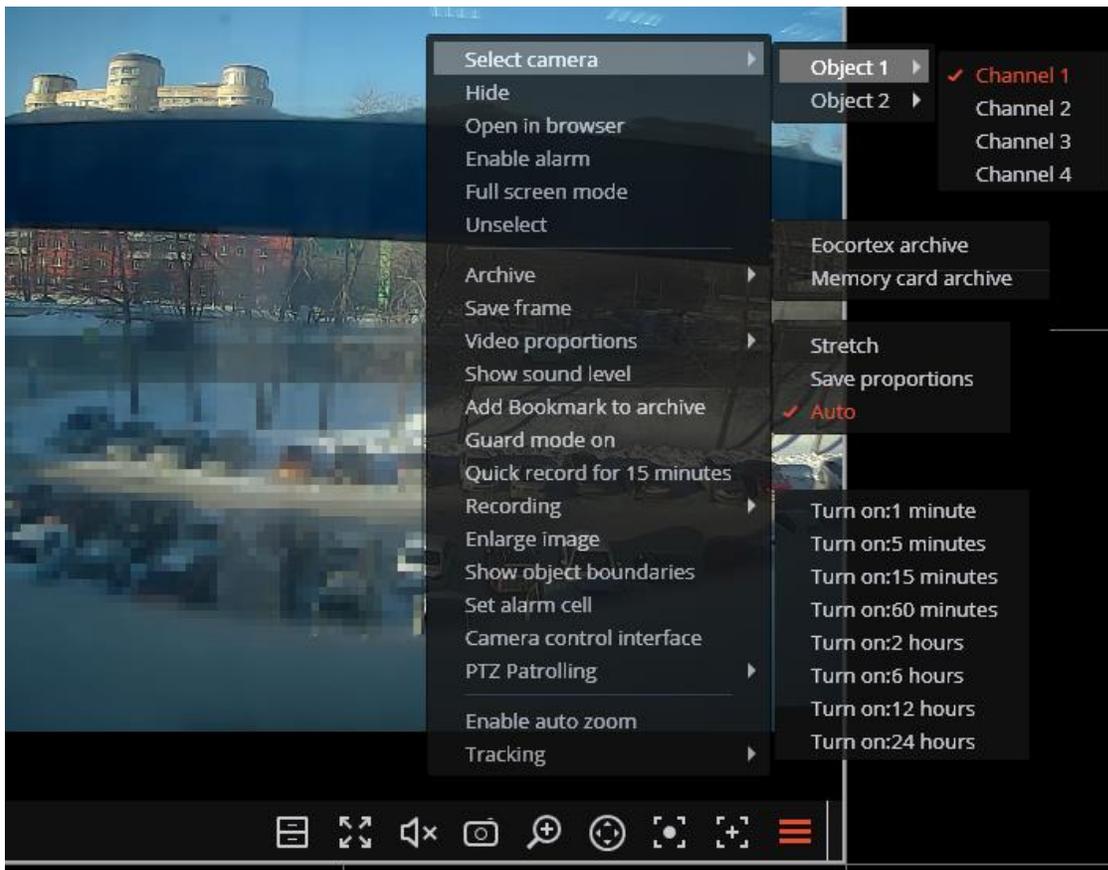
Description of the menu items:

Select camera: Allows selecting one of the available cameras to be displayed in the selected cell.

Hide camera: Removes the camera from the cell (frees the cell).

Open in browser: Opens the camera web interface in browser.

Enable alarm: Enables alarm from the camera in the cell.

Full-screen mode / **Exit Full-screen mode**: Switches the camera display between full screen and grid mode.

Note

Switching between grid mode and full screen mode can also be done by double-clicking in a cell.

Unselect: Removes selection from the cell (makes it inactive).

Archive: Switches the cell to View the single camera archive mode.

The access to the following archive types is possible:

- **Eocortex** Archive : The archive is stored on the Eocortex server.

- **Memory card archive**: The archive is stored on the memory card of the camera.

Save frame: Saves the frame (frame fragment) to the selected location.

Video proportions: Allows selecting frame proportions.

Show sound level: Displays the volume control element at the bottom of the cell.

Add Bookmark to archive: Opens the Archive bookmark creation window.

Quick record for 15 minutes: Enables the compulsory video recording from the camera to the archive for 15 minutes

Recording: Enables the compulsory video recording from the camera to the archive for the time interval selected in the submenu.

Warning

Compulsory recording to the archive is only available if the system administrator has set permissions for the camera and the user to record to the archive.

Note

If the compulsory recording is enabled, the recording to the archive will be continuous during the specified time, nno matter what recording mode the system administrator set for this camera.

Note

When the compulsory recording ends, the recording to the archive will be in the mode set by the system administrator for this camera.

Note

When the compulsory recording is enabled, the **Turn off recording** item with the remaining recording time (**remaining recording time: XX min.**), which stops the recording, is in the context menu.

✓ Turn off recording (Remaining record time : 120 min.)

To disable compulsory recording, select this option.

Note

If the context menu does not contain **Quick record for 15 minutes** and **Recording** items, it means that archive recording for this camera is set up to the **Always on** (continuous) mode or completely disabled.

Enlarge image: Allows to zoom in on a selected fragment of the frame.

Show objects boundaries: Enables the display of colored rectangular frames for moving objects (when using the software motion detector) and for detected faces (using face detection module).

Set alarm cell: The cell in the alarm mode will display the cameras on which the **Alarm** was triggered.

Camera control interface: Enables/disables the PTZ control interface.

Camera position: Allows to set the camera to the pre-configured position (preset).

Note

The items associated with the intelligent modules related to this camera are at the bottom of the menu. For more information, see the sections describing the corresponding intelligent modules.

Hotkeys ⟩

To view live view video, in the Workstation settings, you can assign the following keyboard shortcuts:

- Open a specific camera in full screen mode

- Open in browser

- Show/Hide motion objectû boundaries

- Execute a user task on a specific camera

- Open/close full screen mode

- Sound from camera on/off

- Show on map

Viewing the single camera archive

To open the camera archive (from the live view mode), click in the active cell or select **Eocortex** Archive in the context menu: the cell switches to the archive view mode.
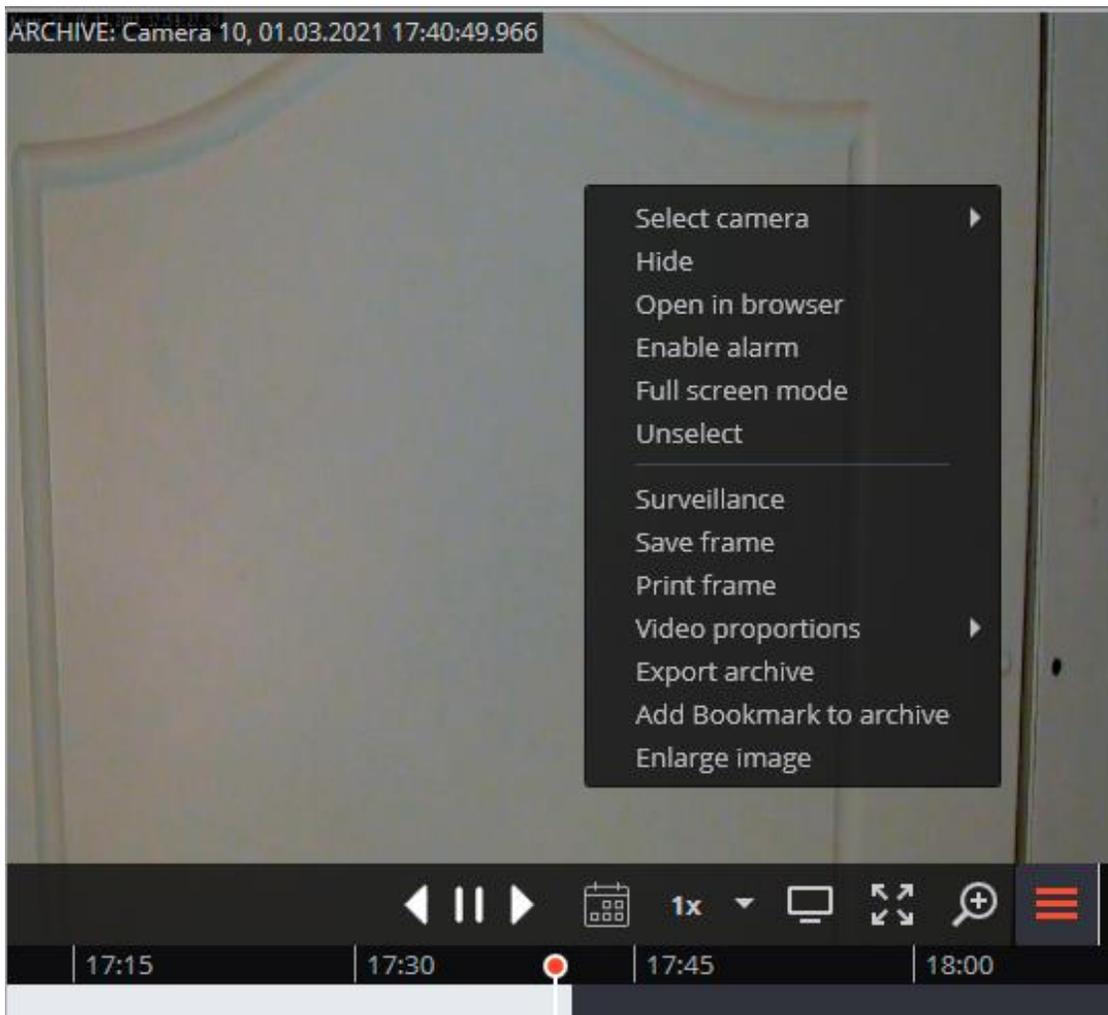
In the bottom part of the cell, there is a **Timeline** with the fragments marked in grey that correspond to the video recordings of the given camera that have been saved in the archive.

Note

The decimated archive is marked with hatching.

The vertical bar shows the place in the archive that is being displayed currently.

To go to the required time moment, click on the corresponding point on the timeline.

To shift the timeline backward or forward, click on it and, holding the mouse button, shift the scale in the required direction.

The time scale can be changed by rotating the mouse wheel while holding the Ctrl button.

Calendar allows going to a particular place in the archive by specifying the exact date and time.

Note

The timeline displays the time of the archive recordings in accordance with the local time of the computer on which they are viewed, while the server stores the archive according to the **Universal Coordinated Time (UTC)**.

As an example:

The server with the **UTC+03:00** time zone settings recorded a fragment of the archive from 12:00 to 12:05 server time.

When viewing this fragment in the **Eocortex Client** application running directly on the server, it will be displayed on the timeline between 12:00 and 12:05.

But when viewing this fragment on a computer with **UTC+05:00** time zone settings, the fragment time on the timeline will be from 14:00 to 14:05.

And when viewing the same fragment on a computer with **UTC+01:00** time zone settings, the fragment time on the timeline will be from 10:00 to 10:05.

Warning

Frames encoded in H.264, H.265 and MPEG-4 may freeze during playing, since only the reference frames are displayed. This is due to the specifics of H.264, H.265 and MPEG-4 codec, because the decoding of intermediate frames requires the whole chain, starting with the last reference frame; when playing backwards it can lead to unnecessary consumption of computer resources.

The playback speeds in the range of 0.1x to 120x are available.

Note

For frame-by-frame playback, move the mouse pointer to the cell and scroll the mouse wheel (down is forwards, up is backwards).

The context menu can be invoked in two ways:

- By clicking the icon in the bottom right corner of the cell.

- By right-clicking anywhere in the cell.

Note

The number of menu items may be different from below, depending on the settings of camera, archive, and client workstation.

Select camera: Allows selecting one of the available cameras to be displayed in the selected cell.

Hide camera: Removes the camera from the cell (frees the cell).

Open in browser: Opens the camera web interface in browser.

Enable alarm: Turns on the alarm in the cell.

Full-screen mode / **Exit Full-screen mode**: Switches the camera display between full screen and grid mode.

Note

Switching between grid mode and full screen mode can also be done by double-clicking in a cell.

Unselect: Removes selection from the cell (makes it inactive).

Surveillance: switches the cell in the real time video viewing mode.

Save frame: Saves the frame (frame fragment) to the selected location.

Print frame: Prints the frame (frame fragment).

Video proportions: Allows selecting frame proportions.

Show sound level: Displays the volume control element at the bottom of the cell.

Export archive: Exports the archive.

Add Bookmark to archive: Opens the Archive bookmark creation window.

Enlarge image: Allows to zoom in on a selected fragment of the frame.

Set alarm cell: The cell in the alarm mode will display the cameras on which the **Alarm** was triggered.

Fragment mode: shows the archive as fragments.

Hotkeys ⟩

To browse the archive, in the Workstation settings, you can assign the following keyboard shortcuts:

- Open/close Eocortex archive

- Open/close edge-based archive

- Start forward playback

- Start backward playback

- Stop playback

- Increase speed

- Reduce speed

- Hide/Show fragments panel

- Open archive export

- Save frame

- Print frame

- Add Bookmark to archive

- Open/close full screen mode

- Sound from camera on/off

- Show on map

Simultaneous viewing of archive of multiple cameras

Simultaneous archive viewing mode allows simultaneously view the videos from the archive from all the cameras in the grid, in this case the video corresponding to the same point in time will be displayed in all cells.

Note

It is possible to simultaneously play back video from up to 25 cameras.

Warning

In the **Eocortex Client** application, when simultaneously playing back the archive hosted on a Linux server, in some situations, the archive may not play back when selecting a playback speed higher than x1.

However, the archive is kept on archive disks in accordance with the archive storage parameters set in the system settings.

The problem described above may be caused by the specifics of the hardware used, the limitations of the data transmission network, and the peculiarities of the system software used on the server.

To switch to **Simultaneous archive viewing mode**, select the **Synchronous archive** sub-item of the **Archive** item in the **Main menu**.
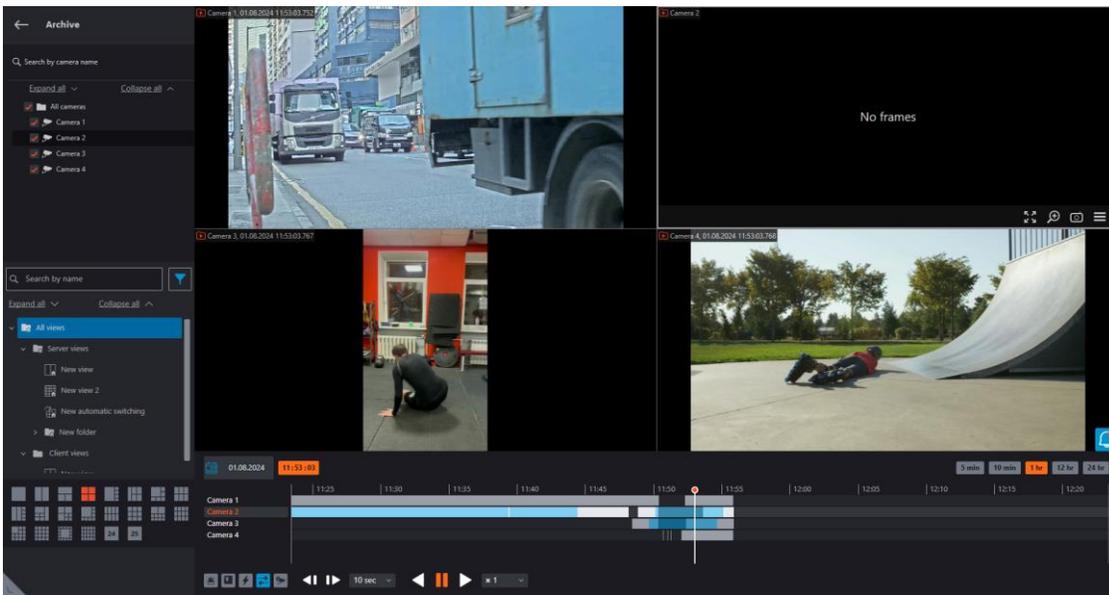
The **Timeline** is located in the lower right part of the page. The fragments of the timeline corresponding to the video recordings for each camera placed on the screen are marked in gray.

Note

The decimated archive is marked with hatching.

The vertical bar shows the place in the archive that is being displayed currently.

To go to the required time moment, click on the corresponding point on the timeline.

To shift the timeline backward or forward, click on it and, holding the mouse button, shift the scale in the required direction.

The time scale can be changed by rotating the mouse wheel while holding the Ctrl button.

Calendar allows going to a particular place in the archive by specifying the exact date and time.

Note

The timeline displays the time of the archive recordings in accordance with the local time of the computer on which they are viewed, while the server stores the archive according to the **Universal Coordinated Time (UTC)**.

As an example:

The server with the **UTC+03:00** time zone settings recorded a fragment of the archive from 12:00 to 12:05 server time.

When viewing this fragment in the **Eocortex Client** application running directly on the server, it will be displayed on the timeline between 12:00 and 12:05.

But when viewing this fragment on a computer with **UTC+05:00** time zone settings, the fragment time on the timeline will be from 14:00 to 14:05.

And when viewing the same fragment on a computer with **UTC+01:00** time zone settings, the fragment time on the timeline will be from 10:00 to 10:05.

Warning

Frames encoded in H.264, H.265 and MPEG-4 may freeze during playing, since only the reference frames are displayed. This is due to the specifics of H.264, H.265 and MPEG-4 codec, because the decoding of intermediate frames requires the whole chain, starting with the last reference frame; when playing backwards it can lead to unnecessary consumption of computer resources.

The scaling buttons that are used for setting the interval to be displayed on the timeline are located above the latter.

The playback controls common to all the cells and the filter buttons are located under the timeline.

The playback speeds in the range of 0.1x to 120x are available.

Frame-by-frame archive playback is available with the following step length: **Frame**, **0.1 sec**, **0.5 sec**, **1 sec**, **5 sec**, **10 sec**, **30 sec**.
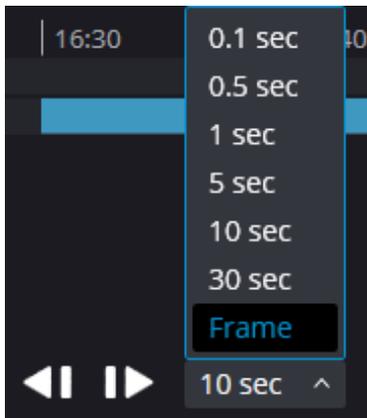
Note

With the **Frame** step length, pressing the **Step forward** button performs synchronous playback (considering all selected cameras) up to the first available frame.

Warning

Frame-by-frame playback is not available:

- if a camera with an archive source **Archive on data storage card** is used;

- if the playing speed is other than 1x;

- if the archive is playing back.

It is possible to enable the display of movement and various events on the timeline using the filter buttons.

Note

The events is displayed only when the scale of the timeline is in the range of 1 hour to 5 minutes.

You can combine the events next to each other under the same mark. In such a case, the events can be divided into separate marks when the scale is enlarged.

Should several events be registered simultaneously, they will be indicated with the same mark, whatever the scale. In such a case, you can view them separately in the Event log.

Filter buttons:

 Alarms;
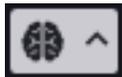
 Video analytics;

 Bookmarks;

 Actions;

 Motion;

 Camera analytics.

In the simultaneous mode, you can make one of the cells active by clicking inside the cell. The control elements in the active cell are the same as in the single-camera archive viewing mode.

Hotkeys ❯

For the synchronized archive browsing, in the Workstation settings, you can assign the following keyboard shortcuts:

- Open syncrhronous archive

- Start forward playback

- Start backward playback

- Stop playback

- Increase speed

- Reduce speed

- Hide/Show fragments panel

- Open archive export

- Save frame

- Print frame

- Add Bookmark to archive

- Open/close full screen mode

- Sound from camera on/off

- Show on map

Viewing archive fragments

The **Fragment mode** window displays and plays back fragments of the video archive of one of the cameras.
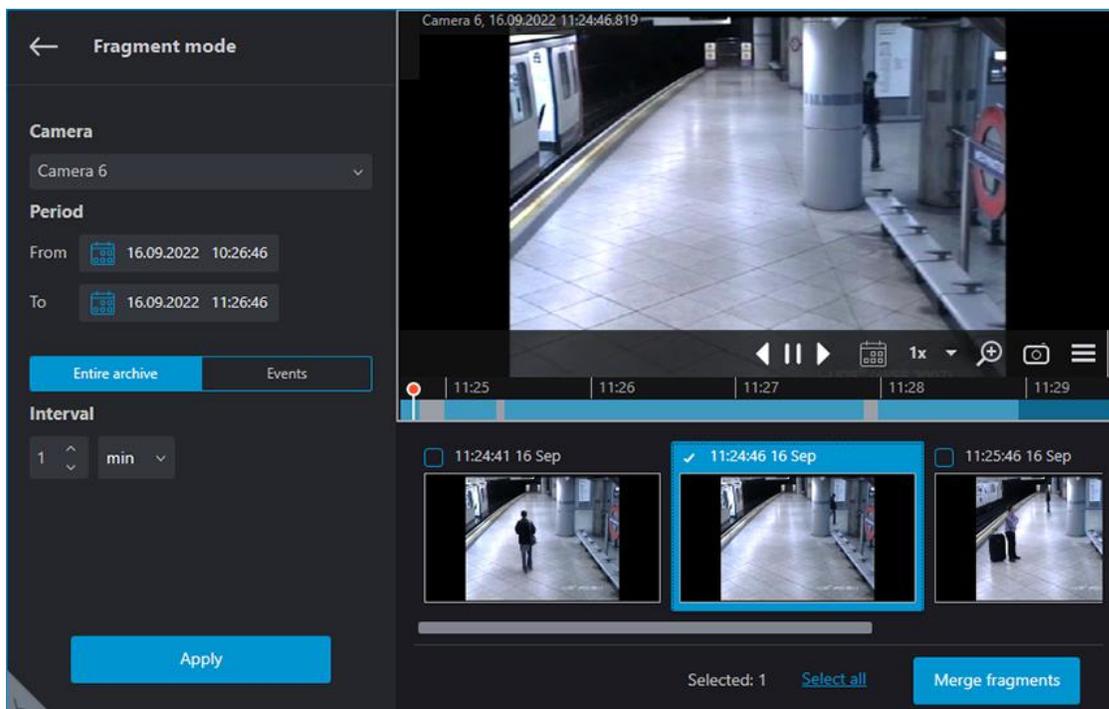
Warning

**Fragment mode** is available only for users with access to viewing the camera's archive.

Warning

The **Fragment mode** page displays only the archive stored on the **Eocortex** servers.

Switching to Fragment mode ⟩

Option 1

Select the **Fragment mode** sub-item of the ▣ **Archive** item in the **Main menu**.
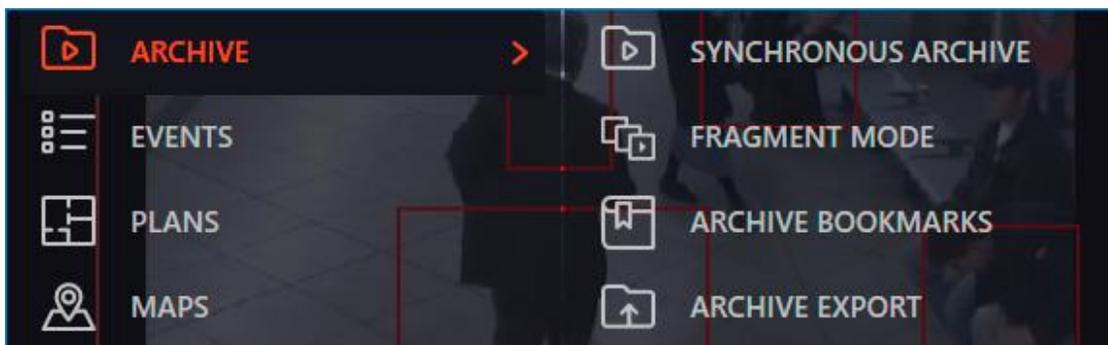
Option 2

Select the **Fragment mode** item in the context menu of the camera cell when viewing archive in the Single camera or Simultaneous viewing of multiple cameras mode.
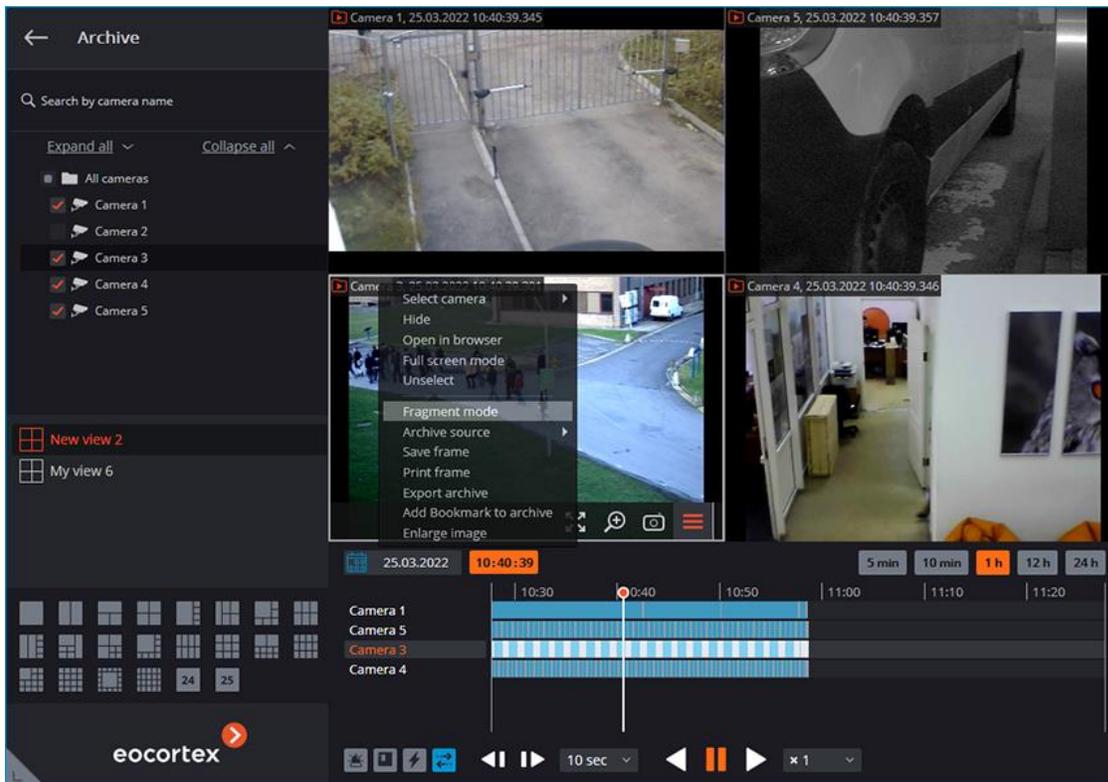
Note

To close the **Fragment mode** window, select the **Exit fragment mode** in the context menu or click the ← button in the left upper corner.

Most part of the window in the fragment view mode is filled by the archive playback screen, under which there is a timeline and the archive fragment panel. The left side of the window contains the parameters panel.

Parameters ›

Switching to **Fragment mode** automatically generates fragments with default parameters.

Fragments can be generated in accordance with specific criteria. To do this, set the desired values in the parameters panel and click the **Apply** button.

The following parameters are used when generating fragments:

- **Camera**: the camera for which archive fragments will be generated.

- **Period**: the time interval for which the archive fragments will be generated. Allowed values: from 5 minutes to 4 days.

Clicking the **Entire archive** and **Events** buttons defines the fragments generation logic.

- **Entire archive**: fragments generates for the entire archive. When using this option, it is necessary to set the length of an individual fragment with the **Interval** parameter.

- **Events**: fragments generates for the specific event types.

Message types:

- **Motion detector**

- **Alarm**

- **Camera analytics**

- **Intelligent modules**

The timeline displays marks for recorded events. If several events occur at the same time, they will be indicated with one mark.

Note

In the event selection list, only those video analytics modules available for selection that are enabled and configured for the selected camera.

The event types selection is retained when switching to another camera.
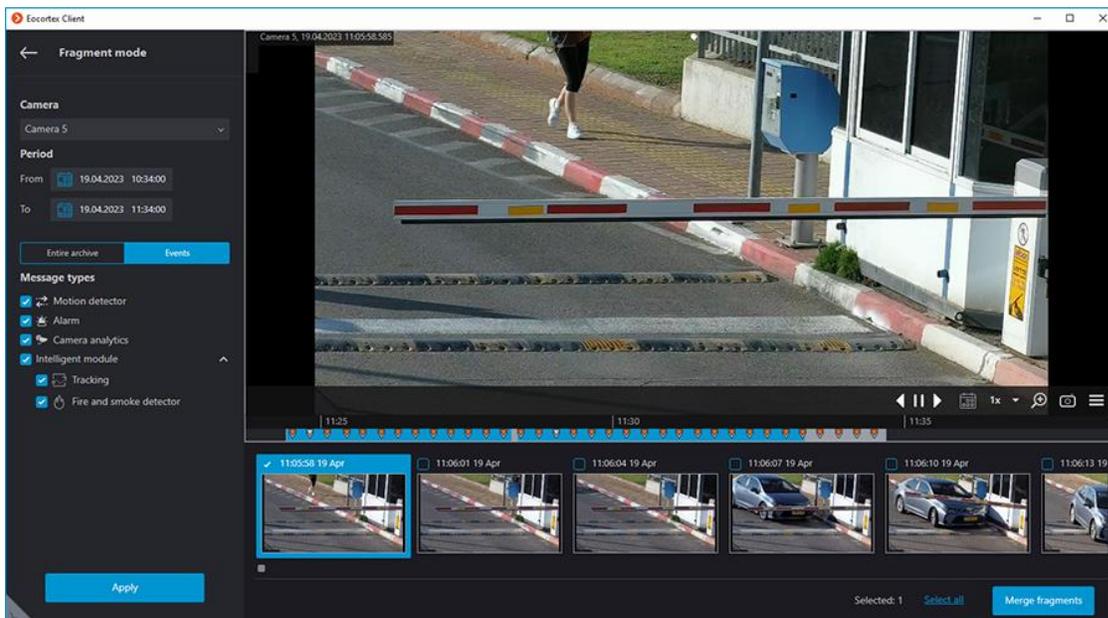
Note

Selected parameters could not be saved when closing the **Fragment mode** window.

Fragments panel ⟩

The generated fragments are located in the fragments feed at the bottom part of the window and can be scrolled by rotating the mouse wheel.

Switching fragments can be performed by pressing the ←, →, **Page Up** and **Page Down** buttons. Use the **Home** and **End** keys to jump to the first and last fragments.

Each object in the fragment feed contains a preview with the first frame of the fragment in the middle and the date and time of the fragment in the upper left corner. The upper right corner contains the 🔽 fragment export button.
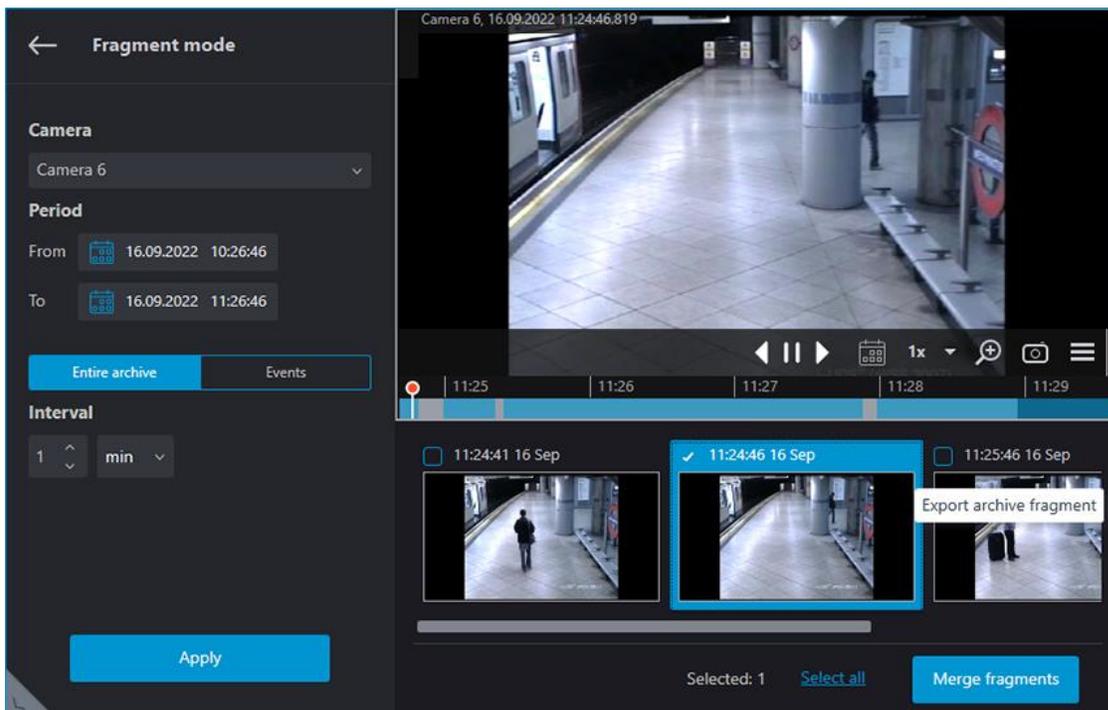
Fragments generated by events have an icon in the lower left corner corresponding to the event type.
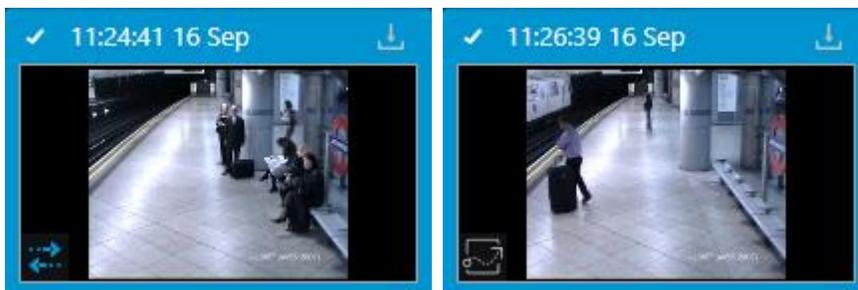
Note

If the event is an alarm event, the displayed icon is orange.
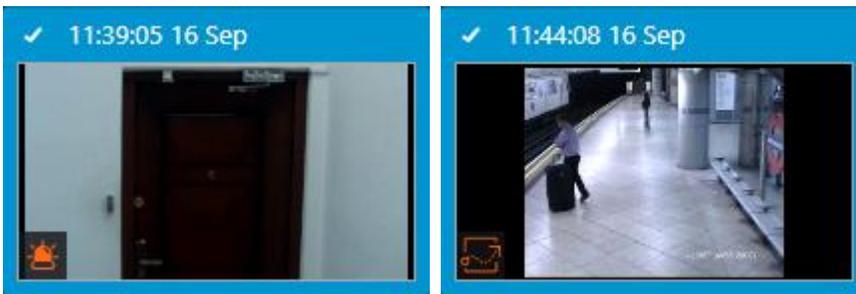
Note

If two different events occurred within the same fragment, the respective icons for each event are in the fragments feed.
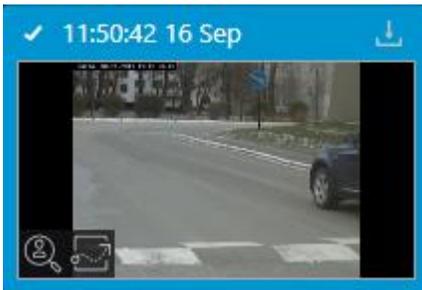
Note

If multiple events of the same type occurred within the same fragment, the number of detected events are next to the event icon.

Hovering the cursor over an event icon displays the event information.

Note

If a fragment does not have archive records throughout its length, then such a fragment is not in the fragments feed.

If there are no fragments within the specified period, the feed remains empty.
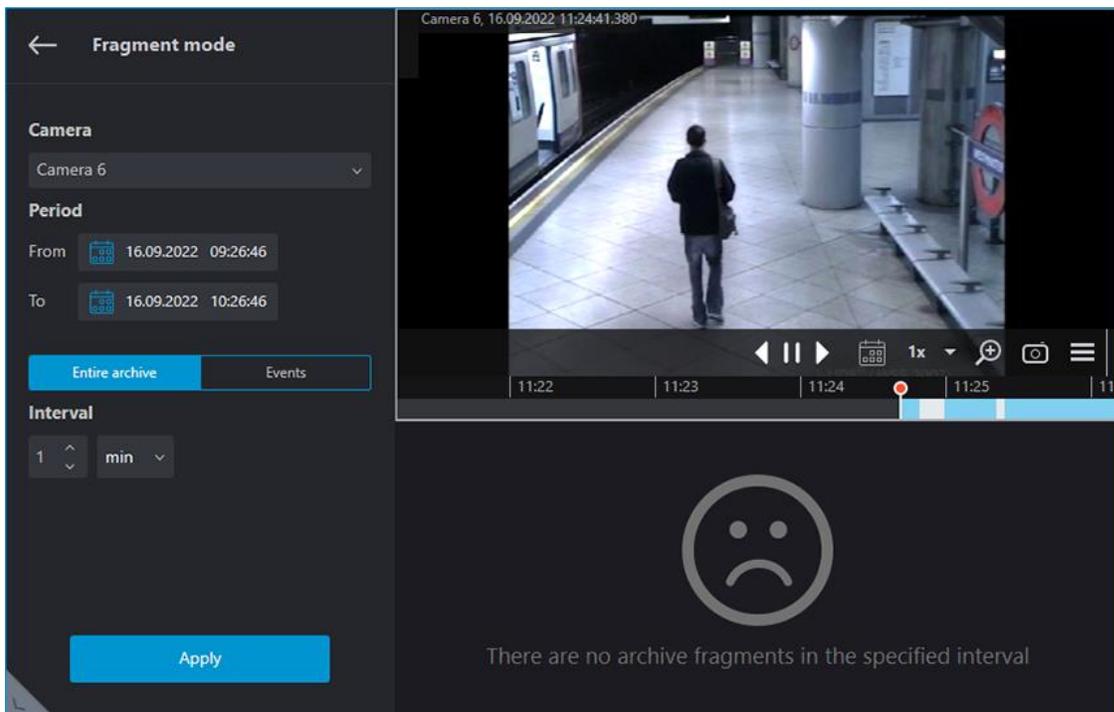
The selected fragment is loaded into the playback buffer. In such a case, a download indicator is below the playback screen.

To control playback, use buttons.

Note

When you select a fragment, the time pointer on the timeline will be automatically set to the moment the selected fragment starts.

If you select any fragment during archive playback, the time pointer on the timeline will jump to the start of the selected fragment, and playback will continue from this position.

When the playback of the selected fragment finishes, the playback will continue from the following fragment of the archive, but the selection will remain on the fragment from which playback began.

Viewing and exporting fragments ⟩

To view and export fragments as a single video, select the desired fragments and merge them.

You can select multiple fragments in the following ways:

- By enabling checkboxes in the upper left corner of the desired fragment in the feed.

- By clicking fragments in the feed while holding down **Ctrl**.

- Having selected the first desired fragment and holding **Shift**, select the last desired fragment. All fragments between the first and last will be selected.

To select all fragments in the feed, click the **Select all** button.

Note

To remove the selection of multiple fragments, click on one of the not yet selected fragments.

One fragment is always selected by default.
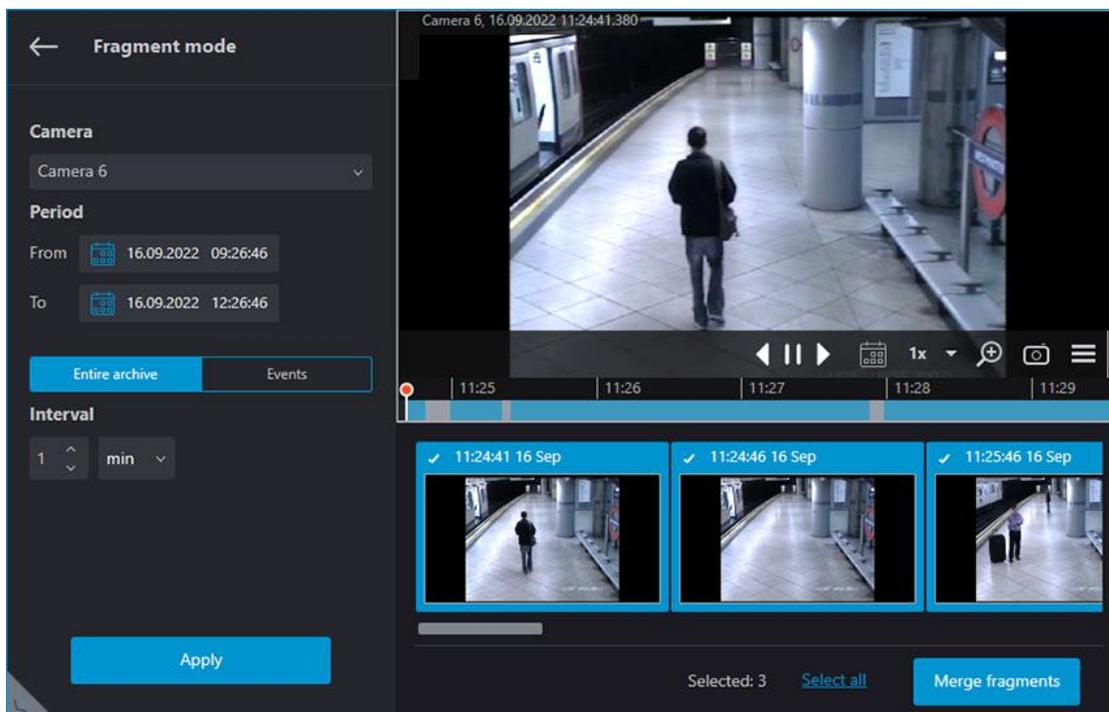
To merge the selected objects to a single video, click the **Merge fragments** button. In the window that opens, the timeline displays an archive with only those fragments that have been selected.
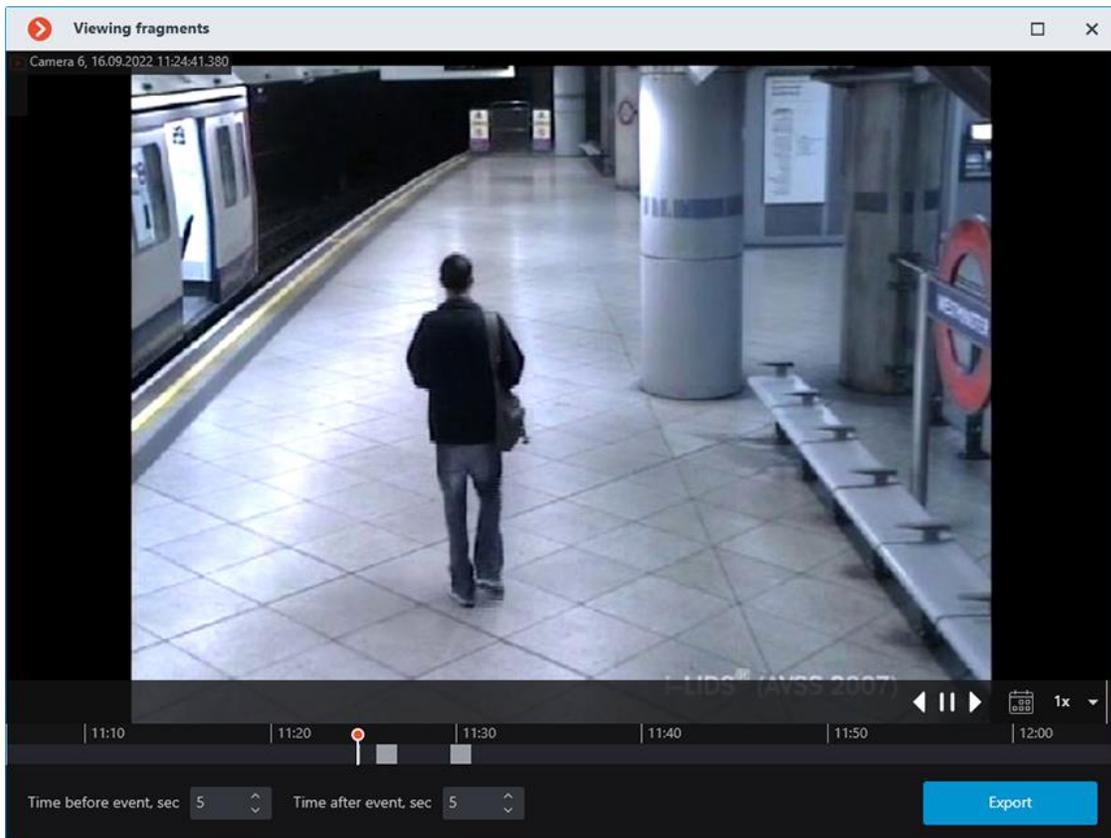
The **Time before event, sec** and **Time after event, sec** parameters increase the fragment length by specified time before and after the event. Allowed values: from 5 minutes to 4 days.

Note

Fragments with increased length must not exceed the value of the **Period** parameter.

Clicking the **Export** button opens a window for exporting a video clip merged from selected fragments.
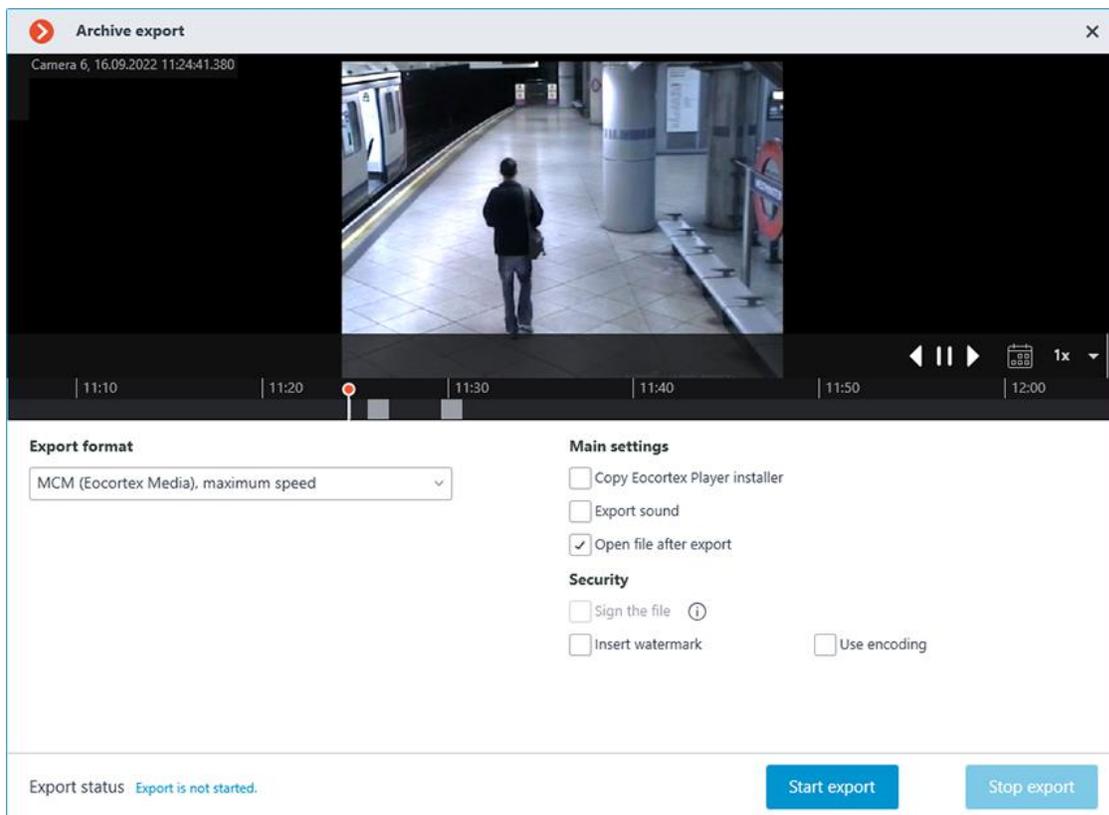
Hotkeys ❯

For a fragment mode, in the Workstation settings, you can assign the following keyboard shortcuts:

- Open fragment mode

Video analytics
- Abandoned Objects Detection
- Auto zoom
- Cross-camera Tracking
- Crowd monitoring
- Emergency Vehicle Detection
- Face Mask Detection
- Face recognition
- Fall Detection
- Fire and Smoke Detection
- Fisheye dewarping module
- Frame Area Blurring
- Heat map
- Licence plate recognition
- Loud sound detection
- Object Classification and Counting

- People counting module
- Counting people in queue
- Personnel activity monitoring
- Sabotage detector
- Shelf Fullness Check
- Search for Objects
- Tracking
- Uniform Detection
- Unique Visitor Counting

Abandoned Objects Detection

This intelligent module is designed to detect abandoned objects — if an object is left in the frame for over the specified period of time, the operator receives a corresponding alarm and the object itself is "highlighted" on the screen.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

To enable the display of abandoned objects select **Show abandoned** objects in the cell context menu, the abandoned objects will be color framed with **Alarm!** header upon the expiration of time, set by the administrator.
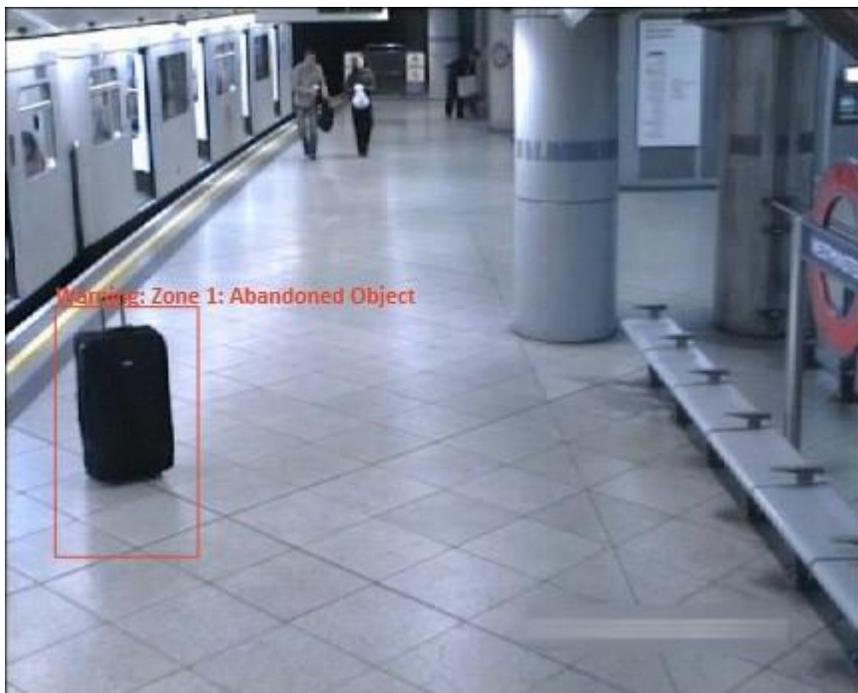
The operator must click inside the frame to react on the event, and the frame will disappear.

All the module events are recording in the Events log.

Auto zoom

This displays a separate enlarged area with moving objects.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Warning

Auto zoom functions only when the frame resolution from the camera exceeds the cell size. If the resolution from the camera is less than or equal to the cell size, the separate area will not be zoomed.

To enable **Auto zoom** during real-time viewing select **Enable auto zoom** in the cell context menu.

Thereafter, in real time mode when fixing the motion in the frame the zoomed area with the objects detected by motion detection software will be displayed.

The image will be scaled in such a way that all currently moving frames were included in the frame.

The following method may be helpful:

One and the same channel that uses **Auto zoom** is located in **Eocortex Client** in neighboring grid cells. The **Enable Auto zoom** is activated only for a single cell. Thus, it is possible to simultaneously display both the entire frame and the zoomed area with moving objects.

The figure below shows such example: In the left frame **Enable Auto zoom** is enabled, in the right it is disabled.

Cross-camera Tracking

Cross-camera Tracking allows to sequentially track the movement of a person going through different cameras of video surveillance system.

Note

Cross-camera Tracking is only available for the cameras on which the **Search for Objects** video analysis module has been enabled and properly configured.

Note

The video analysis modules are enabled and configured by the administrator of the video surveillance system.

Cross-camera Tracking can be enabled in three ways:

- In simultaneous archive viewing mode (to switch to this mode, select the **Synchronous archive** sub-item of the **Archive** item in the Main menu), select a cell and click on , or select **Cross-camera tracking** in the cell's context menu;
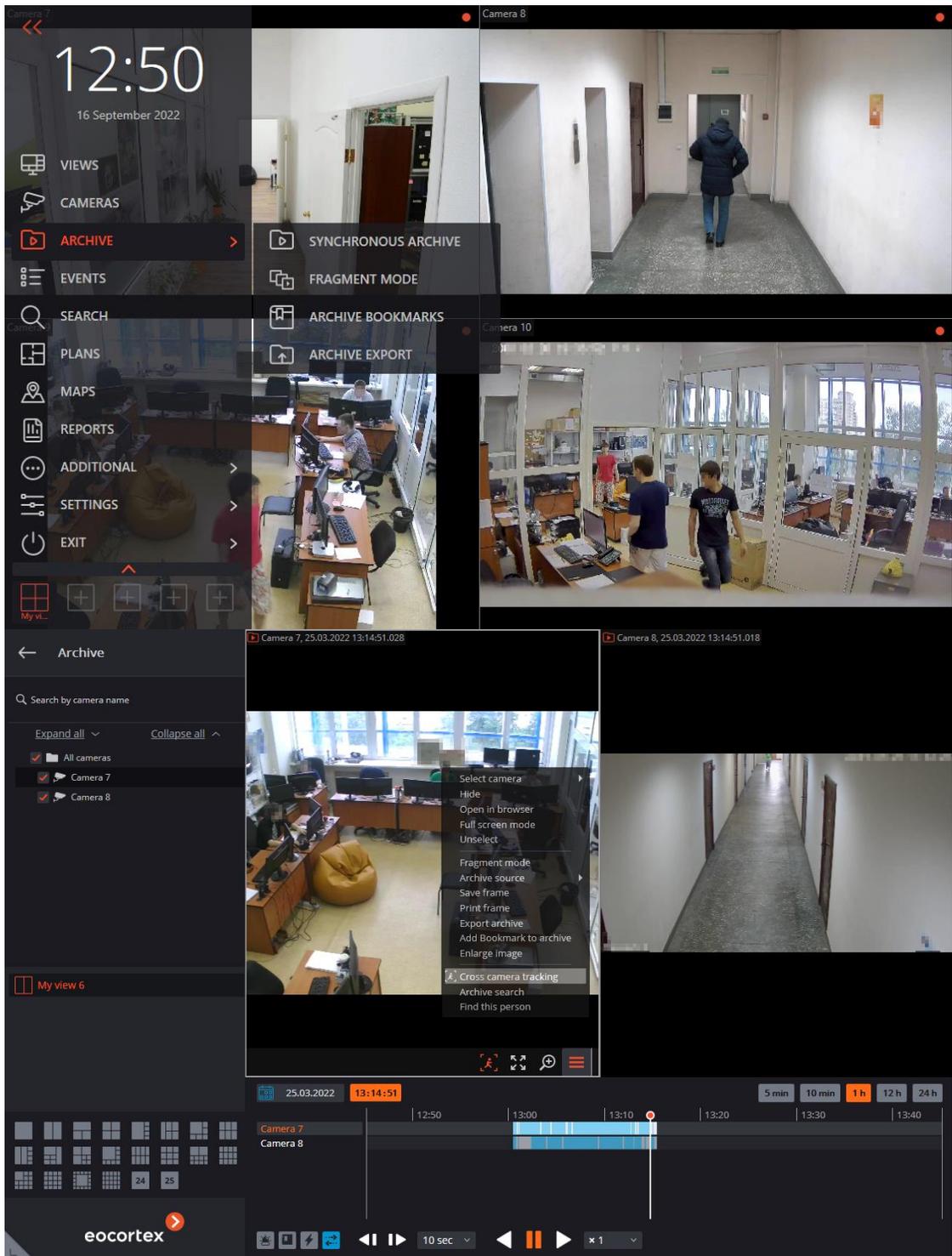
- In individual camera archive viewing mode, select a cell and click on 🏃, or select **Cross-camera tracking** in the cell's context menu;
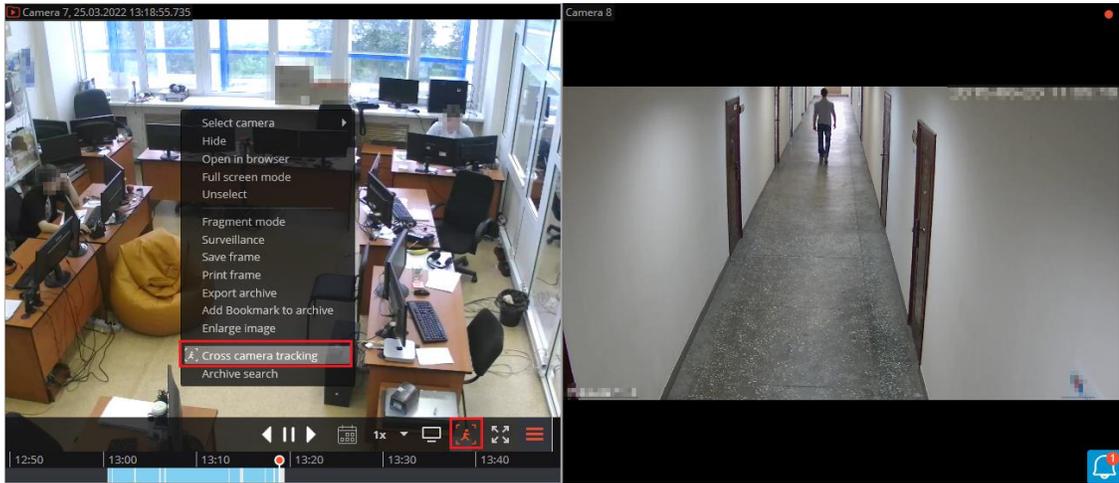
- In Archive search mode, select a fragment, open the context menu with the right mouse button and choose **Cross-camera tracking**.
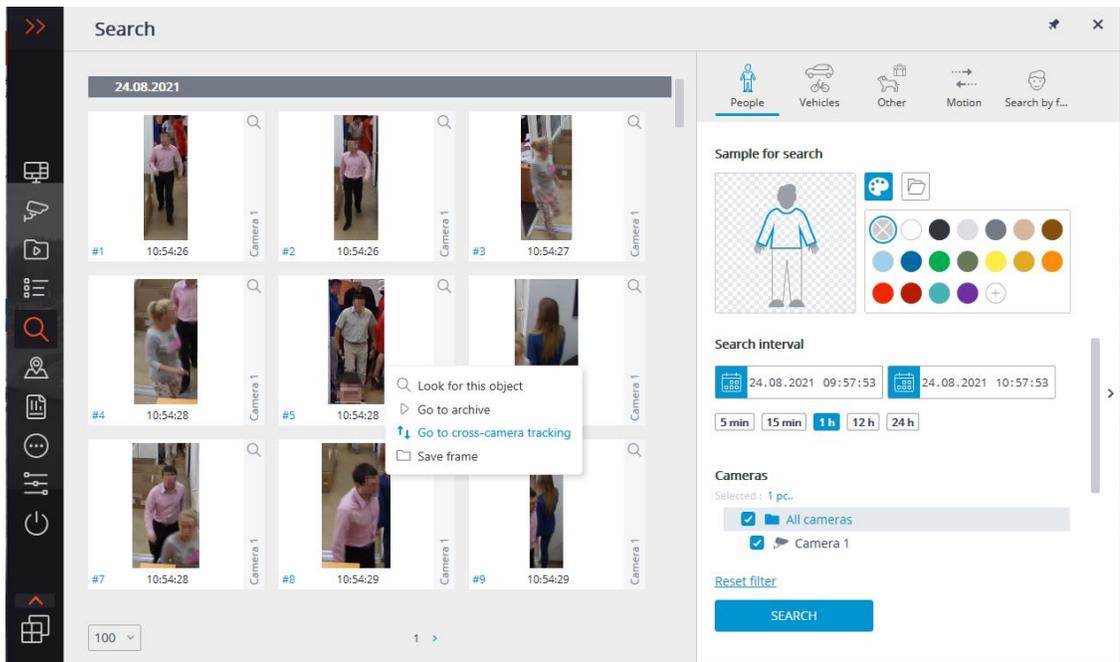
The figures of people will be boxed by frames.

If the figure of a person is absent or not boxed in the frame, or if there are no figures of people at all, you can go to the previous or to the next frames with

people using and buttons.

To look for fragments with a sought person, use button located in the lower part of the frame with this person. This will open Cross-camera tracking master window.

On **Camera selection** tab, select the cameras to perform the search on.

If the camera is present on a site plan, on the right side of the page the plan will be shown on the camera highlighted on it.
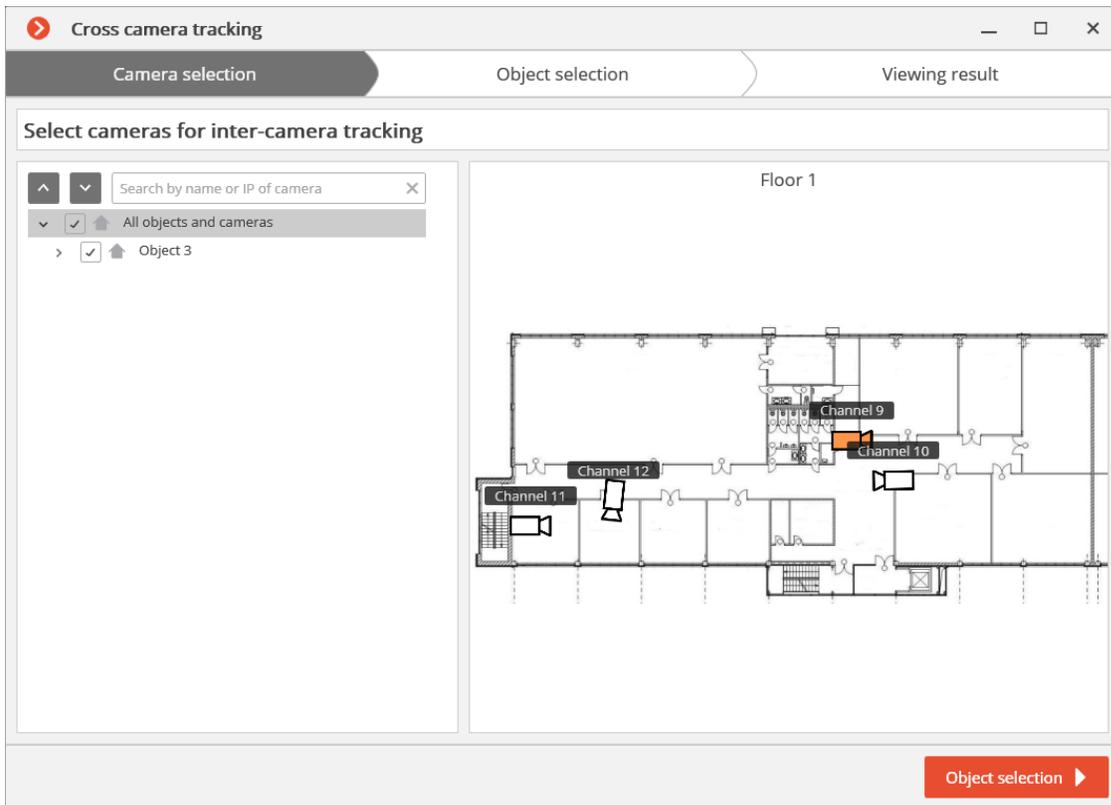
If the camera is not located on any plan, as well as when the plans are not used, a corresponding warning will be displayed on the right side. The search will be performed on this camera, but the route fragments found will not be displayed on the plans.
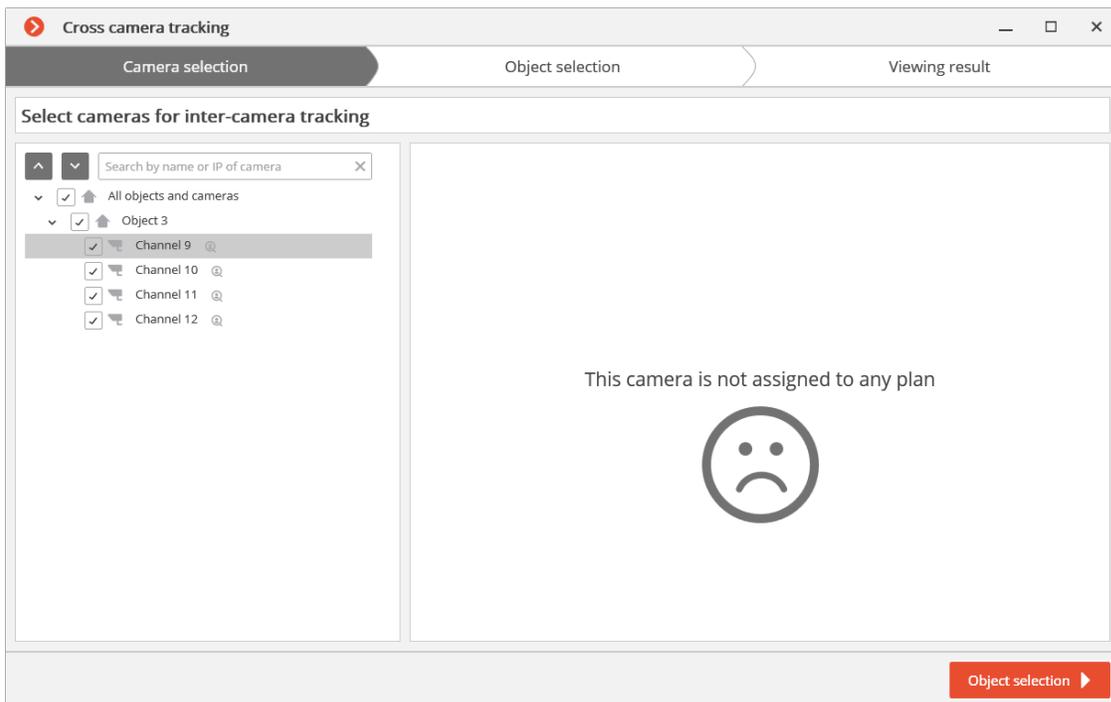
After selecting the cameras, go to Object Selection tab by pressing the button with the same name or clicking on the tab's header. This tab will show fragments with the sought object within ±2 minutes from the first fragment. It is required to tick only those fragments where the sought person is shown, because similar-looking people may also be in the list.
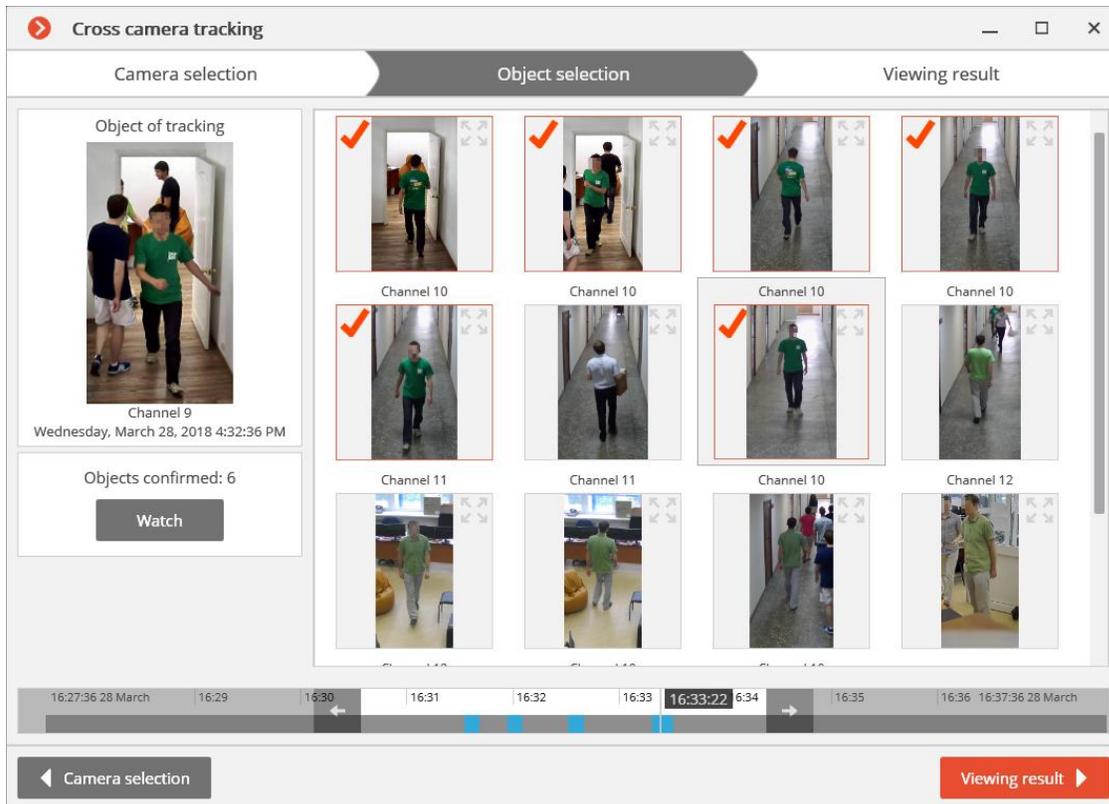
After ticking all the fragments with the sought person, you can click on **No more matches?** link in the lower part of the page. The more precise search will be performed based on the ticked samples within the current timeframe. If such samples are found, they will be displayed on the object selection page.
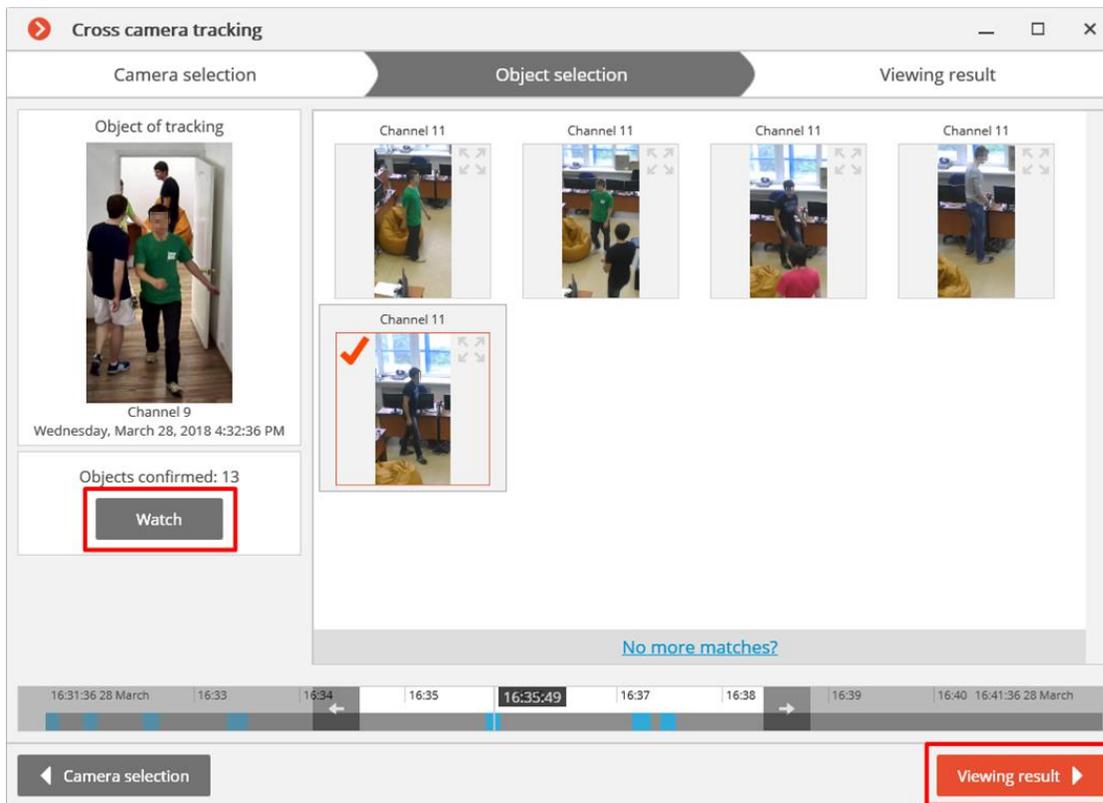
To change search interval, use arrow buttons on the timeline.
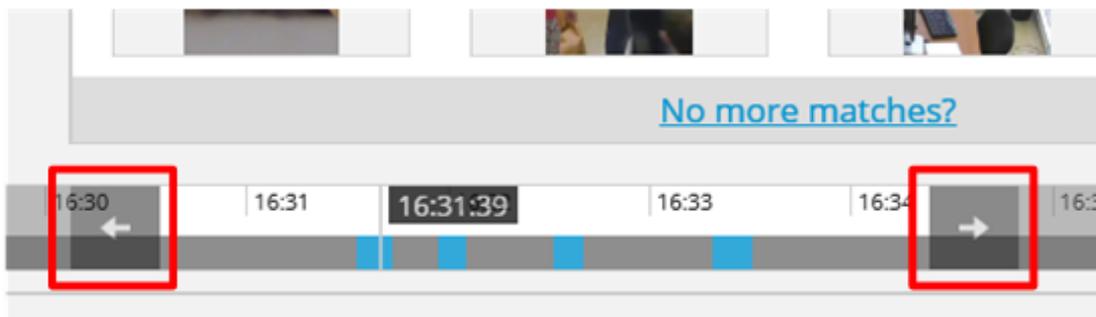
To view all the confirmed samples, use **View** button.
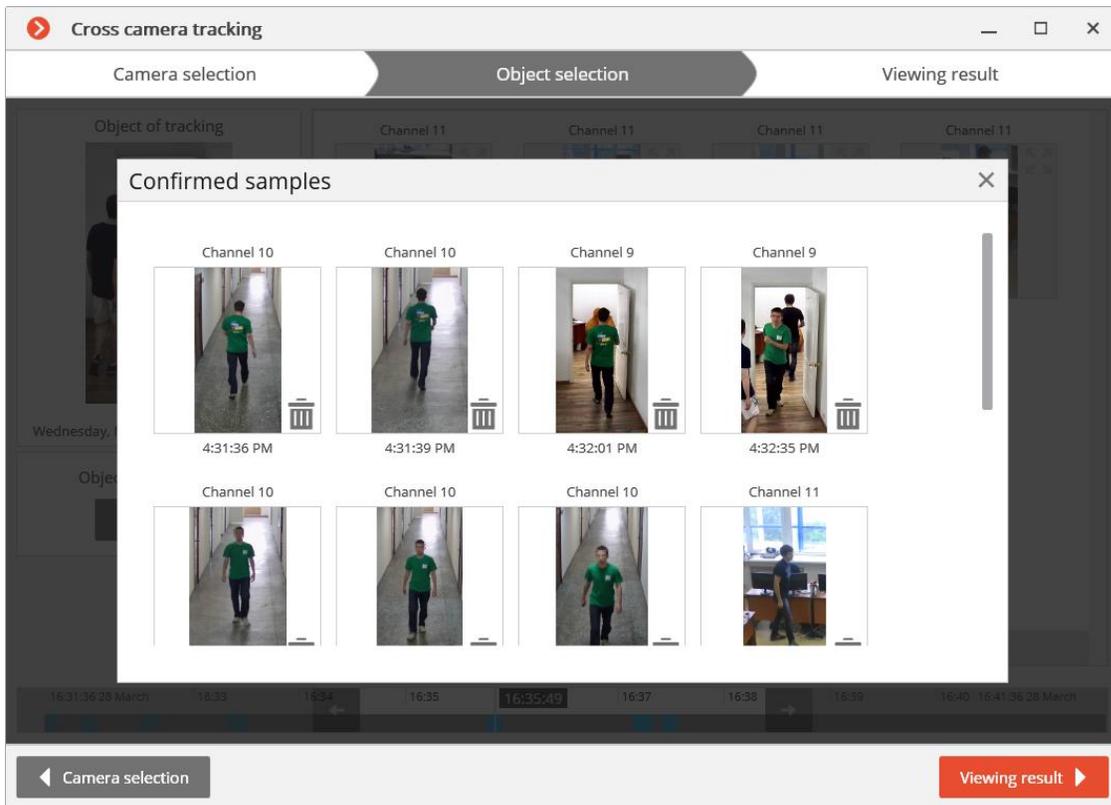
After selecting samples, go to **View result** tab pressing the button with the same name or clicking on the tab header. The video fragments with the sought object will be sequentially displayed on this tab.
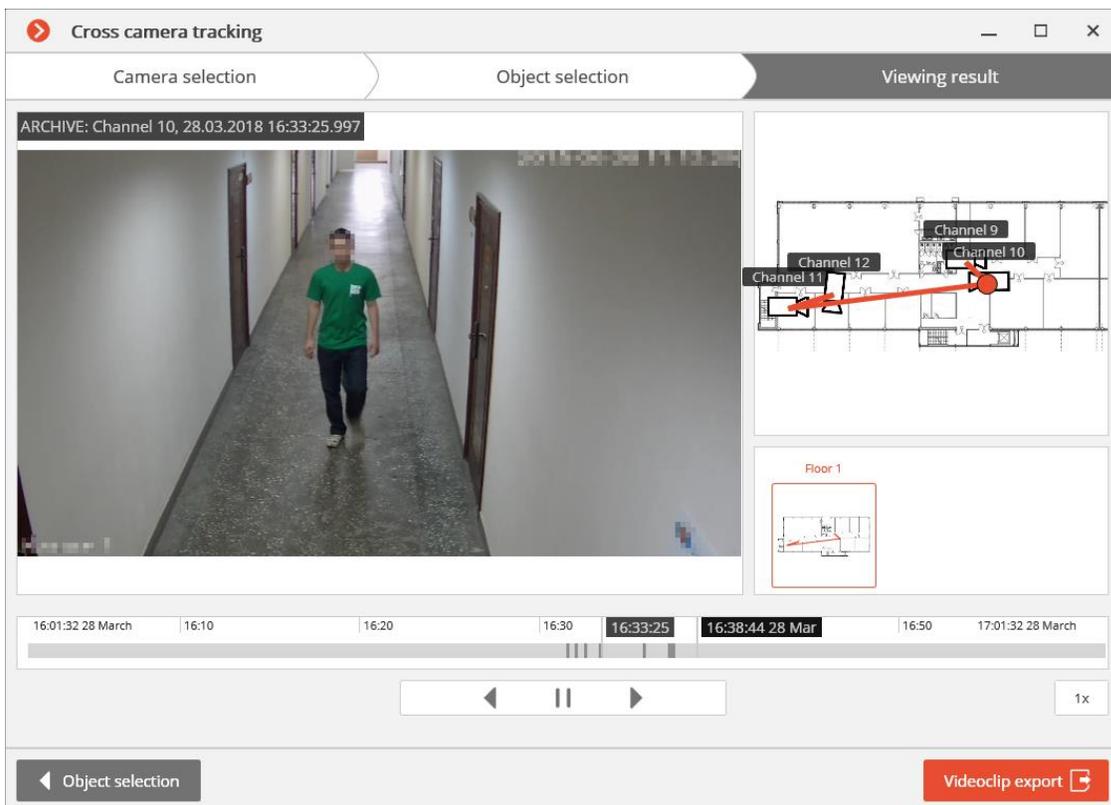
The conventional trajectory of the sought object will be displayed for cameras placed on the plans.

You can export a video to ***.avi** or ***.mcm** format by pressing a **Videoclip export** button.

Crowd monitoring

This module allows to detect the crowds in the frame.

When configuring the module you have to specify the frame area to be monitored, as well as a quantitative criterion — maximum acceptable level. If the number of people in specified frame areas exceeds this level, an appropriate alarm event will be generated.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Besides generating system events the module allows you to construct a graph showing the number of people on a timeline.

Note

The number of people is estimated analytically, on the basis of special-purpose algorithms, so the estimate will be different from the actual one — degree of error may amount up to 30%. One of the factors that affect the estimate is the speed of movement of people in the frame: if people move fast enough — the estimated amount will be higher than the actual; if people in the frame move very slowly or stand still — the estimated amount will be lower than the actual.

During real-time viewing the camera cell in which the crowd counting is performed will display the zone in which the name of the zone, the estimated and maximum acceptable number of people in it will be indicated. In case of exceeding the maximum number of people in the area, the frame and the text will become red, and an exclamation mark will appear before the text.

The system administrator may set the additional actions in response to the acceptable level exceeding: for example, the alarm generation.

To enable the display of areas select **Show crowd detection zones** in the cell context menu.

All the module events are recording in the Events log.

To generate the reports select **Reports** in the Main menu.
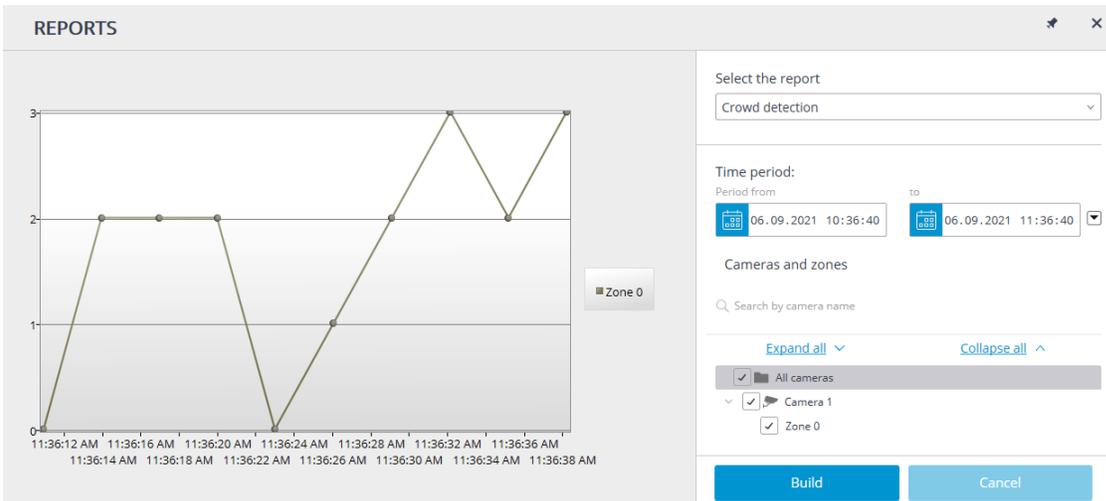
In the **Select the report** field, set the **Crowd detection** option.

Set the **Time period** for which the report will be generated. The field with the list allows to set the interval prior to the current time, for which the report must be generated, by selecting one of the values: **Minute**, **Hour**, **Day**, **Week**, **Month**.

Select the **Cameras and zones** by which the report will be generated.

To generate the report click **Build** (to abort the report building process click **Cancel**).

Emergency Vehicle Detection

The **Emergency Vehicle Detection** module allows recognizing fire, ambulance, and police vehicles in the real-time mode. The recognition is available for predefined areas of the frame. To avoid false positives, a minimum time can be set for special vehicles to be in the area. Recognition events can be used in automation scenarios. For example, to automatically open the barrier.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Displaying settings ›

The display of emergency vehicles in the **Eocortex Client** application can be configured via the context menu.
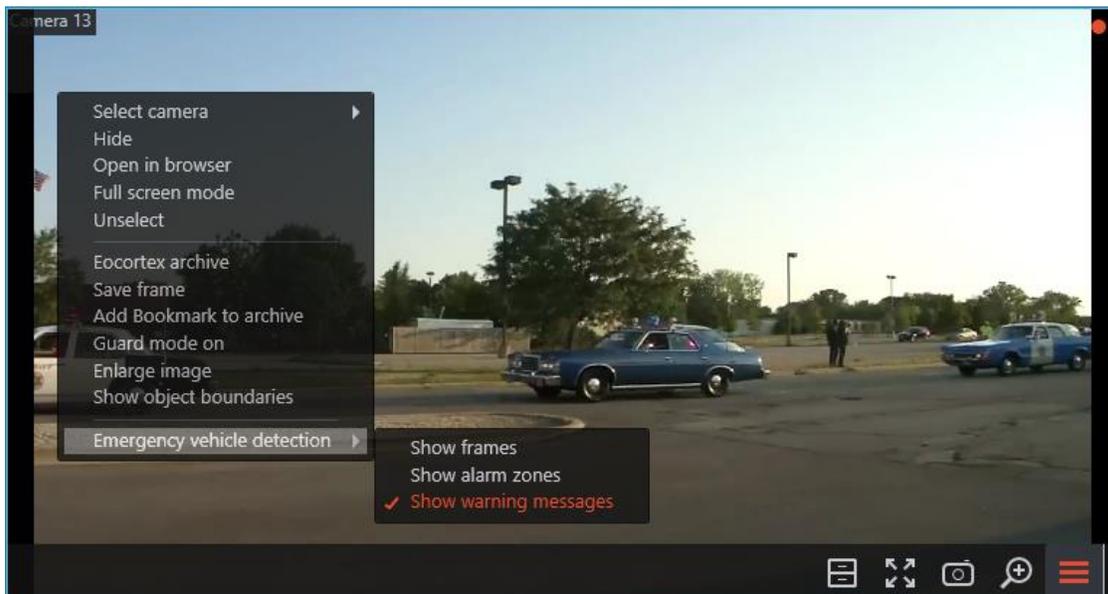
Selecting the **Show alert zones** option allows displaying zones for recognizing emergency vehicles.
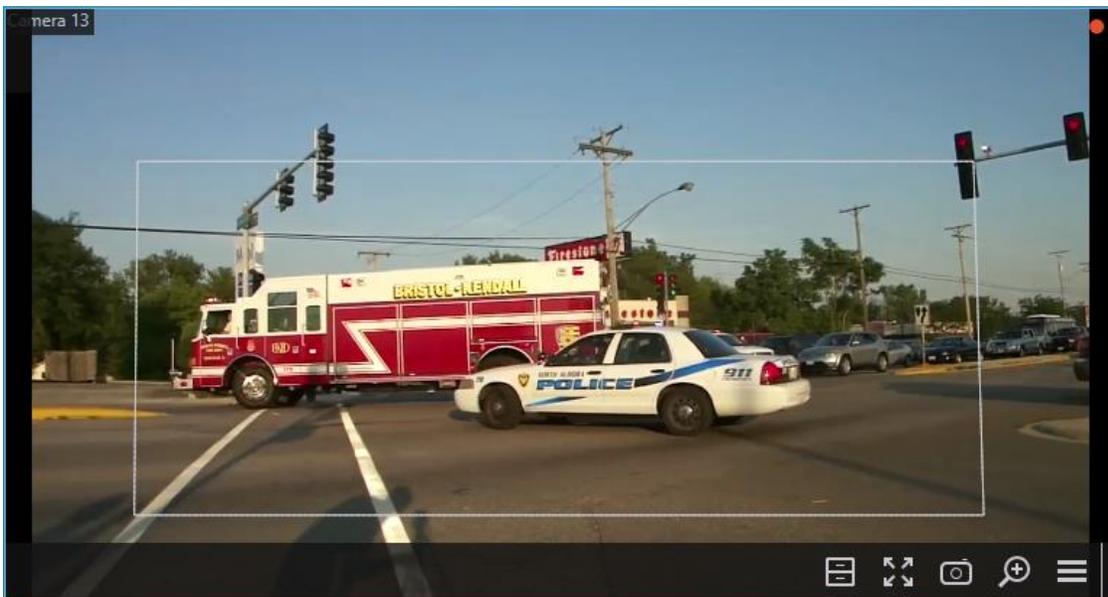
Enabling the **Show coloured boundaries of objects** option puts a frame around each recognized emergency vehicle. The frames have different colors depending on the vehicle category. Also the type of the recognized special vehicle is written above the frame.
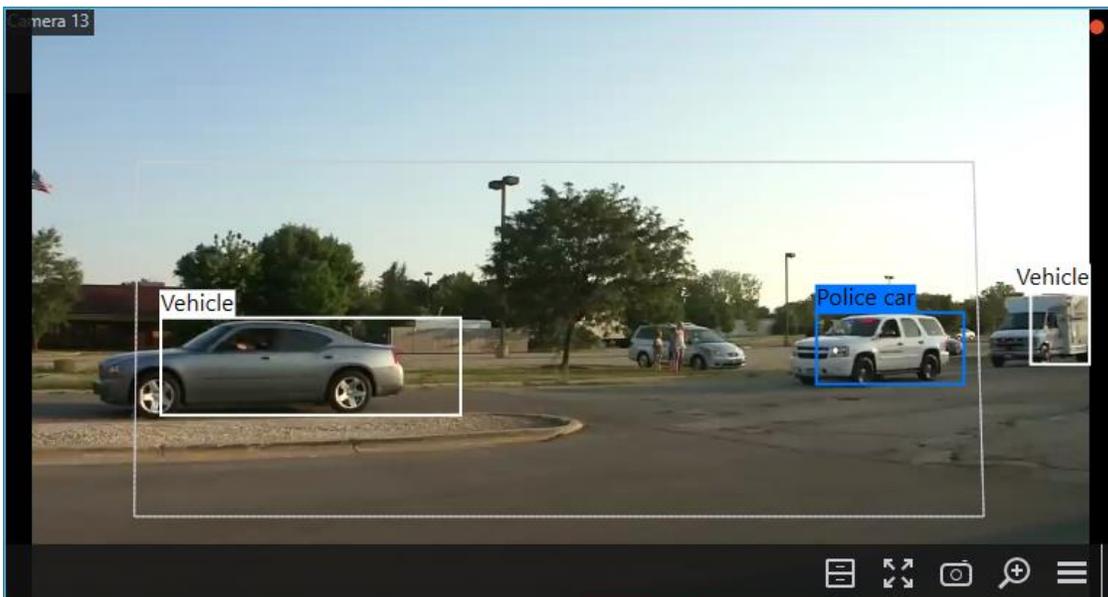
Enabling the **Show warning messages** option will display various warning messages alarming about problems with the module. These warnings take place in the upper left corner of the cell.
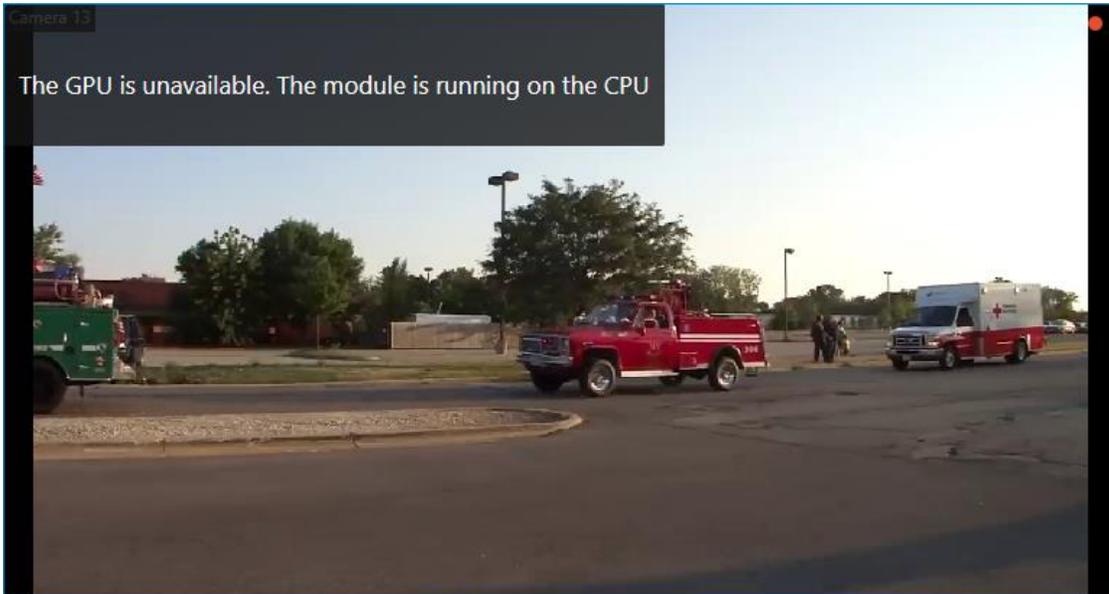
Viewing in the Events log ›

If an emergency vehicle remains in the detection zone longer than the specified time, the **Emergency vehicle detected** event will be generated. Such events can be viewed in the Events Log:

26.04.2023 14:12:38	🔔	Camera 13. Emergency vehicle detected: Police car. Area: Lengthy presence. Emergency vehicle detection.
26.04.2023 14:12:13	🔔	Camera 13. Emergency vehicle detected: Police car. Area: Lengthy presence. Emergency vehicle detection.
26.04.2023 14:12:02	🔔	Camera 14. Emergency vehicle detected: Ambulance. Area: Lengthy presence. Emergency vehicle detection.
26.04.2023 14:11:11	🔔	Camera 14. Emergency vehicle detected: Police car. Area: Lengthy presence. Emergency vehicle detection.

When viewing such an event, the zone and vehicle for which the event was generated will be displayed on the archive record:
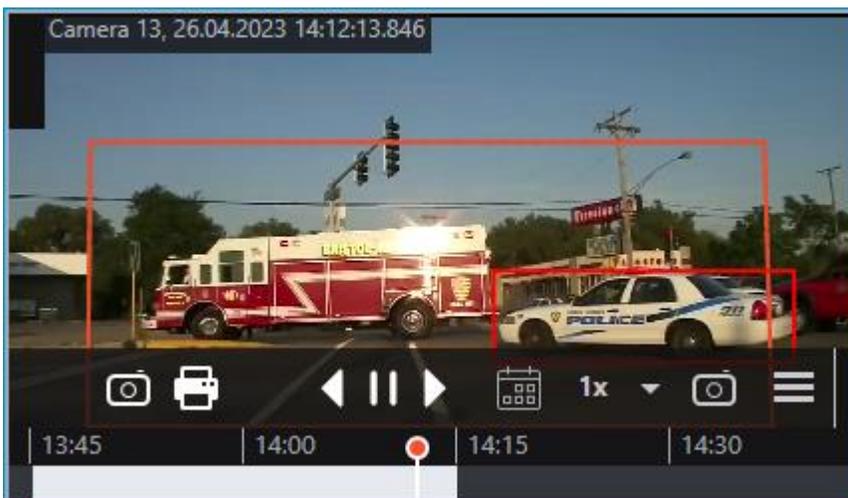
Face Mask Detection

The **Face Mask Detection** module is designed to detect people not wearing medical face masks in the frame. When such persons are detected, the module highlights them in the frame with a square in real time and enters the event in the event log.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.
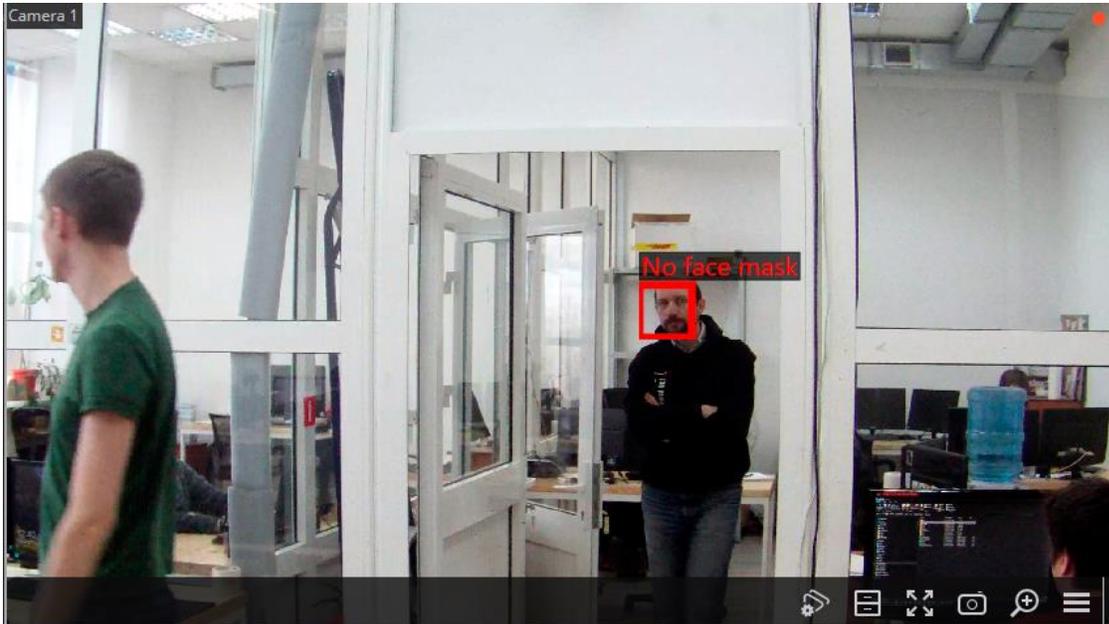

To display the frame around people not wearing face masks, select **Show frames of infractors** subitem in **Face Mask Detection** item of the cell's context menu.
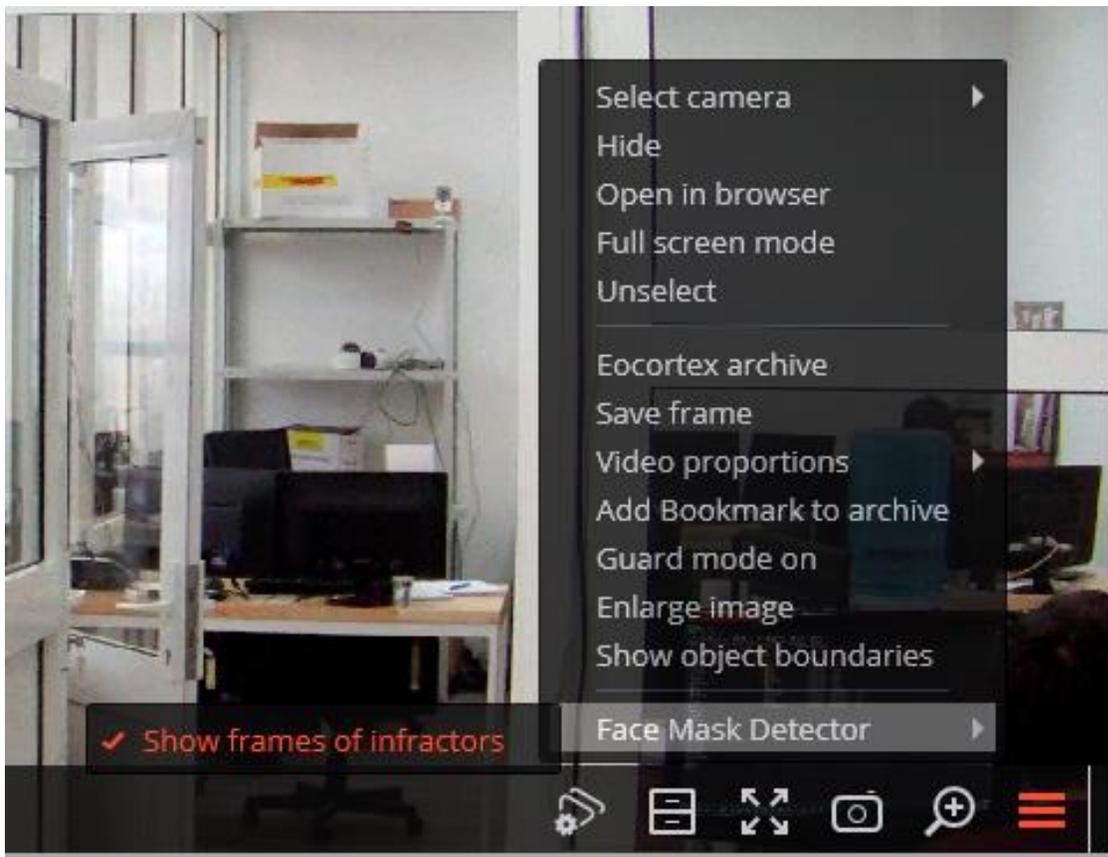
All the module events are recording in the Events log.

Face recognition

Eocortex allows to use several modules that perform face recognition using a database: **Face Recognition (Complete)**, **Face Recognition (Light)** and **Unique Visitor Counting**.

However, it is not possible to use **Face Recognition (Light)** module with otherface recognition modules on one camera at the same time.

The modules ensure high recognition accuracy and can be used together with access control systems at the facilities with high security requirements, for example, at banks or restricted access facilities. Another important use of the modules can be automatic identification of the hotel guests, restaurant customers, and the visitors of other similar enterprises.

Comparison of modules ❯

| | Versions | | |
Capabilities	Face Recognition (Light)	Face Recognition (Complete)	Unique Visitor Counting
Identification of faces	√	√	–

Capabilities	Versions		
	Face Recognition (Light)	Face Recognition (Complete)	Unique Visitor Counting
contained in a database			
Identification of people wearing sunglasses, headgear, etc.	–	√	√
Relative recognition accuracy	Medium	High	–
Number of people in database	Up to 500	Unlimited	–
Determination of sex and age	–	√	√
Recognition of emotions	–	√	√
Recognition of faces in archive	–	√	–
Reports regarding faces	√	√	Detection only
Reports regarding unique visitors	–	–	√
Usage of high-performance video card (GPU)	+	√	√
Usage of several video cards (GPUs)	–	√	√

√ Yes

– No

+ Optionally

Details 〉

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

The **Face Recognition (Complete)** and **Unique Visitor Counting** modules also define sex, age and emotions of recognized people.

The following emotion recognition results are available: **Positive**, **Neutral**, **Negative** and **Unknown**.

The **Face Recognition (Complete)** module can identify masked faces with high accuracy; provided that the database contains samples of these persons without a mask. Also, this module can recognize turned faces; despite the fact that only images of faces looking directly into the camera are entered into the database.

Live view ❯

In the live view displaying of the recognized faces may be activated. To enable this option, select the cell and click 👤 icon. Recognized faces panel will be opened:
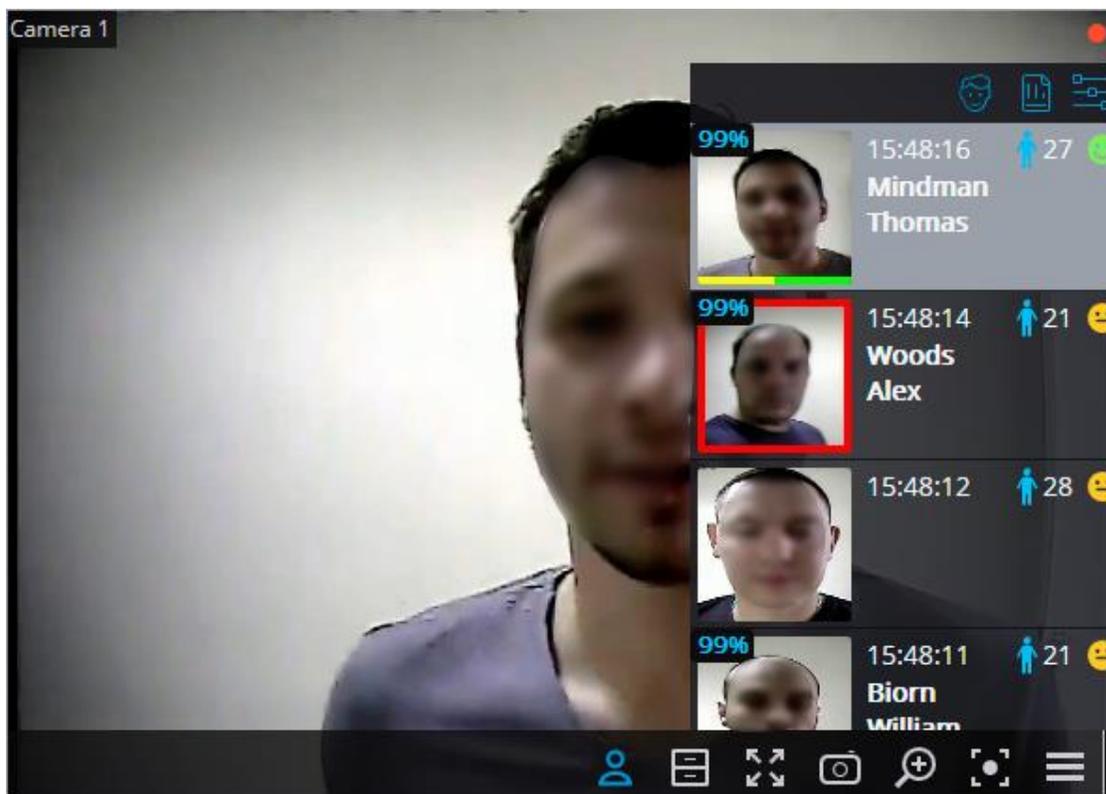
There are the buttons at the top of the panel for addition of a face into the database 👤+ and switching to reports page 📄.

Below there is the list of recognized faces in descending time order.

If the face belongs to one or more groups, a bar with the colors, assigned to these groups, shall be placed below it.

Double-clicking on the row in the list opens the archive window with the moment of recognition of this face.
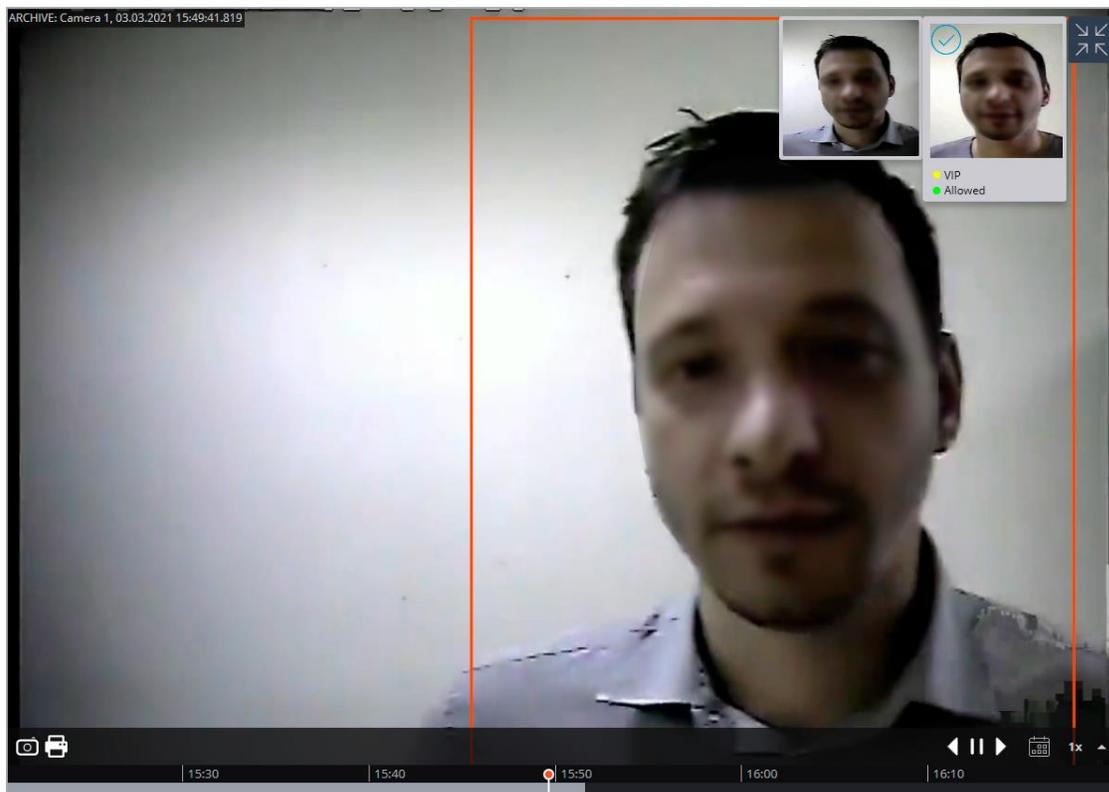
The module settings window.
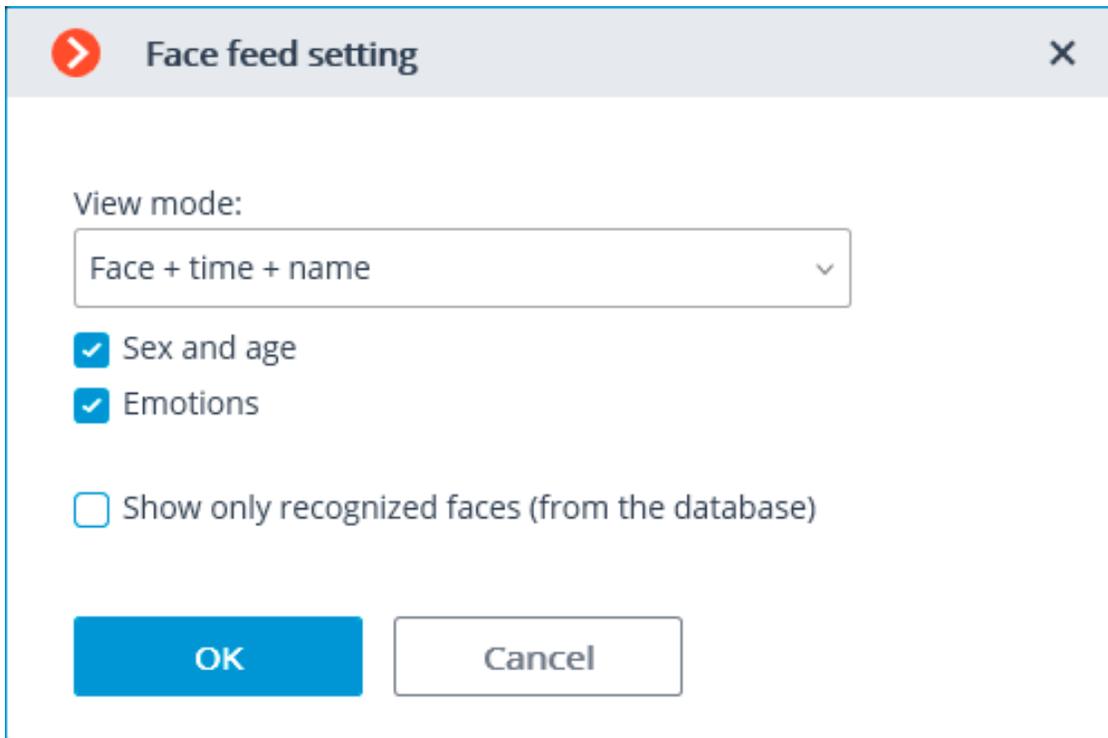
The following settings are available in this window:

View mode: allows to configure the displayed information.

If **Show only recognized faces (from the database)** is checked, only those faces which exist in the database will be displayed in the recognized faces list.

When viewing a camera in the live view mode, it is possible to enable/disable the displaying of frames for recognized faces using the cell context menu.
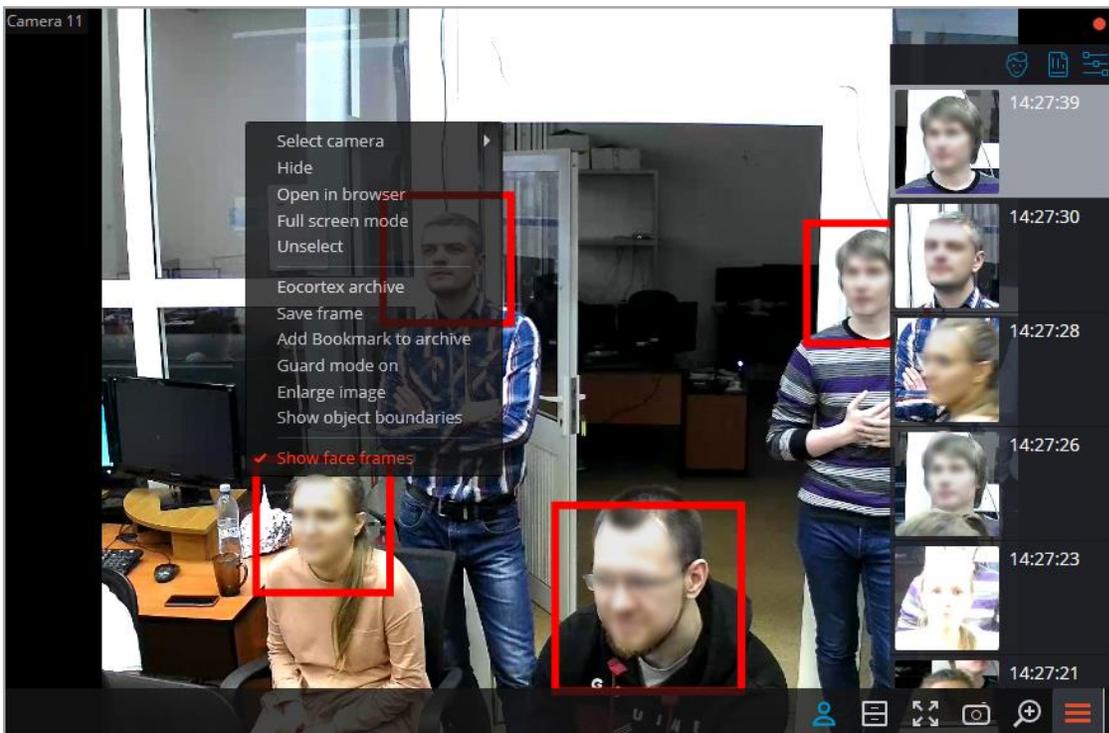
Face recognition report ›

Face recognition report displays the recognized faces.

Note

The reports of all the modules are similar, with some differences in the interfaces and features.

REPORTS — □ ✕

Face	Sample	Date	Time	Camera	Full name	● Groups	Gender	Age	Emotions	Accuracy	Interception	Add
	Not in database Add record	03.03.2021	15:54:47	Camera 1			♂	26	Neutral 91 %			
		03.03.2021	15:54:45	Camera 1	Bagson George	● Forbidden	♂	26	Neutral 78 %	99%	⊖	
	Not in database Add record	03.03.2021	15:54:44	Camera 1			♀	21	Neutral 51 %			
	Not in database Add record	03.03.2021	15:54:41	Camera 1			♂	25	Neutral 91 %			
		03.03.2021	15:54:38	Camera 1	Smith John	● Allowed	♂	31	Positive 94 %	99%		
	Not in database Add record	03.03.2021	15:54:36	Camera 1			♀	26	Neutral 67 %			
		03.03.2021	15:54:32	Camera 1	Bagson George	● Forbidden	♂	36	Neutral 60 %	99%	⊖	
	Not in database Add record	03.03.2021	15:54:30	Camera 1			♀	39	Neutral 55 %			
	Not in database Add record	03.03.2021	15:54:29	Camera 1			♂	29	Neutral 58 %			

Select the report
Face Recognition (Complete)

Filter by time
Period from — to
02.03.2021 15:55:05 — 03.03.2021 15:55:04
In chronological order

All the recognized faces | Persons from database

Search by photo
Add photo

Filter by criteria
Age: Any | Gender | Emotions

Search by camera name
Expand all | Collapse all
☑ All cameras
☑ Camera 1

Export
Refresh | Cancel

REPORTS — ✕

Face	Sample	Date	Time	Camera	● Groups	Full name	Interception	Additional information	Accuracy
	Not in database Add record	06.09.202 1	11:45:01	Camera 1					
	Not in database Add record	06.09.202 1	11:44:58	Camera 1					
		06.09.202 1	11:44:47	Camera 1	● White list	Alex			99%
		06.09.202 1	11:44:44	Camera 1	● Interception	John			99%
	Not in database Add record	06.09.202 1	11:44:39	Camera 1					
	Not in database Add record	06.09.202 1	11:44:36	Camera 1					

Select the report
Face Recognition (Light)

Filter by time
Search for people from database
Groups
Last name
First name
Patronymic

Search by camera name
Expand all | Collapse all
☑ All cameras
☑ Camera 1

Export
Refresh | Cancel

This report is a table, in which each row contains the recognized face, date and time of recognition, camera name, as well as the person's data in the database (if this face exists in the database): his name, groups, additional info.

Using the mouse, you can change the order and width of the columns.

Double clicking on the row opens the face recognition moment on the archive view page.

By default, the recognized faces are displayed in a descending time order.

The list and order of the displayed recognized faces in the report may be changed using the filter panel, located on the right. This list may be filtered by time, cameras, groups and person's names. When filtering by time, also may change the chronological order of items. The filter will be applied after pressing the **Refresh** button.

Selecting **Persons from database** it is possible to filter recognized persons using the data stored in the database.

It is also possible to search for recognized persons based on their similarity to a recognized face or to an image from an uploaded file.

If a period has been specified for the report, the report will be downloaded to disk upon pressing the **Export** button.

This will open a window where it will be possible to select the location and format of the file: CSV, Excel or PDF.

Report regarding groups of face database ❯

The **Report regarding groups of face database** is a table with the information on the state of the face database: the number of entries in the groups, the number of groups, the total number of entries in the database.

Face Database Groups Report

Date: 23-11-2021, 09:36:15

Item no.	Groups	Number of entries, pcs.
1	Interception	2
2	White list	1
Total number of entries in the database (some entries may belong to several groups)		**3**

To create a report, it is required to go to the tab **Groups editing** and click on the button .
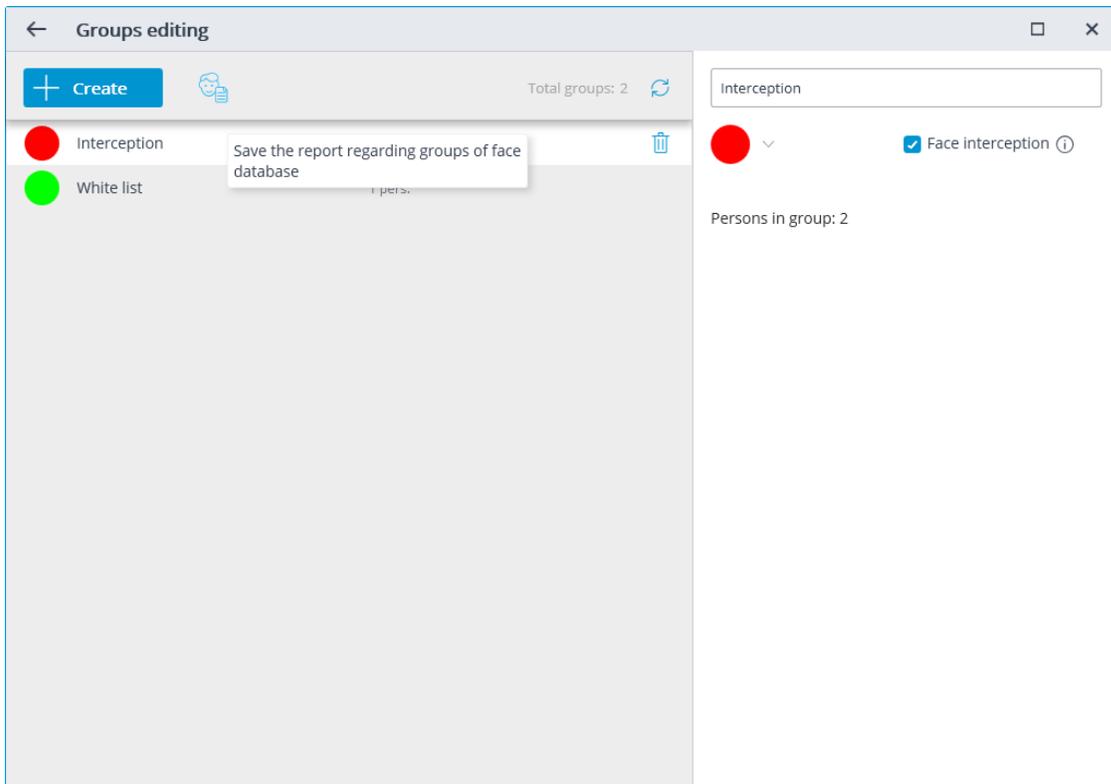
The report will be saved in the PDF format.

Work time logging (Complete) report ›

Work time logging (Complete) report is formed by areas (zones). An area is a territory where it is required to monitor the presence of persons. The people's faces must be recognized at the entrance to and the exit from the area by the **Face Recognition (Complete)** module. Several cameras may be used for a single area both at the entrance and at the exit.

Note

If a face was recognized at the exit of the zone, but was not recognized at the entrance, the person's time in the zone will be counted from 00:00.

For creating a report, it is required to specify the area and the time period for which the report will be made. Additionally, optional filters allowing to create reports by names, by surnames and by groups of people, as well as by the time they spend in the area, are available.

In the **Permanence in the area during the 24-hour period** group of settings, the following parameters that are used to monitor the violations of the allowed time of presence in the area of all the recognized persons are set:

- **At least, h**: total time of presence in the area must not be less than the value set in this field.

- **Up to, h**: total time of presence in the area must not exceed the value set in this field.

- **From**: a person must enter the area before or at the time set in this field.

- **To**: a person must not leave the area before the time set in this field.

After setting all filters need press the **Refresh list** button.

It is required to press Refresh after setting all filters.

The total number of violations of the rules of presence in the area and the descriptions of cameras monitoring exits and entrances are shown in the title of the report.

The lines of the table are grouped by dates. For each date, the people whose entrances and exits to and from the area are shown.

It is possible to open the context menu in the line of the table by clicking the right mouse button.
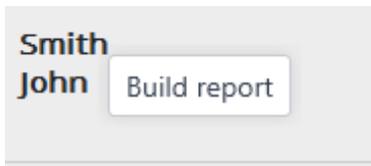
The **Build report** item of the context menu opens the individual chart of the presence of a particular person in the areas in the course of a 24-hour period.
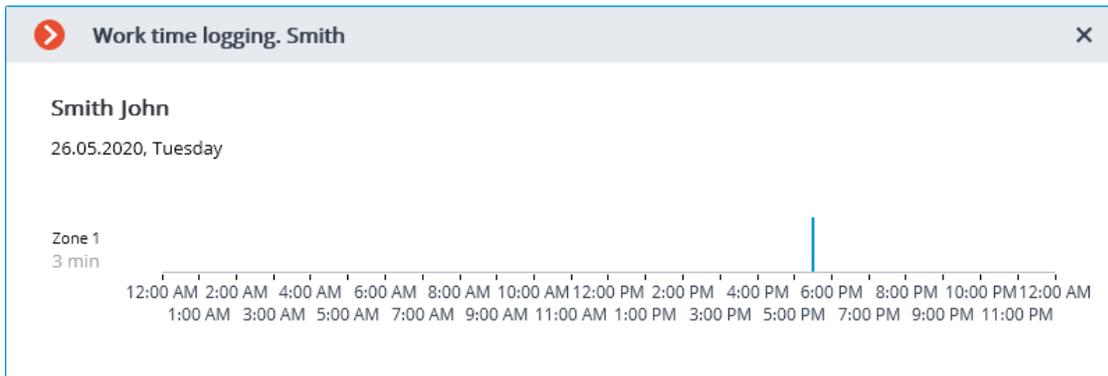
The individual chart shows all the areas where a person was during the selected 24-hour period. For each area, the periods of time when the person was there are highlighted. Hovering the mouse pointer over any highlighted period displays the prompt with the amount of time and the interval of presence of the person in the area.

Faces database ›

Description

The **Faces database** contains the following information: full name of person; group, to which the person belongs; samples of the person's face, and other.

It is possible to add to the database the faces found by the face recognition module as well as to upload image files with faces.

The ways of adding faces found by the face recognition module are described below.

- In the **Face recognition** report, select a face and press the **Add** button. The face database window will open in the mode of adding a new face.

- In the **Face recognition** report, select a face and press the **Add photo to face database entry** button. The face database will open, allowing to select the corresponding entry.

- In the camera cell, select a face in the panel of recognized faces, then press the **Create entry in face database** button. The face database window will open in the mode of adding a new face.

The face database window can be opened from the window of the report regarding the recognized faces, from the camera cell when adding a recognized face, and from the main menu of the application.
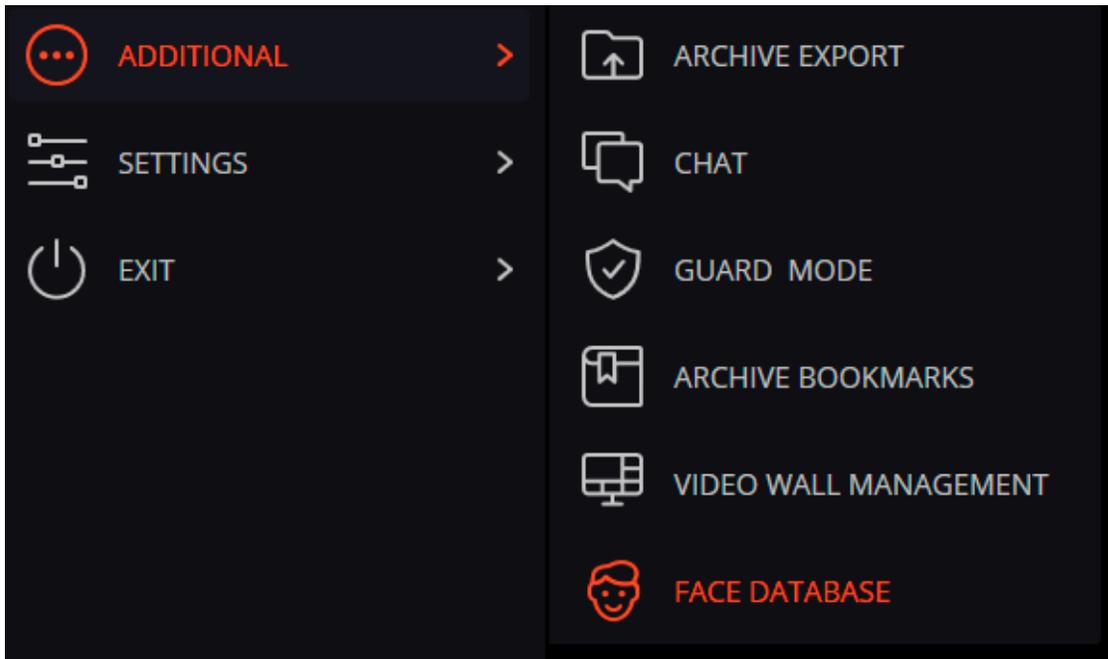
Note

The face databases of all the modules are similar, with some minor differences in the interfaces and features.
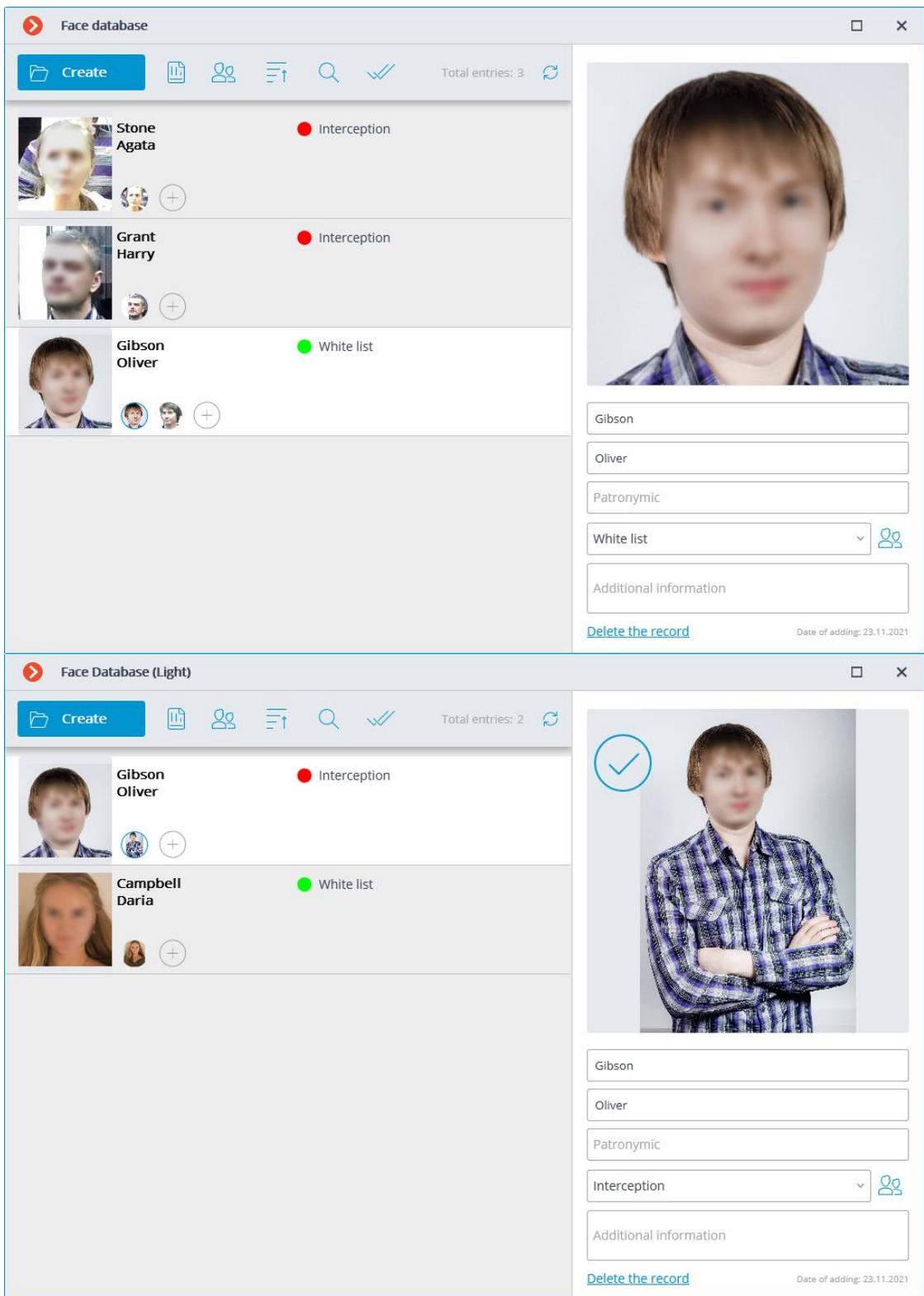
There are the following buttons at the top of the page:

- **Add** button opens the File Explorer for adding a new face image to the database.

- **Reports** button opens the **Face recognition** report.

- **Groups** button opens the form for editing groups.

- **Sorting**: allows to sort the entries of the face database by the date of addition or alphabetically.

- **Search** button opens the person search form.

- **Group operations**: allows to work simultaneously with several entries of the face database.

- **Refresh list** button allows loading the entries from the face database on the server again. This feature is useful, in particular, in the situation when several users are working with the face database simultaneously; it permits to see recent modifications made by other users.

Capabilities

It is possible to add faces found by the face recognition module as well as to upload image files with faces to the database. It is also possible to add a new entry to the database and add a recognized face to an existing entry.

Each face database entry contains the following information: sample face images; surname, given name, patronymic of a person whose face images are in the entry; additional textual information about this person; groups the entry belongs to.

Warning

Each entry may contain up to 5 photos. When this limit is reached, the photo adding button will be unavailable.

The entry deletion button is located in the upper right corner of a highlighted entry.

When adding a new face to the database, it is possible to find out if there are duplicates of the given face in the database.
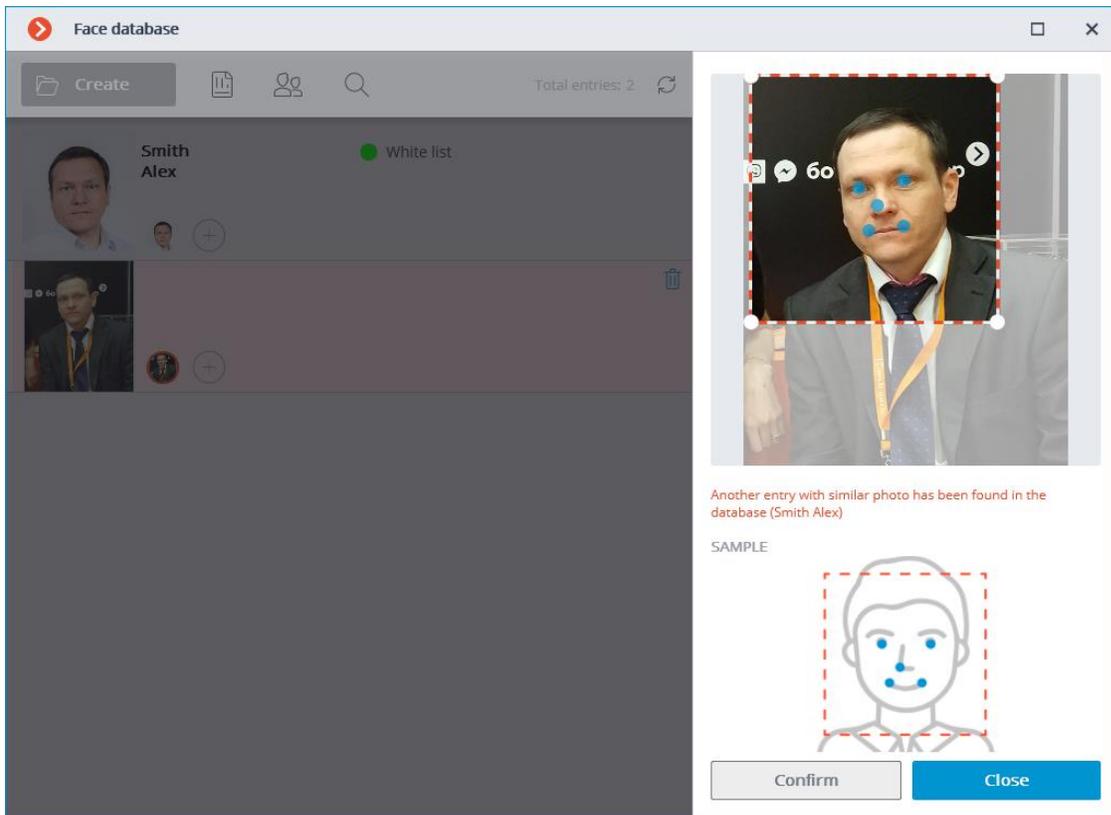
Warning

It is not possible to add images of masked faces to the database.
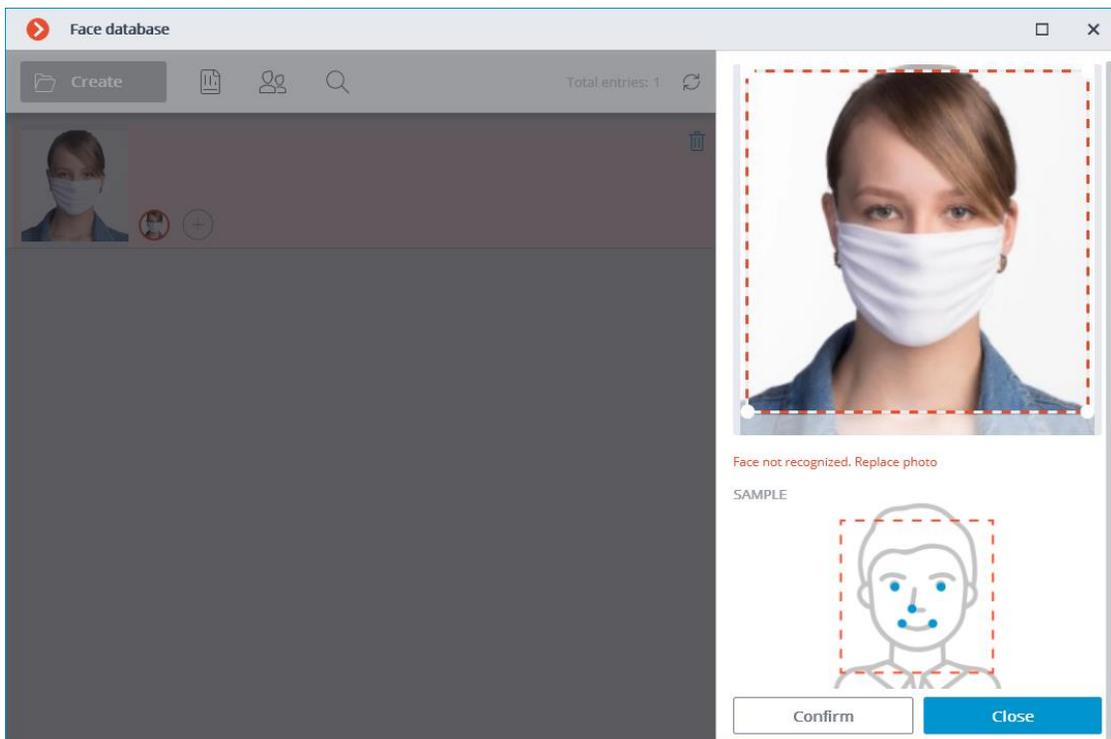
Note

It is possible to add faces that do not meet quality requirements to the database, but they will not be used as samples for recognition. The unrecognized images will be marked with ⊘ ; it is recommended to replace them with the samples that meet the requirements for recognition.

Sorting face database entries

Pressing the button opens a menu for selecting the type of sorting.
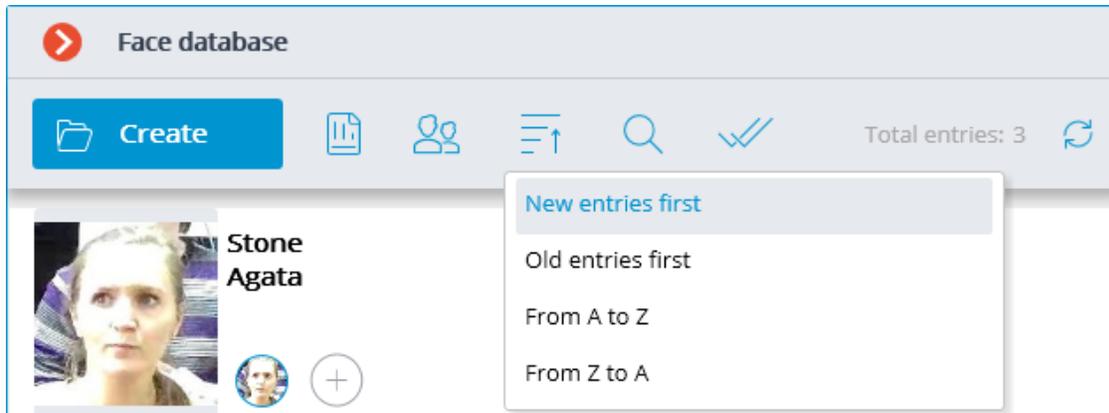
Several types of sorting are available:

- By the date of addition:

    - New entries first;

    - Old entries first.

- Alphabetically:

    - from A to Z;

    - from Z to A.

Note

By default, when opening the face database, entries are sorted by the date of addition: **New entries first**.

The date the entry was added to the database is displayed at the bottom of the entry card.
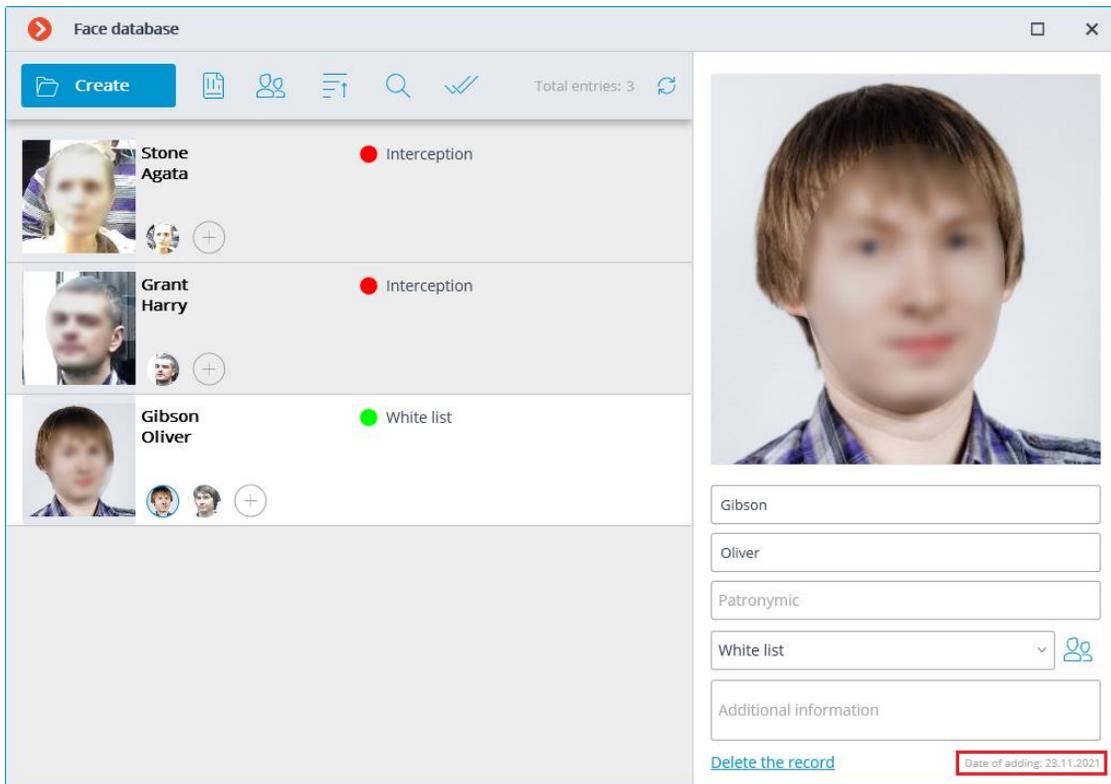
Search in the face database

The search in the face database is performed by the following parameters: **Full name**, **Groups**, **Additional information**.

Note

For the **Face Recognition (Complete)** module, a search by photo is available.
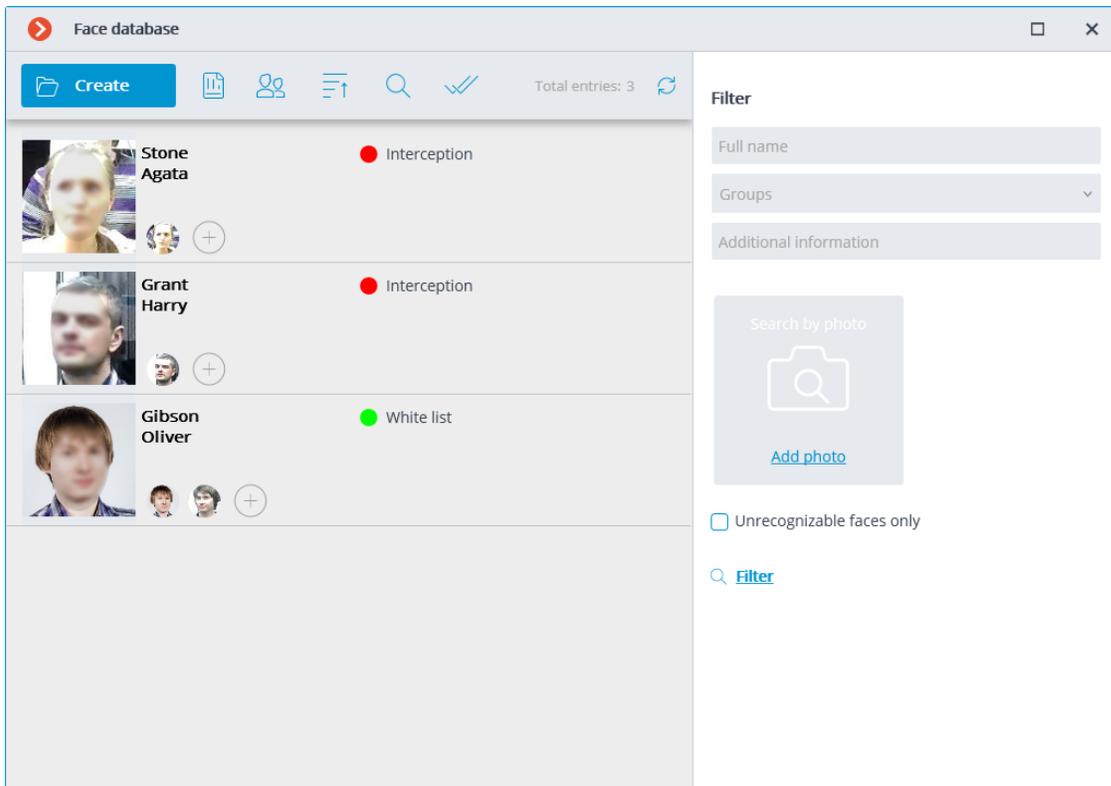
Group operations

To work with several entries at the same time, it is necessary to switch to the

 Group operations mode.
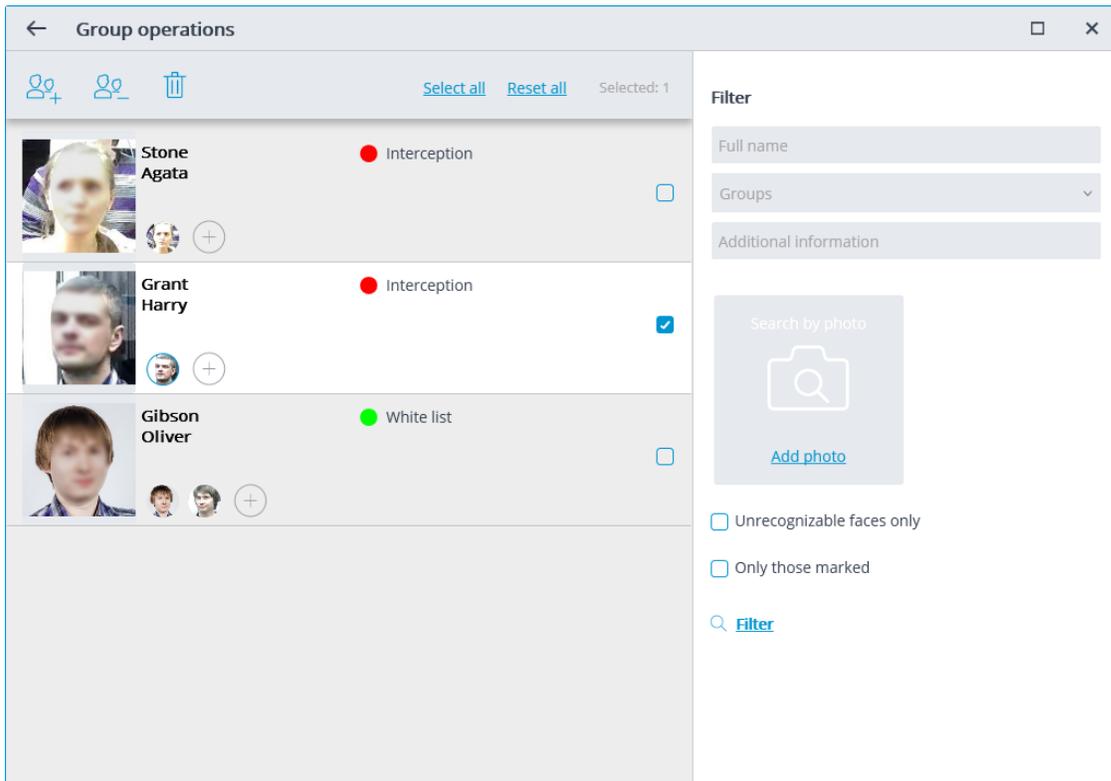
The following group operations are available:

- **Adding to groups**: allows to add all the selected entries of the face database to the marked groups.

- **Deletion from groups**: allows to remove all the selected entries in the marked groups from the face database.

- **Delete marked entries**: allows to remove all the selected entries from the face database.

Note

Reopening the **Group operations** mode will discard all previously selected entries.

Editing panel

The panel for editing a highlighted entry can be found to the right of the list. The face sample is displayed in the upper part of the panel. The text fields with a surname, a given name, a patronymic and the additional information about a person are located below, together with the field with the list that allows selecting the groups. To the right of the list there is the button that opens the list of groups to be edited.

Saving the changes made in the database using the editing panel is performed when highlighting another entry in the list or when closing the face database window.

By default, the editing panel displays the first (the leftmost) face sample. To display another sample, it is required to click on the thumbnail of the sample in the database entry.

Hovering the mouse pointer over the face sample in the editing panel displays the **Check for a match**, **Detect face**, **Export photo** and **Replace photo** links in the lower part of the image; the sample deletion button appears in the upper right corner.
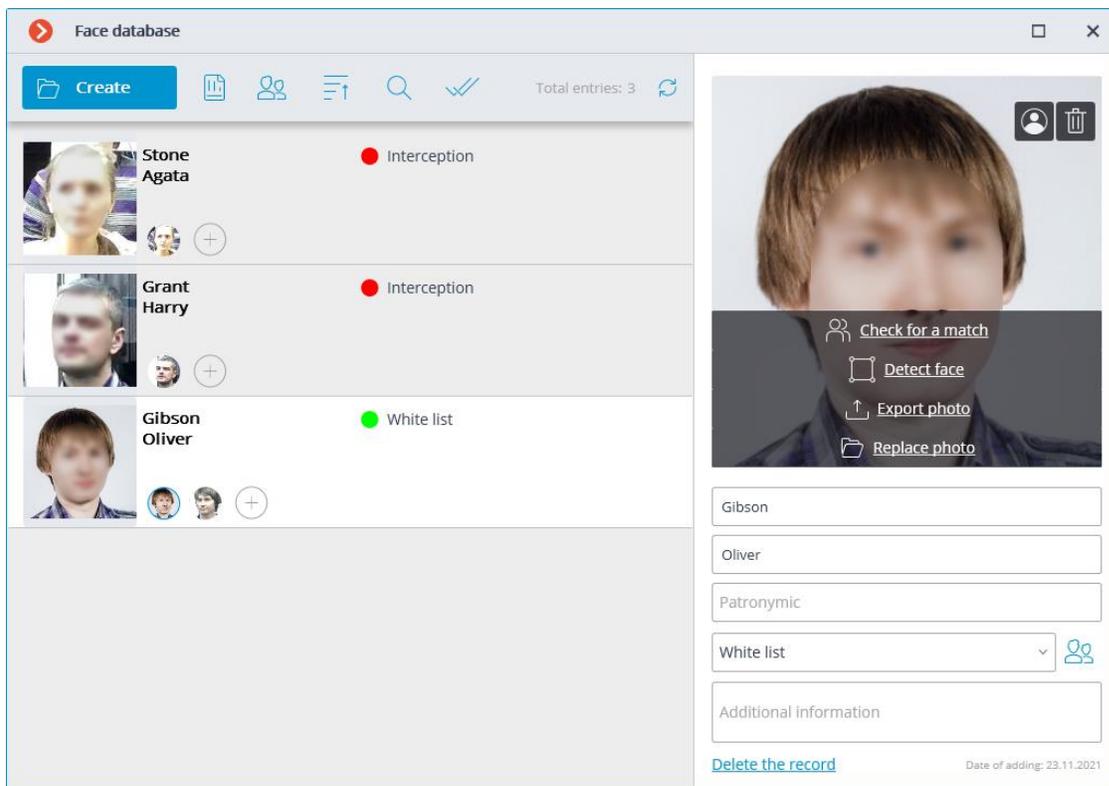
Note

The **Check for a match** feature is only available for the **Face Recognition (Complete)** module and for recognized faces.

- **Detect face** launches the search for special points of a face.

- **Replace photo** opens the File Explorer for selecting an image file with the replacement face sample. The current sample will be deleted.

Warning

The face sample is deleted without confirmation, immediately after the delete button is pressed.

Note

The sample deletion button is shown only for the entries that contain several samples.

Warning

The image of a face to be added from a file must not occupy more than one-third of the frame.

When adding a new face or when performing the Determine Face operation, the module attempts to find a face in the frame, highlight it with a frame and show the position of the eyes, tip of the nose and corners of the mouth.
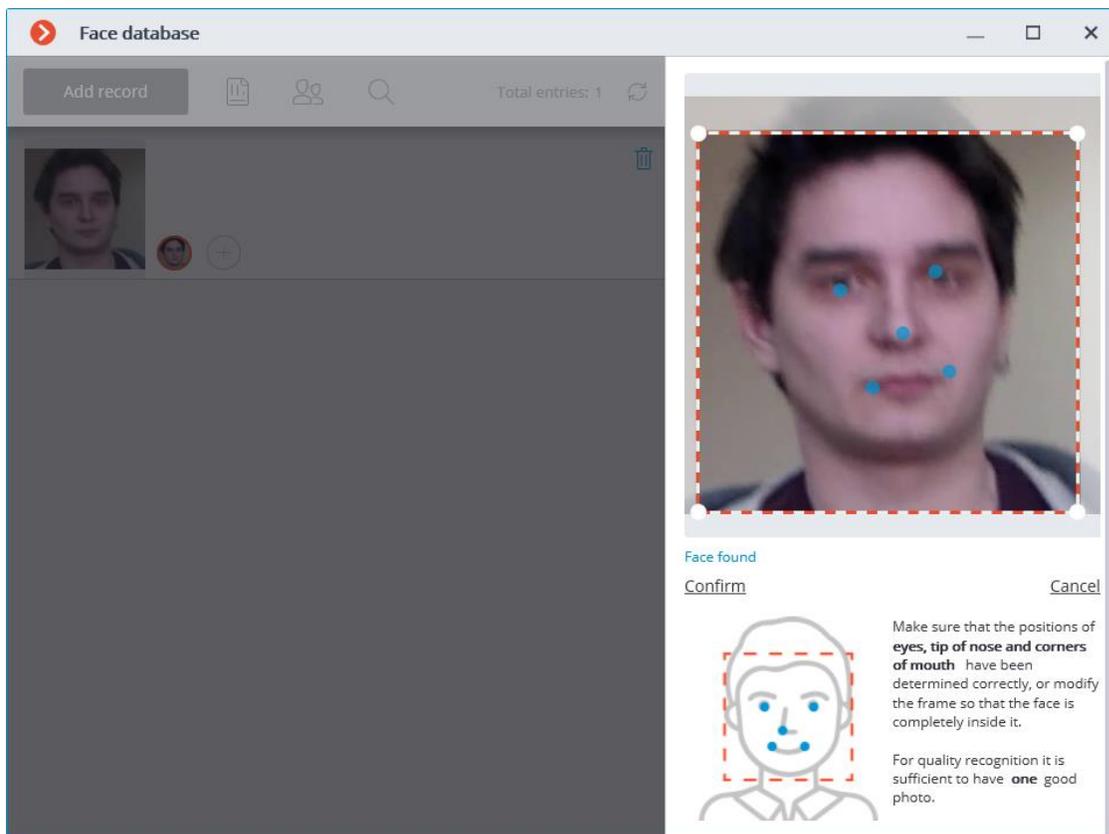
If all the key points of the face are marked correctly, it is required to click on the **Confirm** link.

If the key points have not been found or are marked incorrectly, it is required to manually modify the position of the frame to ensure that it fully embraces the face and that the shoulders are also included. After that, the module will attempt to determine the key points again. If the modification of the frame does not help and the key points are not determined or are determined erroneously, it is required to cancel the loading of the image.

Note

If there are several faces in the frame, the module will find one of them; if necessary, you can select a required face manually using a frame.

If the **Confirm** button is not pressed after finding the key points, the photo will be marked in the list by a red frame. It means that it is required to find the key points on the face and confirm them, or replace the image.

The unconfirmed samples are not entered into the database. The samples that are not compliant with the specified requirements are not entered either.

Editing the list of groups
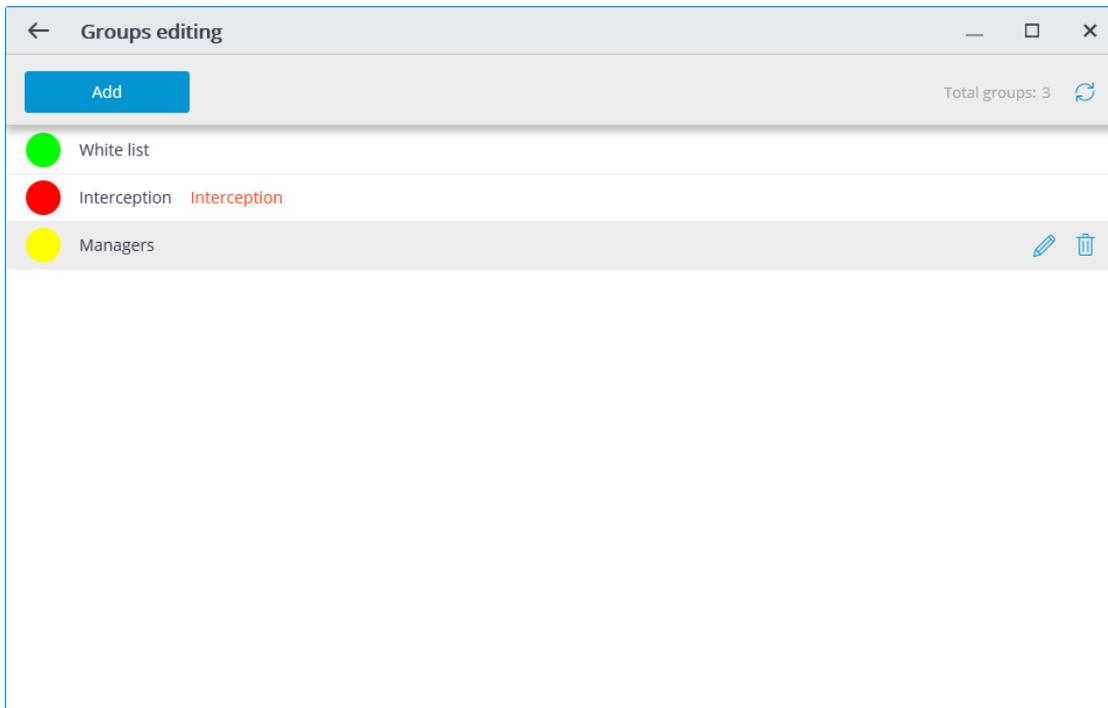
Each group must have a unique name.

You may also assign a color to the group: in this case, face of this group will be marked with this color in report and list of recognized faces.

You may also enable the **Face interception** option for the group, which may be used to configure the automatic actions.

Fall Detection

The **Fall Detection** module is designed to detect fall of people.

Note

The module does not detect the falling process. It detects a laying down person as a fallen person.

It is possible to enable the frame highlighting of the fall scene, both in live view and archive playback.

When falls are detected, **Fall detected** events are generated and recorded in the Event log.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

To enable the display of frames around people who have fallen, select the **Fall Detection** subitem **Show coloured boundaries of objects** in the context menu of the cell.

Camera 1

Select camera
Hide
Open in browser
Full screen mode
Unselect

Macroscop archive
Save frame
Add Bookmark to archive
Guard mode on
Quick record for 15 minutes
Recording
Enlarge image

Fall Detection
✔ Show warning messages
✔ Show coloured boundaries of objects

Fall

Fire and Smoke Detection

The module is designed to detect smoke and open flames in the frame.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

To enable the information about the smoke and / or fire select **Show smoke** and / or **Show fire** in the cell context menu. In case of smoke or fire detection the relevant area of the frame will be color framed with **Possible Smoke** of **Possible Fire** header.

All the module events are recording in the Events log.

Fisheye dewarping module

This module is designed to dewarp images from fisheye cameras both in real-time viewing mode, and in the archive playback.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Features >

The module differentiates cameras with Fisheye lens according to the mounting manner to three types: **Ceiling-**, **Wall-** and **Floor-mounted**. Availability of dewarping modes for the camera depends on its type.

Below are lists of the dewarping modes available for the selected mounting type.

Ceiling- and Floor-mounted

Dewarping modes available for **Ceiling-** and **Floor-mounted** cameras:

- **Without dewarping**

- **Virtual PTZ mode**

- **360° panorama + Virtual PTZ mode**

- ⬓ **Double 180° panorama mode**

- ⊞ **Dewarping 4×90°**

Wall-mounted

Dewarping modes available for **Wall-mounted** cameras:

- ◯ **Without dewarping**

- ☐ **Virtual PTZ mode**

- ⬓ **180° panorama**

Warning

Dewarping is performed only for the convenience of visual monitoring. The module has no effect on the source stream received from the camera. Other video analytics modules, if activated, will process the stream received from the camera in its original form without dewarping.

Usage ❯

Image dewarping is enabled in the active cell, using the ⊞ button. Doing so displays a panel with dewarping modes above the clicked button, and a virtual PTZ joystick appears on the right side of the cell to change position of the dewarped image.

The following is a description for each of the modes.

Without dewarping

When the ◯ **Without dewarping** mode is selected, he image in the cell is displayed as it was received from the camera.

Virtual PTZ mode

When the [■] **Virtual PTZ mode** mode is selected, the image in the cell, when dewarped, simulates the functionality of a PTZ camera, creating a single 90° field of view.
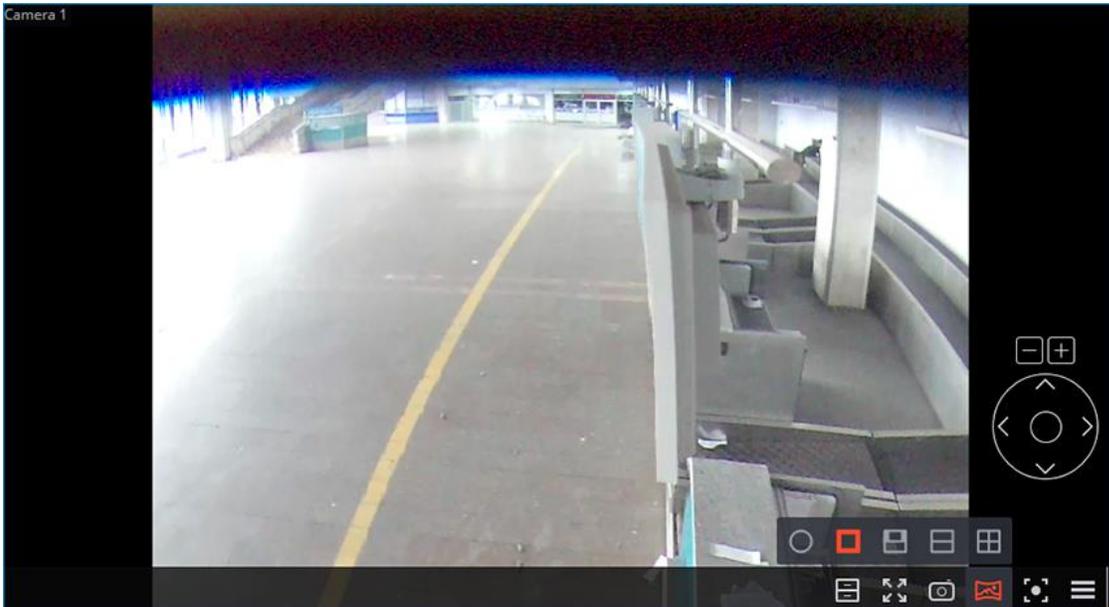
The following are ways to control the field of view.

- **Using mouse**: Pan and tilt can be performed by dragging the camera image with the left button held down, zoom by using the scroll wheel.

- Using the **virtual PTZ joystick displayed** in the bottom right part of the cell. Pan and tilt can be performed by dragging the joystick with the left

mouse button held in the desired direction, zoom — by clicking the ⊞

and ⊟ buttons above the joystick.

- Using a **physical PTZ control device** (PTZ keyboard, joystick) connected to the workplace. Pan, tilt and zoom can be performed according to the settings of the connected device.

360° panorama + Virtual PTZ mode

When the ▱ **360° panorama + Virtual PTZ mode** mode is selected, the cell displays the combination of a 360° panoramic view and virtual PTZ field of view. A red vertical line on the panorama shows the position of the part of the frame displayed by the virtual PTZ.
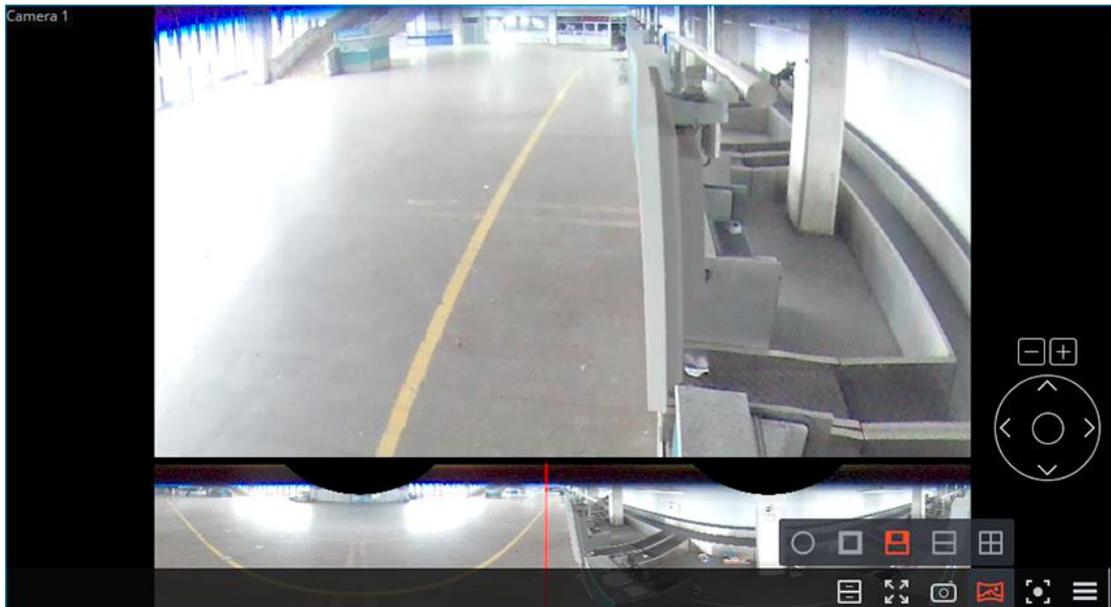
The following are ways to control the field of view.

- **Using mouse**: Pan and tilt can be performed by dragging the camera image with the left button held down, zoom by using the scroll wheel.

  Mouse control is available only for the virtual PTZ field of view. No mouse control on the panoramic section is available.

- Using the **virtual PTZ joystick displayed** in the bottom right part of the cell. Pan and tilt can be performed by dragging the joystick with the left

mouse button held in the desired direction, zoom — by clicking the ⊞

and ⊟ buttons above the joystick.

- Using a **physical PTZ control device** (PTZ keyboard, joystick) connected to the workplace. Pan, tilt and zoom can be performed according to the settings of the connected device.

Double 180° panorama mode

When the ⊟ **Double 180° panorama mode** mode is selected, the cell displays a combination of two 180° panoramic fields of view placed one above the other. The field of view can be changed only by the horizontal axis. Zoom and Tilt are not available for this mode.


The following are ways to control the field of view.

- Using the **virtual PTZ joystick displayed** in the bottom right part of the cell. Pan can be performed by dragging the joystick with the left mouse button held in the desired direction.

- Using a **physical PTZ control device** (PTZ keyboard, joystick) connected to the workplace. Pan can be performed according to the settings of the connected device.

Dewarping 4×90°

When the **Dewarping 4×90°** mode is selected, the cell displays a combination of four 90° fields of view placed in a 2×2 grid. The field of view can be changed only by the horizontal axis. Zoom and Tilt are not available for this mode.

The following are ways to control the field of view.

- Using the **virtual PTZ joystick displayed** in the bottom right part of the cell. Pan can be performed by dragging the joystick with the left mouse button held in the desired direction.

- Using a **physical PTZ control device** (PTZ keyboard, joystick) connected to the workplace. Pan can be performed according to the settings of the connected device.

180° panorama

When the **180° panorama** mode is selected, the cell displays a single 180° panoramic field of view. The field of view can be changed only by the vertical axis. Zoom and Pan are not available for this mode.
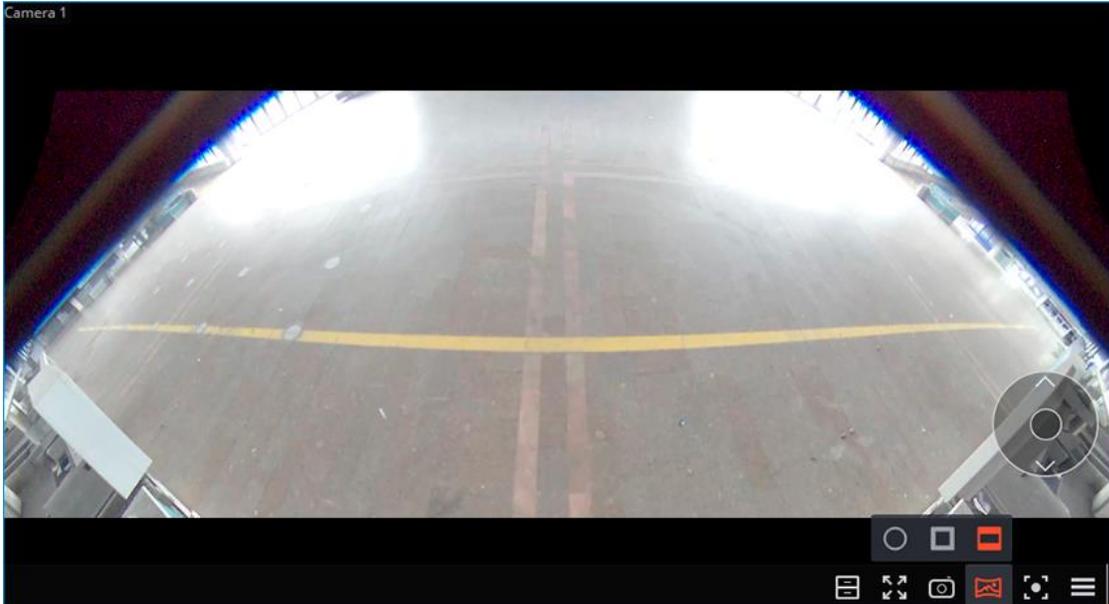
The following are ways to control the field of view.

- Using the **virtual PTZ joystick displayed** in the bottom right part of the cell. Tilt can be performed by dragging the joystick with the left mouse button held in the desired direction.

- Using a **physical PTZ control device** (PTZ keyboard, joystick) connected to the workplace. Tilt can be performed according to the settings of the connected device.

Configuration ❯

Configuration of the module can be performed in the Eocortex Configurator application.

Frame Area Blurring

The **Frame Area Blurring** module is designed to blur the specified areas of the frame on a real-time and archived video.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.
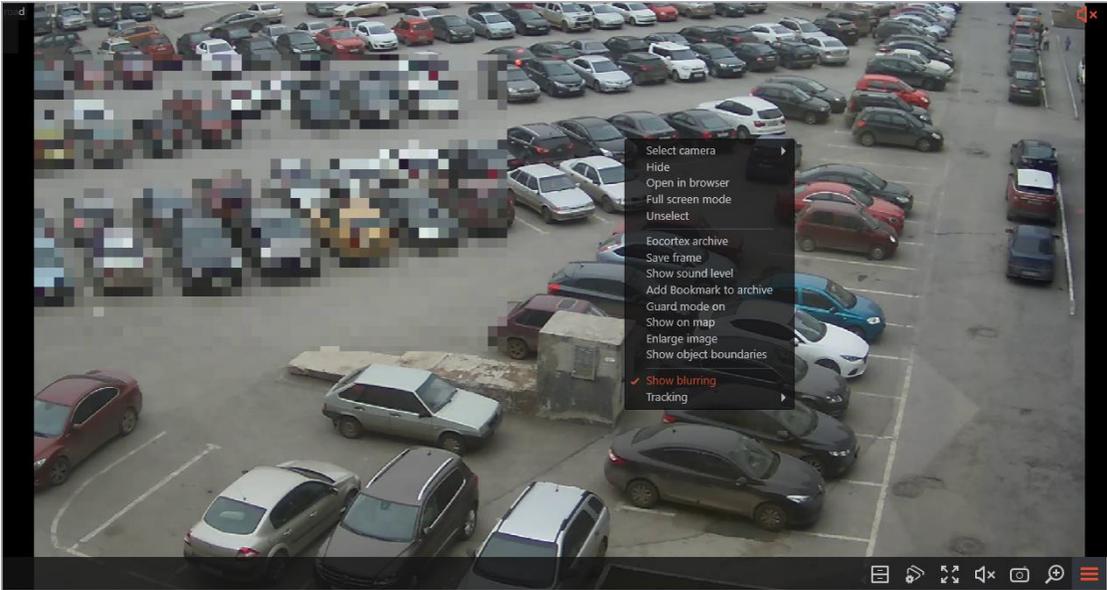
If the user is authorized to disable blurring, the context menu will have the corresponding item.

Note

Frame area blurring works when viewing live and archived video in the **Eocortex Client** application.

Warning

Frame area blurring does not directly affect the video received from the camera and recorded to the archive. Thus, blurring does not work when exporting archive video and saving frames.

Heat map

The heat map module is designed to visualize the traffic density in various areas of the frame. A heat map is formed by summing up the time during which a movement was observed in a certain point — as a result the areas where objects stay more often and for the longest time are highlighted.

A color scale is used to visualize the traffic density: areas are overlaid with transparent color stains according to the traffic density in a video image. For example, if you use a four-color scale, red color denotes high density areas, blue — low density; green and yellow colors are transient.

The heat map module can be used to determine the popularity of different places (racks, cabinets) in a store, preferred routes for people or vehicles, as well as to analyze visit statistics of various objects.

There are three options for using heat maps: real-time mode, scheduled report and camera field of view overlaid on an object plan. In the real-time mode only areas with movement for the last 10 seconds are displayed in the frame. The scheduled report sets the interval of time used to analyze traffic density in the

frame. Camera field of view overlaid allows creating a heat map not only in the frame but also on an object plan.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

In order to enable Heat map in the cell, select **Heat map** item in the context menu, then in the open submenu select Show heat map. Also, in this menu you can choose a scale and a color scheme of the Heat Map.
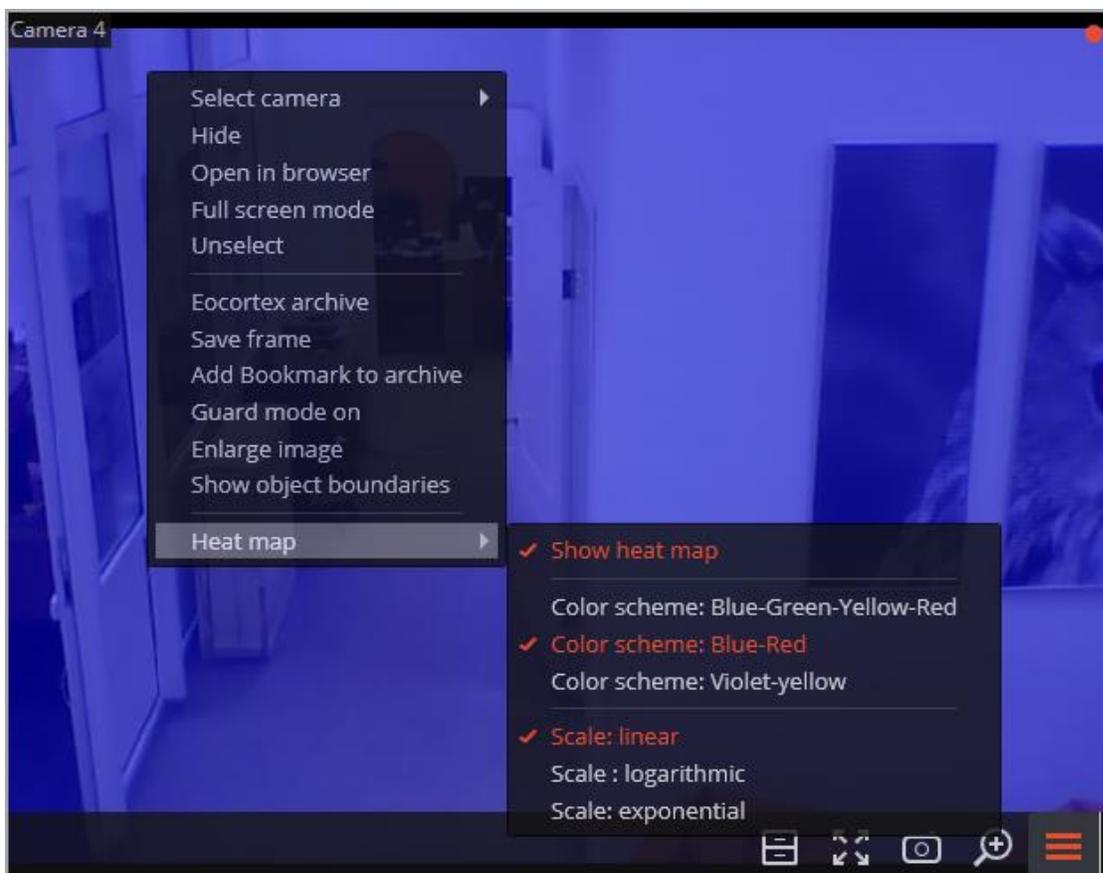
To create reports, open the **Control Panel** and select **Reports** in the Main Menu.
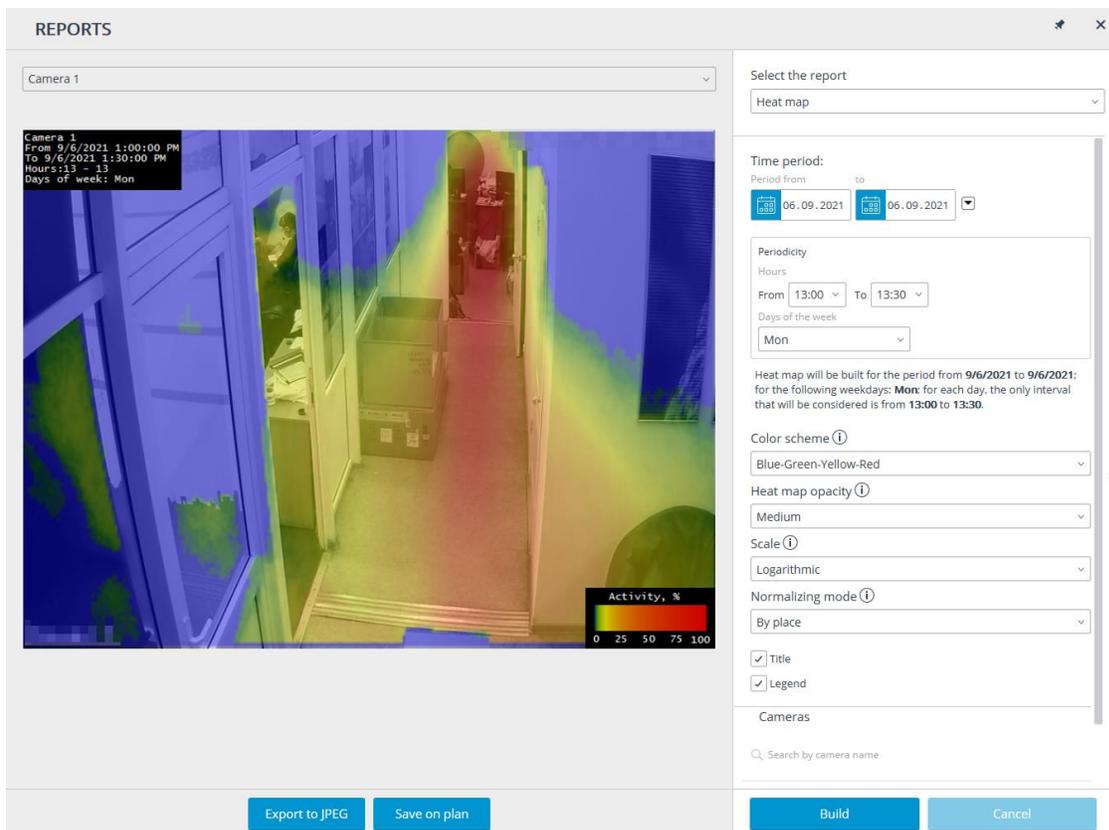
In **Select report** field, select the **Heat map option**.

Set the Time interval for which the report will be generated. Also, in the field with the list you can indicate an interval before the current time for which a report shall be generated. To do that, you will need to select one of the following: Minute, Hour, Day, Week, Month.

Choose **Transparency**, **Scale**, and **Value Calculation Mode**.

Select **Cameras** and zones for which the report will be created.

Additionally, the following parameters are available to report generation:

Hours — the hours during which the motion in the frame will be taken into consideration.

Week days — the days of the week during which the motion in the frame will be taken into consideration. The weekdays can be selected by ticking boxes in the pop-up menu.

Color scheme — type of color scheme for filling the heat map.

Transparency of the heat map superimposed over the camera image.

Scale — toggles the color scale to non-linear Header which displays the following in the upper left corner of the heat map: camera name, interval, weekdays and hours used for creating a heat map.

Value calculation mode determines how the maximum density value will be determined in each point on the heat map.

Header is the text displayed in the lower right corner of the heat map.

Legend displays a legend in the lower right corner of the heat map which matches the scale colors with the levels of movement density.

To generate a report, click **Build**. To abort, click **Cancel**.

After generating the report, the **Show heat map for given time** scale will appear. It allows to review the reports for the shorter periods of time within the generated report.

To save the report to a disc, press Export to JPEG. In the opened window choose a location where to save the report and press **Save**.

Save on the map button allows to upload the file with heat map images superimposed on the corresponding cameras' fields of view on the plan to a disc.

Licence plate recognition

The license plates recognition module has the following features:

- Recognition of license plates of moving cars and archiving of information about the time and date of recognition, the license plate, as well as the reference to the corresponding video frame.

- Real-time interception of recognized license plates listed in a database.

- Support of the embedded database of license plates: adding and editing license plates, additional information (color, owner, etc.) on vehicles.

- License plate groups, including groups for interception and automatic barrier opening; one license plate can be assigned to one or more groups.

- Search of recognized license plates in the archive by time, date and details from a database.

- Export of the list of recognized license plates in Microsoft Excel or CSV formats.

- Barrier control.

- Counting the total number of vehicles in the parking lot.

- Calculation of the total time of presence of the vehicle in the parking lot. Detection of vehicles that violate the maximum presence time.

Warning

The module works only with those cameras on which it is activated in the system settings by the administrator. The functionality, such as the barrier gate control, also depends on the settings.

Live view

../_images/liveview.png

Note

Hovering the cursor over a line of a recognized license plate number will display detailed information about that number, including **Plate color**.

../_images/liveview-info.png

Display settings

In live view mode, it is possible to enable the display of recognized license plates and the barrier control interface. To do this, select the cell and click on the ico-lpr-black icon.

../_images/liveview.png

After that, clicking on the ico-lpr-setting-black button will open the window for setting the module panel display.

../_images/lpr-view-setting.png

The following settings are available in the window:

View mode: allows to configure the displayed information.

../_images/lpr-view-setting-mode.png

If **Automatic selection of new license plates** is checked, the last recognized license plate shall be highlighted in the recognized license plates list.

If **Group similar license plates** is checked, only one entry will be in the list for those license plates, which have been recognized several times in 5 minutes.

If **Show the barrier control buttons** is checked, displays the ico-lpr-barrier-black buttons. Clicking on these buttons commands the barrier to open/close. Since most modern barriers close automatically, the close button may not be used. This option is available when the barrier control mode is enabled on the channel.

Recognized license plates panel

../_images/liveview.png

At the top of the panel there are buttons for adding the license plate number to the database ico-lpr-add-black, switching to reports ico-lpr-report-black,

setting the display ico-lpr-setting-black, and opening and closing the barrier ico-lpr-barrier-black.

If parking lots tracking is configured for the camera, the panel will display information about the number of occupied parking lots. Clicking **Change** opens a window in which the number of occupied parking lots can be manually set.

../_images/parking-manual.png

Warning

Changes to the counter value cannot be applied without specifying a reason in the Reason of change field.

Note

Changes to the counter value can only be performed by those users who have the corresponding right activated in the system settings.

List of recognized license plates is displayed below in descending time order.

If a license plate is a member of one or more groups, a bar with the colors, assigned to these groups, is placed below it.

Double-clicking on the row in the list allows to open the archive window with the moment of recognition of this license plate.

../_images/lpr-archive.png

License Plate Recognition report

License Plate Recognition report displays the recognized license plates.

../_images/report-lpr.png

The report consists of a table, in which each row contains the recognized license plate number, date, time and channel of recognition, direction of movement (if direction recognition is set in the module settings), as well as the license plate number data specified in the license plate number database (if the license plate number is included in the database): group, model and color of the car, name of the owner, additional information; and the recognized brand, color and type of the vehicle.

Use the mouse to swap columns and also to change their widths.

The following buttons are available at the top of the report:

- **Open the archive**: Opens the archive window with the moment of license plate number recognition (the archive is also opened by double clicking on the row).

- **Edit in the database** / **Add to the database**: Opens the window for editing the license plate number in the license plate number database.

Allows you to change information for existing license plates and add new recognized license plates to the database.

- **Export**: Opens the window for exporting recognized license plates to a CSV file.

- **Report settings**: Opens a window for selecting the displayed columns in the report.

By default, the report displays the last license plate numbers recognized on all cameras in descending time order.

The list of license plate numbers displayed in the report can be changed using filters. Filtering by time, cameras, license plate number, group and direction of movement is available for this report.

When filtering by time, it is possible to change the chronological order of the displayed items.

Before building the report, set the time interval and mark at least one area on which the report will be built.

Recording the time of entry and exit of vehicles report

The **Recording the time of entry and exit of vehicles** report displays for each vehicle the time of entry, the time of exit, the total time of staying in the parking lot and the fact that the allowed time to stay in the parking lot was exceeded.

../_images/report-inout.png

Before building the report, set the time interval and mark at least one area on which the report will be built.

Click the **Update** button to generate the report.

To export the report to CSV or Excel format, click the **Export** button.

Number of vehicles in the parking lot report

The **Number of vehicles in the parking lot** report displays the number of vehicles counted as being in the parking lot for the selected time interval.

../_images/report-parking.png

Before building the report, set the time interval and mark at least one area on which the report will be built.

Click the **Update** button to generate the report.

To export the report to CSV or Excel format, click the **Export** button.

Note

Plotting step is determined by the selected interval according to the following rules:

- For an interval of up to 10 minutes, the step is 1 minute.

- For an interval from 10 minutes to 12 hours, the step is 10 minutes.

- For an interval from 1 to 48 hours, the step is 1 hour.

- For an interval from 1 to 60 days, the step is 1 day.

- For an interval exceeding 2 months, the step is 1 month.

License plates database

License plates database contains a list of vehicle registration numbers. For any license plate number stored in the database, you can add additional information: groups the license number is included in; vehicle brand and color; owner's full name; additional information.

License plates database opens from the main panel of the application:

../_images/menu-lpr-db.png

The data in the **License plates database** window is presented in tabular form.

../_images/db.png

Use the mouse to swap columns and also to change their widths.

The upper part of the window contains the following buttons:

Add a license plate: Opens the window for adding a license plate number to the database (similar to the window for changing license plate number information).

Edit the license plate: Opens a window for changing license plate number information.

../_images/db-edit.png

To specify the groups in which the license plate number is included, expand the **Groups:** drop-down list and check the appropriate groups.

Delete the license plate: Deletes the selected record from the database.

Groups: Opens the license plate number groups window.

../_images/db-groups.png

The upper part of the license plate number groups window contains the add, modify and delete buttons.

Each group must have a unique name.

It is possible to assign a color to a group. In this case, the license plate numbers belonging to this group will be marked with the group color in reports and in the recognized license plate numbers panel.

It is possible to enable the **Car interception:** and **Open the barrier:** options for the group, which in turn can be used for automation.

Note

Automation is configured by the administrator of the video surveillance system.

../_images/db-group-edit.png

Database import: Imports records from a CSV file in the following format into the license plate number database:

A1234BC;;Surname1;Name1;Patrname1;;;;AddInfo1;Model1;Color1;Group1,Group2;

5678DEF;;Surname2;Name2;Patrname2;;;;AddInfo2;Model2;Color2;Group3,Group4;

Warning

If the license plate number doesn't have any property, insert an "empty string" in the corresponding field of the CSV file, i.e. use a separator (semicolon) without spaces. In addition, the import format includes fields that are not used in the current version; in these cases, the values will also be replaced by blank lines.

Database export: Exports the license plate number database to a CSV file in the format described above.

Search: Searches the database for license plate numbers that match the parameters specified in the search form.

Update: Updates the information displayed on the screen.

Note

This action can be useful, for example, in a situation where, while one user is viewing the database, another user may add new license plate numbers to the database or change existing information.

Loud sound detection

Loud sound detection module allows responding to the excessive sound level registered by a camera microphone.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Select Display sound detector in the cell context menu to enable the sound level detector, the indicator will be displayed in the lower left corner of the cell.

The indicator displays the current sound level, and the maximum level set by the system administrator.

All the module events are recording in the Events log.

Object Classification and Counting

The **Object Classification and Counting** counts objects that are crossing specified lines or contained in predefined areas of arbitrary shape, distinguishing them by categories.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Live view ❯

When viewing the camera in live view, it is possible to enable displaying of the object count panel. To do this, select a cell and click .

Clicking opens a window for configuring the display of areas and lines.
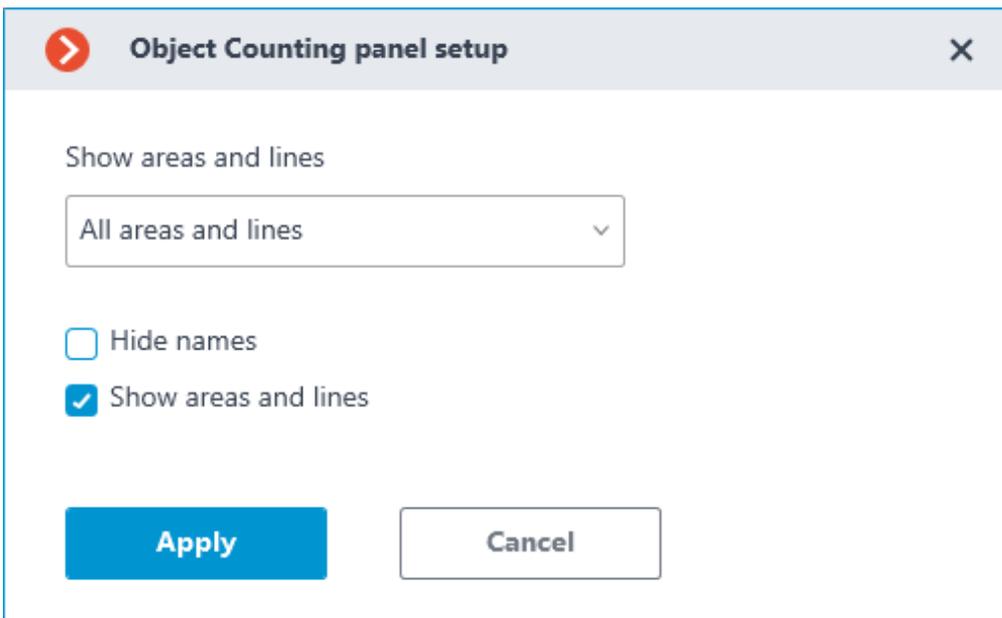
Displaying of areas, lines, and notifications can also be enabled in the context menu of the cell.
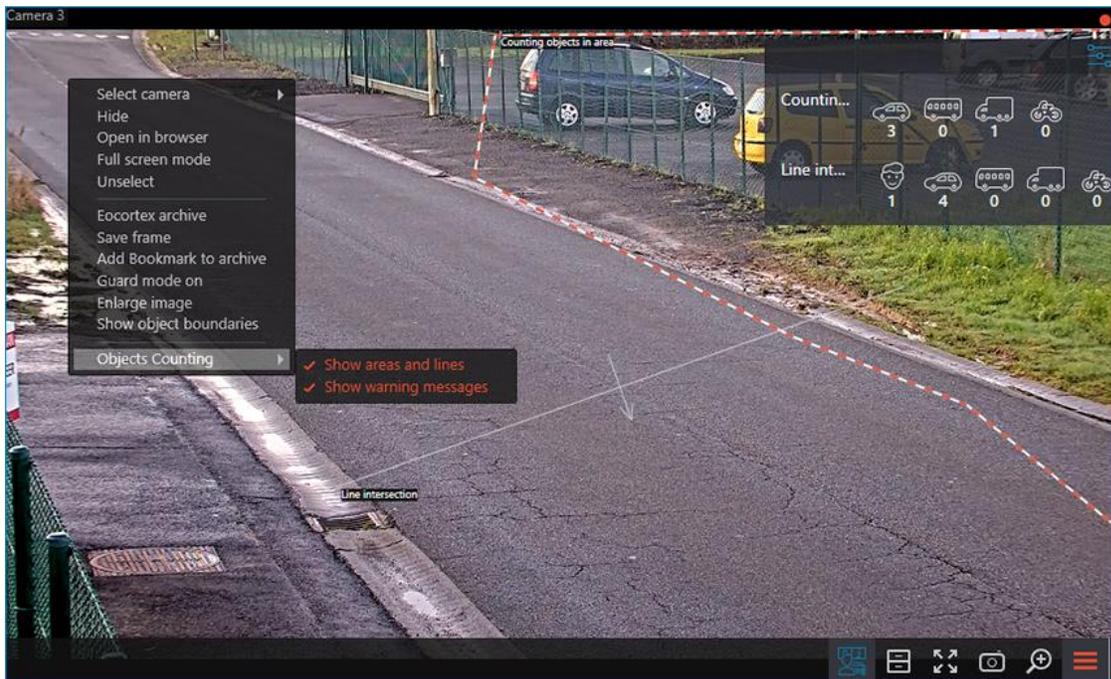
Object Classification and Counting report ❯

The representation of the **Object Classification and Counting** report depends on the type of counting:

- **Counting objects in area**: The count of objects within the area.

- **Line intersection**: The count of objects that crossed the line in a specified direction. The following parameters will be displayed:

- **Total count of objects**: Objects that have crossed the line since the start of counting or since the last time the counters were reset.

- **Change in the number of objects**: Objects that have crossed the line at each time interval equal to the report plotting step.

To form a report set the time interval, select categories of objects, areas and lines, for which the report will be built, and then click **Build**.

Warning

The report generation start time mustn't coincide with the counter reset time. The counter is specified when setting up the module, contact your administrator for information on the module.

Note

Plotting step is determined automatically depending on the set time interval:

Interval	Step
Up to 1 hour	30 seconds
From 1 to 2 hours	1 minute

Interval	Step
From 2 to 10 hours	5 minutes
From 10 to 20 hours	10 minutes
From 20 hours to 2 days	30 minutes
From 2 to 4 days	1 hour
From 4 days to 2 months	12 hours
From 2 to 4 months	1 day
From 4 months to 1 year	3 days
More than 1 year	1 week

Note

Maximum allowable interval for plotting the report is 2 years.

The report can be exported as a CSV or Excel file.

People counting module

The **People counting module** module for counting of entering and exiting people based on their crossing the control line and preparing reports based on this data. In addition, the module allows creating control zones in order to respond in time to exceeding the maximum number of people in a room or a zone.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Features ❯

The module has the following features:

- Counting the number of entering and exiting visitors in real time — either through one or several (if the module is applied to multiple cameras) entrances/exits.

- Creating reports on entered, left and present visitors — over various periods of time (from hours to year) for one or several cameras overseeing one area from different locations.

- Automatic and manual export of reports in CSV, XLS and JPG formats.

- Counting people in moving groups.

- Automatic renewal of the counters.

Additionally, the module allows to set the counting zones and, subsequently, determine the number of people in the zones in real time, providing the following capabilities:

- Setting several counting zones each of which can include an unlimited number of cameras with the active module, assigned to the same server.

- Displaying in real time the information regarding the current number of people in each zone where the camera being viewed is included.

- A possibility to set the current value of the number of people in a zone manually.

- Generating alarm events in case of the maximum allowable number of people in a zone is exceeded as well as in case of the return of this number to the allowable value.

Warning

The number of people in the zones comes into account only when the server is functioning. When the server is restarted, the values of the counters will be set to zero; in such a case, the values can be set manually.
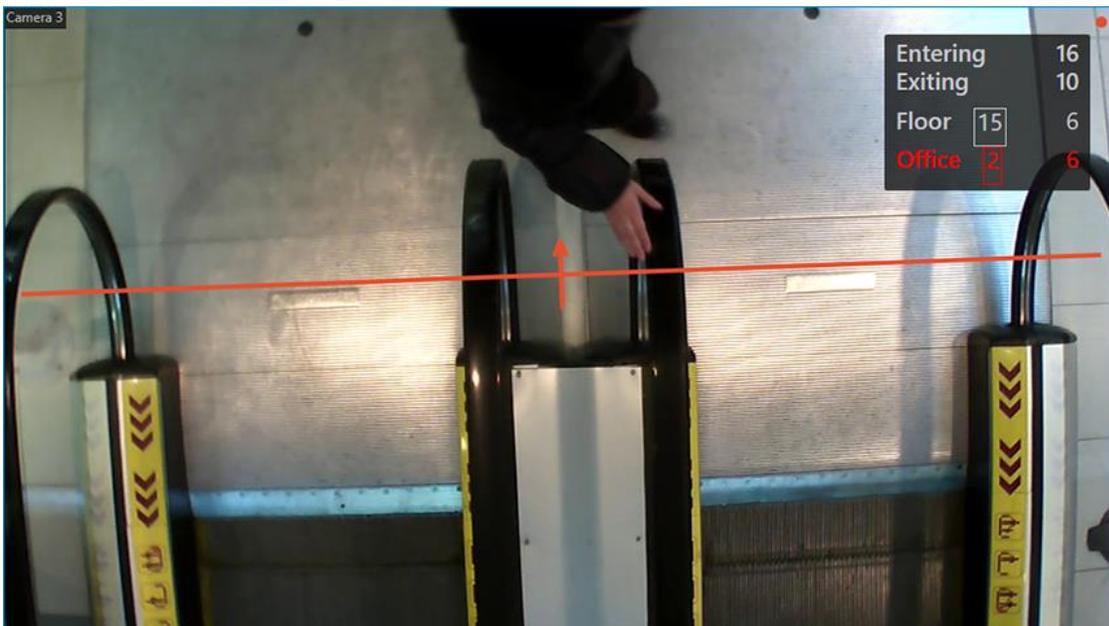
Usage ⟩

When the live view from the camera is displayed on the screen, the upper-right corner of the cell will display the number of visitors that have entered and exited since the last time the counters were reset to zero.

Note

The counter resetting time can be set by the system administrator in the module settings.
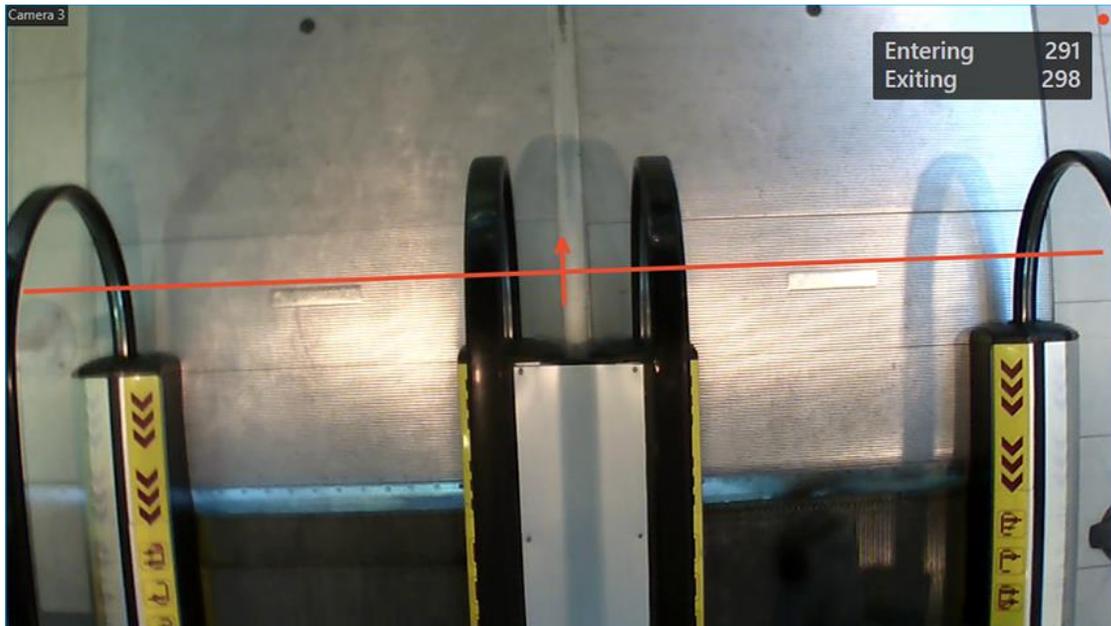
The administrator can configure the module so that only incoming or outgoing visitors will be counted.
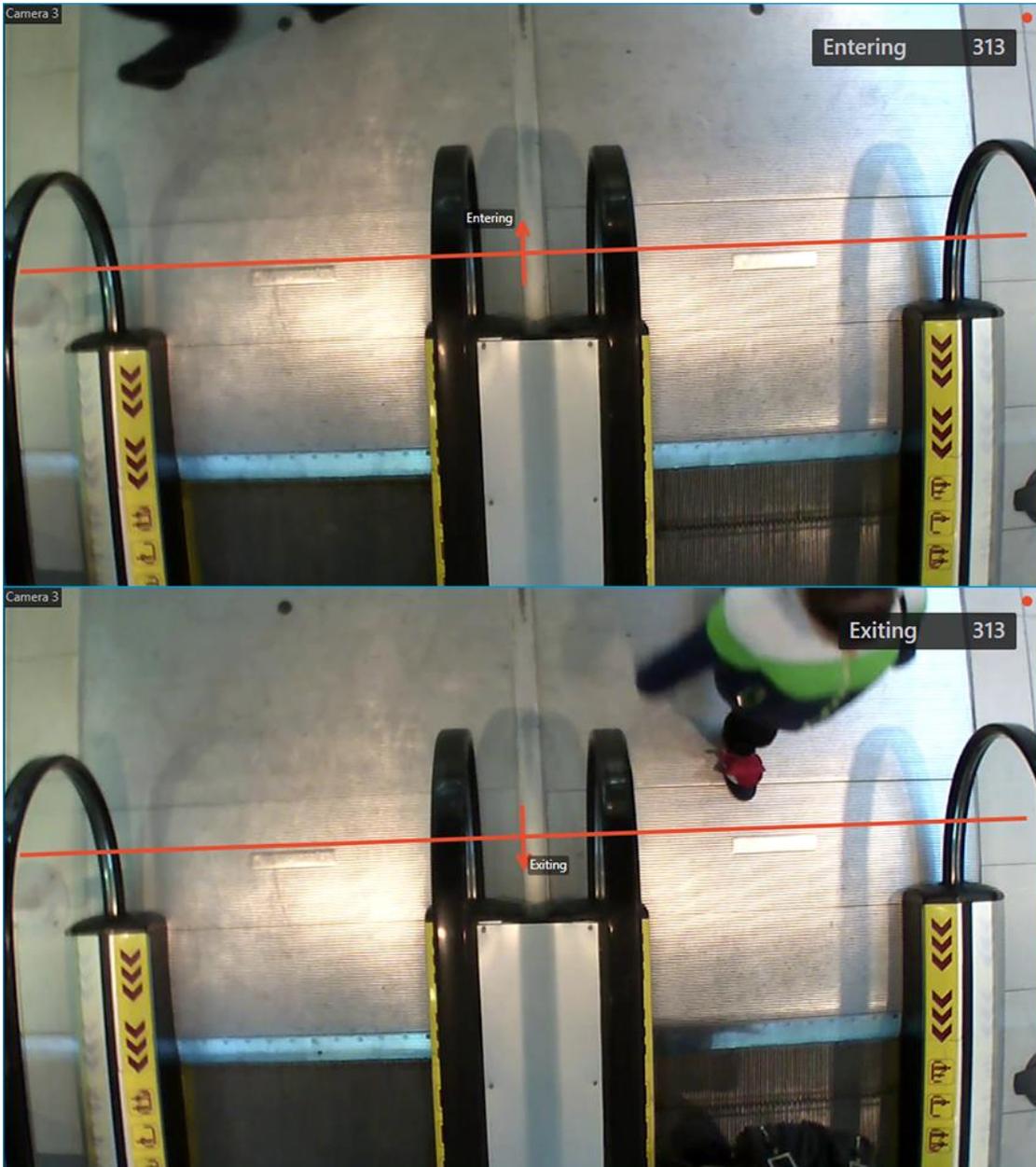
For convenient monitoring, the intersection line can be displayed by selecting the corresponding item in the context menu of the cell.
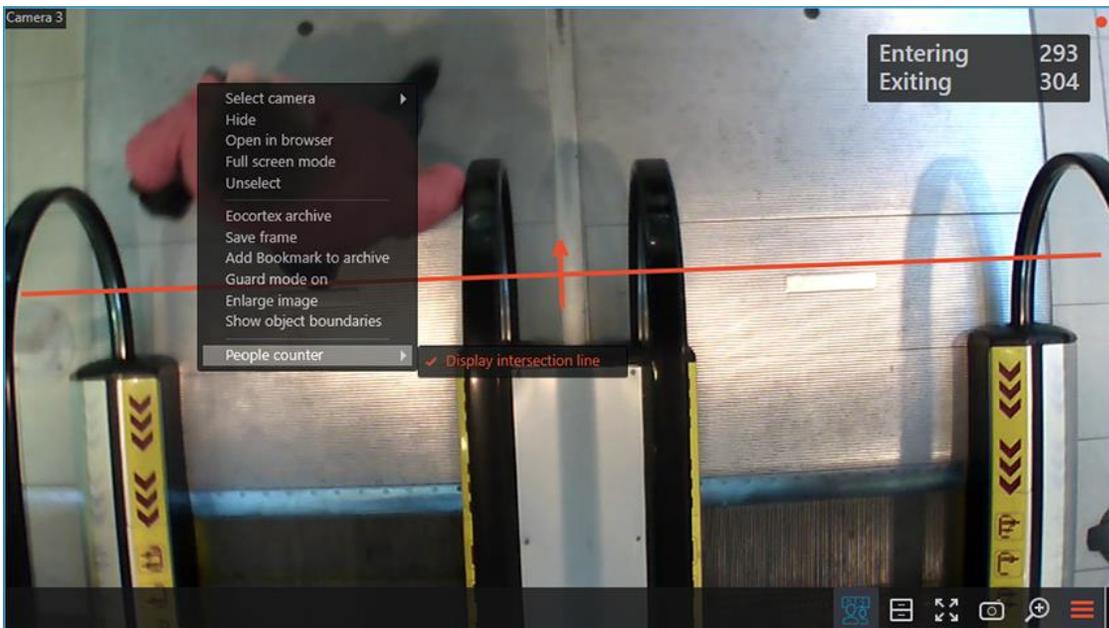
In addition, for one of the counting methods (configurable by the administrator), displaying of object trajectories can be enabled the same way.
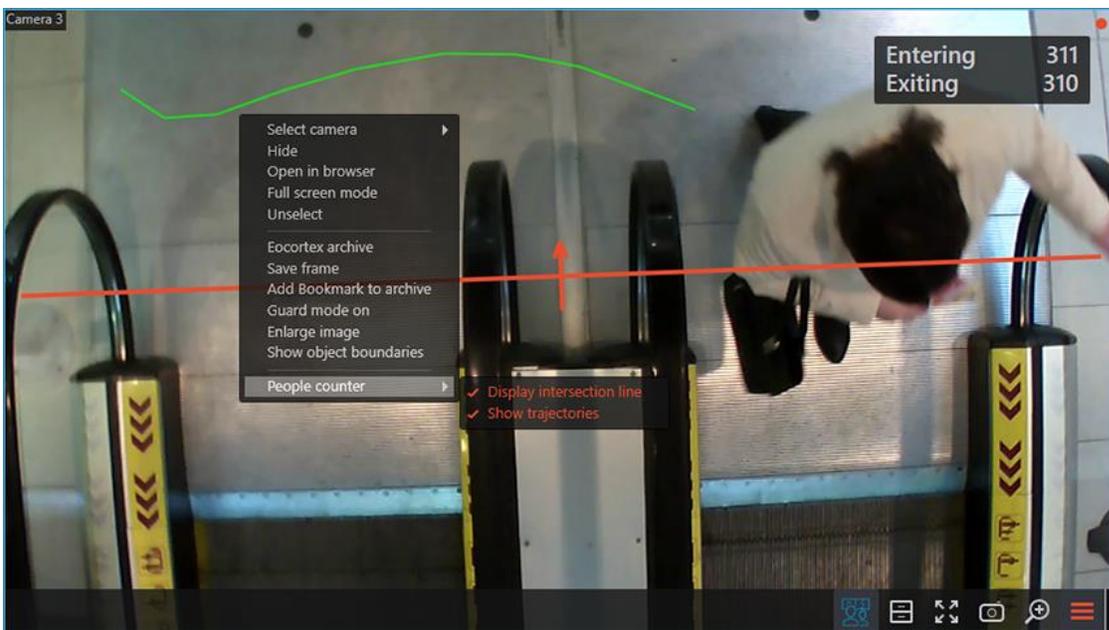
Counting areas ›

By the counting area is meant an abstract area the entrances and exits of which are controlled by one or more cameras with the **People counting module** module enabled, counting the incoming and outgoing people. The value of the counter of people inside the area is the difference of the sums of counters for incoming and outgoing visitors from all the cameras included to the area.

If the camera is included to the counting area by the system administrator, the counter of this area will be displayed below the camera's own counters.
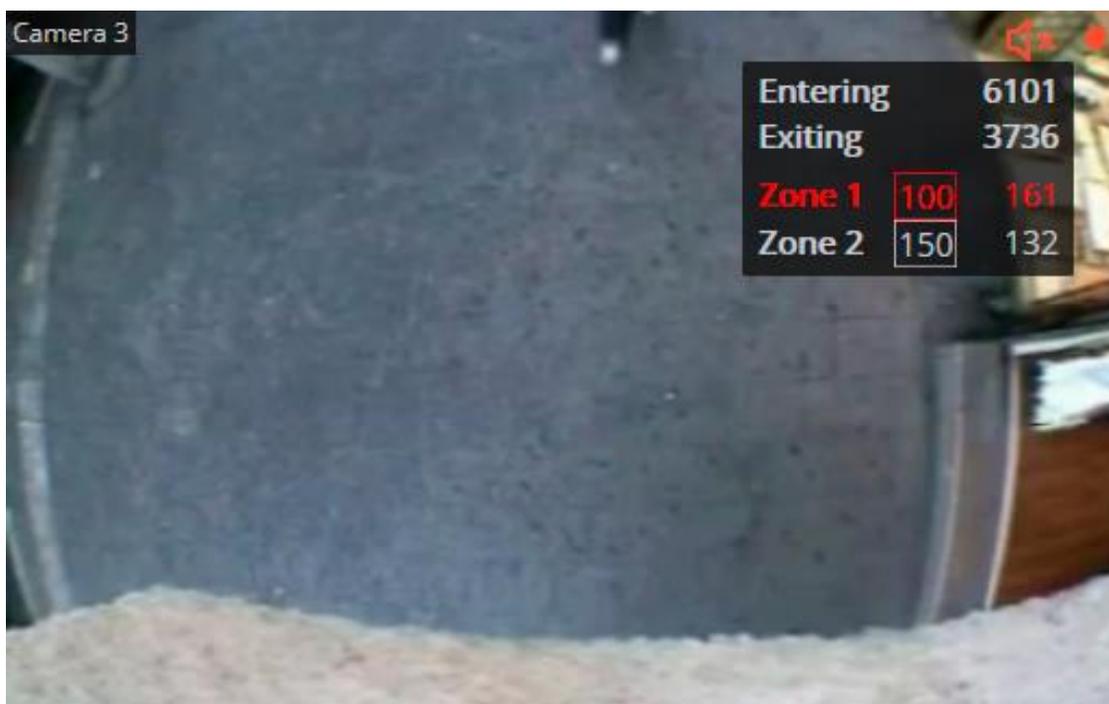
The counting area counter consists of the area name, the wrapped to the frame maximum allowed number of people in the area, and the current number of people in the area.

When exceeding the maximum allowed number of people in the area, the area counter is colored red. In addition, all cases of exceeding the limit and returning to the permissible value are recorded to the Events log.

If necessary, the value of the current number of people inside the counting area can be changed. To set the number of people in an area manually, do the following:

- Hover the cursor over the counter of the desired area.

- Click the ✏ button that appears.

- Set the desired value.

- Save the changes by clicking the ✔ button.
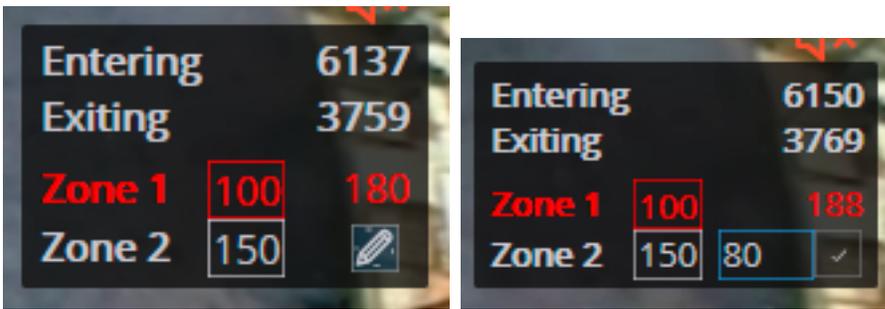
People Counting report ❯

The **People counting** report is a histogram displaying the number of people who crossed the control line in the direction of entry and exit for a specified time interval, as well as the difference between these two counters taken as the number of people inside the area.

To generate a report, do the following:

- Select the **Reports** item in the control panel of the **Eocortex Client** application.

- Select the **People Counting** report option in the upper-right corner of the page that opens.

- Set the report plotting interval.

- Set the report plotting step.

- Select the cameras for which the report should be generated.

- Click the **Build** button.
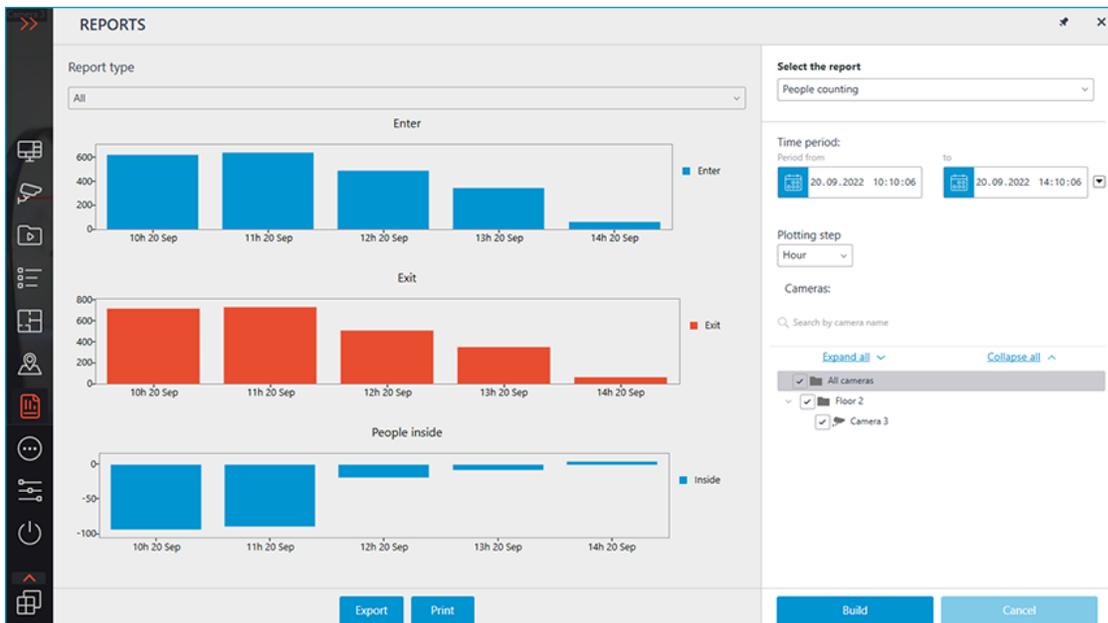
To save the obtained report to the disk, do the following:

- Click the **Export** button.

- In the window that opens, select the location to which the report should be saved.

- If necessary, change the **File name** select the **file format to save** — **CSV**, **Excel** or **JPEG**.

- Click **Save**.

To print the obtained report, do the following:

- Click the **Print** button.

- In the window that opens, select the desired device for printing.

- If necessary, adjust print settings.

- Click **Print**.

Configuration ❯

Configuration of the module can be performed in the Eocortex Configurator application.

Counting people in queue

The module is designed to count people in queues.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Select **Show queues** in the cell context menu to enable the queues displaying, after the camera real-time viewing the counting area limits and the number of people in the queue for each area will be displayed in the frame. In case of exceedance of a threshold value, the legend will turn red.
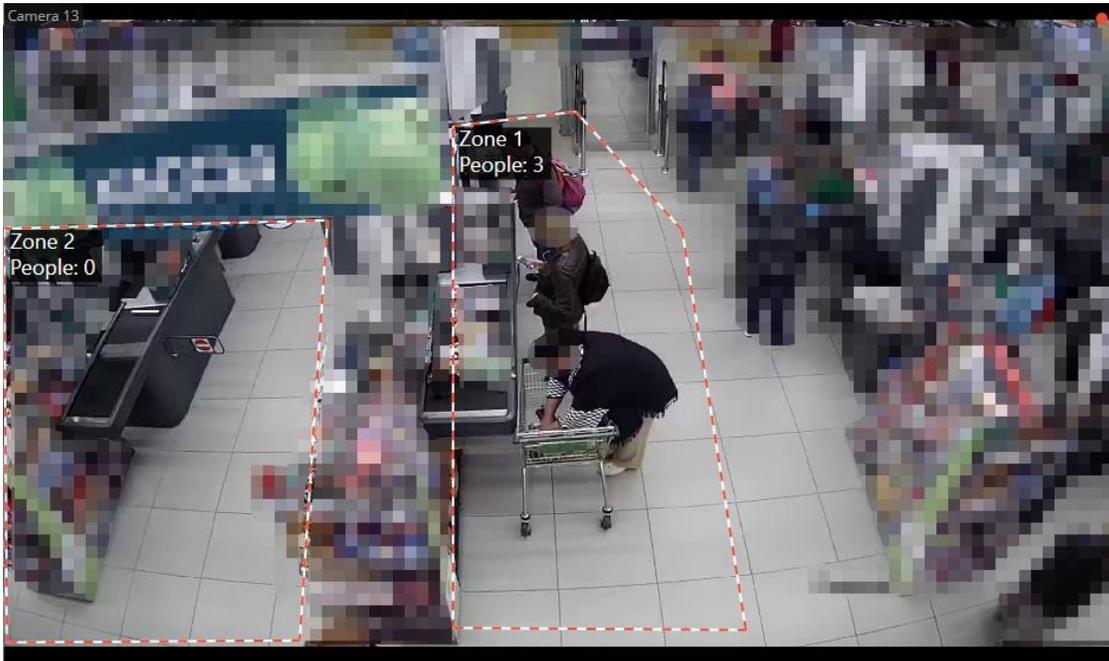
All the module events are recorded to the Events log. To generate the reports open **Control panel** and select **Reports** in the **Main menu**.
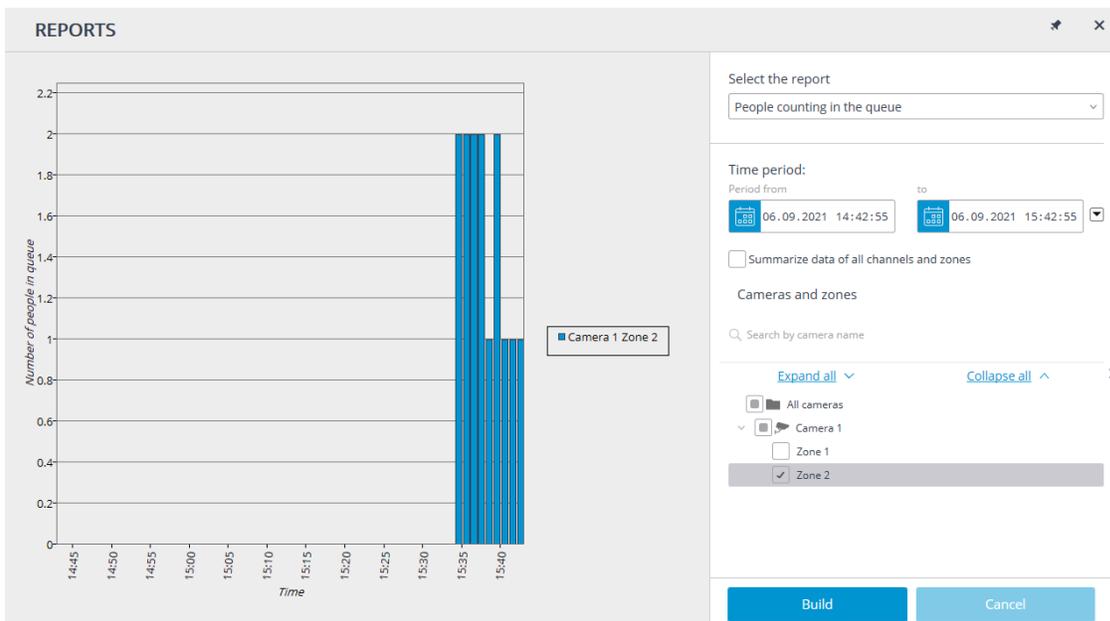
In the **Select report** field, set the **People counting in the queue** option.

Set the **Time interval** for which the report will be generated. The field with the list allows to set the interval prior to the current time, for which the report must be generated, by selecting one of the values: **Minute**, **Hour**, **Day**, **Week**, **Week**.

Select the **Cameras and areas** by which the report will be generated.

To generate the report click **Generate** (to abort the report generating process click **Cancel**).

Personnel activity monitoring

Personnel monitoring Module allows monitoring staff activity time at workstations. By activity is meant fixing movement in the working zone, including minor movements.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Select **Show activity control zones** in the cell context menu to display the information on the personnel activity, after the camera real-time viewing the areas limits will be displayed in the frame, and the area number and status will be displayed in the header of each area. The status can take one of three values: Active area, Low-activity area and Inactive area. For inactive area the header and the limits will change from orange to red.

All the module events are recording in the Events log.

To generate the reports open **Control panel** and select **Reports** in the Main menu.
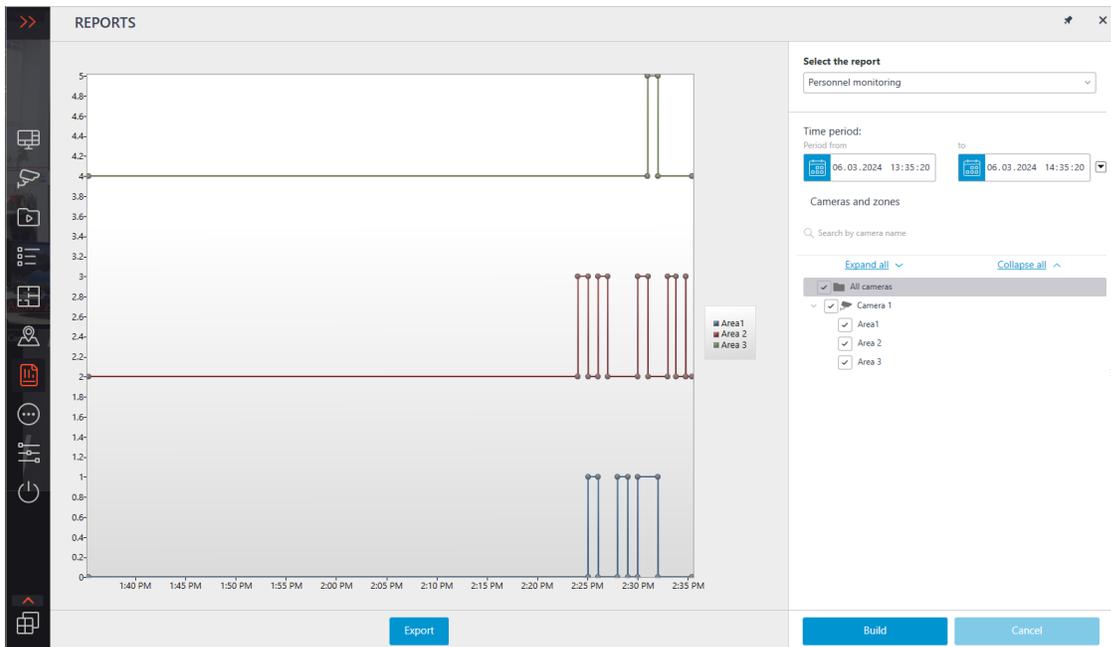
In the Select a report field, set the **Personnel monitoring**.

Set the time period for which the report will be generated. The field with the list allows to set the interval prior to the current time, for which the report must be generated, by selecting one of the values: Minute, Hour, Day, Week, Month.

Select the Cameras and areas by which the report will be generated.

To generate the report click **Build** (to abort the report generating process click **Cancel**).

To save the report on disk click **Export**; in the appeared window select the folder to save the frame; if necessary — change the File name and select the File type (Excel); click **Save**.

Sabotage Detection

The module allows to detect the following events:

- Camera defocusing.

- Camera turnaway.

- Camera flaring.

- Camera's lens coverage.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Upon occurrence of one of the situations the alarm message **Sabotage detected** will be displayed in the camera cell.

Below are the sabotage examples.

Recognition of redirection:

Defocused camera:

Recognition of covering:

Recognition of intense light:
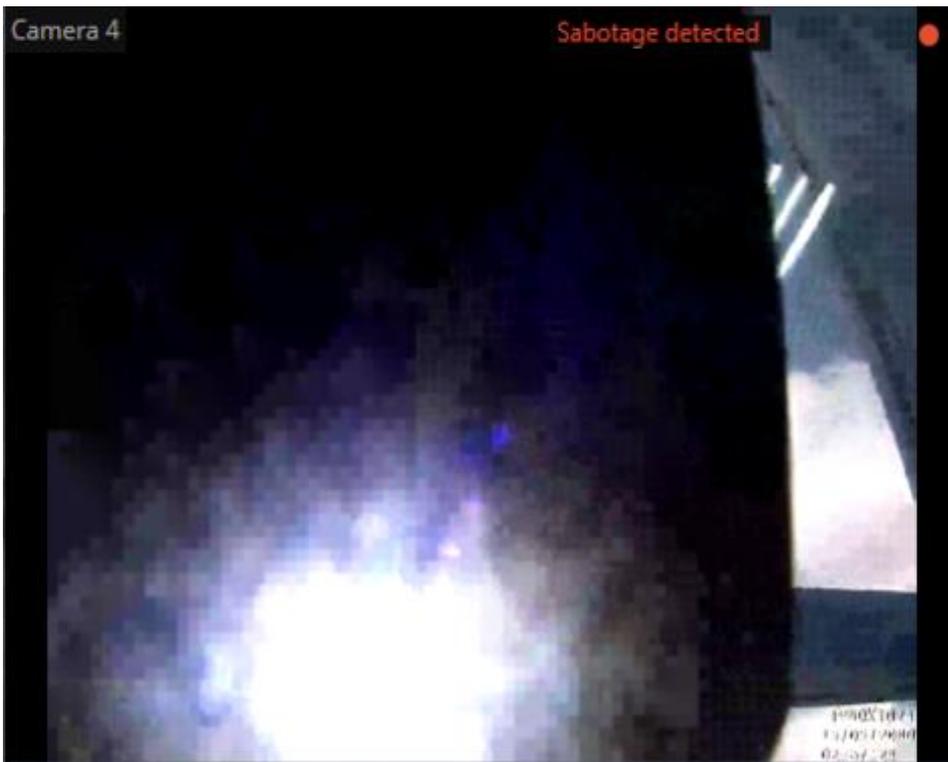
All the module events are recording in the Events log.

Shelf Fullness Check

The Shelf Fullness Check module is designed for monitoring the fullness of shelves in a store to fill them with merchandize in time.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

In order to display outlines, names and current fullness indicators, it is required to select **Show Check Zone** subitem in the Shelf Fullness Check item of the cell context menu.
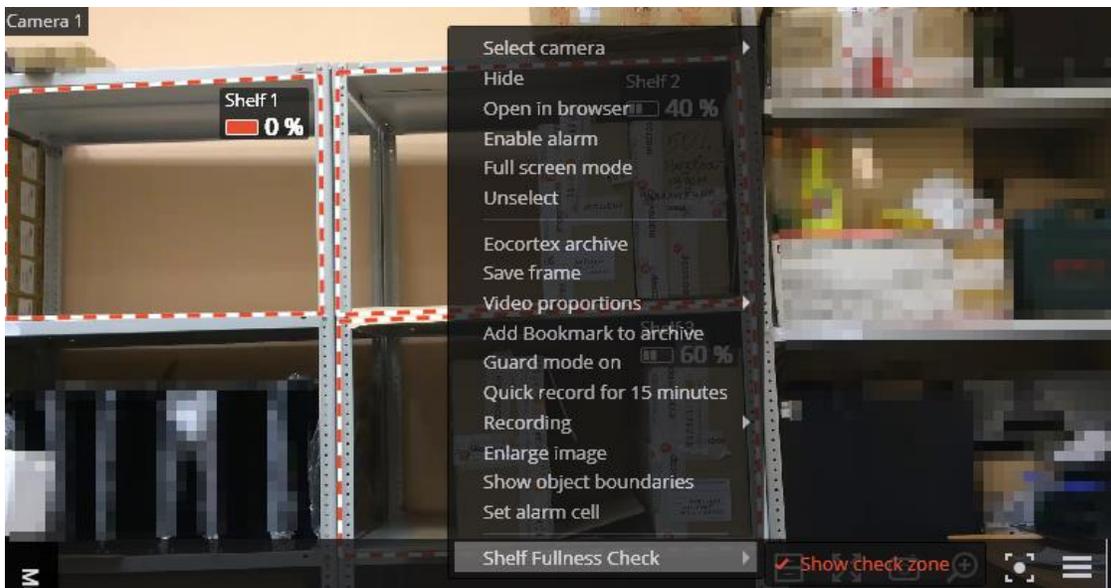
All the module events are recording in the Events log.

To create a report, it is required to select the Reports item in the main menu, then, in the upper right corner of the opened page, select the Shelf Fullness Check report, set the time interval, select the cameras on which the report will be based, and press the Build button.
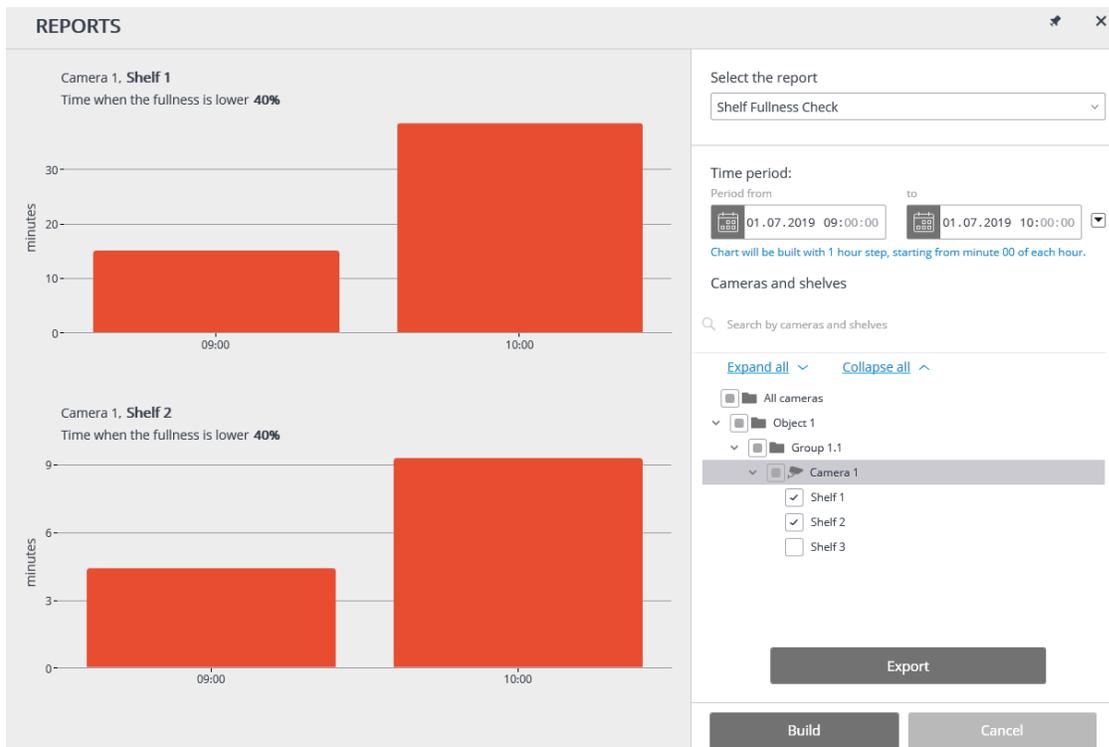
In order to save the report on the drive, click the **Export** button; select a location where the report will be stored in the opened window; change **File name** (if required), then click **Save**.

Search for Objects

On the **Search** page, a search for objects in the archive by various parameters is performed. This page opens when selecting the **Search** item in the main menu.
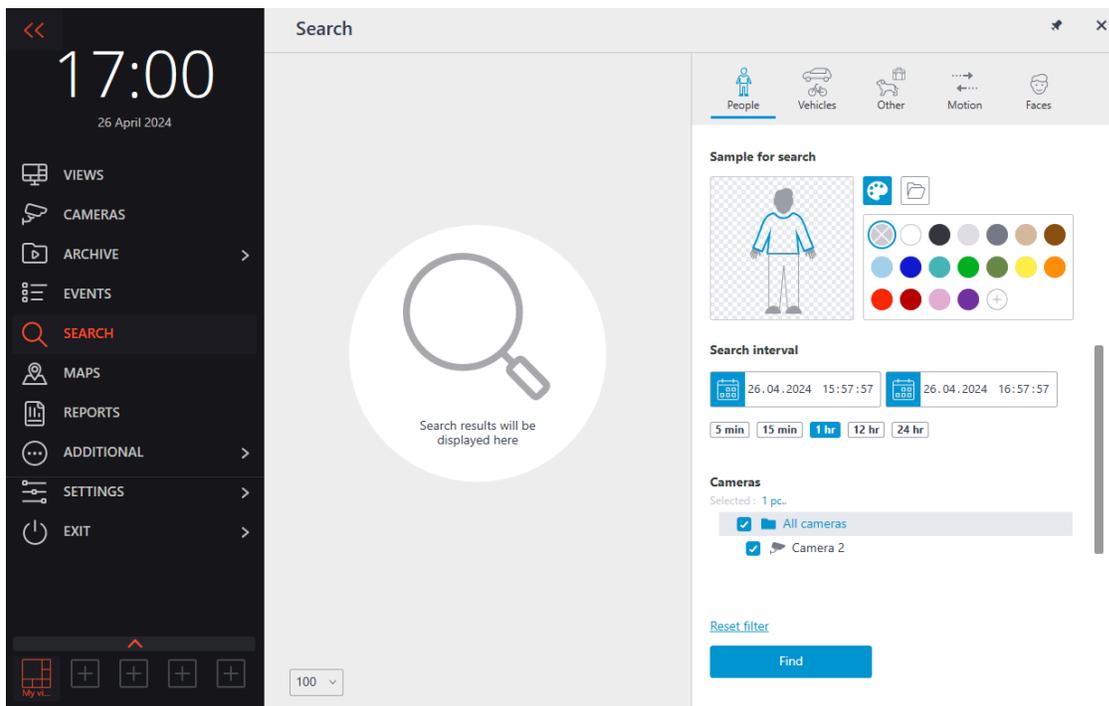
Note

The **Search** menu item is displayed only if the **Search for Objects** or **Face detection** module is enabled on at least one of the cameras in the system.

Search results ›

The search results panel is located on the left side of the page. During the search, the links to the found video fragments that meet the specified search parameters will be displayed.

Note

The results of the last search in the search results panel are retained even when the search page is closed, until a new search is performed or until the **Eocortex Client** is closed.
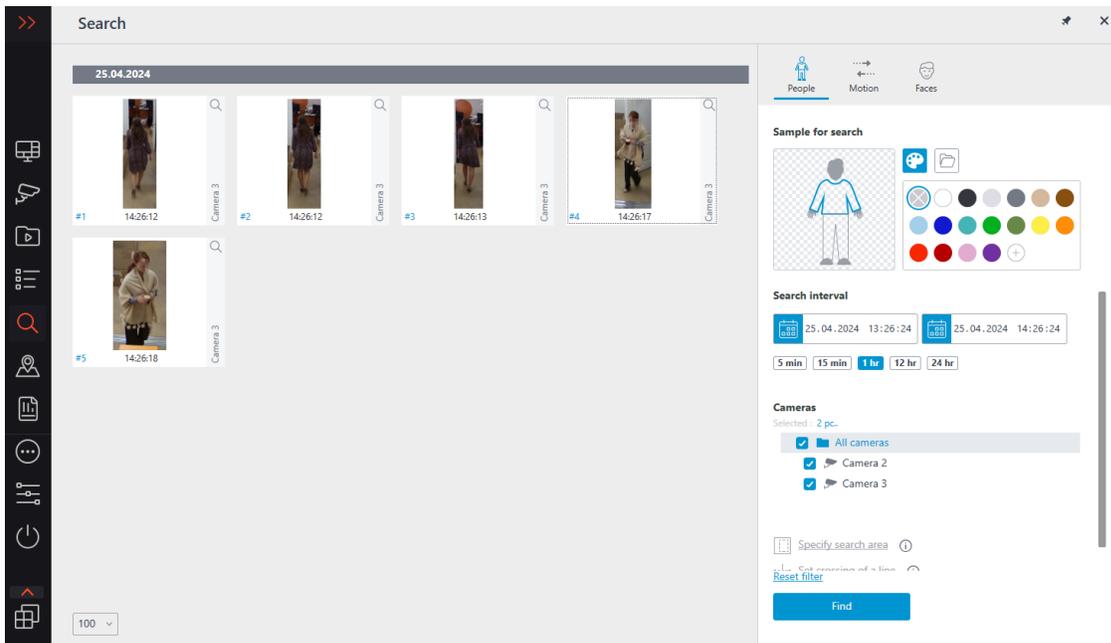
At the bottom of the results panel there is a control panel for displaying search results, which consists of the following controls (from left to right):

- A drop-down list that allows to select the **Number of results per page**.

- Navigation through pages.

Upon clicking on a fragment, the switching to Synchronous viewing of the archive across several cameras at the corresponding moment in time is performed. In this case, the camera in whose archive the fragment was found will be displayed in the channel grid.

It is possible to start working with the fragments from the moment they are placed in the results panel, that is, even before the end of the search procedure. In this case, the search will be interrupted upon proceeding to the archive. Alternatively, the search can be interrupted by clicking on the **Cancel** button at the bottom of the filter panel.

Filter panel 〉

Search parameters are set on the filter panel located on the right side of the page. The filter panel can be hidden/shown by clicking on the right edge of the page.

Depending on the selected filter tab, objects of a certain category will be searched for.

When multiple search parameters are specified, the results that satisfy all parameters specified on the current tab at the same time will be displayed.

To clear all the parameters set on the current tab, including color samples and photos, it is required to click on the **Reset filter** button.

The search starts after clicking on the **Search** button.

During the search, the located fragments will be displayed on the results panel.

General parameters ❯

The following search options are available on each tab:

Search interval: this group of settings specifies the interval in which objects will be searched for. In addition to explicitly specifying the start and end values of date and time, it is possible to select one of the preset intervals: **5 min**, **10 min**, **1 h**, **12 h**, **24 h**. When selecting a preset interval, the end time remains unchanged, the start time is calculated in relation to it.

The **Cameras** section is used for selecting cameras in whose archive the search for objects will be carried out. Each tab displays only those cameras that are to be used for searching for objects of the corresponding category.

Specify search area permits to specify a rectangular area in which the search will be performed. The area can be configured in a separate window.

Set crossing of a line allows to set a line. The search results will only include objects that intersect the specified line. In this case, it is possible to optionally specify only one direction of crossing of the set line. The line can be configured in a separate window.

If the **Specify search area** or **Set crossing of a line** parameter is set, the parameter icon is filled. To reset the parameters, it is required to use the button ✕ to the right of the parameter.

Note

The **Specify search area** and **Set crossing of a line** parameters are available only when a single camera is selected.

The **Specify search area** parameter is available only for the cameras with the **Search for Objects** video analysis module enabled.

The **Set crossing of a line** parameter is available only for the cameras with the **Tracking module** video analysis module enabled with the **Objects being tracked**: **Only those in motion** setting.

On the **People** and **Vehicles** tabs, it is possible to search for objects by color, as well as using photos downloaded from files or obtained from the previous search results.

Color samples >

To add a color sample, it is required to click on the button and select a color from the palette. If the desired color is not in the presented palette, it can be added by clicking the button .

To clear the selected color, it is required to select an empty color in the palette.

To delete a sample, it is required to use the button ✕ located in the upper right corner of the image.

Photo samples >

To add a sample from a file, it is required to click on the button and select the file by clicking on the **Select a photo** link.

After selecting the file, a window with the downloaded image will open. In this window, it is required to select the rectangular part of the frame containing the sample and press the **OK** button.
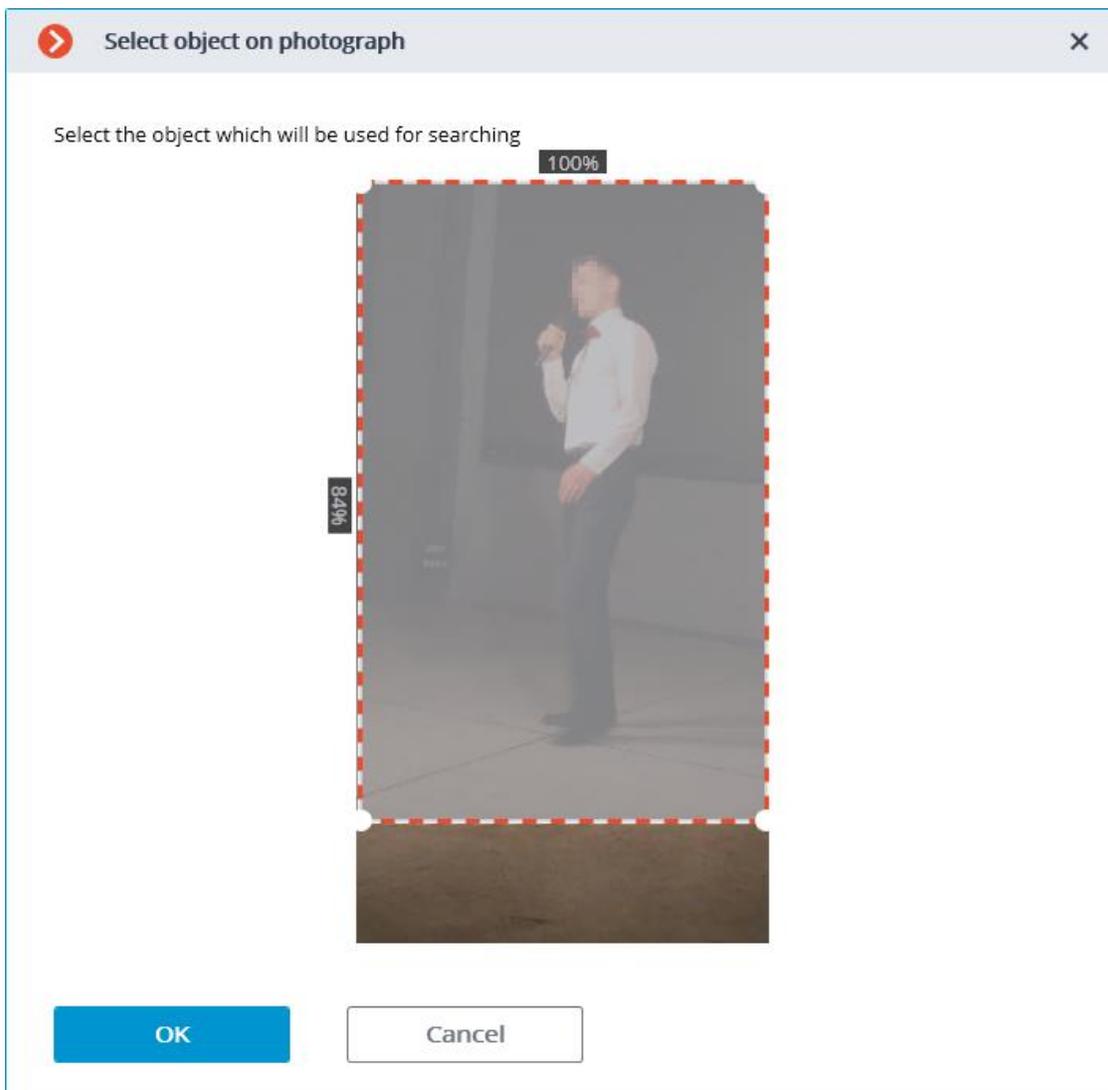
To add a sample from the found results, it is required to select the desired fragment in the results panel and click the button 🔍 located in the upper right corner of the fragment. It is also possible to select a fragment, open the context menu with the right mouse button and select the **Look for this object** item.
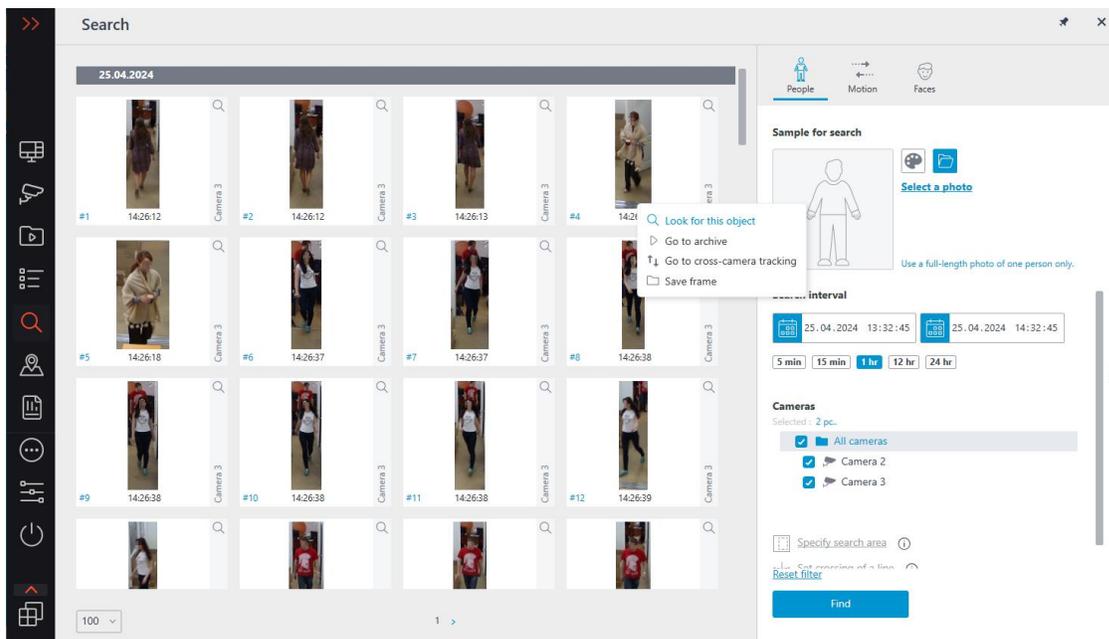
To delete a sample, it is required to use the button ✕ located in the upper right corner of the image.

People ⟩

The **People** tab is used for searching for people.

Note

This tab is only available for the cameras on which the **Search for Objects** video analysis module has been enabled, properly configured and is functioning properly.

Note

The video analysis modules are enabled and configured by the administrator of the video surveillance system.

If none of the search parameters has been specified, the results panel will display all the people found in the archive during the specified interval.

When searching for people by color samples, it is required to set the color for the upper and lower parts of a person's figure. To do this, before choosing a color, it is needed to select the corresponding part of the figure. The selected part will be highlighted with a bold outline.
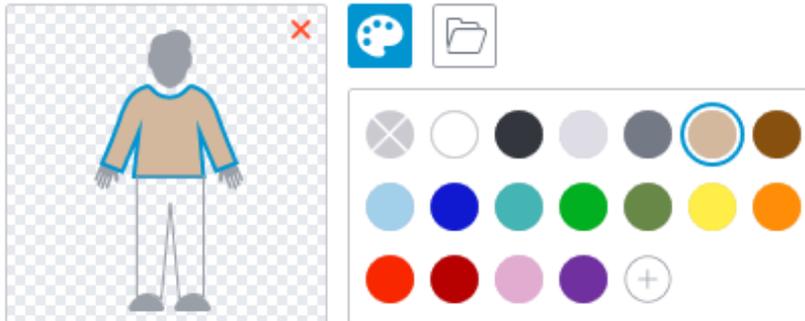
Note

The search results by a color sample can sometimes include people whose lower part was not visible at the time of detection. In this case, a search for the lower item of clothing will work like a search for the top one.

Requirements for lighting and image quality when searching by color sample are as follows:

- A person should be recorded during daylight hours, in good weather, without precipitation.

- The angle in which the person was recorded should allow to correctly determine the prevailing color of clothing.

- The figure of a person must not be overexposed.

- The camera exposure and contrast must be adjusted so that the human eye can clearly identify the color of clothing.

Vehicles ›

On the **Vehicles** tab, the search for the following types of vehicles is performed:

- Passenger cars;

- Trucks;

- Buses;

- Two-wheelers.

Note

This tab is only available for the cameras on which the **Search for Objects** video analysis module has been enabled, properly configured and is functioning properly.

Note

The video analysis modules are enabled and configured by the administrator of the video surveillance system.

Only the vehicles of selected types will be included in the search results.

If only one vehicle type is selected, the vehicle search by color is available.
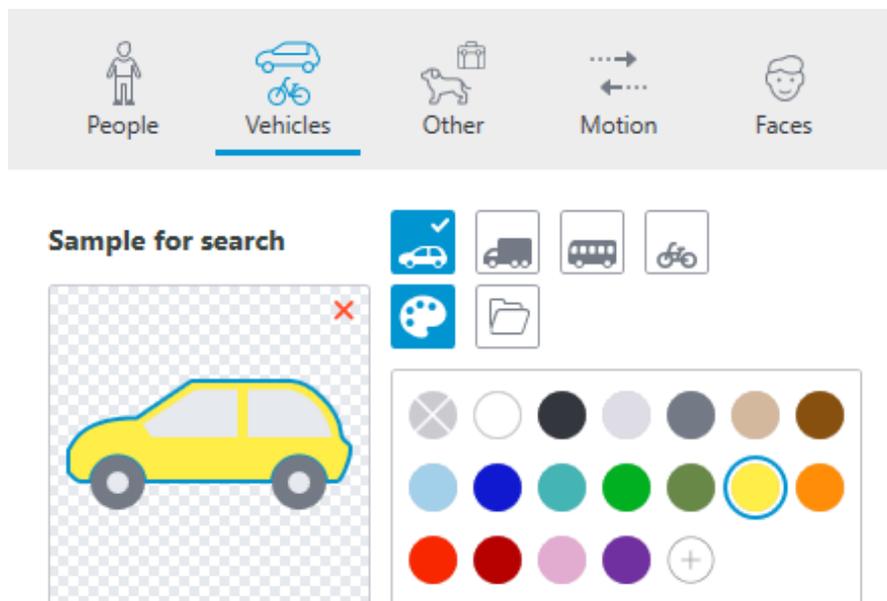
When searching for vehicles by photo, the selected types of vehicles are not taken into account. In other words, the photo itself is used as a basis for a photo search, regardless of whether the type of the vehicle depicted on it matches the type selected on the filter panel or not.

Other ›

The tab **Other** serves for searching for objects of the following types:

- Animals (terrestrial animals and birds);

- Bags (luggage, suitcases and backpacks);

- Hazardous items (firearms and baseball bats).

Note

This tab is only available for the cameras on which the **Search for Objects** video analysis module has been enabled, properly configured and is functioning properly.

Note

The video analysis modules are enabled and configured by the administrator of the video surveillance system.

Types of objects

☐ Animals

☐ Bags

☐ Hazardous items ⓘ

Select at least one view type

Motion ❯

The search for all moving objects is performed on the tab **Motion**.

Note

This tab is only available for the cameras on which the **Search for Objects** video analysis module has been enabled, properly configured and is functioning properly.

Note

The video analysis modules are enabled and configured by the administrator of the video surveillance system.

Search for all moving objects will be performed

Search interval

| 📅 26.04.2024 15:57:57 | 📅 26.04.2024 16:57:57 |

[5 min] [15 min] [**1 hr**] [12 hr] [24 hr]

Cameras

Selected : 1 pc..

| ☑ 📁 All cameras |
| ☑ 📹 Camera 2 |

Faces ›

The tab **Faces** is used for searching for faces.

Note

This tab is available only for cameras on which the **Face detection** video analysis module has been enabled, configured and is properly functioning.

Note

The video analysis modules are enabled and configured by the administrator of the video surveillance system.

Tracking

The **Tracking** module allows to build trajectories of the objects that move in the fields of view of the cameras, track the crossing of lines by these objects in one or both directions, monitor the presence of the objects in the zones of arbitrarily set shapes, and also filter alarm events by object type. At that, the monitored lines and zones as well as the objects' trajectories can be shown on the screen in real time, and the objects themselves can be highlighted by the rectangles of various colors. All the events of the module are recorded in the event log.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Note

All objects causing alarms are being highlighted with non-disablable red boxes.

For tracking convenience it is also possible to:

- display the zones and lines;
- track the objects' trajectories;
- display the colored frames of the objects;
- view object frames by category.

To do this select the relevant subitems in **Tracking** item of the cell context menu.

Note

Crosslines and zones will be highlighted at the moment of crossing the line and entering the zone, even when displaying of lines and zones in the cell is turned off.

Note

Viewing object frames by category is only available for cameras where **Filter by categories** mode is enabled and configured.

All the module events are recording in the Events log.

Uniform Detection

The **Uniform Detection** is designed to detect people both in workwear and without it. In live view, such people will be highlighted on the screen with a colored frame, and the incidents will be recorded in the event log.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

The following subitems appear in the context menu when **Uniform Detection** is selected:

- **Show frames**: Displays frames around people with or without uniforms.

- **Show alarm zones**: Displays detection zones for people without uniforms or with uniforms that don't match the specified parameters.

- **Show warning messages**: Displays various warnings signaling high load. These warnings will be displayed in the upper left corner of the cell.
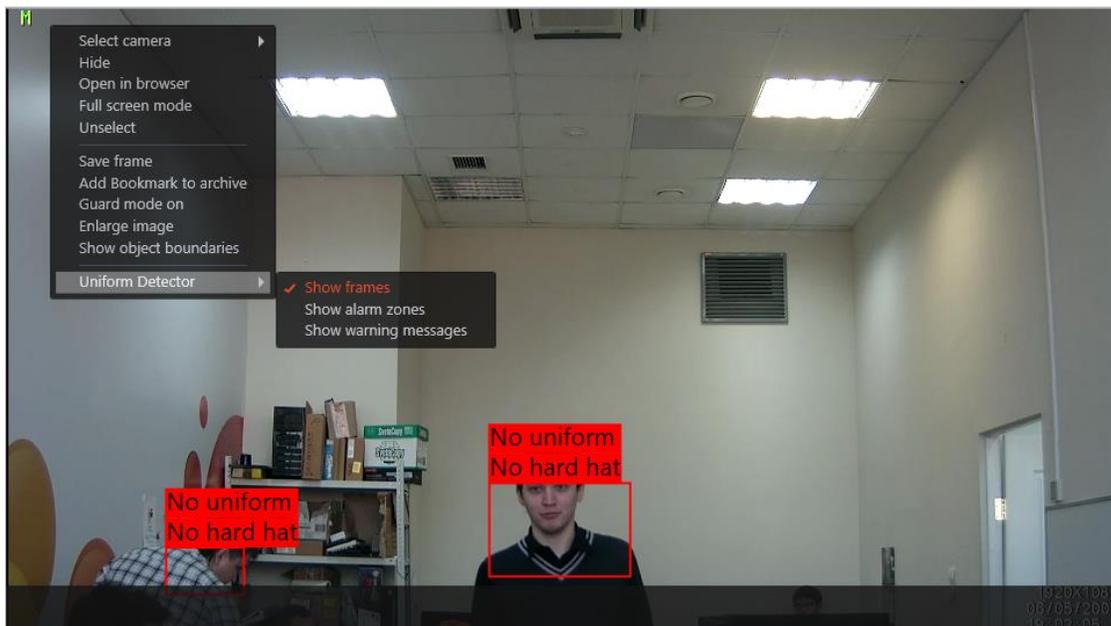
All the module events are recording in the Events log.

Events

Date	Time	Type	Event description
24.11.2021	14:08:57	🔔	Camera 15. No vest. Moving within zone: "Zone "Alarm in the zone". Uniform Detector.
24.11.2021	14:08:57	🔔	Camera 15. No uniform. Moving within zone: "Zone "Alarm in the zone". Uniform Detector.
24.11.2021	14:08:44	🔔	Camera 15. No uniform. Moving within zone: "Zone "Alarm in the zone". Uniform Detector.
24.11.2021	14:08:44	🔔	Camera 15. No hard hat. Moving within zone: "Zone "Alarm in the zone". Uniform Detector.

Unique Visitor Counting

Unique Visitor Counting module is intended for generating unique visitor counting reports based on detecting and recognizing faces. It is possible to exclude faces pertaining to certain groups from the counting, for example, to avoid counting employees.

Warning

This module will only work on the cameras on which it has been enabled by the administrator of video surveillance system.

Face Detection report ❯

The **Face Detection** report shows the brief information regarding the detected faces: time of detection, sex, age and emotions (without showing a name, even if the face is in the database).

The following emotion recognition results are available: **Positive**, **Neutral**, **Negative** and **Unknown**.

If a period has been specified for the report, the report will be downloaded to disk upon pressing the **Export** button.

This will open a window where it will be possible to select the location and format of the file: CSV, Excel or PDF.

Unique Visitor Counting report ❯

In the **Unique Visitor Counting** report, the infographics of the unique visitors is displayed, containing four graphs: by number of visitors, by age, by gender and by emotion.

The following emotion recognition results are available: **Positive**, **Neutral**, **Negative** and **Unknown**.

Apart from the period of time and the step of the graph, it is possible to indicate sex, age and emotions of the people to be included into the report. Additionally, it is possible to set the groups from the database whose members will not be taken into consideration when generating the report; thus, it is possible to exclude employees from the counting.

The graph of the number of visitors shows the unique visitors and all the visitors at the same time.

The diagrams of the age, sex and emotions are generated for the unique visitors by default.

Note

For the age, sex and emotions data to be displayed for all visitors, it is required to toggle the corresponding switch. At that, it will not be necessary to generate a new report to update the information.

Note

The report can be exported to CSV format by clicking the **Export** button.

Faces database ❯

It is possible to use the face database to exclude certain persons from the count (e.g. employees). Since this database is similar to the ones employed in the face recognition modules, the procedure of using it can be found in the face recognition documentation.

PTZ Camera Management

Depending on a camera model, it is possible to use in **Eocortex** such additional camera control options as pan, tilt, zoom, focus, various service functions, and pre-set positions (presets).

PTZ Camera Control ❯

Camera position can be interactively controlled by the following options: physical PTZ control device, virtual PTZ joystick, and buttons on the PTZ control panel.

The use of a physical PTZ control device can be configured on the **PTZ Cameras control panel** tab of the **Workplace settings** window in the **Eocortex** application.

To use the virtual joystick and control buttons, click the ⊕ button in the active cell or select **Camera Control Interface** in the context menu.

Note

If the **Camera Control Interface** is unavailable, this means that this camera model is not controllable or camera control functions are disabled by the system administrator.

Note

Depending on the set of features available for the camera, the controls may vary. The following elements of the control interface are implemented: virtual joystick, zoom in/out, focus control (+/-/AF), transition to "home" position, infra-red lighting and wiper control.

To hide the camera control interface, re-click the button in the active cell or select again **Camera Control Interface** in the context menu.

Camera Preset

To set the camera to one of the presets, in the cell context menu select **Camera position**. In the submenu that opens, select one of the positions available or set the preset number in **Set a preset number**.
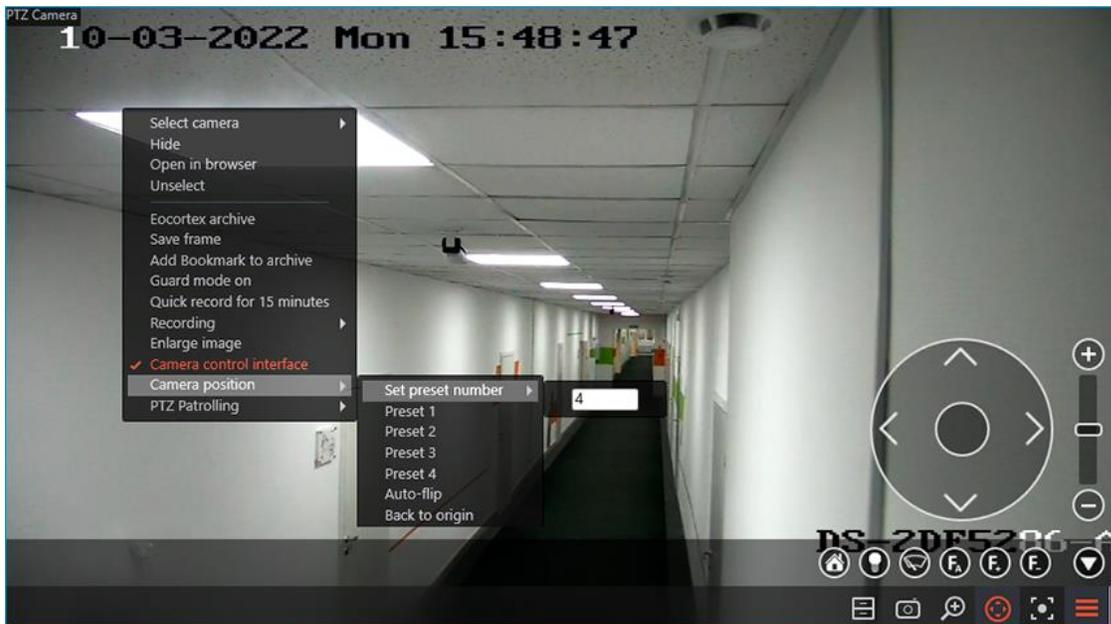
Note

The presets are set on the camera itself by the system administrator.

Note

Some cameras allow setting for presets names (text values) instead of numbers.

Tours (auto patrolling) ⟩

The system administrator can set up tours (auto-patrolling) — scenarios of automatic transition of the camera between presets.

To start a tour, select **Tours** in the context menu of the cell and choose one of the tours in the submenu that opens.
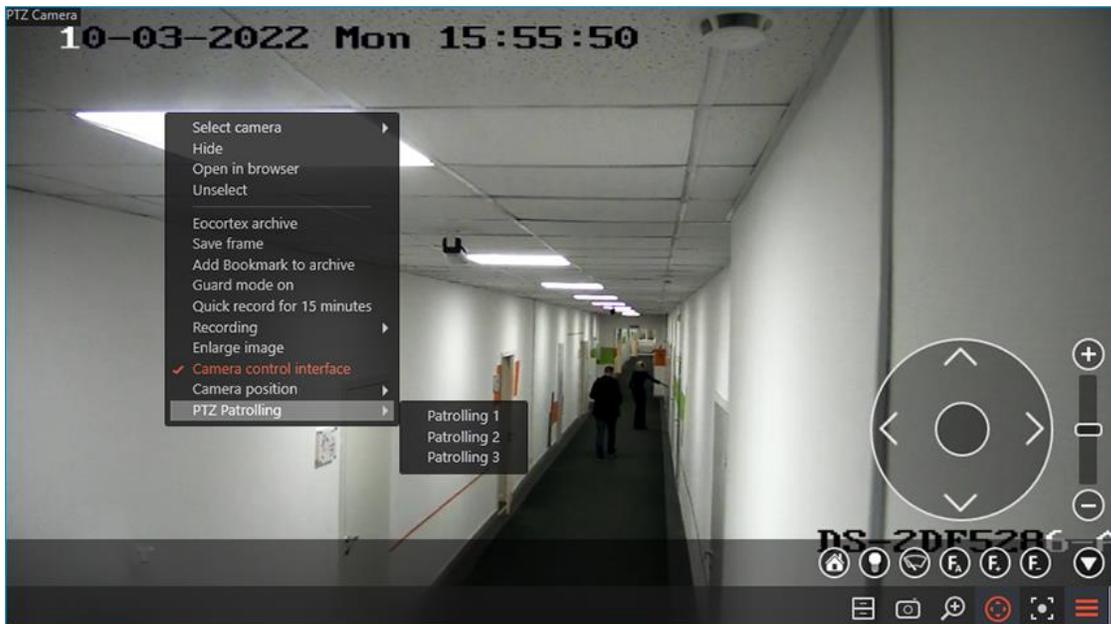
AreaZoom ⟩

AreaZoom AreaZoom allows to outline the frame part and enlarge it using the zoom method (mechanical or optical) of the camera itself.

Note

This feature is available not for all camera models.

To use **AreaZoom**, enable the camera control interface. Then holding the left mouse button, select the area of the frame that you want to zoom — the camera will zoom the outlined frame part. If necessary, the camera will change its position, so that the center of the outlined rectangle will be located in the center of the frame.
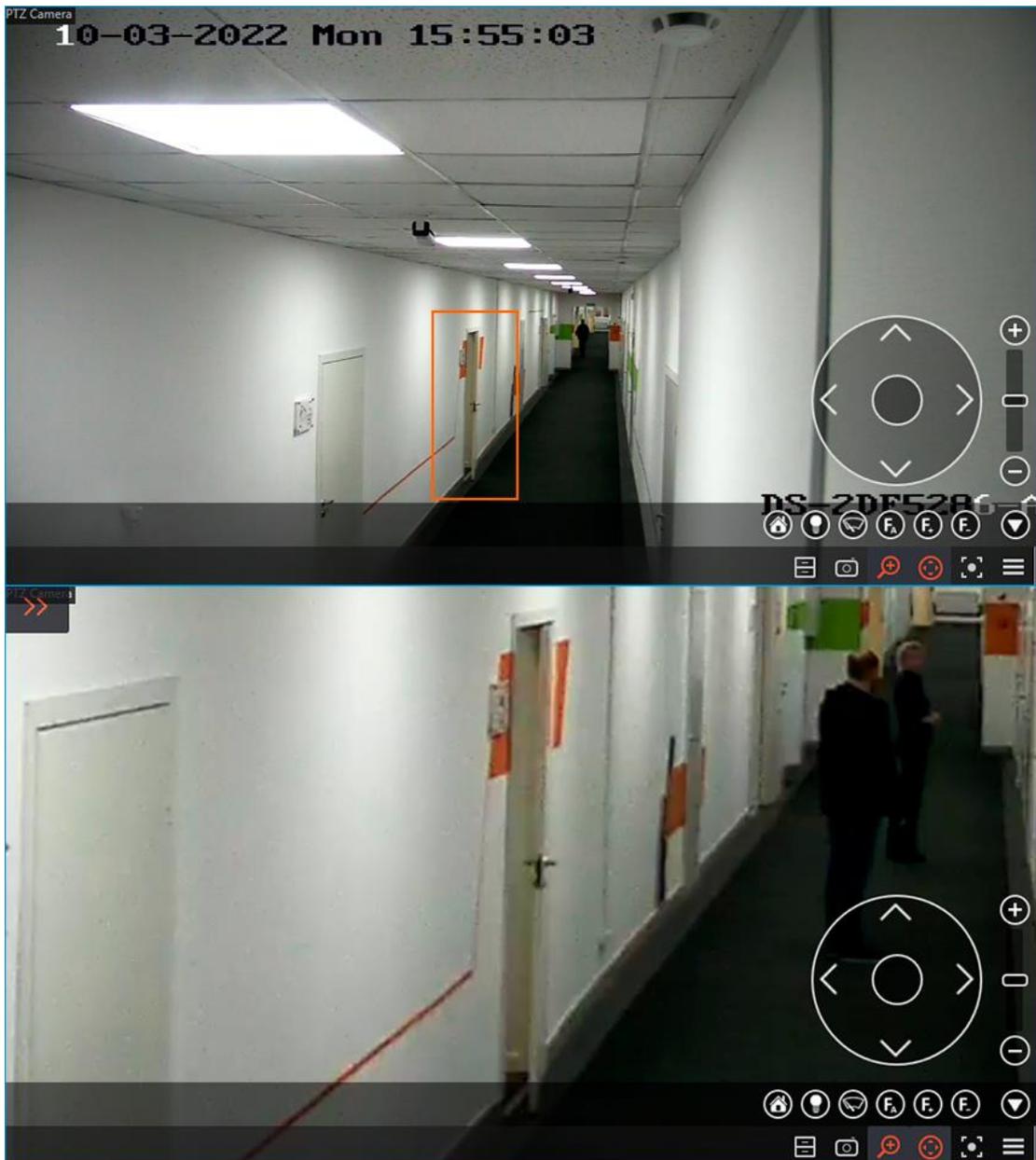
Control priority ⟩

For **Enterprise** and **ULTRA** licenses, users can be assigned one of the priority levels to control the camera's PTZ features: **Maximum**, **High**, **Medium**, **Low**, or **Minimum**. Users with a higher priority can take control of the camera from a user with a lower priority. If the user who took over control is inactive for 5 seconds, the camera will become available to control other users with the same priority level. When the inactivity interval reaches 15 seconds, the camera will become controllable by users with a lower priority level.

The system administrator should set the priority levels spin user rights settings in the **Eocortex Configurator** application.

Warning

Control prioritization does not apply to cameras with disabled **Connection via server** option, which is located on the **Connection** page of the **Eocortex Configurator** application. With such configuration, commands from the **Eocortex Client** application are sent directly to the camera, whereas priority control requires user commands to be sent through the server.

Similarly, control prioritization will not apply to multiple workstations with the **Eocortex Client** application connected to the server under the same account.

For the PTZ control, you can assign the keyboard shortcuts in the Workstation settings.

Alarms in the guard mode

Alarm — condition that requires attention. In **Eocortex** the alarm is always connected with a certain camera and appears in response to the system event or user action.

Warning

The camera will switch to the alarm state if **Guard mode** is enabled on the camera at the time of the event or action triggers the alarm.

Note

Guard mode and alarm notifications are set up and operated individually at each workplace, independently of other workplaces.

Enabling guard mode ⟩

Guard mode can be enabled as follows:

- Automatically, by schedule. For this, configure the schedule (see Eocortex Client / Workplace settings / Sheduled Guard mode).

- Manually, from the context menu of the camera cell. For this, enable the **Guard mode on** item in the context menu of the cell.
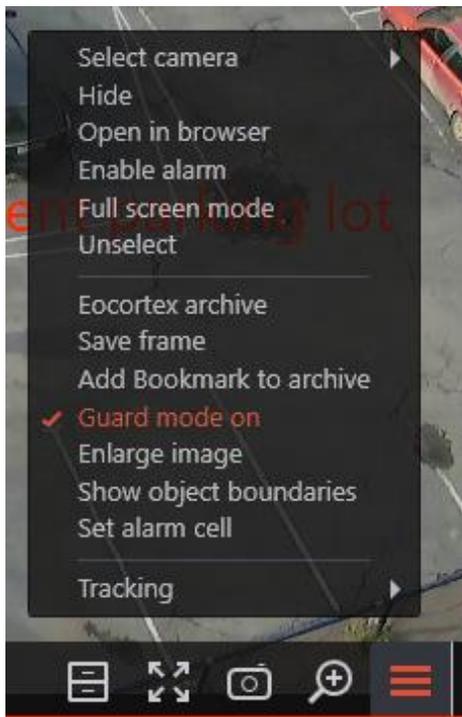
- Manually, from the sidebar. For this, in the sidebar, in **Additional** select **Guard mode**.
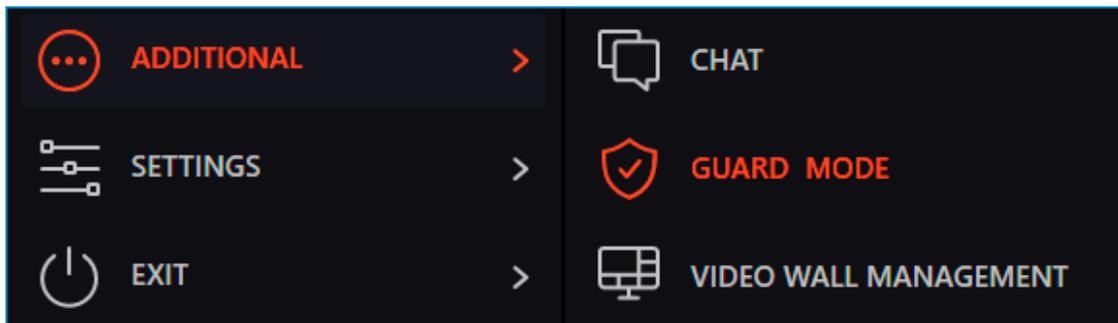
In the opened window, select the cameras to be secured and then press **Apply**.
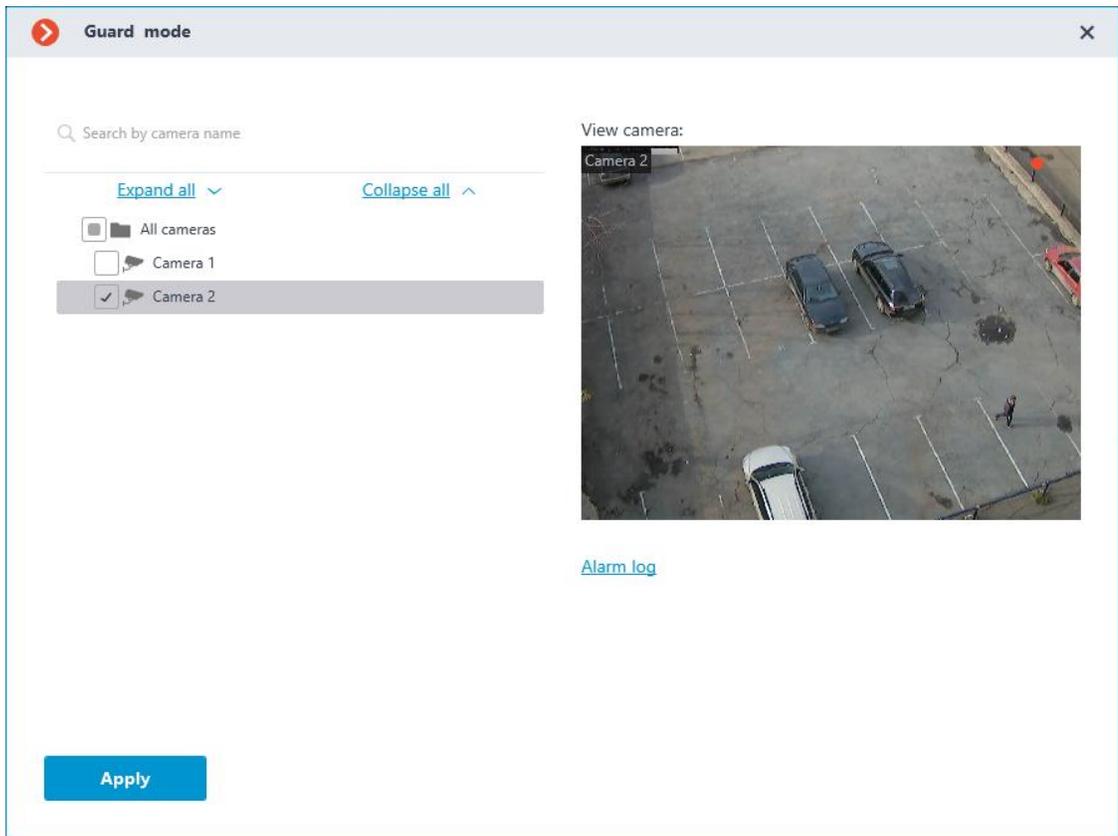
The **Alarm log** link opens the **Events log** filtered by alarms.

If the camera is set to the Guard mode, the ⬡ indicator will be displayed in the upper right corner of the cell.

Alarm generation ›

The camera alarm is triggered as follows: (**Guard mode** must be enabled on the camera):

- Automatically, when a certain event occurs on the camera or system, if alarm generation is configured for that event.

  Note

  The events that trigger alarms are configured by the CCTV Security System Administration

- Manually, by clicking the on-screen button on the side panel to the right of the clock.
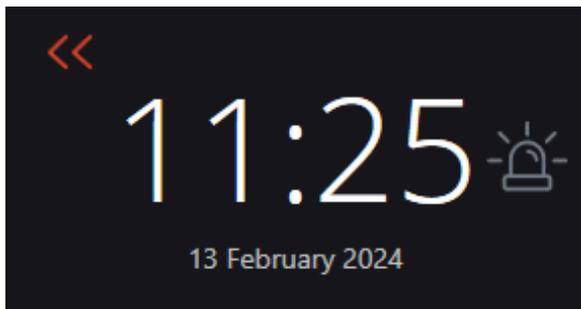
  Note

  Enabling the display of the alarm button and selecting the cameras which will generate an alarm when pressing the button is performed in the current workplace settings on the Interface and User alarm channels.

- Manually, from the context menu of the cell
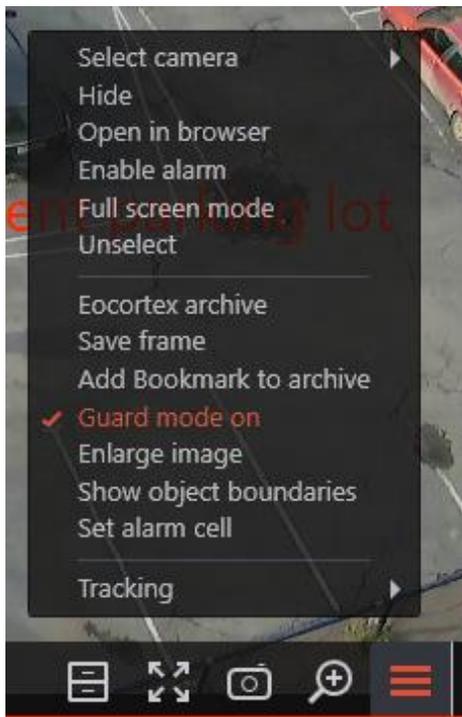
- Manually, when executing a user task, if alarm generation has been configured by the CCTV system administrator for that task.
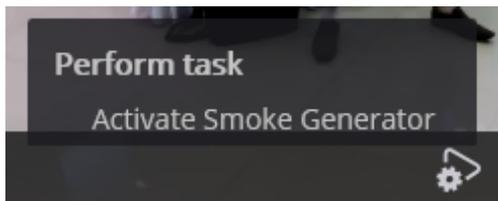
Display 〉

It is possible to use normal cells, alarm cells and alarm monitor for displaying cameras in the **Alarm** state.

Normal monitor: The monitor used to display the camera images in normal mode.

- **Normal cell**: The screen grid cell on a normal monitor used to display the camera image in normal mode.

- **Alarm cell**: Screen grid cell on a normal monitor. This cell refers for displaying the image from the camera with an alarm.

- **Alarm monitor**: Monitor intended for displaying the image from the cameras with an alarm.

Possibilities and limitations of alarm monitor:

- The maximum number of alarm monitors per workplace — not more than one.

- The alarm monitor selects the optimal screen grid automatically. The optimal grid is the one that allows to display all cameras in the **Alarm** state with the minimum number of empty cells.

- The alarm monitor supports the following screen grids: 1, 2×2, 3×3, 4×4, 5×5, 6×5, 6×6, 7×7, 8×8, 9×9, 10×10, 11×10, 15×10; 14×12; 16×16.

When an alarm triggers on one of the cameras with guard mode enabled, the alarm will be displayed in the **Eocortex Client** application as follows:

- If the camera in the **Alarm** state isn't displayed yet, and the alarm cells or an alarm monitor are used in the workplace, this camera will be placed in a free alarm cell or in a free cell of an alarm monitor.

  Note

  If both alarm cells and alarm monitor are used, the camera in the **Alarm** state will be placed in both.

  Note

  Alarm cells and alarm monitor cells are considered free in the following cases:

     – If no camera placed in the cell.

     – If all alarms are accepted, rignored or expired.

  After processing all alarms in the camera, this camera is not hidden from the cell, although the cell is considered as free.

Alarm notifications >

The camera cell in the **Alarm** state will be highlighted with a colored frame on the screen.
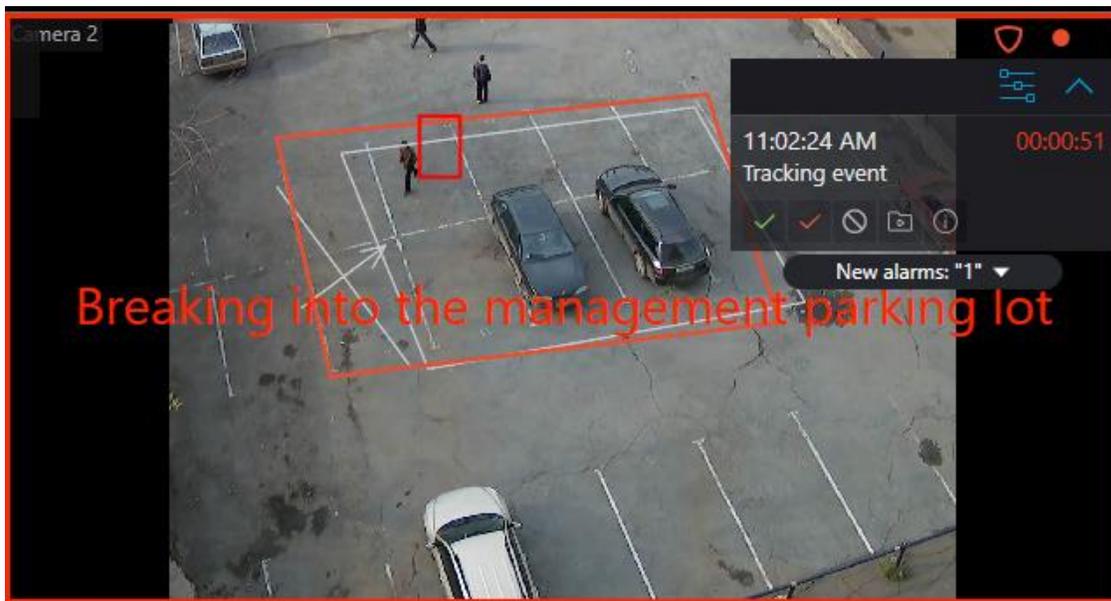
The alarm panel is displayed in the upper right corner of the cell.

Alarm panel allows:

- Process (accept, mark as false and ignore) the alarms.

- Switch to archive playback mode at the moment of the alarm triggering.
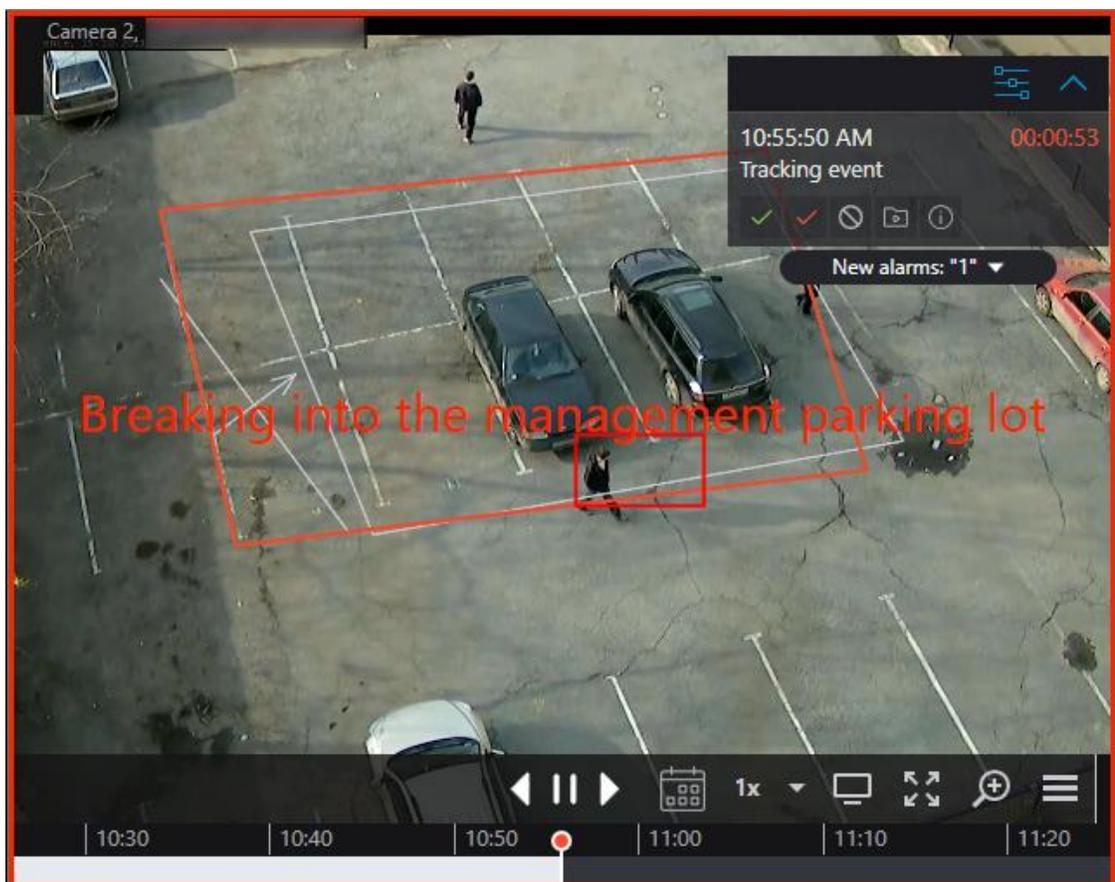
- Display the cameras placed near the alarm triggered camera.

  Such cameras are opened in an optimal grid, in which it is possible to work as usual: move cameras between cells, switch between live video and archive playback, work with alarms etc.

  In order to return to the original view, it is necessary to either close the view with nearby cameras or switch to one of the available views.

- Open the alarm card.
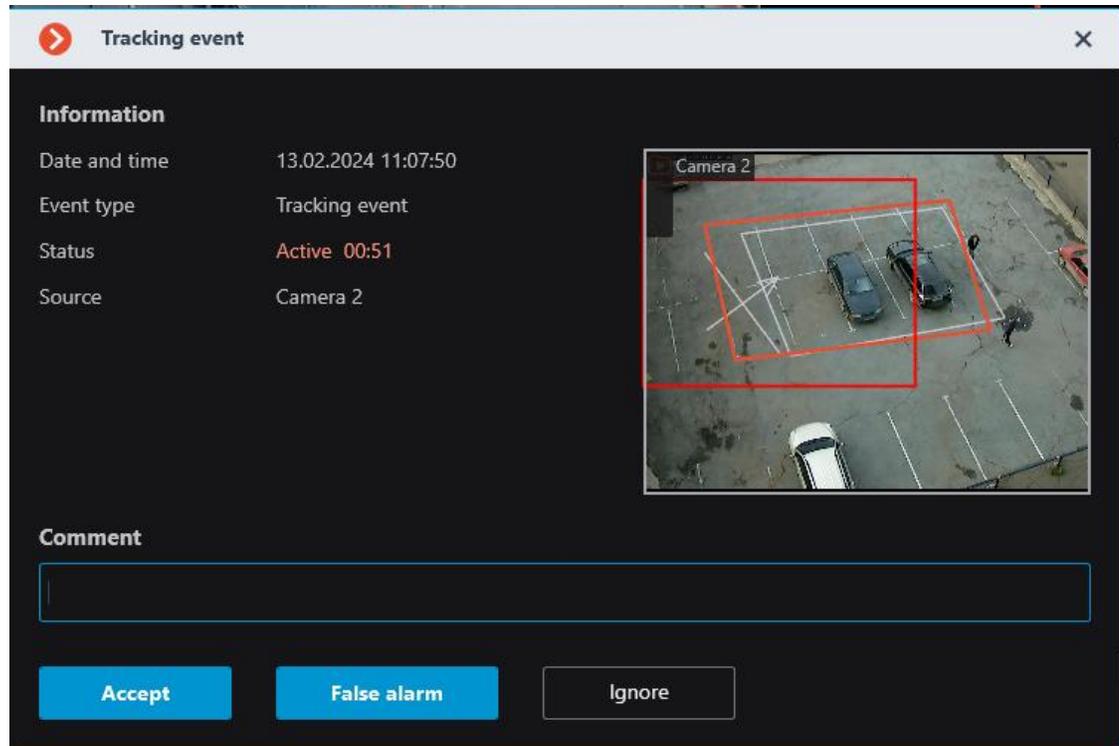
The alarm panel can be turn to ⚠️ icon. By clicking on the icon, the alarm panel will be opened.

It is also possible to expand a feed with all unprocessed alarms under the taskbar
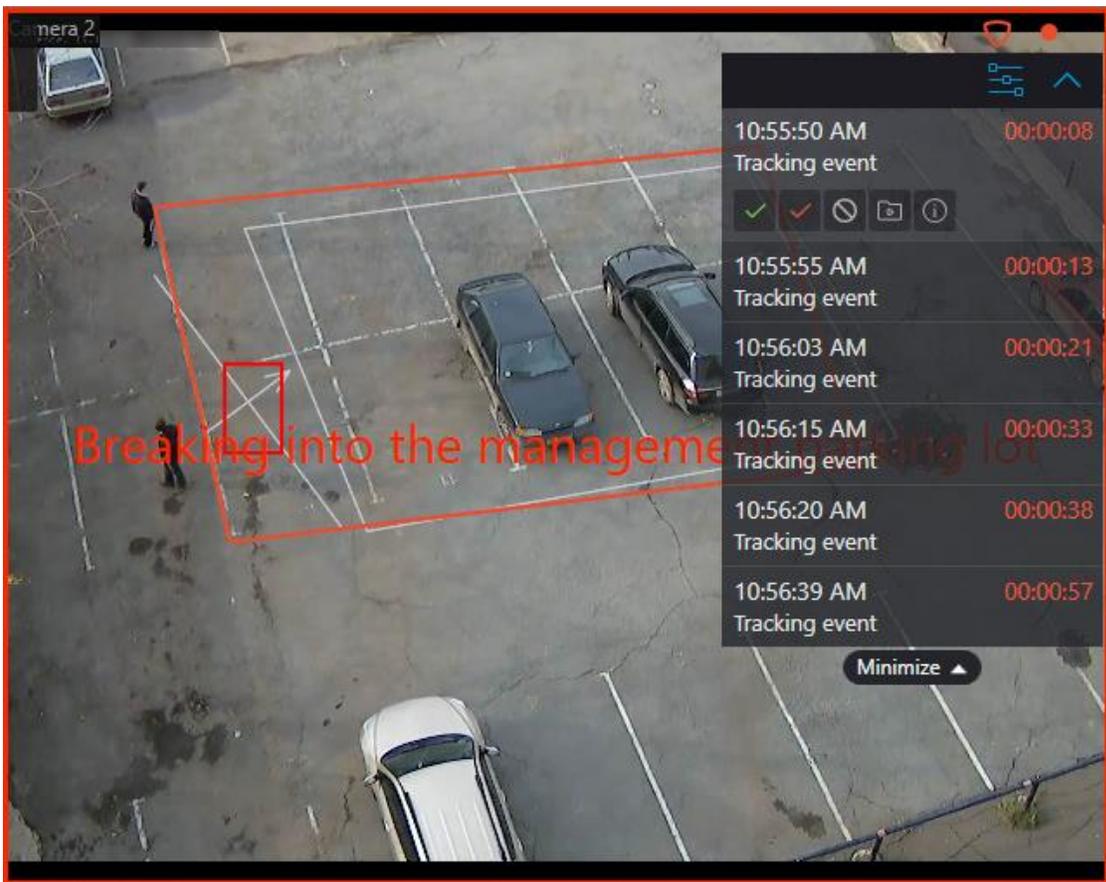
Depending on the settings, it is possible for the cell to output text describing the alarm, as well as frames and other graphic elements indicating the object or situation that triggered the alarm.

In addition to alarm visual notifications, it is possible to set audible notifications.

Note

The alarm parameters that are configured by video surveillance system administrator:

- Requirements for the alarm processing.

- Timeframe after which the alarms considered missed.

- Alarms explanatory inscriptions and visual elements.

- Nearby cameras list.

- Predefined sound signal.

Note

Alarm parameters that can be configured by video surveillance system operator in the setting of the workplace (if authorized by the video surveillance system administrator)

- Default sound signal.

Alarm processing ❯

Each alarm must be processed within the set time.

Processed alarms are accepted, marked as false or ignored alarms.

To process an alarm, it is necessary to press the corresponding button on the alarm panel located in the cell of the camera. The time remaining until the end of the alarm processing time is displayed on the alarm panel in the timer to the right of the alarm name.
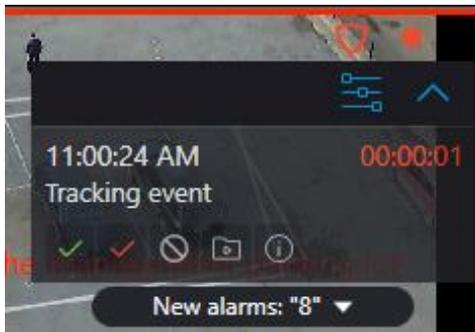
Alarm processing settings may include requirements for users to comment on alarms as they are processed. The user must enter a comment and press the acknowledge button within the time limit for processing. After the time expires, the alarm will be missed and the acknowledge button will become unavailable.

An alarm not processed within the set time is considered missed.
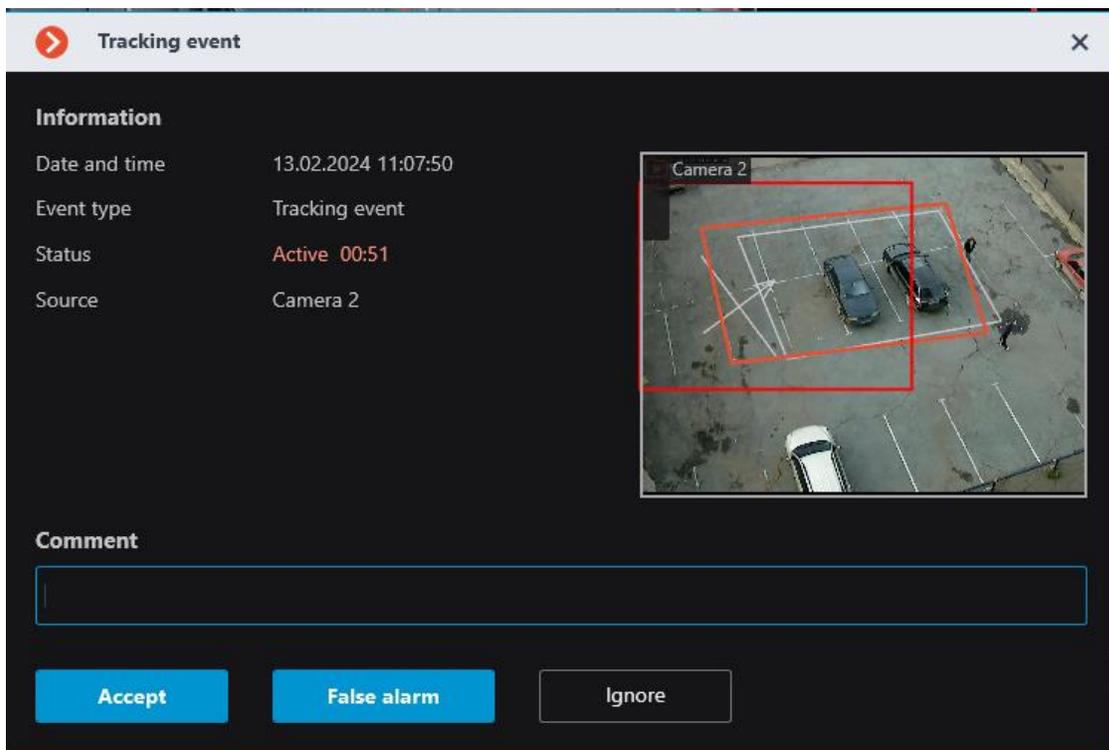
If there are missed alarms, the notification indicator appears in the lower right corner of the screen, clicking on it will open an alarm notifications list.
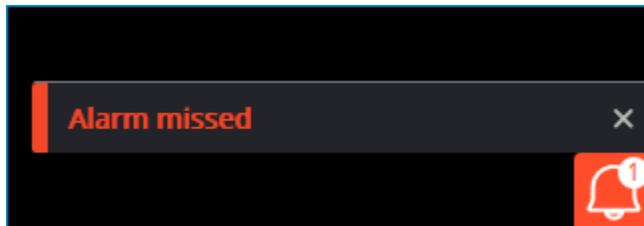
Clicking on the notification will open Events log, filtered by missed alarms.

Note

The requirements for alarm processing, including the time allotted for processing, are set by the video surveillance system administrator. The administrator can also prohibit certain user groups from marking false alarms and ignoring alarms.

If at one workplace the same camera in the **Alarm** state is displayed in several cells, including on different monitors, then after the processing of the alarm in one of the cells, the alarm will be automatically processed in the other cells.

If the one camera is in Guard mode at different workplaces, alarms from this camera will be displayed at all workplaces. In this case,

• Alarms that are accepted or marked as false at one workplace will be identified as accepted or false at other workplaces.

- Alarms that are ignored at one workplace will continue to be unacknowledged at the other workplaces.

Sound signal 〉

Audio files for notifications are stored in the Sound folder in root directory of the **Eocortex Client** application (By default: C:\Users\username\AppData\Local\Programs\Eocortex Client\Sounds).

Playback of the sound signal in case of alarm is carried out according to the following rules:

- The audio file will be played regardless of whether the camera is displayed on any monitor or not.

- Only audio files converted to WAV are supported.

- Each new alarm initiates playback of the selected audio file from the beginning.

Note

It is recommended to avoid using long duration files and frequent generation of alarms of the same type when setting up tasks. Otherwise, the sound file will be interrupted with a new playback every time an alarm is generated.

Alarm cell 〉

To assign a cell as alarm cell, call the context menu and select the **Set alarm cell** item.

Warning

If the camera is configured to display an archive shift when generating an alarm, the date and time settings must be synchronized in the client and server devices.

Placement of the camera in the alarm cell is according to the following rules:

- The maximum number of alarm cells per monitor is limited only by the maximum size of the view.

- In case of alarm generation, the camera occupies the first suitable alarm cell in the order, following the order from left to right and from top to bottom.

- When the alarm state is acknowledged, the camera continues to be displayed in the alarm cell until it will be replaced by another camera in the alarm state.

- A camera without an alarm state can be manually assigned to the alarm cell, but it will be automatically replaced with a camera in alarm state if the need arises.

- If alarm and regular cells are on different monitors of the same worksplace, the camera opened in the regular cell on one monitor will also be opened in the alarm cell on the other monitor. The ![!] alarm indicator will be displayed in both cells.

- If all alarm cells are occupied by cameras with active (not acknowledged) alarm state, the new camera will not be displayed.

- If the **Display only on the alarm monitor** option is enabled on the client settings alarm mode, cameras will not be assigned to alarm cells.

- Camera can be manually removed from the alarm cell by selecting the **Hide** item of the cell context menu.

Alarm monitor ⟩

Warning

If the camera is configured to display an archive shift when generating an alarm, the date and time settings must be synchronized in the client and server devices.

If the **Limit the display time of alarm camera on the alarm monitor** option is enabled on the client settings alarm mode, the cameras will automatically hide from the alarm monitor after a set time since the alarm was generated.

If the camera is to be left on the alarm monitor, it can be pinned in the cell using the ![pin] button located in the upper right corner of the cell.

The cells must be pinned according to the following rules:

- The maximum number of assigned cells is limited by the maximum number of alarm monitor cells — 256.

- A camera that appears in the alarm monitor cell will not be automatically pinned to this cell.

- A camera pinned to the alarm monitor cell will not be hidden by timeout.

- If a camera is placed in a assigned cell, it will remain in that cell when the alarm is generated again.

- When reducing the screen grid size, the assigned cell may change its position on the screen

- When a cell is turned to full screen mode, switched to a video wall, forced to close or restarting the application, all cell pinning is reset.

Hotkeys ⟩

For alarms and the guard mode in the workplace settings it is possible to assign the following keyboard shortcuts:

- Open guard mode

- Guard mode on/off

- Acknowledge alarm

- Mark alarm as false

- Ignore alarm

- Open alarm in the archive

- Open the alarm card

- Open cameras nearby

Alarms on maps and object plans ⟩

For cameras placed on the site plans, it is possible to configure the workplace to display their transition to the **Alarm** state.

Note

This capability is not present in some types of licenses.

In this case, Alarm state cameras will be colored red.
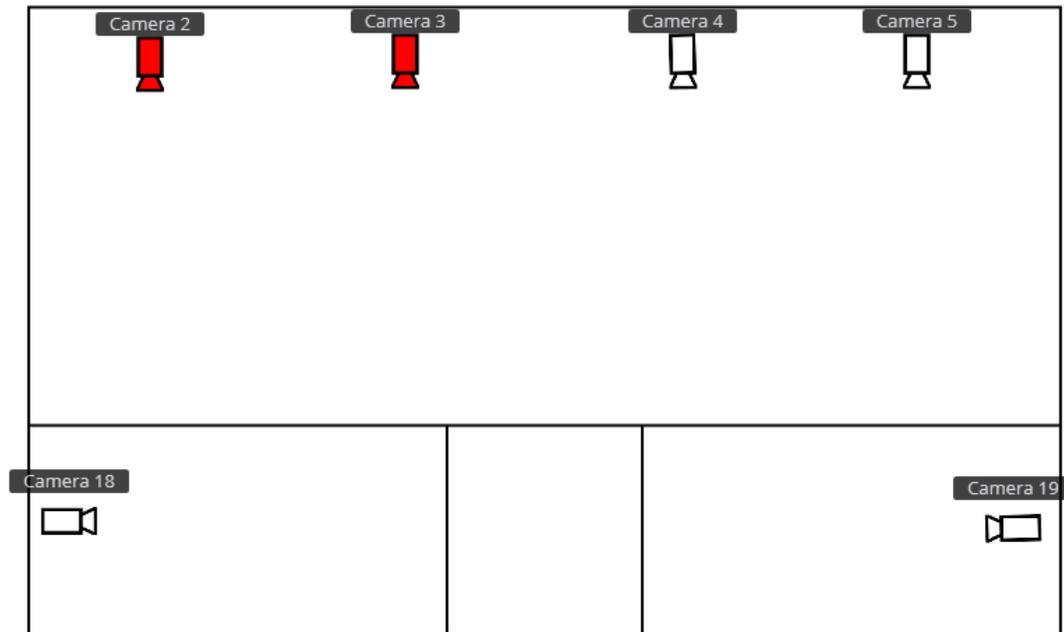
The indication can be removed in one of the following ways:

- By hovering the cursor over the camera and waiting for the preview window to appear.

- By clicking the camera icon on the plan.

- By accepting the alarm in the application window on the regular or alarm monitor.

Warning

Removal of alarm indication on plans or maps does not remove the alarm state on this camera.

Events log

The **Events log** is designed for viewing system and user events.

To switch to the **Events log**, select **Events** from the main menu.
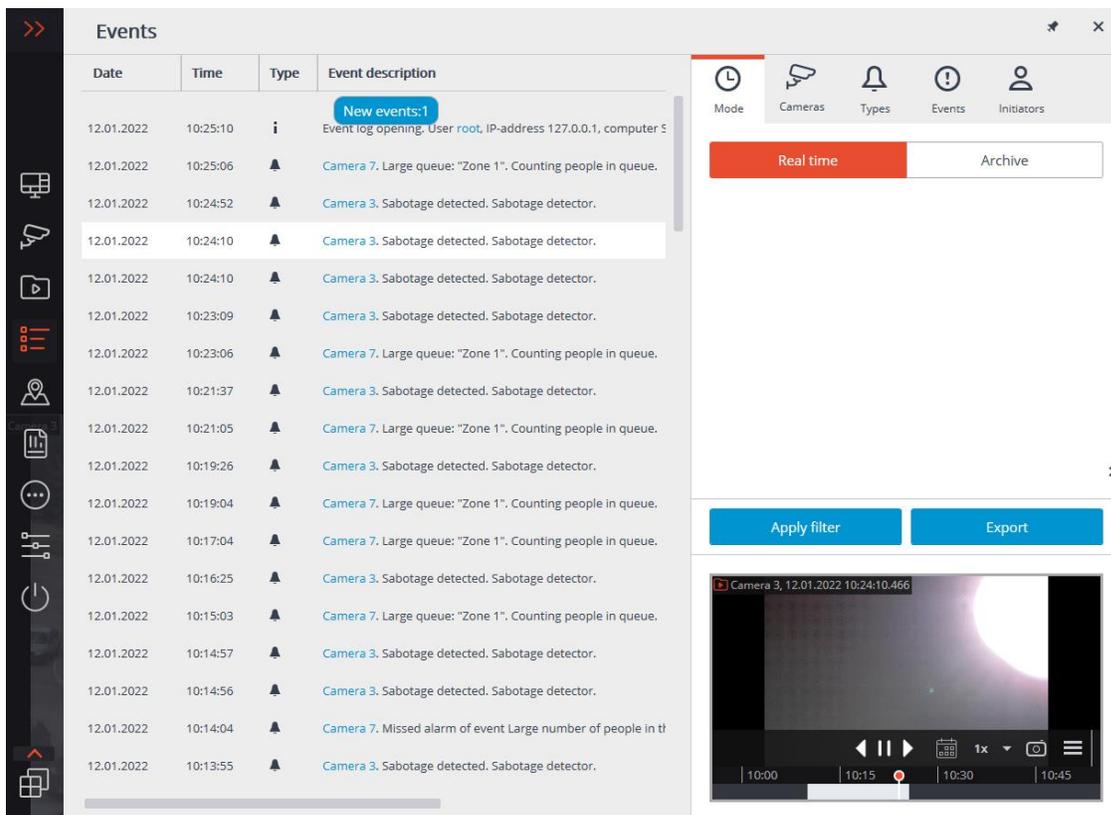
A page with the events list will open. On the right side of this page is a panel allowing you to filter and export event records.

List of events ❯

Each event has its **Time**, **Type** as the icon, and **Event description** displayed.

Note

The **Consider time zones** option must be enabled in the system settings to display the time according to time zone of the camera in the event properties.

The **Event description** contains the name of the event and various attributes related to this event. The list of attributes depends on the event.

It is possible to view events both in real-time and in the archive.
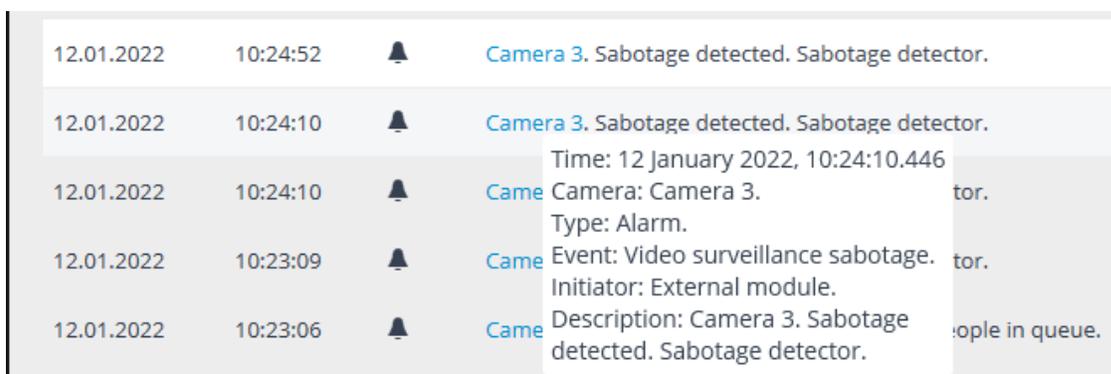
Upon right-clicking on the event the context menu with the following items will be displayed:

- Switch to the frame (only for events linked to the cameras).

- Filter only by this event.

- Exclude the event from the filter.

- Filter only by this camera (only for events linked to cameras).

- Exclude this camera from the filter (only for events linked to cameras).

To filter the list of events by the items selected in the context menu, click the **Apply filter** button.

Filters panel 〉

The filters panel allows to set the parameters for displaying events in the log.

Note

Some filters may not be displayed depending on user permissions and camera settings.

After making changes in the list of filters, click the **Apply filter** button.

The **Mode** filer sets the events display mode:

Real time displays the events in live view. Sorting is performed in reverse chronological order: the new events at the top, the older at the bottom.

Initially, only 150 latest events are displayed, and the new ones are generated during the view.

To refresh the event log, click the **New events** button at the top of the log.

The log is automatically updated with new entries, but this process stops when any of the log entries are selected with a mouse click. The number of new records received since the selection is displayed on the **New events** button at the top of the list of events. Click this button to manually refresh the log and continue receiving events.

Archive displays the archived events within a given time period; you can also specify the order of time sorting in this mode.

The **Cameras** filter allows to filter the events associated with selected cameras, as well as the system events (not associated with cameras).
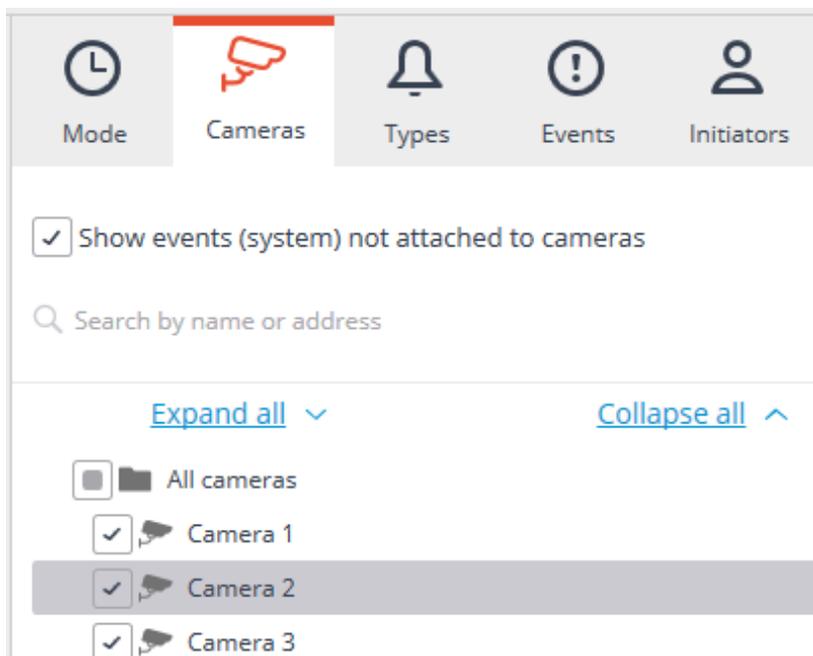
The **Types** filter allows to filter the events by types: **Information**, **Alarm** and **Error**.
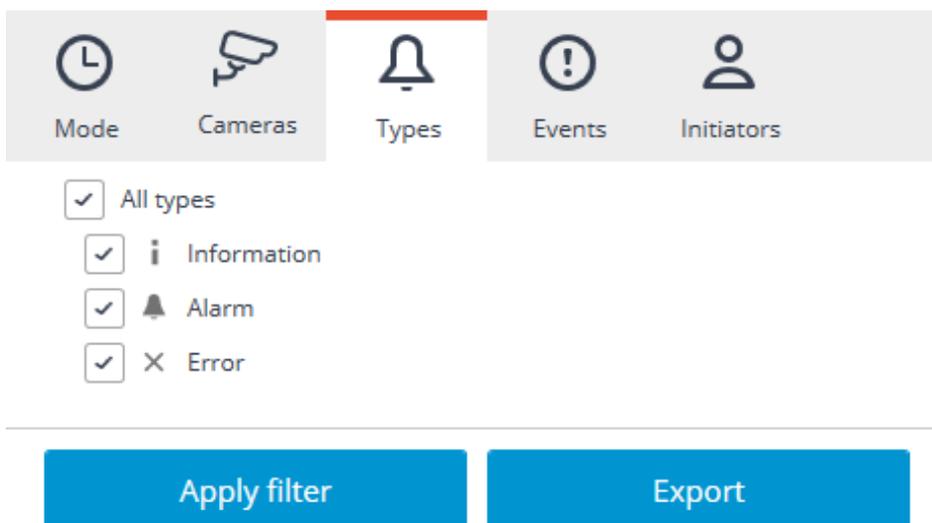
The **Events** filter allows to filter the events by groups and names.
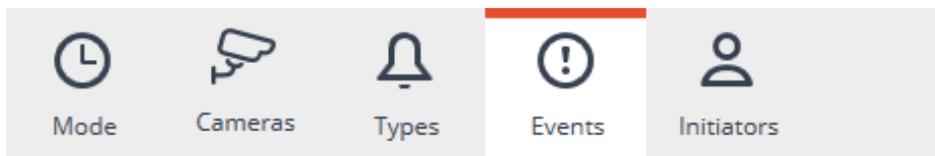
The **Initiators** filter allows to filter the events depending on their initiator.

Export of the Event log ›

To export the Event log, click the **Export** button on the filters panel. In the Export window that opens set the time interval for which the events will be downloaded; if necessary, activate the **Open file after export** checkbox; then click **Start Export**.

Then, in the appeared window, select the folder in which the log file will be saved; in the File type drop-down list specify the saved file format: CSV (text) or XLS (Microsoft Excel); if necessary, change the file name in the relevant field; click **Save**.

Wait until the export end, and then close the **Export** window.

The events set by the current filters will be exported to the file.

Below is an example of an Excel event log export file.

Camera time	Time	Camera	Category	Event	Initiator	Description
17.03.2024 20:51:19.070	17.03.2024 20:51:19.070		Information	Event log opened	User	Event log opening. Client type: Desktop, user: ro
17.03.2024 20:50:43.642	17.03.2024 20:50:43.642		Information	Recording speed	System	Recording speed: 0.83 MByte / s. Subsystem to
17.03.2024 20:50:40.457	17.03.2024 20:50:40.457		Information	Monitoring	User	Monitoring. Client type: Desktop, user: root, IP-a
17.03.2024 20:50:40.281	17.03.2024 20:50:40.281		Information	Successful authentication	User	Successful authentication. Client type: Desktop,
17.03.2024 20:50:32.191	17.03.2024 20:50:32.191	Camera 1	Information	Motion start	System	Camera 1. Motion start. Zone: Area 1.
17.03.2024 20:49:52.109	17.03.2024 20:49:52.109	Camera 1	Information	Established connection with camera	System	Camera 1. Established connection with the came
17.03.2024 20:49:47.315	17.03.2024 20:49:47.315		Information	Server started	System	Server started. Server 1 (192.168.100.119).
17.03.2024 20:46:37.916	17.03.2024 20:46:37.916		Information	Server stopped	System	Shutting down the server. Server 1 (192.168.100.

Hotkeys ›

For the event log, in the Workstation settings, you can assign the following keyboard shortcuts:

- Open the event log

- Events

Site plans

Eocortex allows placing and interacting with cameras, sensors, and relays on the created plans of sites. In addition, if you set the field of view for the camera, you can view the video directly on the plan.

To get access to the **Object plans** section, select the **Plans** item in the main menu.
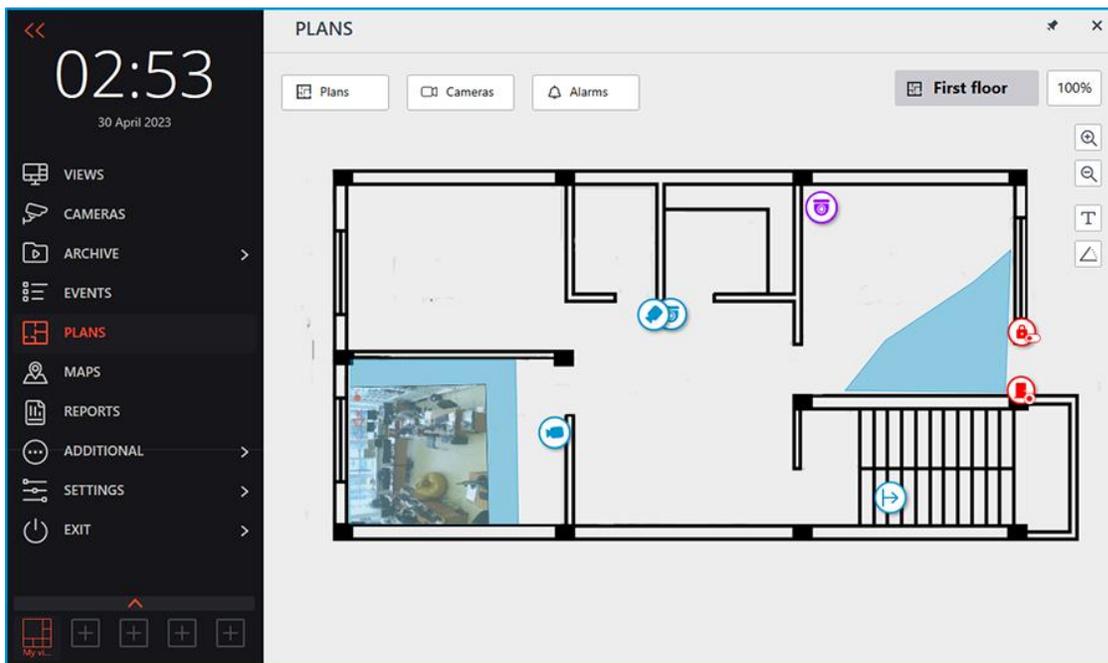
The **Plans**, **Cameras**, and **Alarms** buttons are available at the top of the screen. Clicking the button opens a slide-out panel on the left with the relevant information.

The center of the screen displays the plan with its name and scale.

A bar with the following buttons is available on the right side of the plan:

⊕ **Zoom in**: Scales the plan up.

⊖ **Zoom out**: Scales the plan down.

Note

You can also use the mouse wheel to change the scale of the plan.

T **Show camera names**: Hides or displays the names of all cameras on the plan.

△ **Show fields of view**: Hides or displays the field of view of all cameras on the plan. If no fields of view are configured, this button will not be displayed on the panel.

👣 **Show heat maps**: Overlays a heat map for the specified period on the video in the camera's field of view. If there are no cameras with the **Traffic Density Heat Map** module configured, this button will not be displayed on the panel.

Plans ›
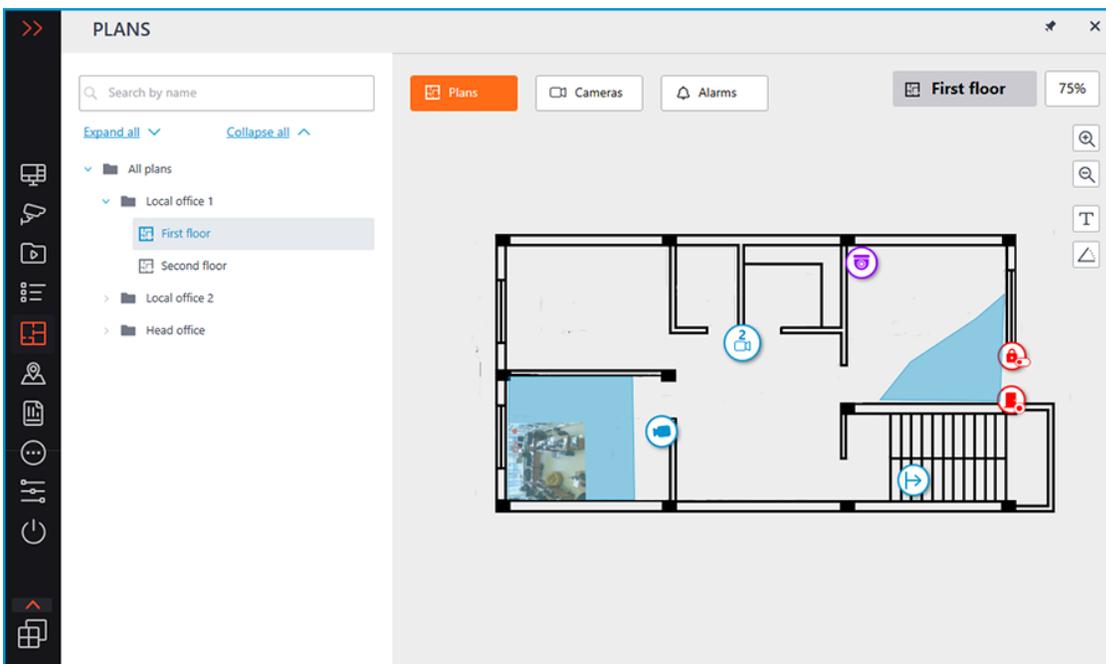
This tab displays the plan tree. Switching between plans is possible by clicking on the needed plan in the tree or via the configured transitions indicated by the

↦ button.

Note

Each plan has its camera tree when clicking the **Cameras** button.

Cameras ›

This tab contains the cameras tree.

Cameras can have the following attributes:

- : the camera has enabled video analytics module;

- : the camera has enabled sound receiving option;

- : the camera has enabled PTZ;

- : the camera has enabled alarm inputs/outputs.

- **Colored labels**: the camera has tags with the displayed colors;

If necessary, you can hide the attributes by clicking the ⊚ icon on the right side of the tree.

Hovering the cursor over the camera opens a preview window that contains video from the camera and a list of its attributes.

The same preview window opens when hovering the cursor over a camera located outside the cameras tree.

To select a camera manually, you can also find it by **name** or **IP address** using the search field above the camera's tree.

You can filter cameras by clicking the ▽ icon and customizing the following filter options:

- Camera settings Filter by the following attributes: 🔊, ⊙, 🔢 .

- Video analytics

- Tags

Note

The availability of filtering options depends on the settings of the cameras. Filtering applies immediately after selecting an item.

If necessary, it is possible to collapse the filtering by clicking the ▽ filter button. When the filtering is applied and collapsed, the filter icon changes to ▼ .

To quickly jump to a camera is on the plan, select this camera in the tree and click **Show on plan** in the context menu. The same way the sensors and relays are on the plan can be switched to.
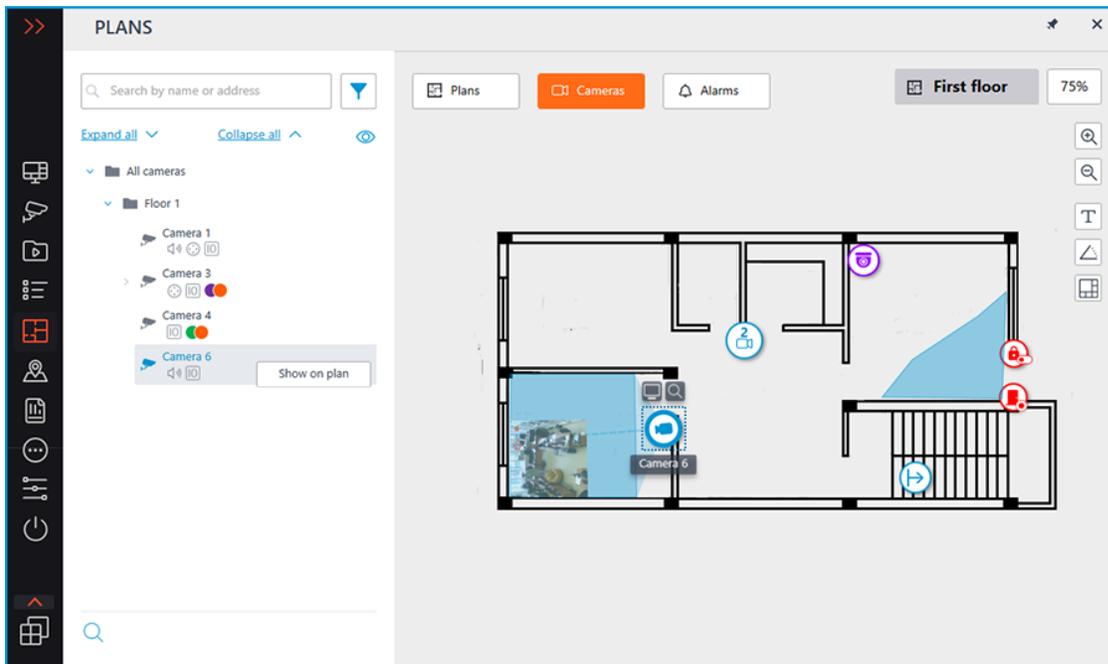
When a camera is selected on the map, the following buttons will pop up around the camera:

- Viewing video from the camera in full screen mode

- Viewing the camera in the tree

Note

Also, when a camera is selected, its name will be displayed. By default, it is hidden.

It is possible to display video in the field of view with the proper setting of the camera.
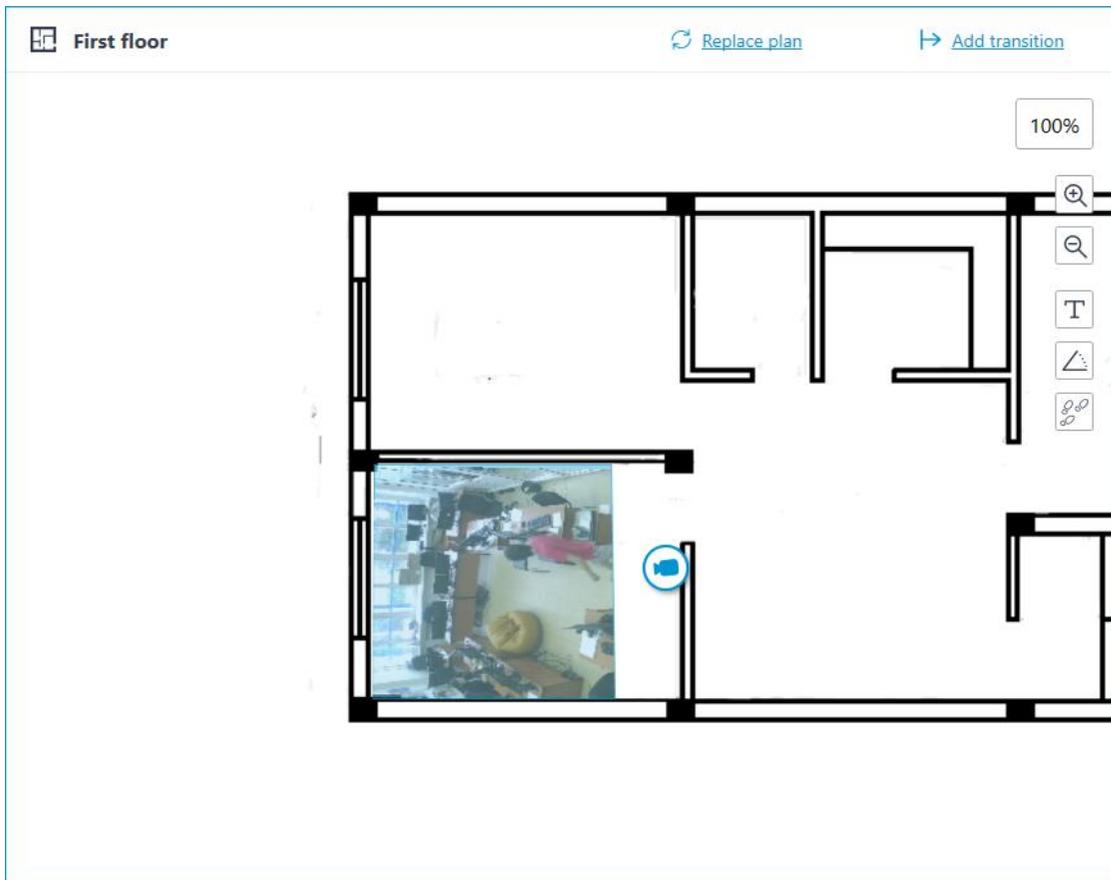
By selecting one or more cameras, you can create new client views containing the selected cameras. To select multiple cameras, right-click the mouse and stretch the rectangle, capturing the desired cameras.
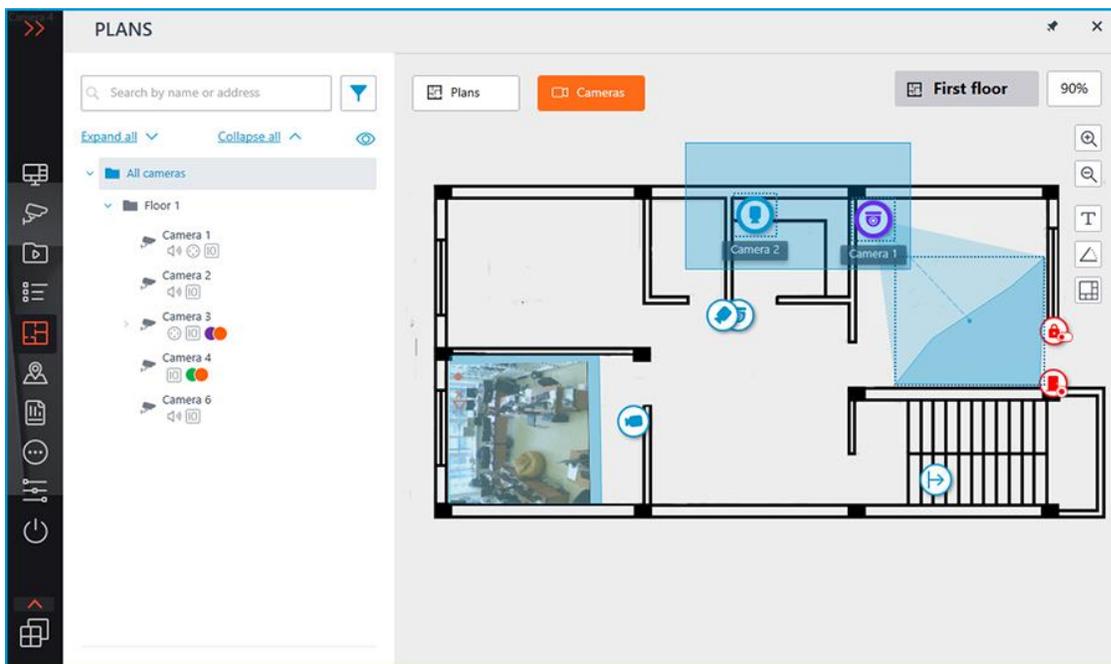
To create a view made up of the selected cameras, click the ⊞ button.
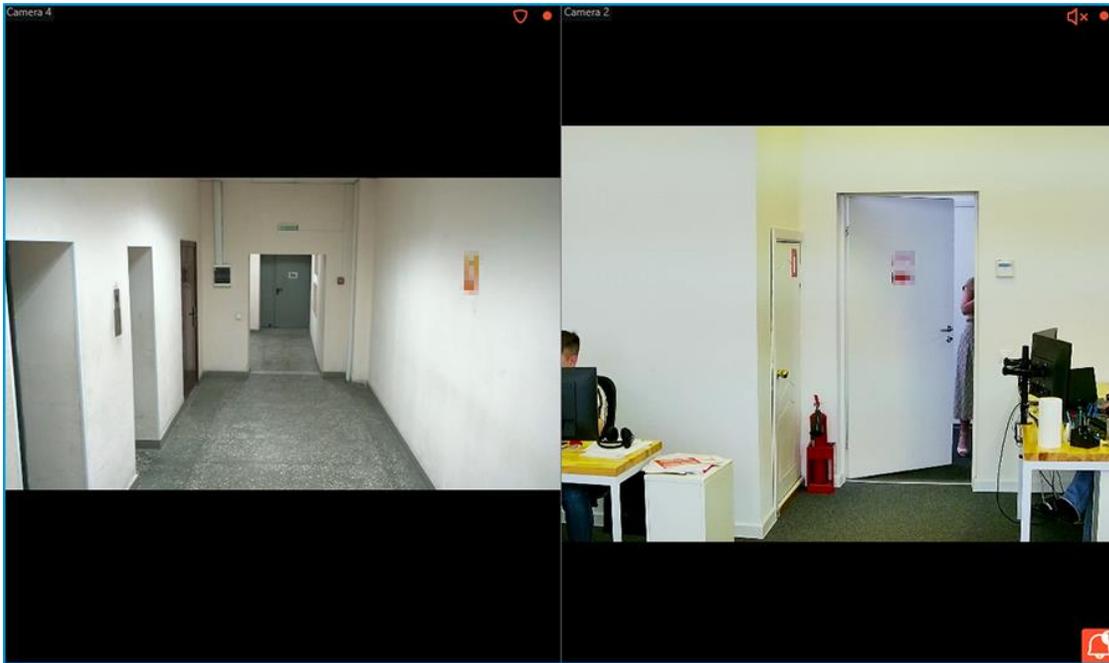
In addition to cameras, the plan can display sensors and relays attached to the alarm inputs and outputs of cameras.

The state of the sensors and relays is indicated by its color: red — off, green — on.
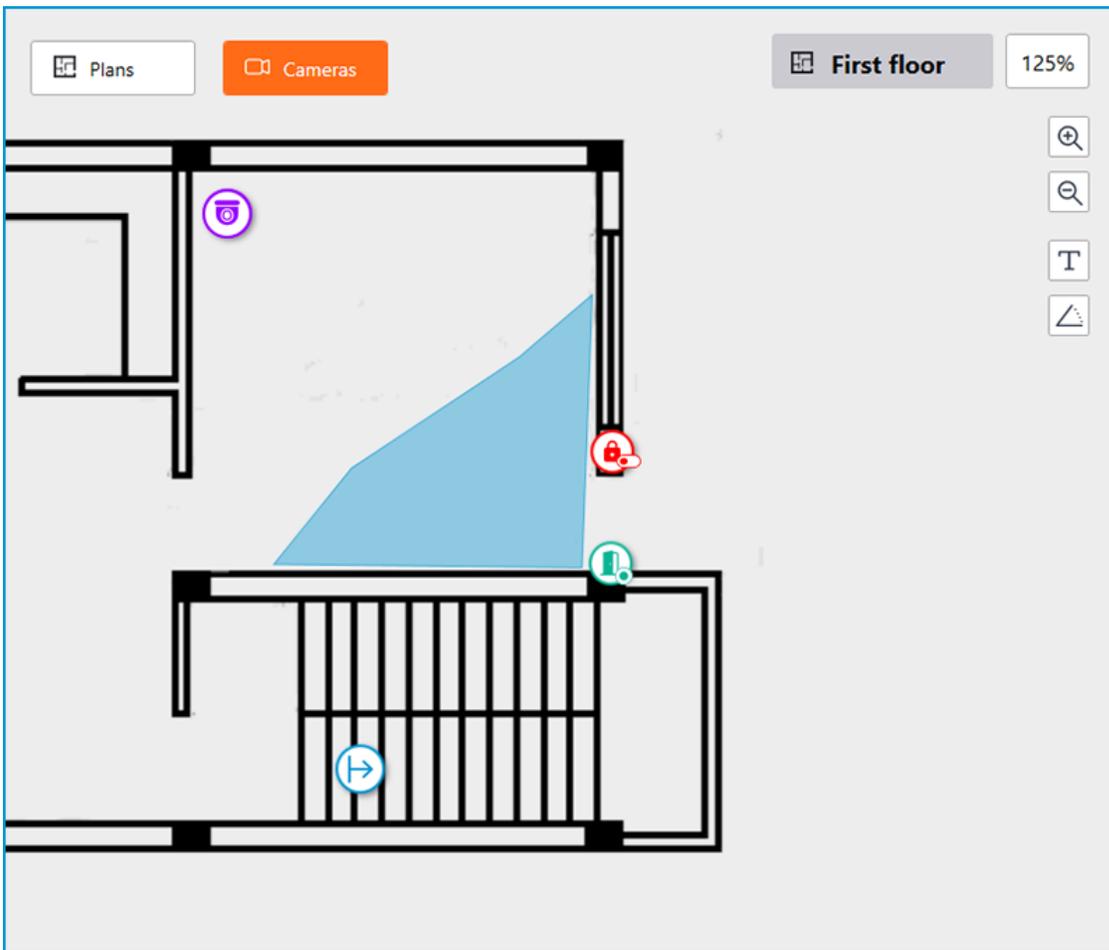
When you change the scale of the plan - cameras, sensors, relays, and transitions are grouped into markers.
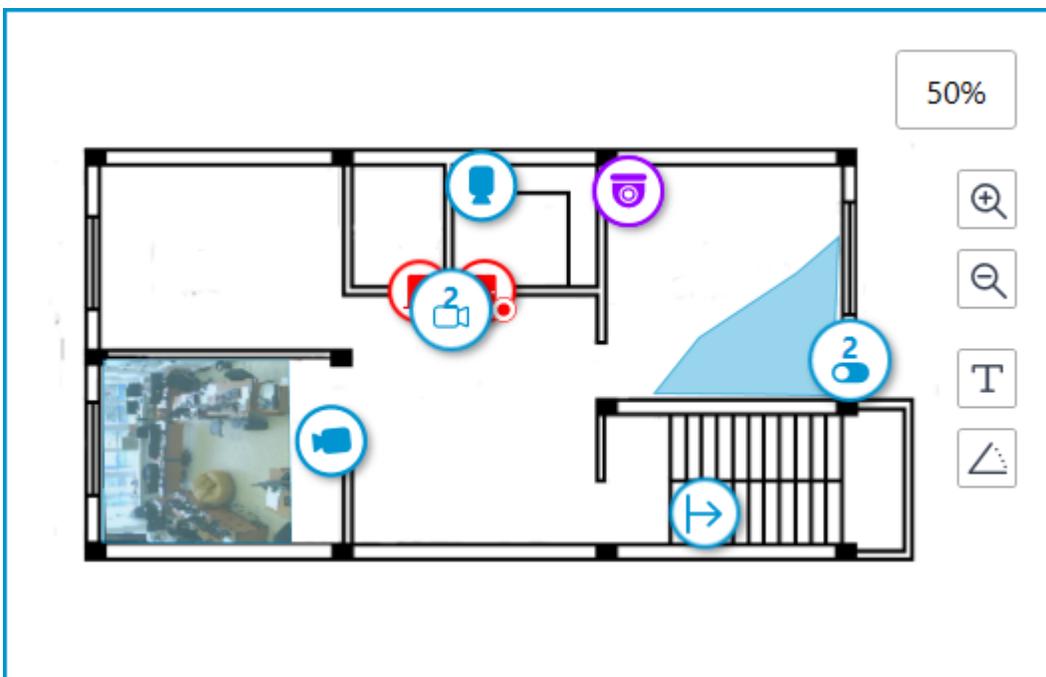
Elements of the same type located close to each other on the plan are grouped into one marker with the number of devices and their type: camera, sensor, relay, or transition.

Elements of different types are grouped into one marker with the number of devices.
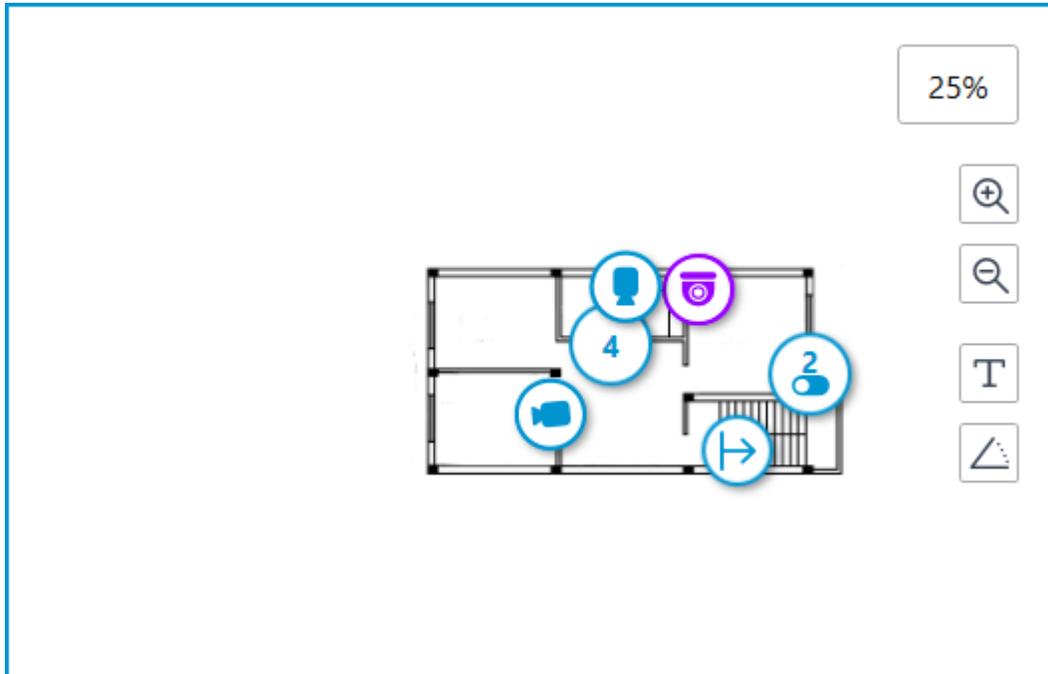
Note

If the number of grouped elements is more than 99, the number on the marker will be displayed as **99+**.

Alarms 〉

To enable displaying camera alarms, activate the **Guard mode** option in the **Show alarms on plans and maps** section of the workplace settings.
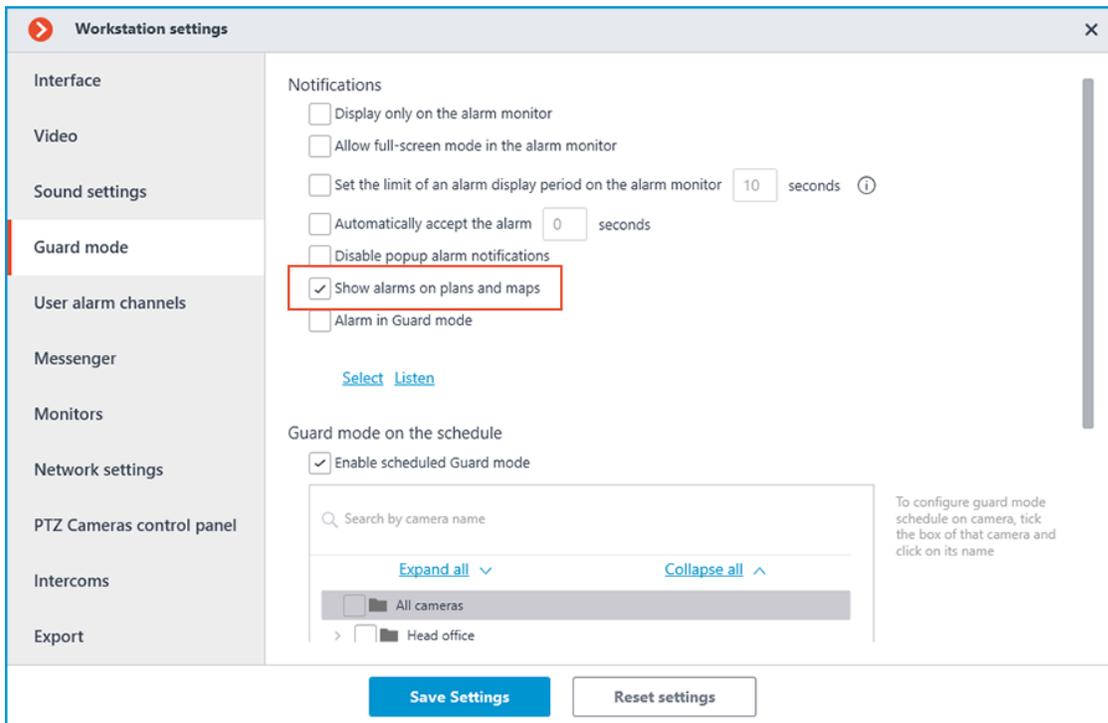
This tab displays alarms from all cameras.
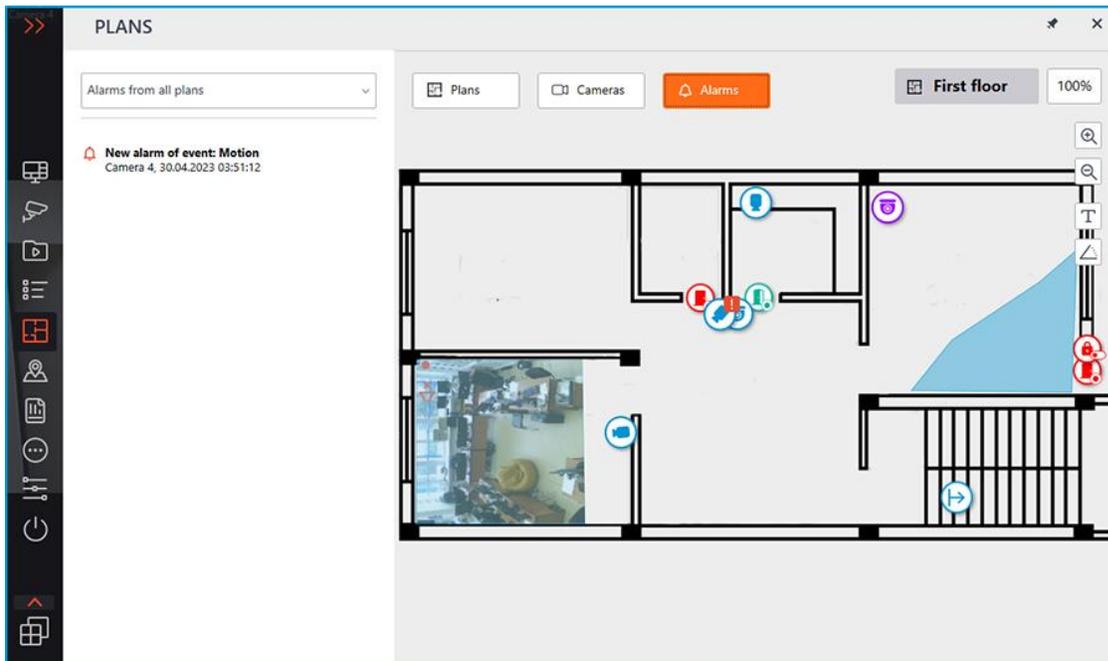
To view the active alarms for the cameras of a certain plan, select the needed plan from the drop-down list.
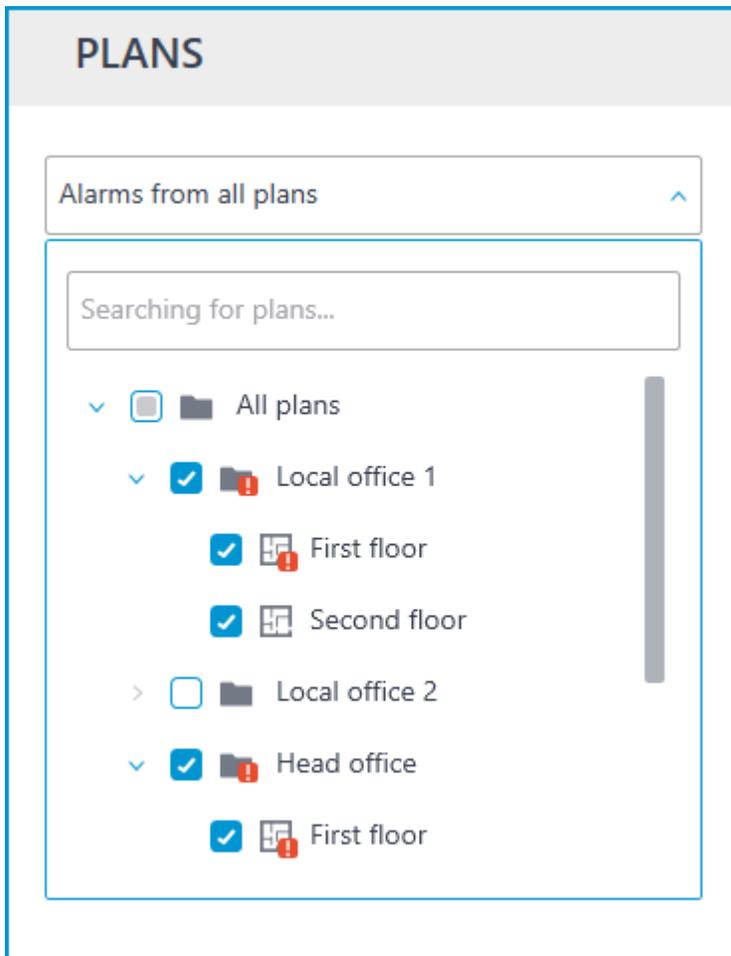
In addition to the alarm indicators, the cameras on the map may also have indicators of a broken or missing connection with the camera.

Alarms are indicated with a red square, broken or missing connection with a yellow triangle. When placing the cursor on the alarm indicator, the event that caused it will be shown.
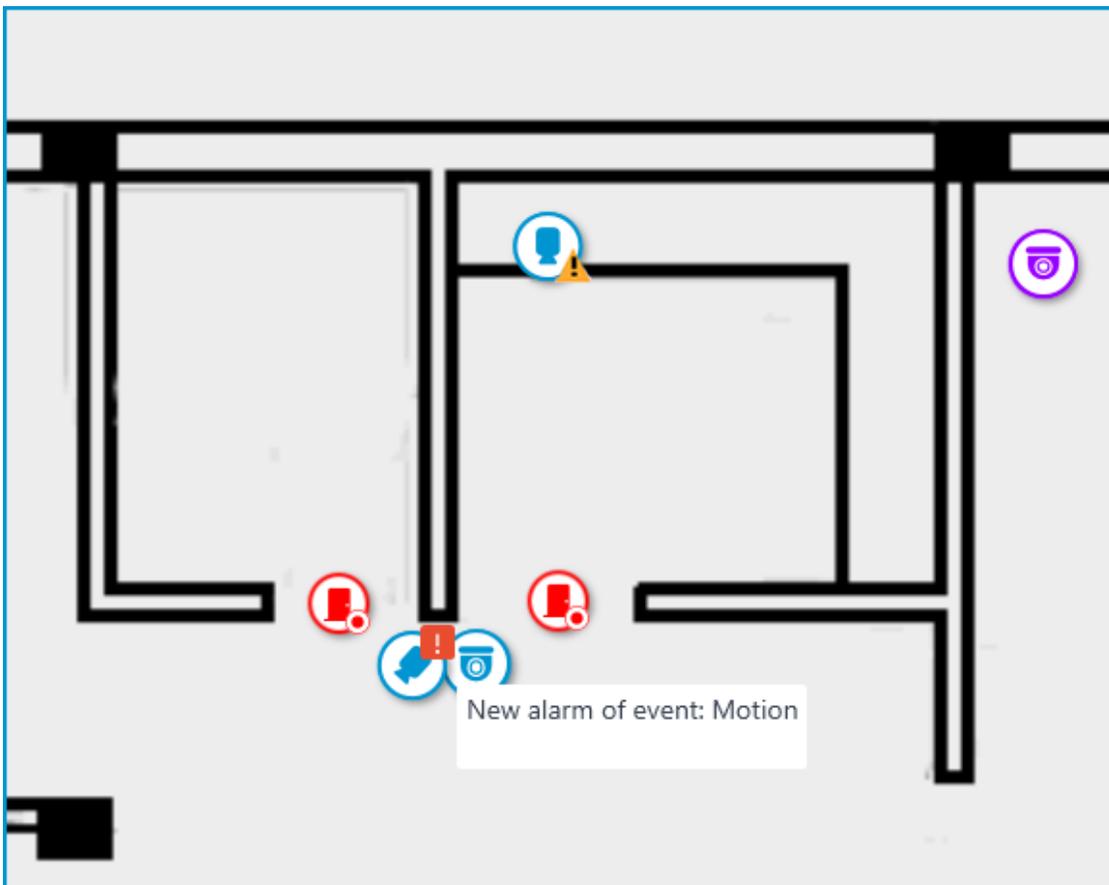
Note

When the connection with the camera is broken, the alarm indicator will be hidden. When the connection is restored and the alarm has not been acknowledged yet, the alarm indicator will be displayed again.

Also, alarm indicators can be displayed on the plans in the plans tree:

Grouped camera markers also have alarm indicators. If the group contains cameras with an alarm and cameras with a broken or missing connection, both indicators will be displayed.
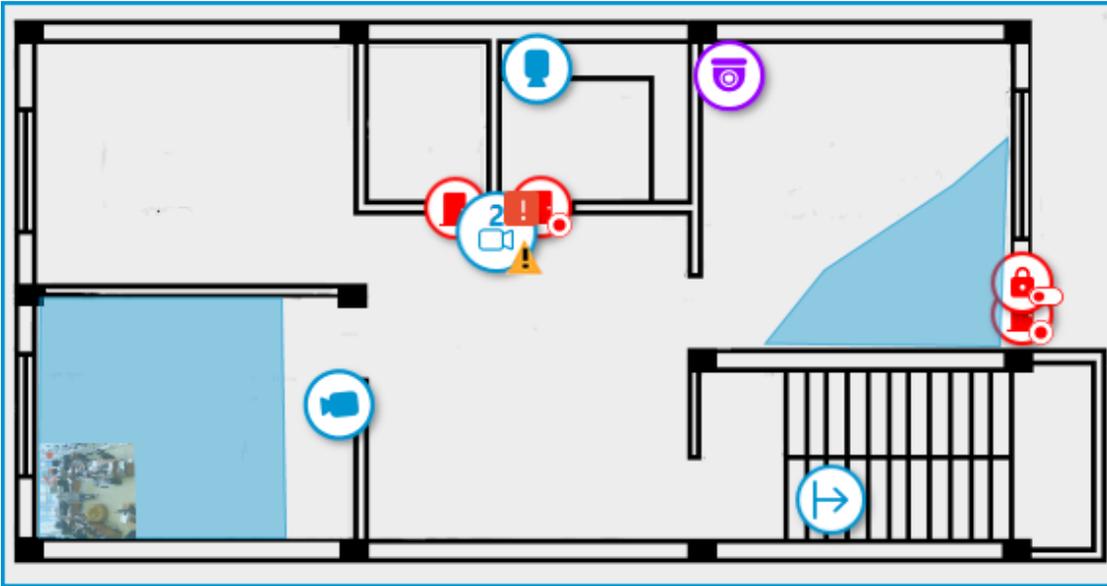
Camera cells >

It is possible to configure displaying of camera cells with video in the Object plans section. To do this, in the **Interface** tab of the workplace settings, select the grid of cells to be used when working with plans.
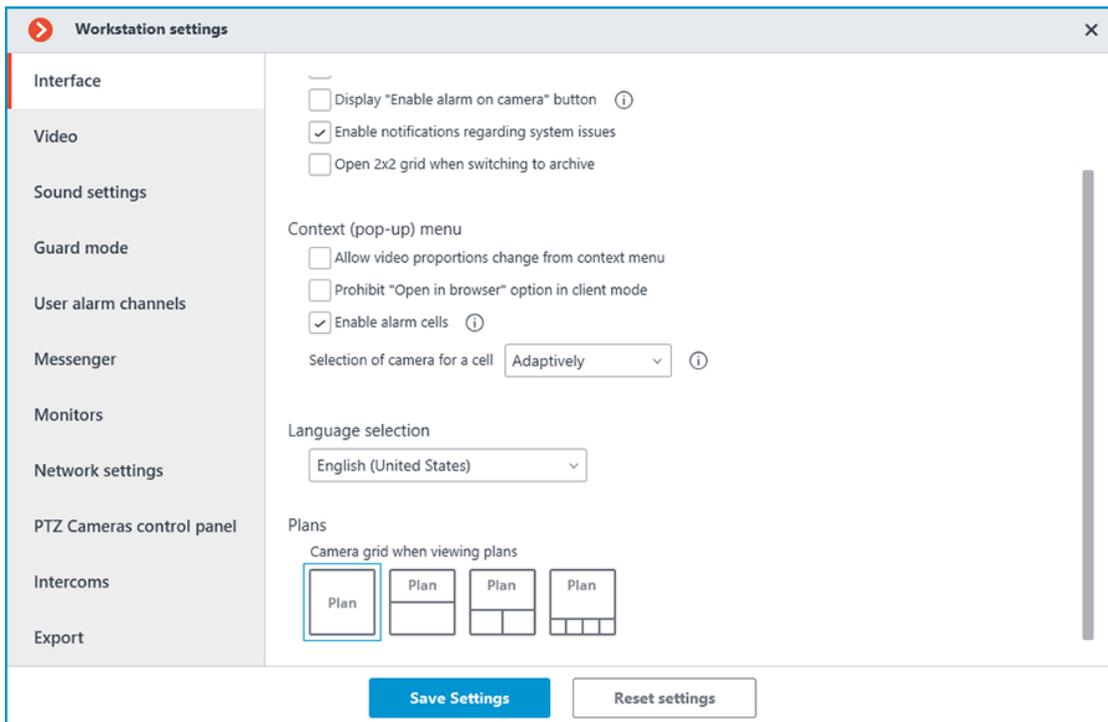
The following displaying options are available:

- No camera cells;

- One camera cell;

- Two camera cells;

- Four camera cells.
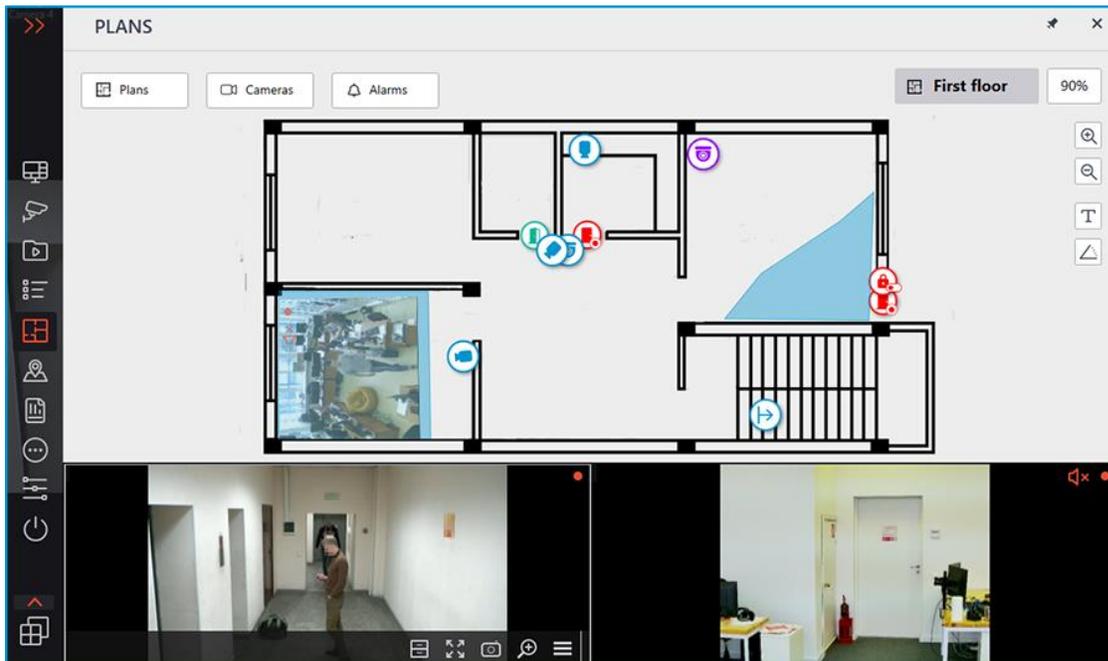
To be able to assign these cells as alarms, enable the **Enable alarm cells** option available in the same window.

The height of the cells panel can be changed by dragging its top edge.
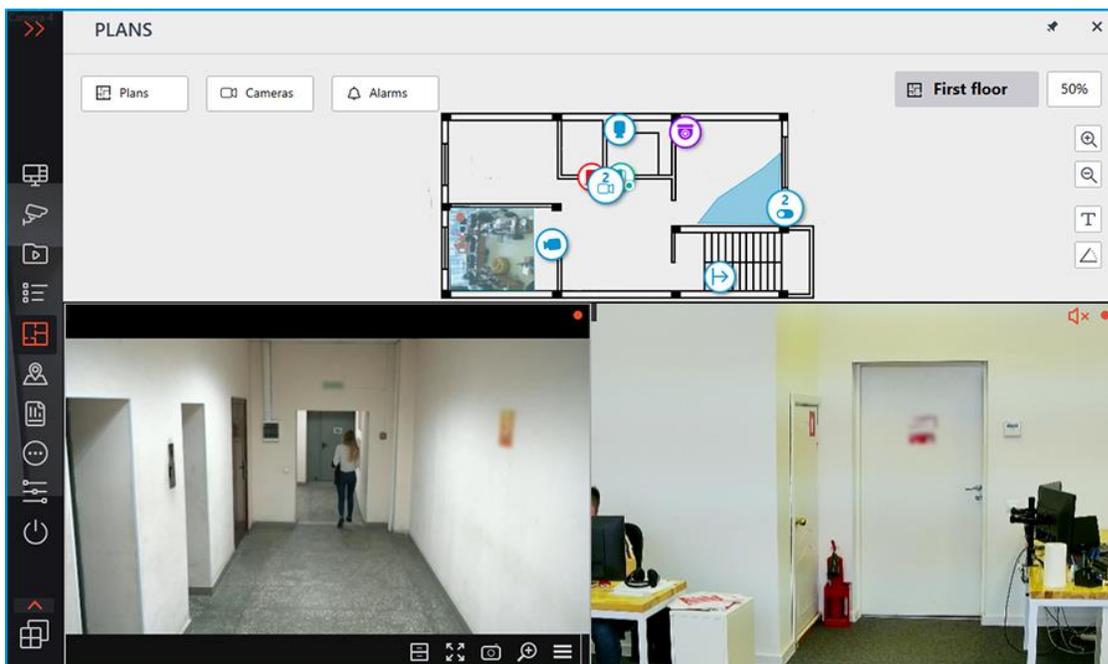
Camera can be added to a cell through the context menu of the cell or by dragging the camera from the plan. The indicator of the alarm that happened on the camera will also be displayed in this cell.

Heat map ❯

Heat map — displays the data of the Traffic Density Heat Map module on the plan.

Note

This option is available only if the relevant module is configured on the cameras.

To display the heat map, click the 🐾 button and set the required time interval, then click **Apply**.
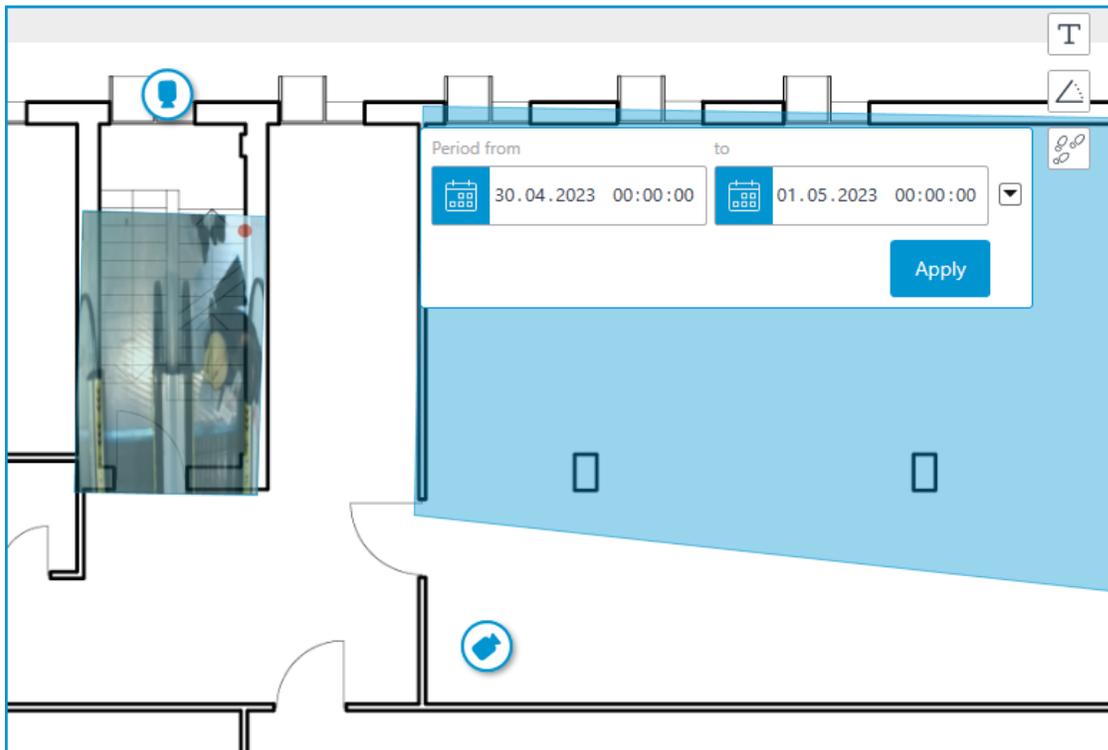
Heat maps will be displayed in all configured camera fields of view. The heat map image completely reflects how the video was configured in the field of view and crops to match its shape in exactly the same way.
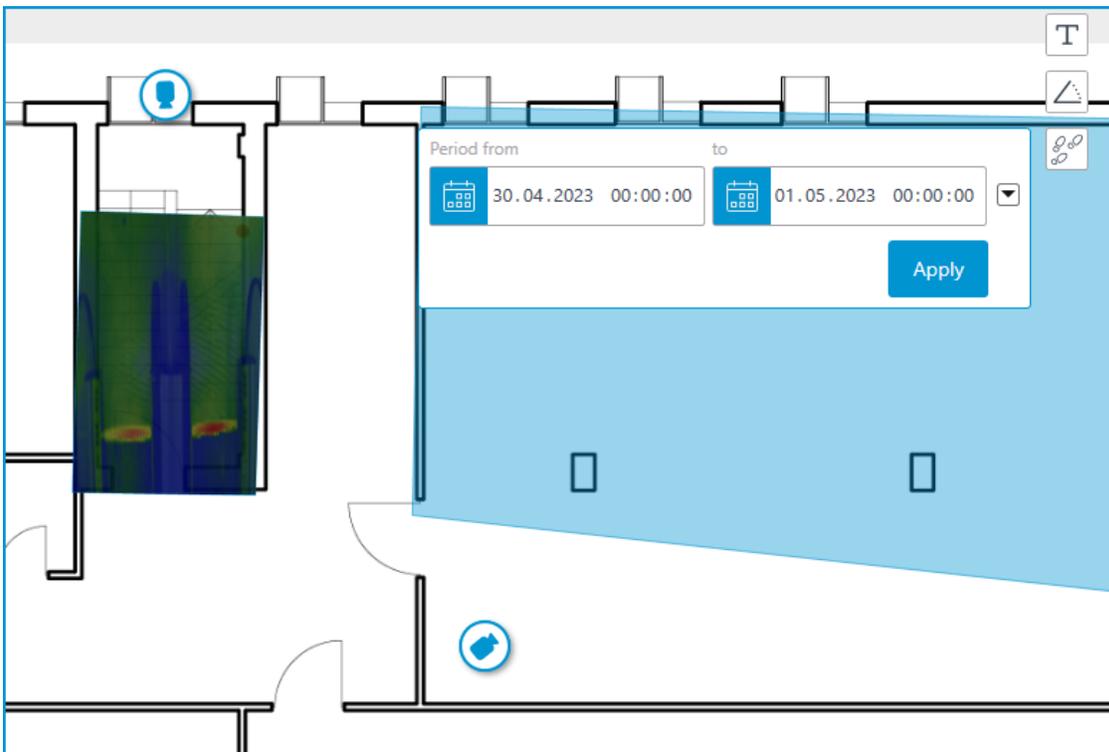
Cross camera tracking >

When selecting cameras in the Cross-camera tracking, the plans associated with them are displayed. It is possible to change the scale of the plan with the mouse scroll wheel and move over the plan by dragging it with the left mouse button held.

Note

This option is available only if the relevant module is configured on the cameras.
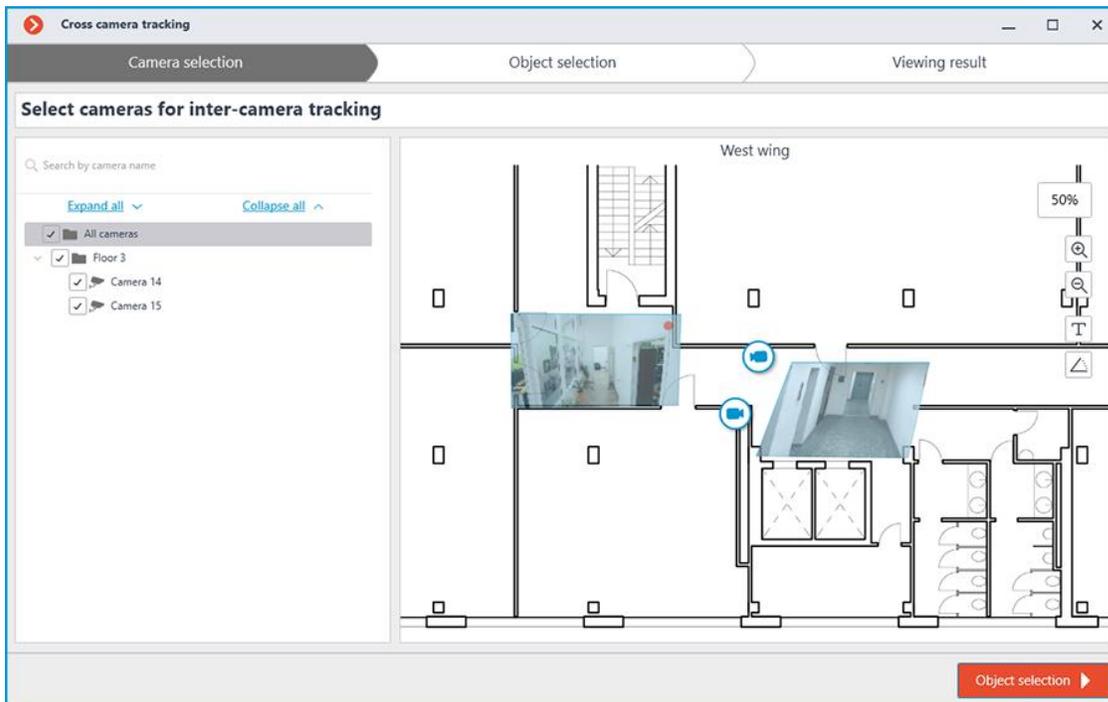
To switch to plans, you can assign the keyboard shortcuts in the Workstation settings.

Interactive Maps

Note

This feature is available only for **Enterprise** and **ULTRA** licenses.

Eocortex allows placing and interacting with cameras, sensors, and relays on the geographic maps provided by the following map services: **Google Maps** and **OpenStreetMap**.
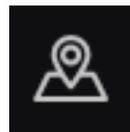
To get access to the **Maps** section, select the **Maps** item in the main menu.
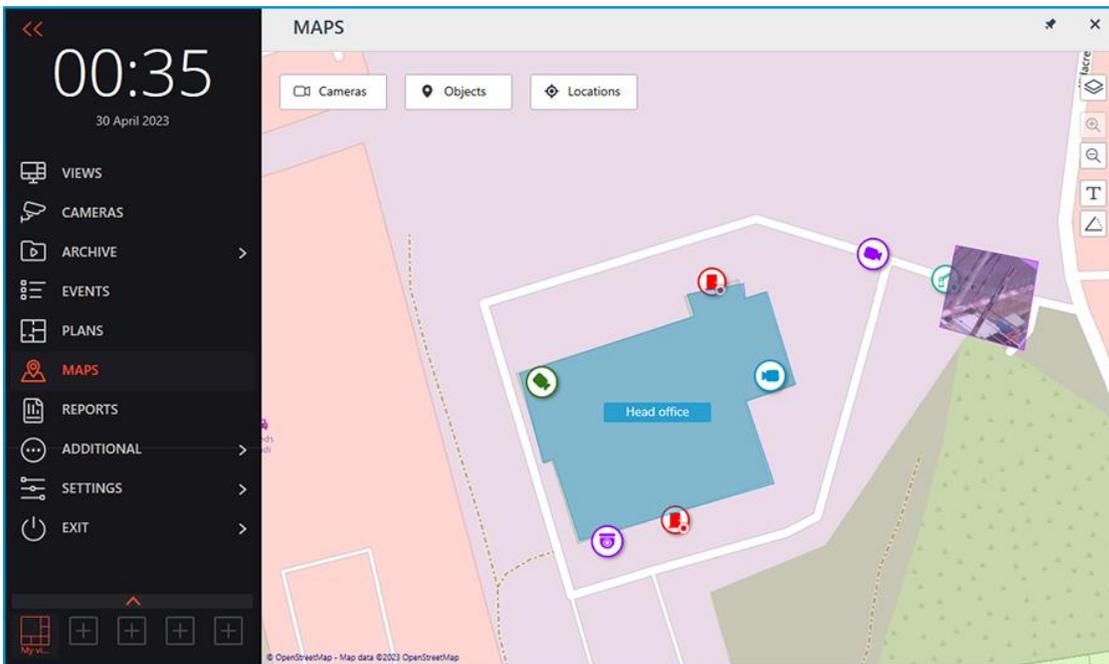
A bar with the following buttons is available on the right side of the map:

Change layer: Changes the current map layer.

Zoom in: Scales the map up.

Zoom out: Scales the map down.

Note

The scale can also be changed with the mouse wheel.

Show camera names: Hides or displays the names of all cameras on the map.

Show fields of view: Hides or displays the field of view of all cameras on the map. If no fields of view are configured, this button will not be displayed on the panel.

Open in the optimal grid: Creates a view from the cameras selected on the map. If no cameras are selected, this button is not in the panel.

The **Cameras**, **Objects**, **Locations**, and **Alarms** buttons are at the top of the screen. Clicking the button opens a slide-out panel on the left with the relevant information.

Cameras >

This tab contains the cameras tree.

Cameras can have the following attributes:

- : the camera has enabled video analytics module;

- : the camera has enabled sound receiving option;

- : the camera has enabled PTZ;

- : the camera has enabled alarm inputs/outputs.

- **Colored labels**: the camera has tags with the displayed colors;

If necessary, you can hide the attributes by clicking the icon on the right side of the tree.

Hovering the cursor over the camera opens a preview window that contains video from the camera and a list of its attributes.

The same preview window opens when hovering the cursor over a camera located outside the cameras tree.

To select a camera manually, you can also find it by **name** or **IP address** using the search field above the camera's tree.

You can filter cameras by clicking the ⧩ icon and customizing the following filter options:

- Camera settings Filter by the following attributes: 🔊, ⊕, 🔟 .

- Video analytics

- Tags

Note

The availability of filtering options depends on the settings of the cameras. Filtering applies immediately after selecting an item.

If necessary, it is possible to collapse the filtering by clicking the ⧩ filter button. When the filtering is applied and collapsed, the filter icon changes to ⧩ .

To quickly go to the camera placed on the map, select it in the list and click the **Show on map** item in the context menu. The same method works for the sensors and relays located on the map.
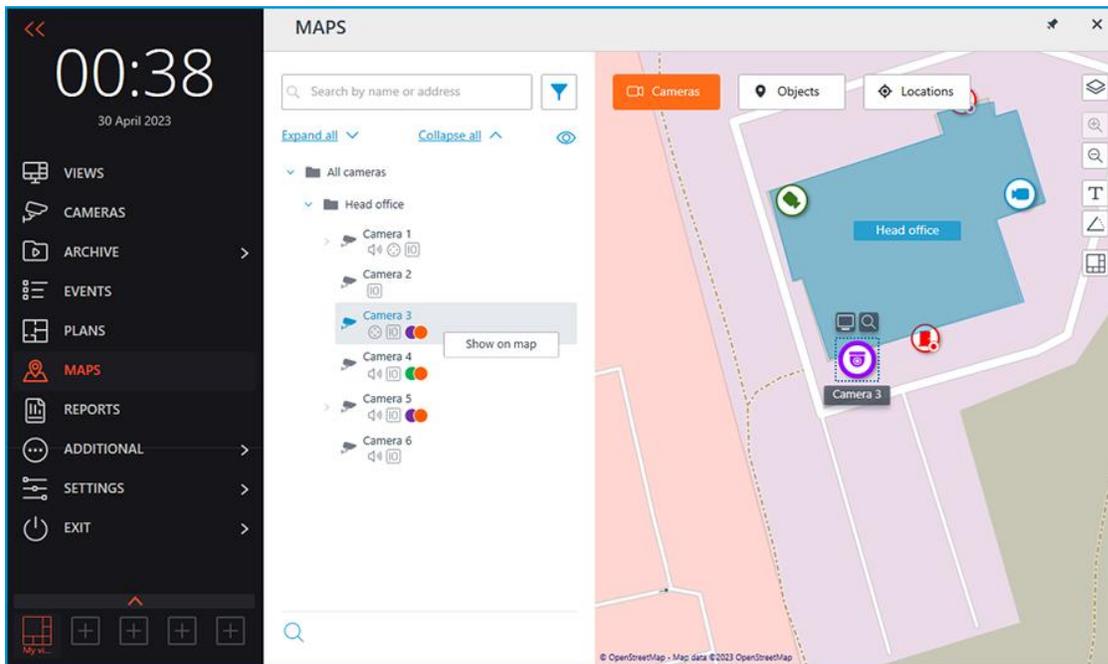
Alternatively, it is possible to go to the camera on the map by selecting **Show on map** in the camera cell context menu. You can use that option when viewing from both live view and the archive, including simultaneous playback of the archive of multiple cameras.
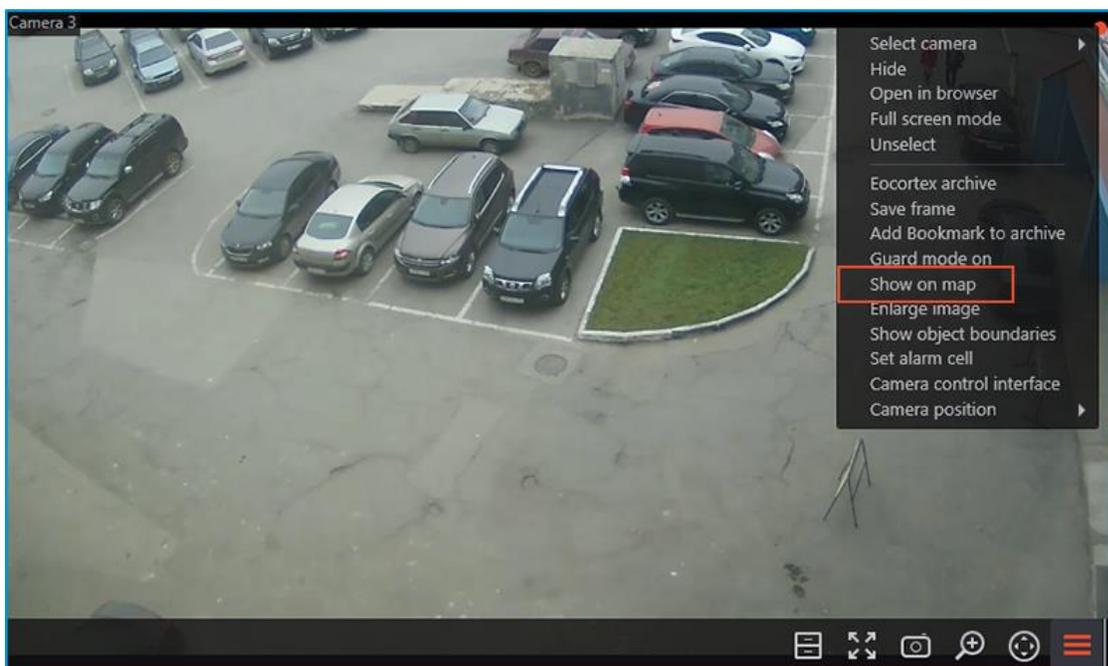
When a camera is selected on the map, the following buttons will pop up around the camera:

- Viewing video from the camera in full screen mode

- Viewing the camera in the tree

Note

Also, when a camera is selected, its name will be displayed. By default, it is hidden.

It is possible to display video in the field of view with the proper setting of the camera.
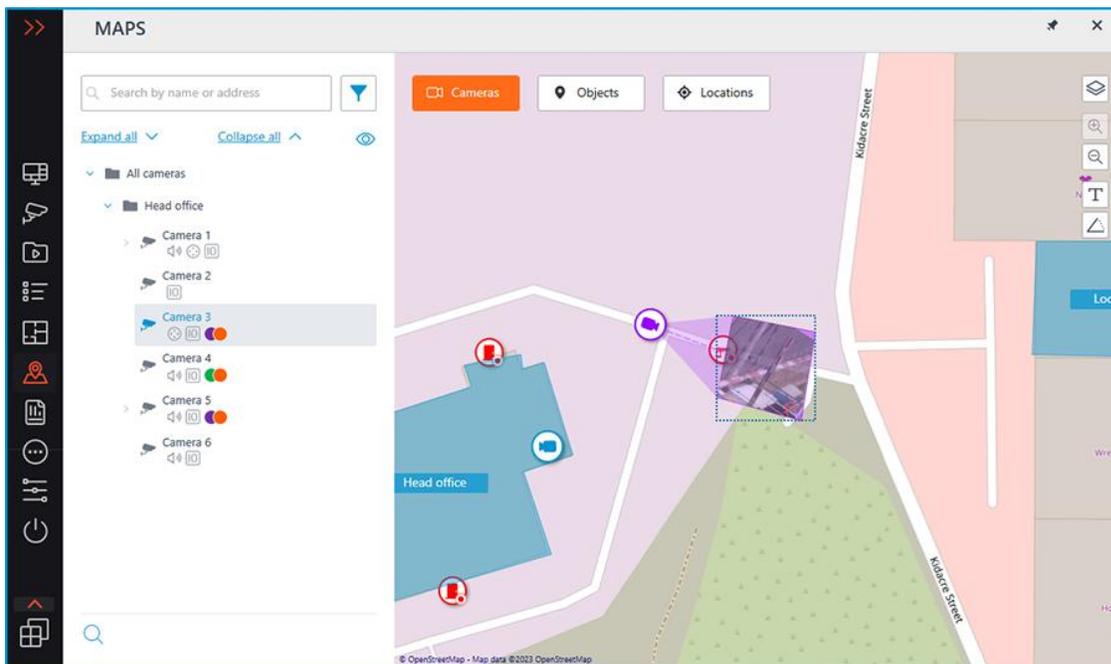
By selecting one or more cameras, you can create new client views containing the selected cameras. To select multiple cameras, right-click the mouse and stretch the rectangle, capturing the desired cameras.
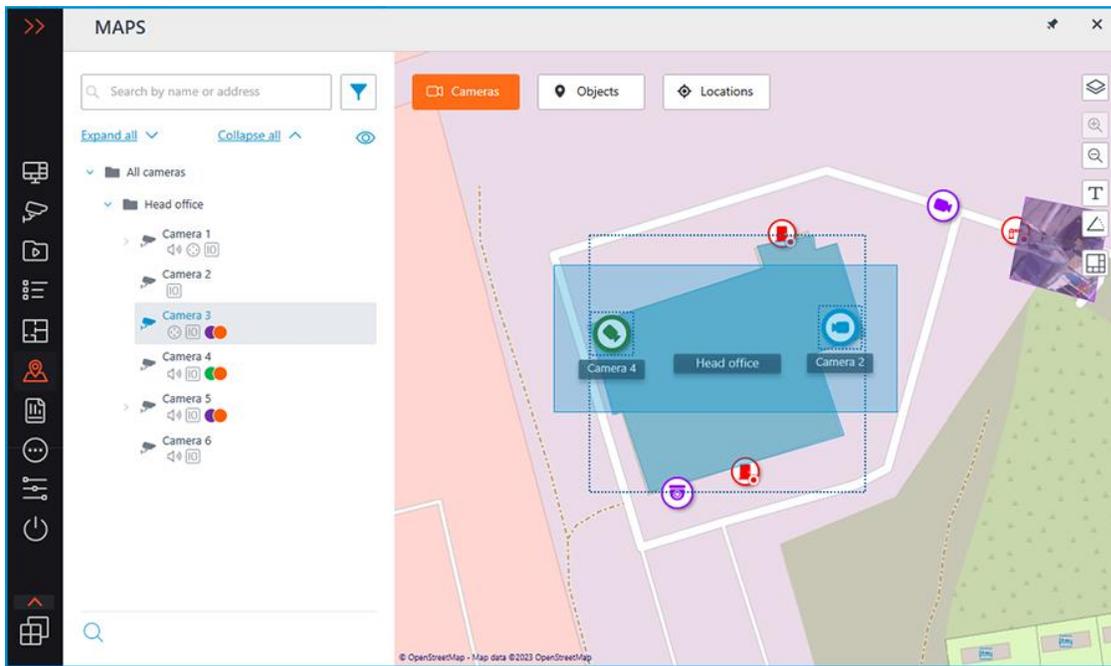
To create a view made up of the selected cameras, click the ⊞ button.
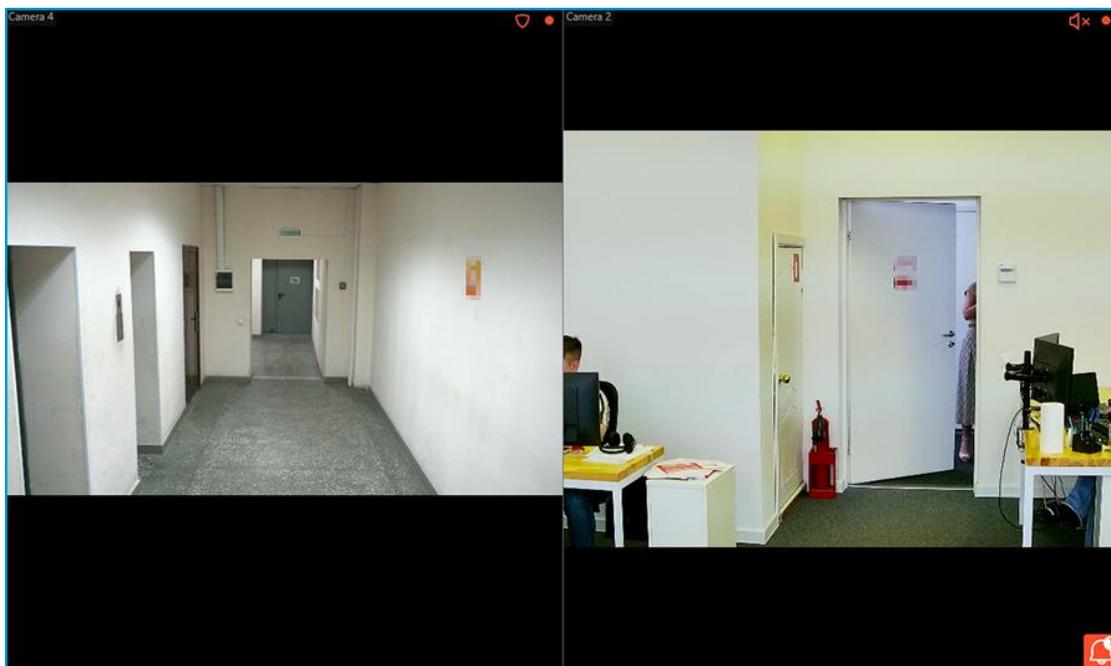
In addition to cameras, the map can display sensors and relays attached to the alarm inputs and outputs of cameras.

The state of the sensors and relays indicates with its color: red — off, green — on.
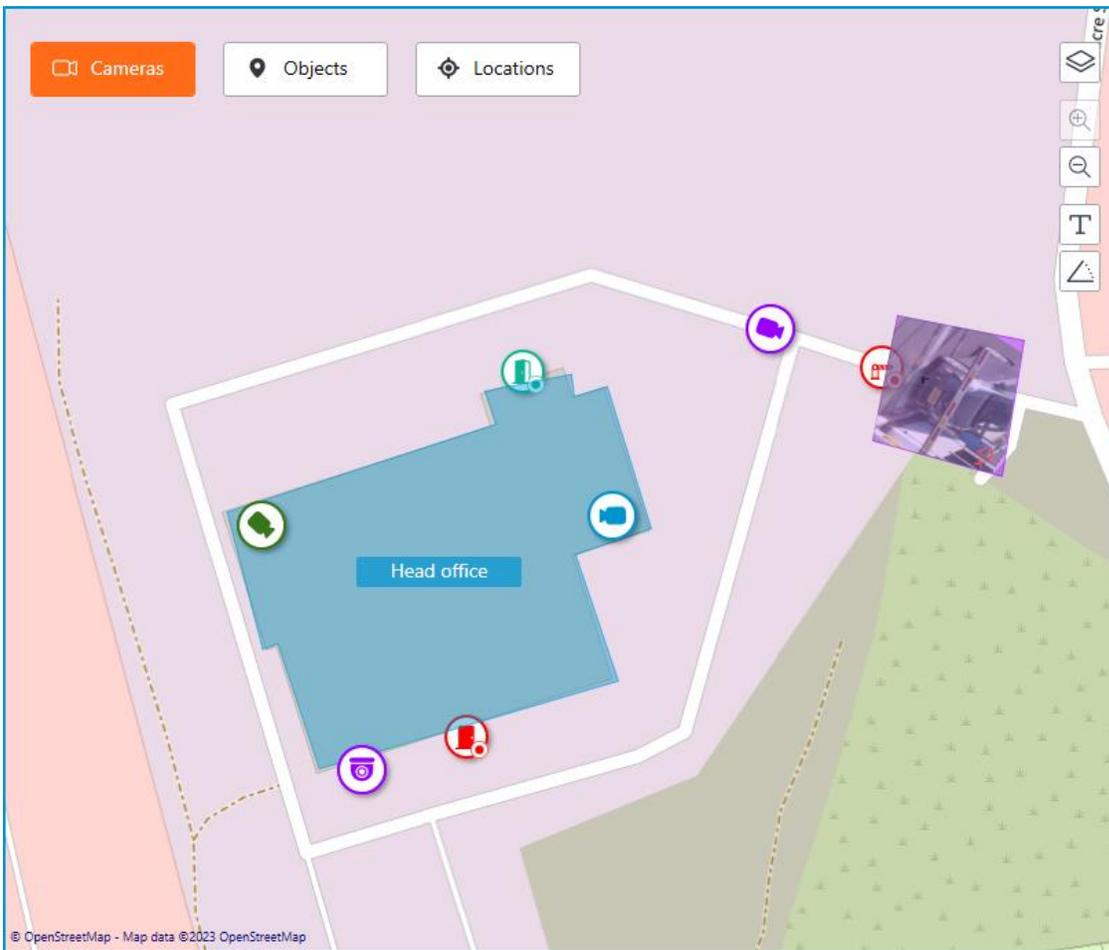
When the scale of the map is changing, cameras, sensors, relays, and sites on the map can be clustered into the group markers.
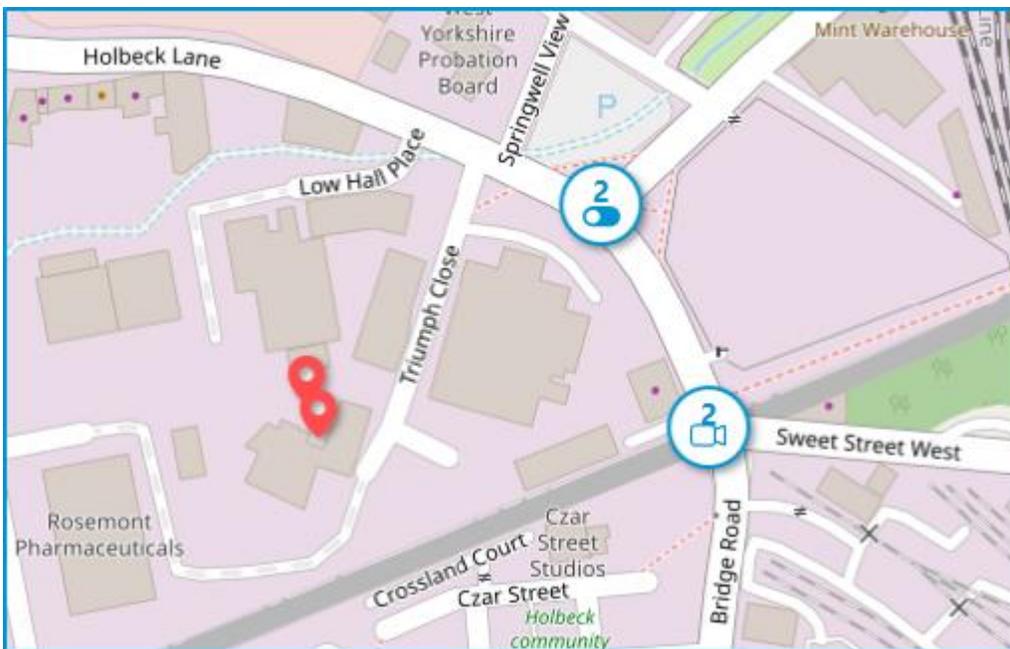
Elements of the same type located close to each other on the map are grouping into one marker with the number of grouped elements and their type: camera, sensor, relay, or site.
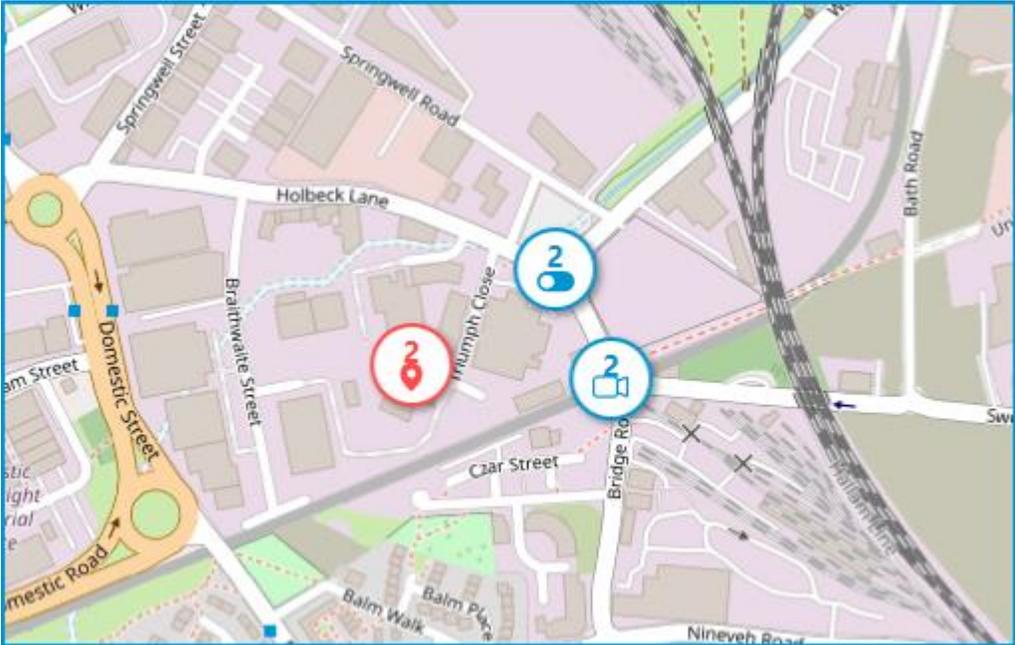
Elements of different types are grouping into one marker with the number of devices.

Note

If the number of grouped elements is more than 99, the number on the marker will be displayed as **99+**.

Sites ⟩

This tab displays the sites tree. A site is an area on the map that can be used to navigate to the **Plans** view.
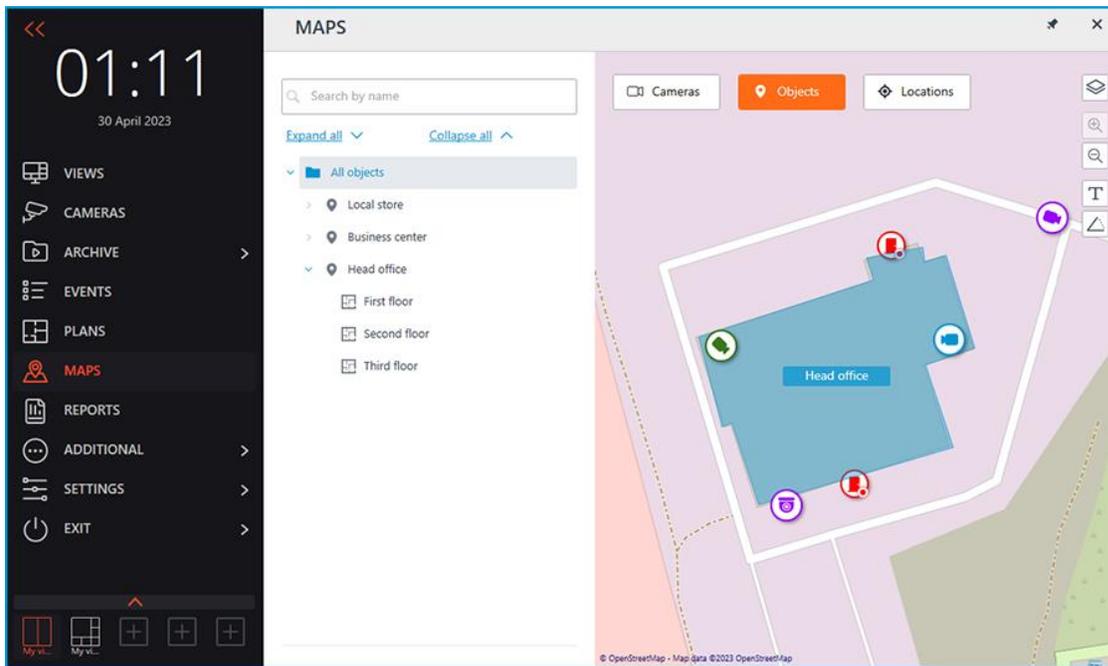
If any plans are attached to the site, the tooltip with a list of attached plans will be displayed when hovering the cursor over the site.
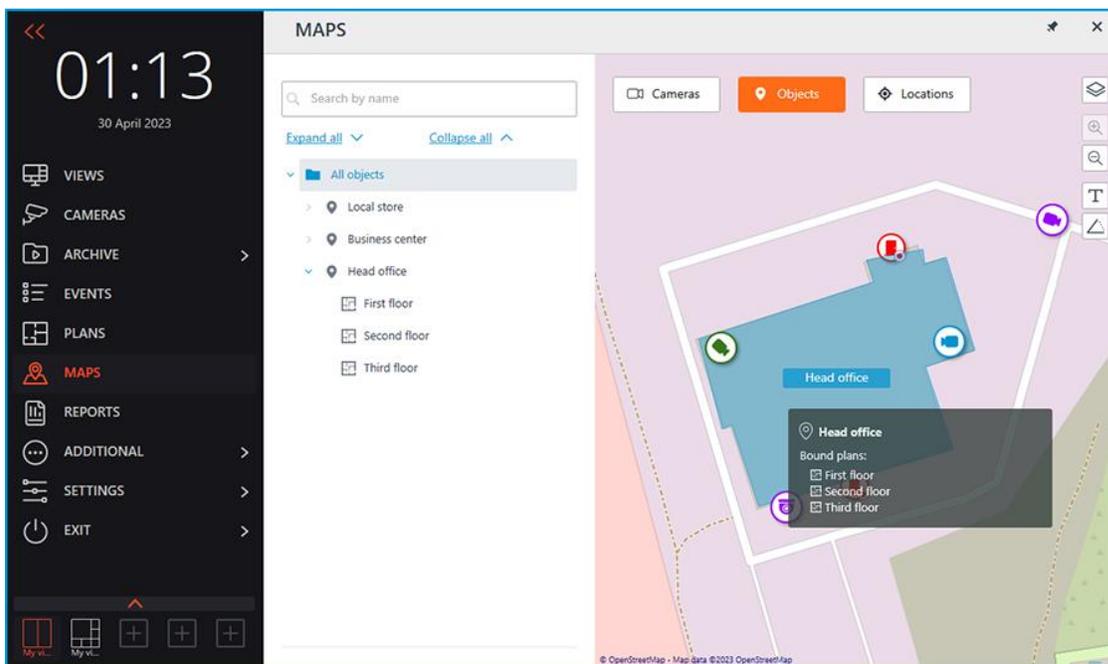
Note

If more than 10 plans are attached, the first 10 plans are displayed and the number of other plans is shown below.

To go to the **Plans** section, select the site and click the **Switch to plans** button.
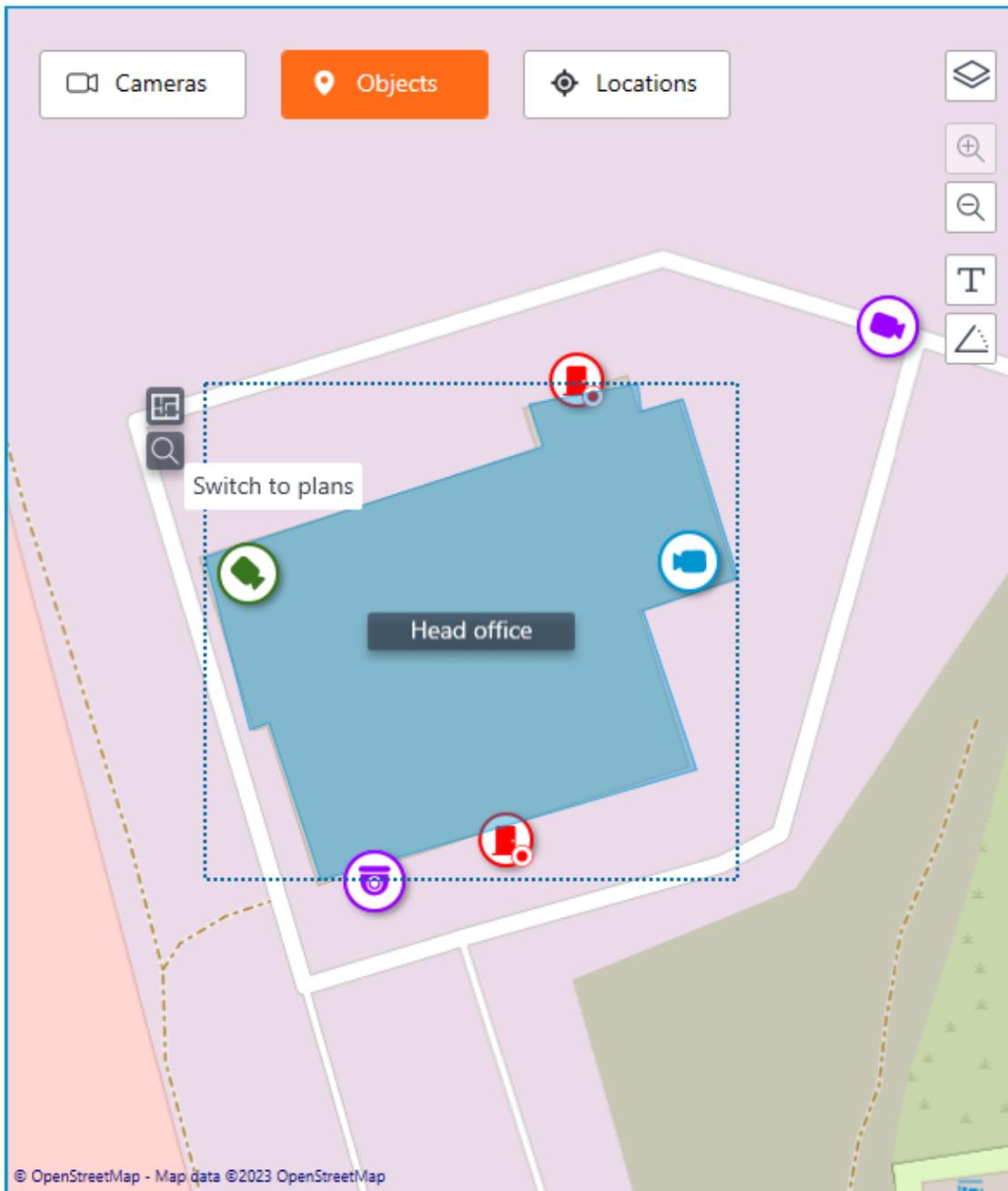
Clicking this button will display a tree of plans attached to the site.
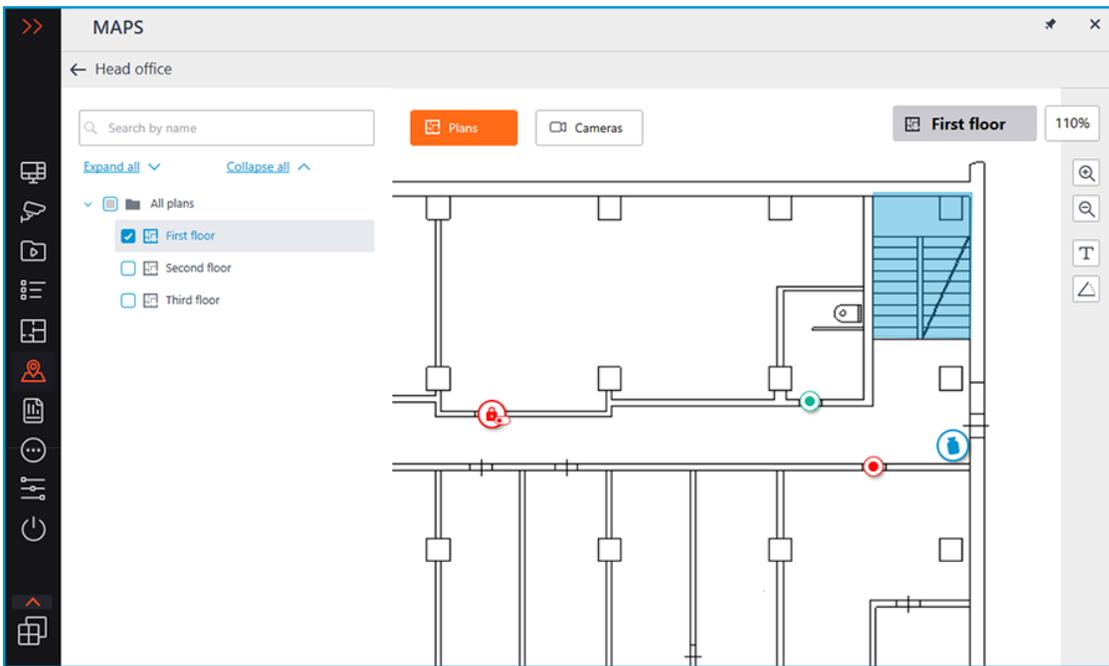
The header of the window displays the name of the site from which the window was switched to the **Plans** section and the **Back** arrow to go back to the **Maps** section.

Locations ❯

Locations allow jumping to a preset area on the map with the specified scale.

This tab displays the locations tree, with which it is possible to quickly switch to the configured locations on the map.
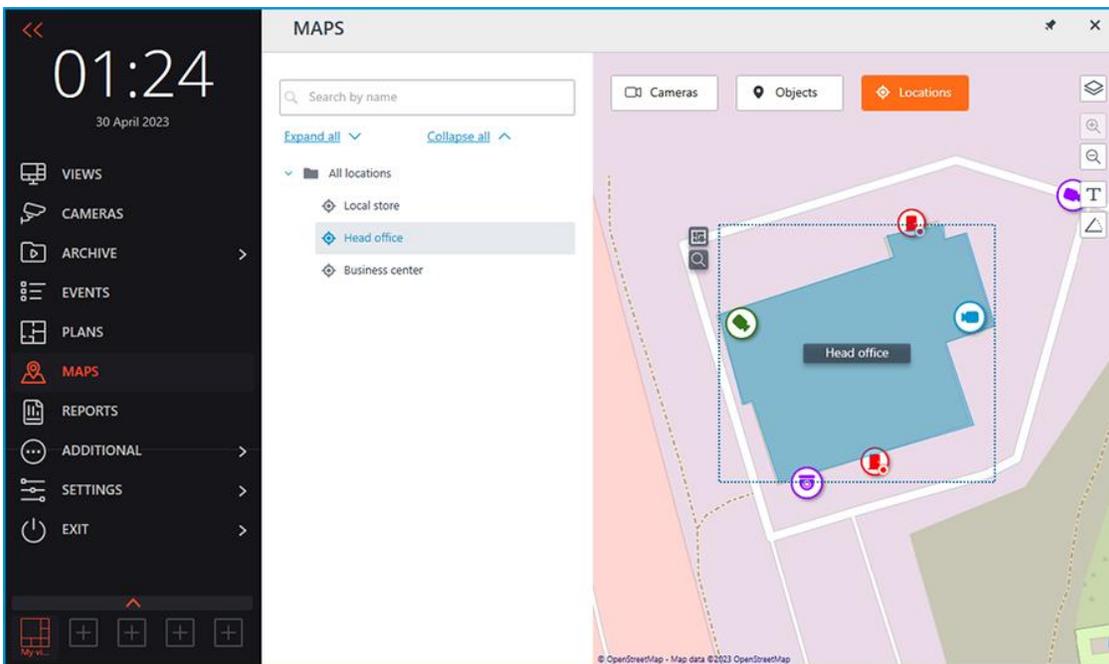
Alarms ⟩

To enable displaying camera alarms, activate the **Guard mode** option in the **Show alarms on plans and maps** section of the workplace settings.
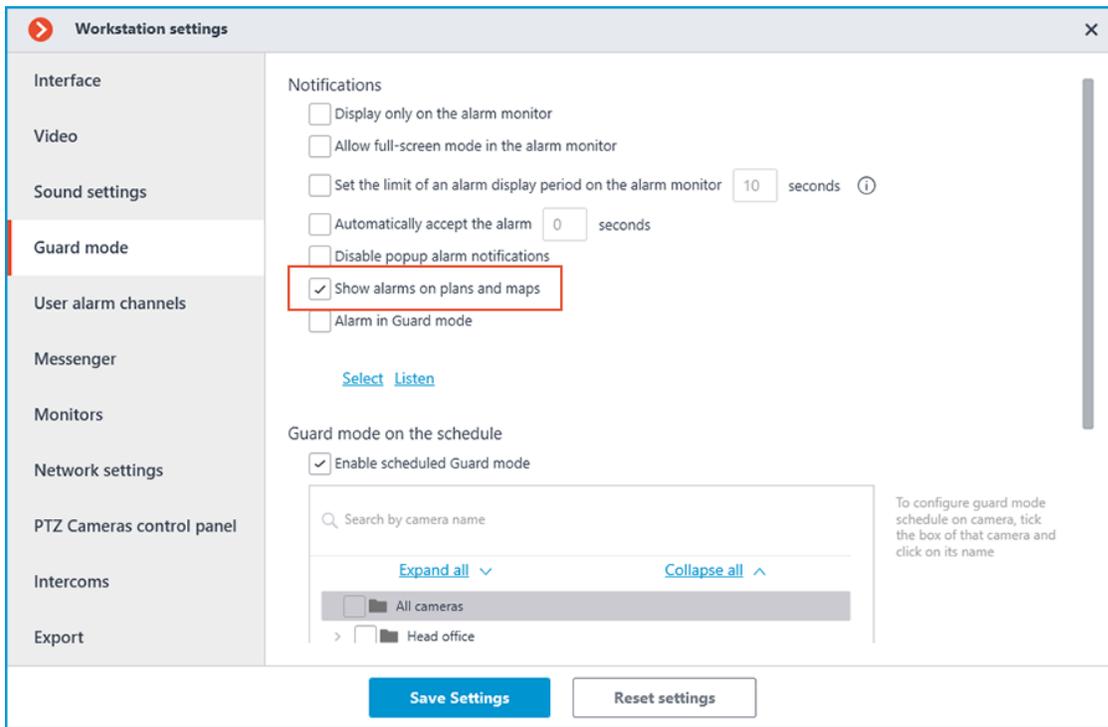
This tab displays alarms from all cameras.
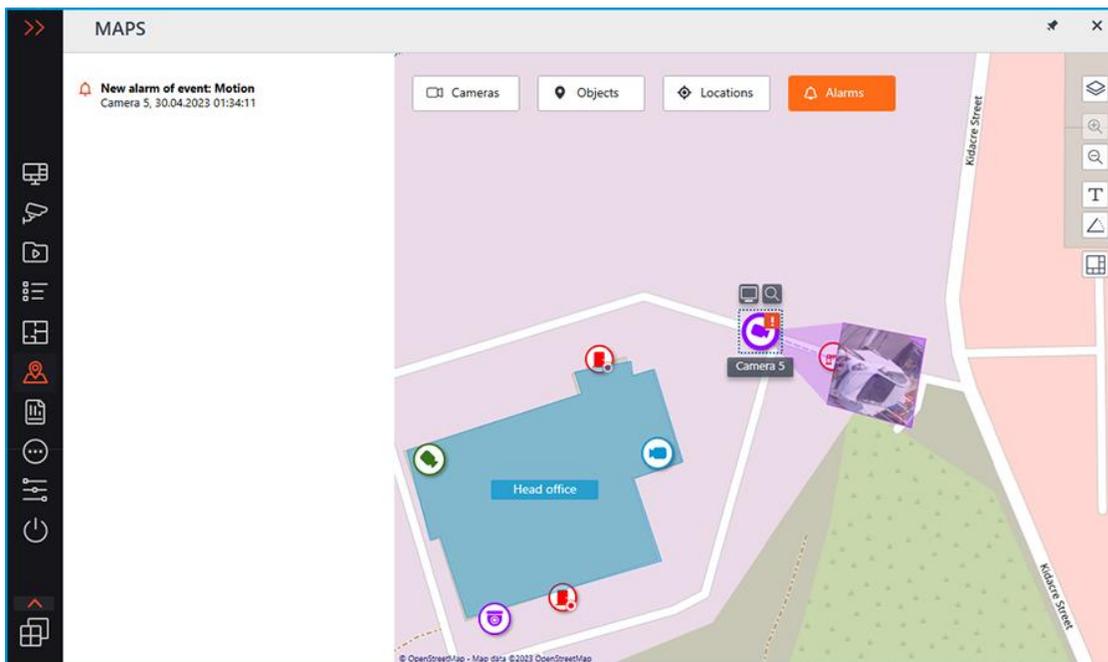
In addition to the alarm indicators, the cameras on the map may also have indicators of a broken or missing connection with the camera.

Alarms are indicated with a red square, broken or missing connection with a yellow triangle. When placing the cursor on the alarm indicator, the event that caused it will be shown.
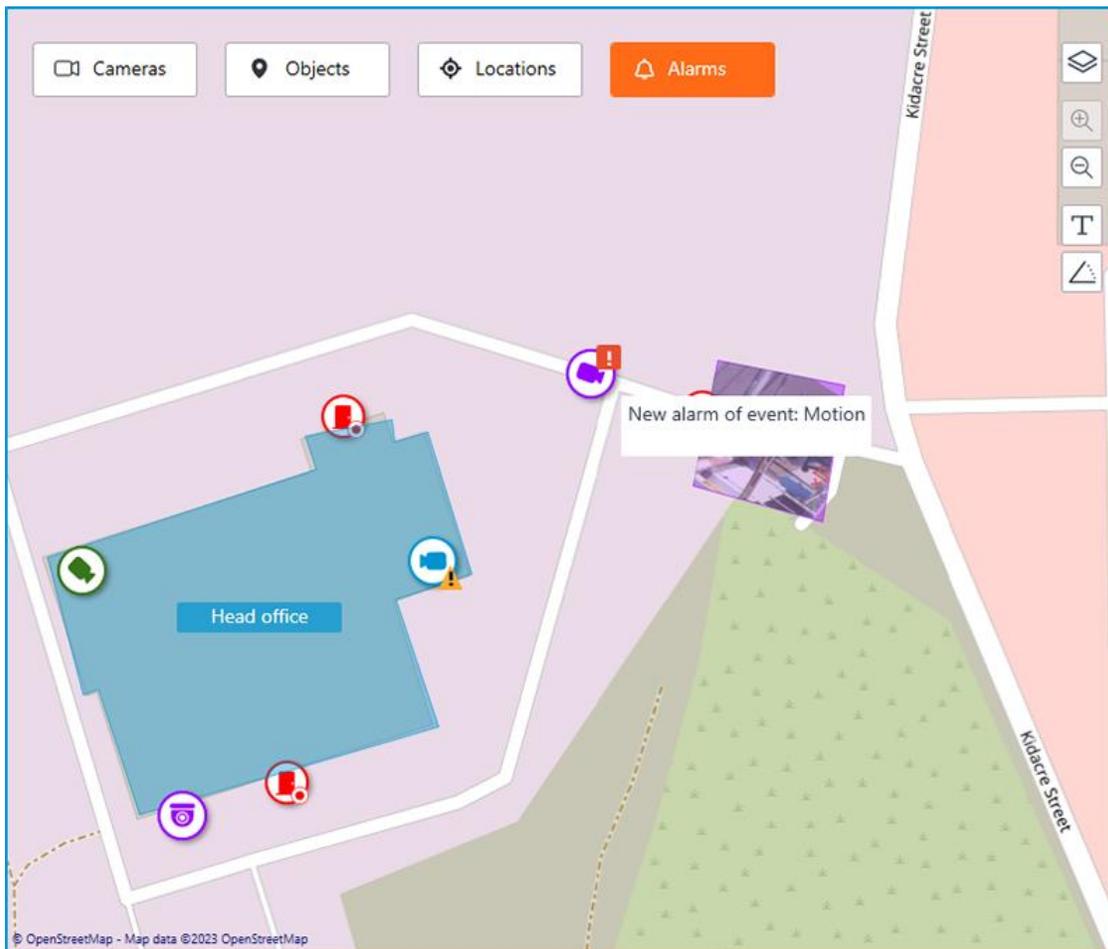
Note

When there is no connection with the camera, the alarm indicator hides. When the connection is restored and the alarm has not been acknowledged yet, the alarm indicator displays again.

These indicators can also be on plans and sites:

- On a plan
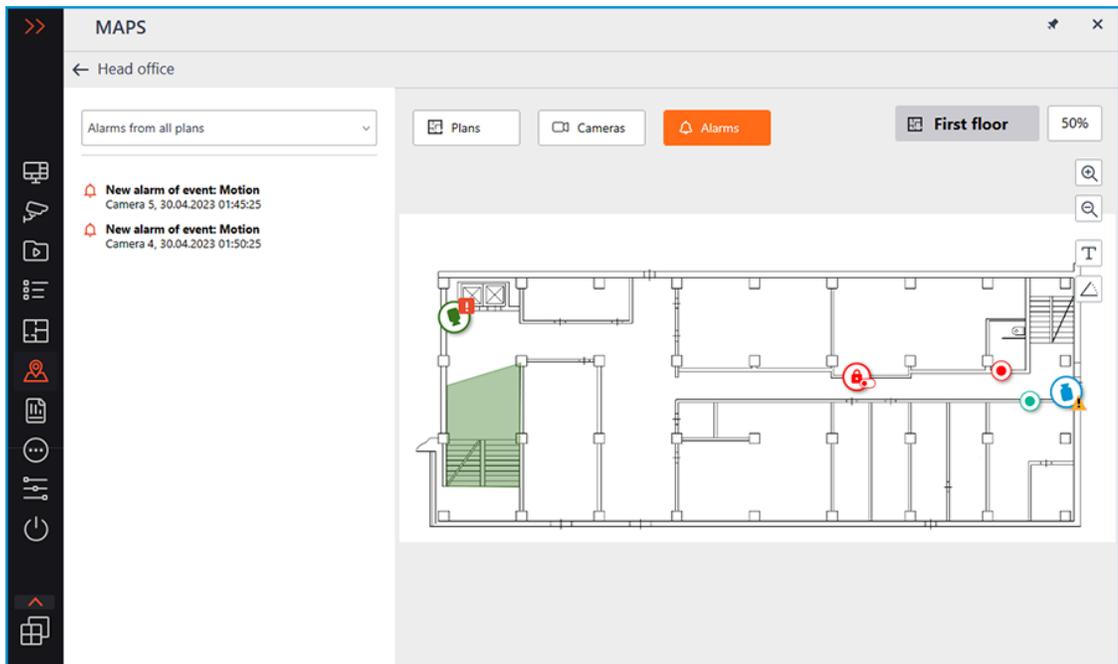
- On the site
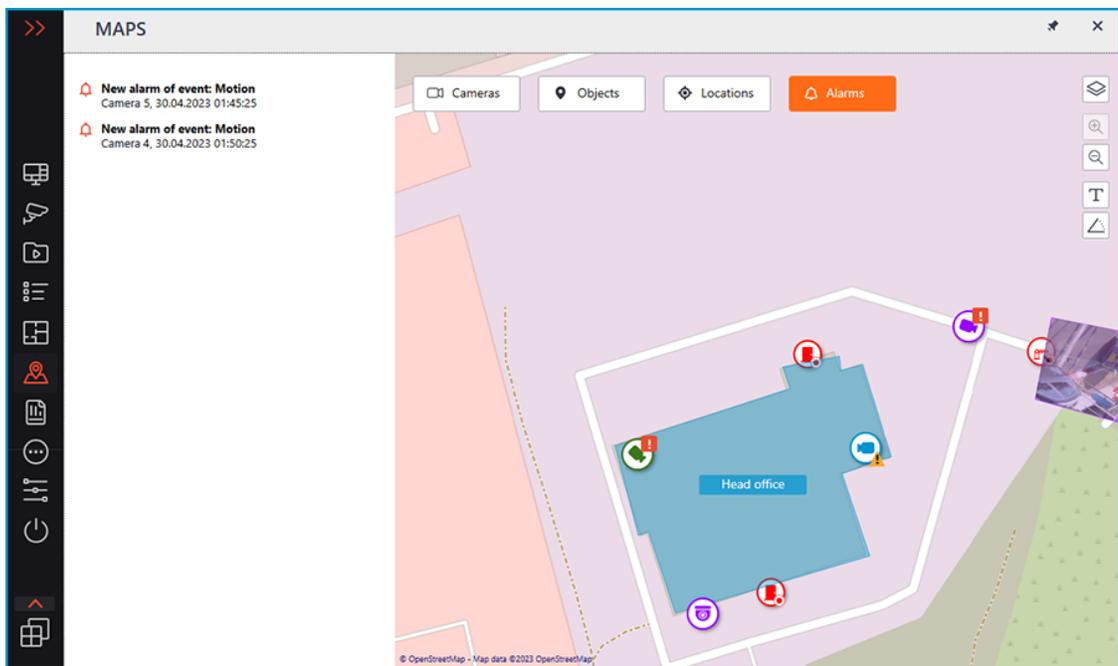
Grouped camera markers also have alarm indicators. If the group contains cameras with an alarm and cameras with a broken or missing connection, both indicators will be displayed.
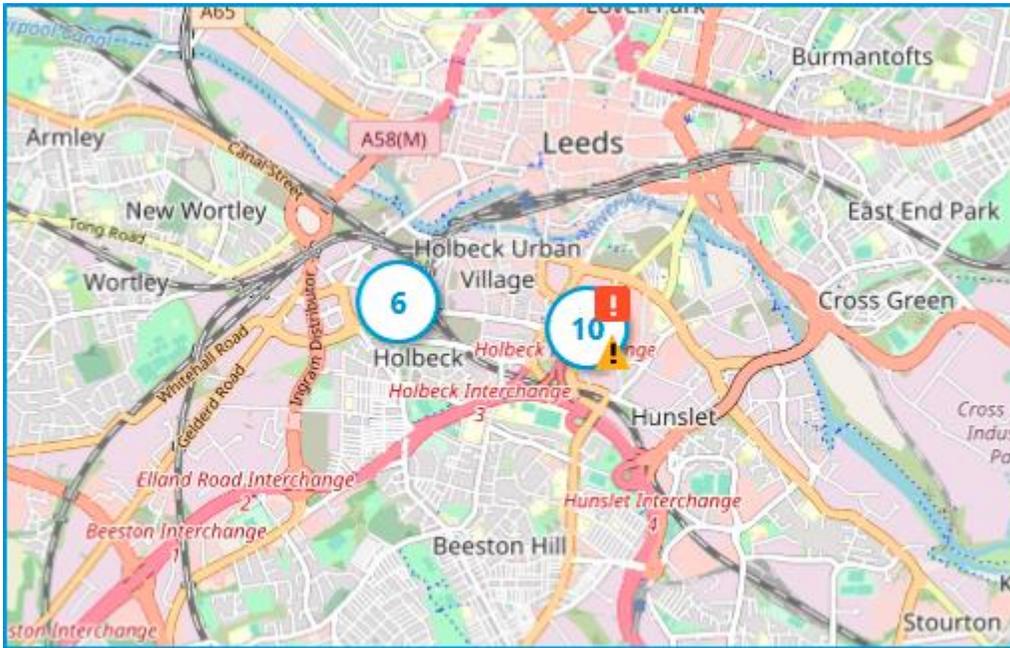
To switch to maps, you can assign the keyboard shortcuts in the Workstation settings.

Bookmarks in the archive

Eocortex allows adding custom markers linked to the archived recordings. Subsequently, you can use the bookmark to navigate to the marked location in the archive.

To create a bookmark, open the context menu of the camera and select the **Add Bookmark to archive** item from the available actions list. In the opened **Add archive Bookmark** window, set the **Bookmark name**, **Category**, **Priority**, and, if it is needed, **Archive Bookmark description**. To create the bookmark, click the **Add** button. To exit from this window without saving, click the **Cancel** button.

Note

Created archive bookmarks will be kept in the system for the entire period of storage of the related archive fragment and cannot be deleted manually.

The system administrator configures the bookmarks categories through the **Eocortex Configurator** application. You can select the **Priority** only from the list of default options: **Minimal priority**, **Low**, **Medium**, **High**, **Critical**.

To view previously created bookmarks, open the **Additional** section on the control panel and select the **Archive bookmarks** item to open the Archive bookmarks window.
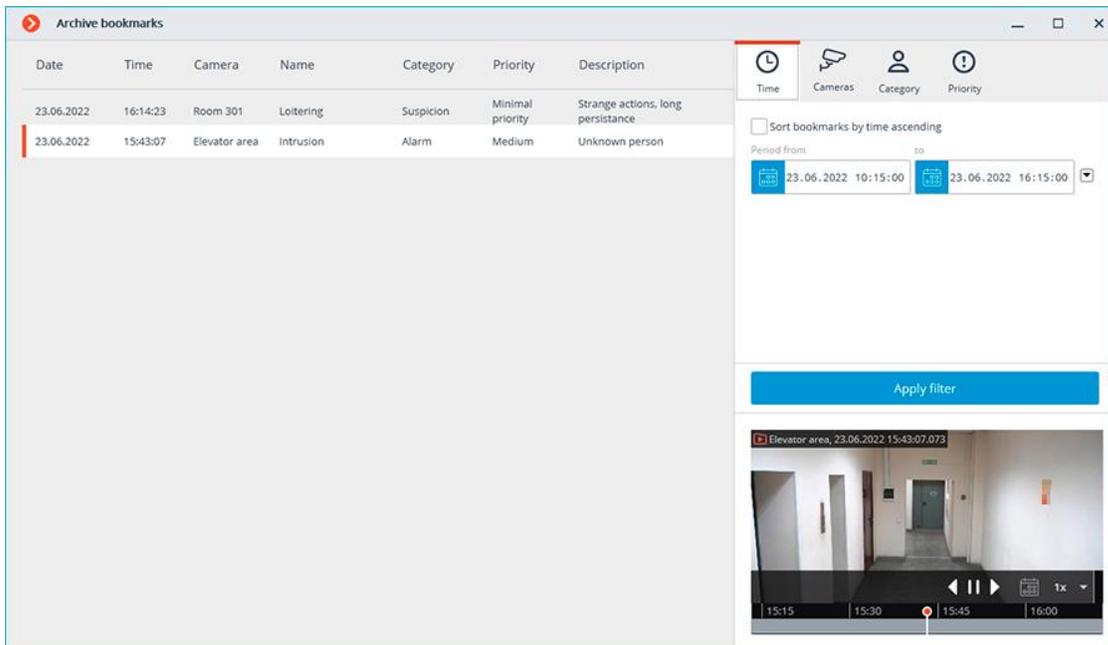
It is possible to filter created bookmarks in the log by date and time, related cameras, categories, and priority.

Hotkeys ⟩

For the archive bookmarks, in the Workstation settings, you can assign the following keyboard shortcuts:

- Open archive bookmarks
- Add Bookmark to archive

Archive export

To export a clip, select the **Archive export** sub-item of the **Archive** item in the **Main menu**. The **Archive export** window opens.

Note

Also, you can access the **Archive Export** window by selecting **Archive Export** in the cell context menu.
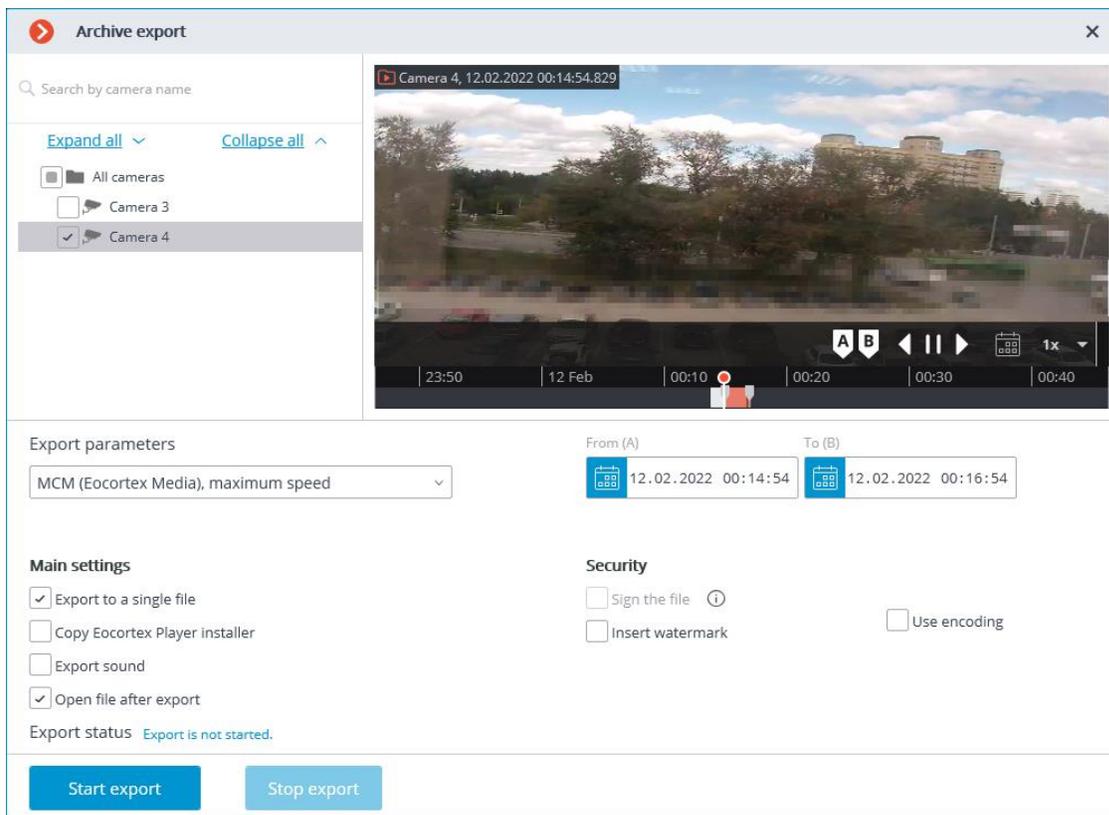
After specifying all export parameters, click **Start export**; select the folder to store the exported files; if necessary, change the archive name in the **File Name** box; click **Save**.

The export progress is on the **Export status** panel.

To abort the export, click Stop export.

Export parameters:

In the cameras tree, select the cameras to be exported. If you open the **Archive export** window from the camera cell context menu, this camera will be automatically selected (you can change this selection prior to export).

In the **Period from ... to ...** fields, specify the start and end date and time of the exported fragment.

Note

You can also set the date and time of the beginning and end of the exported archive fragment interactively using the sliders on the Archive Fragments panel.

The format of the resulting video archive is indicated in the **Export options** combo box.

Note

Eocortex Client allows to export your video archive to the files of the following formats:

MCM is an internal **Eocortex** format. Viewing these files is possible only with the help of the special **Eocortex Player** application provided as part of the installation package. The advantage of exporting to MCM format is the speed of export, which is several times faster than the export to AVI. This advantage is due to the fact that no frame conversion is performed. The speed of export depends primarily on the drive performance. It is possible to export the archives of several cameras to one file with the ability to view them simultaneously later.

AVI is a widely-used format. The files of this format can be played in the majority of video players. AVI is a video container with full video stream recoding for adding timestamps to the frames. The timestamps are completely accurate. The export speed is slow (50-70 fps) and depends primarily on the processor performance.

MP4 without timestamps is export to MP4 video container without video stream recoding. The speed of export is comparable with the export to MCM (700-800 fps). No timestamps are added. The speed of export depends on the drive performance.

MP4 is exported to an MP4 video container with video stream recoding for adding timestamps to frames. The timestamps may not be accurate (error margin is 1-2 seconds). The export speed is significantly slower than one without recoding, but it is faster than export to AVI (300-400 fps). The export speed depends primarily on the processor performance.

Warning

For thinned archives it is necessary to export clips to formats with timestamps, otherwise the archive size will increase.

This is due to the peculiarities of formats without timestamps: since there are no intermediate frames in a thinned archive, the space between the reference frames is filled with copies of these frames to maintain playback speed.

Export sound: if checked, audio from the camera recorded to the archive is also exported.

Open file after export: if checked, Eocortex Ultra Player playing the newly exported file will be launched after export.

When exporting to MCM, the following options are also available:

Copy Eocortex Player installer: if checked, then the **Eocortex Player** installer will be exported together with the archive (file name: **EocortexPlayer Installer.exe**, size: **29 MB**.) Use this parameter if there is no **Eocortex Player** installed on the computer you want to view MCM files on.

Warning

When you select the **Copy Eocortex Player installer** option, you also must install the **Eocortex Player** on the computer from which the export is carried out.

Export to a single file: if checked, the archive from all selected cameras will be exported to a single file that can be synchronously viewed in **Eocortex Player**. Otherwise the archive for each camera will be exported to a separate file.

Sign the file: adds electronic signature to the exported video clips.

Overlay image: superimposes a watermark from the specified image file on the video. The watermark can be added to all the formats except **MP4 without time stamps, high speed**.

Use encoding: allows to encoding of the exported video. AES-128 encoding algorithm is used. This feature is only available when exporting to the **MCM (Eocortex Media), maximum speed** format. The **Eocortex Player** version 3.3 or later is required for viewing.

Warning

When exporting watermarked video, **MCM (Eocortex Media), maximum speed** and **MP4 without time stamps, high speed** formats will not be available.

To export the archive, it is possible to assign keyboard shortcuts in the Workstation settings.

Save frame (frame fragment)

Click in the active cell or open the context menu, and select **Save frame** to save the frame on the disk. Further, in the opened window, select the location to save the frame (if necessary, you can change the file name in the **File Name** field and select the image format — JPG, PNG, or BMP), and click **Save**.

Note

The camera name and the frame time will be saved in the upper left corner of the frame.

Note

If you want to save the frame fragment zoomed in, zoom the image before saving.

To save the frame, you can assign the keyboard shortcuts in the Workstation settings.

Zoom image

Click on in the active cell to switch to the frame zooming mode. Alternatively, press middle mouse button (wheel), or open the context menu and select **Zoom image**.

You can also use mouse wheel to zoom in and zoom out. To zoom in a frame fragment, select a rectangle in the frame using your mouse.

You can move the image in zooming mode by clicking and holding it with the mouse.

To return from the zooming mode to normal viewing, click on ![zoom icon] again in the active cell. Alternatively, press middle mouse button (wheel) or disable **Zoom image** option in the context menu.

Print frame (frame fragment)

To print frame, open the context menu in the active cell and select **Print frame**. In the opened window, select the printer, adjust the print settings, and press **Print**.

Note

The camera name and the frame time are in the upper left corner of the frame.

Note

If you want to print the frame fragment zoomed in, zoom the image before printing.

To print a frame, you can assign the keyboard shortcuts in the Workstation settings.

Reports

Eocortex makes it possible to generate reports available to the current user and export them.

To open a report, select ![reports icon] **Reports** from the main menu, then select the required report in the top right corner of the opened page.

Reports:

- Personnel monitoring
- Face database groups
- Number of vehicles in the parking lot (Complete)
- Shelf Fullness Check
- License plate recognition
- Face recognition (Complete)
- Object Classification and Counting
- Crowd detection
- People counting in the queue
- People counting
- Unique Visitor Counting
- Heat map
- Recording the time of entry and exit of vehicles (Complete)
- Work time logging (Complete)
- Archive depth report

Archive depth report

This report shows the existence and settings of the archive for each camera.

To open a report, select **Reports** in the Main panel, then select the report **Archive depth** in the upper right corner, then mark the channels, on which the report will be built and click **Build** button — a report shall be built for the last month.

Selected channels are listed in the lines of the report. The report columns show the archive depth settings for each channel, the actual depth of the archive, and the archive for each month number.

To select another month, use the time slot selector at the bottom of the page above the legend.

By clicking the **Export** button, it is necessary to save the report to a CSV file.

Hotkeys

It is possible to set up keyboard shortcuts for the following actions:

- Start forward playback
- Start backward playback
- Stop playback
- Increase speed
- Reduce speed
- Hide/Show fragments panel
- Open archive export
- Save frame
- Print frame
- Open a specific camera in full screen mode
- Open/close full screen mode
- Sound from camera on/off
- Open/close ... archive
- Open/close edge-based archive

- Save frame

- Open in browser

- Guard mode on/off

- Show on map

- Show/Hide motion objectû boundaries

- Print frame

- Add Bookmark to archive

- Start forward playback

- Start backward playback

- Stop playback

- Hide/Show fragments panel

- Increase speed

- Reduce speed

- Open fragment mode

- Acknowledge alarm

- Mark alarm as false

- Ignore alarm

- Open alarm in the archive

- Open the alarm card

- Open cameras nearby

- Execute user tasks on a specific camera

- Switch to the appropriate local or system view or automatic switching

- Switch to a preset or run a tour on the selected camera.

User tasks

If user set up tasks on a camera, and the user has the rights to execute these tasks, then, in the observation mode, during the activation of such camera, the

 or button will be displayed in the cell, depending on the number of tasks that can be launched on the camera (one or more).

Note

User tasks are configured by the administrator of the video surveillance system.

If only one task is set up on the camera, it will be executed upon pressing the button.
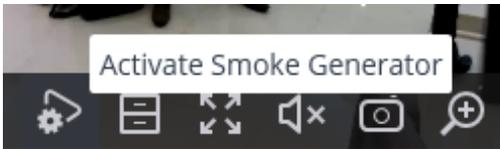
If several tasks are configured on the camera, a list of those tasks opens upon pressing the button, and the task will be started only after selecting it in the list.
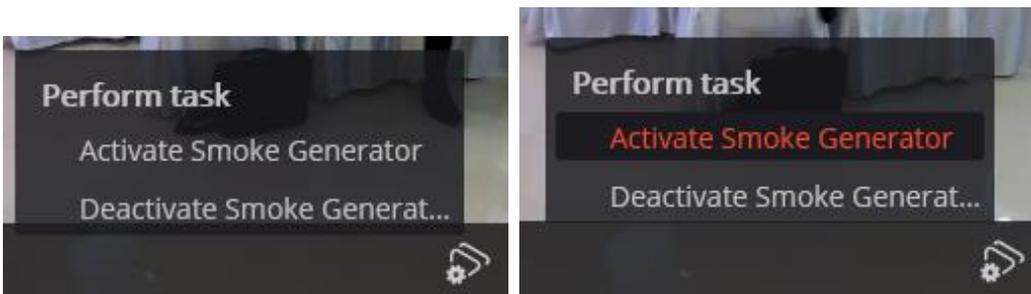
If the launch confirmation has been set in the configuration of the task, a dialog will open before the launch. In this dialog, it is possible to confirm or cancel the launch.

Selection of one task with confirmation:
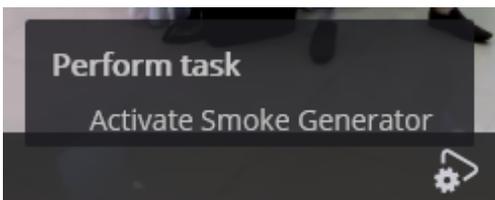
Confirmation of one task:
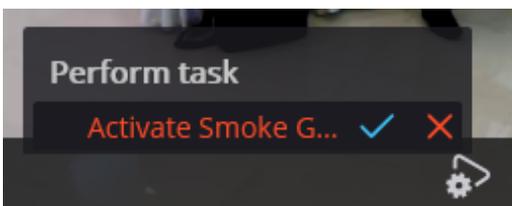
Selection one of several tasks with confirmation:
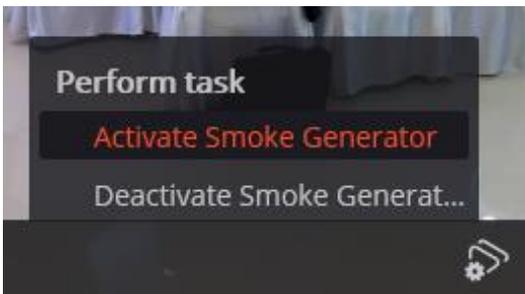
Confirmation of one of several tasks:
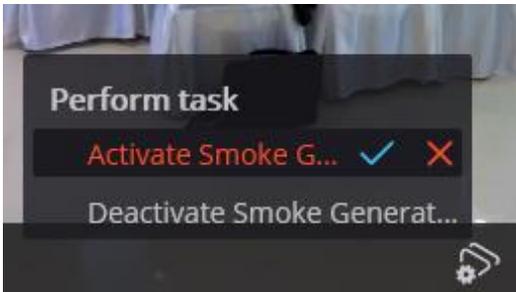
After launching the task, the corresponding notification appears on the screen.
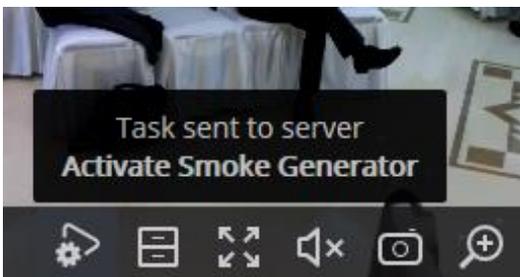
Hotkeys 〉

To run the tasks, you can assign the keyboard shortcuts in the Workstation settings.

Video wall

Eocortex has implemented the possibility of building a video wall consisting of any number of separate monitors, using neither extra devices nor software. The monitors, which make the video wall, must be connected to the computers, with the running **Eocortex Client** application, connected to one of the **Eocortex** servers.

To increase efficiency, use client computers (Remote Work Station — RWS) with several monitors. However, the RWS hardware configuration must provide the performance required to show the set number of channels.

Note

This capability is not present in some types of licenses.

Video wall settings ⟩

Before using the video wall, it is necessary to set it up. To do this, open the Control panel and select in the Main menu the **SETTINGS** option, then the **Video wall setting** sub-option.

The main part of the opened setup page for the video wall is taken by the view window displaying the image from the selected monitor.
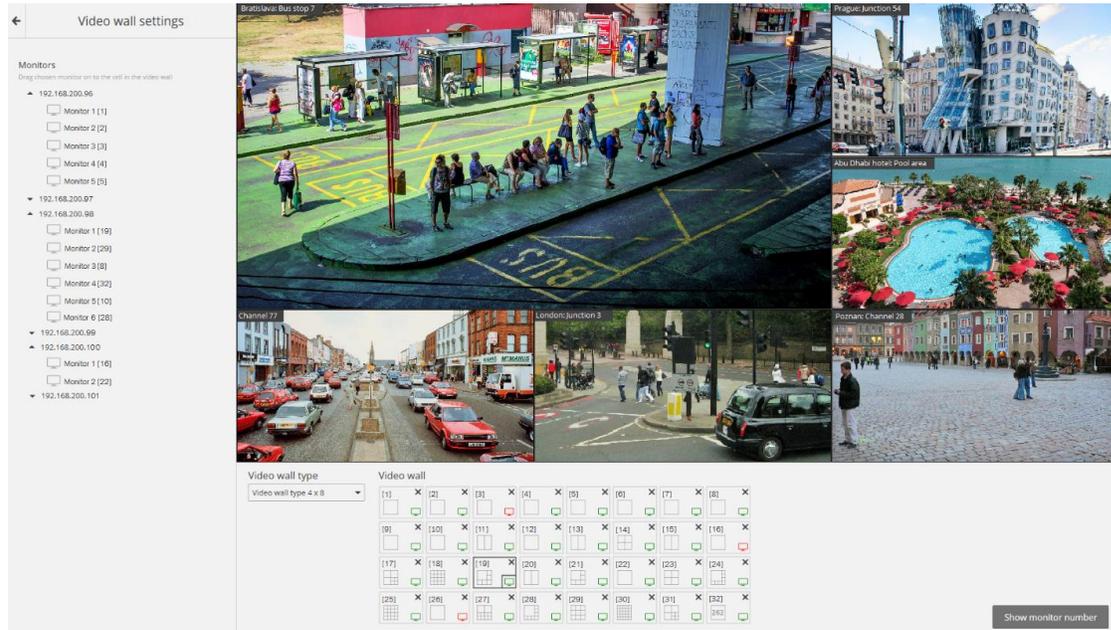
In the left part of the page is displayed the hierarchical list of IP addresses of the connected RWS system (client computers with the running **Eocortex Client** application) or servers displaying (**Eocortex Standalone**), and also connected to these RWS/servers monitors.

Note

The list shows only those RWS / servers and monitors which are currently running the **Eocortex Client** application and the view window is open.

To the right of each monitor in square brackets is given the position number (position) of the monitor in the video wall. For visual control over the monitors position numbers, there is a **Show monitor** number button; when pressed, each video wall monitor will show its position number for several seconds.

To form a video wall it is necessary to select one of the options in the **Video wall mode** drop-down list, then, with the help of the mouse, move the monitors from the hierarchical list to the relevant cells located under the view window. Then, to set up grids and the displayed channels, it is necessary to move to Video wall management.

Note

Hereafter, during operation, separate RWS can be disconnected from the system. In this case, the pictograms of these monitors will be red.

Video wall management ›

To manage the video wall, open the Control panel and select in the Main menu the **ADDITIONAL** option, then the **Video wall management** suboption.

The main part of the opened page for video wall management is taken by the remote view window broadcasting the image from the selected monitor.
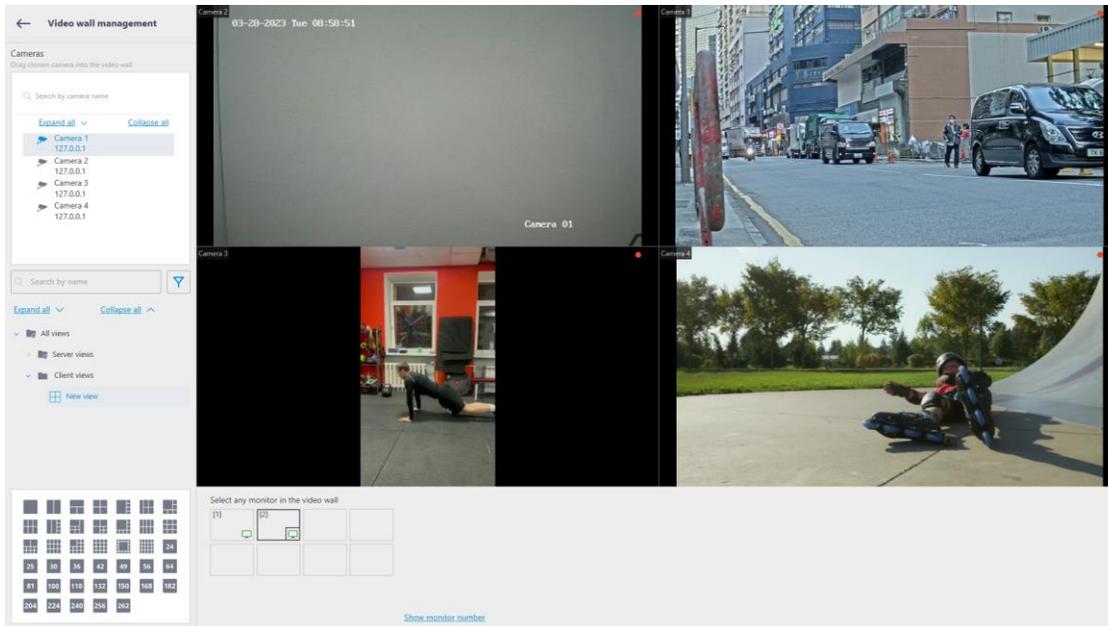
Monitor selection takes place in the panel located right under the view window. Each monitor has a position number (position number in the video wall) displayed in square brackets in the left top corner of the video wall cell.

The **Show monitor number** button is used for visual control over the monitor's position number; when pressed, each video wall monitor will show its position number for several seconds.

Note

If any of the monitors used in the video wall does not display the image in the remote view window, this means that the RWS, to which the monitor is connected, is not connected to the system (besides this, the pictogram of this monitor in the list will be red). In this case, run the **Eocortex Client** application on this RWS and connect to one of the Eocortex servers (if viewing is implemented on the server with **Eocortex Standalone** display — open the view window). The monitor which manages the video wall will also not broadcast images.

The left side of the page displays a hierarchical list of cameras connected to the system and the panel with the available channels. In a multiserver

configuration, the list will show all cameras connected to all servers in the configuration.

To display a particular channel grid on a monitor, you must mark that monitor and then select the grid.

To place specific cameras in the grid cells, you can either drag these cameras into the relevant cells in the view window or click inside a cell in the view window and select a camera using the cell context menu.

Hotkeys ❯

For the video wall, in the Workstation settings, you can assign the following keyboard shortcuts:

Internal chat

Eocortex has a functionality of messaging between system users — the **internal chat**.

Note

This capability is not present in some types of licenses.

Note

The **internal chat** is available only to those users who have the appropriate permissions granted by the system administrator and only on those **Eocortex Client** workstations where the use of chat allowed in settings.

Description ❯

To open the internal chat, open the **Additional** section on the control panel and select the **Chat** item.
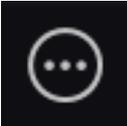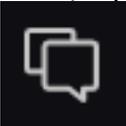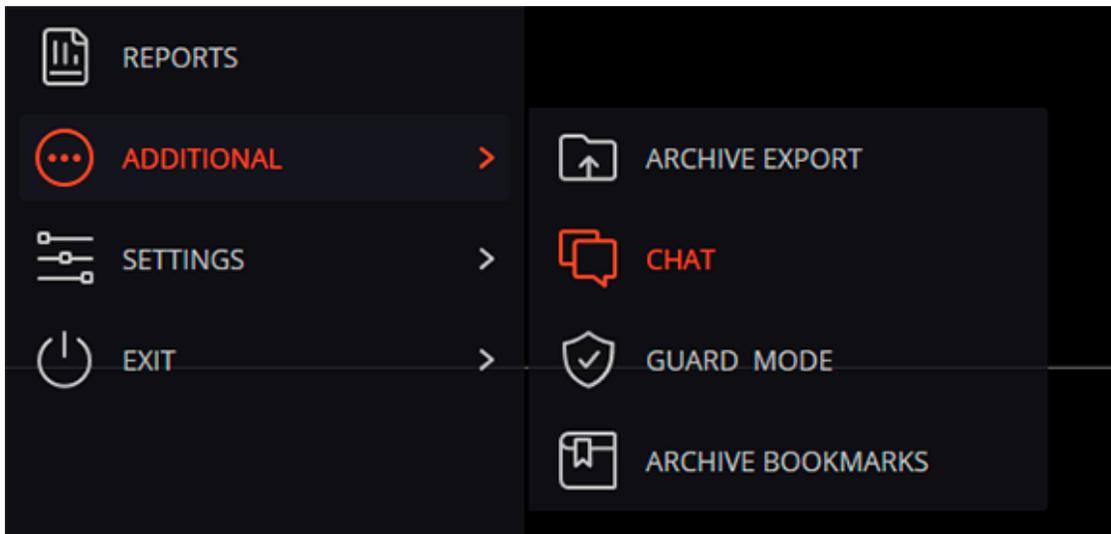
The **Chat** window will open, containing the following interface elements:

Name and network address of the current user

Message feed

List of recipients

Message text field

View attachment option

Message sending button
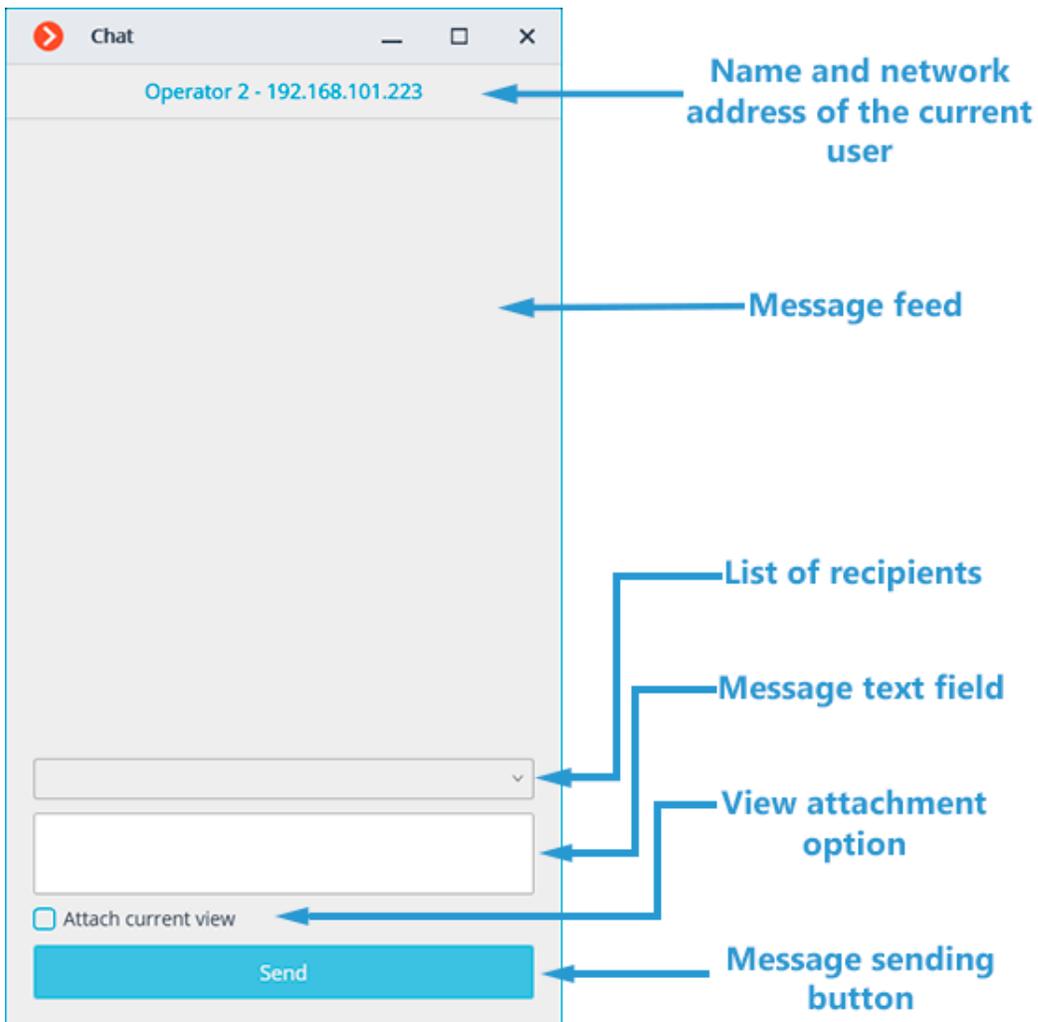
Chat window opens automatically for message recipients.

Sending a message ❯

To send a message to one or several system users, select these users from the drop-down menu, type a message in the Message text field and click the **Send** button.

With the **Attach current view** checkbox enabled, the camera view that is used at the moment of sending the message, including all cameras assigned to cells, will be attached.

Note

The drop-down menu contains only those system users who are connected to the system at the moment of sending the message. If no user is logged into the system, the chat window will show the "There are no operators in the chat" message instead of the list of recipients.

Note

The message length cannot exceed 50 characters, including spaces.

Note

The recipient will be able to open the View attached to the message only if he has permission to view the cameras assigned to this View and access to use the View itself is allowed at his workplace.

Receiving a message ❯

To confirm receipt of a message, click the **Confirm receipt** button located under the message text.

To open a camera grid attached to the message at the current workplace, click on the view icon to the left of the Confirm receipt button.

Replying a message ❯

To reply to a received message, create a new message and specify a list of recipients.

Chat

Operator 2 - 192.168.101.223

☐ 192.168.137.14 Operator 1

☐ Attach current view

Send

Chat

Operator 2 - 192.168.101.223

192.168.137.14 Operator 1

Hey, check this out!

☐ Attach current view

Send
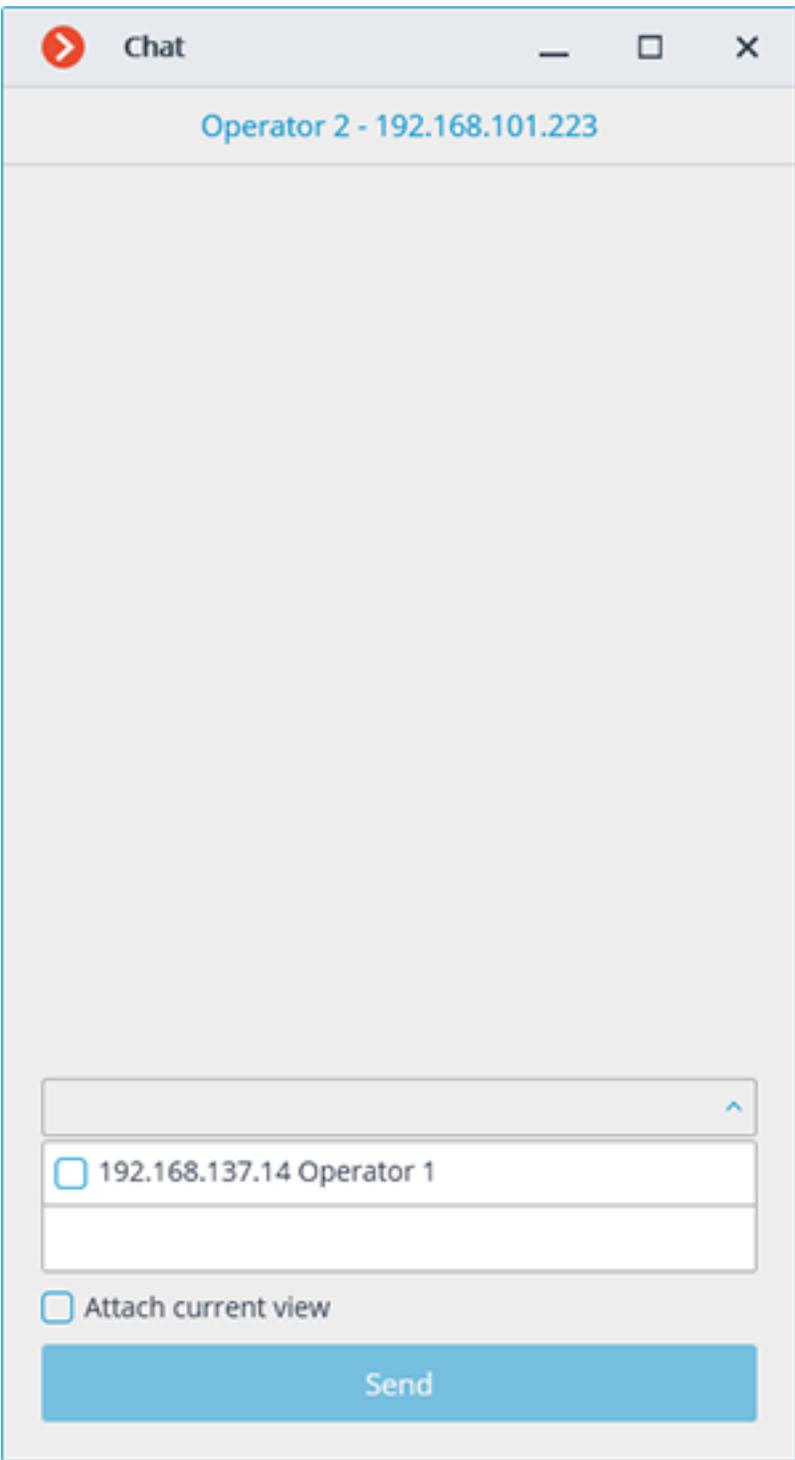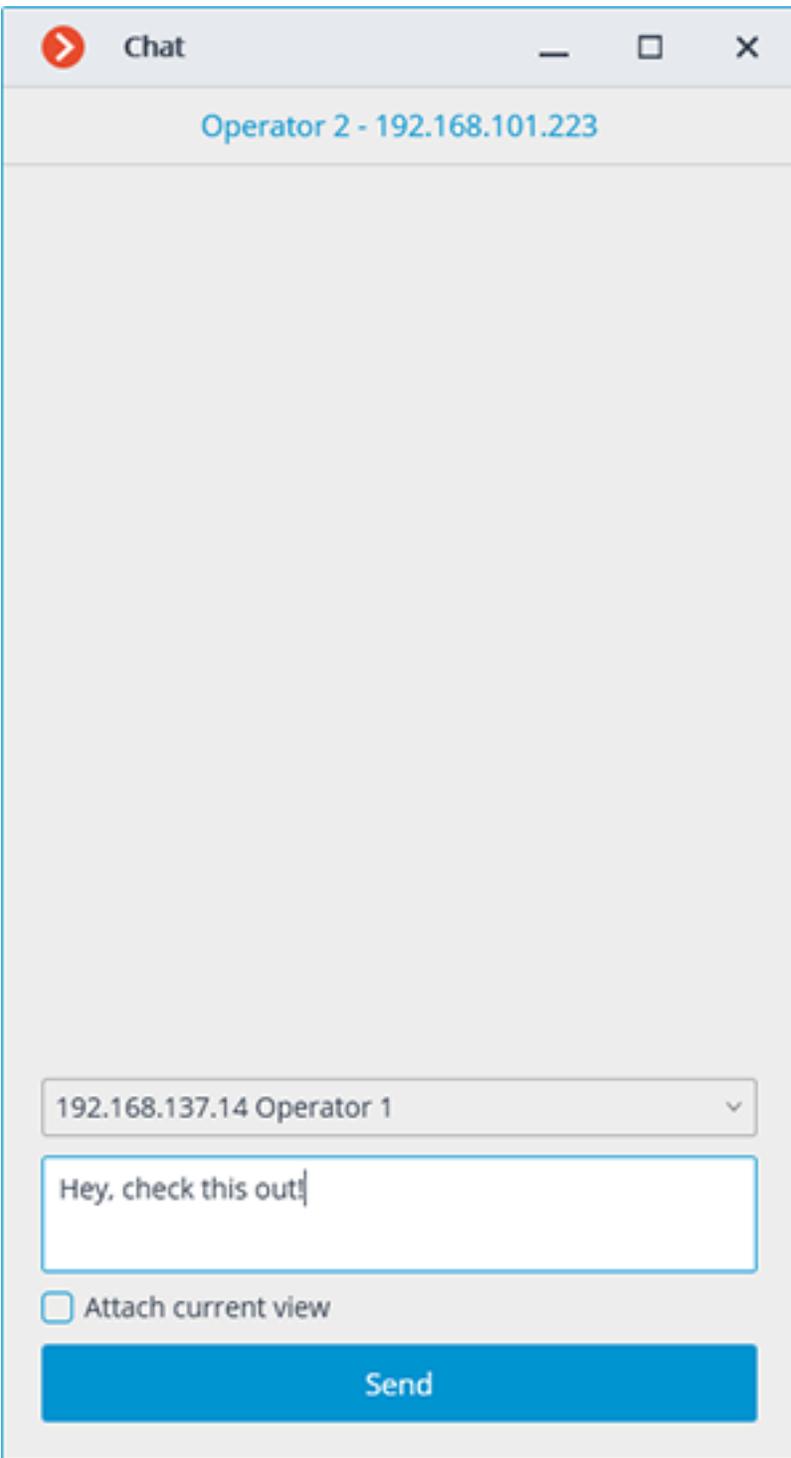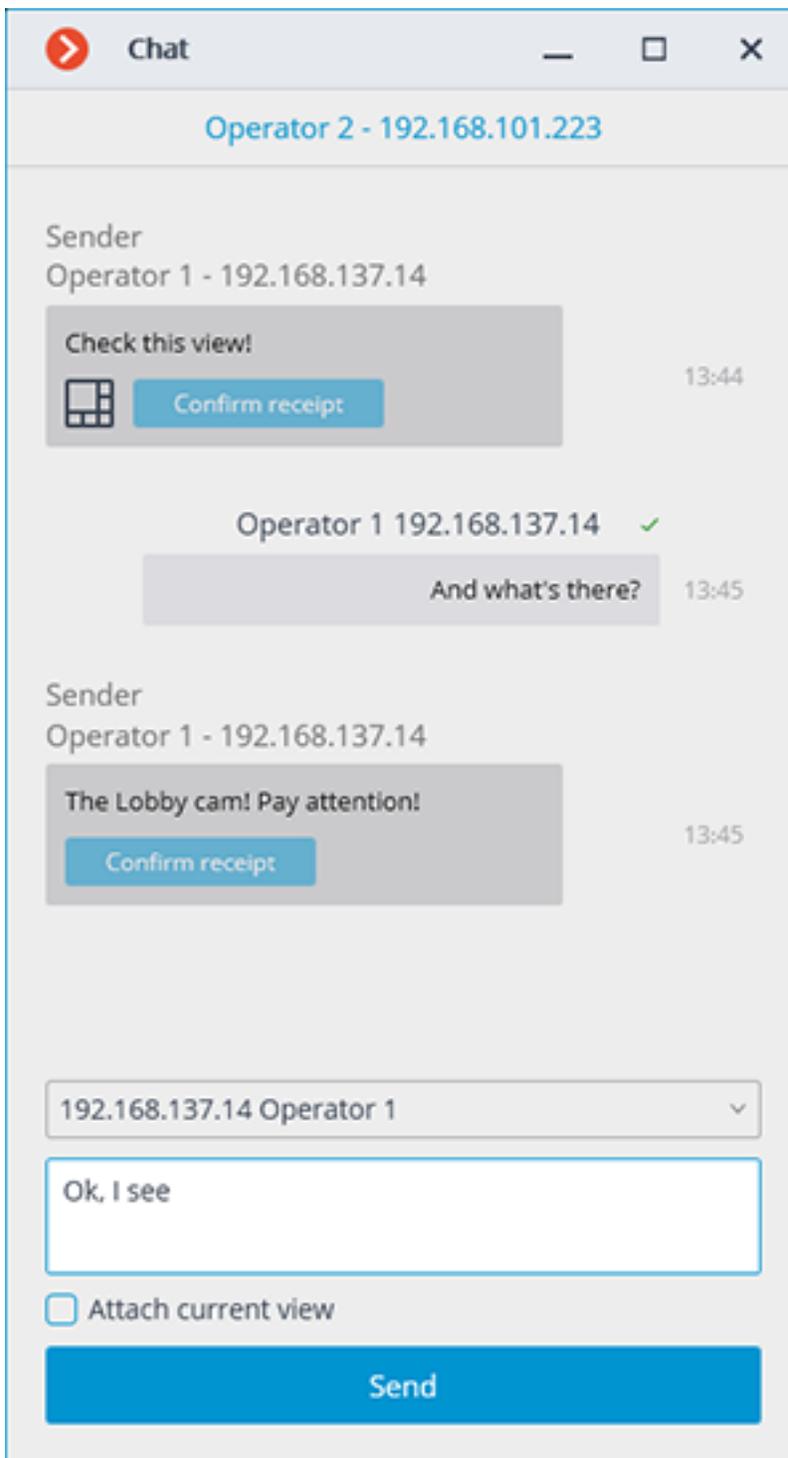
Workplace settings

These settings allow you to specify operating parameters for **Eocortex Client** on the applied computer.

To configure the current workstation, open the Control Panel in **Eocortex**

Client and select **Workplace settings** under **Settings**.
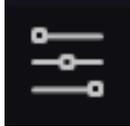
Warning

The **Workplace settings** menu item is available only if a user with configuration rights is logged in.
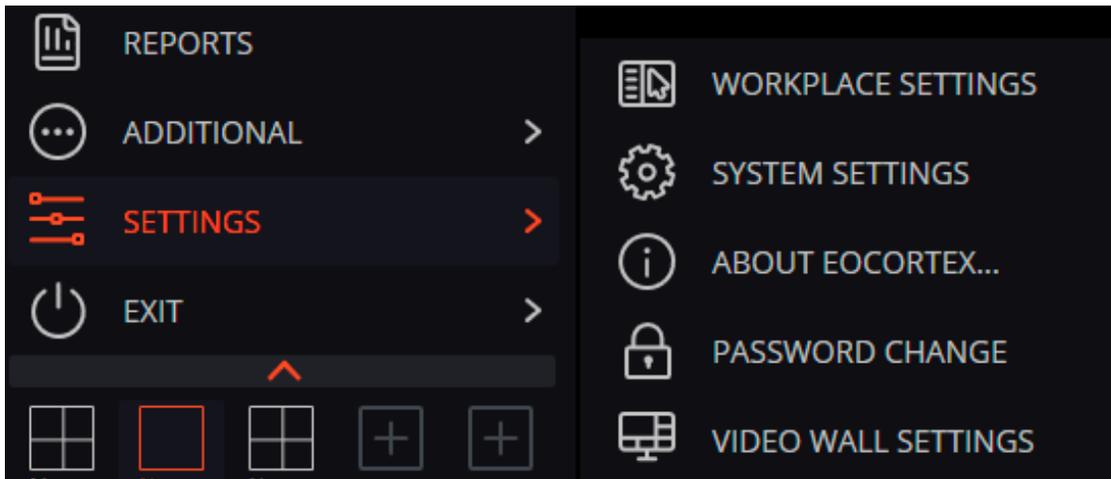
The **Workstation settings** window opens.
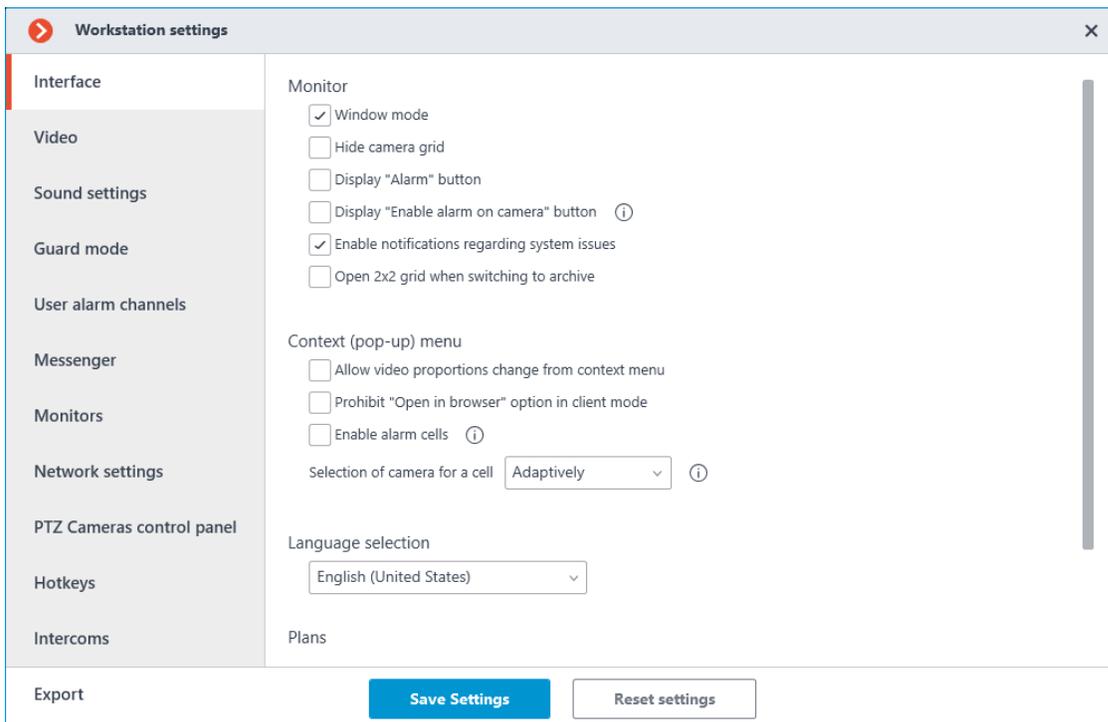
To implement the changes made, click **Save Settings** — the **Eocortex Client** application will reboot automatically.

To return to default, click **Reset settings**.

Below is a description of all tabs of the **Workplace settings** window.

Interface

Window mode: if this option is enabled, the **Eocortex Client** application will run in windowed mode; if the option is disabled, it will run in full screen mode.

Hide camera grid: if this option is enabled, the lines separating camera cells will not be displayed on the screen; if the option is disabled, the cells will be separated by thin lines.

Display "Alarm" button: if this option is enabled, the **Alarm** button will be displayed on the control panel to the right of the clock; if the option is disabled, the button will not be displayed.

Display "Enable alarm on camera" button: if this option is enabled, the **Enable alarm** item will be displayed in the context menu of camera cells; if the option is disabled, this item will not be displayed.

Enable notifications regarding system issues: if checked, the system notifications about possible problems (including recommendations for their elimination) will be displayed.

Open 2x2 grid when switching to archive: if this option is enabled, then a 2x2 grid will be used when switching to the simultaneous archive viewing mode.

Use client time: if this option is enabled, the cameras will be displayed with the time zone of the computer running the client application; if disabled, the camera time zone will be used.

Note

This option is available only if the system administrator has enabled the considering time zones feature in system settings.

By default, this option is disabled.

Allow video proportions change from context menu: if checked, you will be able to choose video proportions in the cell context menu; otherwise this function will not be available.

Prohibit "Open in browser" option in client mode: if checked, users of **Eocortex Client** on this computer will not be able to open cameras in browser from the context menu; otherwise the context menu will include the Open in browser option.

Enable alarm cells: If checked, the **Set alarm cell** item will be displayed in the context menu of camera cells; such cells will be used for broadcasting from the cameras that triggered an alarm; if the flag is cleared, this item will not be displayed.

Selection of camera for a cell: Set the method for selecting a camera to be placed in a cell through the context menu called by right-clicking in the cell. With the Only in window option, the Select camera item in the context menu will open a window with the list of cameras available for selection. With the Only in context menu option, the list of cameras will be displayed as a sub-item of the context menu. With the Adaptively option selected, the client application

will use both options regarding the number of cameras available: if more than 300 cameras are available for selection, then the window option will be used. Otherwise, the list of cameras will be displayed in the context menu. For systems with a large number of cameras, it is not recommended to use the context menu option due to possible delays in the display of the context menu and decrease in usability.

Language selection: allows selecting one of the interface languages available for **Eocortex Client**.

Plans: allows setting a grid of cells for convenient placement of individual plans in each of them.

Place first in the tree: defines the order in which the server and client view folders are placed relative to each other in the view tree.

Preserve views from: allows saving views created in **Chat**, **Cameras**, **Cameras**, **Plans**, **Maps** and **Video Wall** sections.

Video

Video proportions: you can select how images are scaled in cells:

- **Stretch**: the image will be stretched in a cell;

- **Save proportions**: the image will be displayed with the proportions specified by the camera;

- **Auto**: the program automatically determines chooses whether to stretch the image or keep proportions.

Preferred video stream for display: allows you to select which streams will be displayed on the screen and how:

- **Auto**: in the multiscreen mode all channels that use two stream will display an alternate one; in the uniscreen mode only the main stream will be displayed.

- **Main**: the main stream will be displayed for all channels in all modes.

- **Alternate**: the alternate stream will be displayed for all channels that support two streams in all modes.

- **Average**: in both modes each channel that uses two streams will display the stream, which resolution is closest to the resolution of the current cell.

Show info about codec, resolution, bitrate, frequency and IP-address: if checked, the appropriate information for the displayed stream will be located in the upper left corner.

Show debug info: if checked, the debug information for each channel will be displayed in the upper left corner.

Font size, **Horizontal alignment**, **Vertical alignment**: the display options in the cell of the text blocks with the name of the camera and additional information.

Use high quality: if checked, the image will be sharper but the CPU and RAM load will increase.

Allow H.264 decoding on video card: if checked, H.264 video will be decoded on video card of the client computer; otherwise it will use CPU. Only the channels with this option enabled will be decoded on video card.

Note

H.264 decoding on the video card will be performed only for those cameras for which the video surveillance system administrator has enabled such decoding in the **Eocortex Configurator** application. The number of video streams from cameras simultaneously decoded on the video card depends on the video card model.

Enable display speed limitation (only for MJPEG): if checked, the image will adhere to the specified maximum frame rate. This limitation may be useful to reduce the CPU and RAM load on the client computer.

Sound settings

Play only for the active Channel: if checked, the sound will be played only for the active (currently selected) channel; otherwise the sound will be played for all the displayed channels.

The **Sound transmission** setting group allows selecting the microphone and screen button operation modes for the channels that support sound transmission to the camera.

Sheduled Guard mode

Note

Guard mode is the mode that triggers a notification in the **Eocortex Client** application when an alarm is generated from the camera.

Display only on the alarm monitor: If this option is enabled, the alarm notifications and cameras with triggered alarms will be displayed only on the alarm monitor.

Allow full-screen mode in the alarm monitor: If this option is enabled, it is possible to expand the cameras in full screen mode on the alarm monitor.

Limit the display time of alarm camera on the alarm monitor: If this option is enabled, in the field on the right you can specify after what time the alarm monitor will stop displaying alarm notifications; if the flag is unchecked, alarm notifications will be displayed until the operator reacts to them. In either case, the alarm notification will be interrupted if the operator reacts to it.

Disable popup alarm notifications: If this option is enabled, when one of the cameras with enabled guard mode passes to the alarm state, the notification icon will not be displayed in the lower right corner of the screen.

Show alarms on plans and maps: If this option is enabled, for the cameras placed on the site plans and maps, the alarms will be displayed on these plans and maps.

Note

This capability is not present in some types of licenses.

Alarm in Guard mode: If this option is enabled, an audio file will be played when one of the channels in the guard mode enters the alarm state. It is possible to use only WAV files (with the extension *.wav). To select a file, press the **Select** button. To listen to the selected file, press the **Listen** button.

Enable scheduled Guard mode: If this option is enabled, it is possible to configure a schedule for the cameras, according to which the cameras will be enter into guard mode automatically.

To configure a camera or a group of cameras into the guard mode, it is necessary to mark this camera or group in the list, then click on the camera and set up the schedule located under the list.
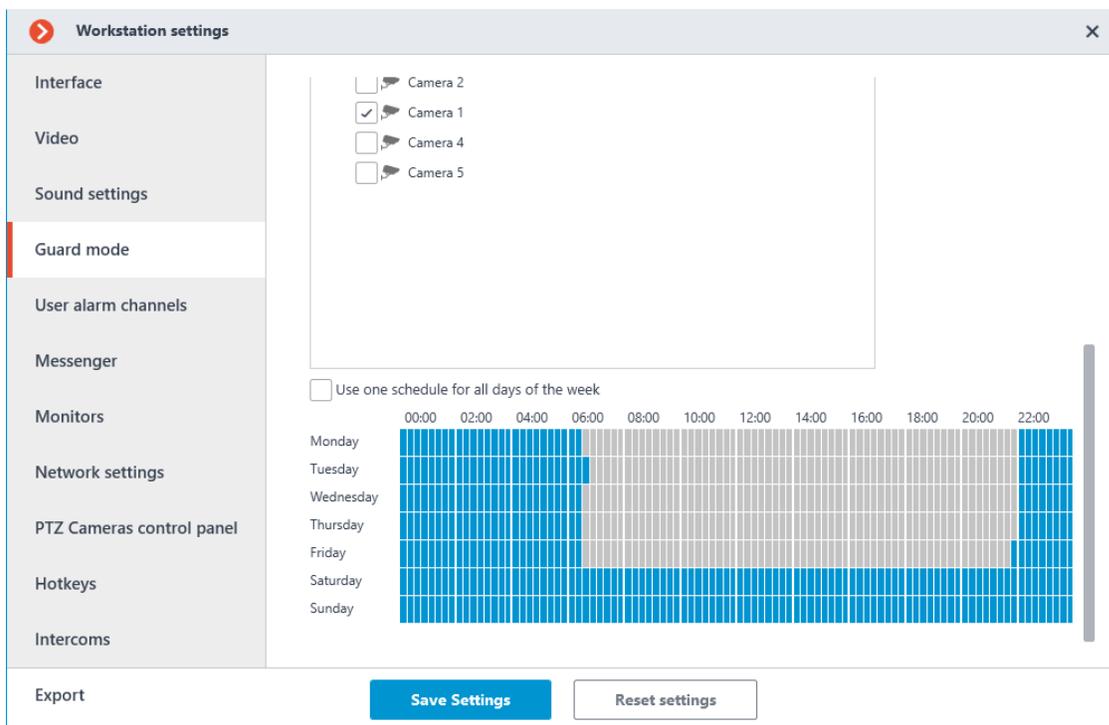
In the schedule the periods when the channel must be in the guard mode are marked in blue color. Left mouse button is used to set a mark in the schedule and the right mouse button is used to unmark it. If the **Use one schedule for all days of the week** flag is set, the one schedule will be assigned for all days.

User alarm channels

Note

User alarm channels — an alarm that is generated in the **Eocortex Client** application when the operator presses the [!] **Alarm activate/deactivate** button located on the control panel to the right of the clock. The action that is performed when the user alarm is generated can be configured by the system administrator in the **Eocortex Configurator** application.

On this page, select the cameras from which the **User alarm channels** is generated by pressing the **Alarm activate/deactivate** button.

Messenger

Note

This capability is not present in some types of licenses.
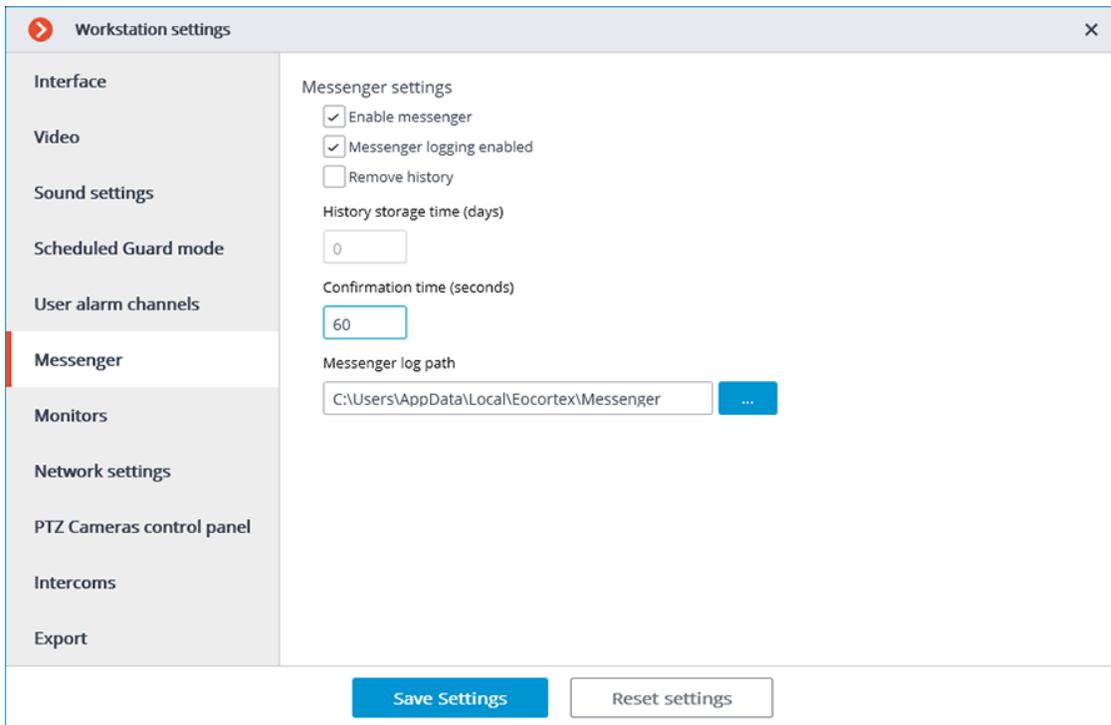
Monitors
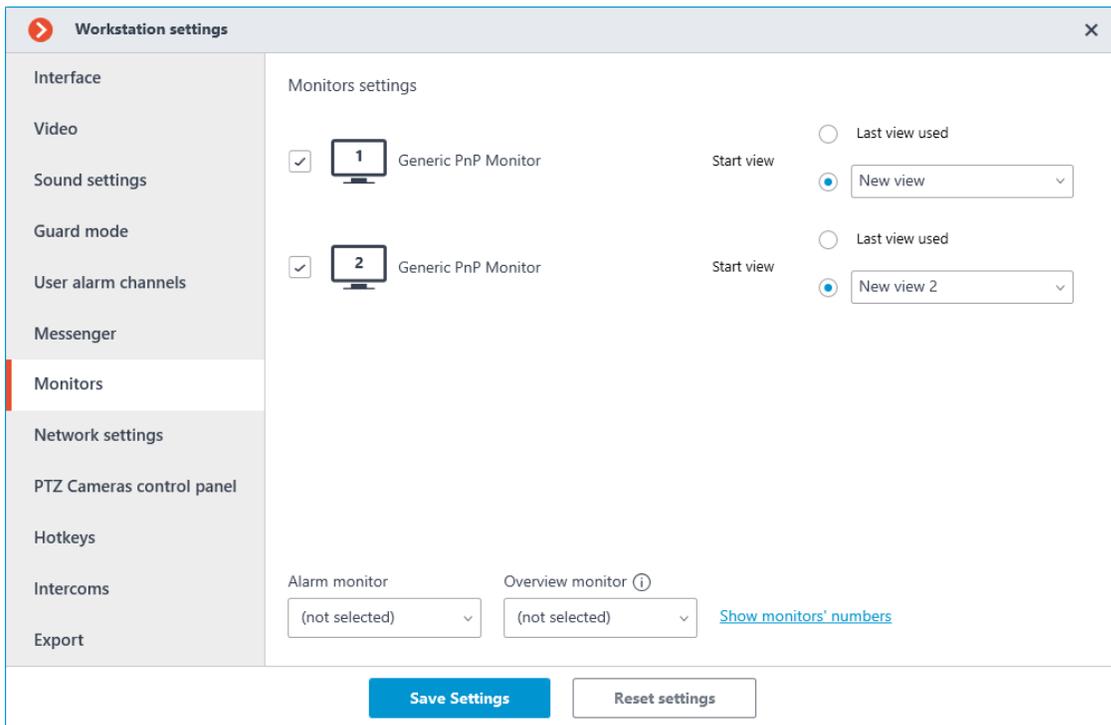
This tab displays all monitors connected to the computer. Select monitors if you want **Eocortex Client** to use them.

If multiple monitors are connected to the computer, one of the monitors can be used as an **Alarm monitor** or **Overview monitor**.

Warning

The same monitor cannot be both alarm and overview monitor at the same time.

When clicking **Show monitors' numbers** button on the monitors, their numbers are displayed.

Alarm monitor 〉

The Alarm monitor displays cameras in the state of **Alarm**.
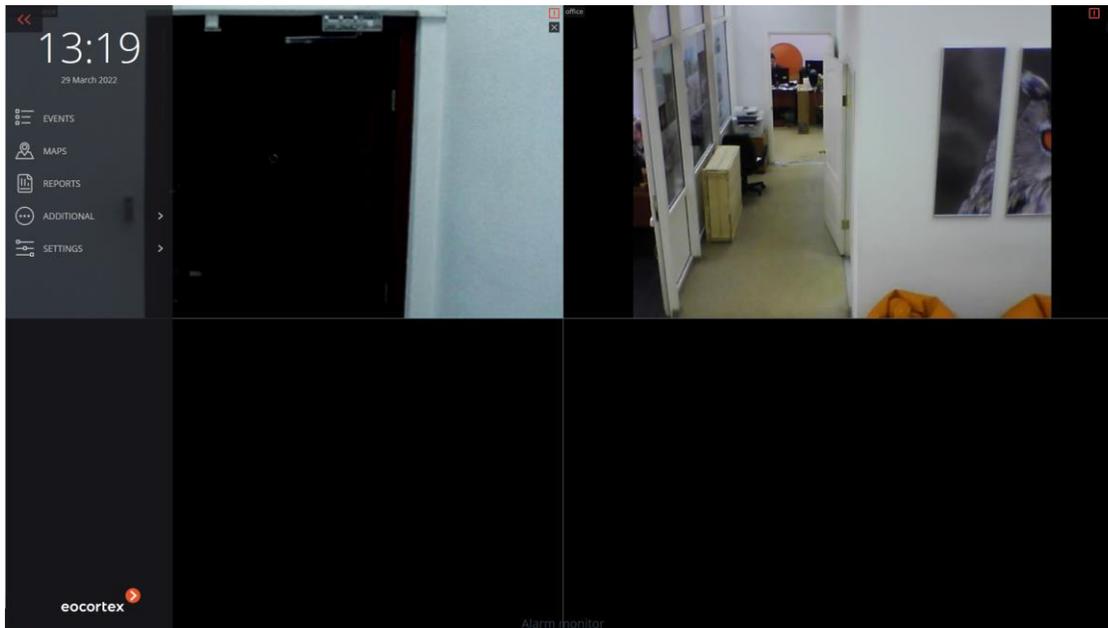
Overview monitor 〉

The **Overview monitor** is used to view any camera in full screen mode on a separate monitor.

Viewing a camera is performed as follows:

- double-clicking in the cell of the main or alarm monitor;

- clicking on the button **Full screen mode** in the cell or in the context menu of the camera on the main monitor;
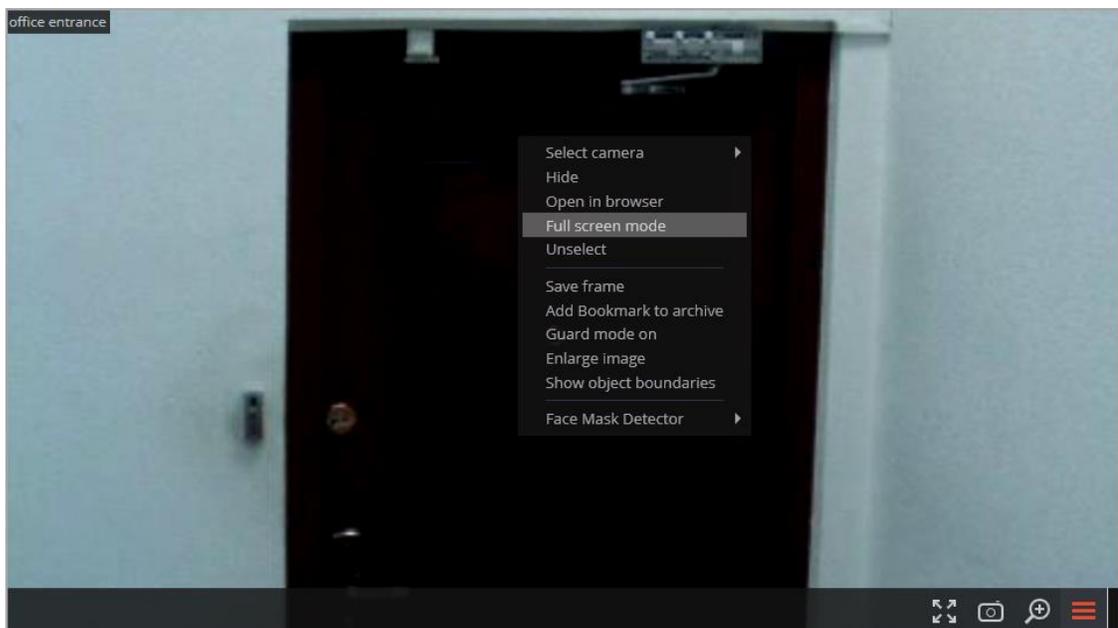
- using the context menu of the Overview monitor.
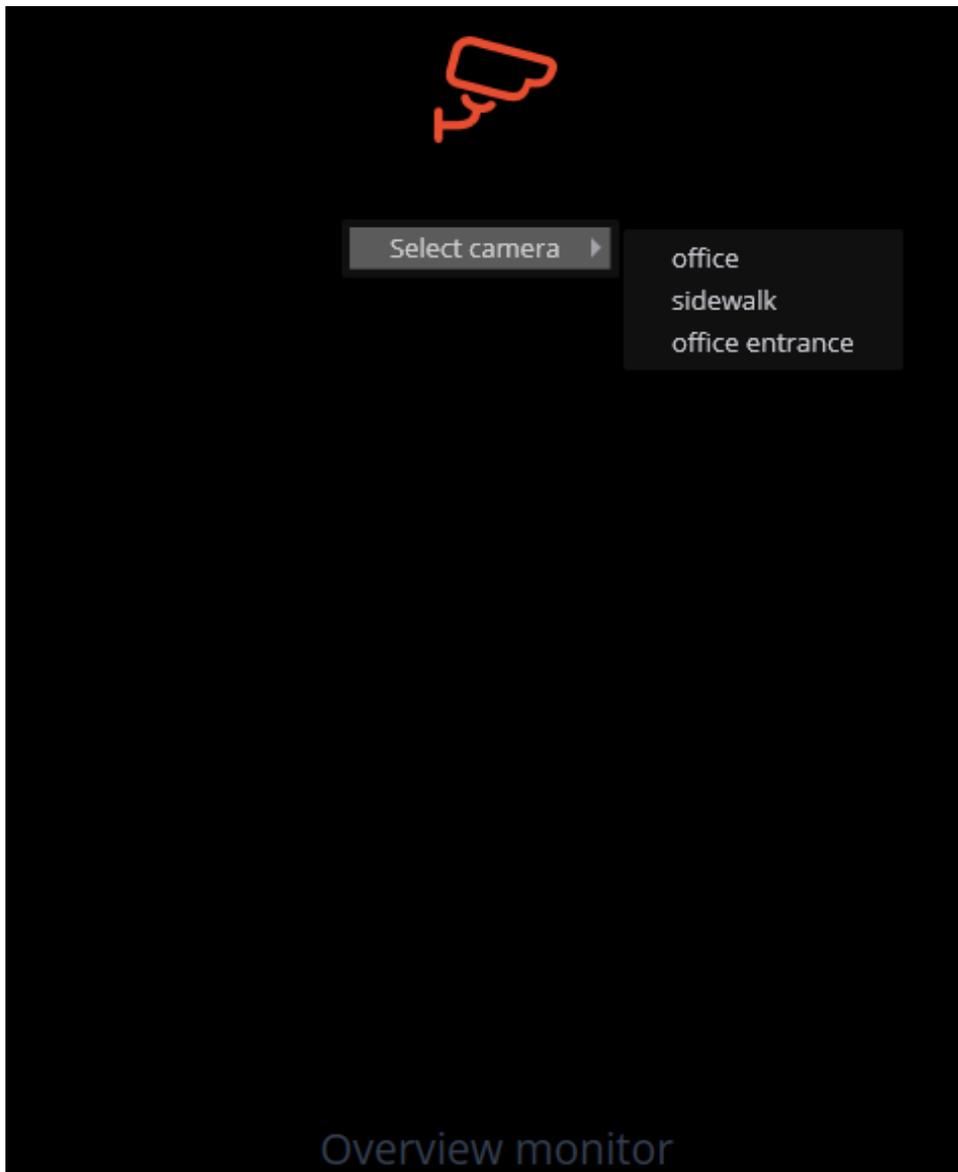
Note

Opening a camera on the overview monitor is available both from the grid of real-time cells or from the archive.

Note

If a camera is opened on the **Overview monitor** from the archive cell, the video will continue from the moment when the transition was made.

To open the alarm monitor cells on the overview monitor, it is required to

select the **Settings** item in the control panel, then the **Workplace**
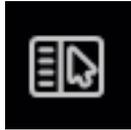
settings sub-item, then go to the **Sheduled Guard mode** tab and enable the **Allow full-screen mode in the alarm monitor** option.

Note

Opening the **Alarm monitor** cells on the **Overview Monitor** is possible if more than one camera is open on the **Alarm monitor**.

Start view ❯

Start view allows to set the start view for each monitor when the **Eocortex Client** application is opened.

Note

By default, the last view is used as the start view for each monitor.
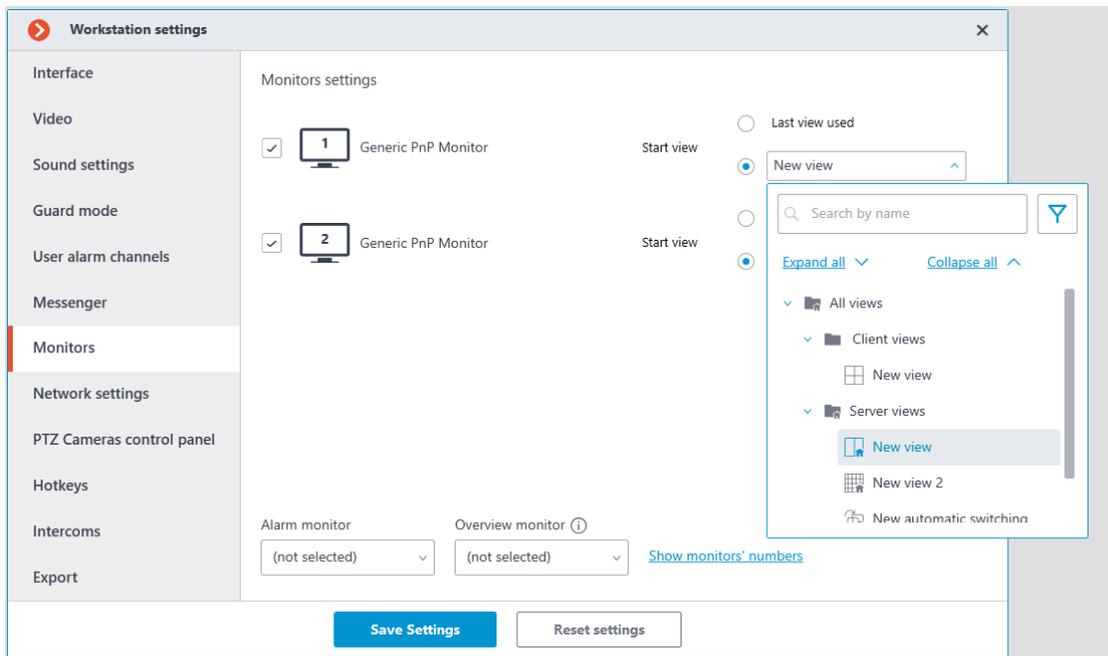
Warning

For the alarm and overview monitors, the start view setting is not available.

The starting view can be selected by double-clicking from the drop-down tree of views or by entering a part or the full name of the view in the input field. It is also possible to use the filter by views and automatic shiftings and by their belonging to the Client, Server and Favorite views folders.
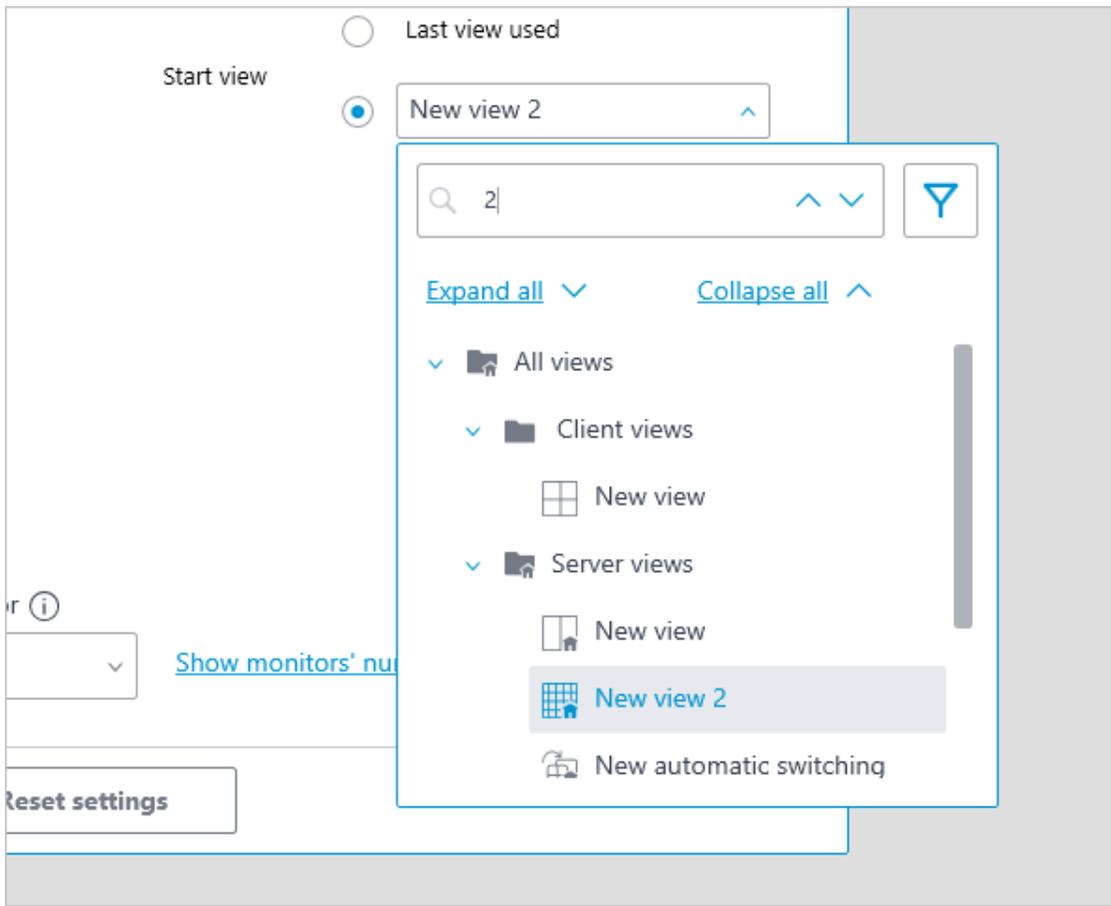
Network settings
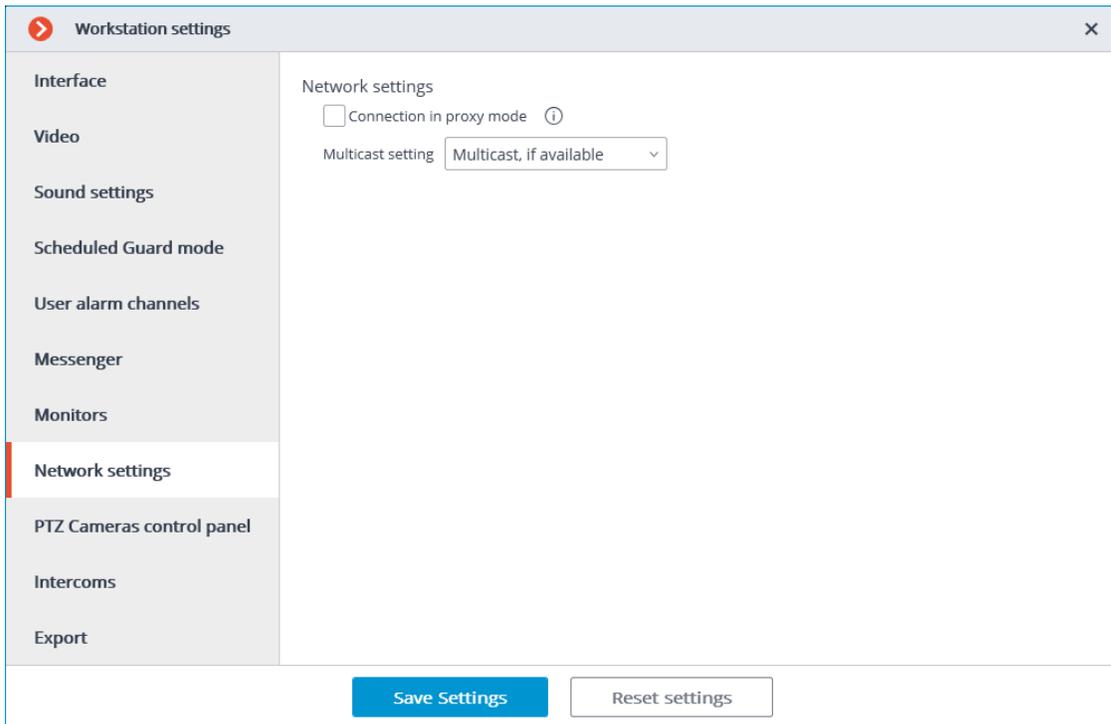
Connection in proxy mode: this option is used when the system includes several video servers: if checked, **Eocortex Client** will receive all real-time video streams and historical records by connecting to only one Eocortex server (this server, in turn, will receive data from other servers and send it to **Eocortex Client**); otherwise **Eocortex Client** will connect directly to those servers, which channels are displayed (i.e., simultaneous connection to multiple servers is possible).

Multicast setting: allows selecting a broadcasting mode for this computer.

- **Multicast, if available**: channels with all broadcasting modes will be received.

- **Multicast only**: only **multicast** channels will be received.

- **Unicast only**: **unicast** (default) channels will be received.

PTZ Cameras control panel
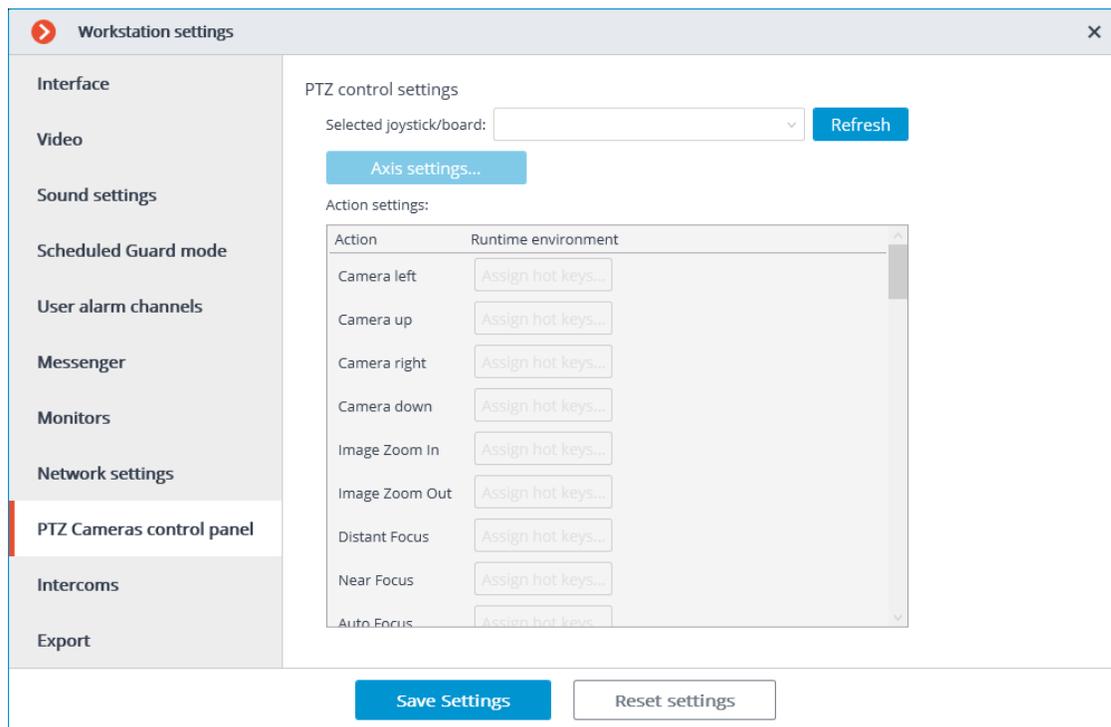
On the **PTZ Cameras control panel** tab you can configure the remote control or joystick parameters.

Hotkeys
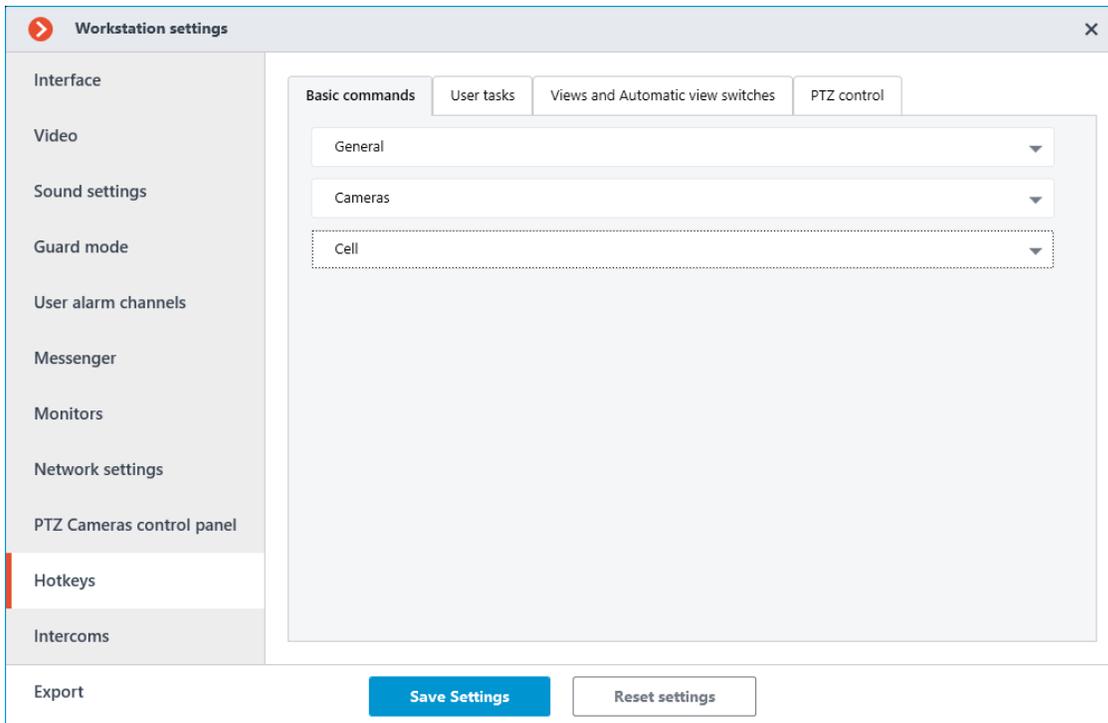
Use this tab to configure keyboard shortcuts for various actions in the **Eocortex Client** application.

Users can assign keyboard shortcuts only for the actions they have permission to perform and only for the objects they have access. The same restrictions apply to performing actions using already assigned keyboard shortcuts.

For convenience, actions are distributed across the following tabs:

- Basic commands ⤵
- User tasks ⤵
- Views and Automatic view switches ⤵
- PTZ control ⤵

Basic commands 〉

The **Basic commands** in turn contain three sections: **General**, **Cameras** and **Cell**.

In the **General** section, keyboard shortcuts are assigned to perform actions related to the whole application.
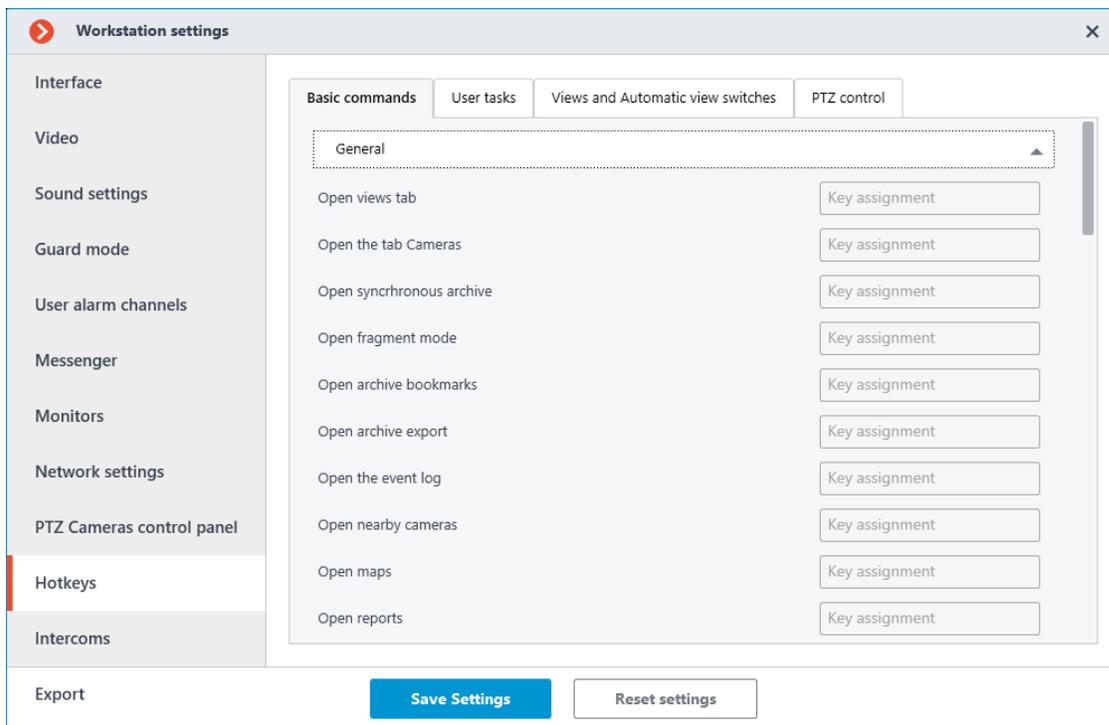
- Open views tab

- Open the tab ...

- Open syncrhronous archive

- Open fragment mode

- Open archive bookmarks

- Open archive export

- Open the event log

- Open nearby cameras

- Open maps

- Open reports

- Open guard mode

- Open video wall control

- Open video wall settings

- Open workstation settings

- Open system settings

- Open chat

- Change password

- Change user

- Restart client

- Close application

- Open information about the program

- Show/Hide comtrol panel

The **Cameras** section assigns keyboard shortcuts that open specific cameras in full screen mode.
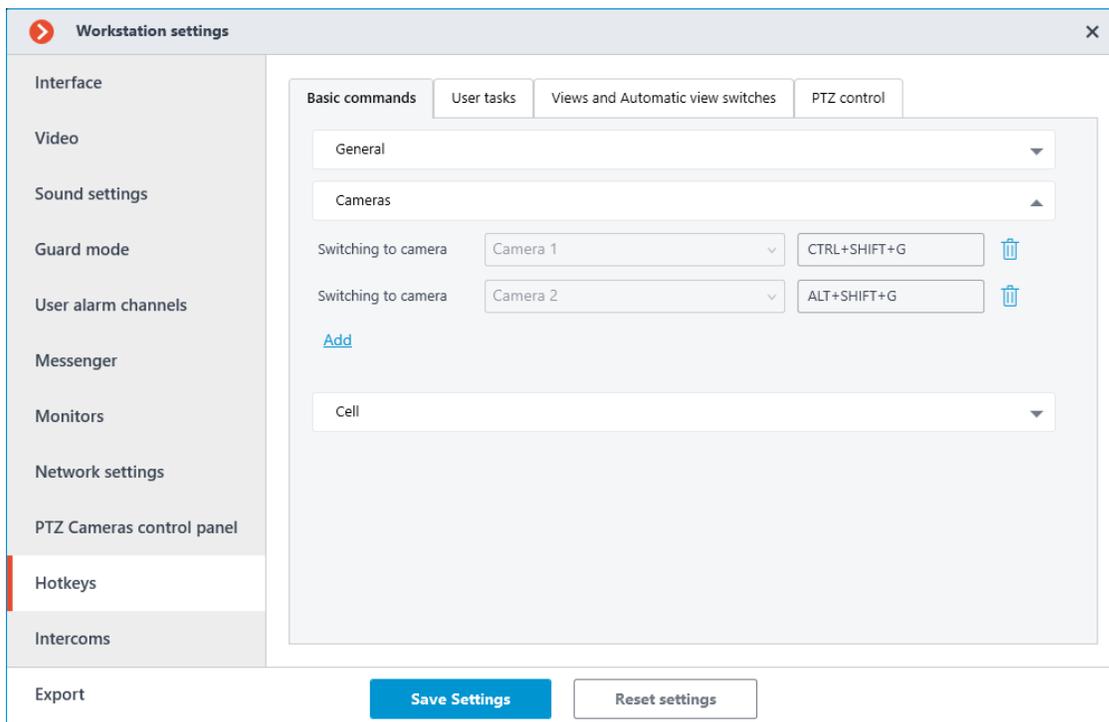
The **Cell** section assigns keyboard shortcuts to perform actions related to the active cell.
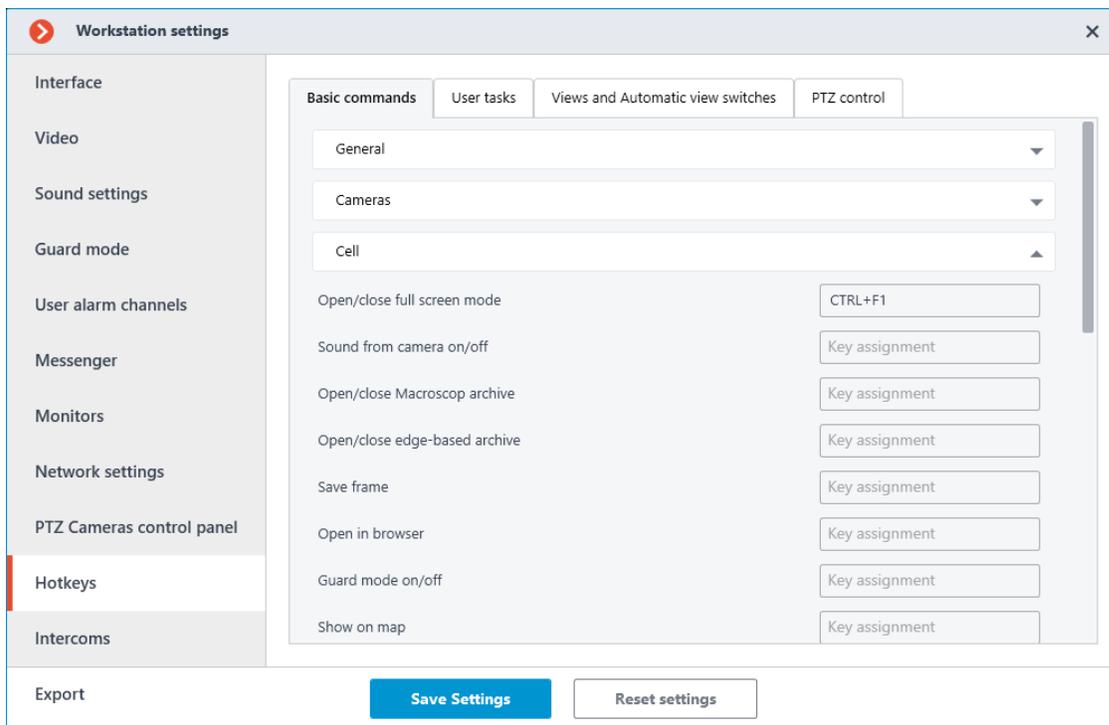
- Open/close full screen mode

- Sound from camera on/off

- Open/close ... archive

- Open/close edge-based archive

- Save frame

- Open in browser

- Guard mode on/off

- Show on map

- Show/Hide motion objectû boundaries

- Print frame

- Add Bookmark to archive

- Start forward playback

- Start backward playback

- Stop playback

- Hide/Show fragments panel

- Increase speed

- Reduce speed

- Open fragment mode

- Acknowledge alarm

- Mark alarm as false

- Ignore alarm

- Open alarm in the archive

- Open the alarm card

- Open cameras nearby

User tasks 〉

In the **User tasks** tab, assign keyboard shortcuts to perform user tasks on cameras.
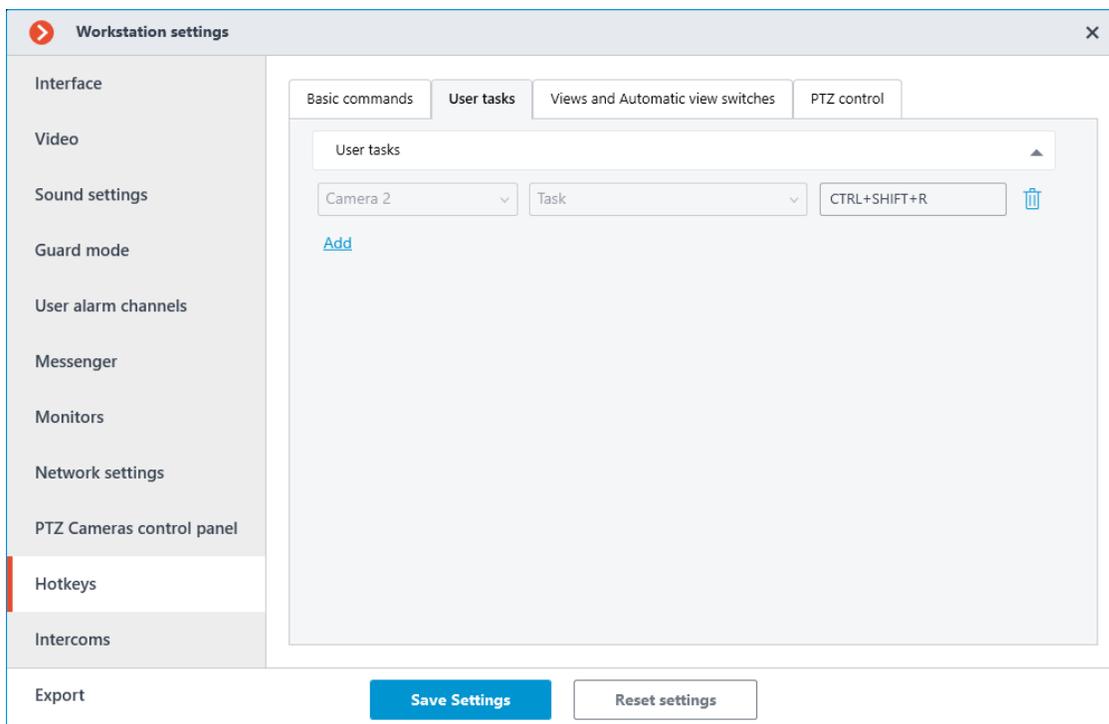
Note

Only those cameras on which user tasks are configured are displayed in the list.

Note

When a user task that requires confirmation is using the keyboard shortcuts, a dialog box opens where it is necessary to confirm the start of the task.
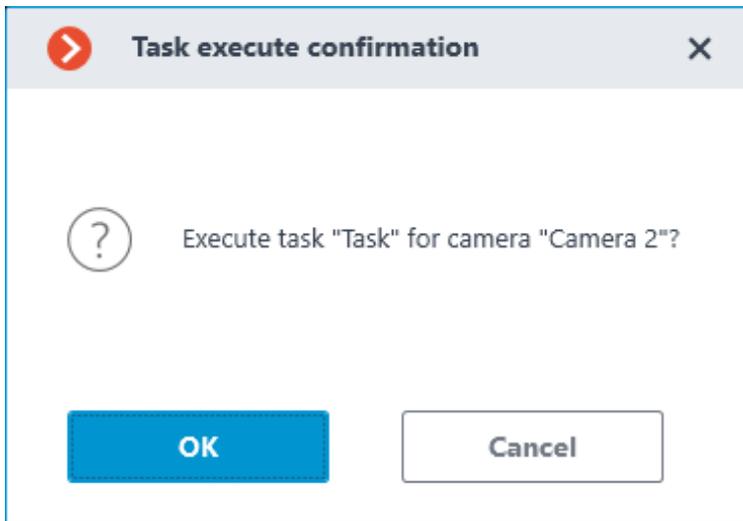
Views and Automatic view switches ›

In the **Views and Automatic view switches** tab, assign keyboard shortcuts for switching to local and system views and for starting automatic switching.
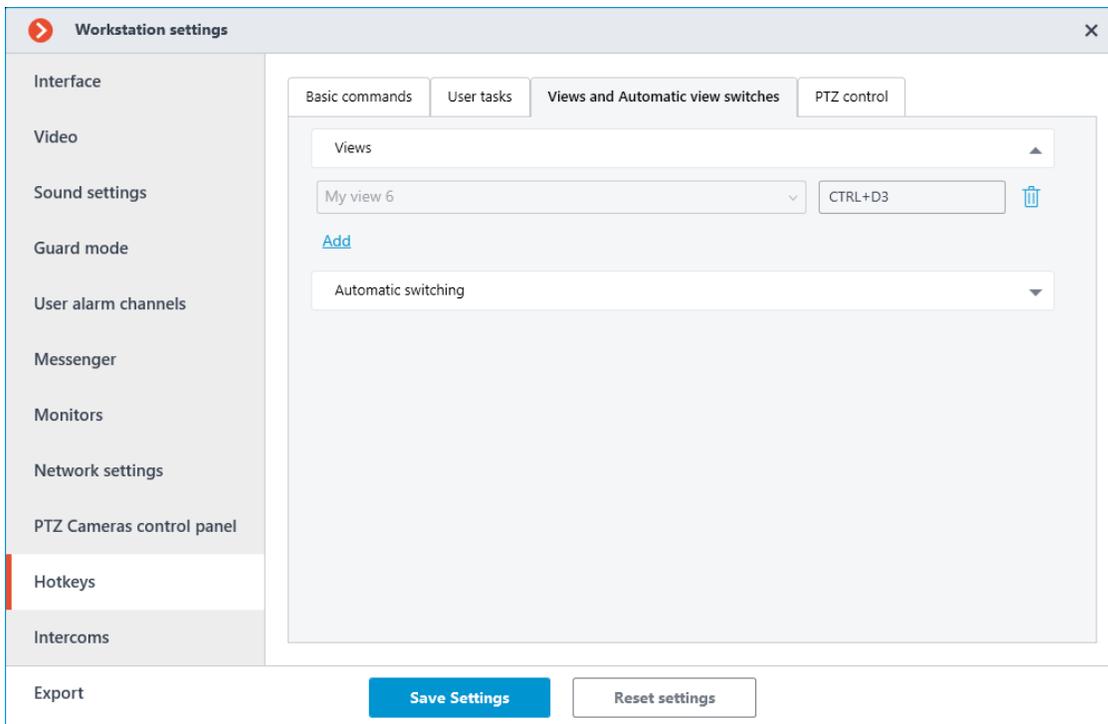
PTZ control ›

In the **PTZ control** tab, ssign keyboard shortcuts for switching to presets and for launching tours on cameras.
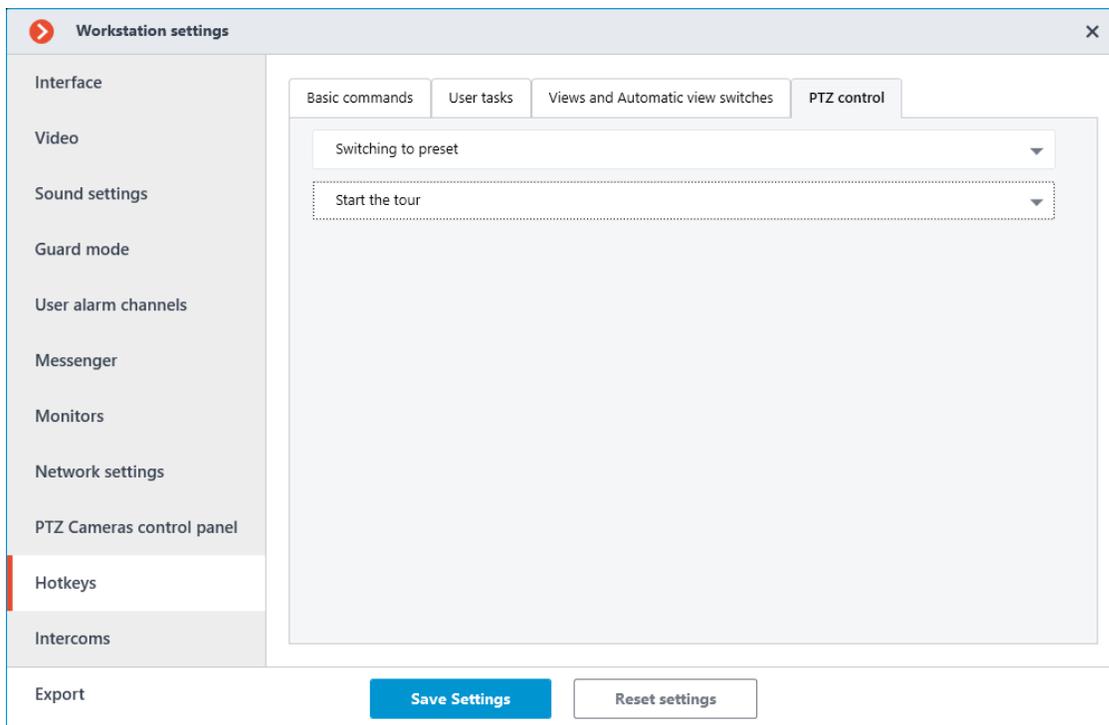
Requirements and limitations ❯

Allowed keys and combinations

- Num0 - Num9 without modifiers.

- F1 - F12 both without modifiers and with one or more modifiers Ctrl Alt Shift.

- letters, numbers, punctuation marks on the main keyboard with one or more Ctrl Alt Shift modifiers.

- Shift can be the only modifier for F1 - F12 keys, in other cases it should be used only if there is another modifier.

Invalid keys and combinations

- Esc Backspace: Use these keys to unassign keys to actions.

- Enter

- System keys: Win ← ↑ → ↓ Home End PageUp PageDown Insert CapsLock NumLock.

- letters, numbers, punctuation marks on the main keyboard without modifiers or with one Shift modifier.

Note

Examples:

F1 is valid

Shift+F2 is valid

Ctrl+Shift+F3 is valid

F1 is valid

Alt+A is valid

A is invalid

Shift+B is invalid

Ctrl+Shift+C is valid

Num1 is valid

Ctrl+Num2 is invalid

Ctrl+Alt is invalid

Assignment conflicts ⟩

If conflicts are detected when assigning keyboard shortcuts, tabs and rows with duplicate keyboard shortcuts will be highlighted.
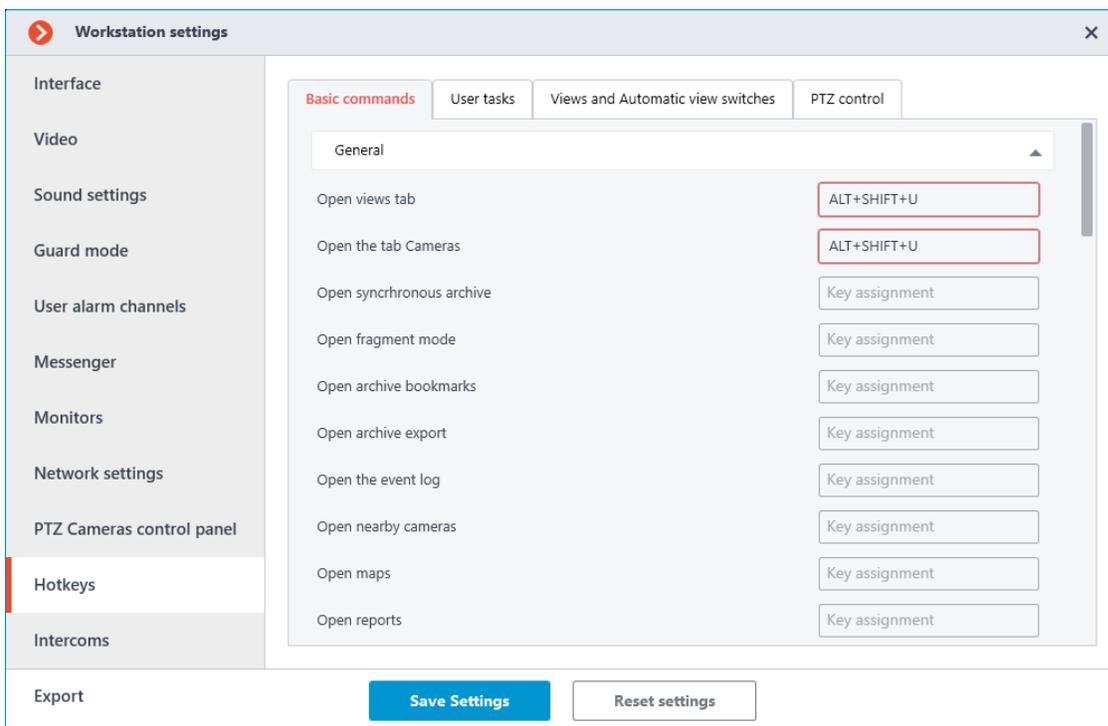
Attempting to save settings that contain conflicts opens an error message:
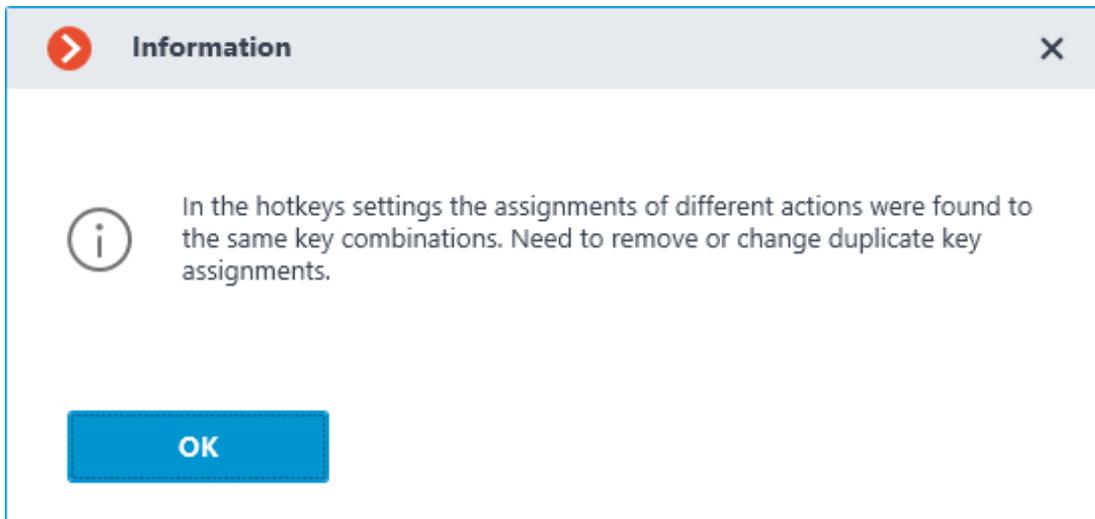
Note

Keyboard shortcuts assignments for the **Switching to preset** action is an exception since it is only necessary to select a camera, and you can change the preset at any time.

Intercoms
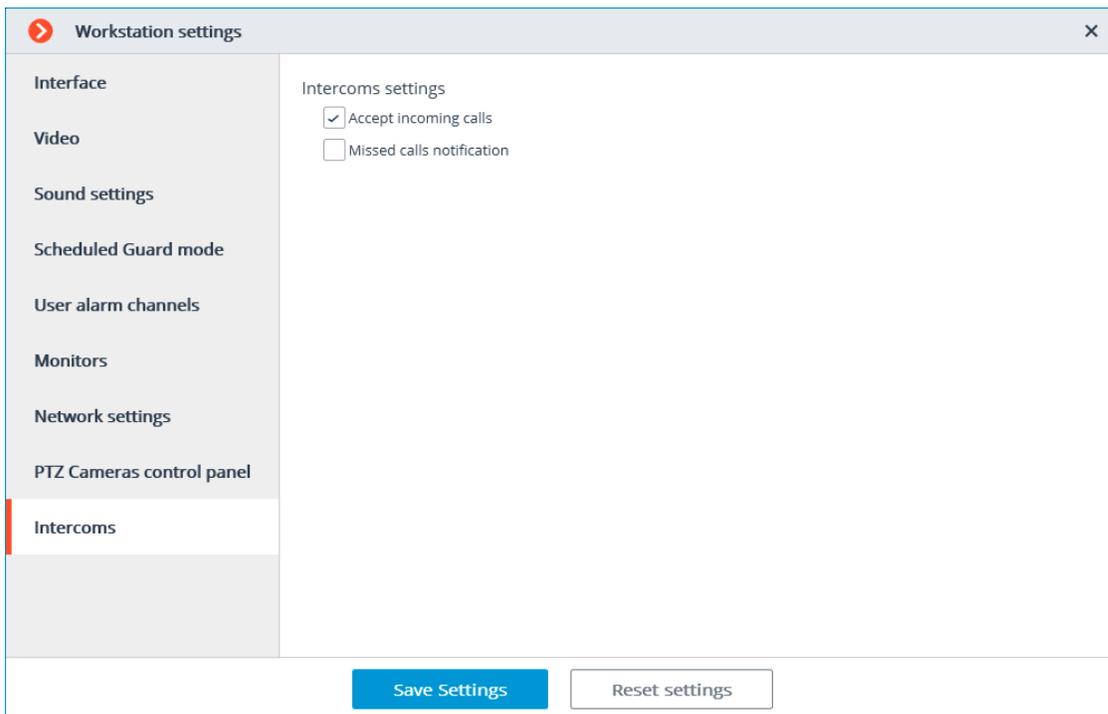
Accept incoming calls: If checked, this computer will accept calls from intercoms.

Missed calls notification: If checked, this computer will display notifications of missed calls from intercoms.

Export
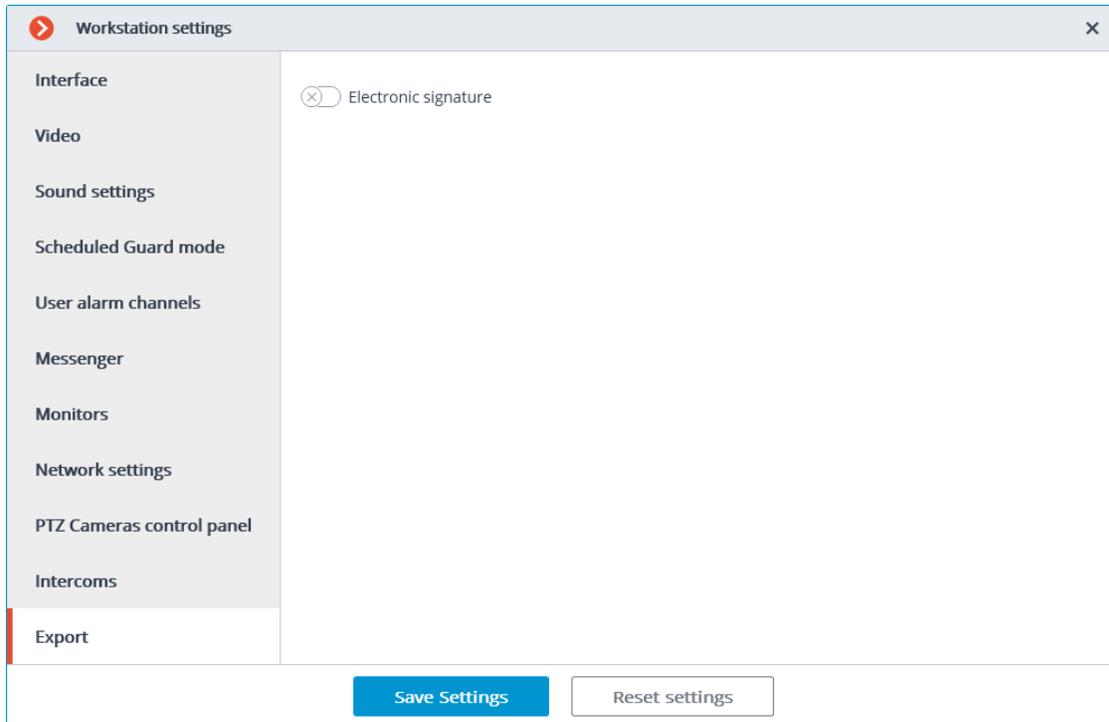
Electronic signature can be enabled on this tab.

Eocortex Web Client

Eocortex Web Client allows viewing live video, system archive and **Event log** in browsers that support **HTML5**.

Warning

In **Eocortex**, starting from version 3.5, support for the **Internet Explorer** browser has been discontinued.

Warning

Eocortex Web Client displays only videos encoded with H.264 and MJPEG codecs.

Capabilities of the module ⟩

- View one or more cameras in a live view.

- Playback the archive of the selected camera.

- Listen to the sound from the selected camera.

- Control PTZ functionality of the selected camera.

- Save frames — both from a live view, and an archive playback.

- View the zoomed frame part — both in a live view, and an archive playback.

- View both system and user events.

- Filter, sort, and search for events in the log.

- Automatic event updates.

Launch ang log into the system

To start a **Eocortex Web Client**, type in the address bar of the browser the following:

http://<IP_address_or_URL_of_server>:<port>

or for the secured connection

https://<IP_address_or_URL_of_server>:<SSL_port>

Examples:

http://192.168.1.100:8080

http://server.company.com:9090

https://192.168.1.100:18080

https://server.company.com:18080

In the opened authorization form, enter the user name and password, then click **Connect**.
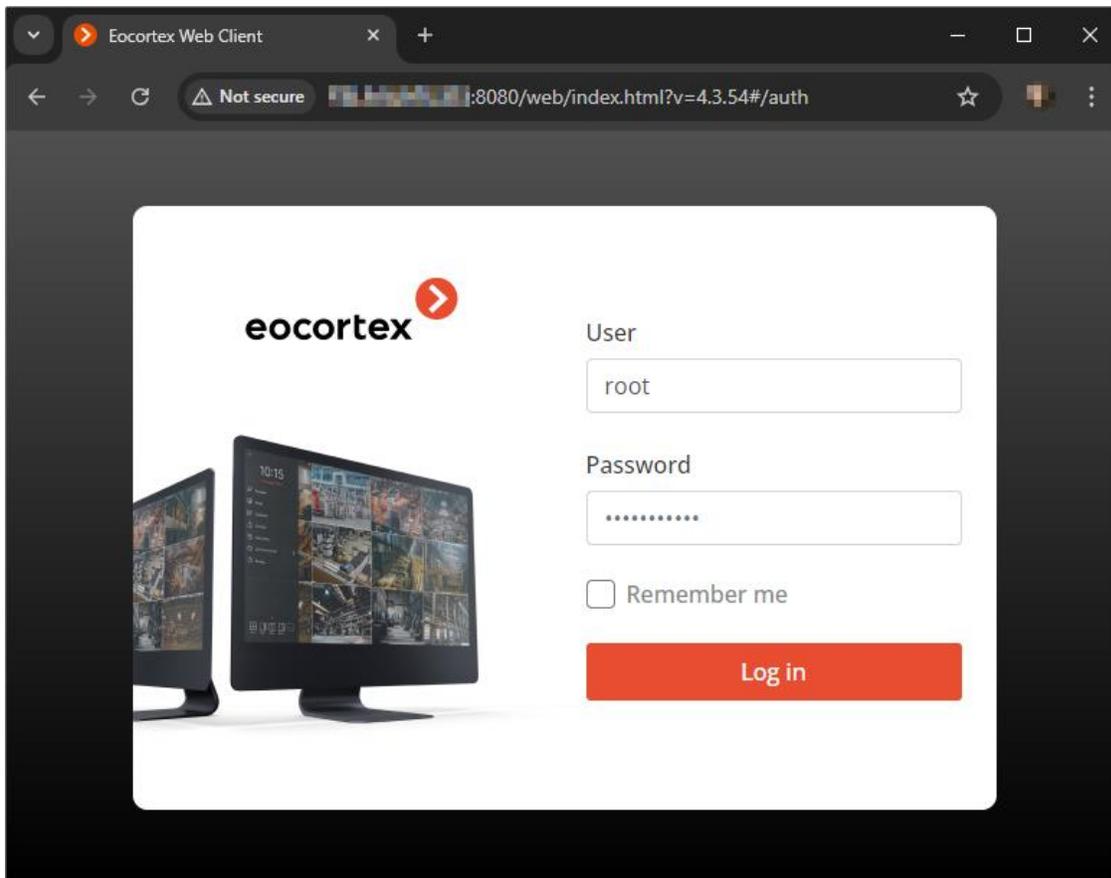
Note

It is possible to connect to **Eocortex** servers running with **Enterprise** and **ULTRA** licenses under **Active Directory** account, if the administrator of the video surveillance system has configured such functionality for the user.

For **Active Directory** accounts, the user name is specified as: **username@domain**; where **domain** is the domain name, **username** is the name of the user in the domain.
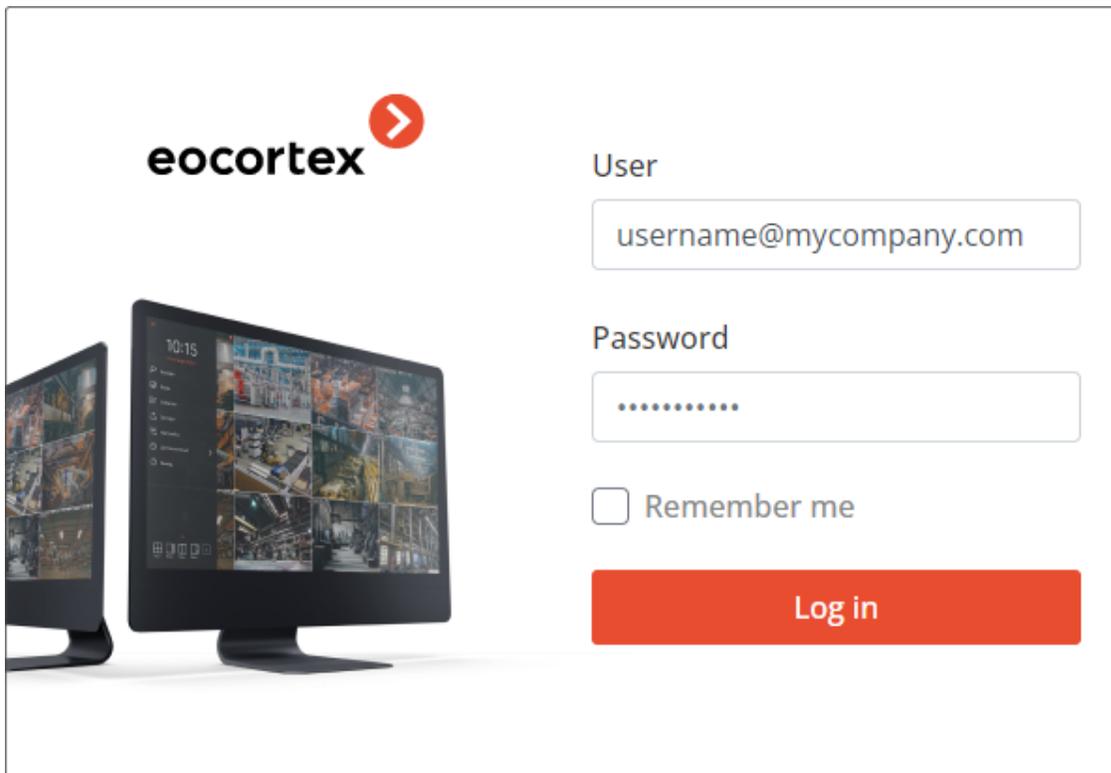
At the first launch, a blank page (without display from the cameras) will be opened.
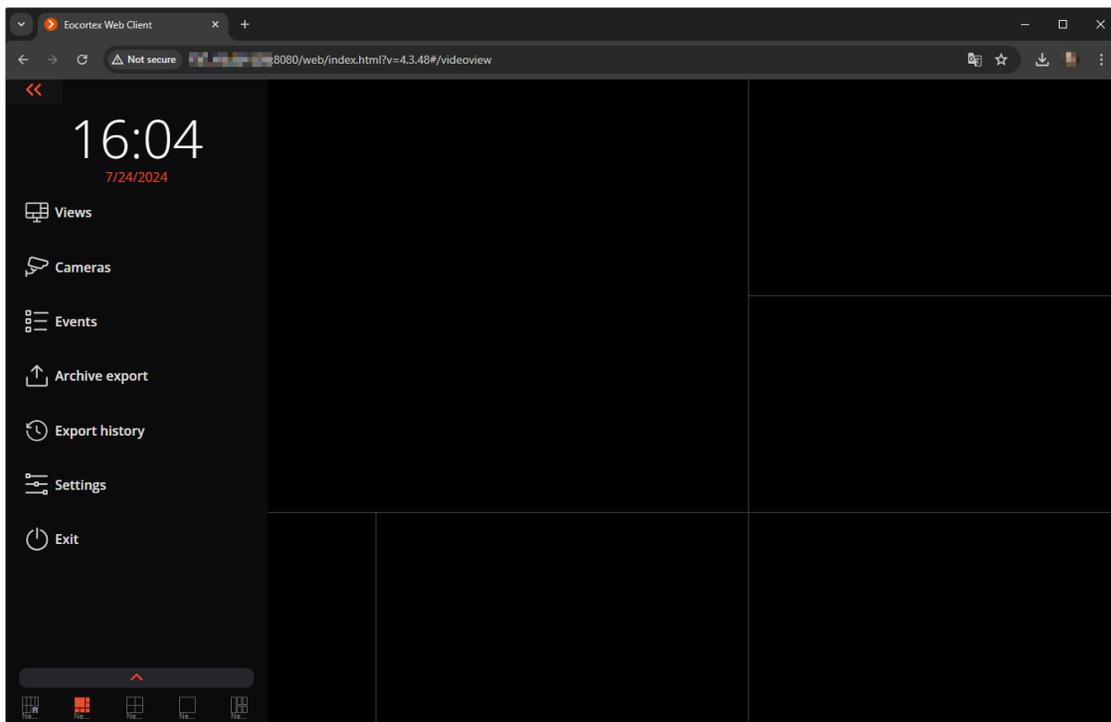
Automatic authorization

Warning

This authorization method is insecure because the user's password is transmitted in the clear. It is not recommended to use it on open or public networks.

To perform automatic authorization, you must enter a URL in the following format:

{scheme}//{host}:{port}/web?user={user_name}&password={user_password}.

Query parameters:

- user - user login

- password - user password.

  If your password contains special characters such as **! @ # $ % ^ & * ( )**, you should encode them according to RFC 1630 before sending them. To do this, perform the following steps:

  - Open the Developer Tools by pressing the **F12** key.
  - Click the **Console** tab.
  - Enter the **encodeURIComponent** function in the console with your password as a parameter, for example: encodeURIComponent('password').
  - Copy the resulting value without quotation marks.
  - Use this encoded value as your password.

  For example, for the password qwerty!@##^&qwerty, the encoded string would look like this: qwerty!%40%23%23%23%5E%26qwerty.

Note

This authorization method supports authorization of users through **Active Directory**.

Examples:

http://localhost:8080/web?user=root&password=

http://localhost:8080/web?user=user1&password=123

http://localhost:8080/web?user=user2@company3.com&password=P@55w0rd

Warning

If incorrect data is entered, such as an invalid username or password, or a password containing special characters, the login page will appear.

Example of a request with a password containing special characters:

http://localhost:8080/web?user=user3&password=!@#$%^&*()

Example of a request with an encoded password:

http://localhost:8080/web?user=user3&password=!%40%23%24%25%5E%26*()

Usage

Control panel 〉

The controls in **Eocortex Web Client** are similar to the controls in the **Eocortex Client** application. Clicking by the left border of the window opens the control panel.
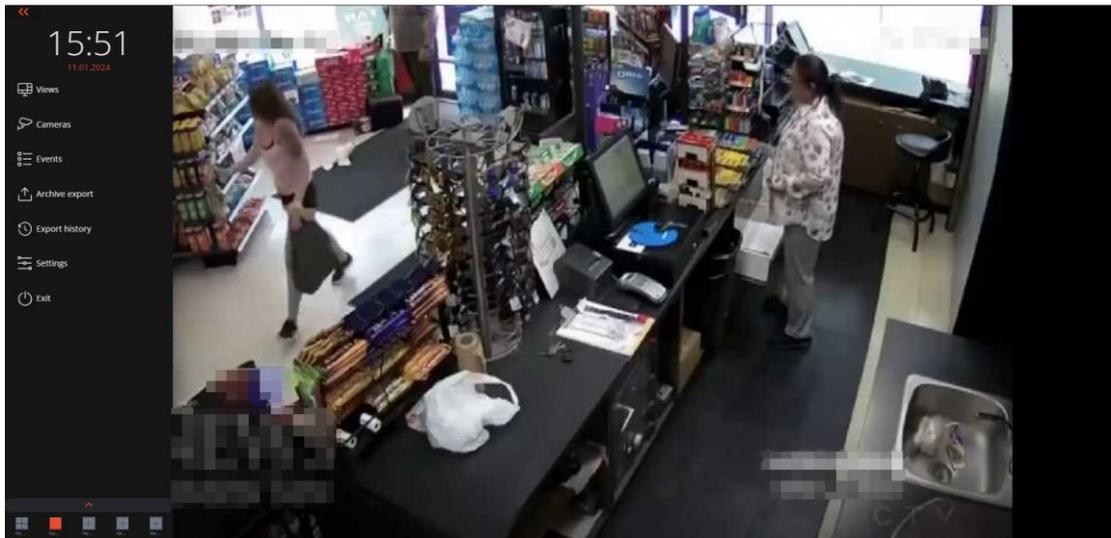
At the bottom of the control panel is a short view panel that displays the five user views that are the first in the general list of views. If the total number of views is less than five, then the remaining spaces in the short panel are filled with the **New view** buttons.

A short list of views can be expanded to fill the entire sidebar. In this case, the search field for a view by its name will become available.
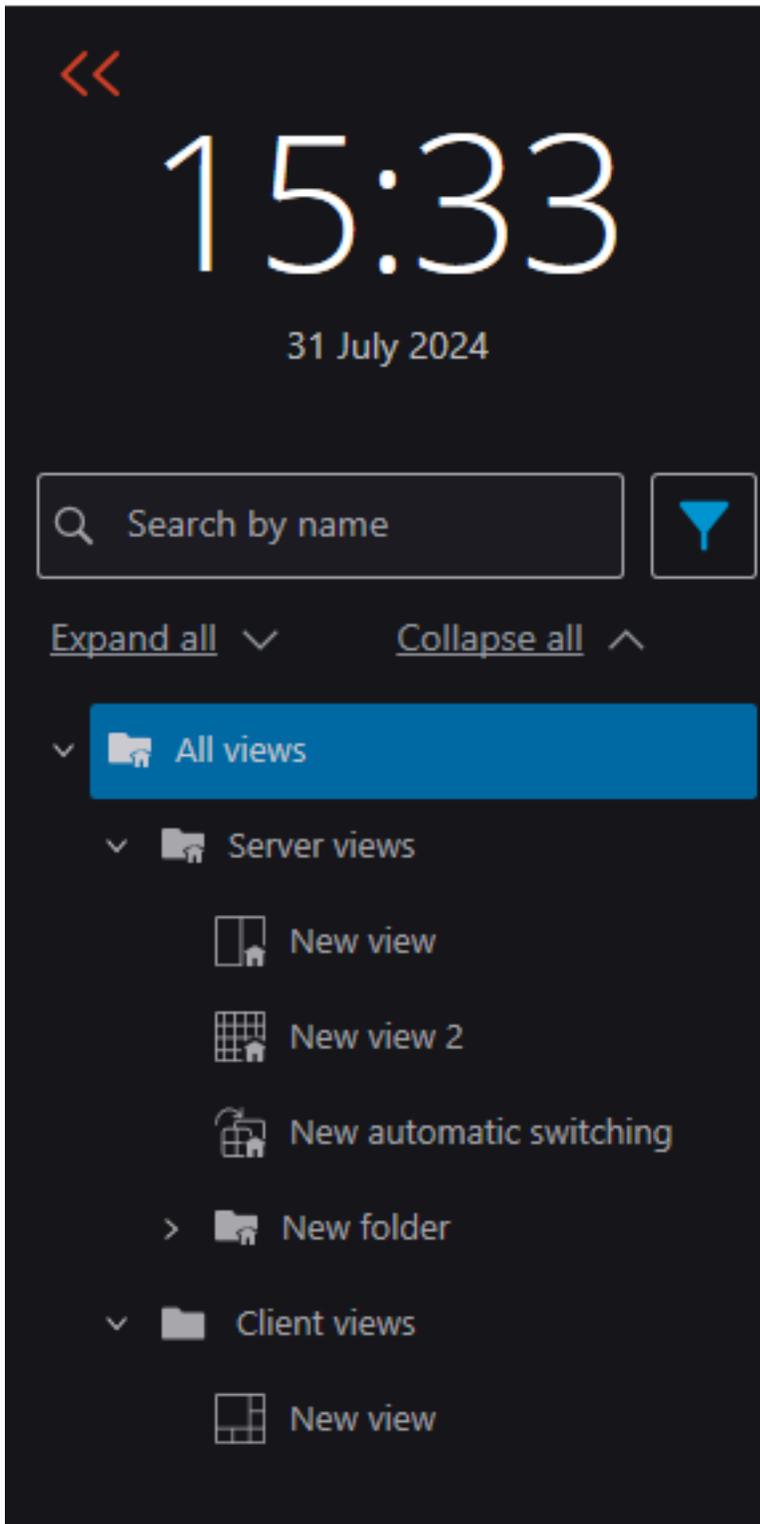
The following is a description of the pages that open when you select the corresponding control panel menu items:

Views

The view editor provides the ability to view and edit the view tree, add new views or create new ones based on existing ones, and delete views in groups.

More details....
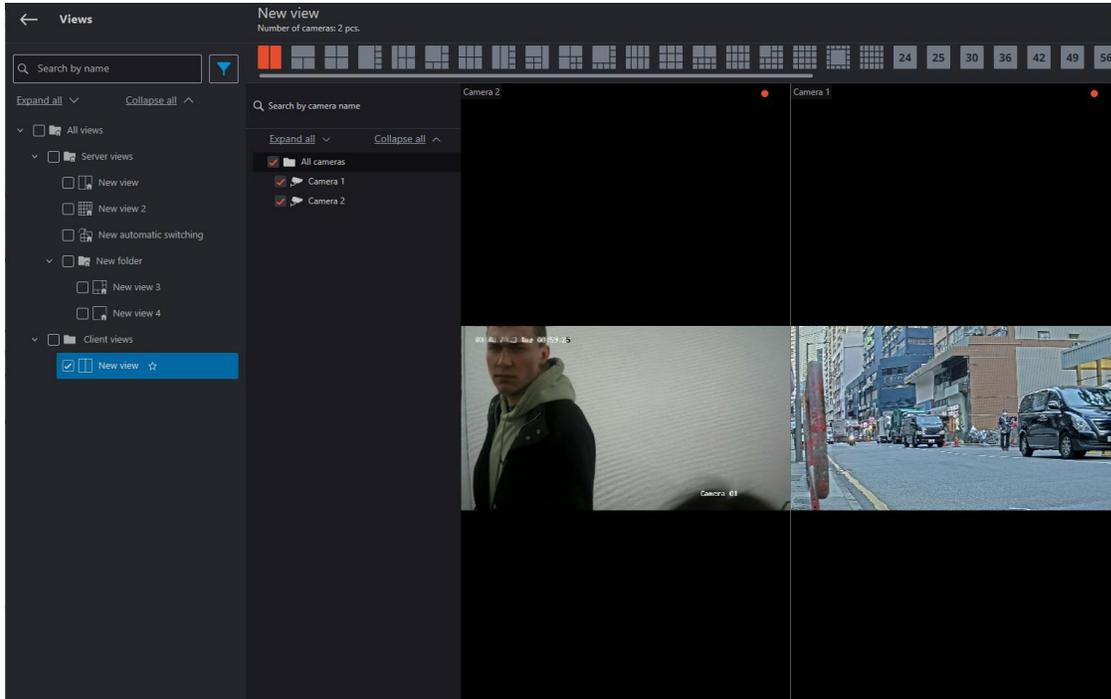
Cameras

Selecting cameras to be displayed on the screen.

Camera selection

Search by camera name

∧ Collapse all   ∨ Expand all

☑ All cameras

- ☐ Office
- ☐ Exit
- ☐ Parking lot
- ☐ Entrance
- ☐ Kitchen
- ☐ Meeting room
- ☐ HK street

Create view   Cancel

A camera preview is available in the camera selection window.
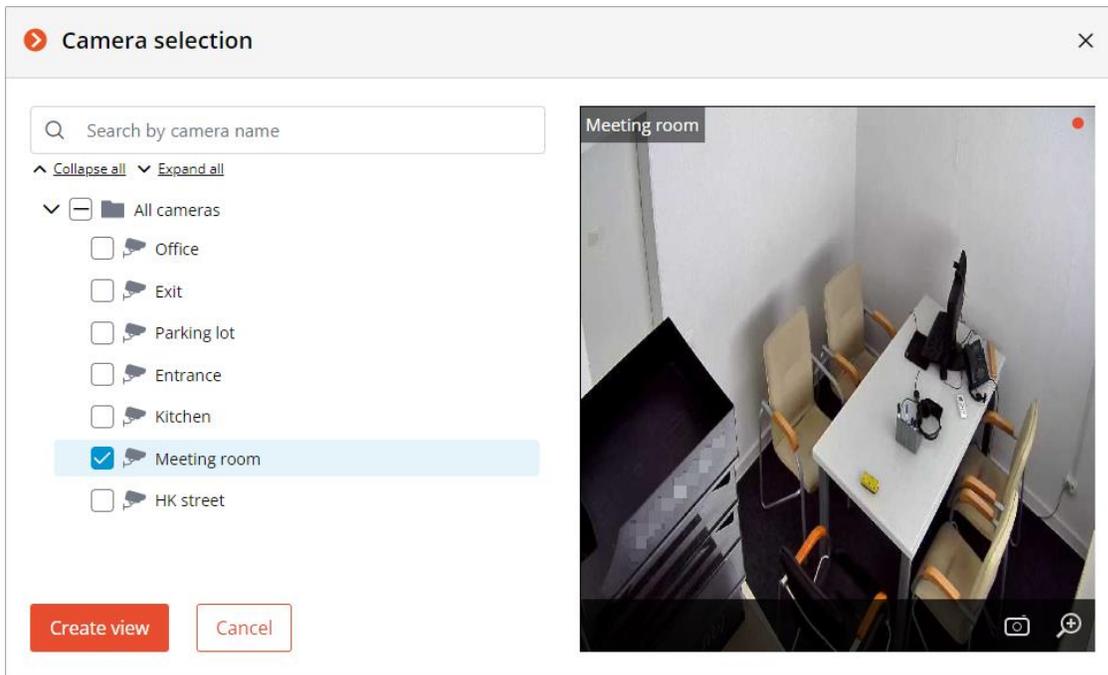
Clicking **Create view** button creates a view with selected cameras and a grid that places all the selected cameras with a minimum number of remaining empty cells.

Events

Events log. The list of system and user events with the ability to search, filter, and sort.
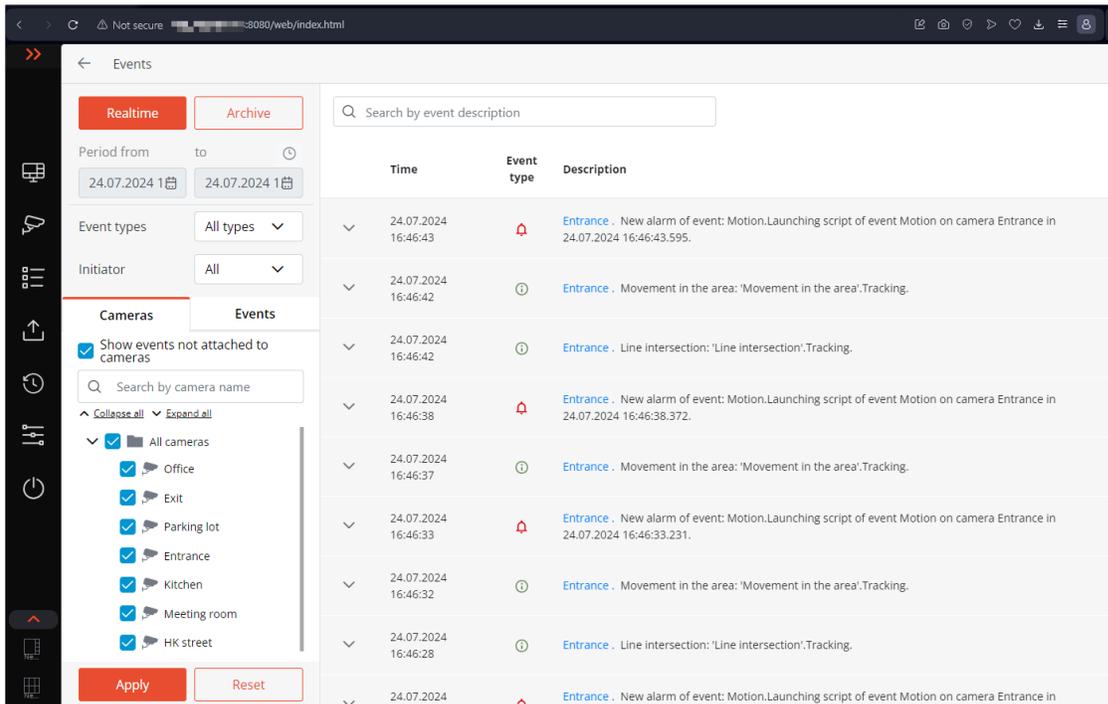
Archive export

Export the archive fragment to a file. More details...

Export history

Viewing the current status and export history, downloading videos. More details...

Settings

Application settings.

Exit

Return to the authorization form.

On-screen grid cell ❯

Grid cells display live and archive video of the selected cameras. One of the cells can be selected as active. The active cell is highlighted with a frame. To activate the cell, click inside it.

To call the context menu of the channel, right-click in the cell of that channel, or click to the icon in the active cell.

Note

The contents of the context menu items and the active cell buttons depend on the camera and application settings.
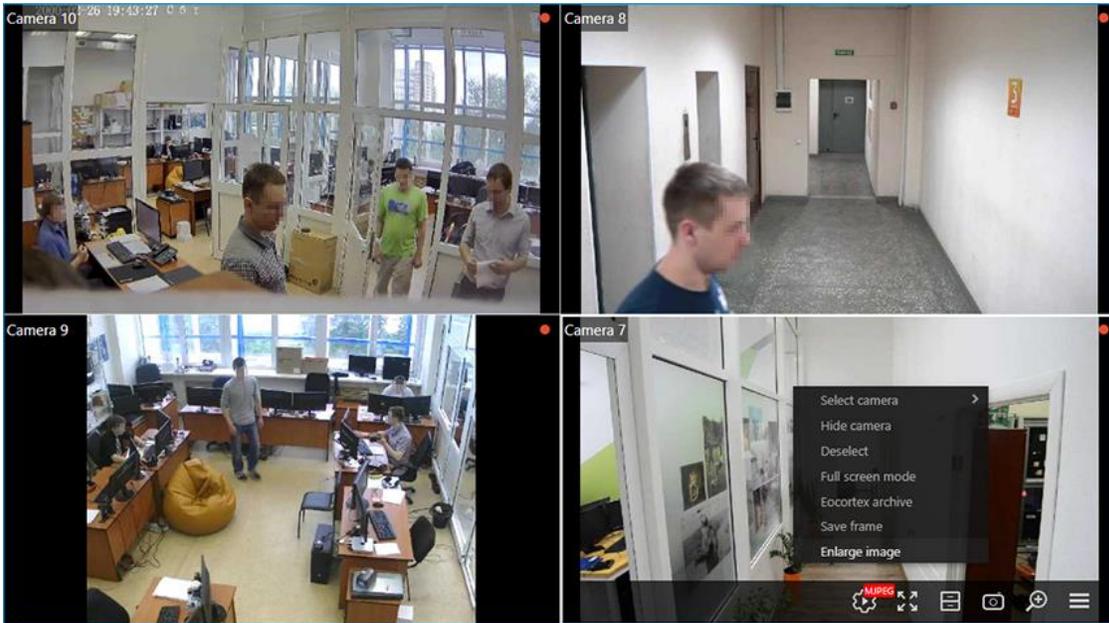
The following is a description of items in the context menu and control buttons:

Select camera: allows selecting the camera which will be displayed in the cell.

Hide camera: allows hiding the camera (clears the cell).

Deselect: removes the selection from the cell (makes the cell inactive).

 Full-screen mode: expands the cell to the entire browser window.

Note

The change between the grid mode and full-screen mode can also be performed by double-clicking in the grid cell.

 Eocortex Archive : opens archive of the selected camera recorded on the server.

 Save frame: saves the current frame to disk. When this menu item is selected (or after clicking on the icon), the window for the selection of the location and name of the file to be saved will open.

 Sound: adjusts the volume of the sound in the cells.

 Enlarge image: displays the enlarged area of the frame. To enlarge the frame area, select this item in the context menu or click the corresponding

button and draw the frame over the area to be enlarged. Enlarging mode can be disabled by clicking the middle mouse button.

Camera control interface: displays PTZ control elements.

Stream selection: Allows to choose the stream to display in the camera cell.

The following streams are available:

- **Main**

- **Additional 1**

- **Additional 2**

- **Additional 3**

- **Auxiliary**
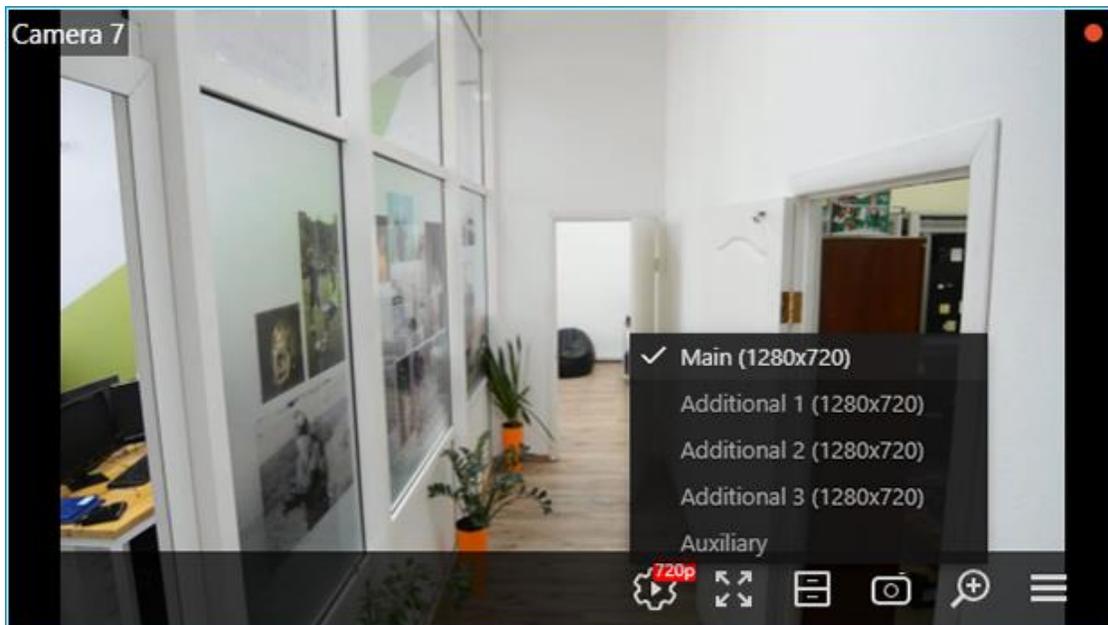
Note

Both main and additional streams are available for selection only in case if they are encoded to H.264 video codec in the source and the browser are capable to decode and display it.

Configuration of video streams should be performed by the surveillance system administrator.

Auxiliary stream will always be available for selection. The server generates this stream in MJPEG from the original stream regardless of what video codec this original stream was encoded.

When assigning a camera to the cell for the first time, the auxiliary stream will be displayed by default.

Stream selection settings will be saved for each camera in the cell.

Warning

When viewing many cameras in H.264 video codec simultaneously, problems with the playback may occur. In such cases it is recommended to decrease the load to the browser by activating the **Switch to MJPEG in case of video playback issues** option in the **Settings** window.

Full-screen live viewing ❯
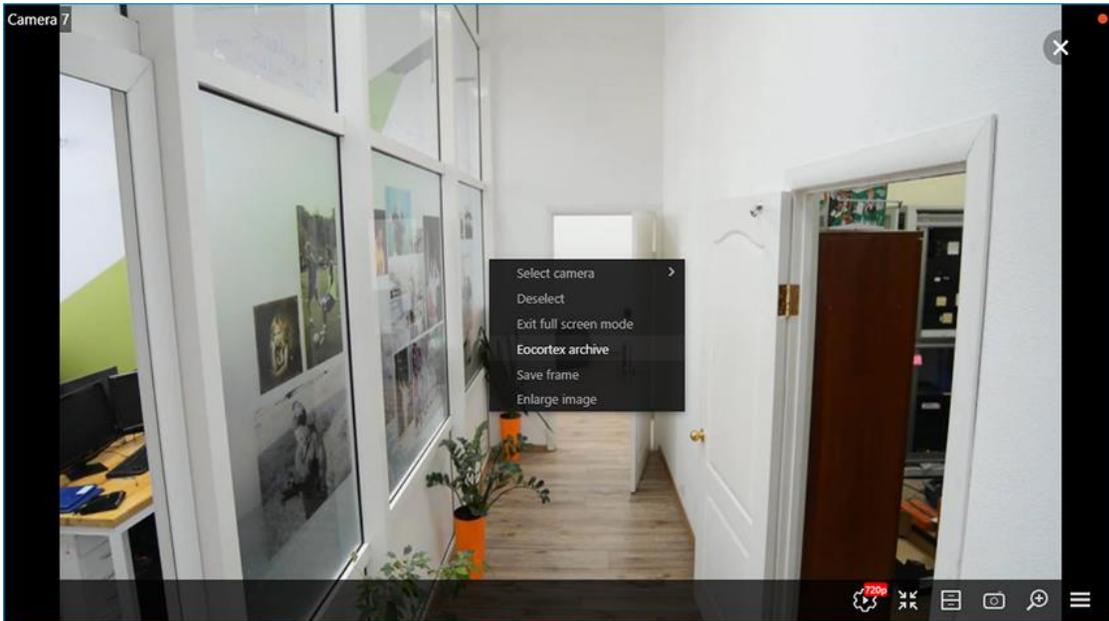
Warning

The full-screen mode may significantly increase the load to the device where the browser with **Eocortex Web Client** is running. In addition, it may increase consumption of network channel with the surveillance server.

The following is a description of context menu items and buttons specific to full-screen viewing:

⚙ **Stream selection**: Allows to choose the stream to display in the camera cell.

Note

By default, when switching to the full-screen mode, the best available stream with the highest image quality will be selected automatically.

When changing the stream selection for the camera in the full-screen mode, the selection will be saved for this camera.

⛶ **Exit full-screen mode**: allows returning to the on-screen grid of channels.

▶ **Eocortex** Archive : opens archive of the selected camera recorded on the server.
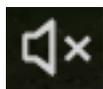
🔊 **Turn sound On** / 🔇 **Turn sound Off**: allows enabling and disabling the sound transmission from the camera.

Note

There may be a gap between the sound and the image that may be up to 1.5 seconds long.

Context menu >

The context menu can be invoked in two ways:

- By clicking the ☰ icon in the bottom right corner of the cell.

- By right-clicking anywhere in the cell.

Note

The number of menu items may be different from below, depending on the settings of camera, archive, and client workstation.
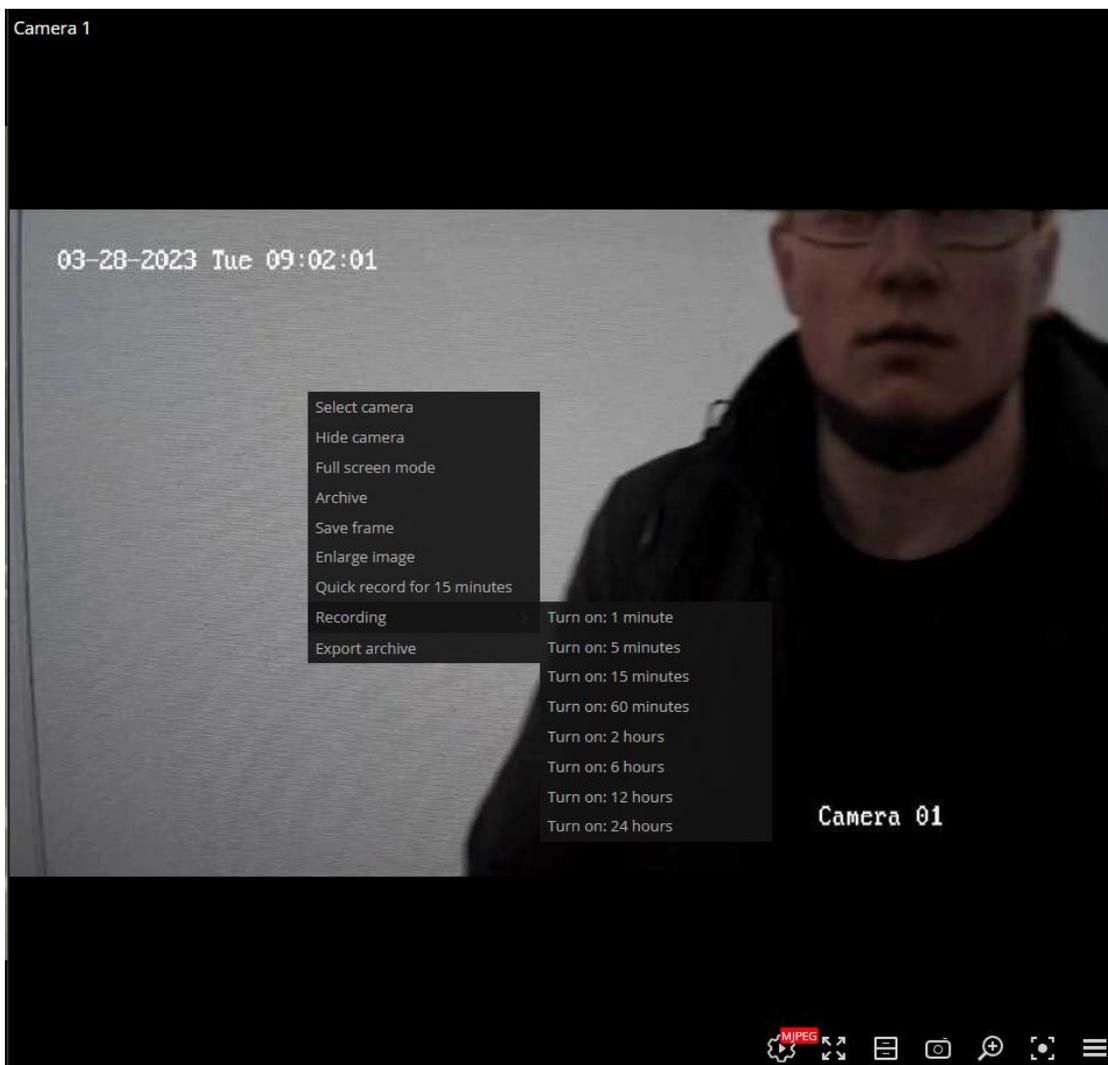
Description of the menu items:

Select camera: Allows selecting one of the available cameras to be displayed in the selected cell.

Hide camera: Removes the camera from the cell (frees the cell).

Full-screen mode / **Exit Full-screen mode**: Switches the camera display between full screen and grid mode.

Note

Switching between grid mode and full screen mode can also be done by double-clicking in a cell.

Archive: Switches the cell to View the single camera archive mode.

The following archive types can be accessed:

- **Archive Eocortex**: Archive on Eocortex server.

- **Memory card archive**: Archive on the camera's memory card.

Save frame: Saves the frame (frame fragment) to the selected location.

Enlarge image: Allows to zoom in on a selected fragment of the frame.

Note

When recording to an archive, a record-indicator is placed in the upper right corner of the cell: .

Quick record for 15 minutes: Enables forced recording of camera video to the archive for 15 minutes.

: Also enables recording to the archive for the next 15 minutes.

Recording: Enables forced recording of camera video to archive for the period selected in the submenu.

Warning

Forced archiving will only occur if the system administrator has set the recording permission to archive for this camera and user.

Note

When forced archiving is enabled, continuous recording to the archive will take place for the specified duration, regardless of the recording settings configured by the system administrator for this camera.

Note

After the forced archiving is completed, archiving will continue in the mode set by the system administrator for this camera.

Note

When forced recording is enabled, the menu will display **Turn off archive recording till ...**.
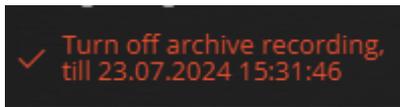
To disable forced recording, select this item.

Note

If there are no **Quick record for 15 minutes** and **Recording** items in the menu, it means that the camera is already recording to archive permanently or cannot be recorded.

Export archive: Exports the archive.

Show objects boundaries: Enables the display of colored rectangular frames for moving objects (when using the software motion detector) and for detected faces (using face detection module).

Set alarm cell: The cell in the alarm mode will display the cameras on which the **Alarm** was triggered.

Camera control interface: Enables/disables the PTZ control interface.

Camera position: Allows to set the camera to the pre-configured position (preset).

Note

In the lower part of the menu, items related to the intelligent modules connected to this camera are placed. Descriptions of these items are provided in the sections describing the corresponding intelligent modules.

Warning

Any changes in one of the client applications are automatically reflected in the other.

Playback of archive ›
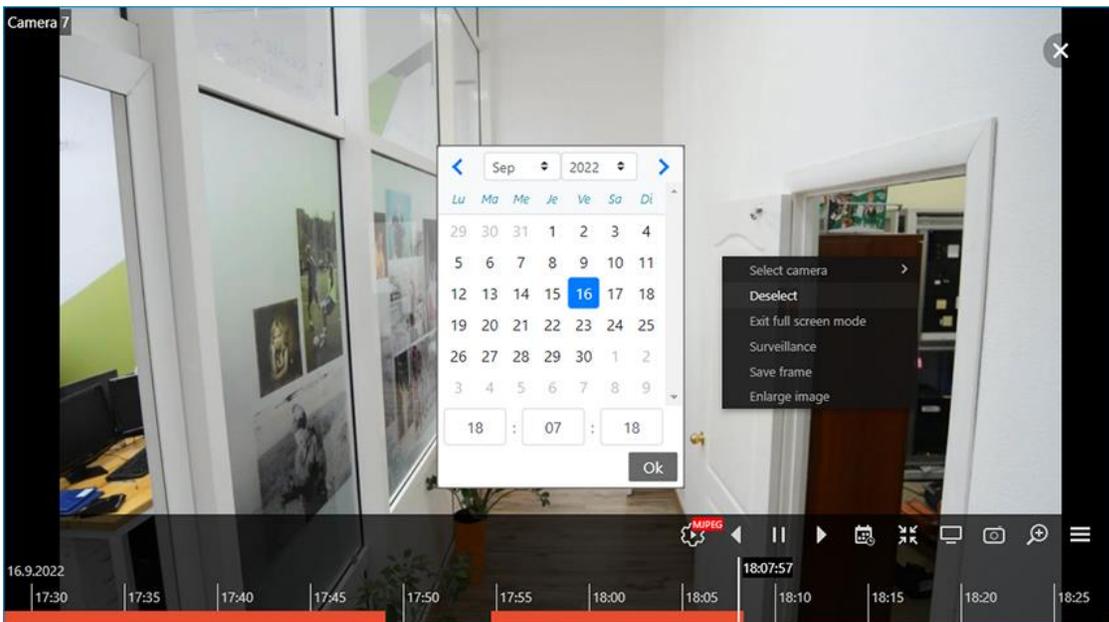
Note

The scale of time on the Fragments panel can be changed by rotating the mouse wheel.

The following is a description of context menu items and buttons specific to archive playback:

Stream selection: Allows to choose the stream to display in the camera cell.

Note

Choice of stream for archive playback is saved for the camera. Selected stream will be applied to the camera next time when viewing archive.

: expands the cell to full-screen.

: playback controls: backward, forward, pause.

Note

When playing in backward, the archive recordings will be displayed only in key frames.

: opens the calendar for switching to a set date and time.
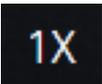
: controls the speed of video playback.

MJPEG video playback is available from 0.1x to 120x.

 Surveillance: switches the cell to live view.

 Save frame: saves the frame to the device.

 Zoom: enlarge the frame area (set with the frame). Press the middle mouse button to exit the zoom mode.

 : call the context menu.

PTZ control ❯

PTZ controls in **Eocortex Web Client** are similar to the controls in the **Eocortex Client** application.

Note

PTZ capabilities are only available in the full-screen view of the camera.

Clicking the button in grid mode will automatically switch to full-screen mode.

Pan and tilt can be performed with the virtual joystick by dragging a handle (a small circle inside a large circle) with the mouse.

: Opens the tour list.

The selected tour from the list will be marked with a checkmark. After refreshing the page, the checkmark will disappear, but the tour will continue to be displayed on the screen.

: Opens the preset list.

: Returns the camera to the home position.

: Controls the infrared lighting.

: Controls the wiper.

: Controls the washer.

 / / : Controls the focus.

 / : Zooming in/out.

: Hides the PTZ control panel.

Warning

Tour and Preset buttons are displayed if the corresponding settings are enabled on the camera. Other buttons will be displayed if camera settings are available, as well as the corresponding user permissions.

Opening a camera from Eocortex Client ❯

To open the camera in the **Eocortex Web Client**, go to the **Eocortex Configurator** application, go to the **Users** tab, and turn on the **Users of Eocortex applications** button, then go to edit group rights.
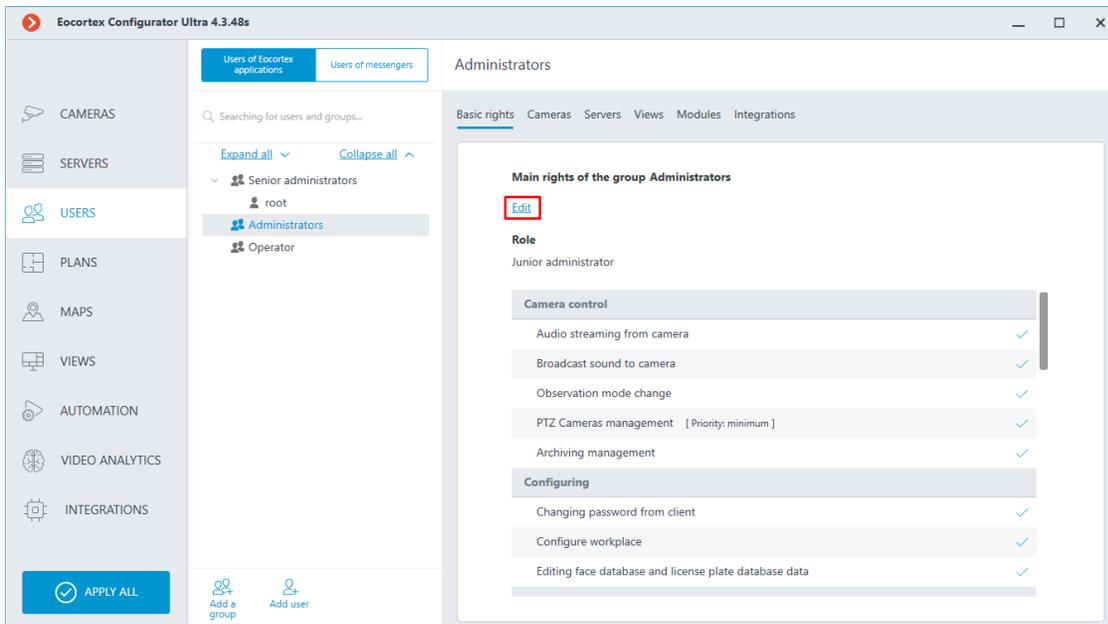
In the new window, you should switch to the **Basic** tab, then in the **Eocortex client applications capabilities** item, tick the **Opening camera in a browser** checkbox.
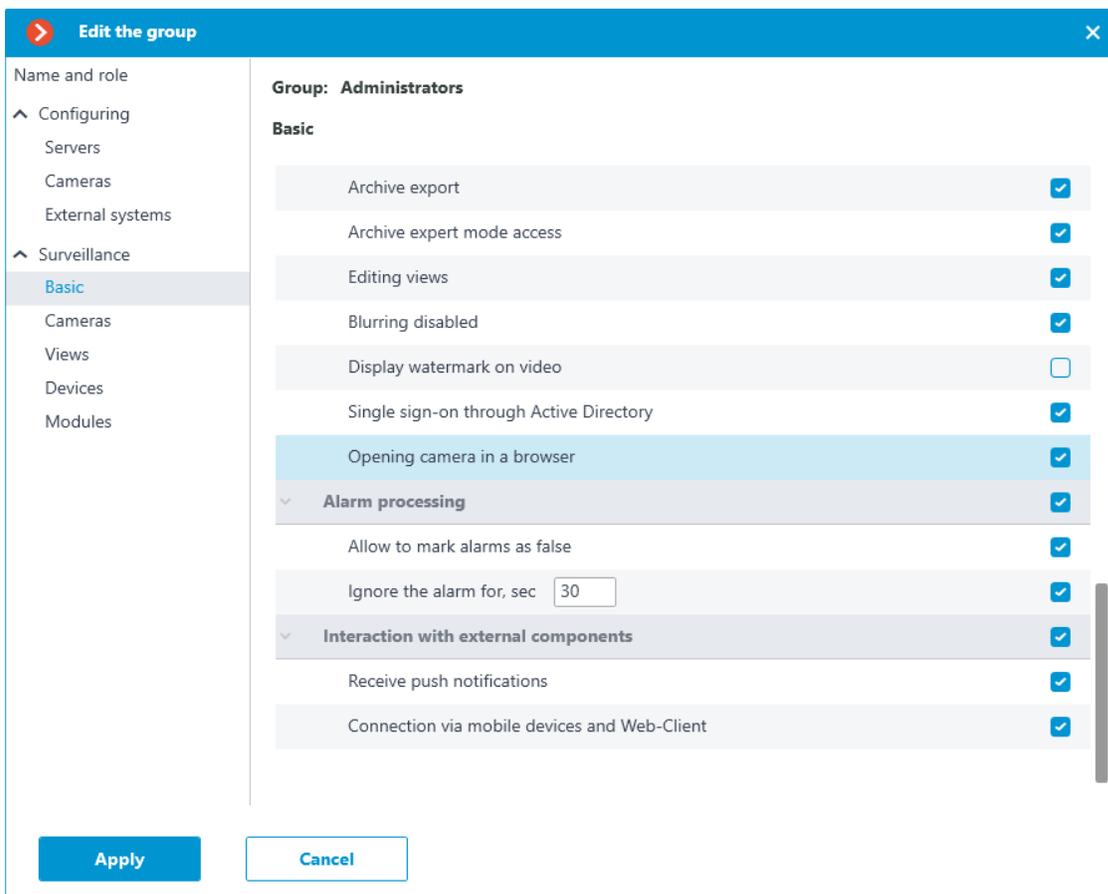
After that, you need to launch **Eocortex Client** and open the context menu in the cell of any camera. Then select **Open in browser**.
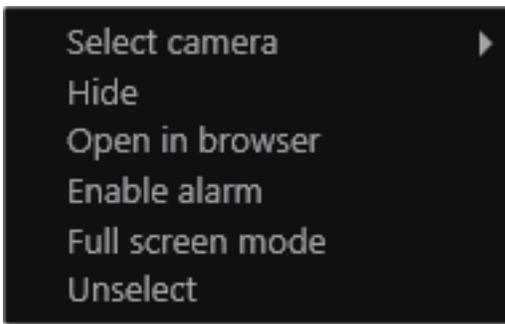
Access to the **Open in browser** menu item depends on the rights configured in the **Eocortex Configurator** application and the default workplace configuration in the Eocortex Client.

If **Opening camera in a browser** is disabled by the administrator in the **Eocortex Configurator**, the corresponding context menu item is not displayed in the Eocortex Client, also in the workplace settings the option **Prohibit "Open in Browser" option in client mode** will not be displayed.
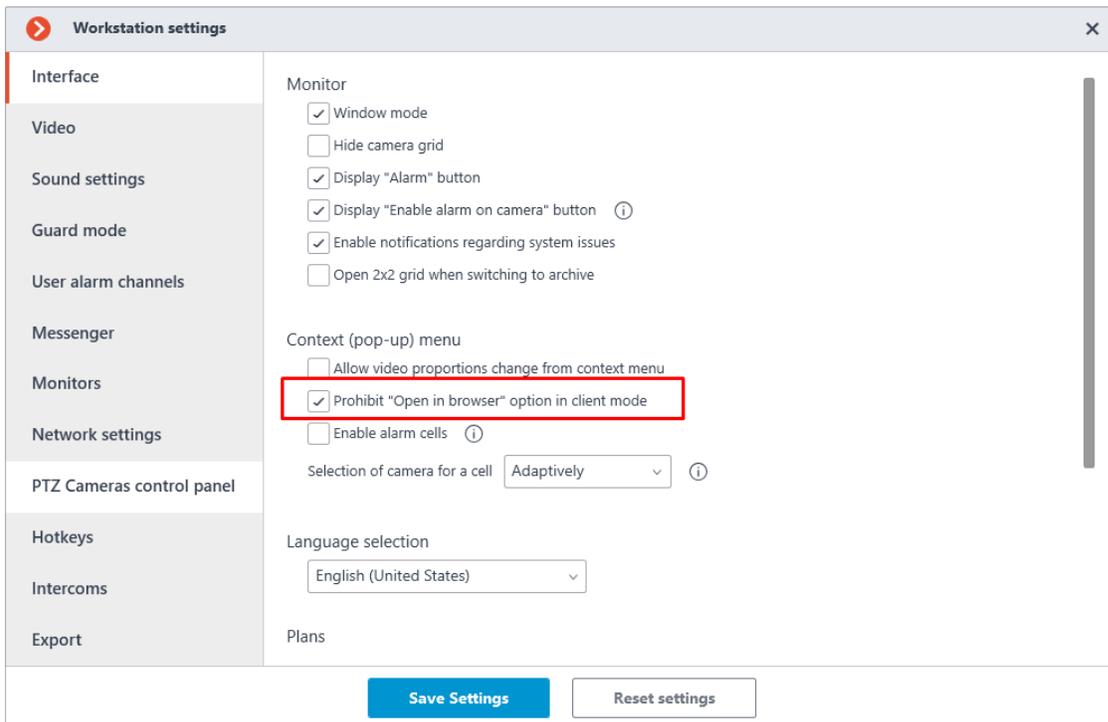
Note

For the **Senior administrators** group, the **Opening camera in a browser** option is turned on by default, with no option to turn it off.

Views

The view editor provides the ability to view and edit the view tree, add new views or create new ones based on existing ones, and delete views in groups.

To switch to the view editor, select **Views** from the control panel menu or click

 button in the short view panel.

15:43

23 July 2024

- VIEWS
- CAMERAS
- ARCHIVE >
- EVENTS
- SEARCH
- MAPS
- REPORTS
- ADDITIONAL >
- SETTINGS >
- EXIT >

Eocortex contains both user and server views.

- User views are only saved and modified within the browser on the user's device. Thus, if you create a user view in one browser and then connect to the same **Eocortex** server from the same device but from a different browser, the previously created user view will not be available.

Note

To transfer views between browsers, follow these steps:

1. Open the page code by selecting **View page code** from the context menu.

2. Click the **Application** tab and open **Local storage** in the left pane.

3. Copy the value of the **gridProfileTree** field and paste it into the same field when launching the client in another browser.

- Server views are stored on the **Eocortex** server and are available from any device and browser when connected to the server. Access to certain server views can be restricted to certain groups of users.
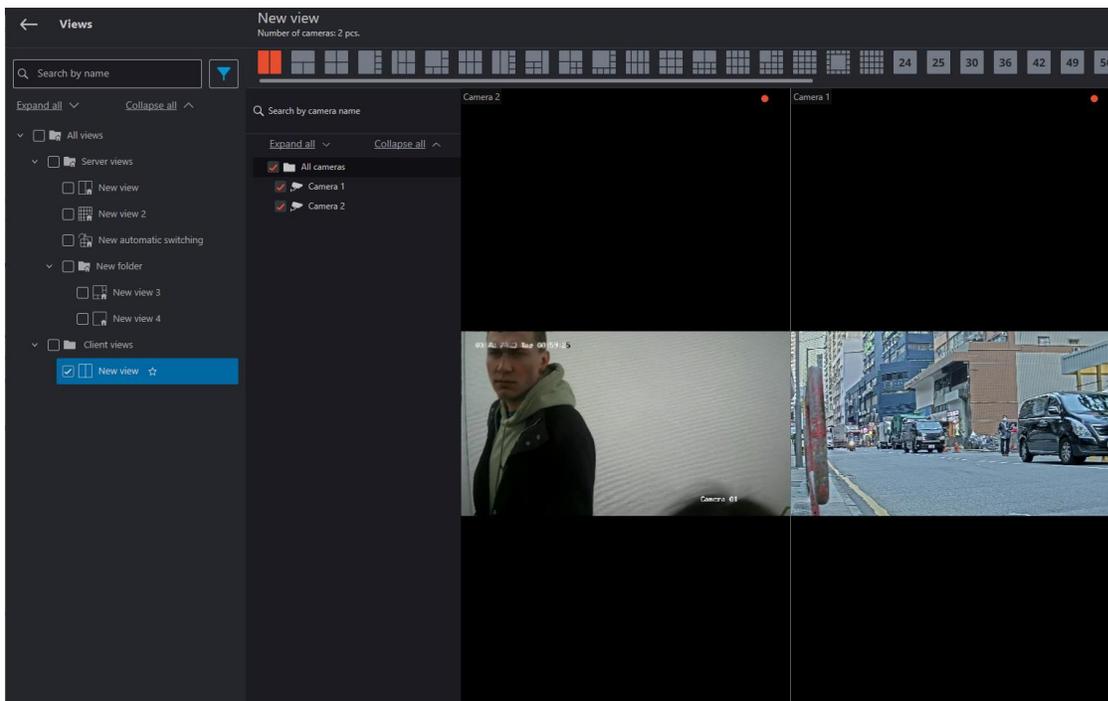
The left panel of the view editor contains the tree of views available to the user. The tree displays the root uneditable folders: All, Server and Client views. By default, one view should always be present, if all views are missing or deleted, a client view will be created automatically.

The view tree includes the following features:

- Moving by dragging and dropping individual views through the tree.

- Search by species name.

- Toolbar.

Note

Server views are configured by the video surveillance system administrator in the **Eocortex Configurator** application. Client views are customized in the view editor.

The commands available for the views are listed below. These commands are invoked using the buttons at the bottom of the page.

- **Add view**

- **Add folder**

- **Rename**

  You can also rename a view or folder by double-clicking on the name.

- **Create view based on the selected one**

  This command can be applied to both client and server views. It is possible to select more than one view.

- **Delete**

  When removing tree items, the following dialog box opens:
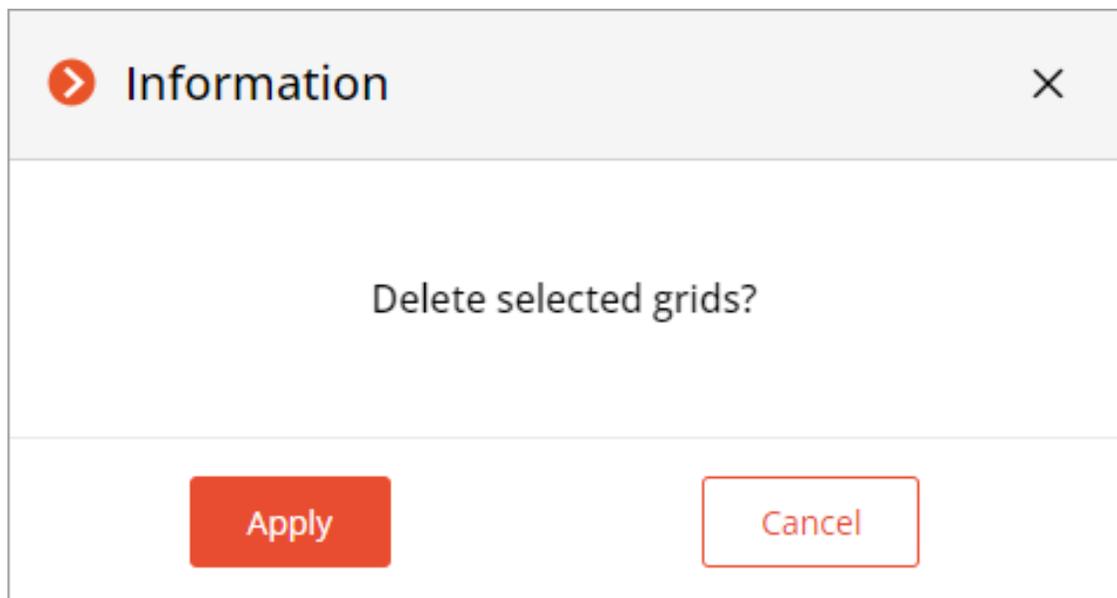
For server views, only the **Create view based on selected one** command is available.

Note

When creating a view based on the selected one, **-copy** will be added to the end of its name.

The upper part of the view editor contains:

- View name.

- Number of grid cells occupied by cameras.

- Grid panel. The grid that is used in the current view is highlighted. The same grid can be used in several views.

Note

The grid set changes depending on the number of cameras selected in the current view.

Warning

Grids with a maximum of 16 cells are available in the web client.

The newly created view is automatically saved in the client views list. Also, the view is saved after changing its name, the grid used, or linking cameras to grid cells.

To link cameras to grid cells, select cameras in the camera tree. In this case, the cameras will be linked to the cells automatically.

It is also possible to select a camera in a cell using the context menu:
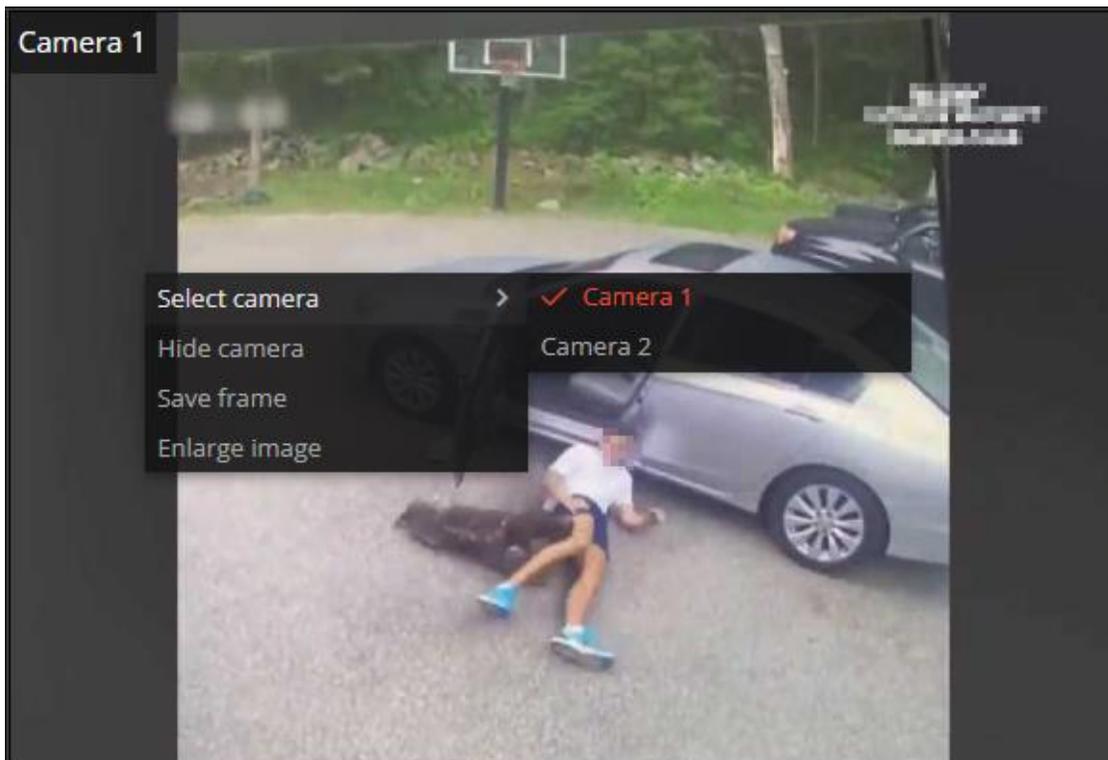
Camera linking to cells can be changed by dragging cells with already linked cameras inside the view editor.
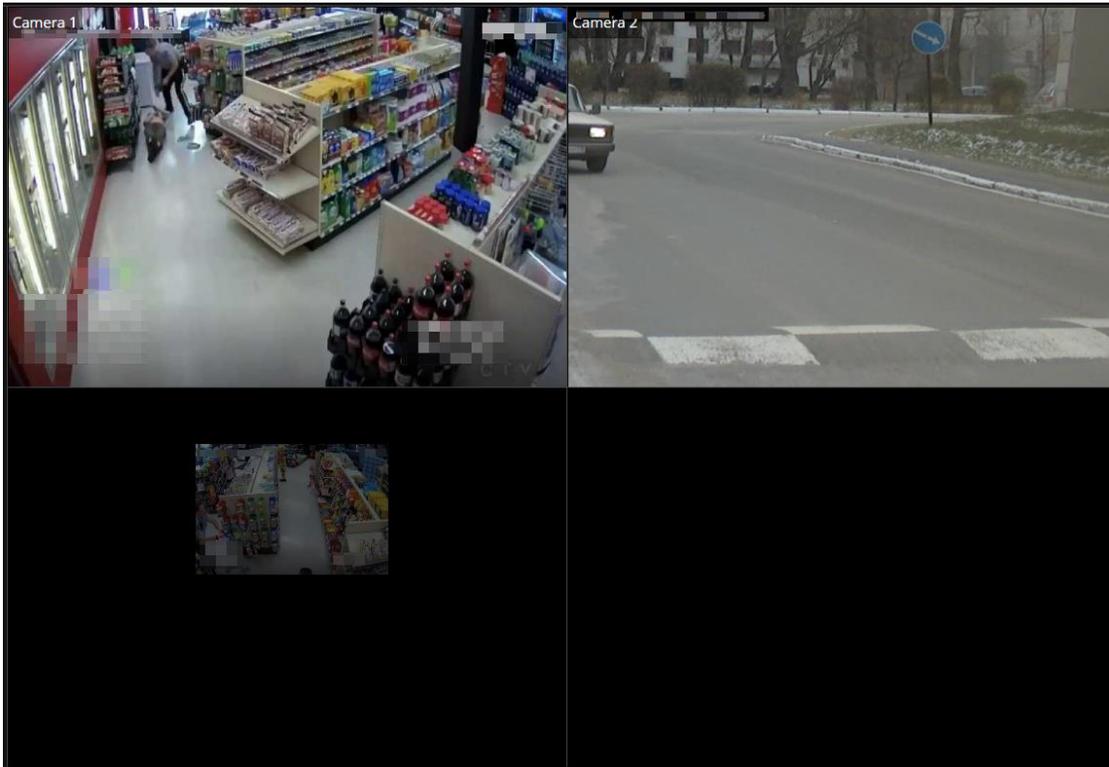
It is also possible to attach a camera to a grid cell by dragging the required camera. To do this, select a camera in the views tree and drag it to the necessary cell.

Archive export

In the **Eocortex Web Client** application, it is possible to export an archive fragment of one or more cameras to MP4 (MPEG-4 Part 14) files. The export files are saved in the system, so you can download them repeatedly.

Warning

To generate an export file and to access the export history, the user must have permissions to view and export the archive.

Export 〉

To export a fragment of the archive:

1. Select **Archive export** on the control panel.
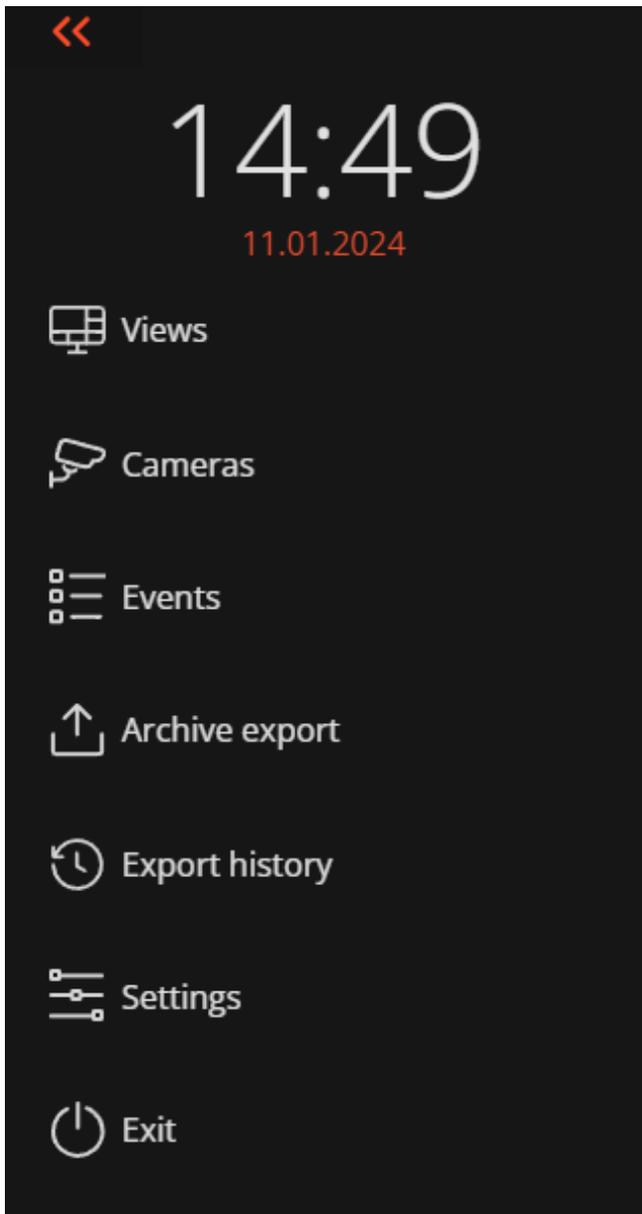
2. In the window that opens, select the cameras in the tree for which you want to generate export files. If you select several cameras, a separate file will be generated for each of them.

Note

The right part of the window displays the archive preview area and timeline related to the currently selected camera.

3. Set the export interval: either by specifying the start and end time of the interval in the sidebar or by dragging the start and end of the interval on the timeline.

Warning

The export interval should not exceed 1 hour.

4. Select the export file format in the sidebar.

5. Specify whether to export the sound.

6. Click **Start export** button.

Warning

When no camera is selected, the **Start export** cannot be pressed.

When **Start export** button is clicked, a task to generate export files will be started on the server. If several cameras have been selected, a separate task will be generated for each selected camera; the export parameters of all such tasks will be the same.

Note

Only one export file can be generated at a time. In other words, if several cameras are selected, each next task will be executed after the previous one is completed.

If the export web page remains open and is not force refreshed, the export files will be automatically downloaded to the browser when the tasks are completed. If the page has been closed or refreshed, the export Files will be downloaded on the **Export history** page.

Note

In a multiserver system, export files are created on the server to which the web-client is connected.

Export files are stored on one of the server's archive disks, in the directory:

<Disk>://EocortexArchive/export.

Warning

If the **Eocortex** server application is stopped or restarted, all running or queued tasks will be canceled and will not be resumed after the application is started.

Export history >

Selecting **Export history** on the control panel opens a page containing information about queued, running, previously executed and canceled archive export tasks.
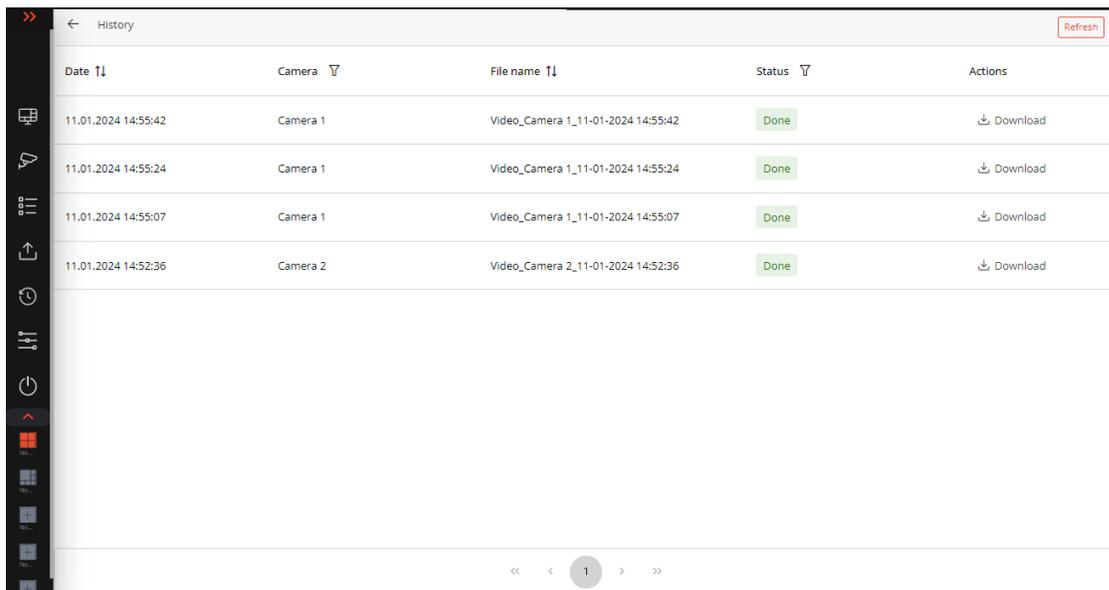
Each record contains the following information:

- Date and time of creating the export file task

- Camera name

- Export file name

- Task status

Statuses:

- **Done**: Export completed successfully. File is ready for download. The **Download** action is available with this status.

- **Error**: Export error. The **Retry** action is available with this status.

- **Cancelled**: Export cancelled. The **Retry** action is available with this status.

- **Preparing**: Export file is being generated. The **Cancel** action is available with this status.

- **In Queue**: Export task is queued for execution. The **Cancel** action is available with this status.

- **Expired**: Time limit for storing the exported file has expired. The **Retry** action is available with this status

Actions:

- : Download export file.

- : Cancel export file generation.

- : Repeat export file generation. Creates a new task without deleting the old record.

No more than 10 records are displayed on one page of export history. To navigate between pages, use the pagination located at the bottom of the window.

Note

Each user has their own export history.

Export history is available from different workstations and browsers.

Warning

Each recording is stored until the archive storage period for the corresponding camera expires.

Warning

Files on the server are guaranteed to be stored for 24 hours and deleted within 48 hours.

Video analytics

Real-time video analytics in the **Eocortex Web Client** is available for the following modules:

- **Face recognition**;

- **People Counting**.

Warning

If the cell size is less than 500×400 pixels (the cell is smaller than a cell in a 4×4 grid), no video analytics are displayed.

Note

If several analytic modules are enabled for the same camera, it is possible to select the data of which module should be displayed on the screen at the current moment.

Face recognition

If **Face Recognition (Complete)** or **Face Recognition (Light)** modules are enabled on the camera, a panel with recognized faces with the date of recognition and full names of the recognized persons will be displayed on the right side of the cell in real time.

Also, the following data is displayed in the panel upon pressing the button ⬅|:

- gender;

- age;

- group the recognized person belongs to;

- emotions.

Note

Gender, age, and emotions are displaying in the **Face Recognition (Complete)** module only.

In the context menu, depending on whether the person has been identified or not, it is possible to switch to the archive.
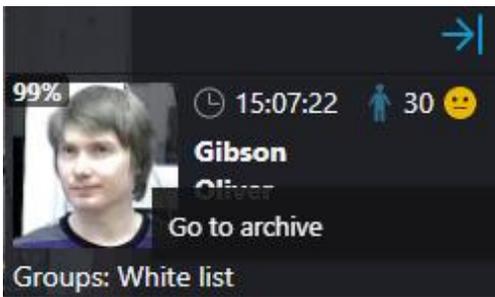
Note

The last 50 recognized faces are automatically loaded to the panel from the archive.

The maximum capacity of the panel is 200 recognized faces. The panel is overwritten when this number is exceeded.

People Counting

If the **People Counting** module is enabled on the camera, the number of visitors who have entered and exited the premises since the last time the counters were reset will be displayed in the upper right corner of the cell in real time. The time of resetting the counters is setting by the system administrator. The administrator can also configure the module in such a way that only entering or only exiting visitors will be counted.
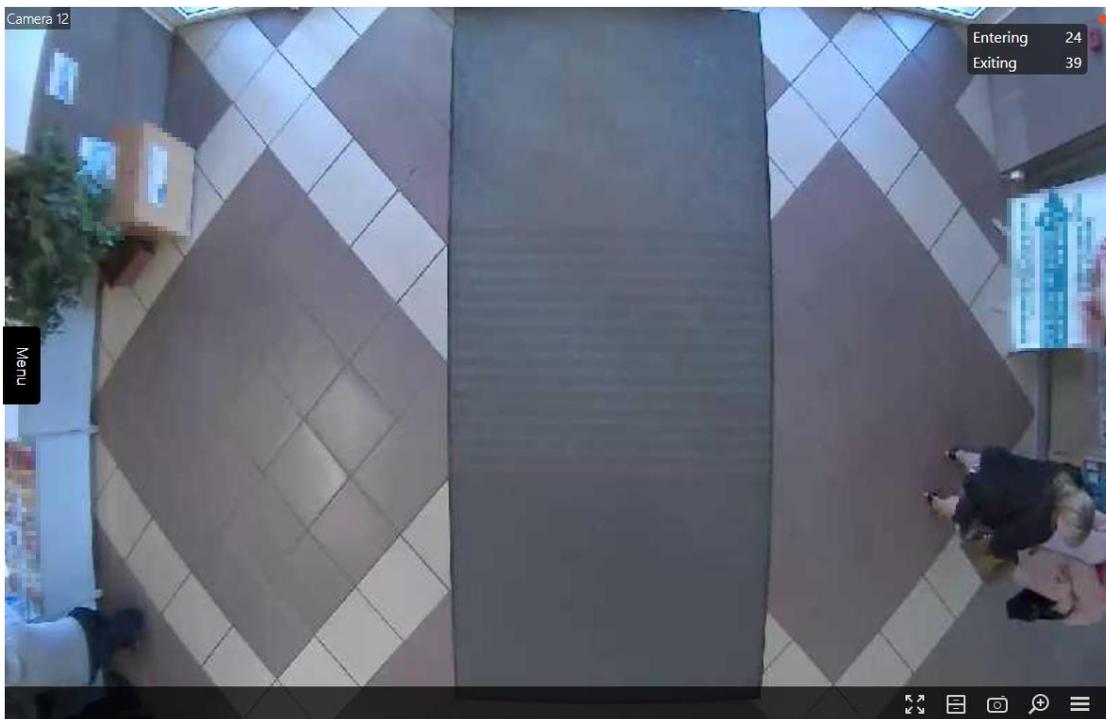
Events log

Warning

The **Event log** is available only to those system users who have enabled access to it in group settings.

The **Events log** is designed for viewing system and user events.

To switch to the **Events log**, select **Events** from the main menu.
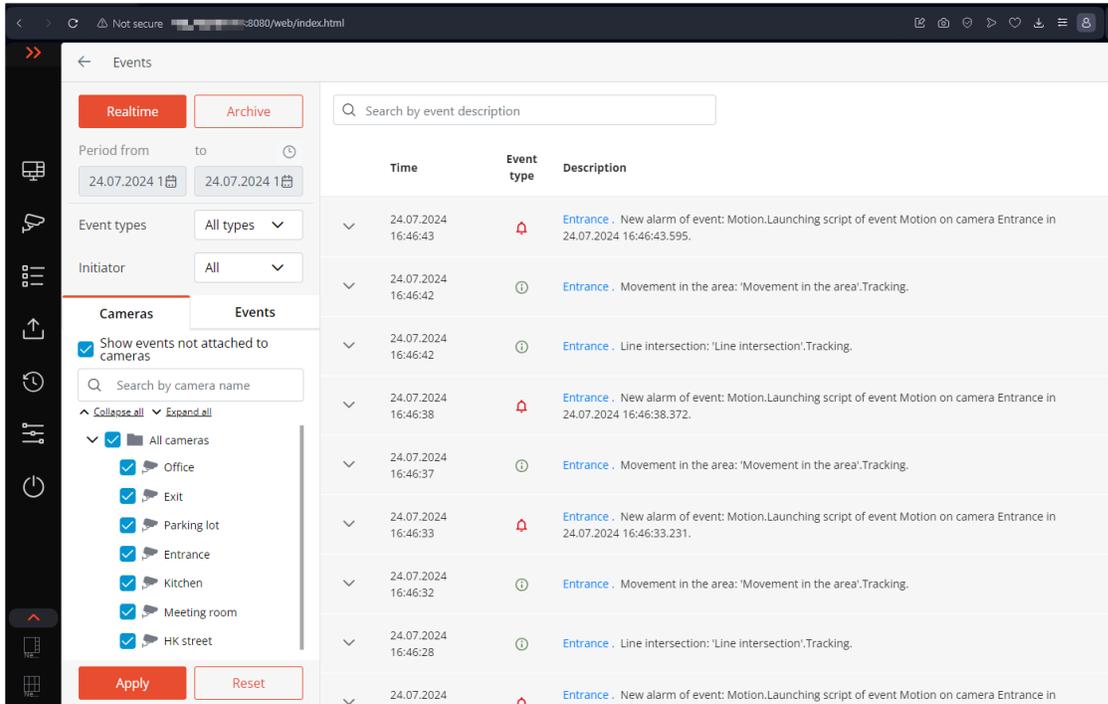
The page with the list of events will open. On the left side of this page is a panel that allows filtering the events. The two panels above the list of events allow sorting events by attributes and searching for events by description.

Events list ⟩

Each event has its **Time**, **Type** as the icon, and **Event description** displayed.

Note

The **Consider time zones** option must be enabled in the system settings to display the time according to time zone of the camera in the event properties.

The **Event description** contains the name of the event and various attributes related to this event. The list of attributes depends on the event.

It is possible to view events both in real-time and in the archive.

You can view additional information of events.

Events of the Face Recognition module additionally have:

- Face image

- Gender

- Age

- Emotion

- If the face is in the database — given name, group, recognition accuracy

Filter panel 〉

The filter panel allows to define the parameters of displaying events in the log.

To apply changes to the filter settings, click the **Apply** button.

To reset changes to the original settings, click the **Reset** button.

The following filters can be applied to the log:

Real time displays real-time and archive events. Sorting is done in reverse chronological order: newer events at the top, older events at the bottom.

Archive displays only events from the archive.

The **Period** filter displays archive events of a given time interval.
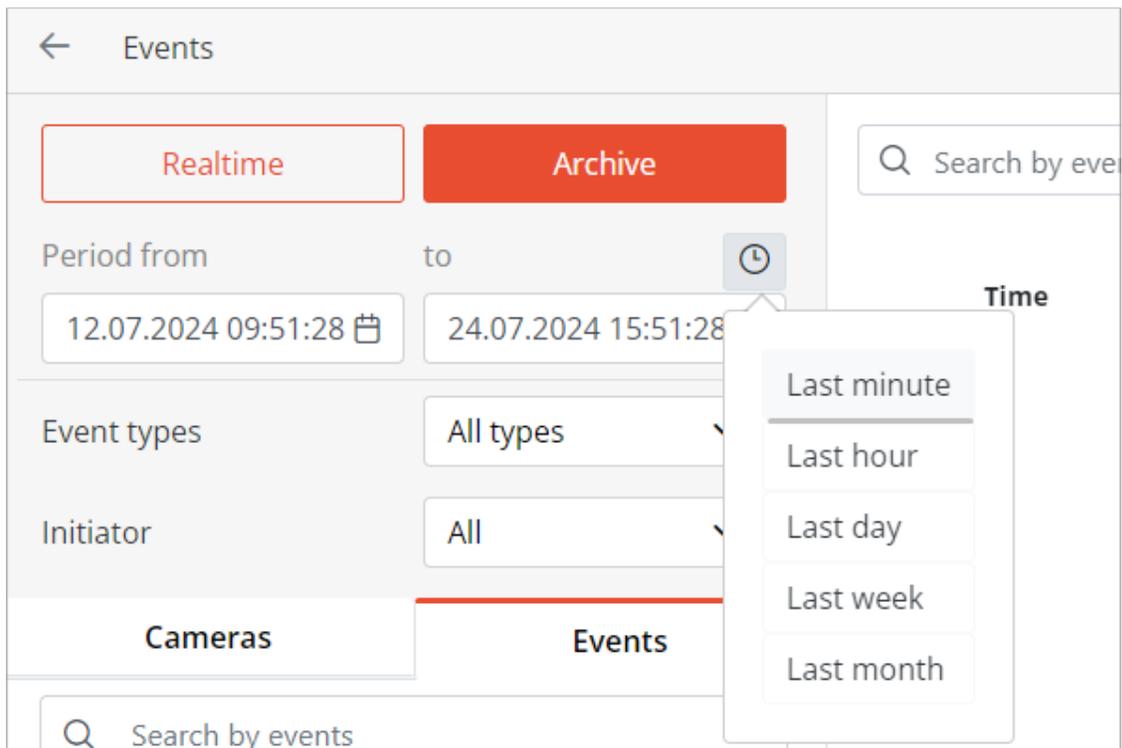
The **Types** filter displays events by type: **Information**, **Alarm**, and **Error**.
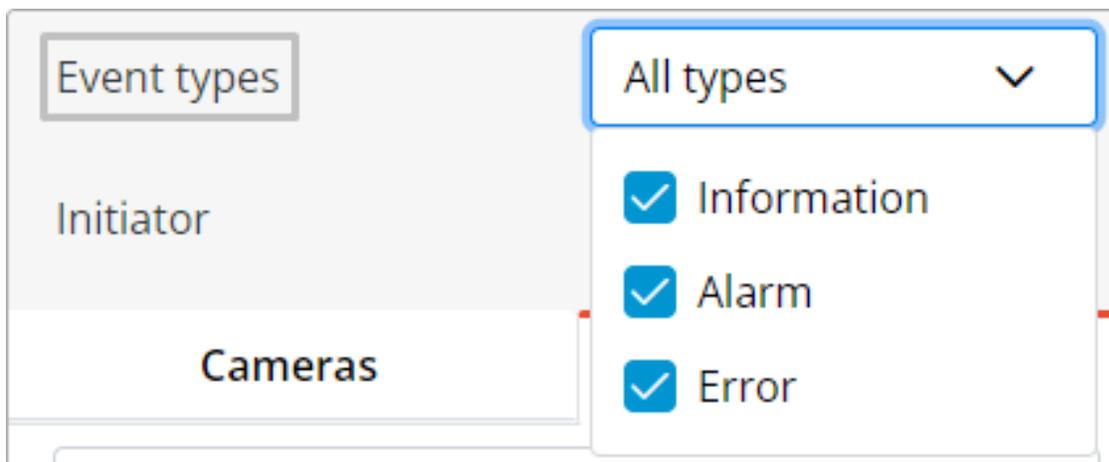
The **Initiators** filter displays events depending on their initiator.
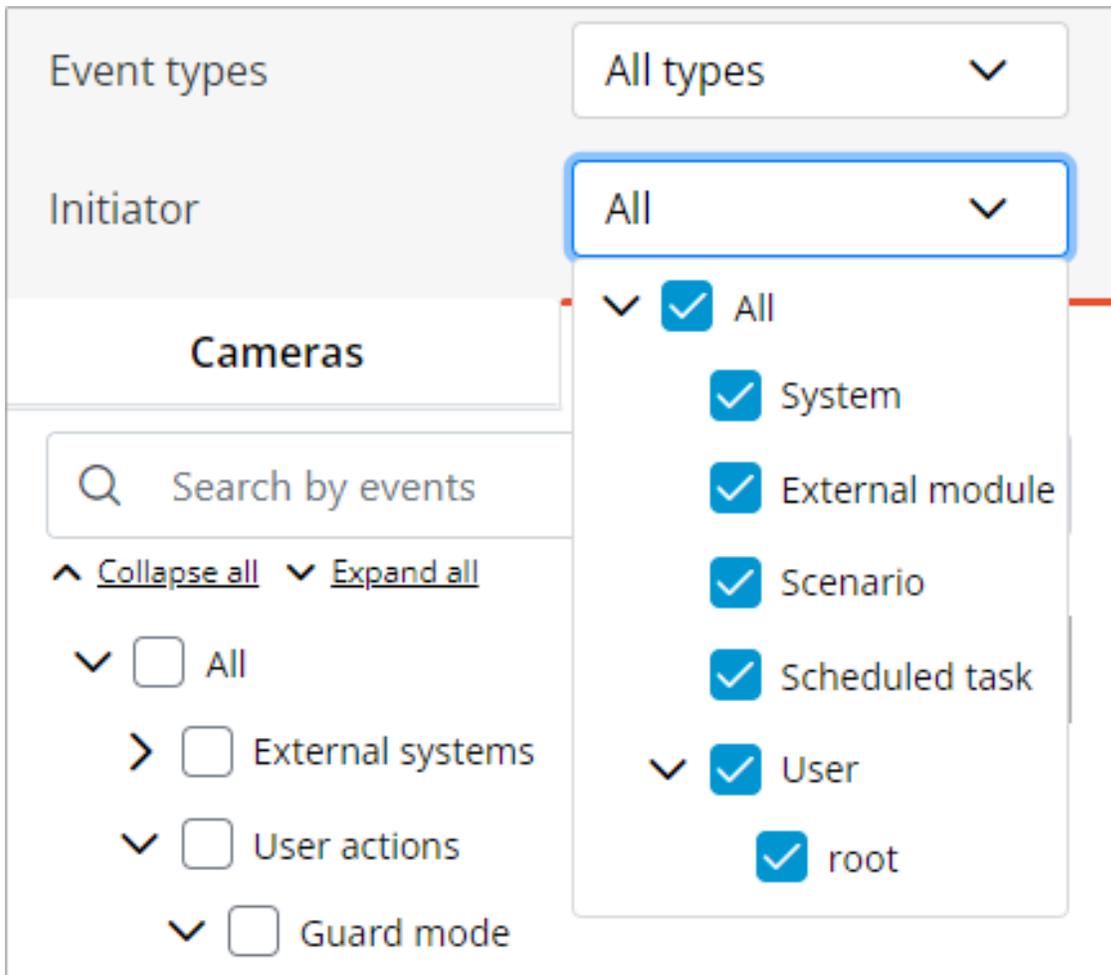
The **User** filter displays events by the user who initiated them.
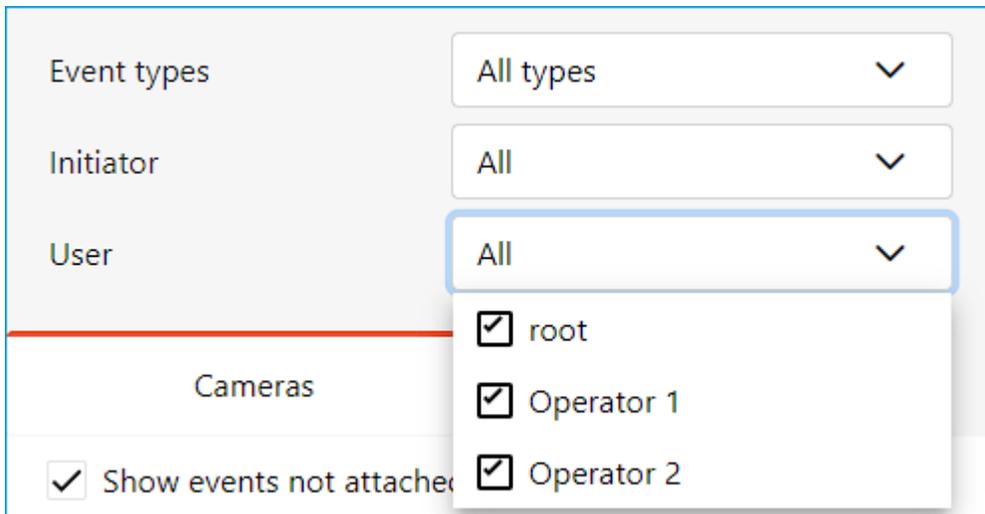
The **Cameras** filter displays events associated with the selected cameras, as well as system events that are not related to any cameras.

The **Events** filter displays events by their groups or names.
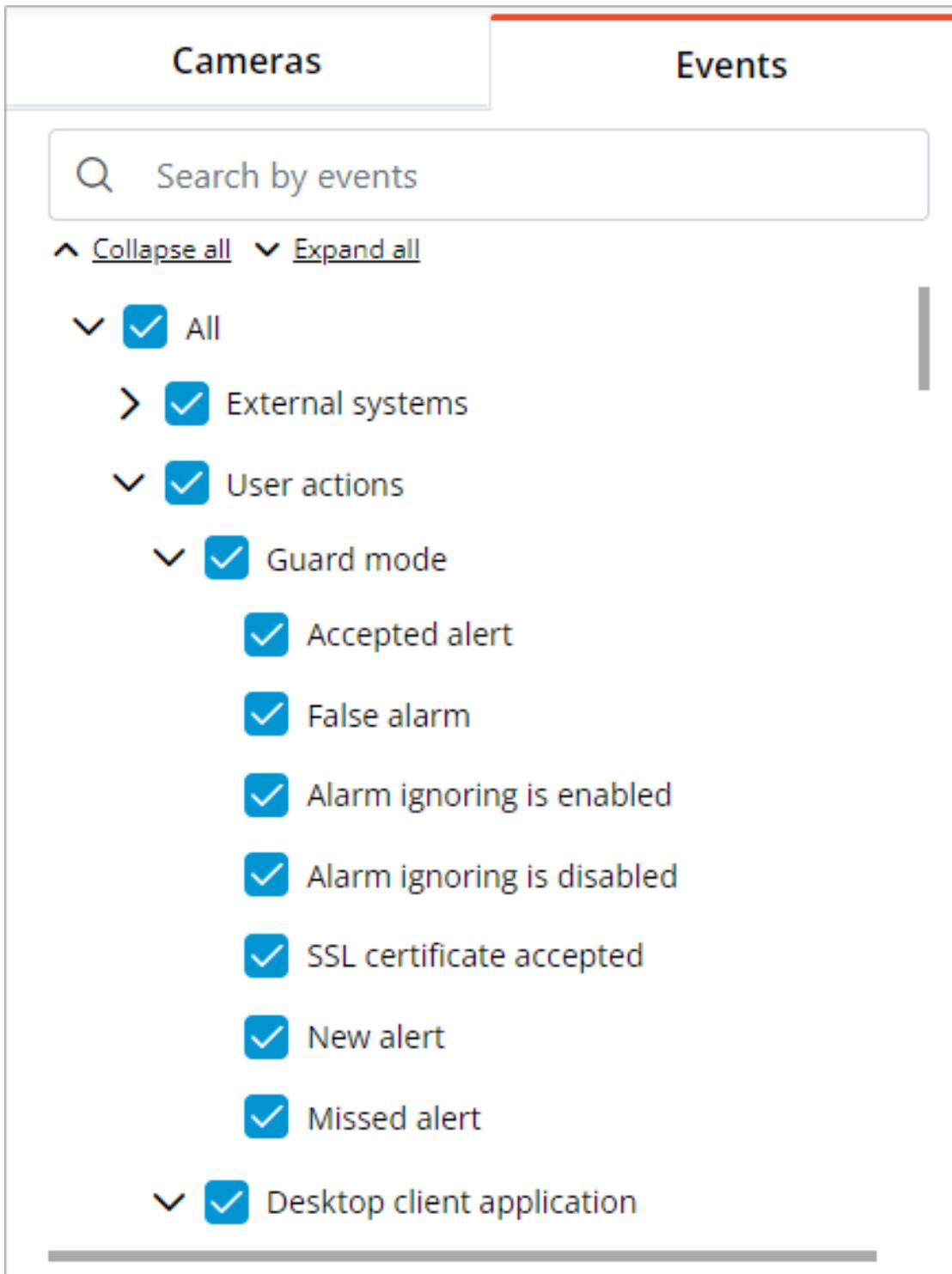
Filters have settings validity checks to make sure that the settings are correct. If no options are set in filters or no camera is selected, the **Apply** button will be unavailable. In this case an error indication will appear on the filter, and the respective error will be displayed for the cameras below the list.

Below is an example of incorrect filter settings:

← Events

Realtime   Archive

Period from   to   🕐

24.07.2024 09:51:28 📅   24.07.2024 15:51:28 📅

Event types   All types   ⌄

Initiator   All   ⌄

Cameras   **Events**

🔍 Search by events

⌃ Collapse all ⌄ Expand all

⌄ ☐ All
  › ☐ External systems
  ⌄ ☐ User actions
    ⌄ ☐ Guard mode
        ☐ Accepted alert
        ☐ False alarm
        ☐ Alarm ignoring is enabled
        ☐ Alarm ignoring is disabled
        ☐ SSL certificate accepted
        ☐ New alert
        ☐ Missed alert

Select one or multiple events

Apply   Reset