



User's guide

Eocortex

Version 3.4

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eocortex.com

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Client applications

Eocortex Client

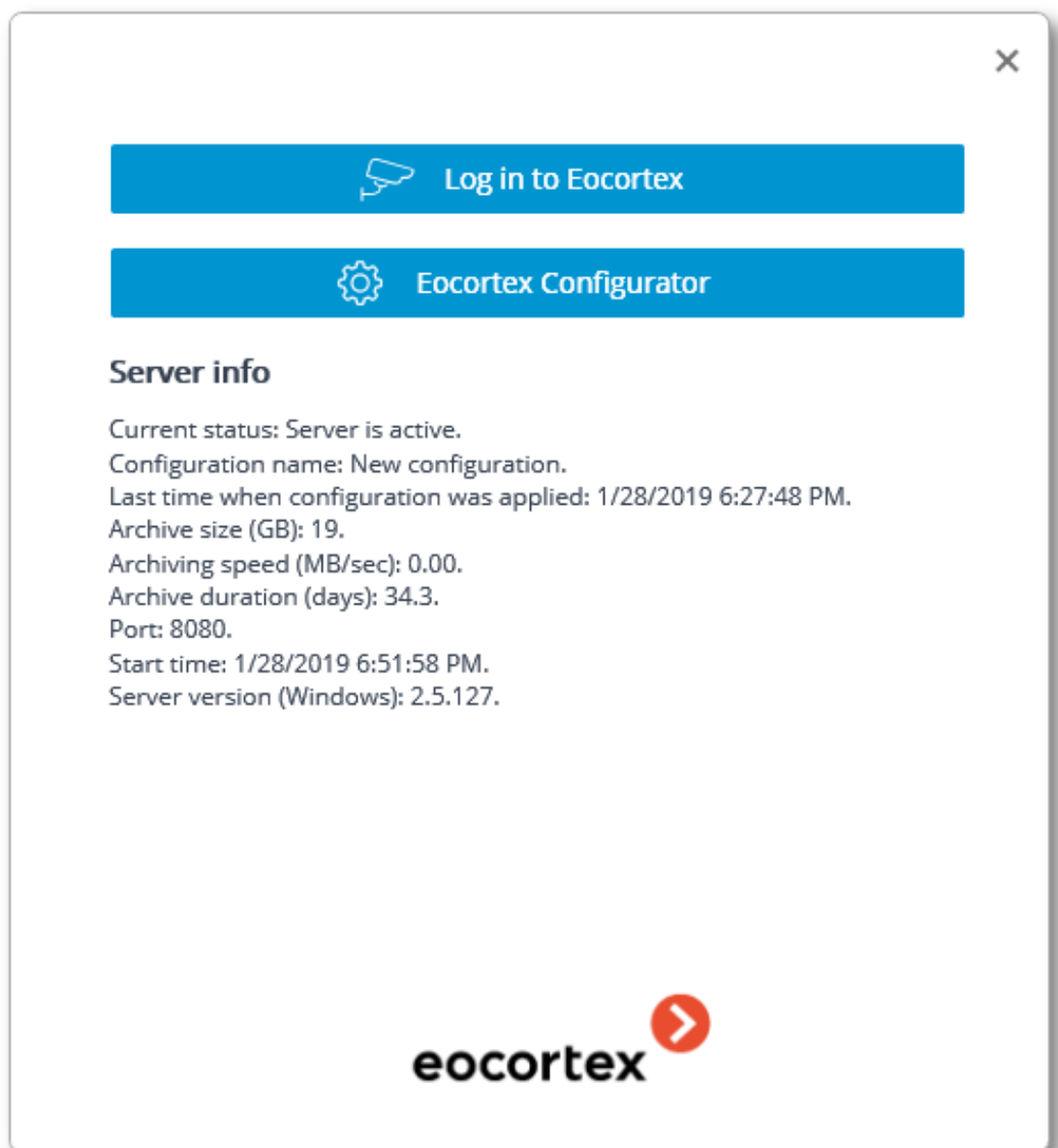
Eocortex Client is used for work in the **Eocortex** video surveillance system.

Launch and Login

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



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:  **Macroscop**;  **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.


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

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



×

Eocortex Client  

Server




192.168.1.100

User

root




Password

●●●●●●●●

☒ Save


Connect

eocortex 


×

Eocortex Client

Server




vmserver.mycomp.com



User

vmuser@mycomp.com




Password

●●●●●●●●

☐ Remember password

Connect

eocortex

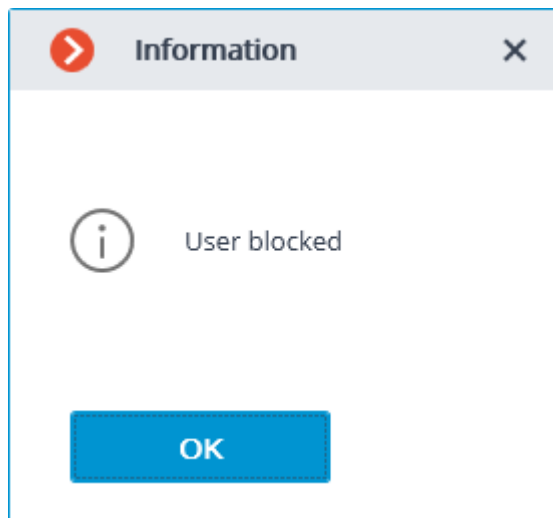


The secure connection to the server via HTTPS is enabled by pressing button located in the left side of the field with the server's address.



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.



- ① 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.
- ⚠ The system administrator can forbid the connection to the server using the insecure protocol. Such servers will always require a secure connection.
- ① A user can be blocked by the video surveillance system administrator. In this case, a window with a corresponding message will open.



- ① Contact the **Eocortex** system administrator for user name and password, server address and account type.
- ① 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?](#)

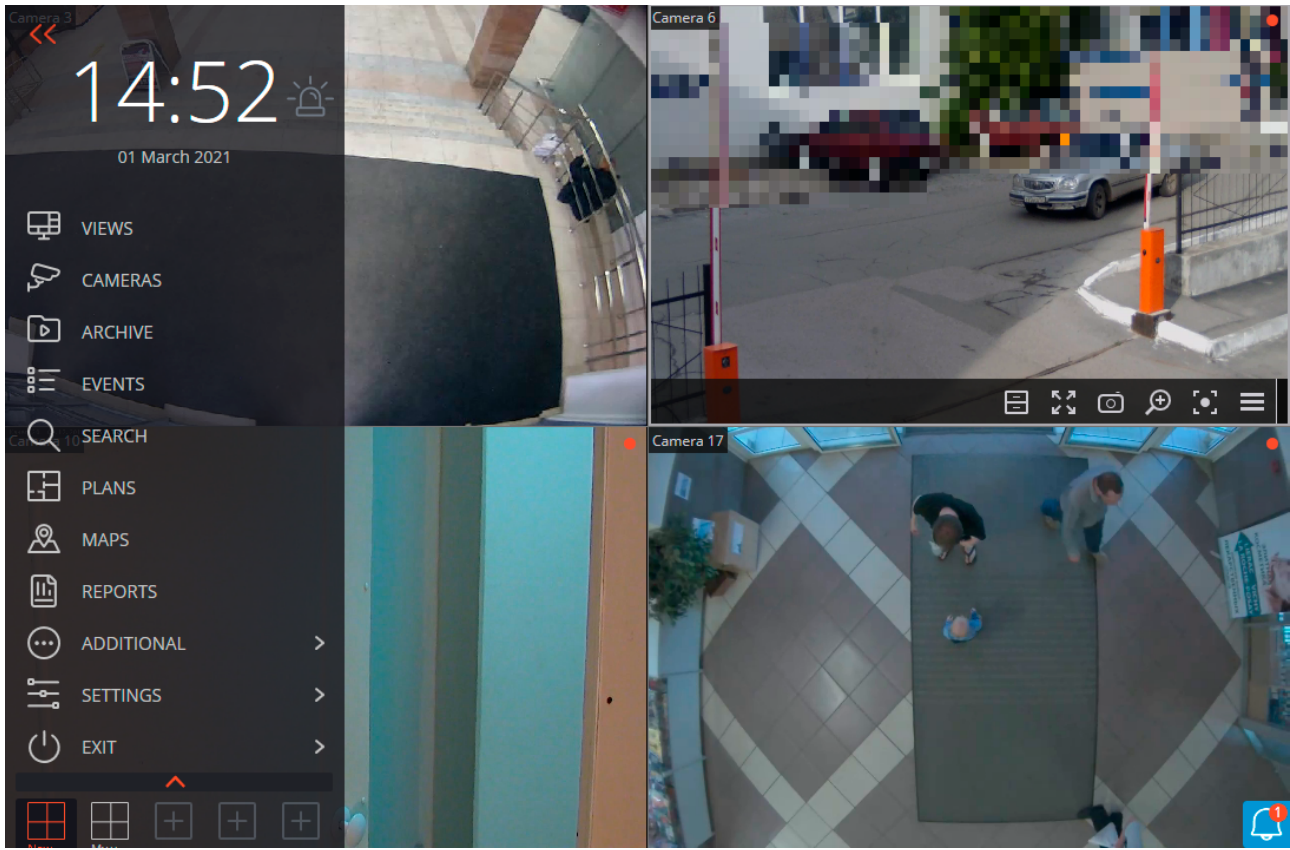
Connect

[Register](#)

[What is Eocortex Cloud?](#)

eocortex 

Main Window



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

Control panel



In order 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 button can be found in the upper part of the control panel. The items of the main menu are located under the clock. The view selection menu is in the lower part of the panel.



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 placed to the right of a clock.



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

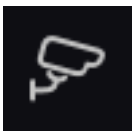
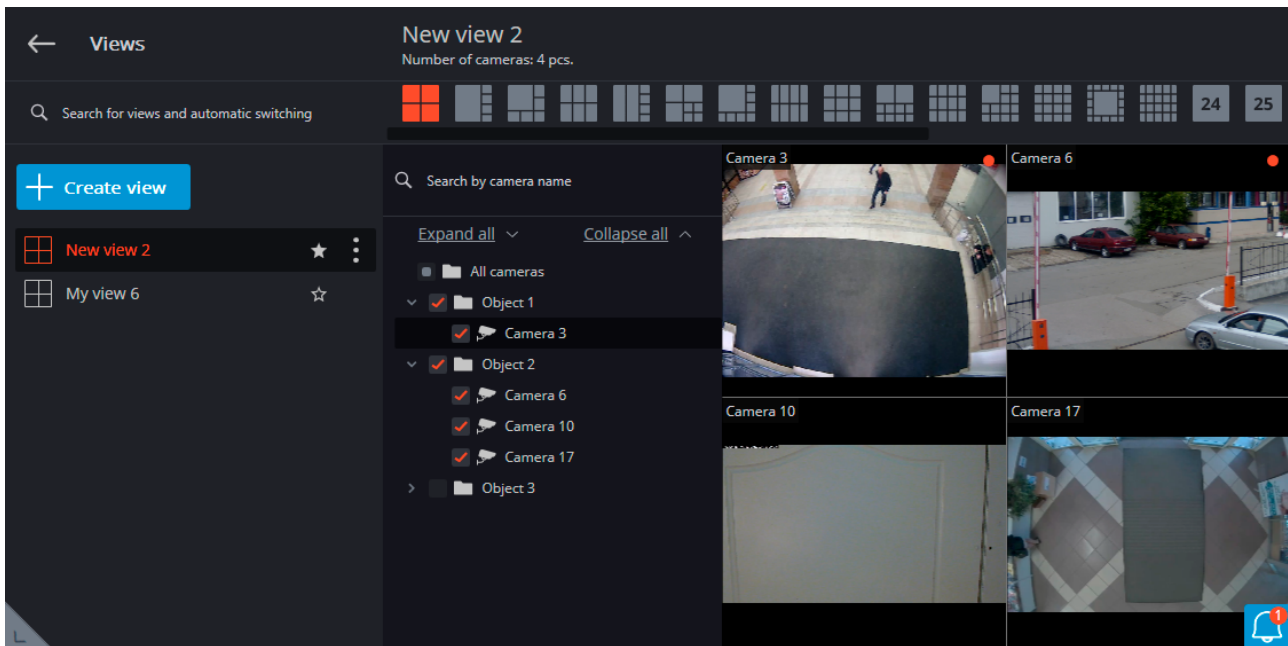


activation of the user alarm, and the displaying of the **Alarm activate/deactivate** button are set in the workstation settings.

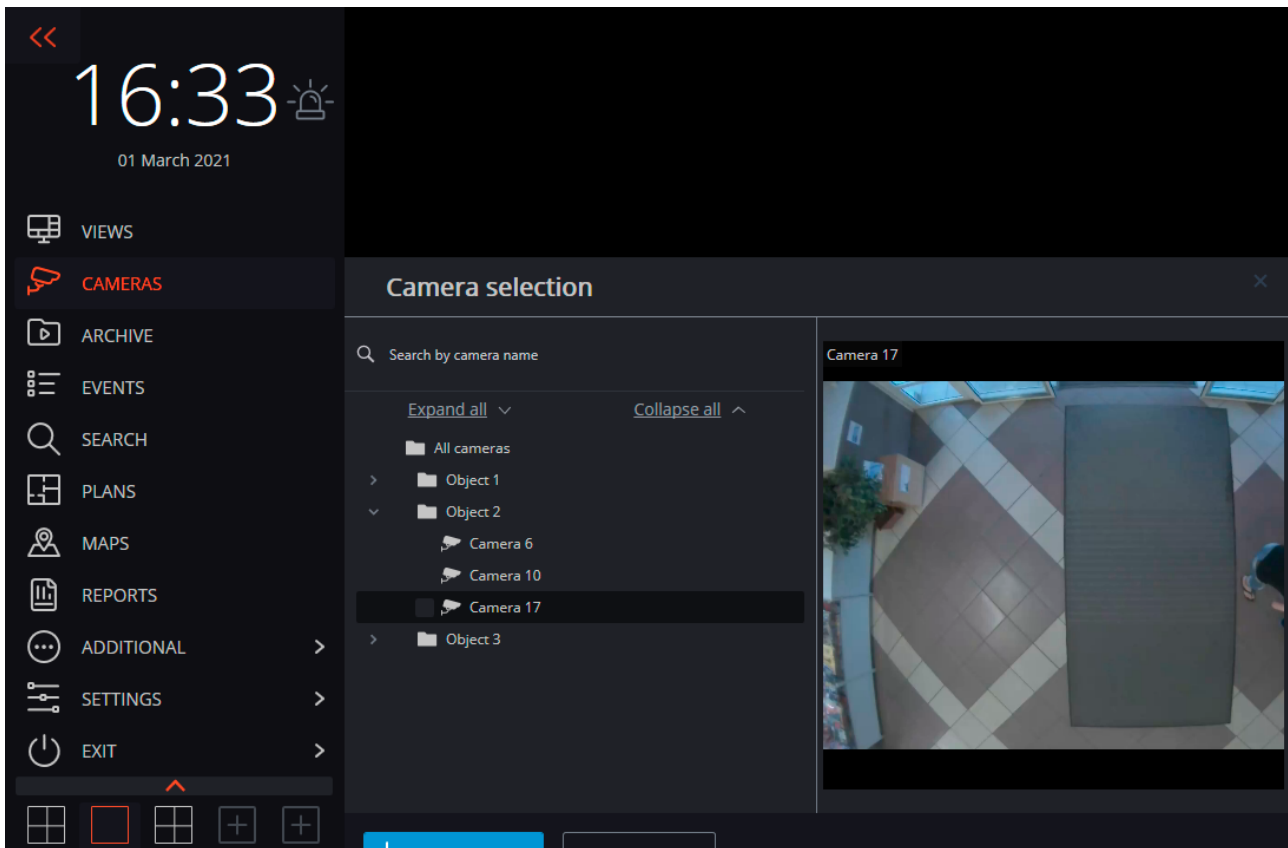
Below you will find the description of the control panel items:



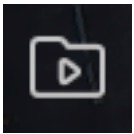
Views opens the **Views** page.



Cameras item allows to select the cameras to be displayed on the screen.



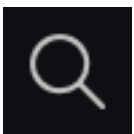
After selecting cameras, it is required to press the **Create view** button. This will display the selected cameras on the screen without names, using the most suitable grid.



Archive opens [Simultaneous archive viewing from multiple cameras](#).



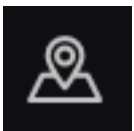
Events opens [Events log](#).



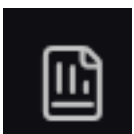
Search opens [Search for objects](#).



Plans opens [Object plans](#).



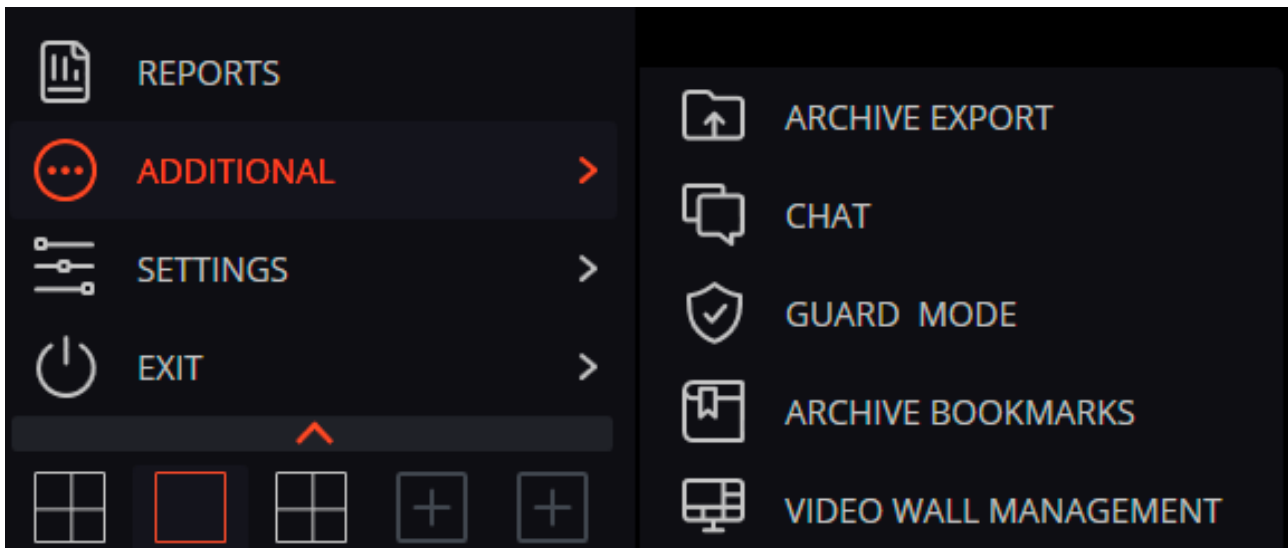
MAPS opens [MAPS](#).



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](#).

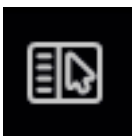
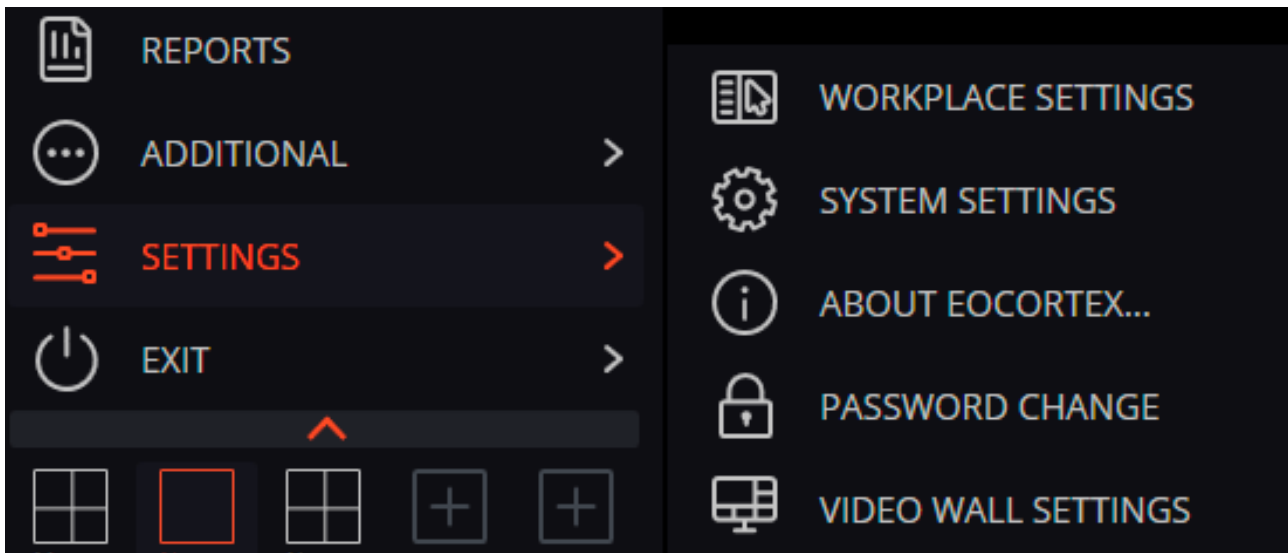


Video wall management permits to [manage the video wall](#).

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



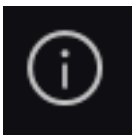
Settings opens the submenu that contains the following items:



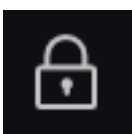
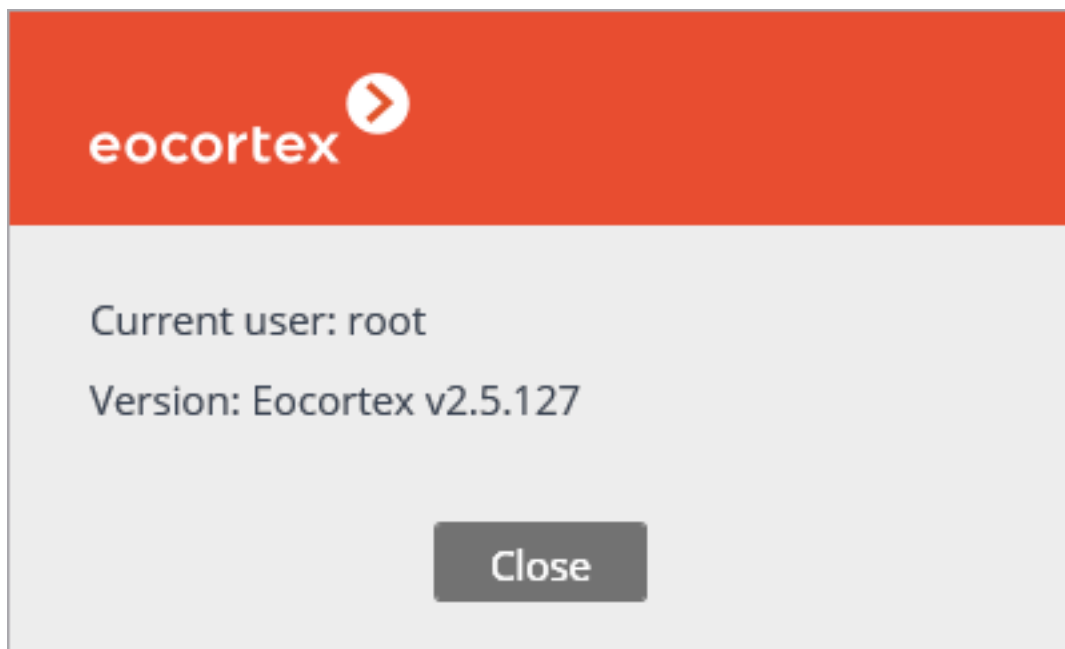
Workplace settings opens the [Workstation settings](#).



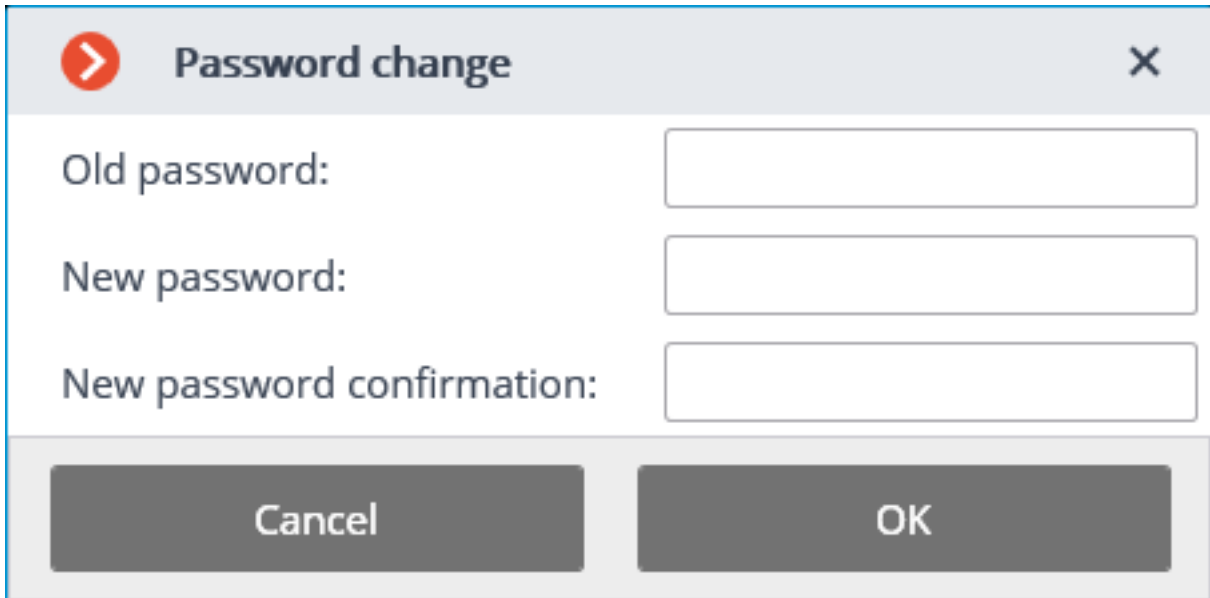
System settings launches the [Eocortex Configurator](#) application.



About Eocortex... opens the information window.



Change password permits to change the password.

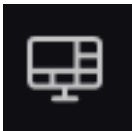
A dialog box titled "Password change" with a red arrow icon on the left and a close button (X) on the right. It contains three input fields: "Old password:", "New password:", and "New password confirmation:". At the bottom, there are two buttons: "Cancel" and "OK".

Old password:

New password:

New password confirmation:

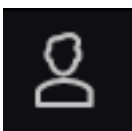
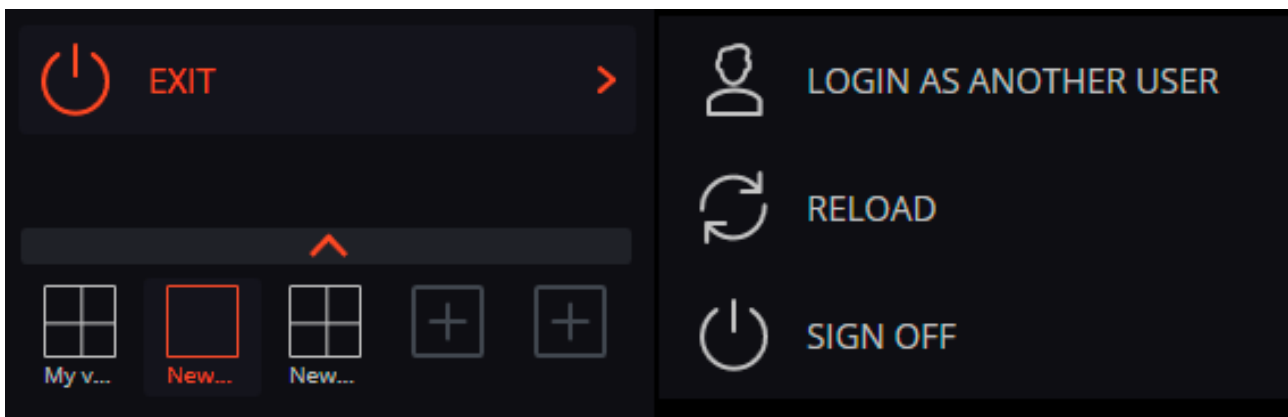
Cancel OK



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 this item is selected, the main window closes and the authorization window opens.



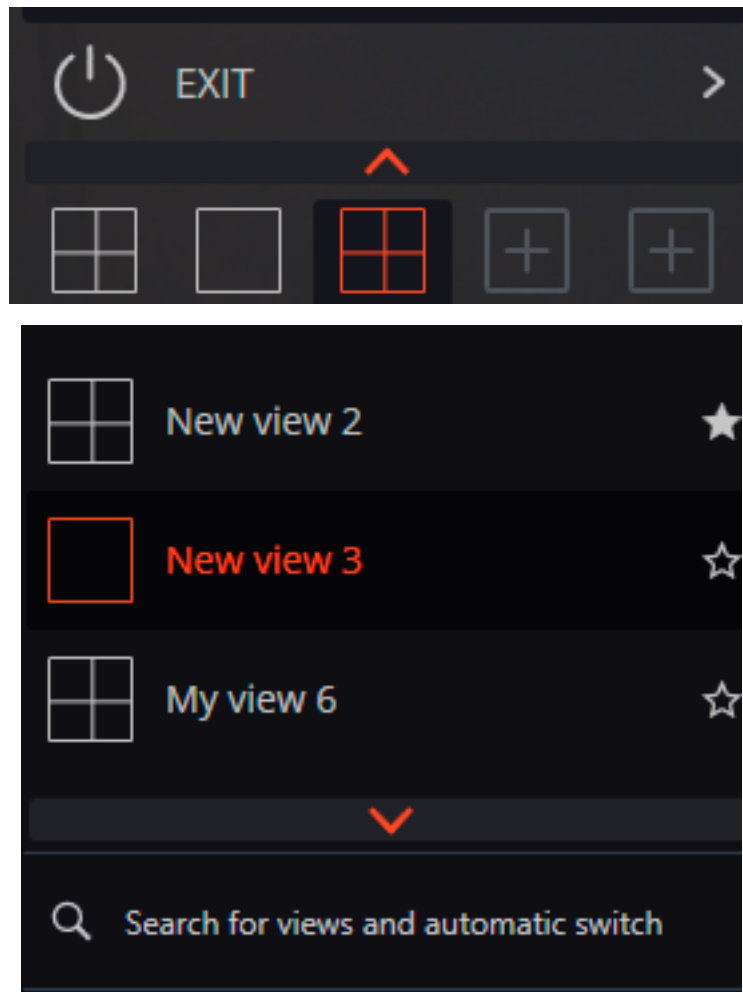
Sign off shuts down the application.



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

Selection of views

In the lower part of the control panel there is a menu that permits to choose one of the preset screen views, or to activate the automatic screen view switching mode.



- ❗ 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. Client views are set up in the [view editor](#).

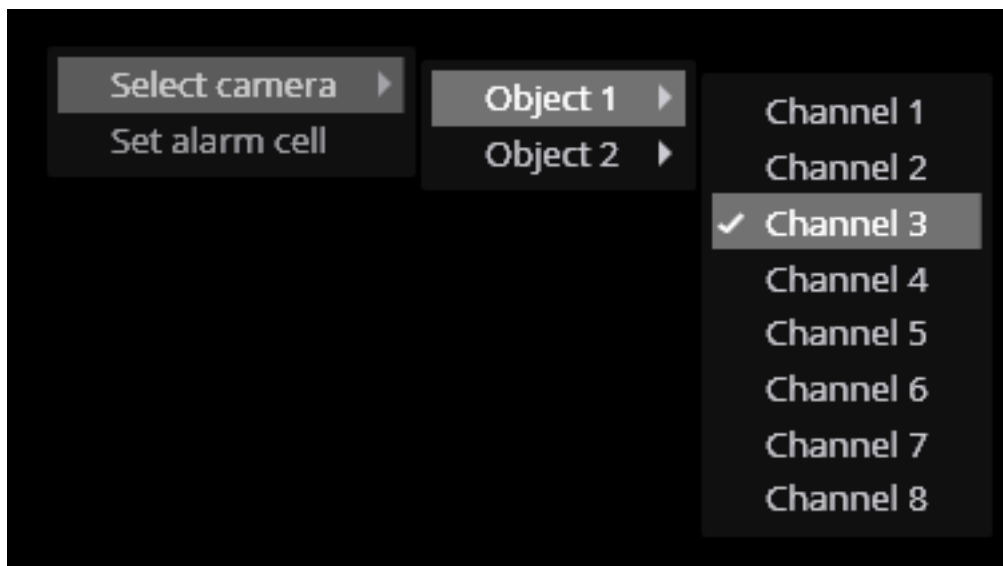
This menu does not display views and automatic switches that do not contain any cameras available for the current user.

Current view

The cameras can be dragged between the cells of the current view by holding the left mouse button. If the view cell where the camera is being moved is occupied, the cameras swap their places.

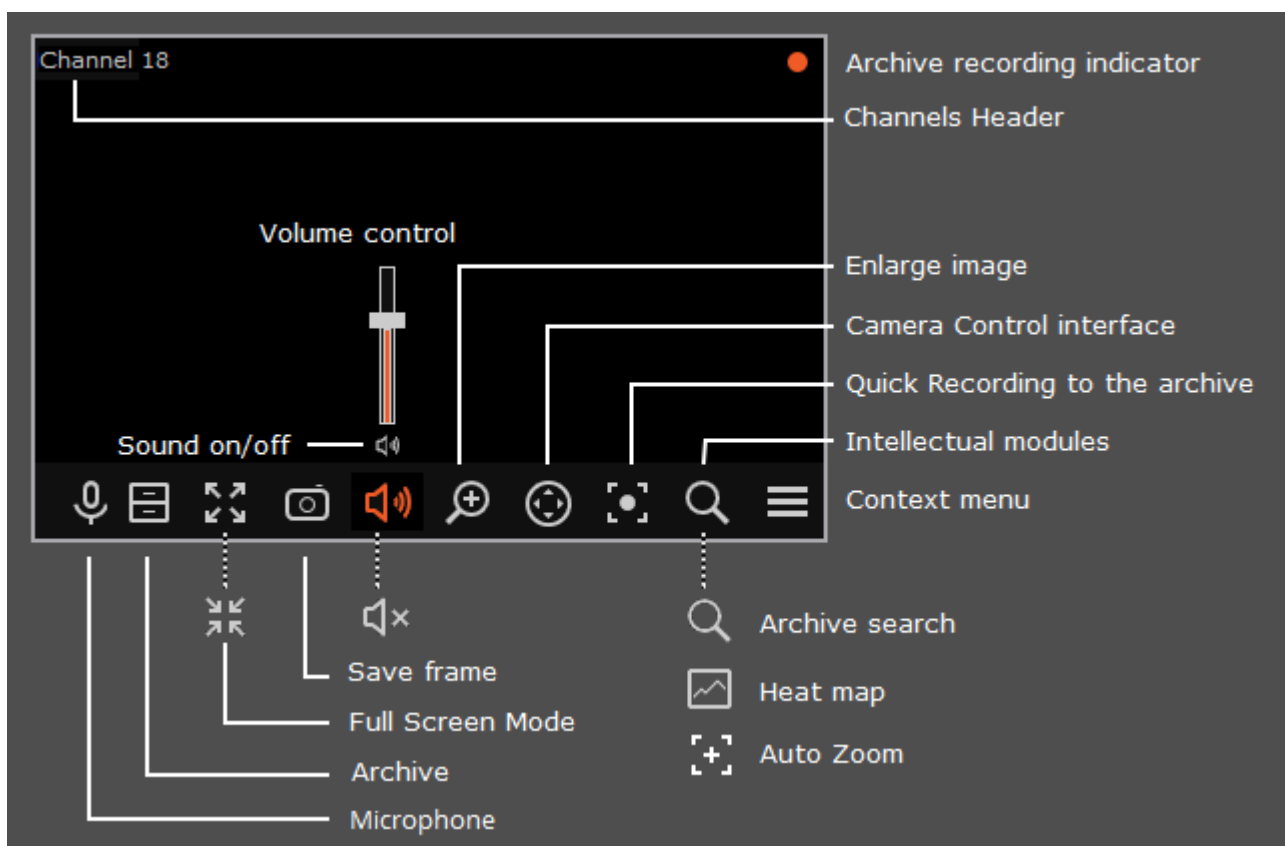
One of the cells of the view can be active. The active cell is highlighted by a frame. To activate a cell, it is required to click inside it with the mouse.

By clicking in the empty view cell, it is possible to select a camera in the list that opens, 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.

Channel grid cell



- ❶ To display the controls in a grid cell, you need to click inside the cell.
- ❷ All commands from the icons in the grid cell, can also be called from the context menu.



Some of the icons appear only when the function is set for the camera, and the current user has access to this function. The system administrator sets the cameras options and access rights.

Recording to the archive indicator is displayed during the video recording to the archive.

Microphone allows to transmit sound from the client workspace microphone to the camera speaker. Click on the microphone icon to transmit the sound. The microphone can operate in two modes:

- **Hold:** the microphone works while the button is held;
- **Switching on/off:** by clicking the microphone is activated/deactivated.



The microphone mode is set by the system administrator in the current workspace settings.

Archive: switches the cell to View the separate camera archive.

Full-screen mode: expands the cell full-screen; in full-screen mode - returns to the grid mode.



The transition between the grid mode and full screen mode is also performed by double-clicking in a grid cell.

Save frame: Saves the frame (frame fragment).

Volume control: allows to adjust the sound volume, translated from the camera, and to enable or disable audio playback. Click on the speaker icon to display the volume control. If the design or the camera



settings not allowed to broadcast the sound, as in the off playback the icon is displayed.

Zoom image: performs the Image zoom.

Camera control interface: shows / hides the [PTZ control](#).

Quick recording to the archive: switches the video recording from a camera to the archive for 15 minutes.


Intelligent Modules: shows / hides the intelligent module interface. The icons for the following modules are displayed:

- [Crowd counting module](#)
- [Auto zoom](#)



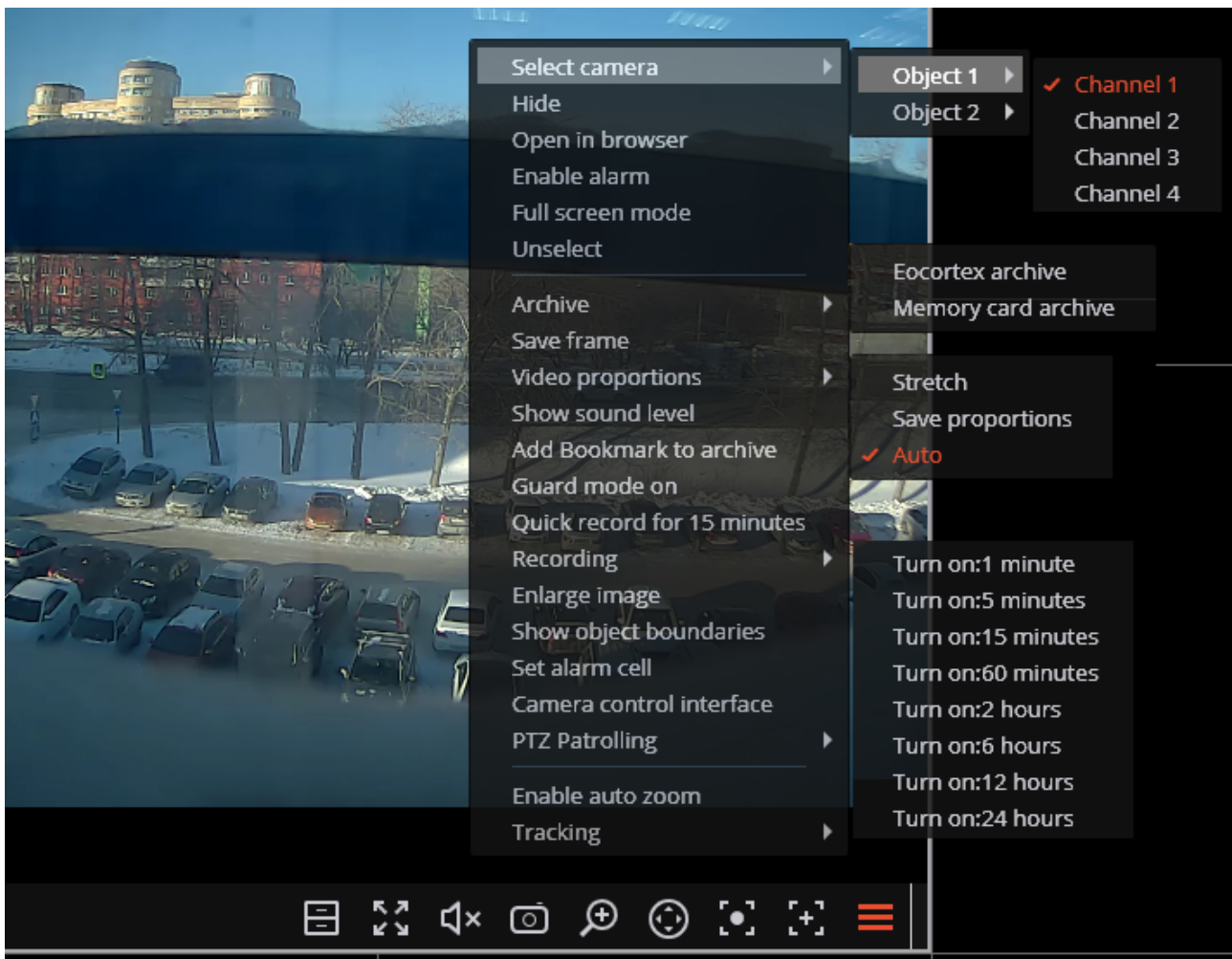
No more than one intelligent modules icons may be displayed at the same time.

The context menu can be accessed in two ways:

- by clicking  in the lower right corner of the cell;
- by right-clicking anywhere in the cell.



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



Cell context menu:

Select channel: allows selecting one of the available cameras to be displayed in a cell grid.

Hide: hides the camera (frees the cell).

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

Full screen mode / Exit Full screen mode: cell reversal full screen / return to grid mode.



The transition between the grid mode and full screen mode is also performed by double-clicking in a grid cell.

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

Archive: switches the cell to View the separate camera archive. The access to the following archive types is possible:

- **Macroscop Archive:** the archive on Eocortex server..
- **Memory card archive:** the archive on the camera memory card..

Save frame: Saves the frame (frame fragment).

Video proportions: allows selecting frame proportions.

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

Guard mode on/off: enables/disables the Guard mode for the camera.

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.

- ⓘ If the compulsory recording is enabled the recording to the archive will be continuous during the specified time, no matter what recording settings are set by the system administrator for this camera.

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

- ⓘ When the compulsory recording is enabled the **Switch off** the recording to the archive will be displayed (**remaining recording time: XX min.**).

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

Select this option to disable the compulsory recording.

- ⓘ If **Quick Recording to the archive for 15 minutes** and **Recording to the archive** are unavailable then the archive recording for this camera is already permanent or impossible.

Enlarge imagee: performs the [Image zoom](#).

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).

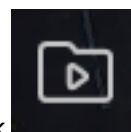
Set alarm cell: the cameras in the **Alarm** condition will be displayed in the alarm cells.

Camera control interface: shows the [PTZ control](#).

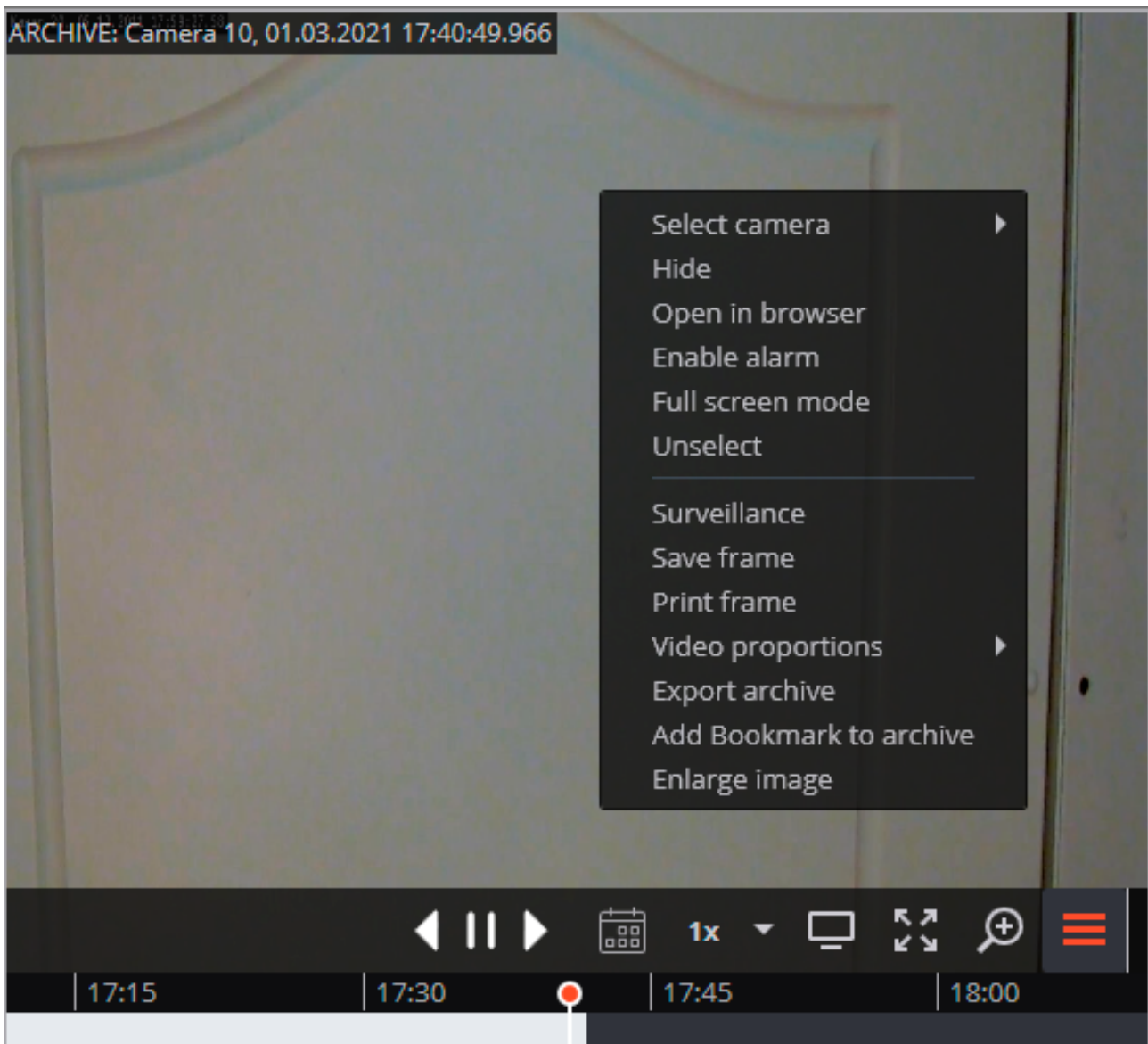
Camera position: [Camera presetting](#) is performed.

- ⓘ The items associated with the intelligent modules connected for this camera are placed in the bottom of the menu. The description of these items is given in the sections describing the relevant intelligent modules.

Viewing the single camera archive



To open the camera archive (from the real time view mode) .0 click in the active cell or select **Macroscop Archive** in the context menu: the cell will switch 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.

 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.

 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.



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

The controls available in the cell in a single camera archive view mode are described below:

Hide/show fragment panel: hides or shows the fragment panel in the cell.

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

Suspect tracking: transition to [Suspect tracking](#).



Suspect tracking is only available for cameras for which the Suspect search is enabled.

Full-screen mode expands the cell full-screen; in full-screen mode - returns to the grid mode.



The transition between the grid mode and full screen mode is also performed by double-clicking in a grid cell.


Save frame: Saves the frame (frame fragment).

Volume control allows adjusting the sound volume, translated from the archive, and enabling or disabling audio playback. Click the speaker icon to display the volume control. If the sound recording is not



set for the archive, then the icon is displayed as in case of the disabled playback. This icon is displayed only when the sound recording to the archive is set for the camera.

The context menu can be accessed in two ways:

- by clicking  in the lower right corner of the cell;
- by right-clicking anywhere in the cell.



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

Select camera: selects one of the cameras available for display in the grid cell.

Hide camera: hides the camera (frees the cell.)

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

Full-screen mode: expands the cell full-screen; in full-screen mode - returns to the grid mode.

Remove selection: removes selection from the cell (makes it inactive).

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

Save frame: [Saves the frame \(frame fragment\)](#).

Print frame: [Prints the frame \(frame fragment\)](#).

Video proportions: allows selecting frame proportions.

Volume control: displays the volume control element at the bottom of the cell.

Export archive: [Exports the archive](#).

Add bookmark to the archive: adds tab to the archive.

Enlarge image: performs the [Image zoom](#).

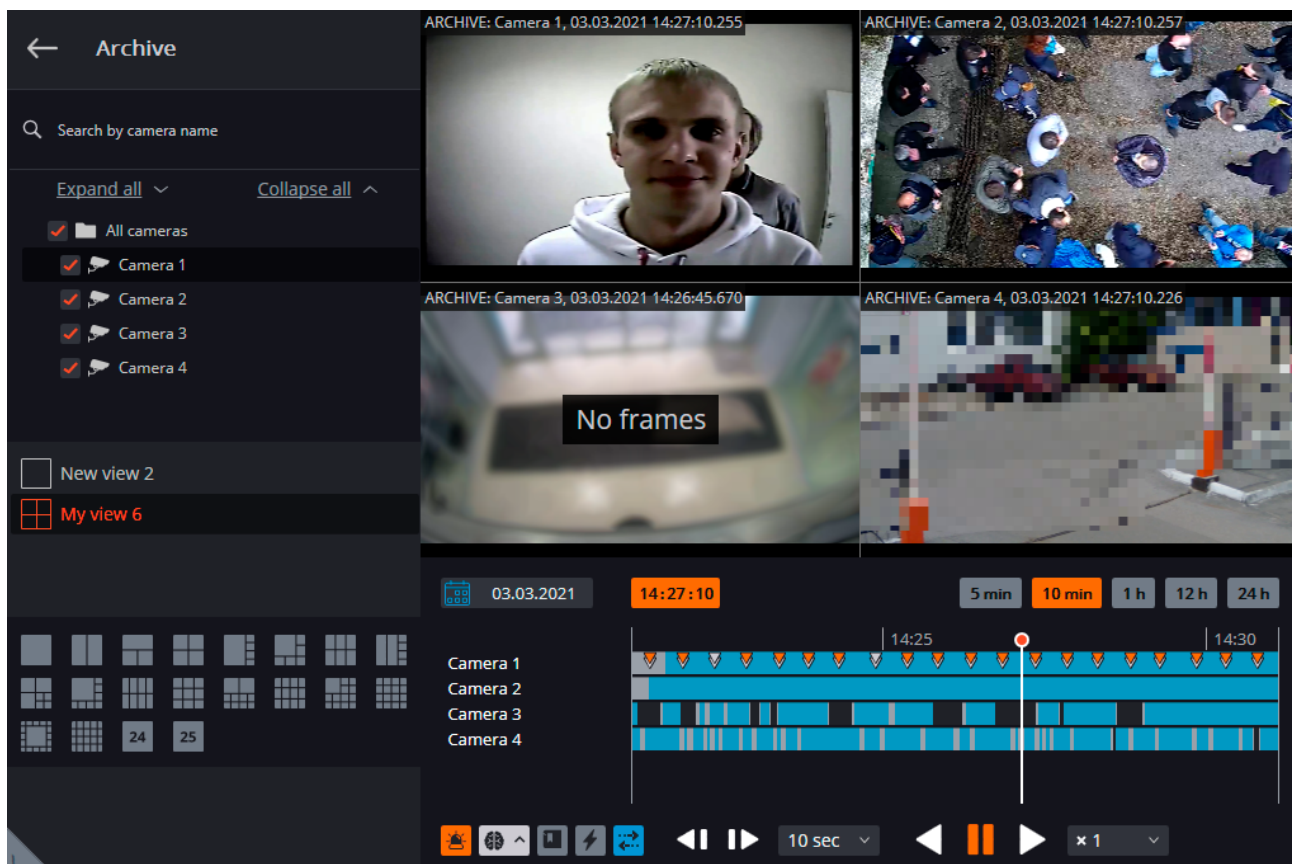


The items associated with the intelligent modules connected for this camera are placed in the bottom of the menu. The description of these items is given in the sections describing the relevant intelligent modules.

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.

To switch to **Simultaneous archive viewing mode**, expand the **Control Panel** and select 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 grey.



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.



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.

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



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

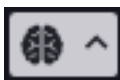
The events located next to each other may be combined under the same mark. In such a case, the events can be divided into separate marks when the scale is enlarged.

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

Filter buttons:



Alarms;



Video analytics;



Bookmarks;



Actions.

In the simultaneous mode, one of the cells can be made active — to do this, click inside the cell. In the active cell of this mode available the same control elements, as in the single camera archive viewing mode.

Video analytics

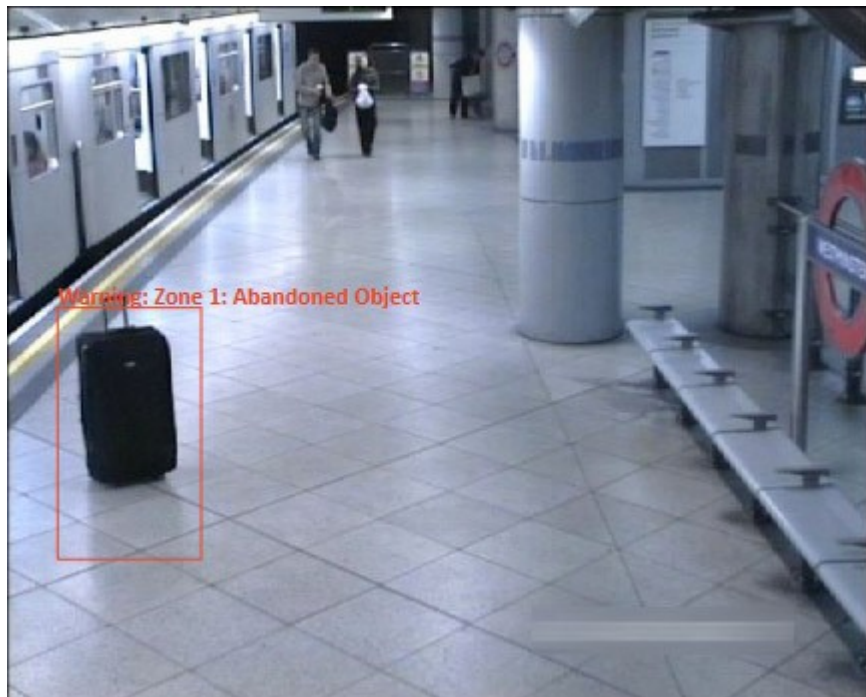
Abandoned object detection module

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 "high-lighted" on the screen.



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

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 recorded in the [Events log](#).

Auto zoom

This displays a separate enlarged area with moving objects.



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



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.

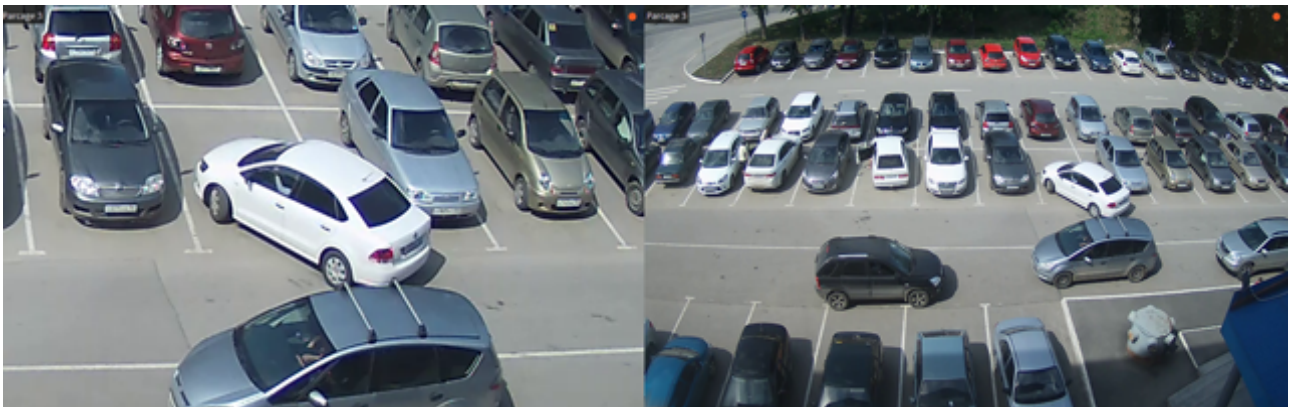
The image will be scaled in such a way that all currently moving frames were included in the frame.

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.

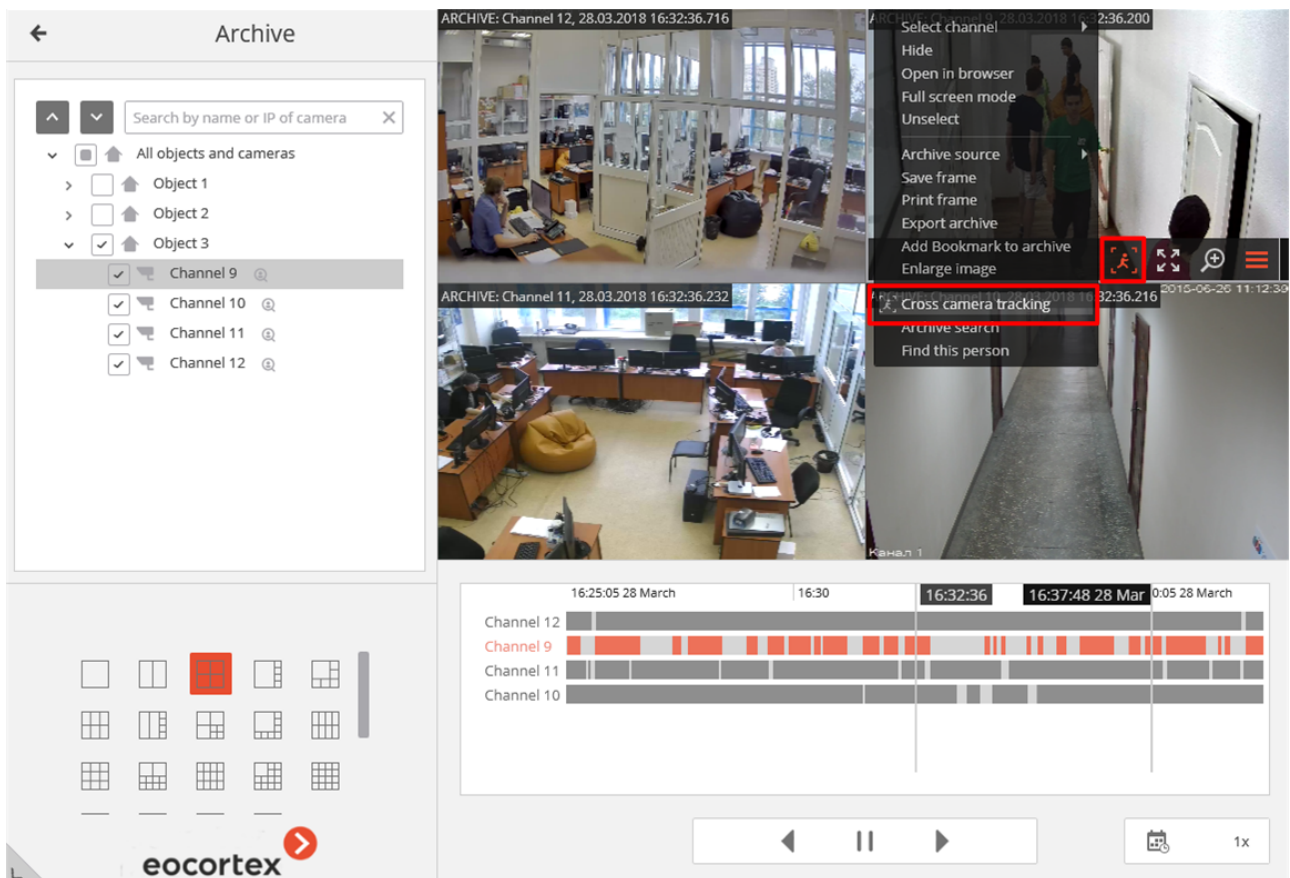
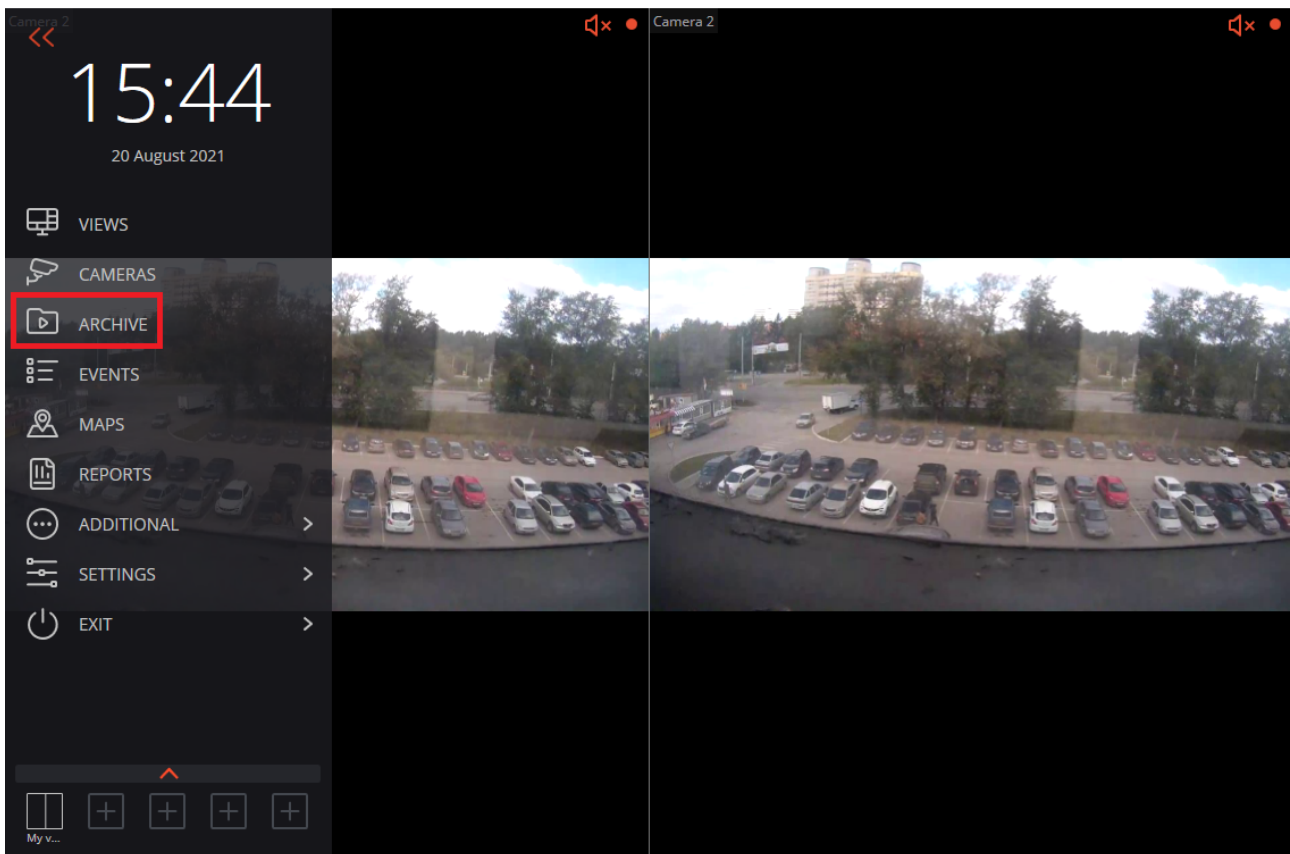



Cross-camera tracking will be performed only on those channels, on which the **Indexing of the moving objects by signs** was enabled by the system administrator.

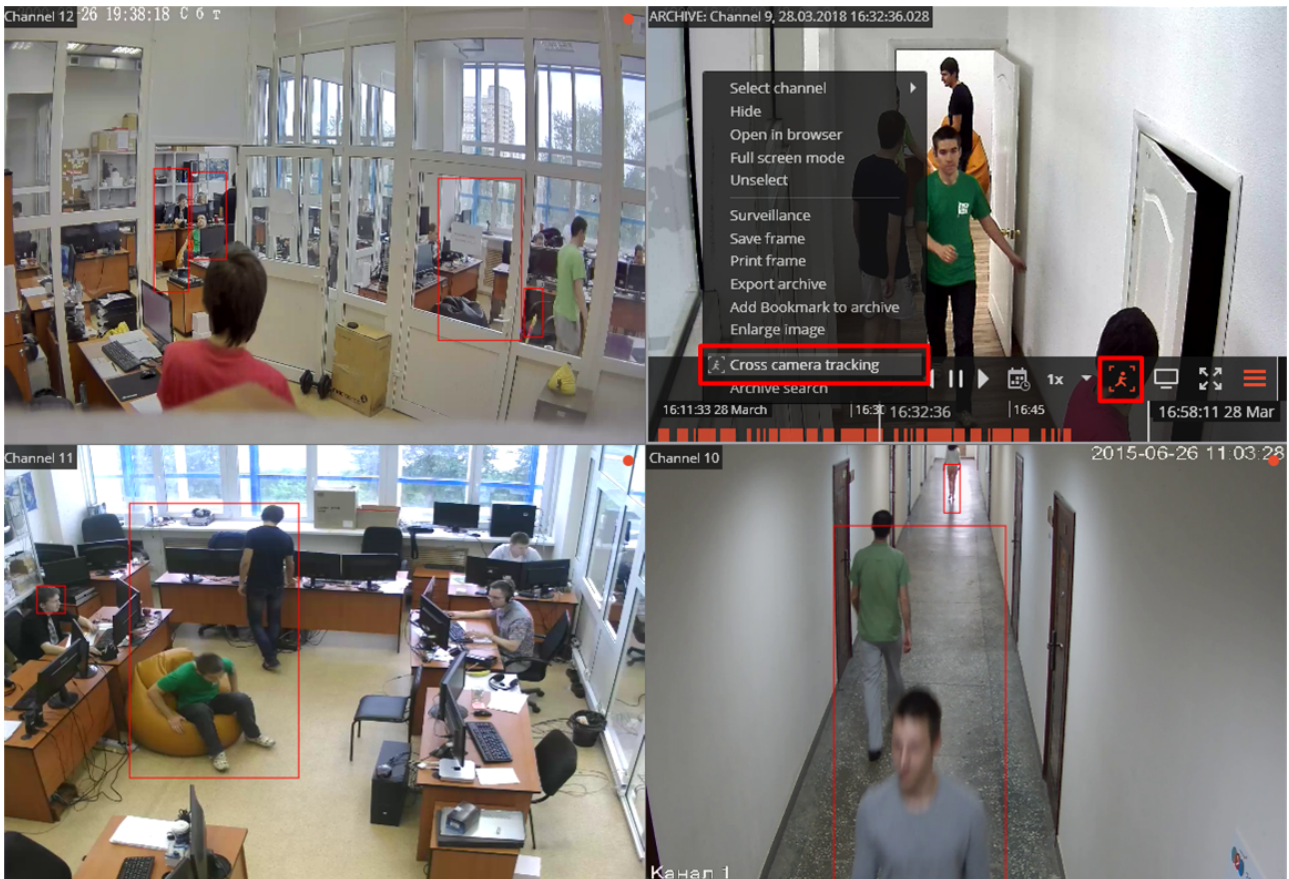
Cross-camera tracking can be enabled in three ways:

- In [simultaneous archive viewing](#) mode (to switch to this mode, select **Archive** item in the Main menu),

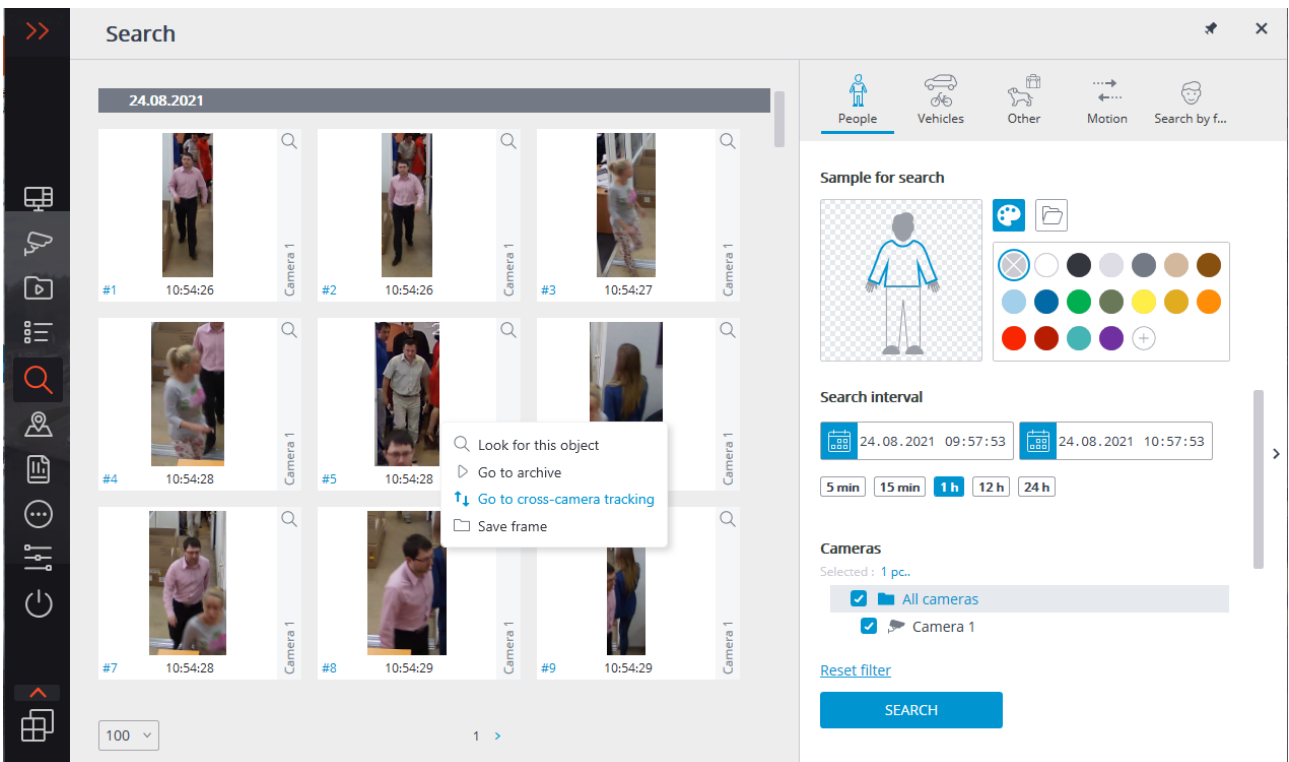
select a cell and click on , or select **Cross-camera tracking** in the cell's context menu;



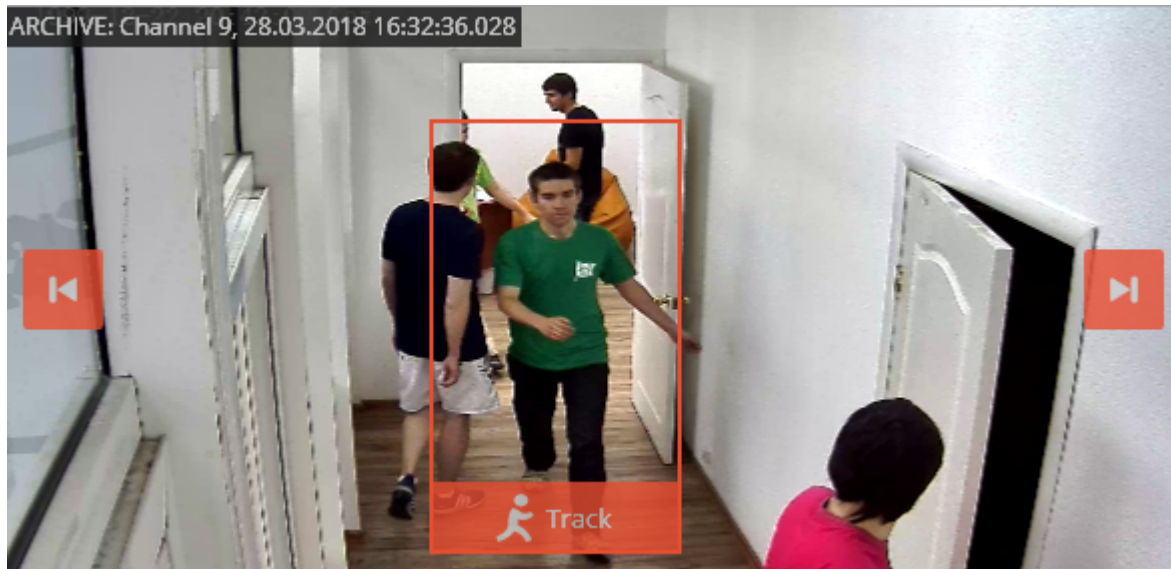
- In [individual camera archive viewing](#) mode, select a cell and click on , or select **Cross-camera tracking** in the cell's context menu;





- 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.



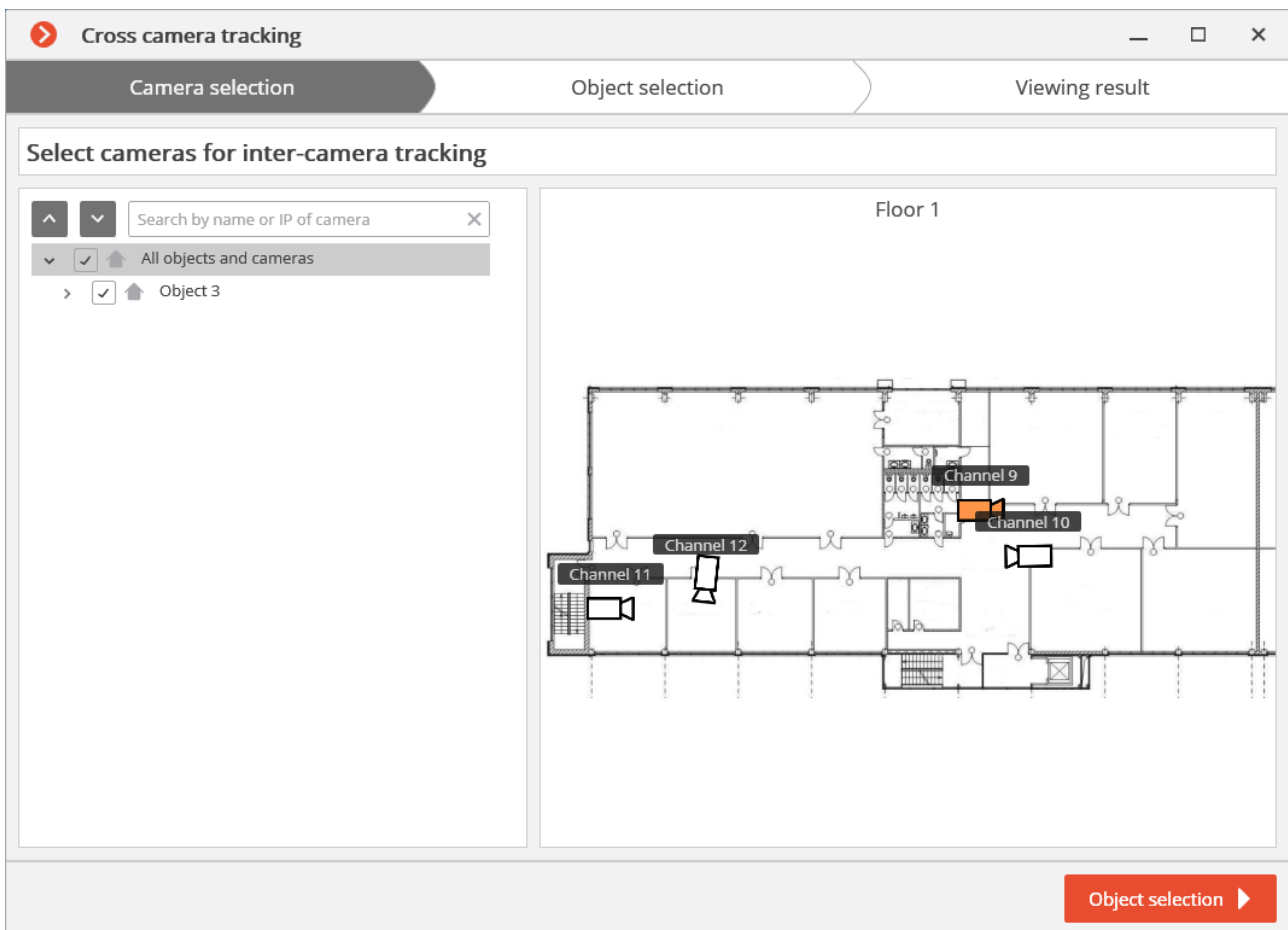
If the figure of a person is absent or not boxed in the frame, or if there are no figures of people at all, you

can go to the previous or to the next frames with people using  and  buttons.

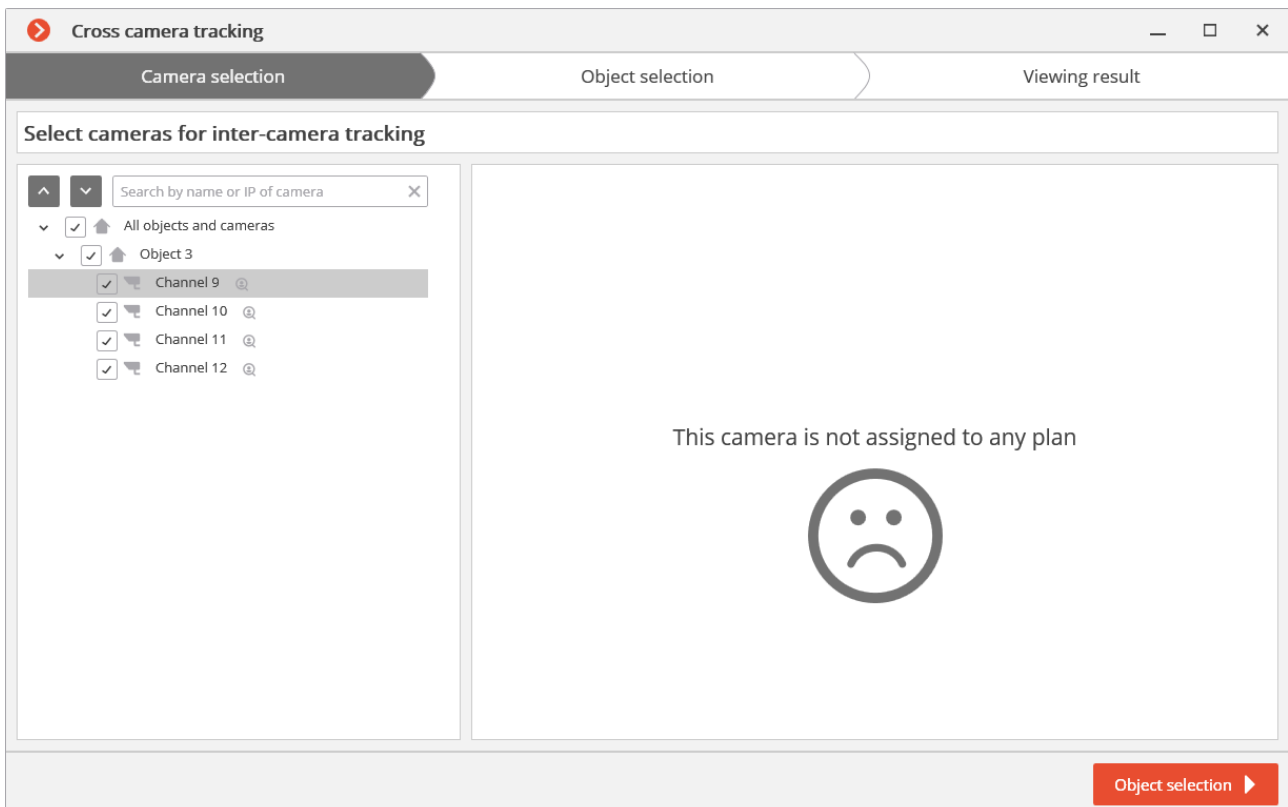
To look for fragments with a sought person, use  button located in the lower part of the frame with this person. This will open Cross-camera tracking master window.

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).

The screenshot displays the 'Cross camera tracking' application window. The interface is divided into three main sections: 'Camera selection', 'Object selection', and 'Viewing result'. The 'Object selection' tab is currently active.

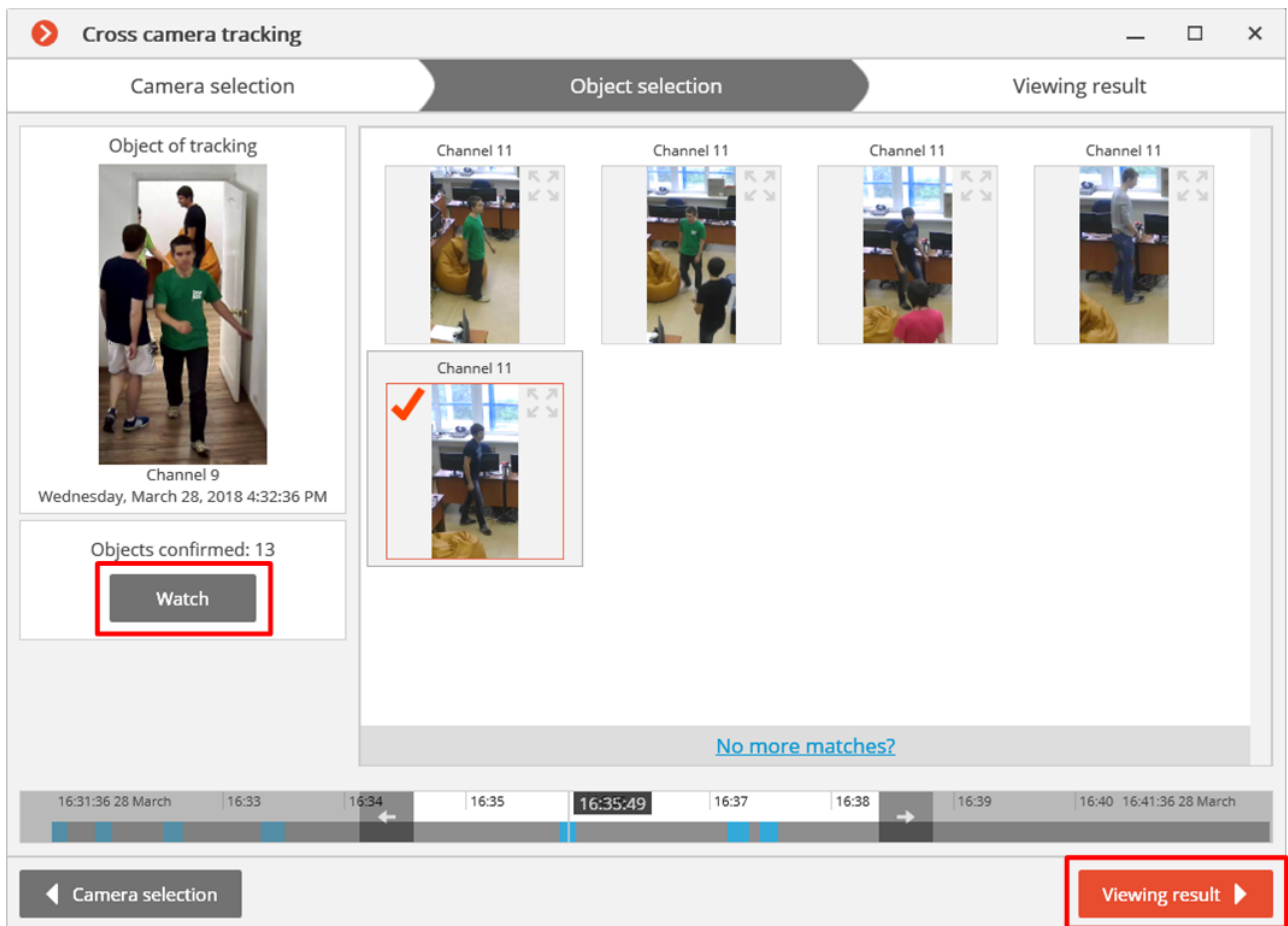
Object of tracking: A video frame from Channel 9 shows a person in a green shirt walking in a hallway. The timestamp is Wednesday, March 28, 2018 4:32:36 PM. Below this, it states 'Objects confirmed: 6' and has a 'Watch' button.

Object selection grid: A 3x4 grid of video frames from various channels (Channel 10, Channel 11, Channel 12) shows the person in the green shirt. Each frame has a red checkmark in the top-left corner, indicating it has been selected. Each frame also has a small 'x' icon in the top-right corner for zooming.

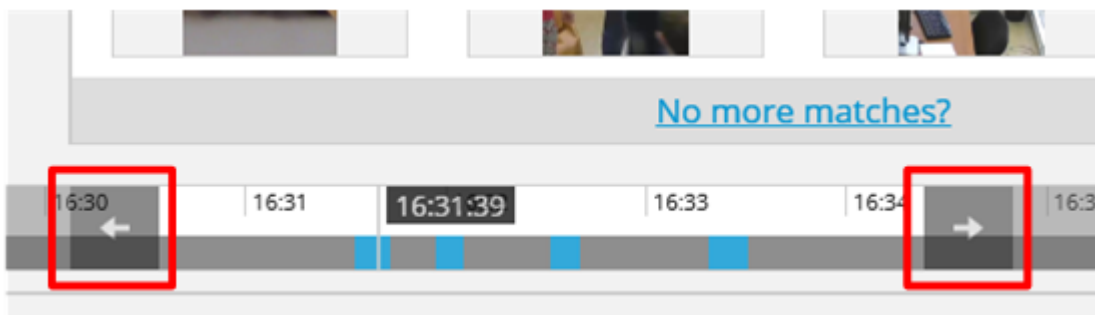
Timeline: A horizontal timeline at the bottom shows the time range from 16:27:36 to 16:37:36 on March 28. The current time is 16:33:22. The timeline is divided into segments, with the current segment highlighted in blue.

Navigation: At the bottom left, there is a 'Camera selection' button with a left arrow. At the bottom right, there is a 'Viewing result' button with a right arrow.

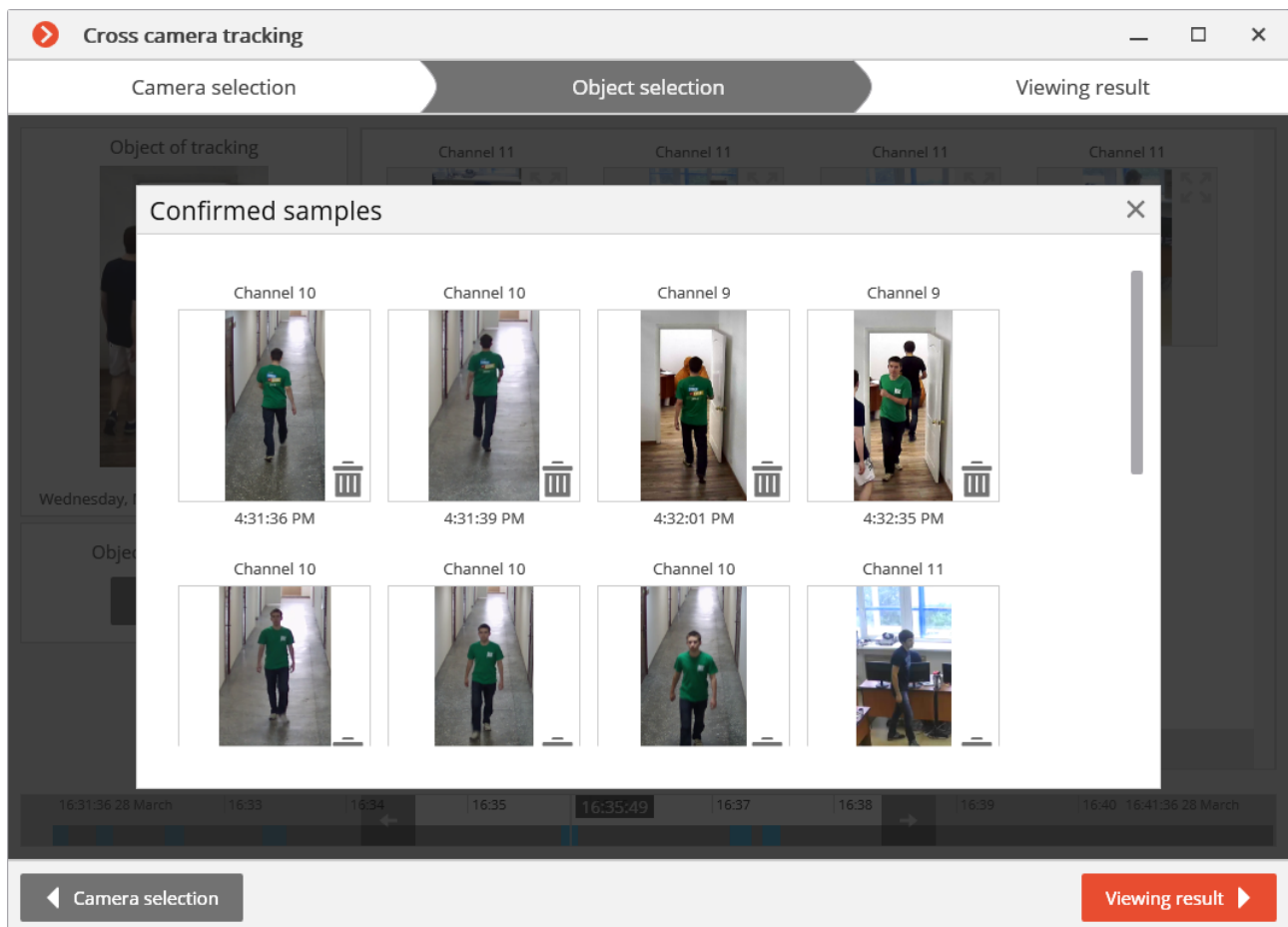
After ticking all the fragments with the sought person, you can click on **No more matches?** link in the lower part of the page. The more precise search will be performed based on the ticked samples within the current timeframe. If such samples are found, they will be displayed on the object selection page.



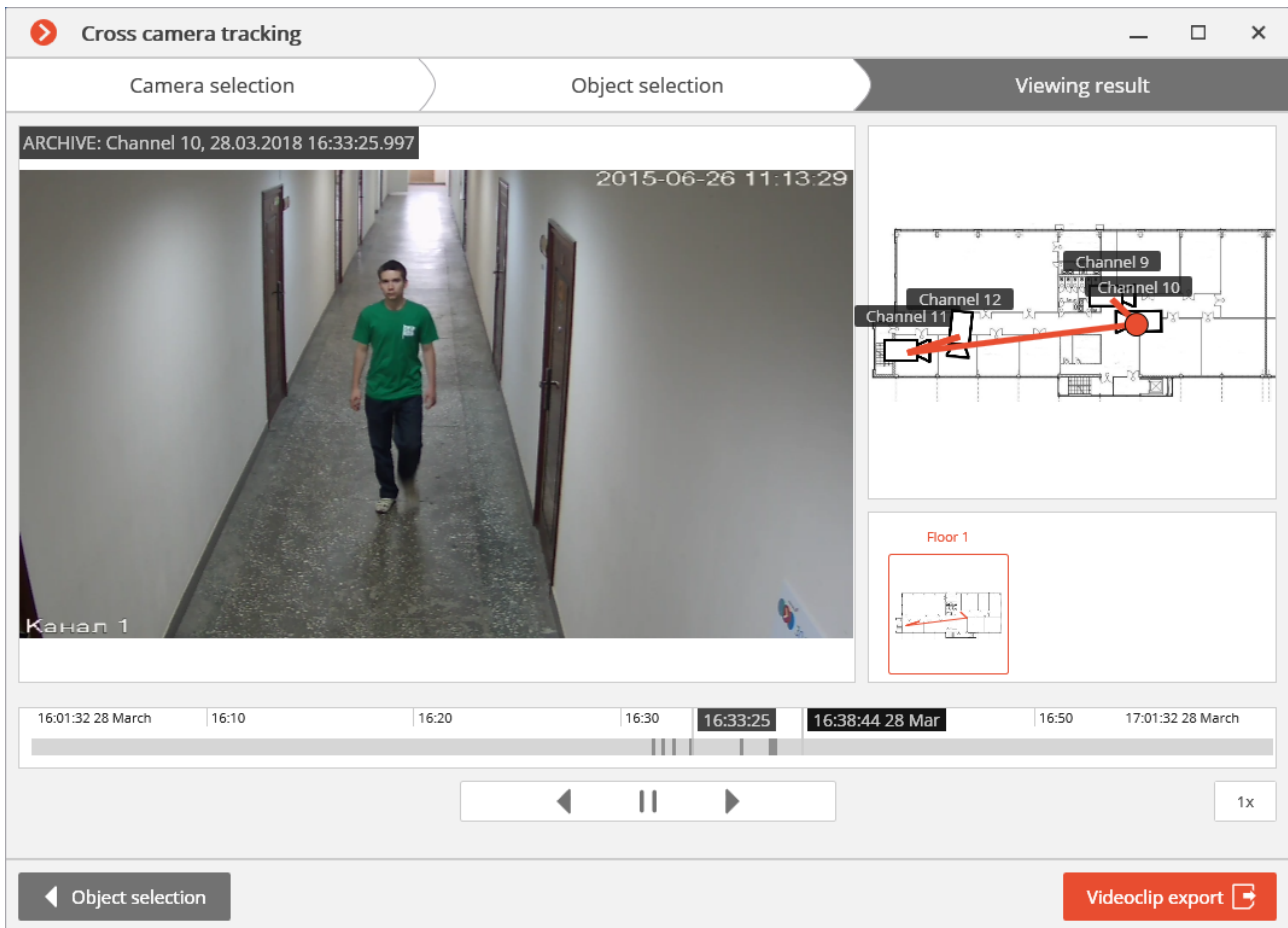
To change search interval, use arrow buttons on the timeline.



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 counting module

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 two quantitative criteria (levels) — attention is required and allowable maximum levels. If the number of people in specified frame areas exceeds one of these levels, an appropriate alarm event will be generated.



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

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



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.

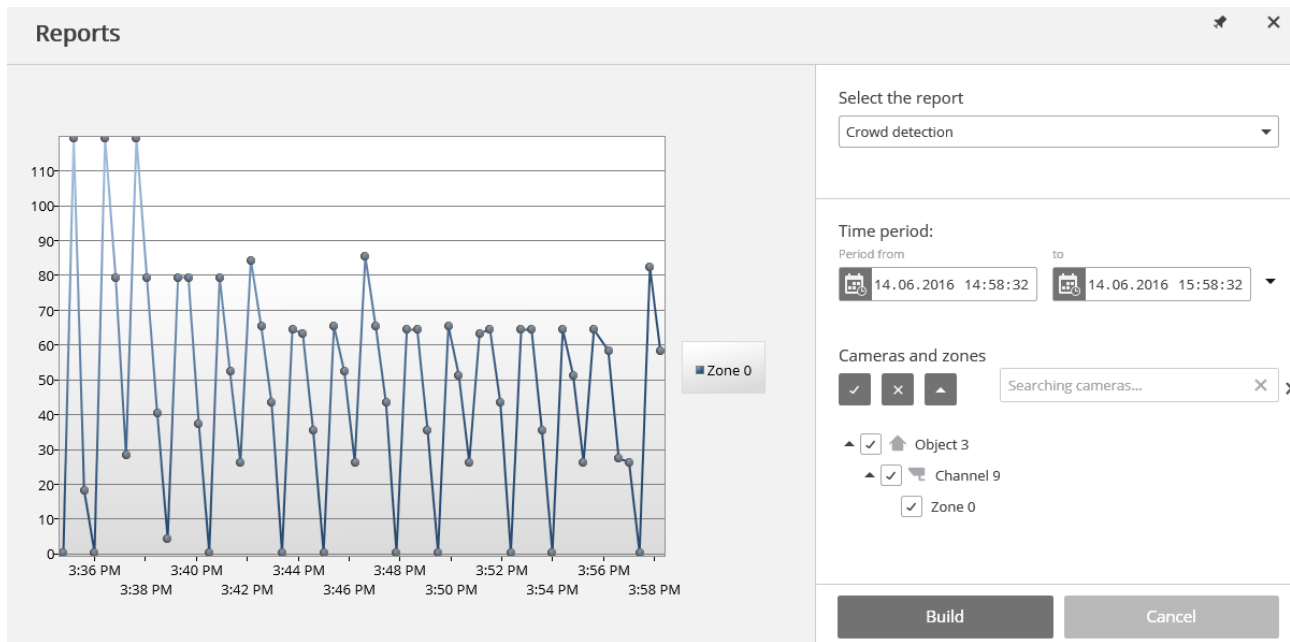
During real-time viewing the camera cell in which the crowd counting is performed will display the area in which the name and the estimated number of people in it will be indicated. In case of exceeding the maximum number of people in the area, the frame and the name will become red, and an exclamation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

All the module events are recorded in the [Events log](#).



To generate the reports select **Reports** in the Main menu.



In the **Select report** field, set the **People counting** 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, Month**.

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

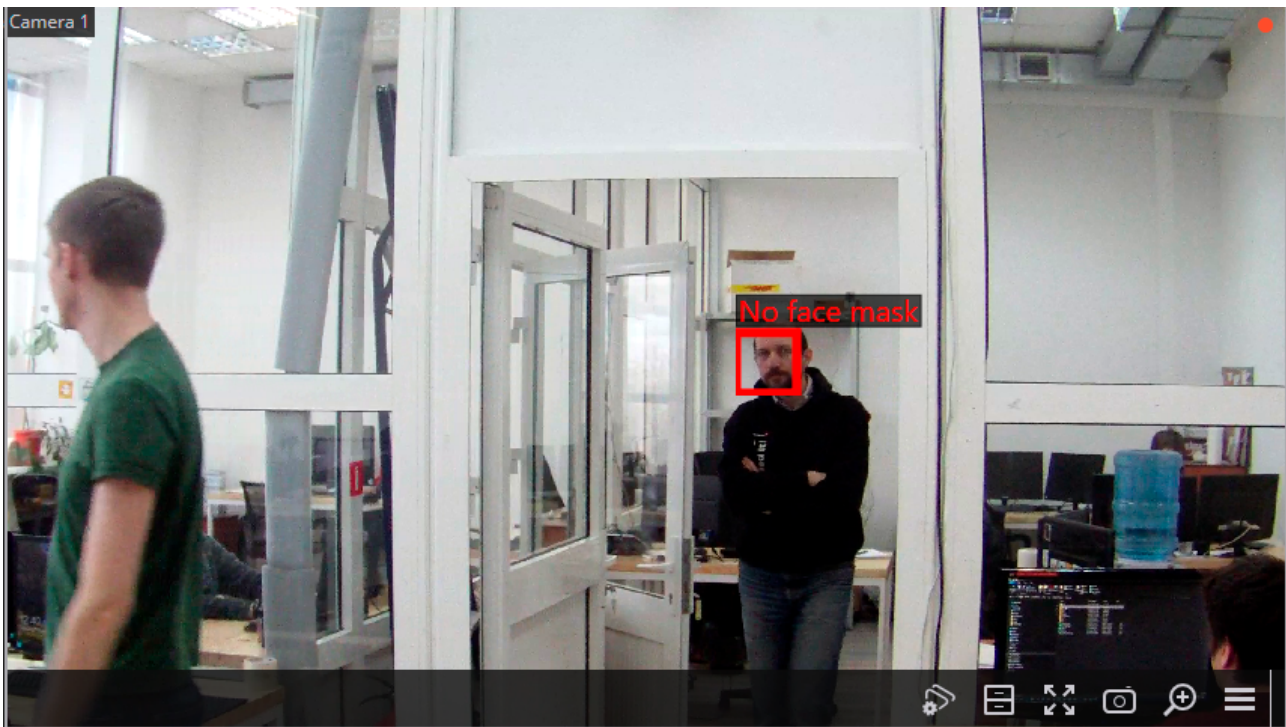
To generate the report click **Generate** (to abort the report generating process click **Cancel**).

Face Mask Detector

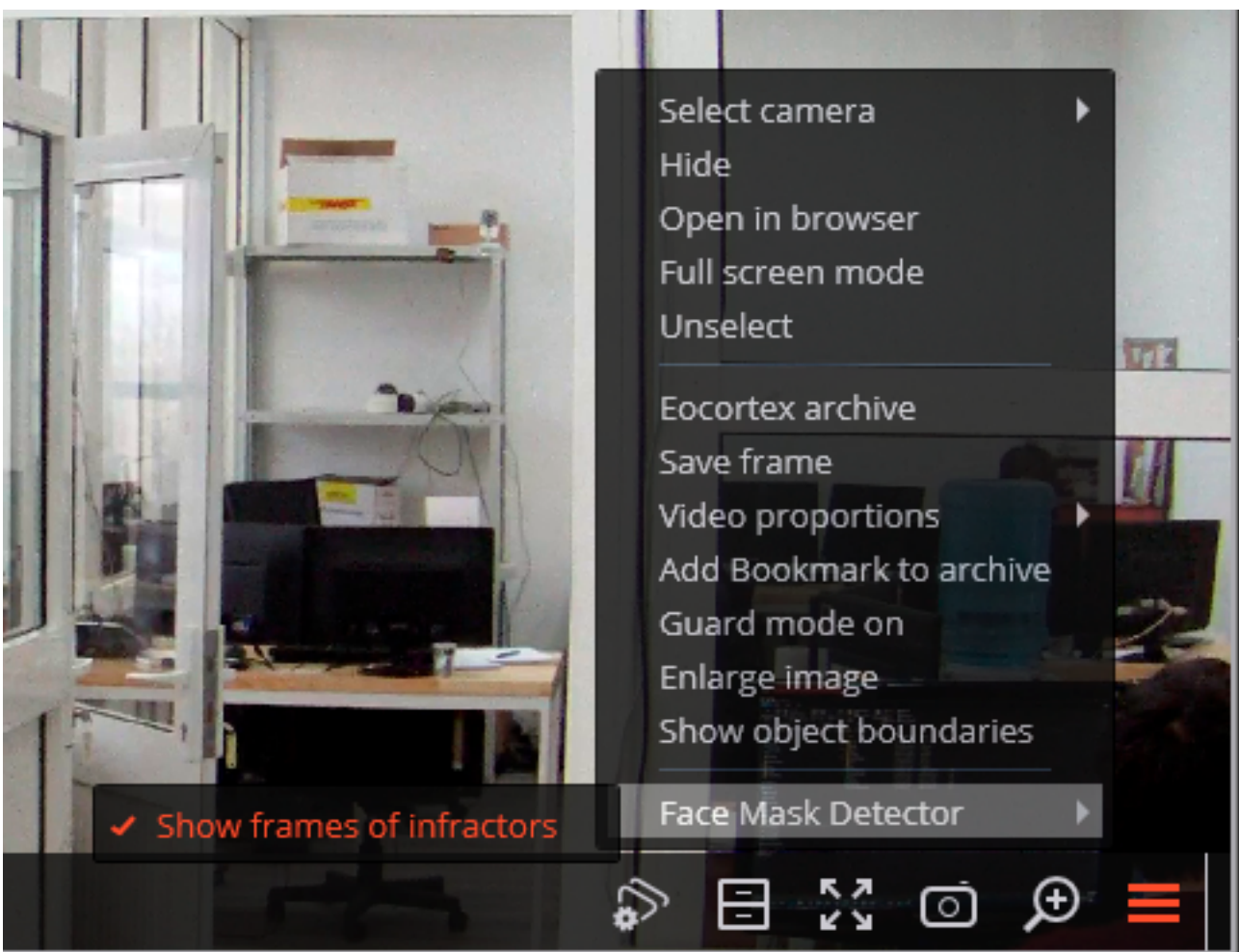
The **Face Mask Detector** module is designed to detect people not wearing medical face masks in the frame. When such persons are detected, the module highlights them in the frame with a square in real time and enters the event in the event log.



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



To display the frame around people not wearing face masks, select **Show frames of infractors** subitem in **Face Mask Detector** item of the cell's context menu.



All the module events are recorded in the [Events log](#).

Face recognition

Macroscop 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 several face 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.




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

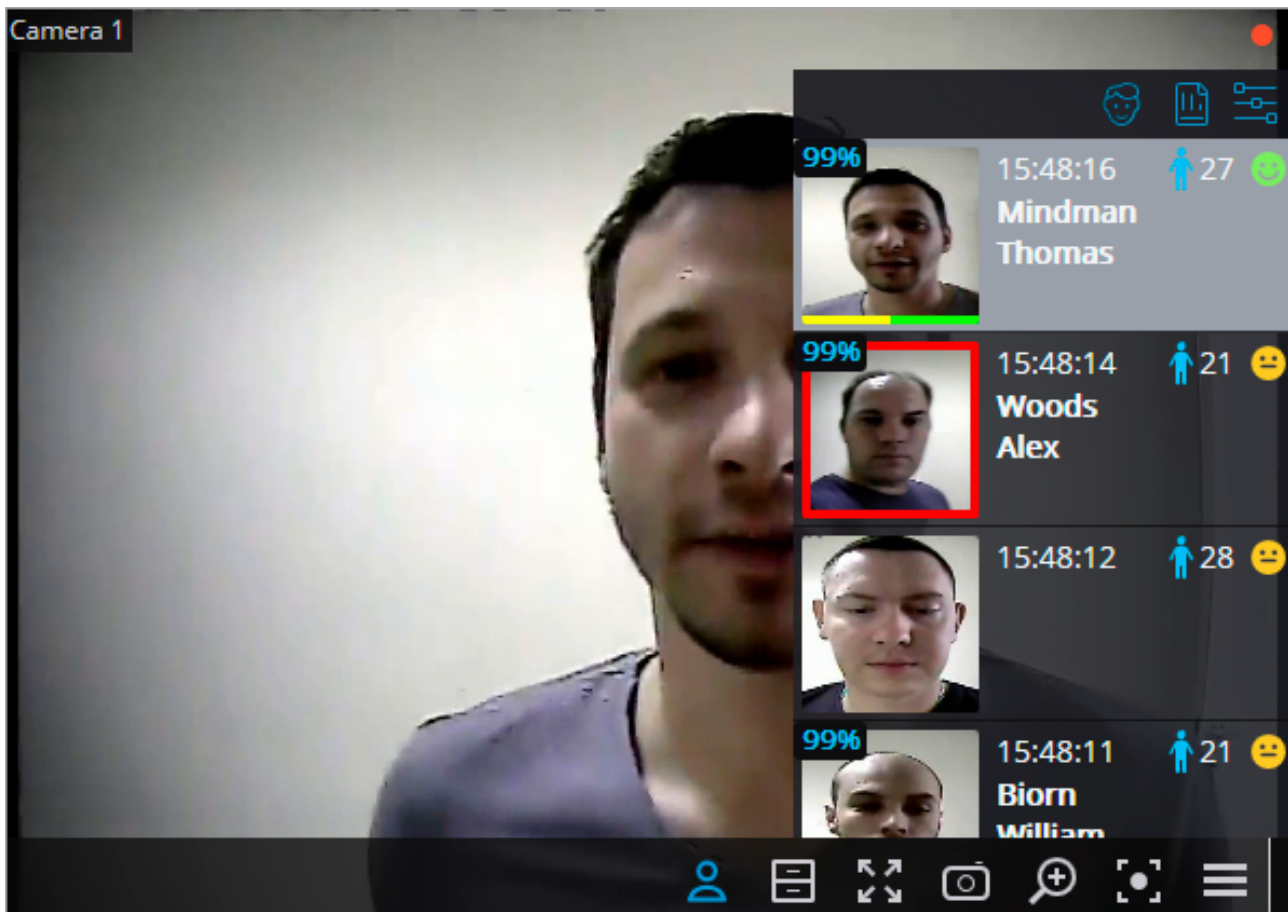
The **Face Recognition (Complete)** and **Unique Visitor Counting** modules also define sex, age and emotions of recognized people.



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

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 .

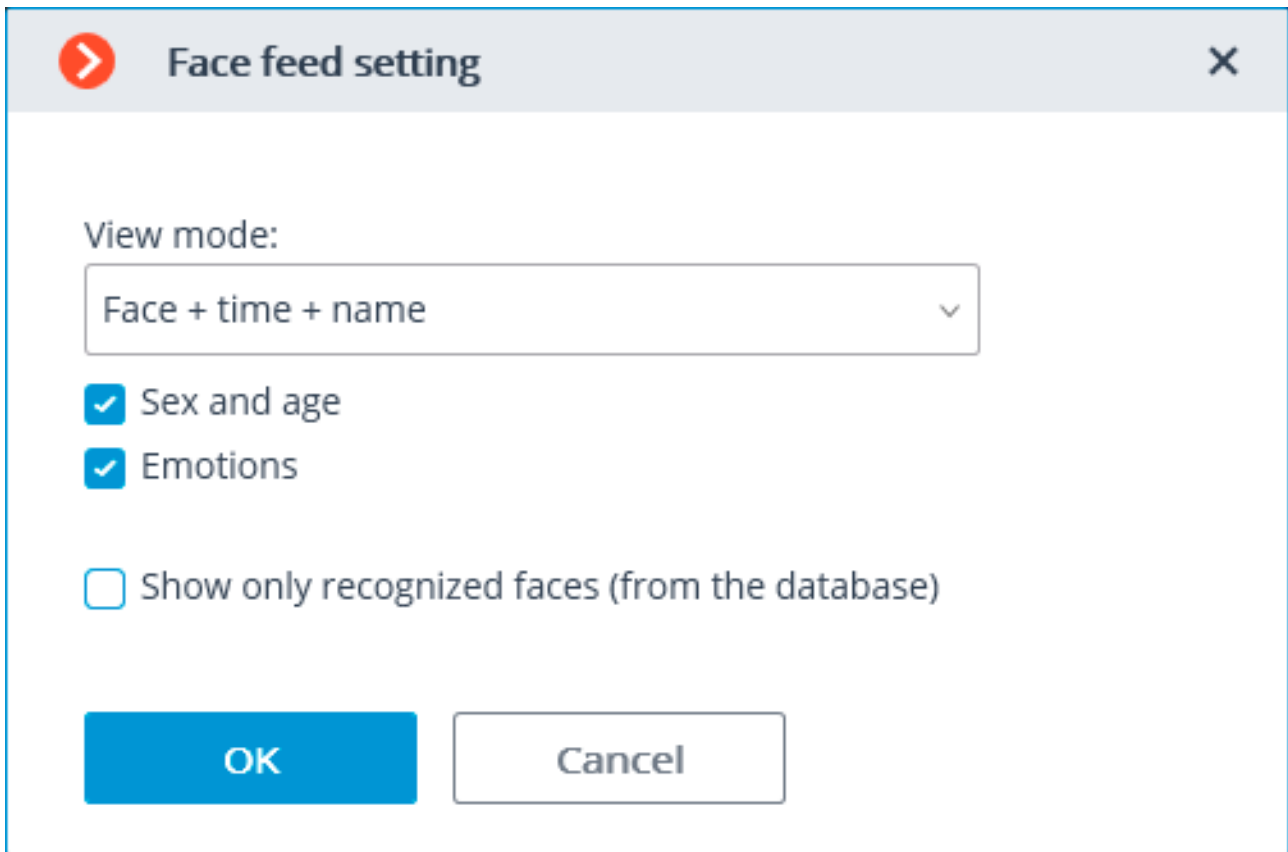
Below there is the list of recognized faces in descending time order.

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.



Face feed setting

View mode:

Face + time + name

☒ Sex and age

☒ Emotions

☐ Show only recognized faces (from the database)

OK Cancel

The following settings are available in this window:

Enable the faces panel enables displaying (on the right side of the cell) of the panel with a list of recognized faces.

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.

If **Automatic selection of the new record** is checked, the last recognized face will be highlighted in the recognized faces list.

Face recognition report

Face recognition report displays the recognized faces.



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

02.03.2021 15:55:05

 to

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	Date	Time	Camera	Groups	Full name
	27.09.2019	14:28:37	Camera 17	White list	Smith John
	27.09.2019	14:26:06	Camera 17	White list	Miller Erikh
	27.09.2019	14:23:33	Camera 17		
	27.09.2019	14:23:32	Camera 17	Interception	Walter Anrew
	27.09.2019	14:23:17	Camera 17		

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

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.

At the top of the report there are the following buttons:



Open the archive button opens this face recognition moment on archive view page (may also provide switching to the archive view page by double clicking on the row).



Edit in the database,



Create entry in face database and



Add photo to

face database entry buttons open the window of editing a person in the face database, allowing to

modify personal information, add a new person to the database and add new image samples, correspondingly.



By clicking on **Export** button, window, providing export of the recognized faces to a CSV file shall be opened.

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.

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.

The screenshot shows a web application window titled 'REPORTS'. It contains a table of violations and a filter panel on the right.

Table Data:

Full name	First entrance	Last exit	Total in area	Number of stays
26.05.2020				
Smith John	17:27:39		3 min	1

Filter Panel (Right):

- Select the report:** Work time logging (Complete)
- Date Range:** 25.05.2020 17:31:09 to 26.05.2020 17:31:09
- Filters:**
 - Zone 1
 - Groups
 - Full name
- [Clear the filters](#)
- Permanence in the area during the 24-hour period:**
 - At least, h: 00:05
 - Up to, h: 09:15
 - From: 08:00
 - To: 17:00
- ☐ Show violations only
- Buttons:** Refresh, Cancel

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.

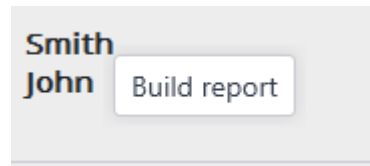
After setting all filters need press the **Refresh** button.

It is required to press Refresh after setting all filters.

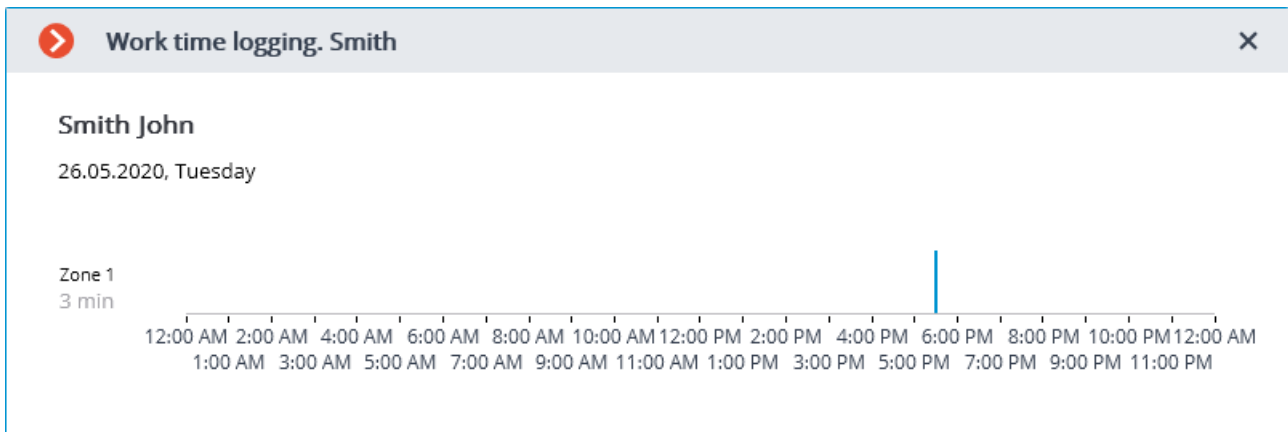
The total number of violations of the rules of presence in the area and the descriptions of cameras monitoring exits and entrances are shown in the title of the report.

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

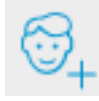
The **Faces database** contains the following information: full name of person; group, to which the person belongs; samples of the person's face, and other.

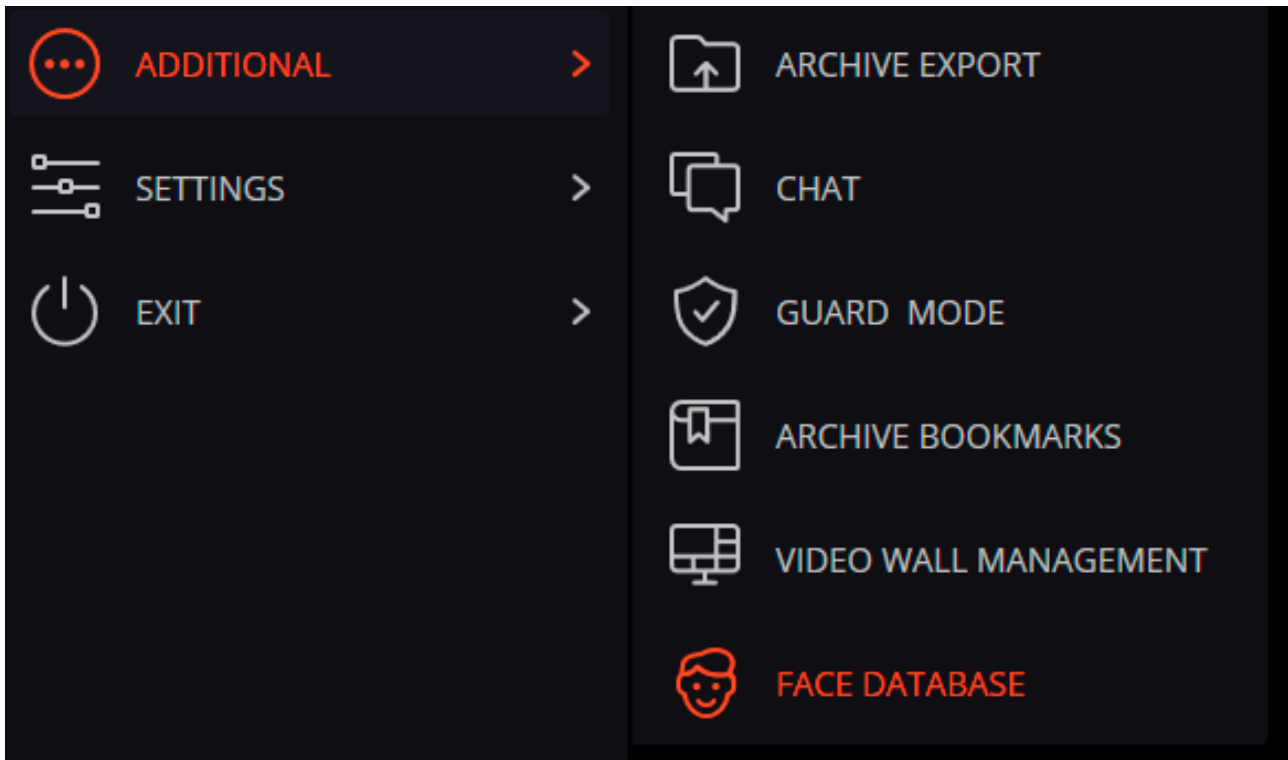
It is possible to add to the database the faces found by the face recognition module as well as to upload image files with faces.


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

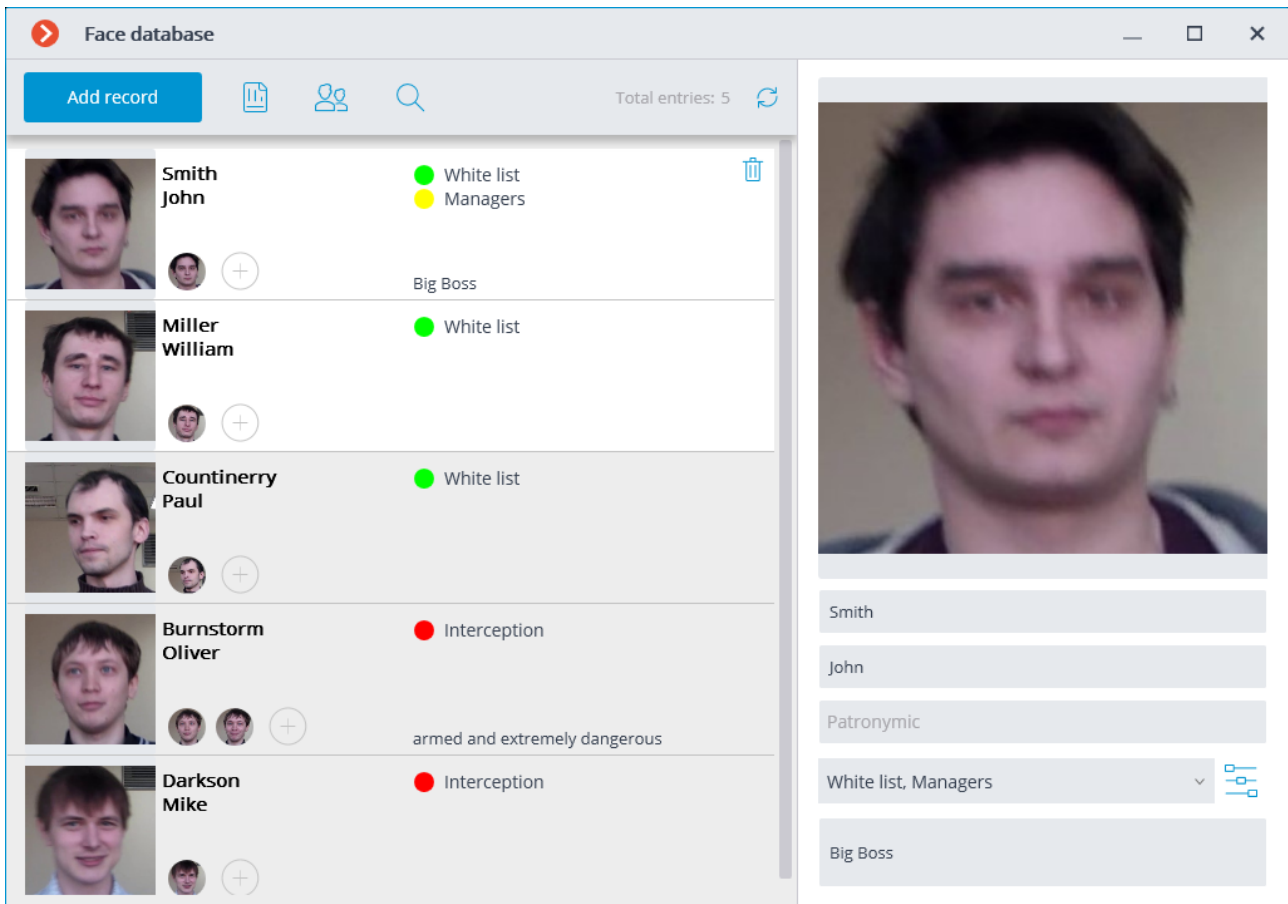
- In the **Face recognition** report, select a face and press the **Add a person to the face database** button. The face database window will open in the mode of adding a new face.

- 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.





-  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 record** 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 groups editing.

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

-  **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.

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.



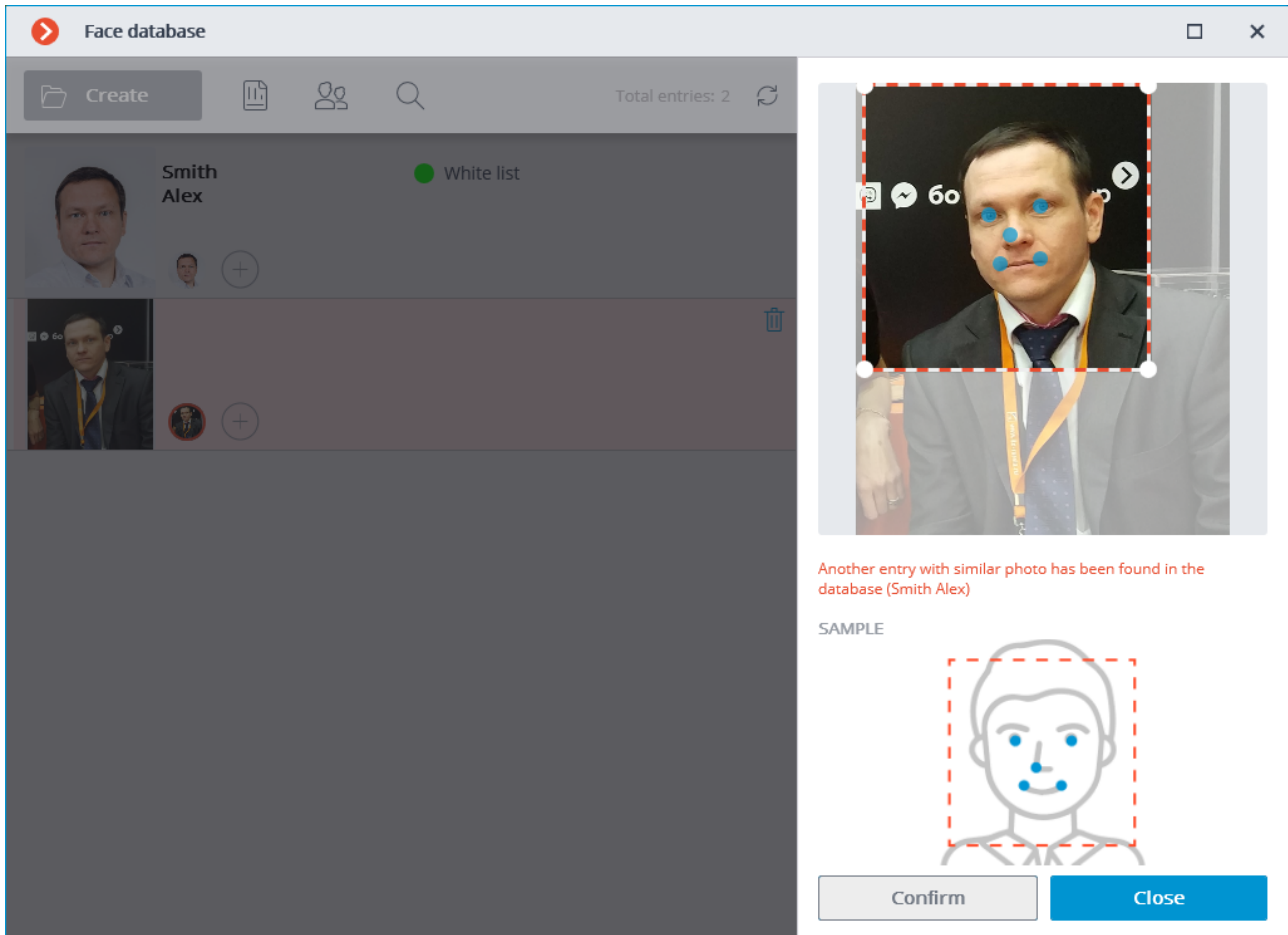
Each entry may contain up to 5 photos. When this limit is reached, the photo adding button will be unavailable.



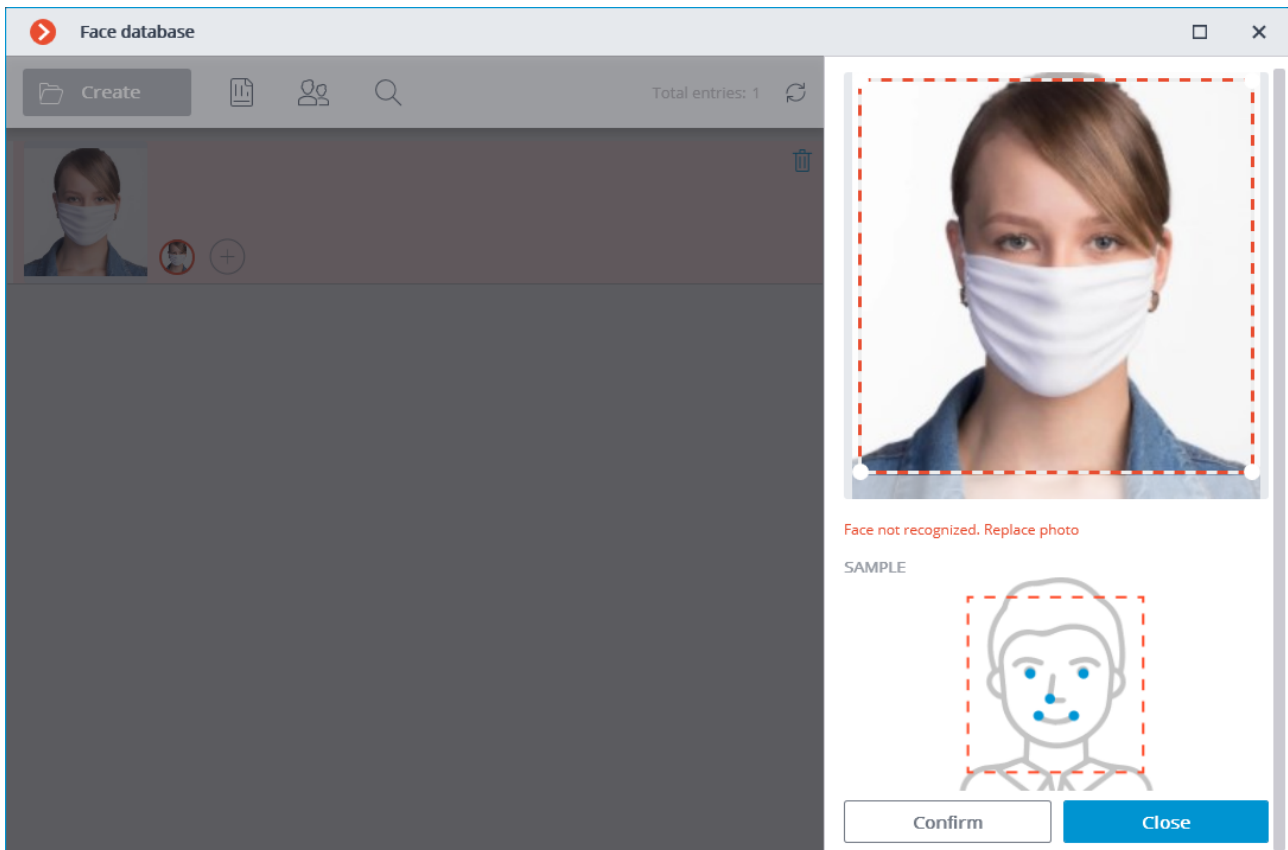
No more than 3 groups are displayed in the list for each entry. If the entry is included into more than 3 groups, the full list of groups can be viewed by hovering the mouse pointer over the list of groups or by pressing the button with the ellipsis.



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.



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



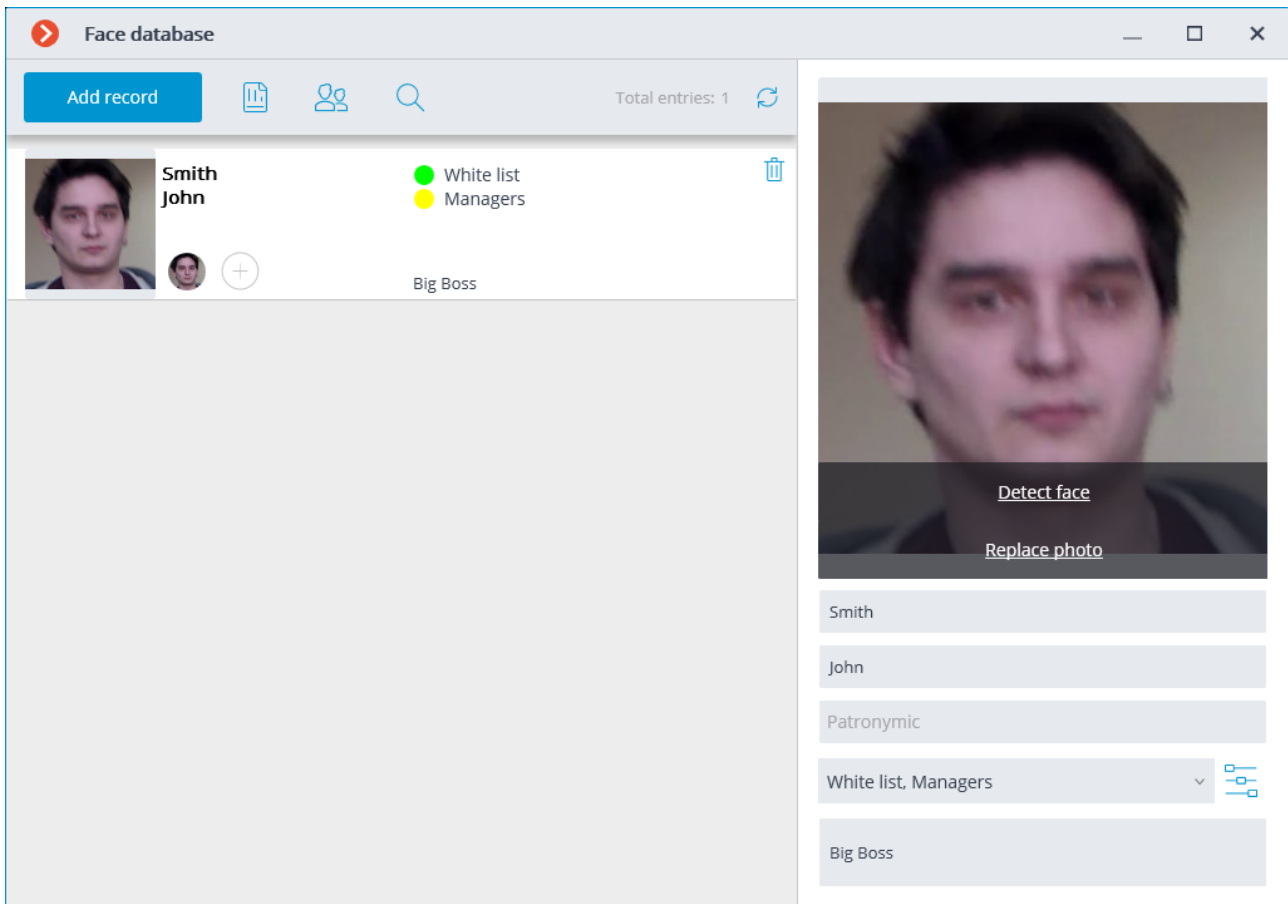
-  It is possible to add faces that do not meet quality requirements to the database, but they will not be used as samples for recognition. The unrecognized images will be marked with  ; it is recommended to replace them with the samples that meet the requirements for recognition.

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 **Detect face** and **Replace photo** links in the lower part of the image; the sample deletion button appears in the upper right corner.



- **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.



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

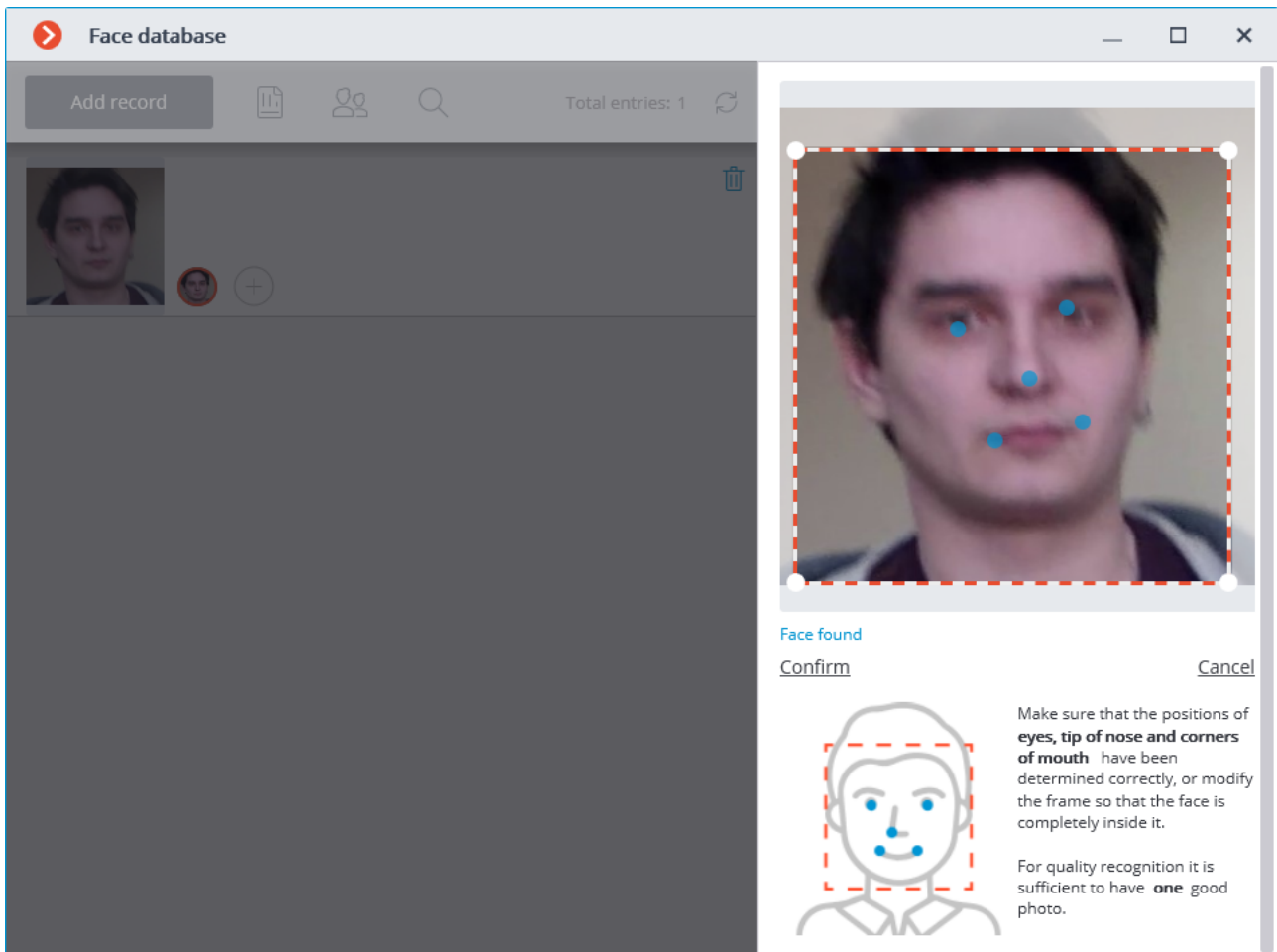


The sample deletion button is shown only for the entries that contain several samples.




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.

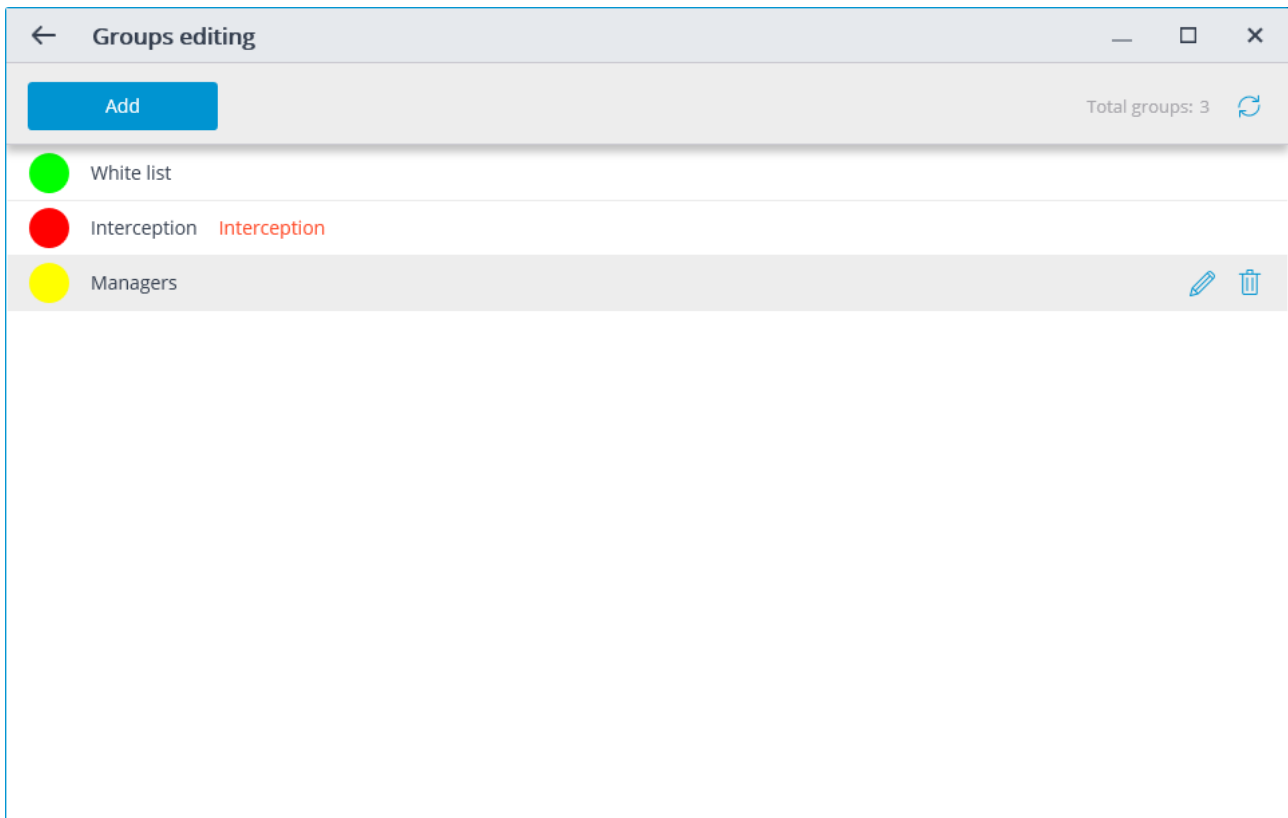
If the key points have not been found or are marked incorrectly, it is required to manually modify the position of the frame to ensure that it fully embraces the face and that the shoulders are also included. After that, the module will attempt to determine the key points again. If the modification of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

-  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.

A screenshot of a dialog box titled "Edit the group" with a close button (X) in the top right corner. The dialog contains two input fields: "Name" with the text "Managers" and "Color" with a yellow color swatch. Below these is a checkbox labeled "Face interception" which is currently unchecked. At the bottom of the dialog are two buttons: "Add" and "Cancel".

Fire and smoke detection

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



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

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** or **Possible Fire** header.



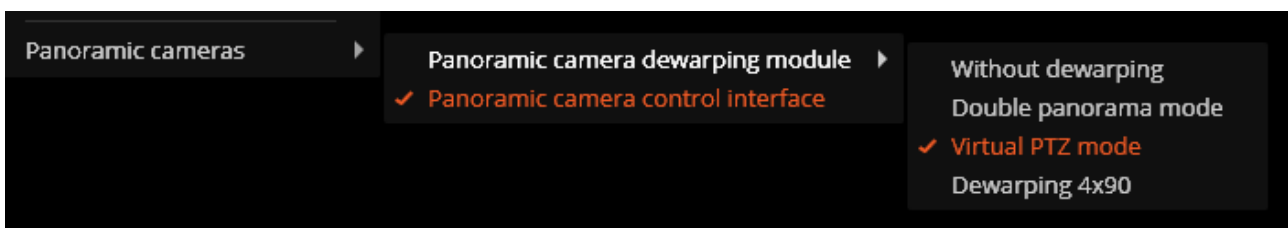
All the module events are recorded in the [Events log](#).

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

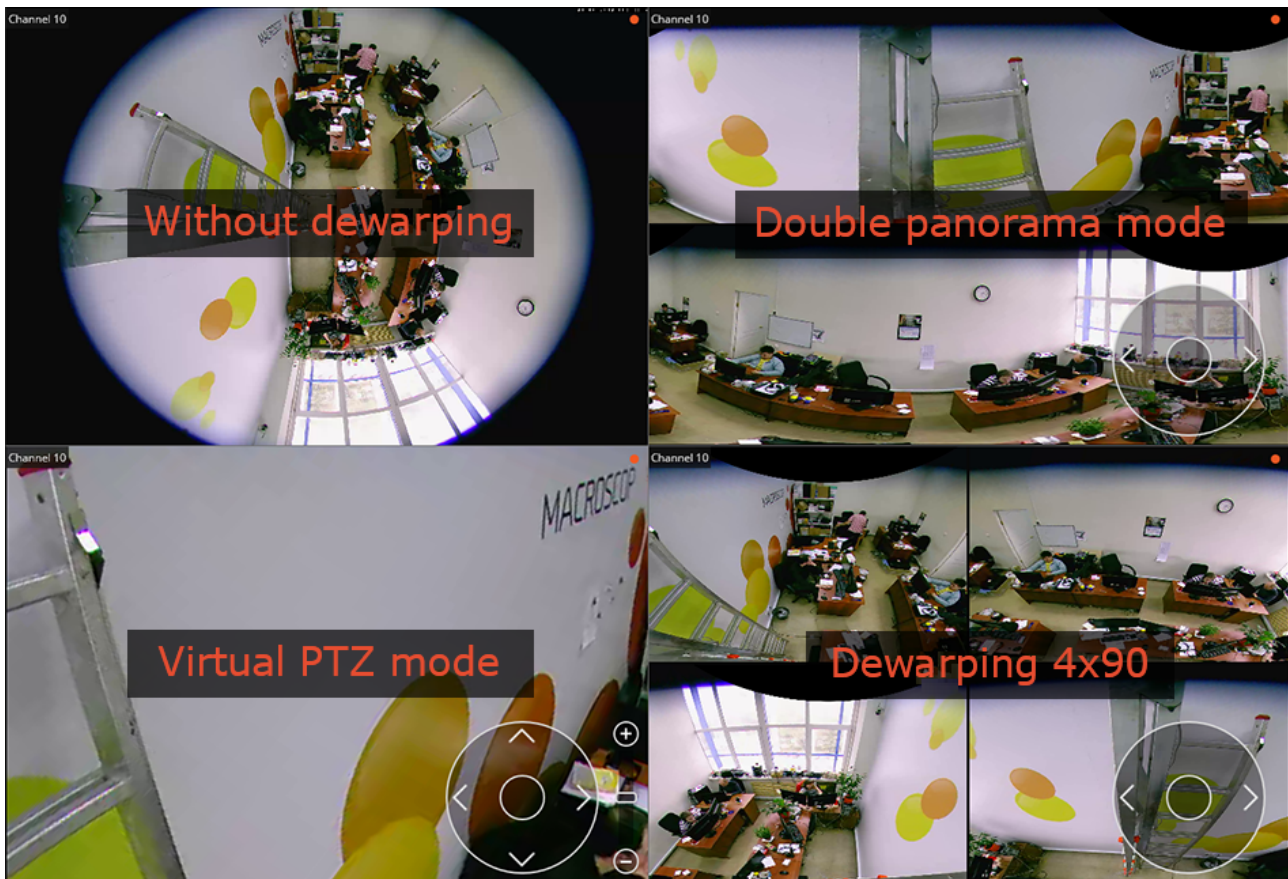


This module will only work on the cameras on which it has been enabled by the video surveillance system administrator.

To dewrap the image from the fisheye camera select **Fisheye cameras** in the cell context menu, and then select one of the modes in **Panoramic cameras: Without dewarping, Double panorama mode, Virtual PTZ mode** or **Dewarping 4x90**; the cell will be displayed in the relevant mode.



Below is the description for each of the modes.



Without dewarping: the cell image is read out without conversion: as it was received from camera.

Double panorama mode: the image in the cell is divided in two panorama, 180° each. The panorama rotates to the right and to the left using a virtual joystick that is displayed in the lower right part of the cell (use mouse to control the virtual joystick); or by using the PTZ control panel (joystick) that is connected to the computer.

Virtual PTZ mode: the image in the cell is dewrapped so that to simulate PTZ operation. It is controlled using a virtual joystick that is displayed in the lower right part of the cell (use mouse to control the virtual joystick); or by using the PTZ control panel (joystick) that is connected to the computer.

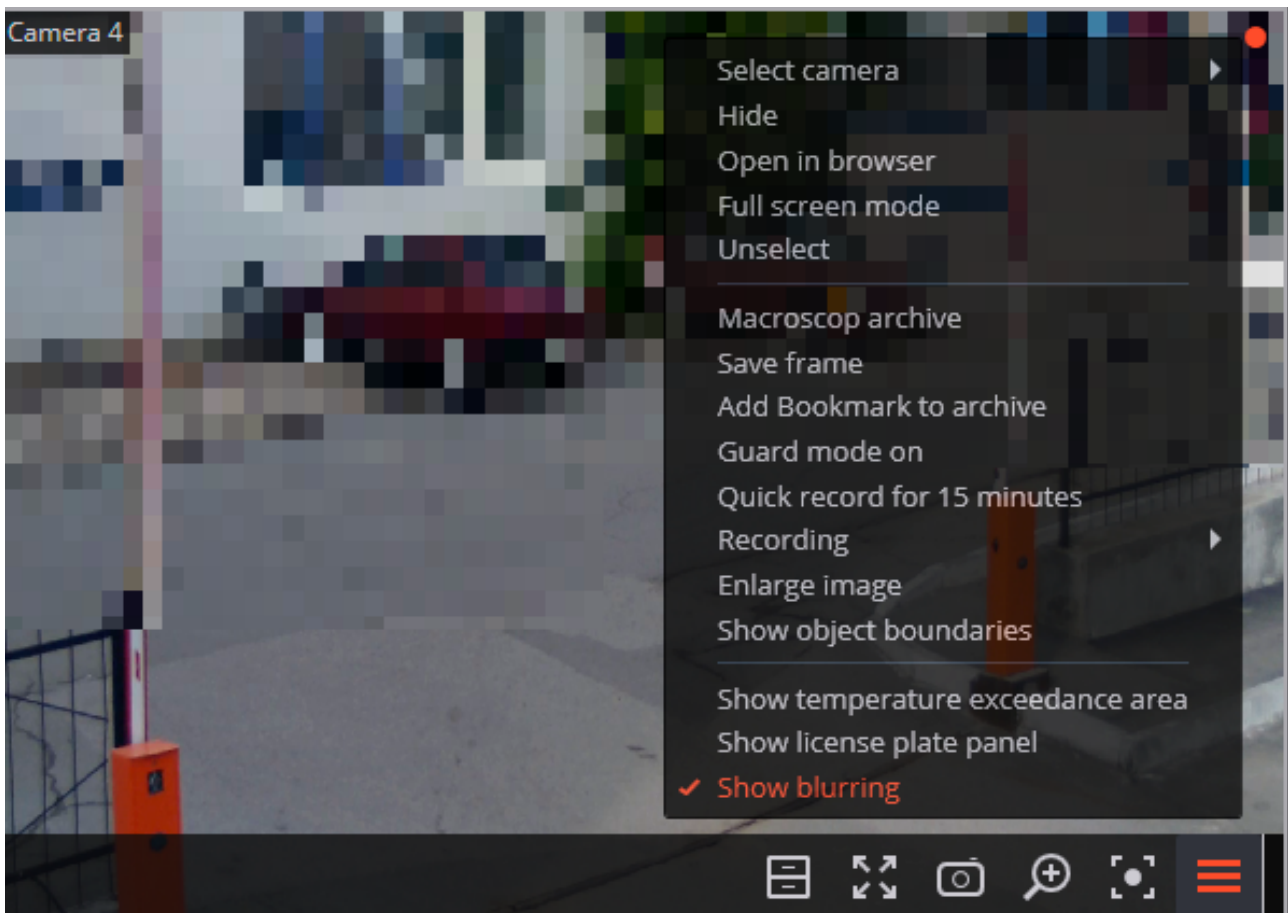
Dewarping 4x90: the image in the cell is divided in four sectors, 90° each. The image rotates to the right and to the left using a virtual joystick that is displayed in the lower right part of the cell (use mouse to control the virtual joystick); or by using the PTZ control panel (joystick) that is connected to the computer.

Frame area blurring

The **Frame area blurring** module is designed to blur the specified areas of the frame on a real-time video.



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



If the user is authorized to disable blurring, the context menu will have the corresponding item.



The blurring is only available when broadcasting real-time video and on a freeze frame from the archive. The image will not be blurred when playing back the archived video.

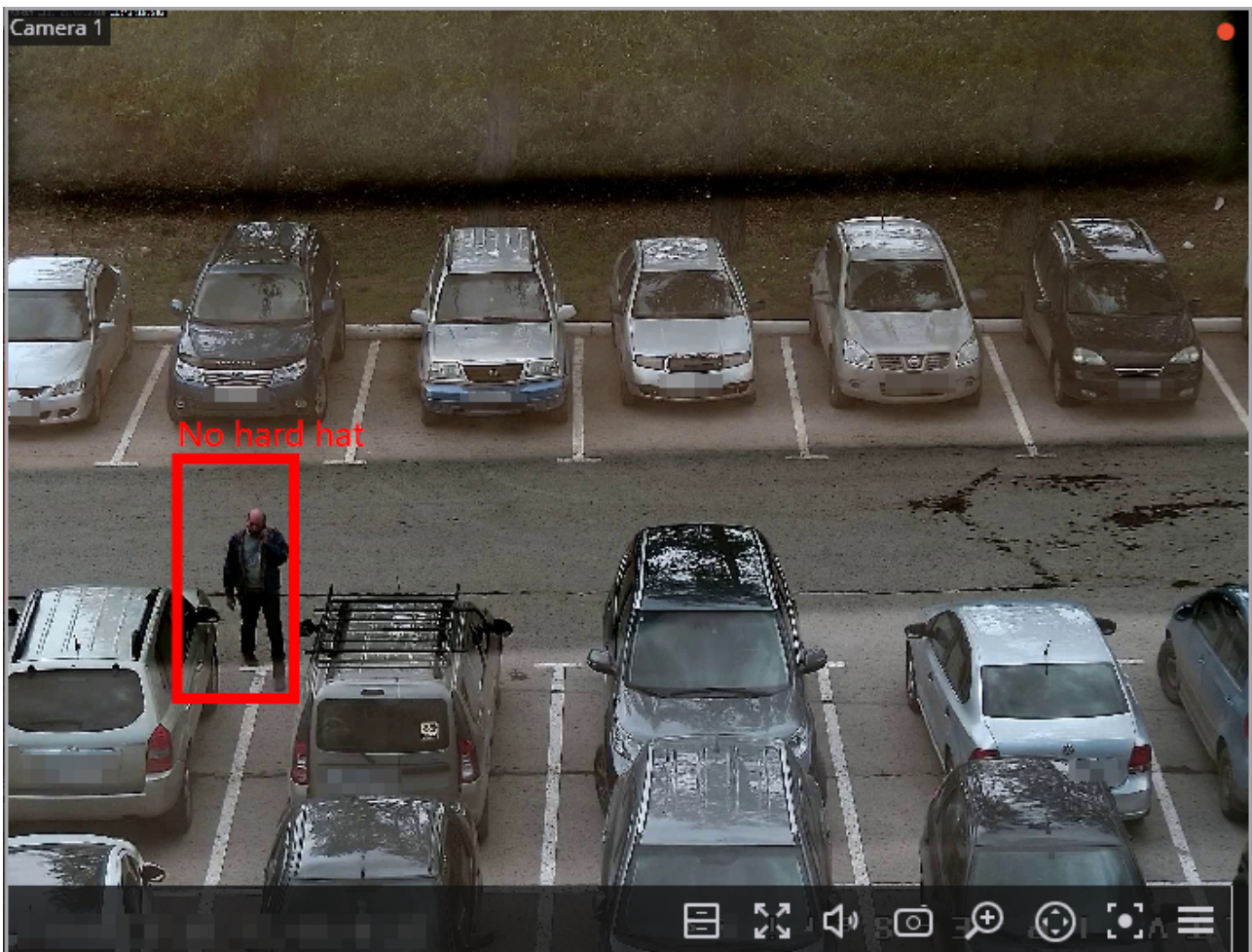
Hard Hat detector

The Hard Hat detector module is intended for detecting people not wearing hard hats.

When such persons are detected in real time, the module frames them and registers the event in the log.



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



To show a frame around the people not wearing hard hats, select the Show Infractor's Frame subitem in the Hard Hat Detector item of the cell's context menu.

All the module events are recorded in the [Events log](#).

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.

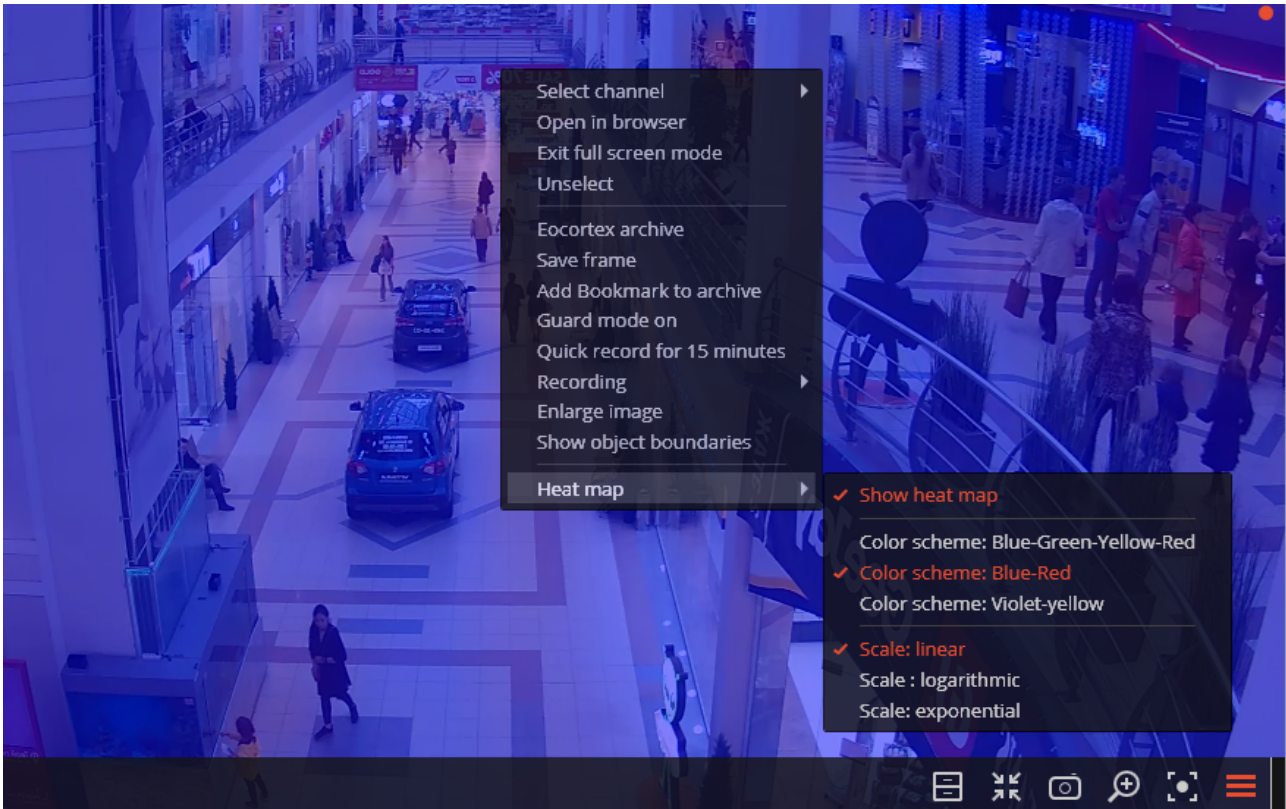
The heat map module can be used to determine the popularity of different places (racks, cabinets) in a store, preferred routes for people or vehicles, as well as to analyze visit statistics of various objects.

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.



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

In order to enable Heat map in the cell, select Heat map item in the context menu, then in the open sub-menu 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.

Channel 11

Channel 11
From 10.06.2016 17:00:09
To 10.06.2016 18:00:09
Hours: 0 - 24
Days of week: Mon Tue Wed Thu Fri Sat Sun

Activity, %
0 25 50 75 100

Select the report
Heat map

Time period:
Period from 10.06.2016 17:00:09 to 10.06.2016 18:00:09
Hours 0 24
Days of the week Mon,Tue,Wed,Thu,Fri,S...

Scale
Blue-Green-Yellow-Red

☒ Title
☒ Legend
☐ Logarithmic scale

Cameras
☒ Object 3
☒ Channel 11

Export to JPEG Save on the map Build Cancel

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.

License plates recognition

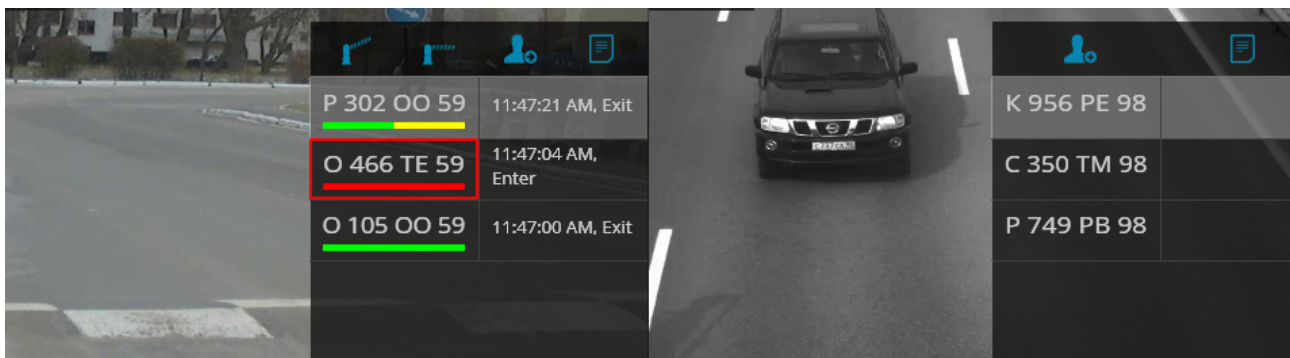
The license plates recognition module has the following features:

- 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.




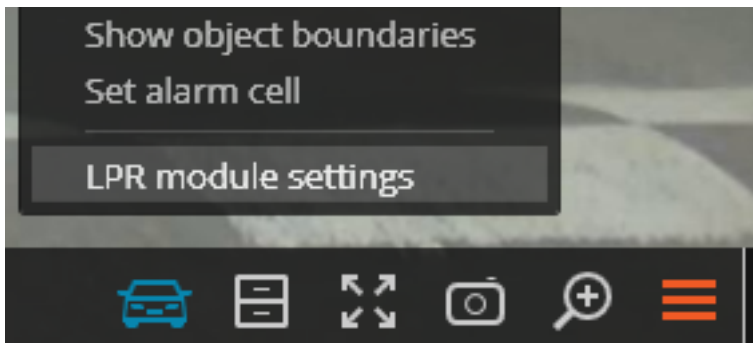
The module is designed to detect license plates on moving vehicles: if a vehicle is not moving a license plate is not recognized with high accuracy.

Live view





Display settings

In live view mode, you can turn on the display of the recognized license plates as well as the interface control of the barrier. To do this, select the cell and click  icon, or select LPR module settings in the context menu —module settings window will be opened.




Setting, available in this window, are specified below:

 **License Plate Recognition module** 


Module settings in the real time mode:

☒ Enable the panel with number plates

View mode:

Number plate + additional information about 

☒ Automatic selection of new number plates

☐ Group similar number plates 

☒ Show the barrier control buttons

OK

Cancel

View mode:

Number plate + name of the driver 

Number plate + additional information about the
Number plate + name of the driver
Number plate + timing and direction
Only number plate

Enable the panel with number plates - enables display of the panel (on the right side of the cell) with a list of recognized license plates.

View mode allows to configure the displayed information.

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

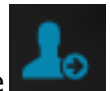
If Group similar number plates is checked, only one entry will be in the list for those license plates, which have been recognized several times in 5 minutes.




If Show the barrier control buttons is checked, Open / Close barrier buttons will be displayed at the top of the panel: when clicking these buttons, commands are sent for closing and opening of the barrier. As most of the barriers are closed automatically, closing button may remain unused. This option is available when the barrier control mode is enabled on the channel.

Recognized license plates panel

There are the buttons at the top of the panel for the addition of the license plate into the database



and switching to the reports page . And there are also Open / Close barrier buttons if this option is enabled.



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.

License plate recognition report

License plate recognition report displays the recognized license plates.

Reports							
<div> <div>Open the archive</div> <div>Add to the database</div> <div>Export</div> </div>							
Date	Time	Number plat	Groups	Channel	Direction	Full name	
11.08.2017	15:36:31	O 466 TE 59	Intercept	LPR module	Enter	Viperson William	
11.08.2017	15:36:27	O 105 OO 159	Allowe...	LPR module	Exit	Suoannenn Yoaki	
11.08.2017	15:35:58	P 302 OO 5*		LPR module	Exit		
11.08.2017	15:35:49	A 336 HY 55		LPR module	Direction unknown		
11.08.2017	15:35:43	O 466 TE 59	Intercept	LPR module	Enter	Viperson William	
11.08.2017	15:35:37	O 105 CO 59		LPR module	Direction unknown		
11.08.2017	15:35:09	P 302 OO 5*		LPR module	Exit		
11.08.2017	15:34:53	O 466 TE 59	Intercept	LPR module	Enter	Viperson William	
11.08.2017	15:34:48	O 105 OO 59	Allowed	LPR module	Exit	Gonzales Felix	
11.08.2017	15:34:20	P 302 OO 5*		LPR module	Exit		
11.08.2017	15:34:11	A 336 HY 15*		LPR module	Exit		
11.08.2017	15:34:04	O 466 TE 59	Intercept	LPR module	Enter	Viperson William	
11.08.2017	15:33:59	O 105 OO 5*		LPR module	Exit		
11.08.2017	15:33:31	P 302 OO 196		LPR module	Exit		
11.08.2017	15:33:15	O 466 TE 59	Intercept	LPR module	Enter	Viperson William	
11.08.2017	15:33:10	O 105 OO 51		LPR module	Exit		
11.08.2017	15:32:42	P 302 OO 5*		LPR module	Exit		

Select the report

Licence plate recognition

☒ Filter by time

Period from 11.08.2017 14:41:47 to 11.08.2017 15:41:47

☐ Sort events by time ascending

Searching cameras...

☒ LPR module
 ☐ LPR Highway

Filter by the parameters

Number plate

Surname

Groups

Direction

Refresh

Cancel

This report is a table, in which each row contains the recognized license plate, date and time of recognition, camera name, as well as other info from the database, bound with license plate (if this license plate exists in the database).

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

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

Open the archive button opens this license plate recognition moment on archive view page (may also switch to the archive view page by double clicking on the row).

By clicking Edit in the database / Add to database button, window for addition/editing of the person's data in database is opened. This allows to change the information about the person, as well as add new license plate samples.

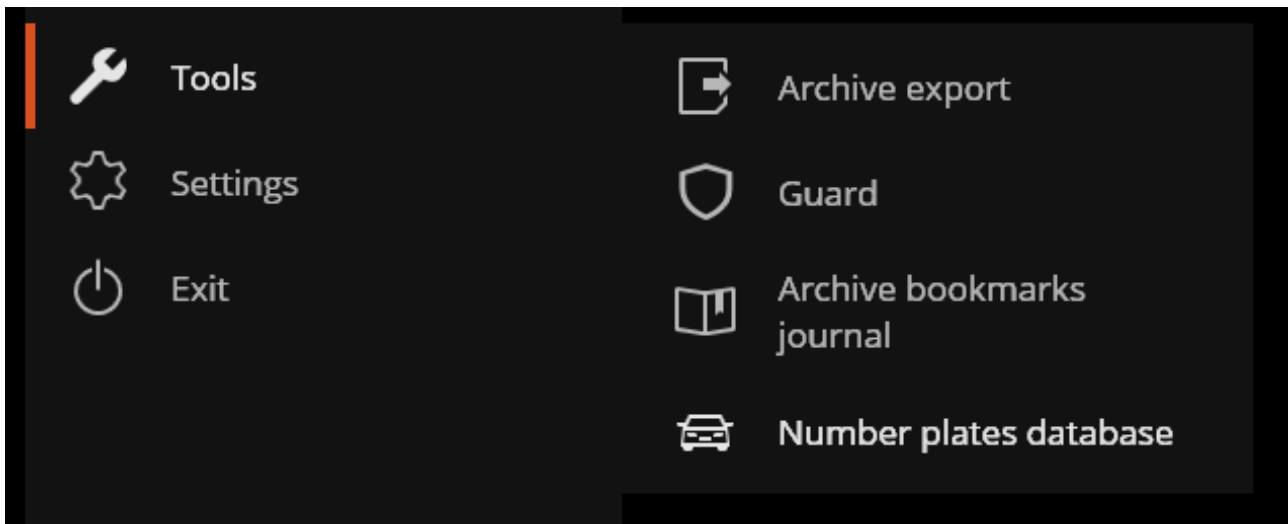
By clicking on the Export button, window, providing export of recognized license plates to a CSV file is opened.

By default, recognized license plates are displayed in descending time order. The list and order of the displayed recognized license plates in the report may be changed, using filter panel, located on the right. This list may be filtered by time, cameras, groups and other parameters. When filtering by time, you may also change the chronological order of the items.

License plates database

License plates database contains the following information: license number; group in which this entry is included; model and color of the vehicle; owner's name; additional information.

To open the license plates database, expand the [Control panel, select Tools in the Main menu, and then — the appropriate item in the submenu.](#)



Number plates database						
Add a number plate	Edit the number plate	Delete the number plate	Groups	Database import	Database export	Search
Number plat	Groups	Model	Colour	Full name	Additional information	
P3020O59				Smith John		
O466TE59				Viperson William		
O1050O59				Gonzales Felix		
O1050O159				Suoannenn Yoakhim		
B336YO91				Zweistein Albert		
P3020O138				Bounjolley Melissa		
P3020O177				Cronberg Sabrina		
P3020O197	<input type="text"/>			Michael Lebraen		

The following buttons are located at the top of the page:

Search button opens the license plate search form.

Delete the number plate button deletes the selected entry from the database.

Add / Edit the number plate button opens the form for addition/editing of the entry.

Record editing

Number plate:	<input type="text" value="p3020059"/>
Groups:	<input type="text" value="Allowed,Eocortex"/>
Surname:	<input type="text" value="Smith"/>
Name:	<input type="text" value="John"/>
Patronymic name:	<input type="text"/>
Model:	<input type="text"/>
Colour:	<input type="text"/>
Additional information:	<input type="text"/>

OK

Cancel

Groups:	<input type="text" value="Allowed,Eocortex"/>
Surname:	<input checked="" type="checkbox"/> Allowed
Name:	<input type="checkbox"/> Intercept
	<input checked="" type="checkbox"/> Eocortex

To specify the groups, to which the license plate belongs, open the Groups drop-down list and check the corresponding groups.

Database export button is used to save a CSV-file, containing the following data structure:

```
A1234BC;;Surname1;Name1;Patname1;;;AddInfo1;Model1;Color1;Group1,Group2;  
5678DEF;;Surname2;Name2;Patname2;;;AddInfo2;Model2;Color2;Group3,Group4;
```

Database import button is used to load the data from a CSV-file, having above-mentioned structure.

Groups button opens the form for groups editing.


←


Groups editing


—




□

×


Add a group


Edit the group


Delete the group

Name	Colour	Open the barrier	Interception of number plates
Allowed			
Intercept			✓
Eocortex		✓	


Buttons for the addition, editing and deleting of the groups are located at the top of this form.
Each group should have a unique name.

Group editing

Name:

Eocortex

Colour:



Car interception:

☐


Open the barrier:

☒

OK











Cancel

Colour:



Interception:

Theme colour



You may also assign a color to the group: in this case, license plate of this group shall be marked with this color in the report and list of recognized license plates.

Car interception and Open the barrier options may be used to configure the automatic actions.

Loud sound detection

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



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

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 recorded in the [Events log](#).

People counting module

The People counting module has the following features:

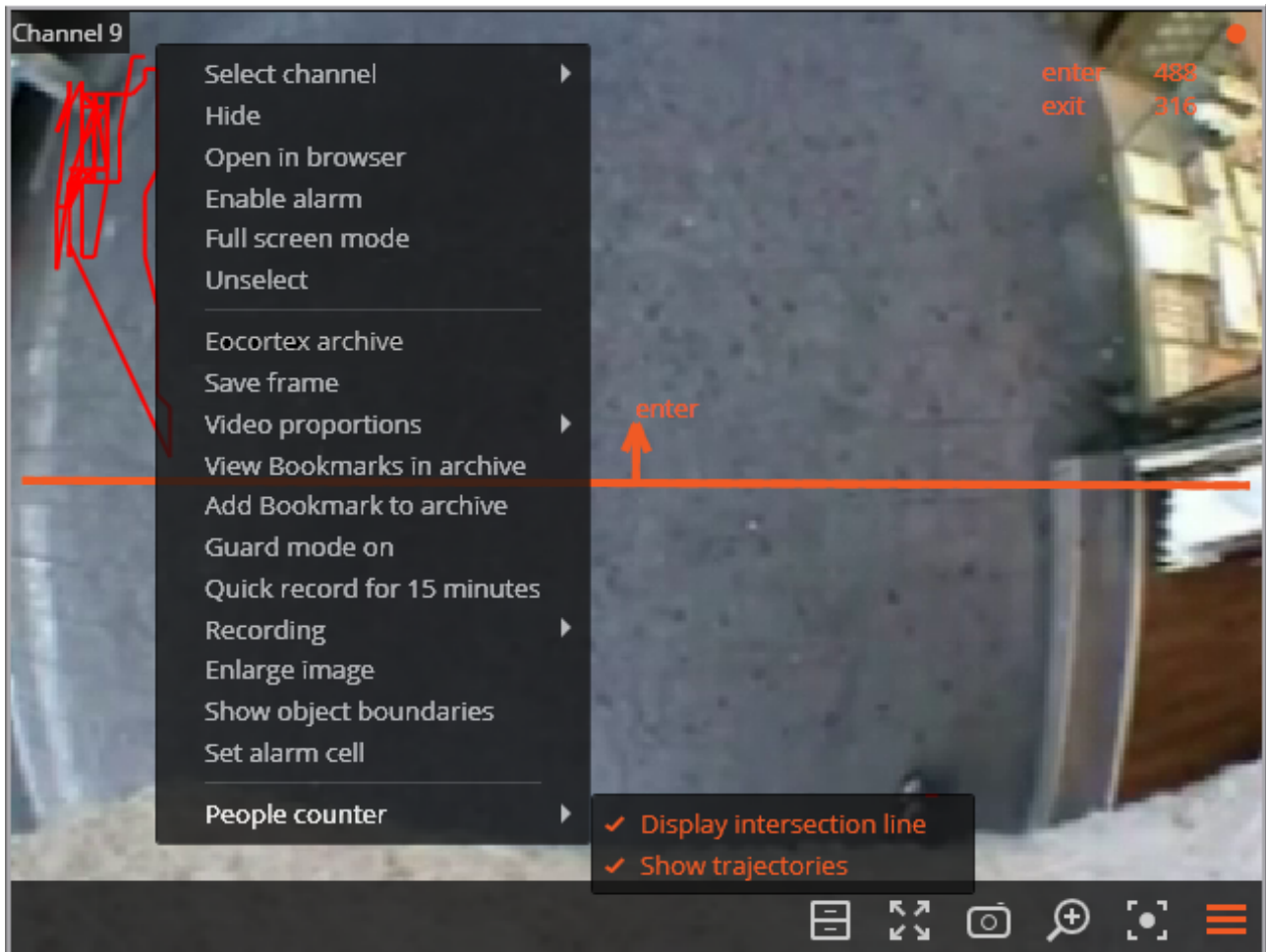
- Counting the number of entering and exiting visitors in real time — either through one or several (if multiple cameras are used) entrances/exits.
- Creating reports on entered, left and present visitors — over various periods of time (from hours to years) for one or several cameras overseeing one area from different locations.
- Automatic and manual export of reports in CSV (supported, inter alia, by Microsoft Excel.)

- Counting of people in moving groups: i.e. few people moving as a group will be counted with a minimum error.

The People counting module uses two mutually exclusive calculation methods: The method of counting separately moving people and the method of counting people moving in groups. The exact method to be used on a particular channel is determined when configuring this channel in Eocortex Configurator.



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



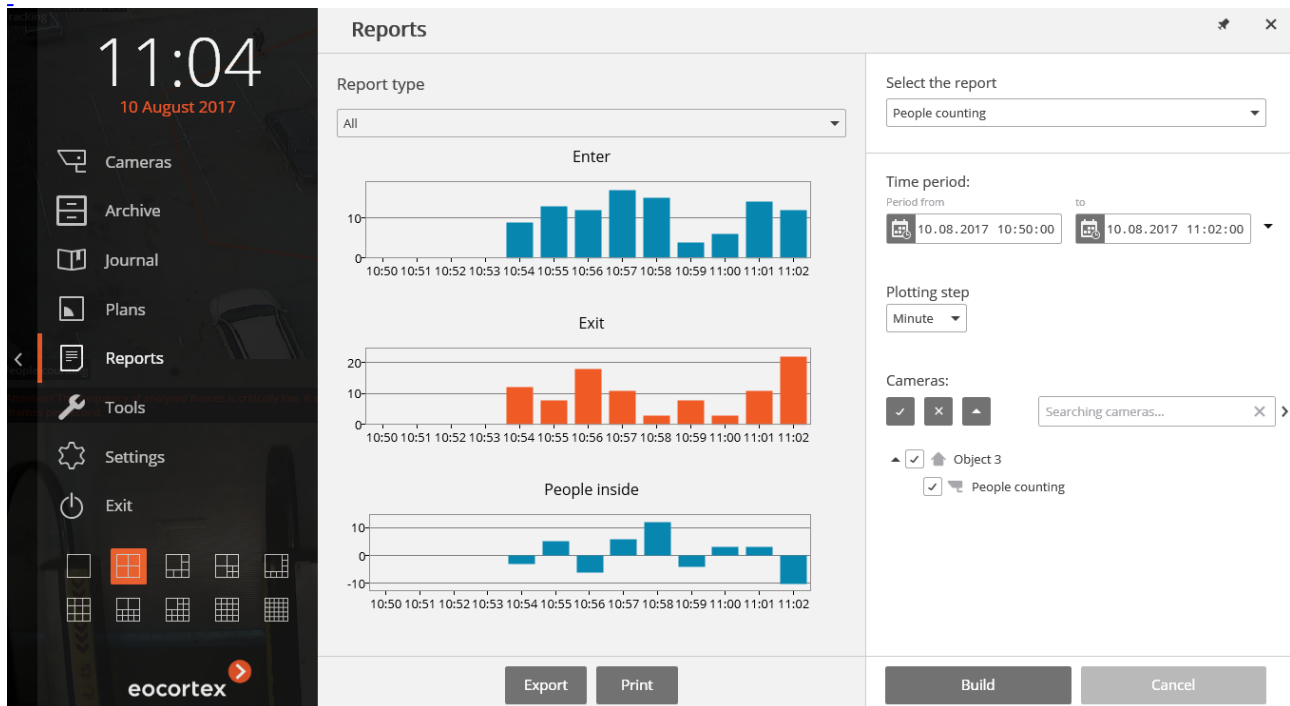
During the real-time viewing the number of people incoming and outcoming since the last launch of Eocortex Client will be displayed in the upper left corner of the camera cell.

Also, for the tracking convenience it is possible to:

- enable the display of intersection line;
- set the trajectory display (depending on the camera settings this feature may be unavailable).

To do this select the relevant items in People counting section of the cell context menu.

To generate the reports open [Control panel and select Reports in the Main menu.](#)



In the Select report field, set the People counting option.

Set the Time period for which the report will be generated.

Set the Plotting step selecting one of the following values: Minute, Hour, Day, Week, Month.

Select the Cameras by which the report will be generated. When selecting several cameras the report will reflect the total value by all selected cells.

To build 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 report; if necessary - change the File name and select the File type (CSV, Excel or JPEG); press Save.

Click Print to print the report; select the printer in the appeared window; if necessary, adjust the print settings; press Print.

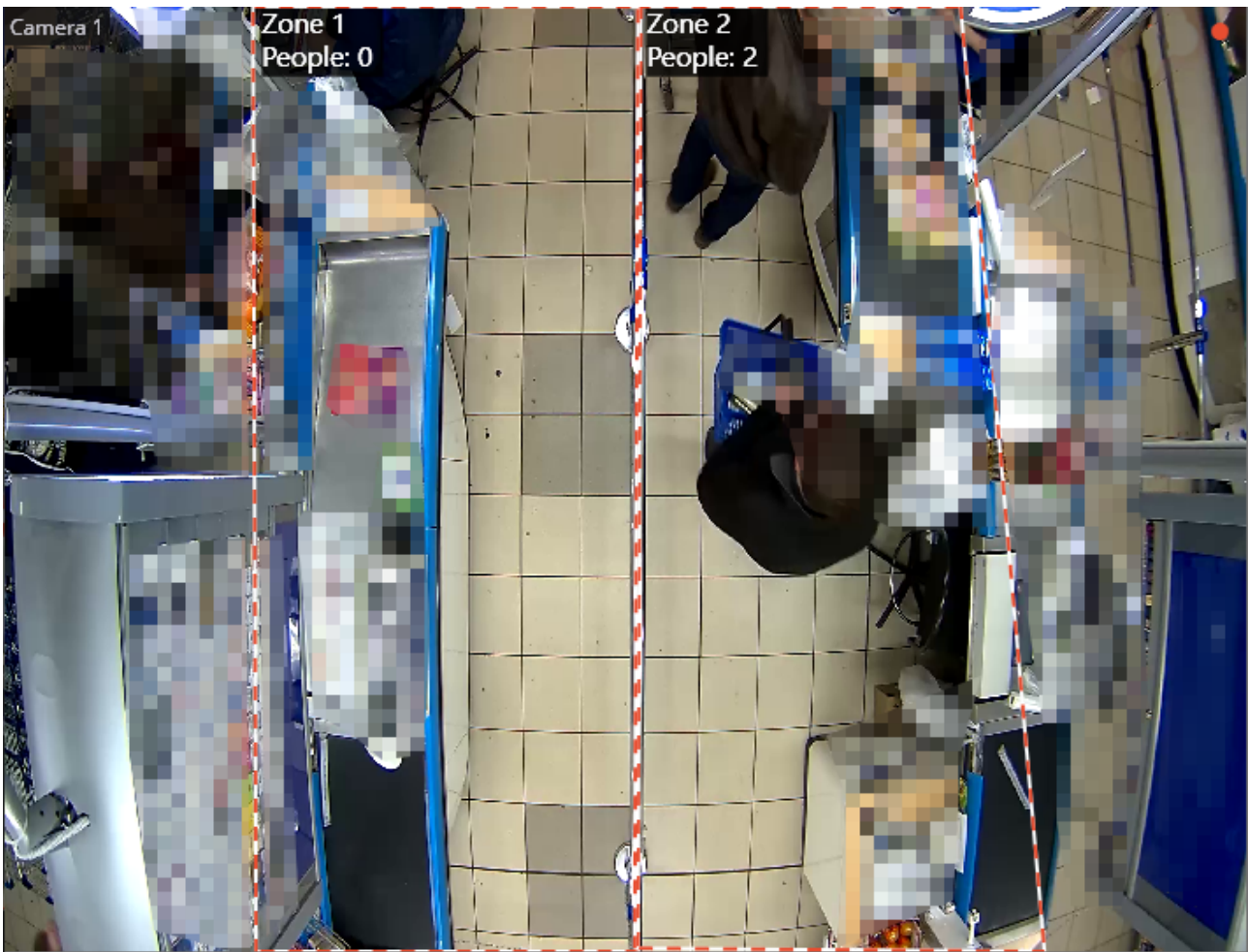
People counting in queue module

The module is designed to count people in queues.

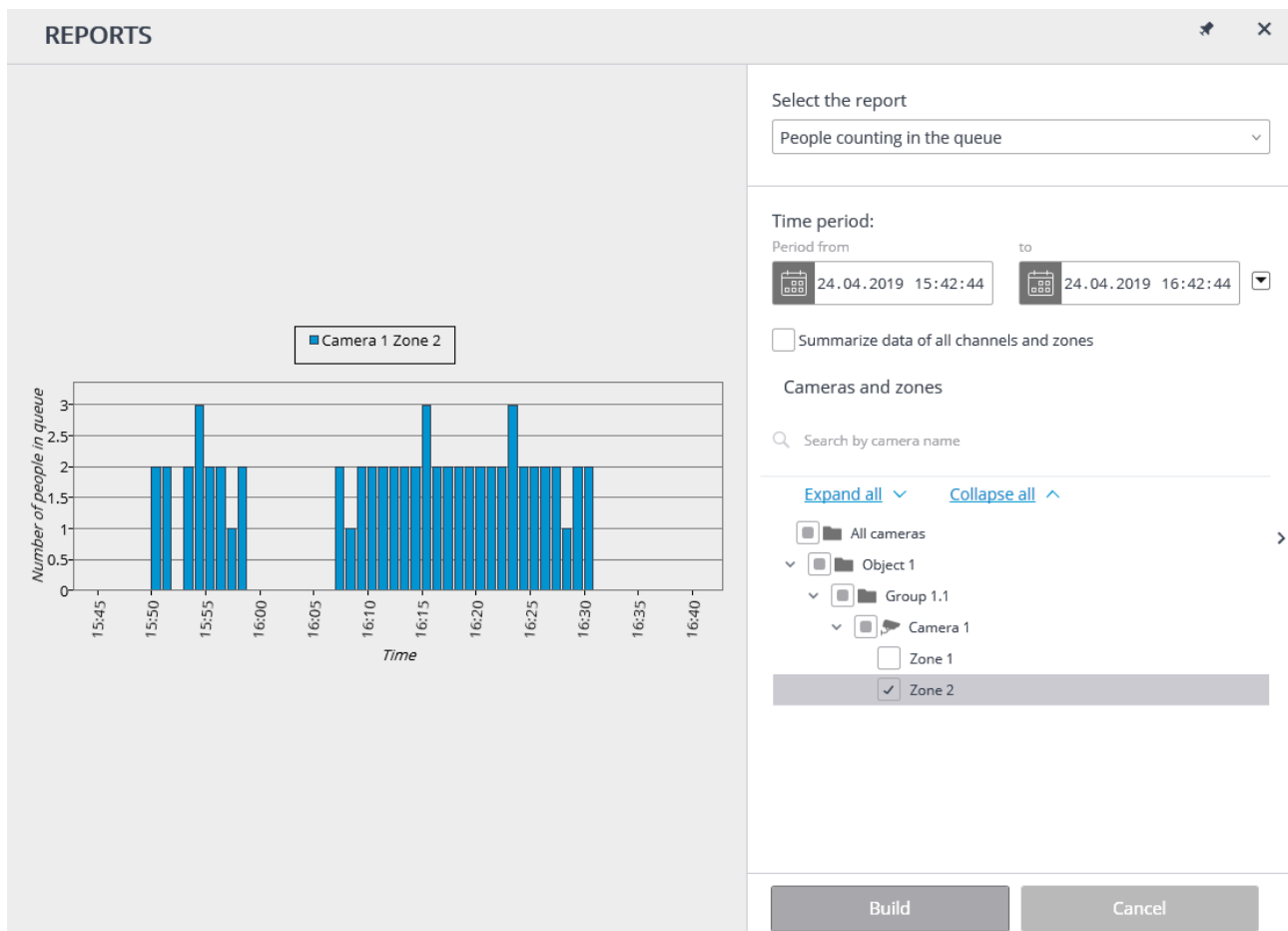


This module will only work on the cameras on which it has been enabled by the video surveillance system administrator.

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 in 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 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, Month.

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 monitoring module

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



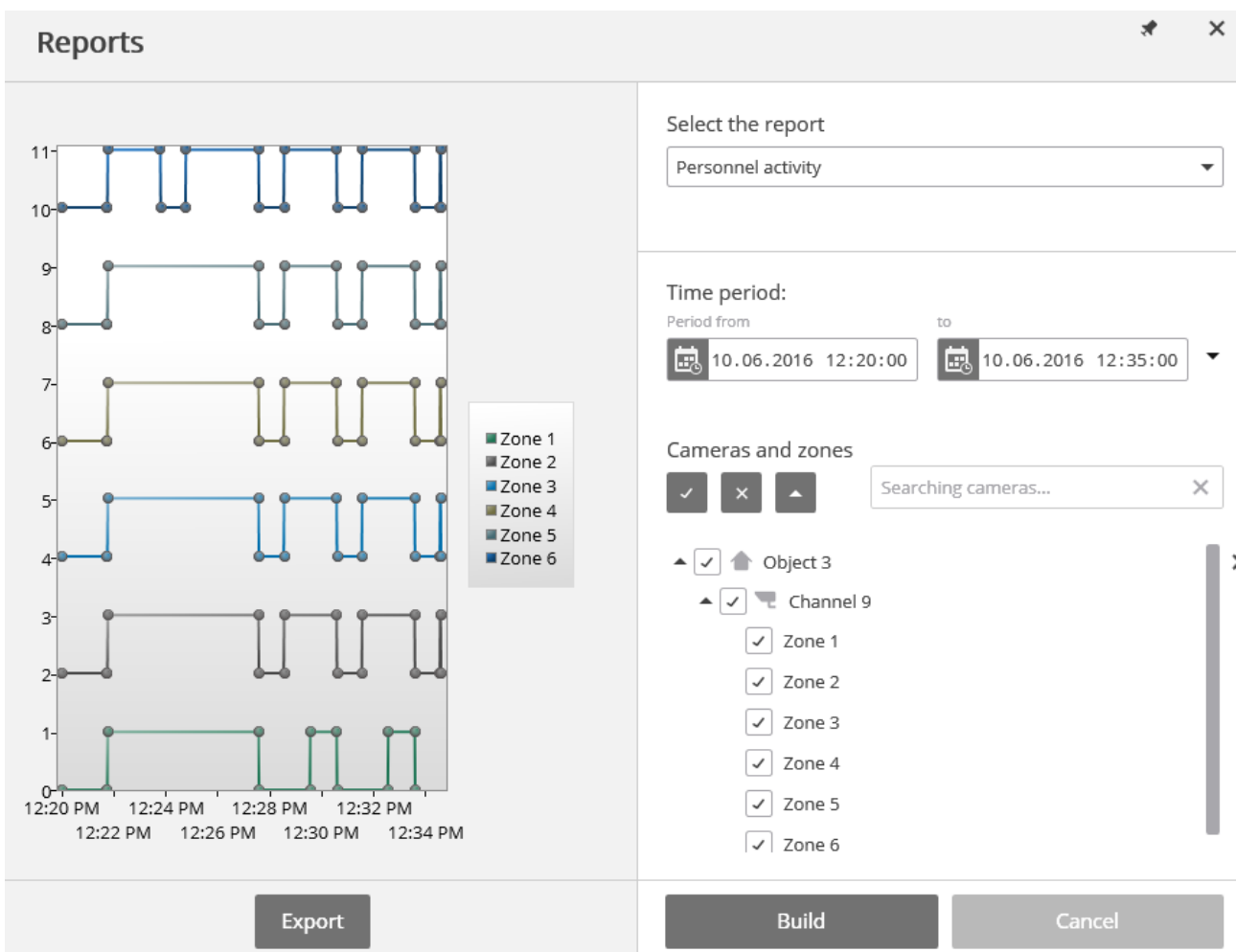
This module will only work on the cameras on which it has been enabled by the video surveillance system administrator.

Select Show activity areas 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 recorded 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 activity 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, Month.

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).

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 (CSV, Excel or JPEG); press Save.

Sabotage detection module activates:

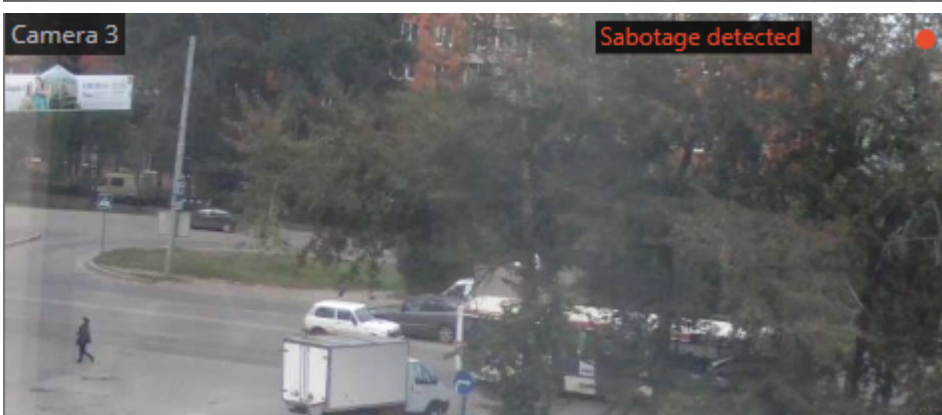
- camera defocusing;
- camera turnaway;
- camera illumination;
- camera overlap.



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

Upon occurrence of one of the situations the alarm message Sabotage detected will be displayed in the camera cell. Below are the sabotage examples.

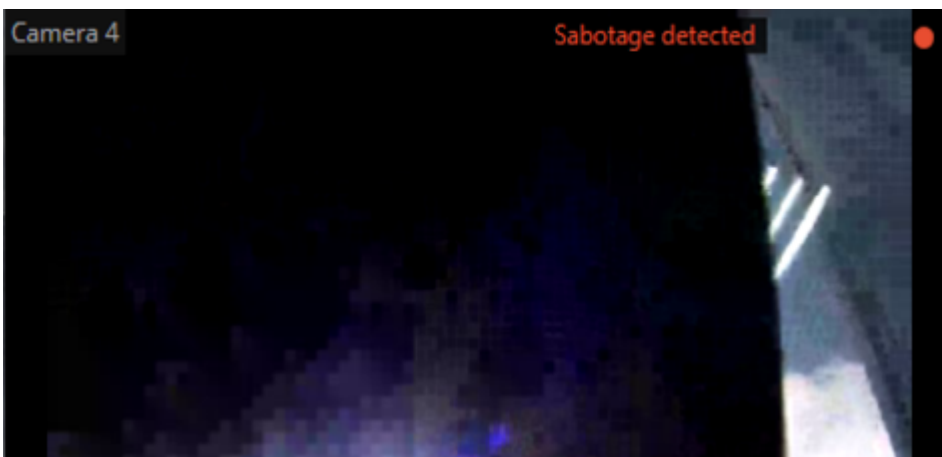
Camera reverse:



Defocusing:



Overlap and flash:



[log](#).

Shelf Fullness Check

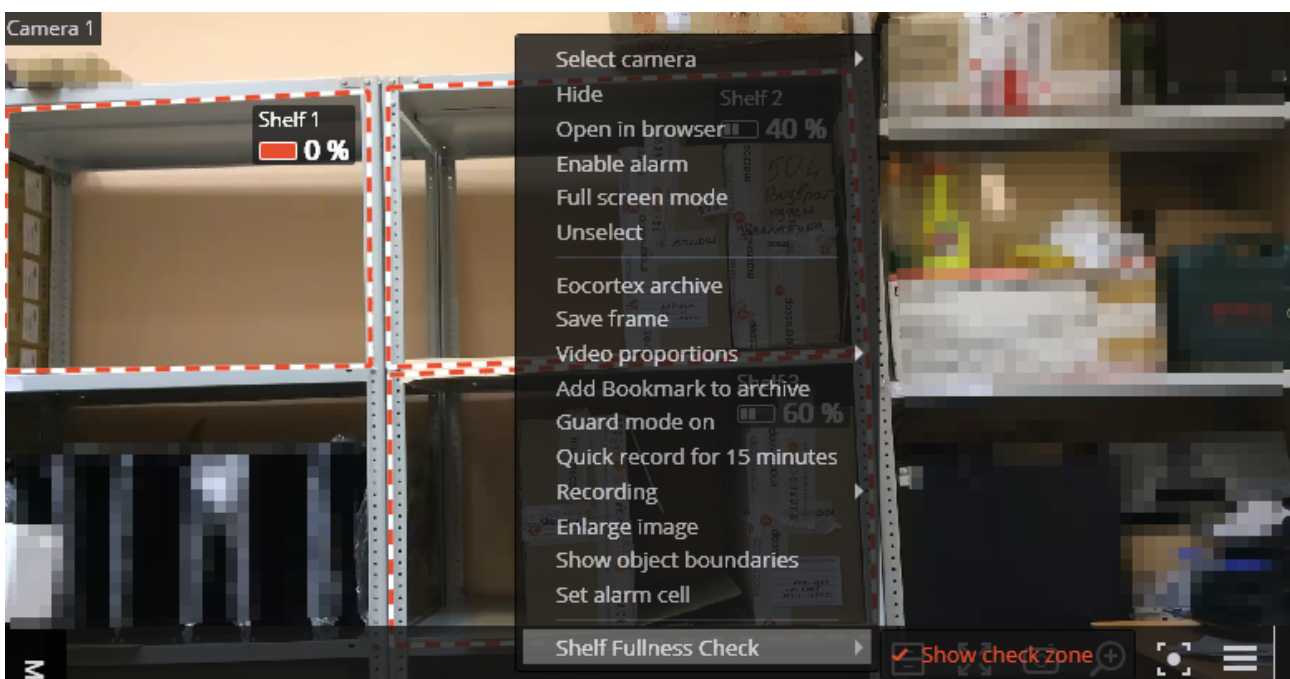
The Shelf Fullness Check module is designed for monitoring the fullness of shelves in a store in order to fill them with merchandize in time.



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

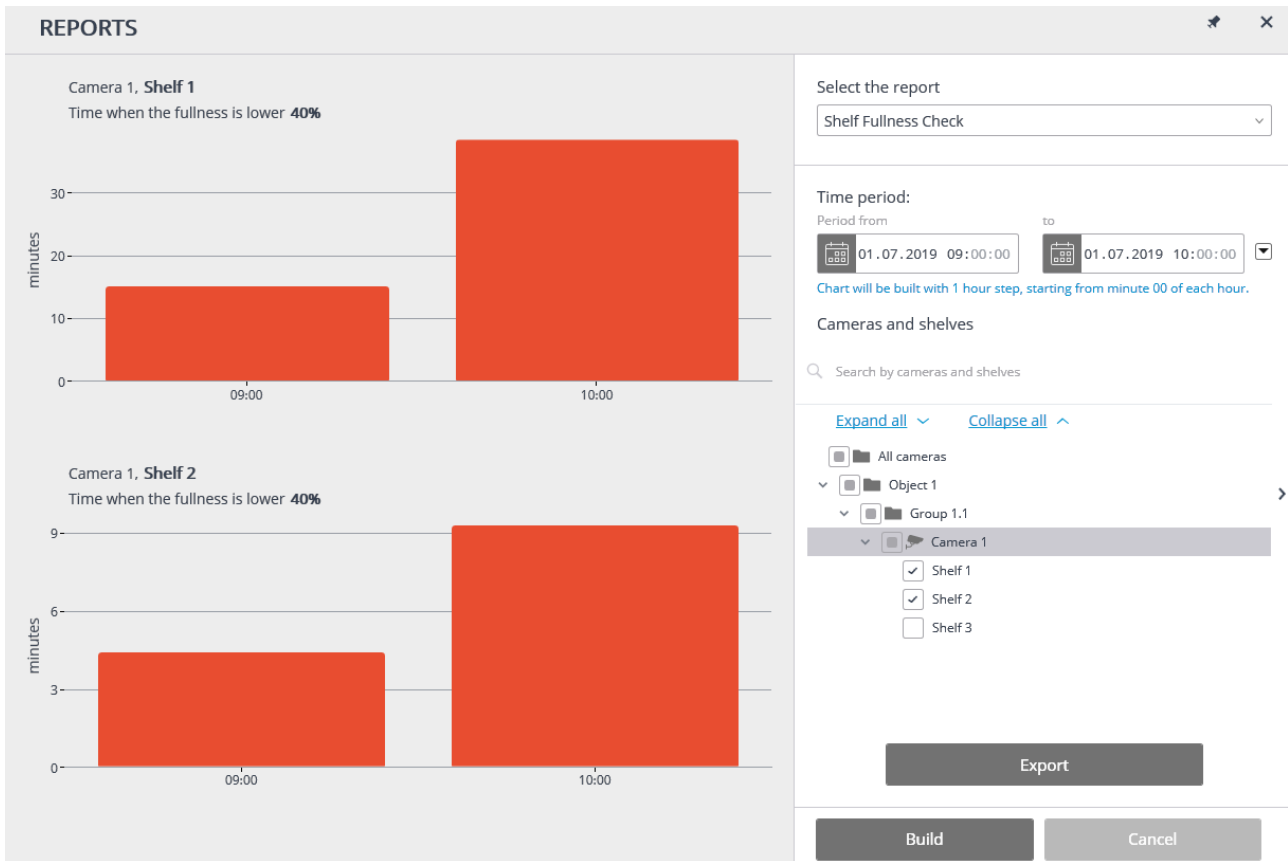


In order to display outlines, names and current fullness indicators, it is required to select Show Check Zone subitem in the Shelf Fullness Check item of the cell's context menu.



All the module events are recorded in the [Events log](#).

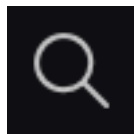
To create a report, it is required to select the Reports item in the main menu, then, in the upper right corner of the opened page, select the Shelf Fullness Check report, set the time interval, select the cameras on which the report will be based, and press the Build button.



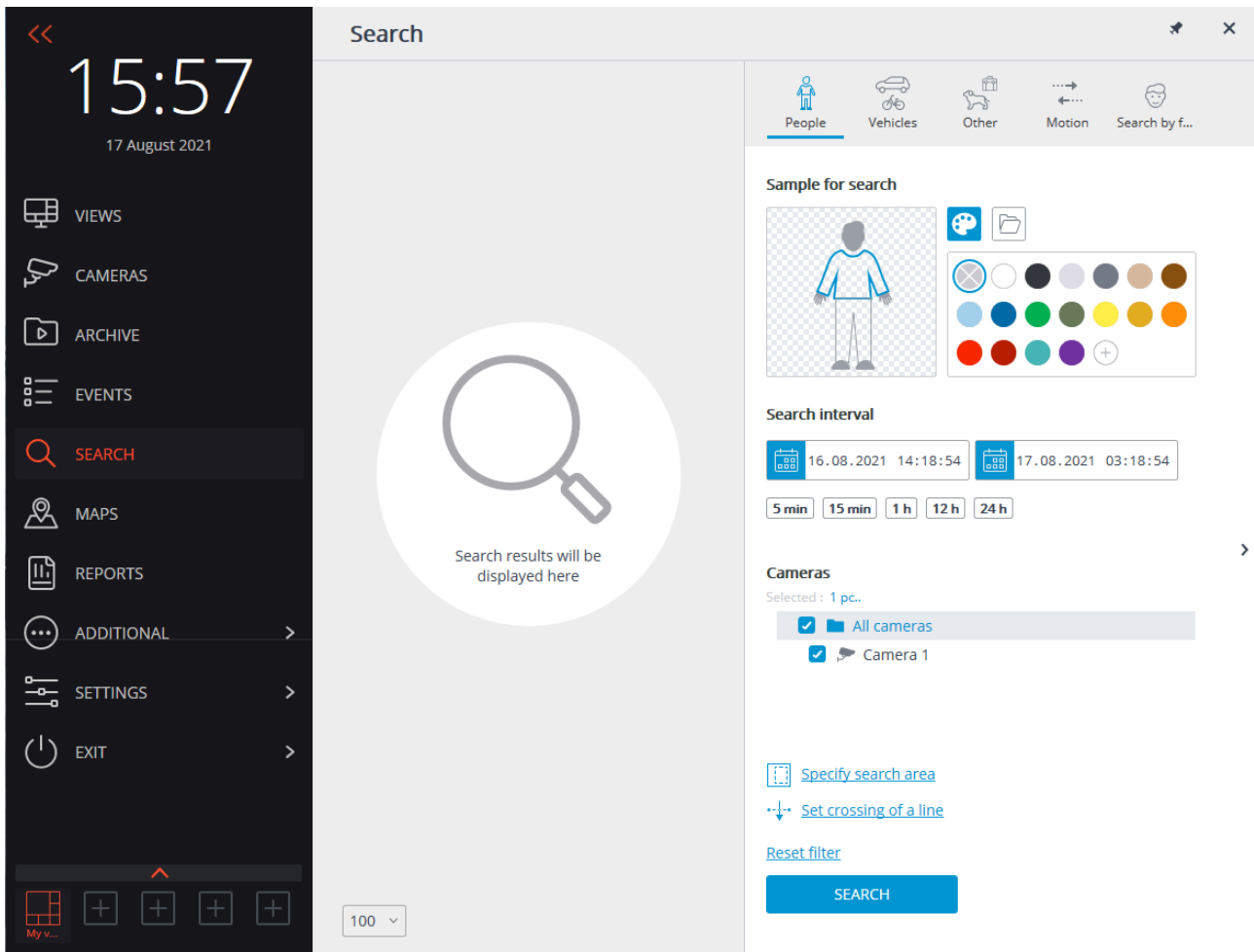
In order to save the report on the drive, press the Export button; select a location where the report will be stored in the opened window; change File name (if required), then press Save.


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.

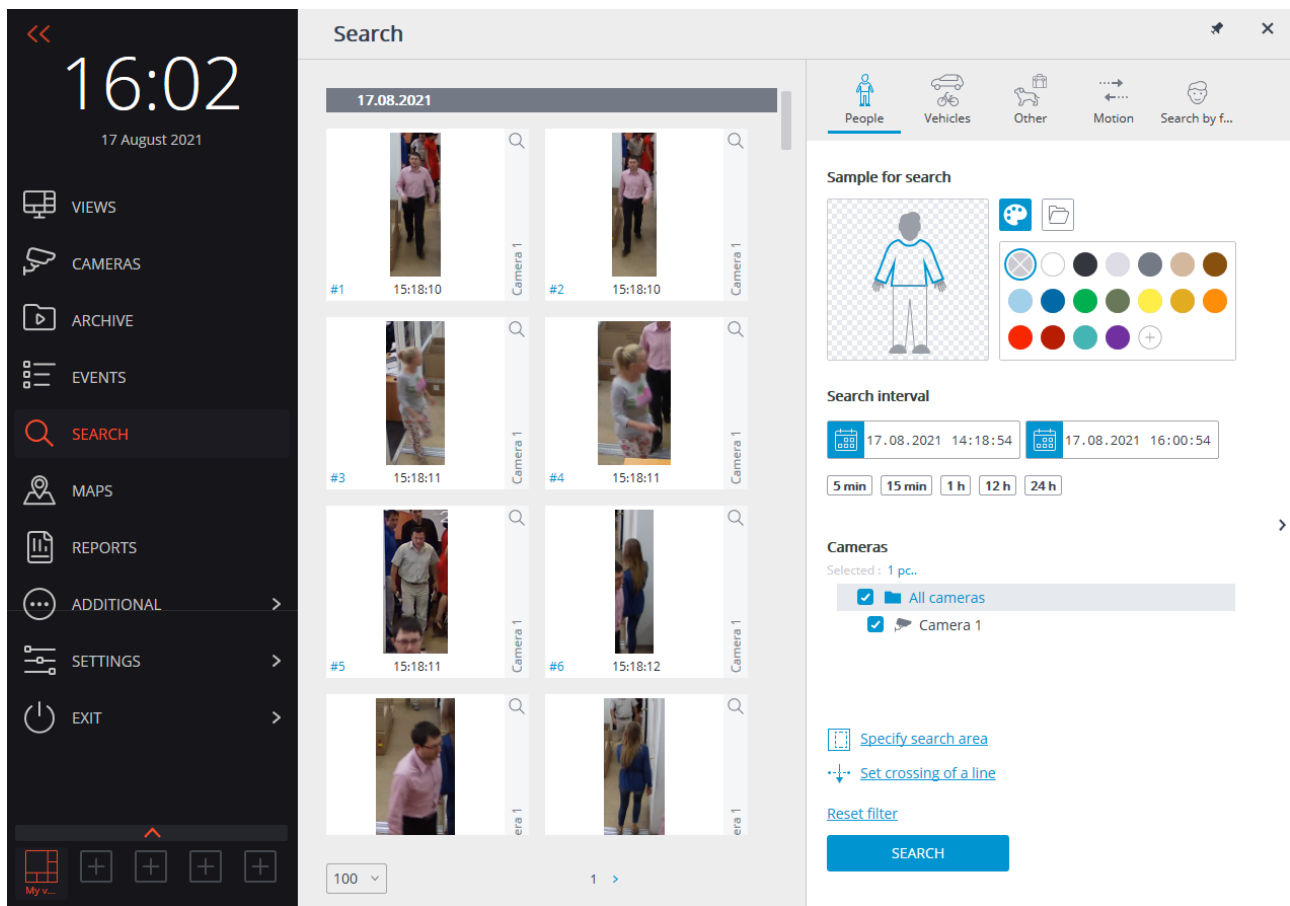


-  The **Search** menu item is displayed only if the **Search for objects** or **Face detection** module is enabled on at least one of the cameras in the system.

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.

-  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 thru 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.

Cameras 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 is 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 is 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.





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 parameter **Set crossing of a line** is available only for the cameras with the **Tracking module** enabled.

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 .

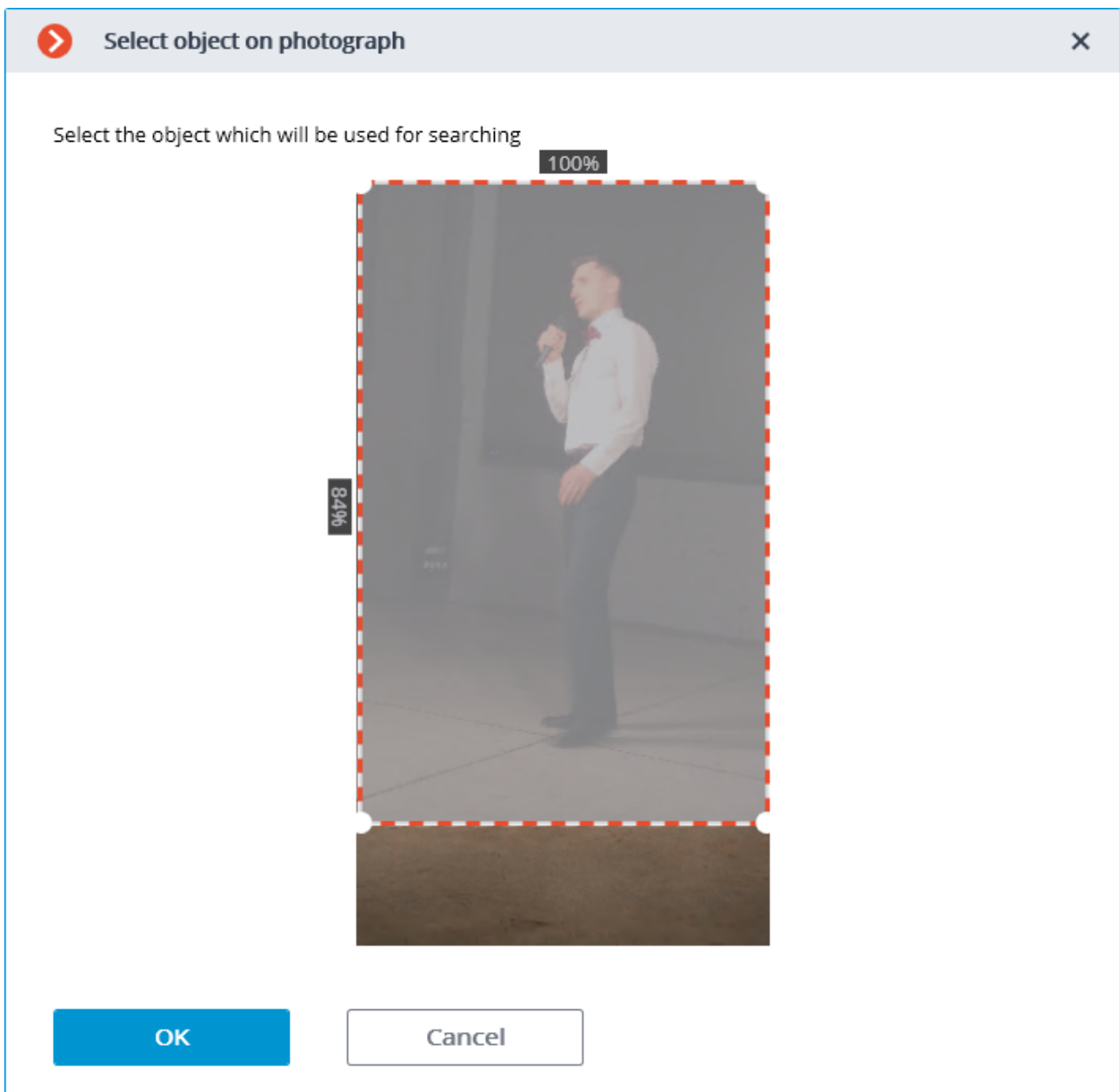
To clear the selected color, it is required to select an empty color  in the palette.


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

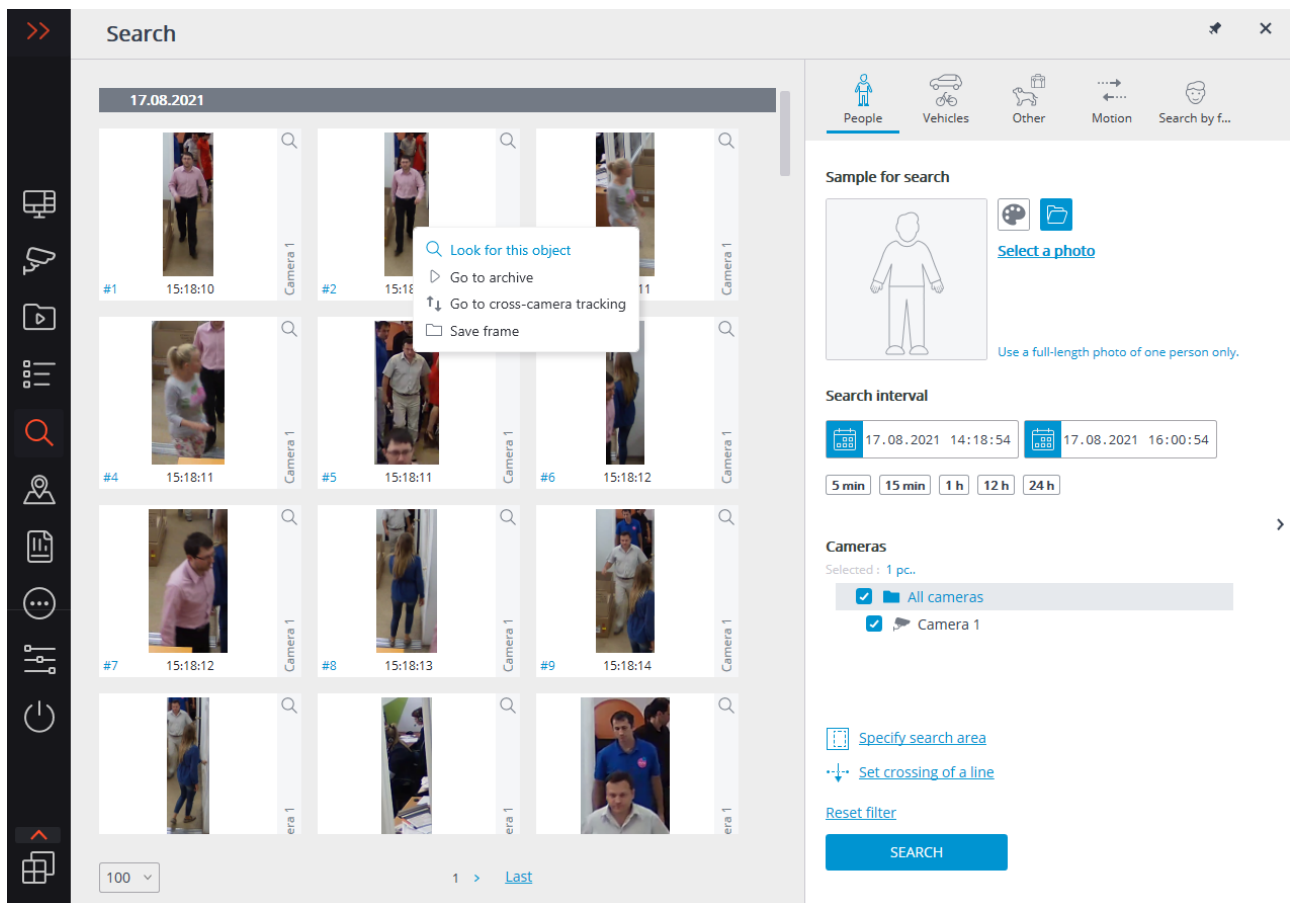
Photo samples

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.

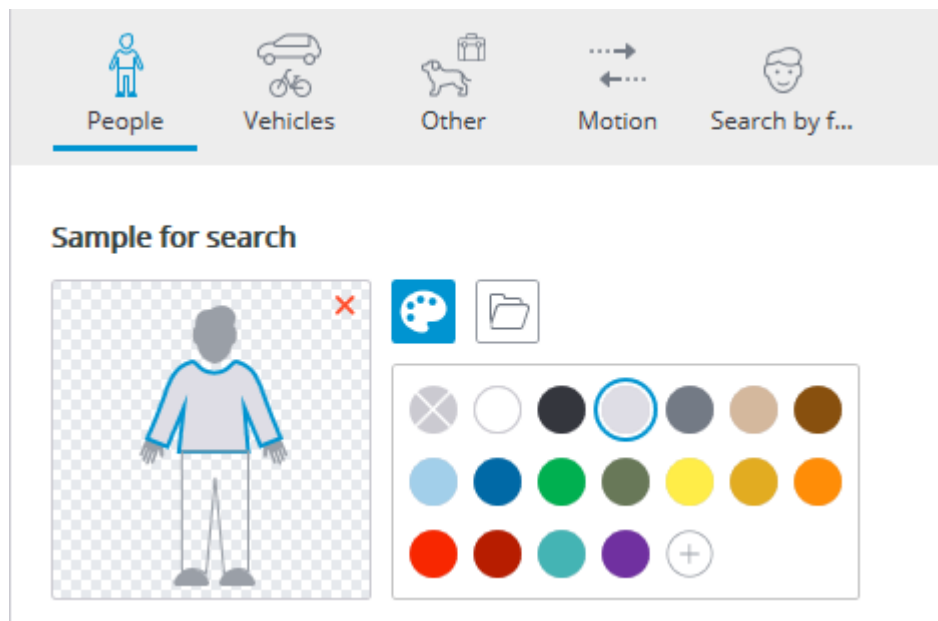
People

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

-  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.
-  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.







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.

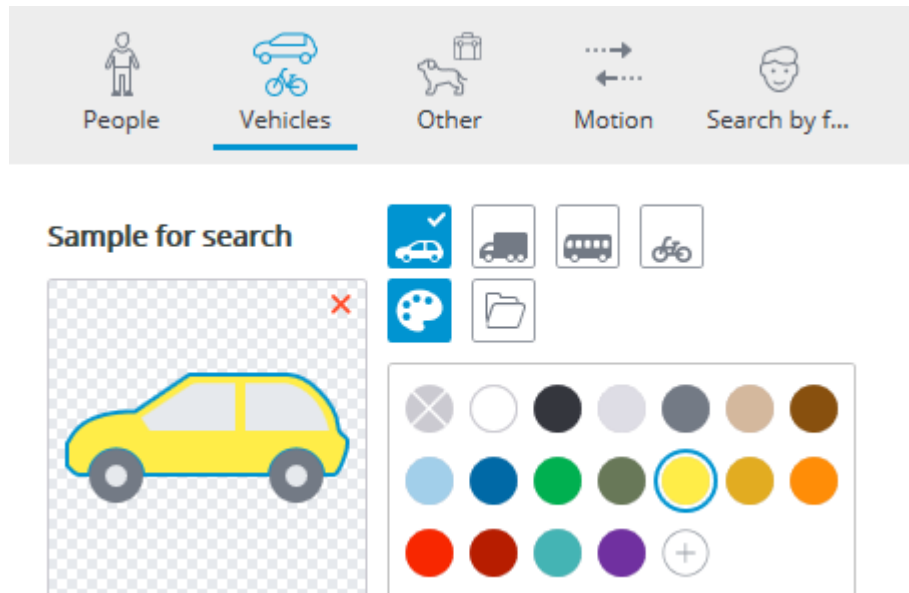


This tab is only available for the cameras on which the **Search for objects** video analysis module has been enabled, properly configured and is functioning properly.

-  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).

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



Types of objects

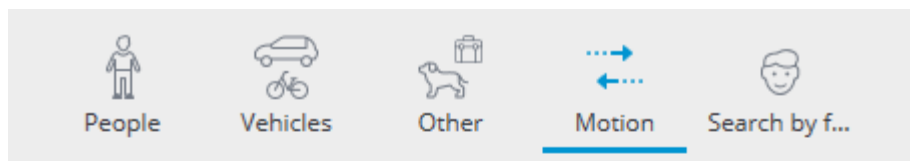
- ☐ Animals
- ☐ Bags
- ☐ Hazardous items ⓘ

Select at least 1 view

Motion

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

- ⓘ 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.
- ⓘ 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

17.08.2021 15:50:46

17.08.2021 16:50:46

5 min

15 min

1 h

12 h

24 h



Cameras

Selected : 2 pc..

- ☒ All cameras
- ☒ Camera 1
- ☒ Camera 2


Search by face

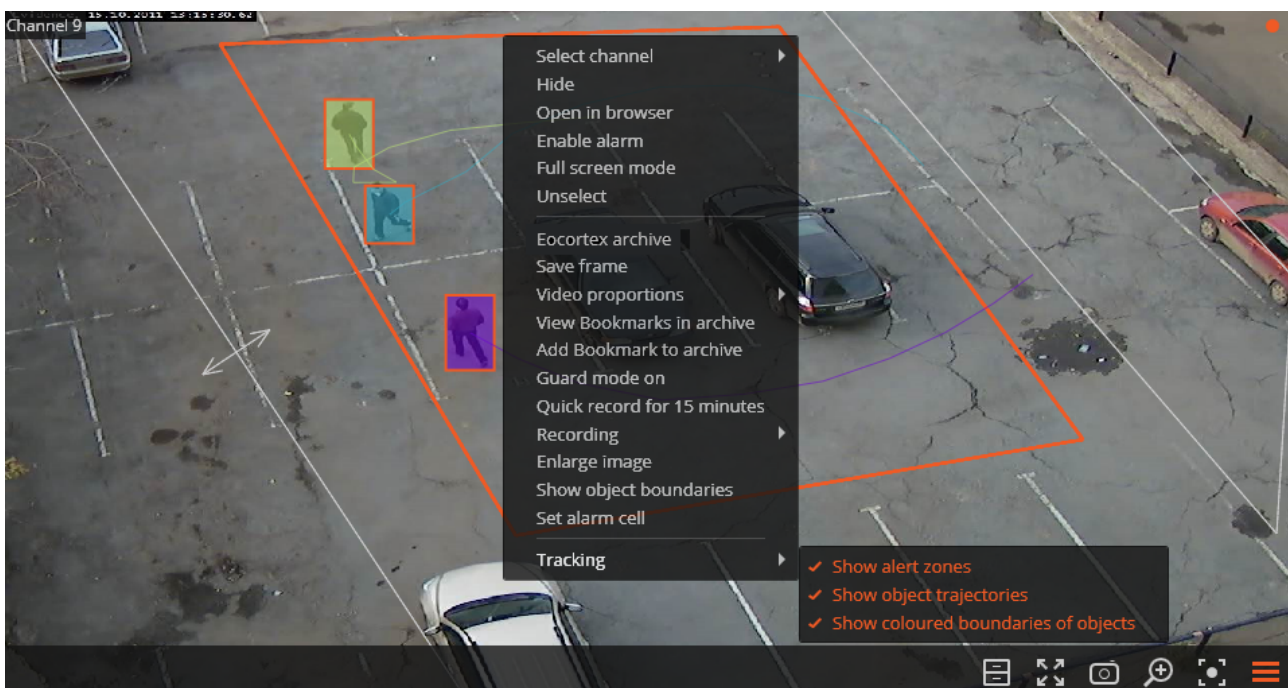
The tab **Search by face** is used for searching for faces.

-  This tab is available only for cameras on which the **Face detection** video analysis module has been enabled, configured and is properly functioning.
-  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, as well as monitor the presence of the objects in the zones of arbitrarily set shapes. 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.

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



For tracking convenience it is also possible to:

- display the zones and lines;
- track the objects' trajectories;
- display the colored frames of the objects.

To do this select the relevant items in Tracking section of the cell context menu.

All the module events are recorded in the [Events log](#).

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.



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

[Face Detection report](#)

[Unique Visitor Counting report](#)

[Faces database](#)

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**.

Face	Sample	Date	Time	Camera	Gender	Age	Emotions	Accuracy
	Not in database Add record	03.03.2021	16:27:00	Camera 1	Male	21	Neutral 😊 62 %	
	Not in database Add record	03.03.2021	16:26:57	Camera 1	Male	36	Neutral 😊 52 %	
	Not in database Add record	03.03.2021	16:26:55	Camera 1	Female	27	Neutral 😊 80 %	
	Not in database Add record	03.03.2021	16:26:55	Camera 1	Female	26	Negative 😡 61 %	
	Not in database Add record	03.03.2021	16:26:46	Camera 1	Female	29	Neutral 😊 82 %	
	Not in database Add record	03.03.2021	16:26:45	Camera 1	Female	34	Neutral 😊 66 %	
	Not in database Add record	03.03.2021	16:26:45	Camera 1	Male	25	Neutral 😊 76 %	
	Not in database Add record	03.03.2021	16:26:44	Camera 1	Male	47	Neutral 😊 71 %	

Select the report

Face Detection

☒ Filter by time

Period from 02.03.2021 16:27:03 to 03.03.2021 16:27:02

☐ In chronological order

Search by camera name

Expand all Collapse all

☒ All cameras

☒ Camera 1

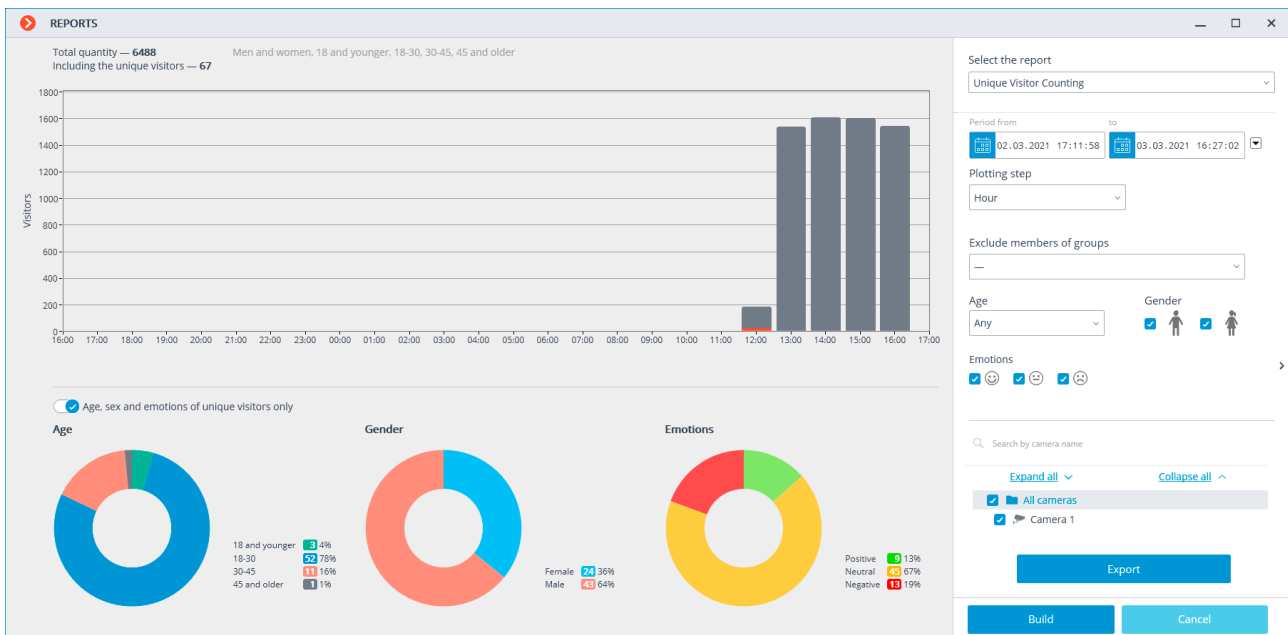
Export

Refresh Cancel

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.



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.

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

You can use one or more of the following methods of PTZ camera management, depending on the camera model, including management the camera motion in different directions, zoom in/out, focus, service functions, as well as presetting the camera.

[PTZ Camera Control](#)

[Camera Preset](#)

[AreaZoom](#)

PTZ Camera Control



Click on the  icon, in the active cell or select **Camera Control Interface** in the context menu to enable the interactive camera management mode.




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

Use the management interface to manage the camera: virtual joystick and icons on the PTZ panel.



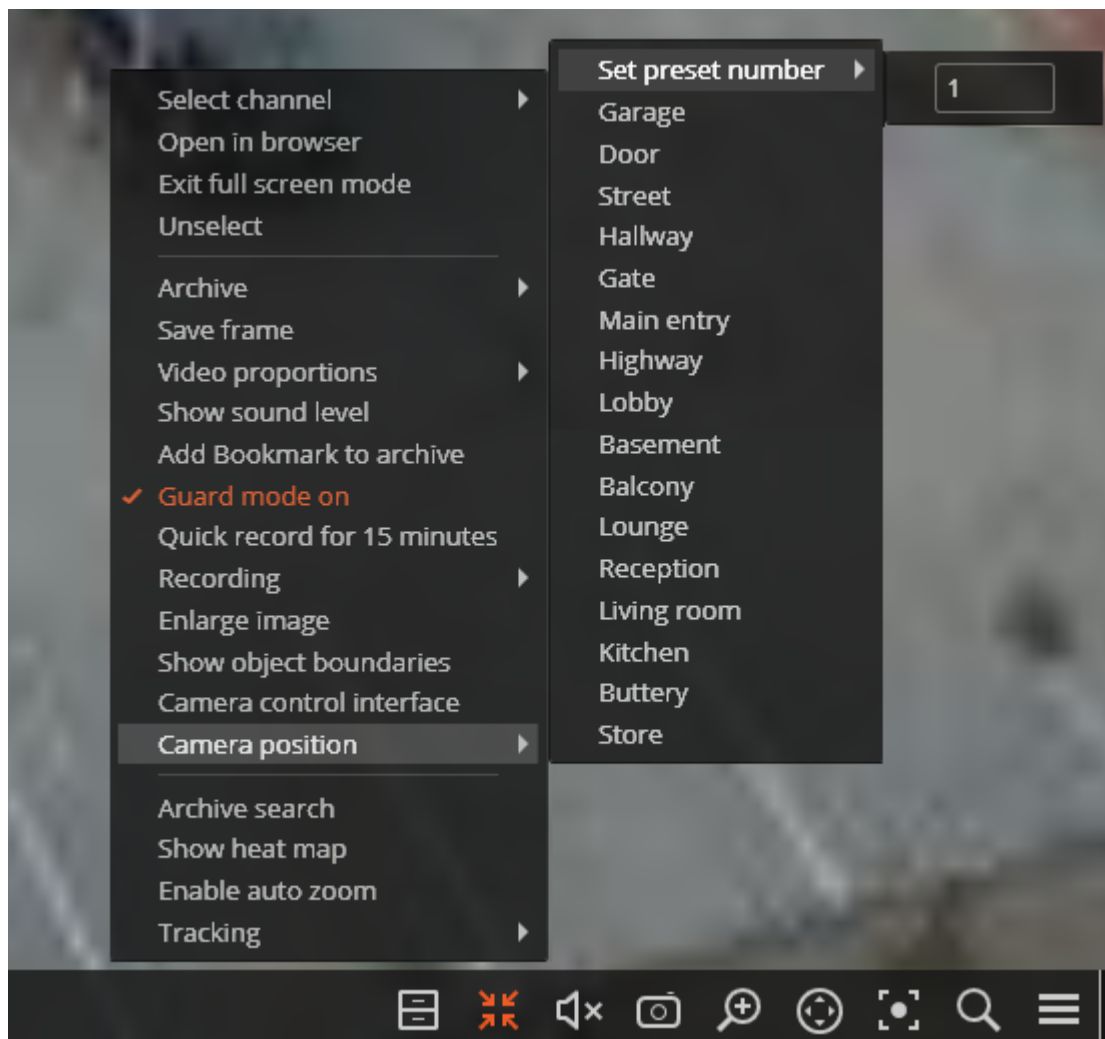
The controls may differ depending on the available camera features. The following elements of the PTZ camera management interface were implemented in Eocortex Ultra: virtual joystick, zoom in / out, focus control (+/-/AF), transition to the "home" position, infra-red light control, wiper control.



Re-click on the  icon in the active cell or select the **Camera Control Interface** in the active menu to hide the camera management interface.

Camera Preset

To set the camera to one of the presets, in the cell context menu select **Camera position**; further, in the submenu select one of the positions, or enter the preset number in **Set a preset number**.




- ① The presets are set on the camera itself by the system administrator.
- ① Some cameras allow you to set for presets not numbers but names (text values).

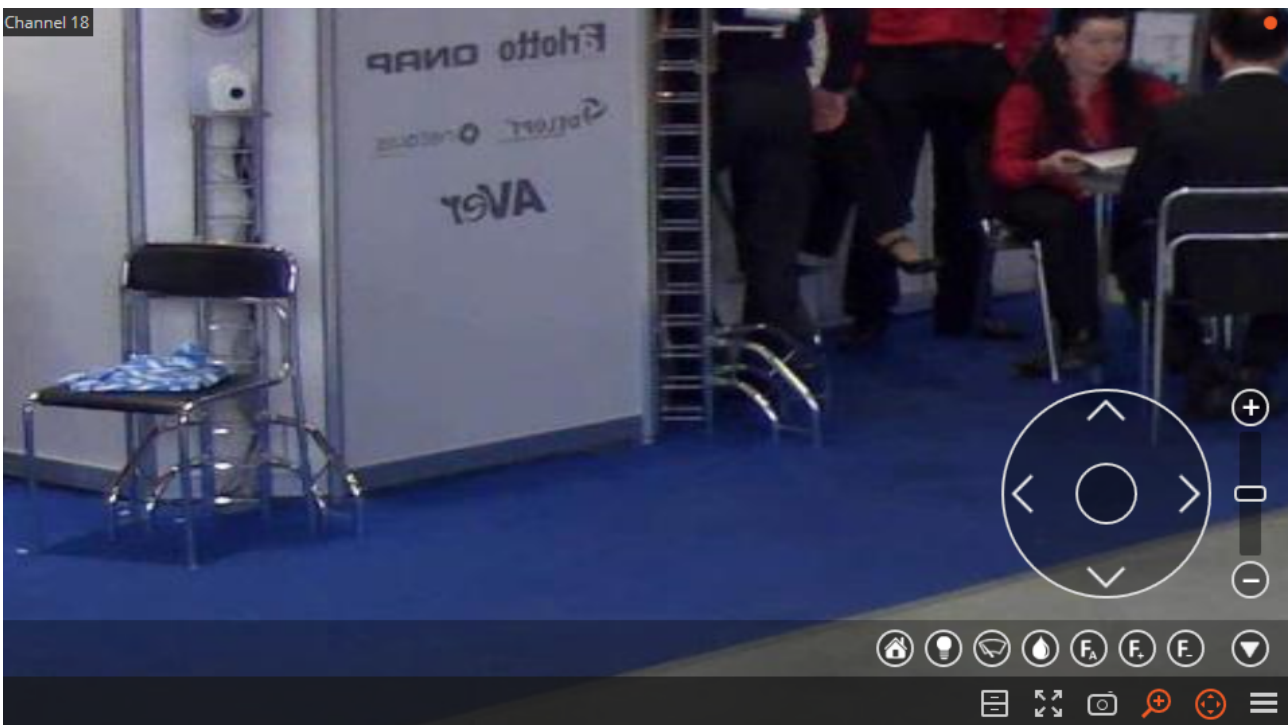
AreaZoom

AreaZoom AreaZoom allows to mark the frame part and zoom it using the PTZ-mechanism of the camera itself.

- ① This feature is not available for all camera models.



To use **AreaZoom** switch to the camera interactive management mode (click on the  icon in the active cell, or select the **Camera Control Interface** in the context menu). Then holding the left mouse button, select the area of the frame that you want to zoom- the camera will zoom the marked frame part and, if necessary, will rotate so that the center of the marked rectangle was located on the center of the frame.



Alarm

Alarm is the channel state to which it switches in cases for which the alarm generation was set by the system administrator.

Upon channel transition to the alarm mode:

- audible signal sounds (if configured by the administrator);
- if the camera is displayed a small alarm indicator blinks in the upper right corner of the cell;

- if the camera is not displayed a general (major) alarm indicator blinks in the bottom right corner of the cell;
- if the alarm monitor is used at the workspace, the camera is displayed on the alarm monitor.
- if the alarm cells are used on the workspace the camera is displayed in one of these cells.



The missed alarms can be viewed by clicking on the general alarm indicator in the lower right corner of the screen: this will open the [Events log](#).

[Auto generate alarm](#)

[User alarm](#)

[Guard mode](#)

[Alarm monitor](#)

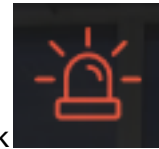
[Alarm cell](#)

[Displaying alarms on site plans](#)

Auto generate alarm

To generate an alarm automatically in response to the certain events, CCTV administrator should add **Alarm generation** action to the corresponding scenario (in **Eocortex Configurator**).

User alarm



To enable/disable the user alarm for multiple channels at once, click on the control panel to the right of the clock.



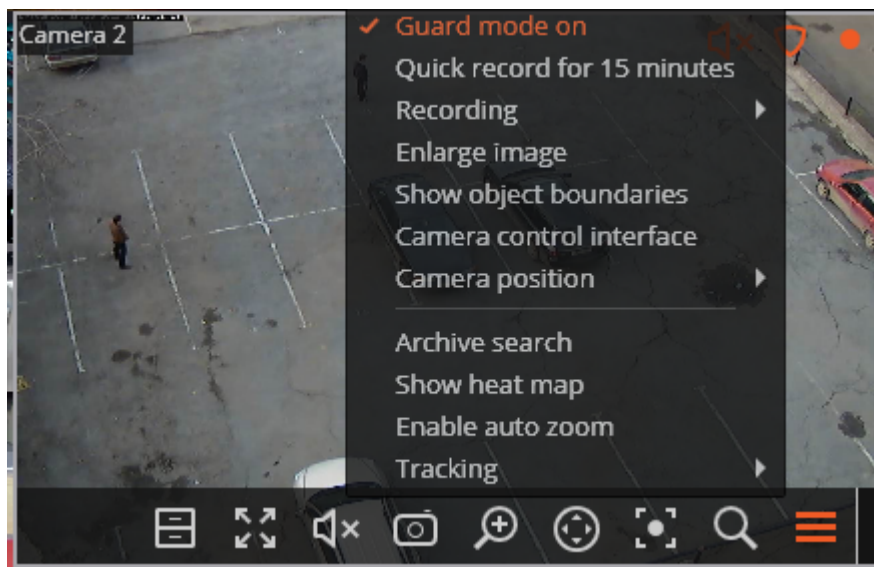
The button display of is enabled by the system administrator in the [current workspace settings](#).

Guard mode

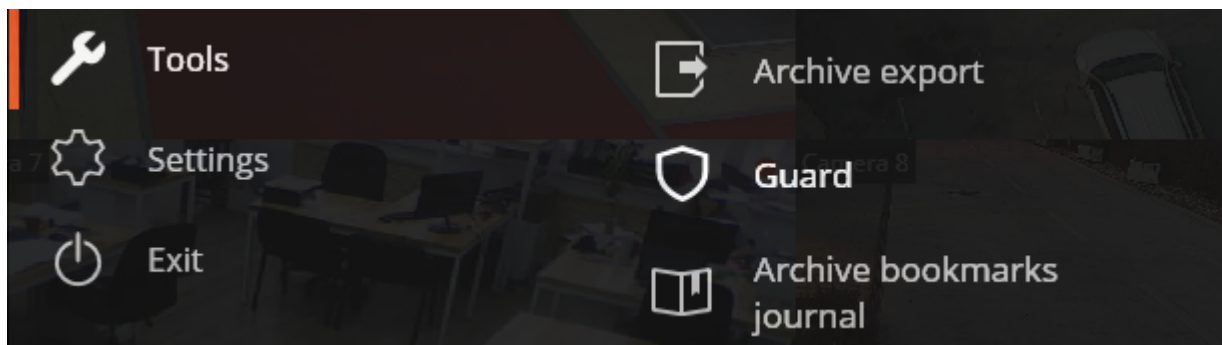
In the **Guard mode** the user is notified concerning the [Alarm](#) on camera channel.

When the camera is in the **Guard mode**, indicator  is displayed in the upper right corner of the cell. The following are the methods for enabling the **Guard mode** on the camera channel.

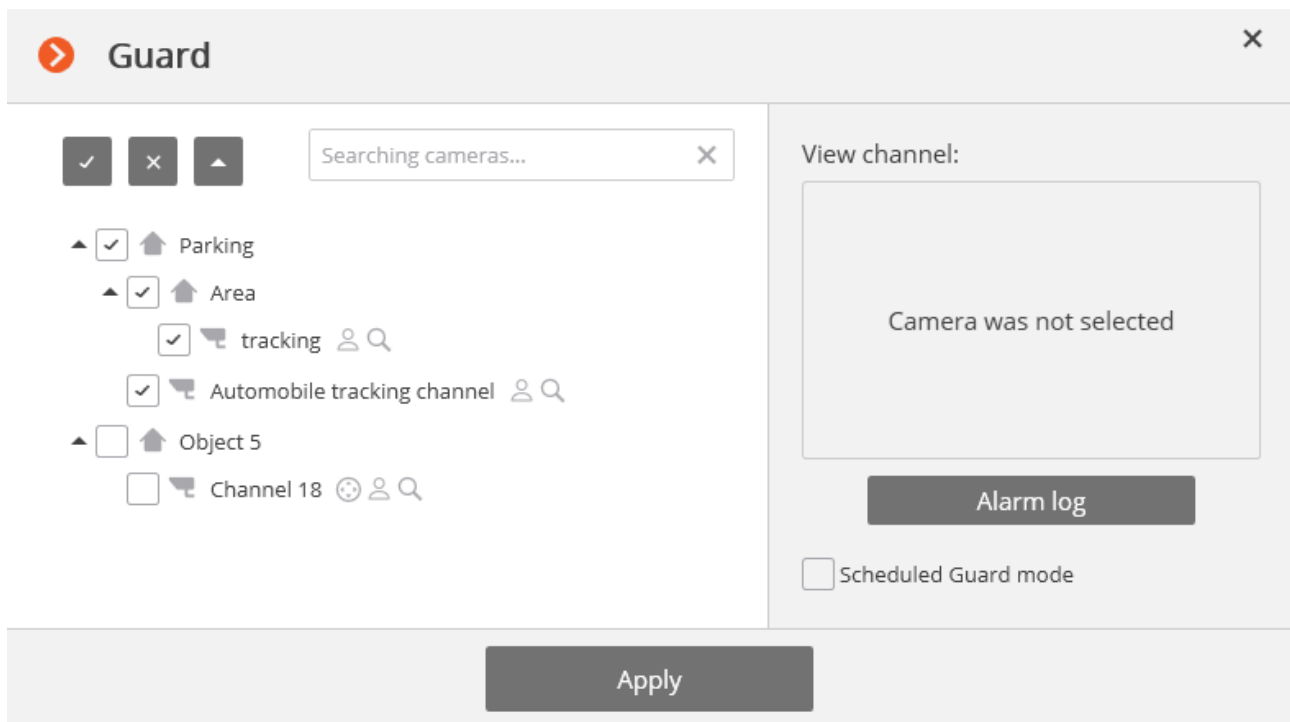
Method 1: Select **Enable guard mode** in the context menu.



Method 2: Open the **Control Panel** and select **Additional** in the **Main Menu**; then select **Guard mode** in the submenu.



In the appeared window check the cameras for which guard mode shall be enabled (uncheck the channels, for which guard mode shall be disabled), and then click **Apply**.



Alarm monitor

Alarm monitor is a monitor displaying the cameras in the **Alarm** mode.

Upon camera displaying on the alarm monitor the alarm must be accepted within 1 minute. To do this click in the camera cell in which the alarm occurred, otherwise the alarm will be considered as missed.



Alarm cell

Alarm cell is a cell on the “usual” video surveillance monitor, displaying the camera, where the **Alarm** occurred.

If the camera is displayed in the alarm mode the alarm must be accepted within 1 minute. To do this click in the camera cell in which the alarm occurred, otherwise the alarm will be considered as missed.

Displaying alarms on site plans

When **Enable display of alarms on plan** option is activated in the application settings on the Guard mode tab, the cameras on the plans will turn red in case of alarm.

Events log

The **Events log** is used to view system and user events.

To open the **Events log**, open the Control panel and select **Events** the Main menu.

The screenshot shows the 'Journal' window with a table of events on the left and filter panels on the right. The table has columns for Date, Time, Type, and Event description. The right panel includes tabs for Mode, Cameras, Types, Events (selected), and Initiators. Below the tabs are checkboxes for filtering events, and buttons for 'Apply filter' and 'Export'. A video preview window at the bottom right shows a camera feed from 'Channel 10' at the time of the selected event.

Date	Time	Type	Event description
09.06.2016	12:45:23	🔔	Channel 9. Line intersection: "Line intersection". Movin...
09.06.2016	12:45:22	i	Channel 10. Bookmark added into archive: exit Emily, infor...
09.06.2016	12:45:00	🔔	Channel 9. Line intersection: "Line intersection". Movin...
09.06.2016	12:44:50	🔔	Channel 9. Line intersection: "Line intersection". Movin...
09.06.2016	12:44:35	🔔	Channel 9. Line intersection: "Line intersection". Movin...
09.06.2016	12:44:32	i	Channel 11. Lengthy presence: "Alarm in the zone". Moving...
09.06.2016	12:44:31	🔔	Channel 11. Lengthy presence: "Alarm in the zone". Moving...
09.06.2016	12:44:24	🔔	Channel 11. Lengthy presence: "Alarm in the zone". Moving...
09.06.2016	12:44:17	🔔	Channel 11. Lengthy presence: "Alarm in the zone". Moving...
09.06.2016	12:43:38	🔔	Channel 11. Lengthy presence: "Alarm in the zone". Moving...
09.06.2016	12:43:09	🔔	Channel 11. Lengthy presence: "Alarm in the zone". Moving...
09.06.2016	12:43:03	🔔	Channel 9. Line intersection: "Line intersection". Movin...
09.06.2016	12:42:56	🔔	Channel 9. Line intersection: "Line intersection". Movin...
09.06.2016	12:42:15	🔔	Channel 11. Lengthy presence: "Alarm in the zone". Moving...

The window displays the **Events log** (at the left), and **Filter panels** (at the right).

The **Filters panel** consists of the filters tabs, **Apply filter** and **Export** buttons, and the preview window.

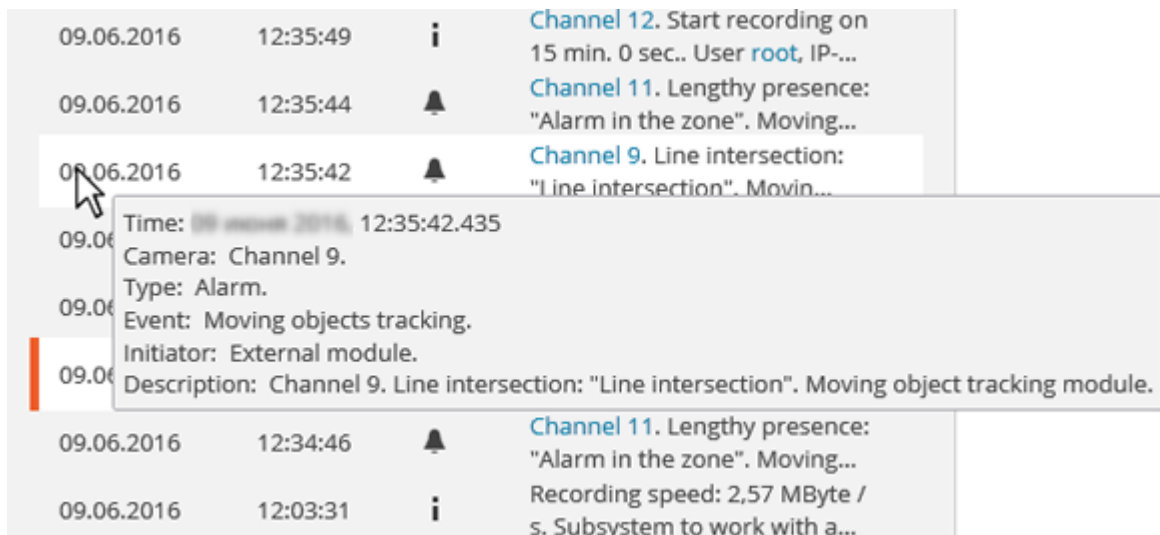
The **Events log** displays the **Date**, **Time**, **Type** and **Event description** (as an icon) for each event.

The **Event description** includes, in addition to the event name, various attributes associated with the event. The composition of the attributes depends on the event: for example, the camera name is displayed for the events linked to the camera; for the events characterizing the user's actions - the user name, IP-address, and the computer name, etc.

Upon selection of an event linked to the camera, and the archive availability at the date / time of event, the preview window will display the frame from the archive. The viewing can be controlled in the same way as in the archive viewing.

Upon double-clicking the event linked to the channel the **Log** window closes, and the switch to Simultaneous archive viewing from multiple cameras occurs to the point in time relevant to the event: in this case the channel grid will display the camera containing that fragment.

The pop-up tip with detailed information about the event appears upon mouseover to the event.



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 channel (only for events linked to the cameras)
- Exclude channel from the filter (only for events linked to the cameras)

After selecting the context menu items adding / excluding filters, click Apply filter to apply a new filter.

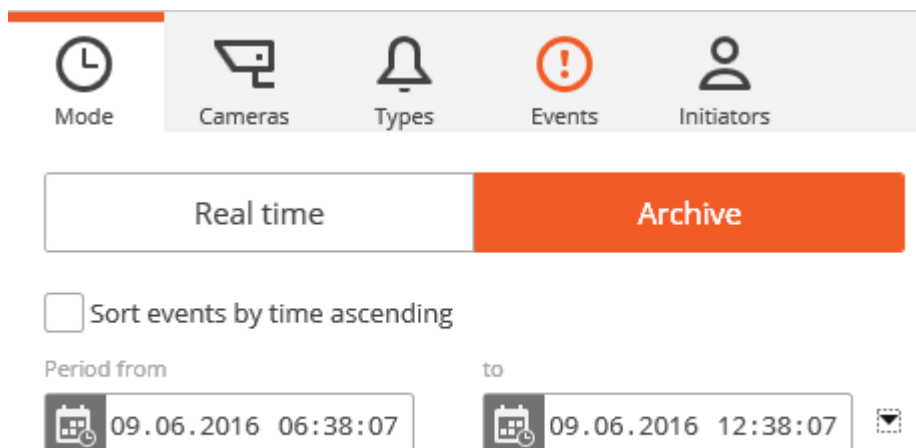
The following filters are available on the filters panel allowing to set the events display options in the log. Click **Apply filter** after making changes to filter settings.

The **Mode** filter sets the events display mode.

Real time displays the events in real time . 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 added the new ones , generated during the view.

If none of the events is selected, the new events are automatically displayed at the top of the list.



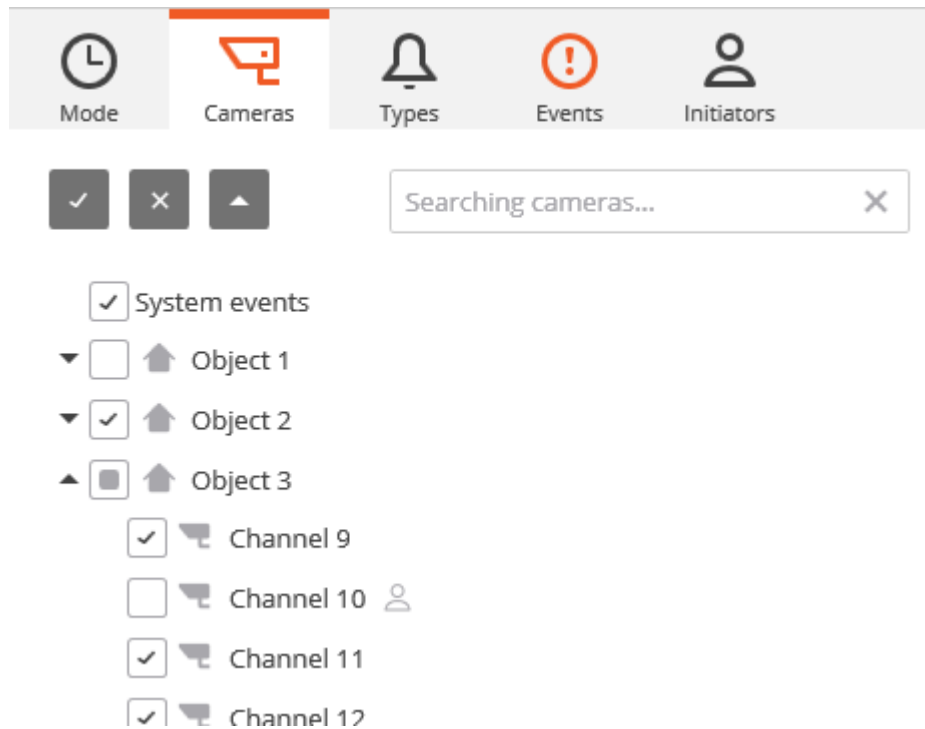
If any event is selected in the **Events log**, the number of new events is displayed in the **Events log** header, near , and to display new events click it.

If the system stores more than 15 event, to display the previous 150 events, press **More events...** at the bottom of the log.

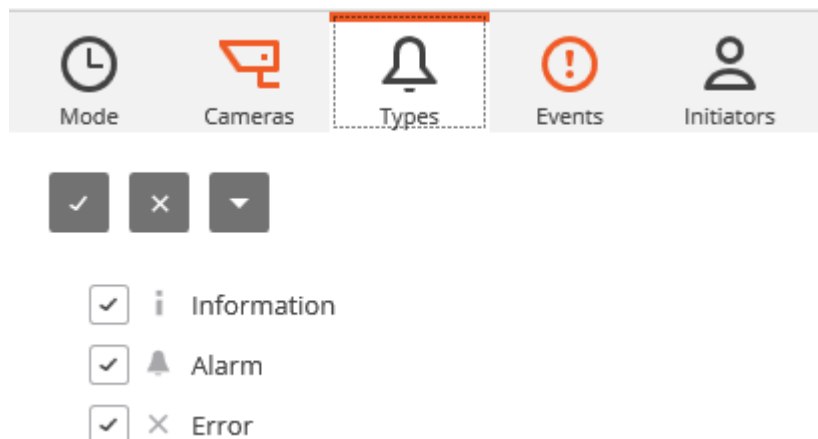
If 10,000 events are already displayed in the log, upon further displaying the old events the new ones will be hidden. You can return to the last events by clicking **More events...** at the top of the log.

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

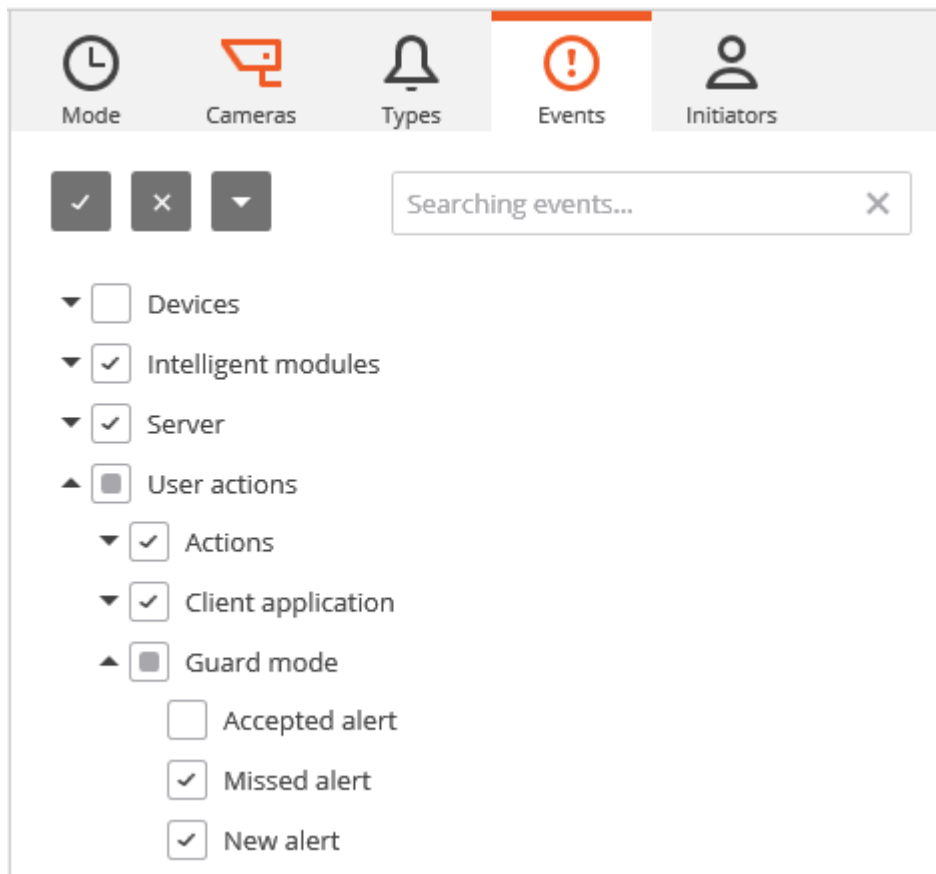
The **Cameras** filter allows to filter the events associated with selected cameras, as well as the system events (not associated with cameras).



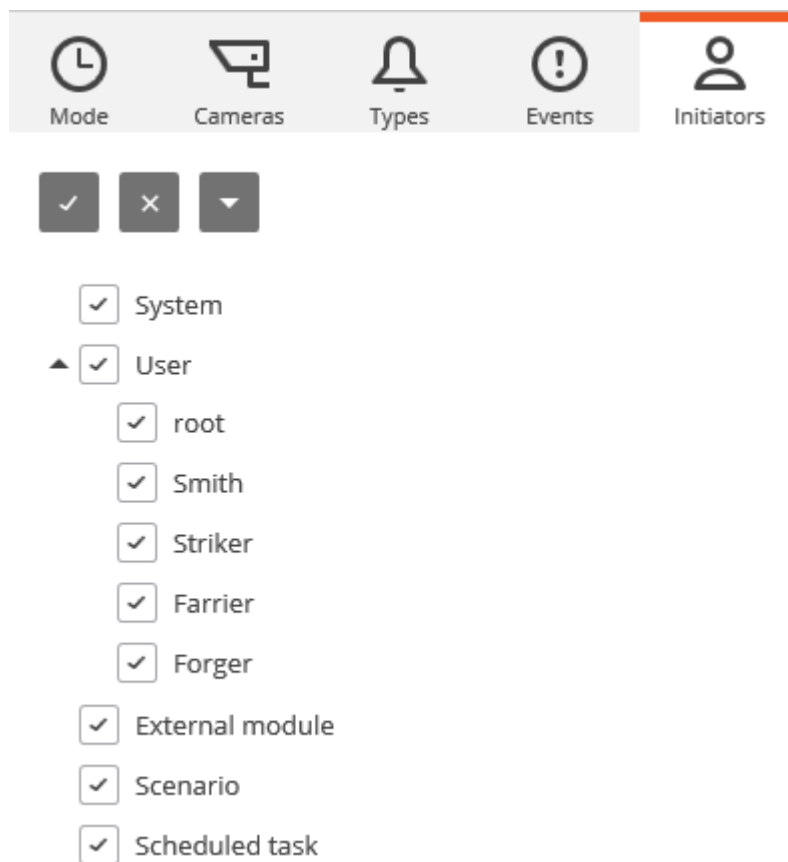
The **Types** filter allows to filter the events by types: **Information**, **Alarm** and **Error**.



The **Events** filter allows to filter the events by groups and names.

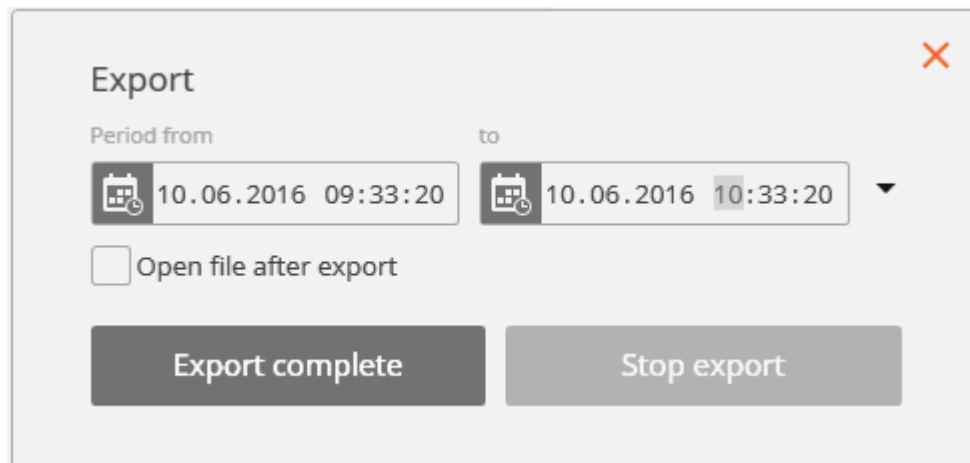


The **Initiators** filter allows to filter the events depending on their initiator.



To export the events log click **Export** on the **Filters panel**.

In the appeared **Export** window set the time interval over which the events will be uploaded; if required, check the box **Open file** upon export completion; 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.


Time	Channel	Category	Event	Initiator	Description	
6/9/16 12:36:04 PM		Information	Simultaneous archive viewing	User	Simultaneous archive viewing. User root, IP-address 192.168.100.145, compute	
6/9/16 12:35:49 PM	Channel 12	Information	Recording started	User	Channel 12. Start recording on 15 min. 0 sec.. User root, IP-address 192.168.100	
6/9/16 12:35:44 PM	Channel 11	Alarm	Moving objects tracking	External module	Channel 11. Lengthy presence: "Alarm in the zone". Moving object tracking mc	
6/9/16 12:35:42 PM	Channel 9	Alarm	Moving objects tracking	External module	Channel 9. Line intersection: "Line intersection". Moving object tracking modu	
6/9/16 12:35:32 PM		Information	Monitoring	User	Monitoring. User root, IP-address 192.168.100.145, computer petrovich.	
6/9/16 12:35:31 PM		Information	Successful authentication	User	Successful authentication. User root, IP-address 192.168.100.145, computer pe	
6/9/16 12:34:27 PM	Channel 10	Information	Established connection with camera	System	Channel 10. Established connection with the camera: main stream.	
6/9/16 12:34:26 PM	Channel 12	Information	Established connection with camera	System	Channel 12. Established connection with the camera: main stream.	
6/9/16 12:34:25 PM	Channel 9	Information	Established connection with camera	System	Channel 9. Established connection with the camera: main stream.	
6/9/16 12:34:15 PM		Information	General configuration application	System	Application of the general configuration from IP-address 127.0.0.1. Server 1 (1	
6/9/16 12:26:05 PM	Channel 1	Alarm	No connected camera	System	Channel 1. No connection: main stream on 15 sec.	
6/9/16 12:25:50 PM	Channel 1	Error	Lost connection with camera	System	Channel 1. Camera connection failure main stream.	

Object plans

Eocortex allows to use the object plans with cameras, sensors and relays. In addition, the images from cameras including data of the separate intelligent modules (the heat maps in current version) can be superimposed on plans.

To open the **Object plans**, open **Control panel** and select **Plans** in the **Main Menu**.

Plans





Choose a plan


Floor 1

Floor 0

Additional plan display settings

☒ Frame from camera



To the right of the **Plans** page is the **Settings panel** which may be hidden/displayed by clicking  at the right edge of the page. You can select the **Plan** on the settings panel, and specify the additional display options in the section **Additionally display on plan**. The list of additional options depends on the settings set by the system administrator.

- **Frame from camera** displays the frame overlaid on the camera field of view.
- **Heat map** displays the [Heat map](#) module data.



To fit the image on the plan to the current window size click on  in the lower right corner.

To save the image on the plan in JPEG, PNG or BMP format, click on  in the lower right corner.

To display the real-time video from a camera on the plan, click on this camera icon whereafter the preview window will open and then next to the icon.

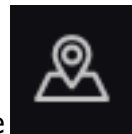
Sensors and relays may be placed on the plan.

Upon the sensor triggering the icon will become orange.

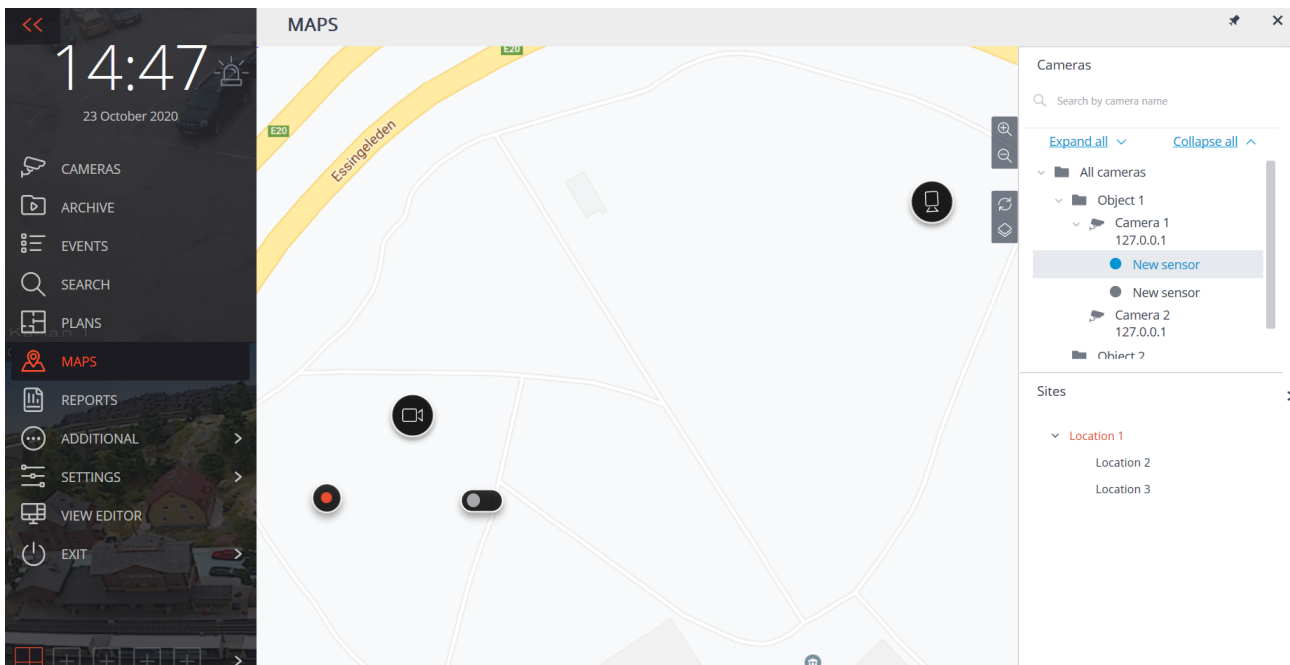
Click on  to enable / disable the relay. When enabled the relay icon becomes green, and the switch is in the right position .

MAPS

Eocortex allows to place cameras and sensors and relays connected to them on the geographical maps provided by the following cartographic services: **Google Maps, OpenStreetMap**.



To place these devices on a map, it is required to select the **MAPS** item on the control pane.



A bar with the following buttons is placed on the right side of the map:



Zoom in: scales up the map.



Zoom out: scales down the map.



Discard site changes: returns the current site to its position at the moment of opening the tab or the last application of settings.



Change layer: modifies the current map layer.

On the right side of the window there is a sliding bar with the following elements:

Cameras.

To quickly go to the camera placed on the map, select it in the list and choose the **Find on map** item in the context menu. The same method works for the sensors and relays located on the map.

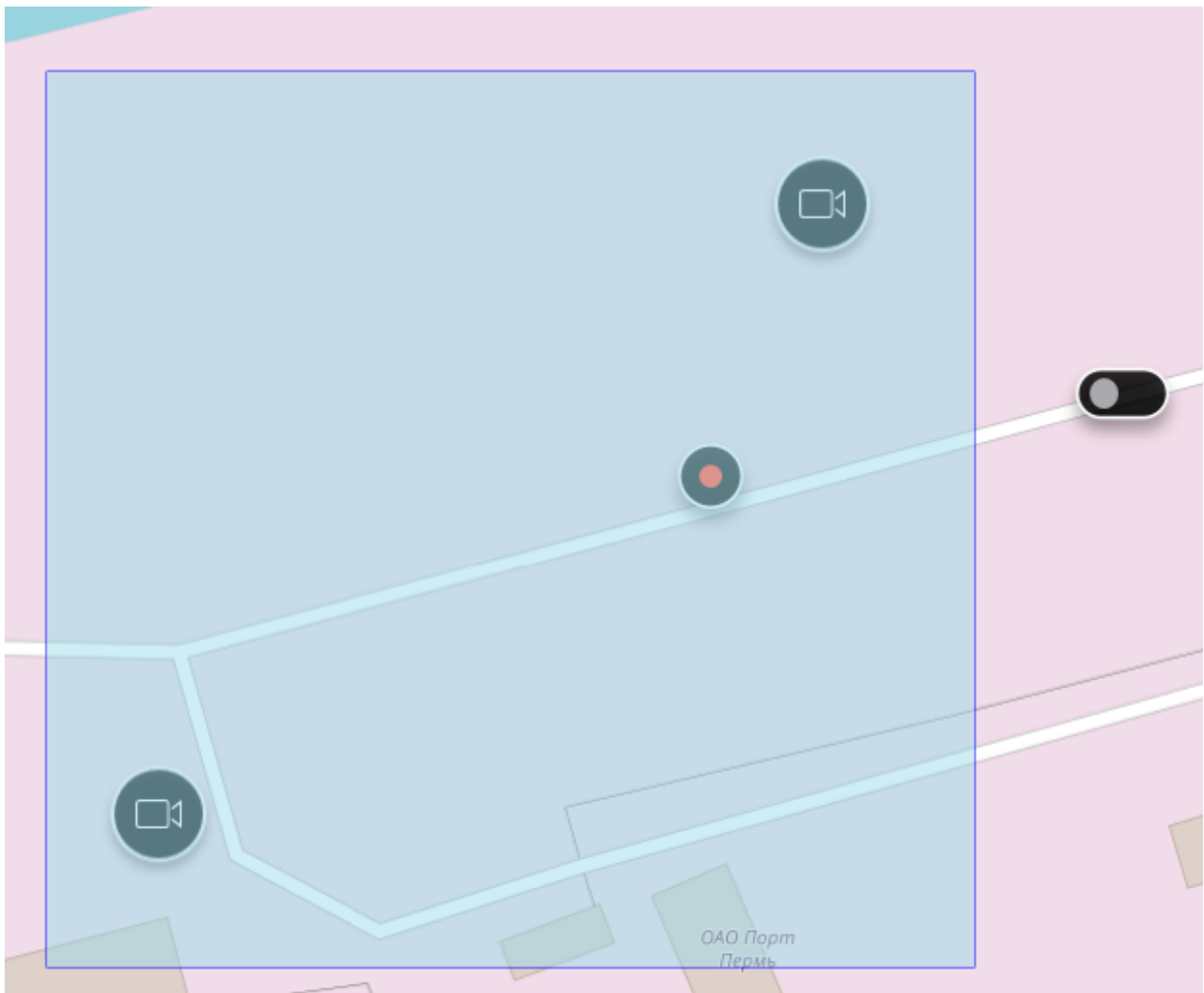
It is also possible to jump to a camera on the map by selecting the **Show on map** item in the context menu of the camera viewing cell. This method is available both in the real time viewing mode and in the archive playback mode, including the simultaneous playback of the archives of several cameras.

Sites.

The sites allow to quickly jump to the required points on the map.

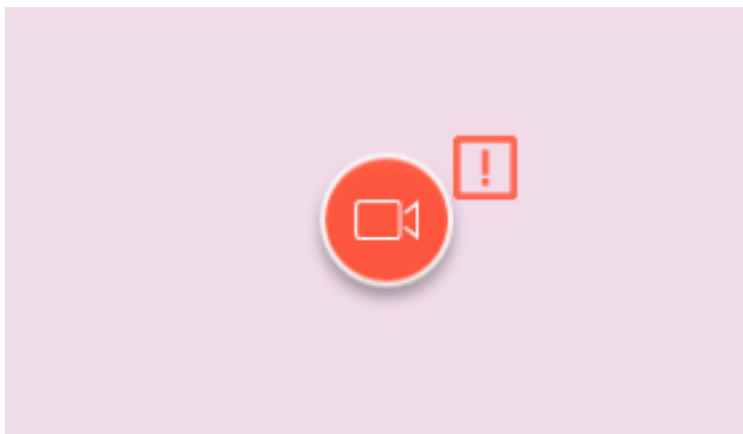
The preview window also opens when the mouse pointer hovers over the camera.

It is possible to create new client views containing the chosen cameras by selecting one or more cameras on the map. To select several cameras, it is required to hold the right mouse button and stretch the rectangle, catching the needed cameras within it.



To create a view, it is required to select the **Create view** item in the context menu of any highlighted camera. The created view will open immediately.

If the camera is in the guard mode, it will change color and a flashing alarm icon will appear near it.



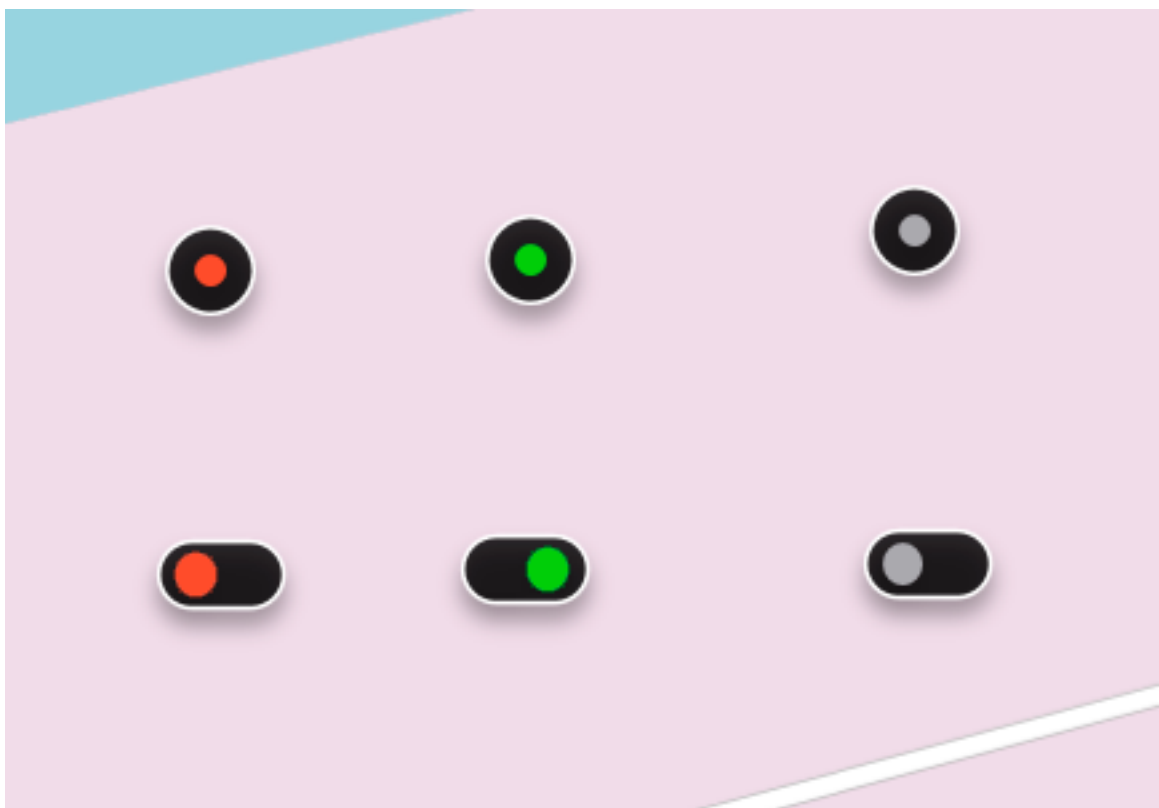
When the mouse pointer is hovered over the alarm icon, the event that has caused the alarm will be displayed.

You can acknowledge or ignore the alarm as well as go to playing back the camera's archive from the moment of the beginning of the alarm by opening the context menu with a click of the right mouse button on the alarm icon.

In addition to the cameras, the sensors and relays connected to the signal contacts of the cameras can also be displayed on the map.

These sensors and relays are displayed as connected to the corresponding cameras. To jump to the sensors and relays, it is possible to use their context menus.

The status of the relays and sensors is indicated using the color code: red stands for "disabled", green for "enabled", and gray for "not specified".

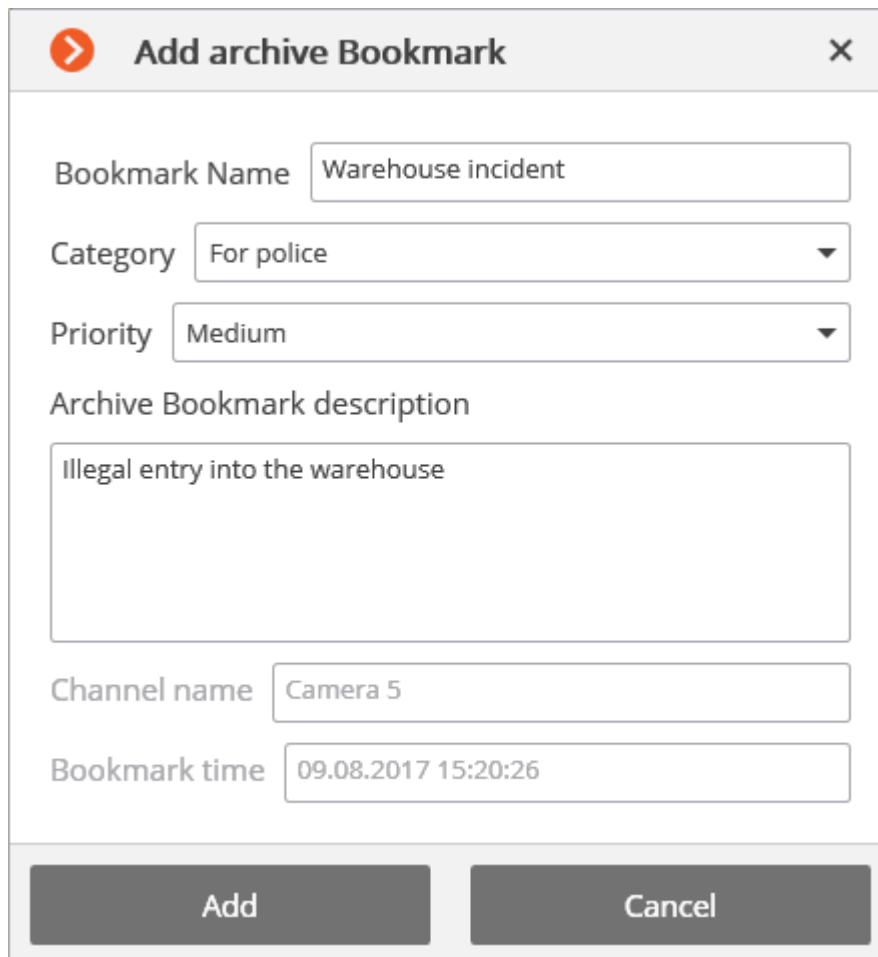


To toggle the status of a relay on the map, select the required relay on the map and click on it.

Bookmarks in the archive

Eocortex allows you to add tabs in the archive. Subsequently, by the bookmarks, you can go to the marked location in the archive.

To add a bookmark, in the archive playback mode, open the cell context menu and choose **Add bookmark to the archive**. The **Add archive Bookmark** window opens, in which the **Bookmark Name**, **Category** and **Priority** should be specified and, if necessary, the **Archive Bookmark description**; then click the **Add** (or, to cancel the action, click the **Cancel**).



Add archive Bookmark

Bookmark Name: Warehouse incident

Category: For police

Priority: Medium

Archive Bookmark description: Illegal entry into the warehouse

Channel name: Camera 5

Bookmark time: 09.08.2017 15:20:26

Add Cancel

To view the added tabs, in the archive playback mode, open the cell context menu and choose **View bookmarks in the archive**. The **Events log** will open, with the **Archive bookmark** filtered by the current camera and event.

Because the tabs are the events of the **Archive bookmark**, they also may be viewed by setting the appropriate filters in the **Events log** (filter **Events/ User actions / Actions/ Archive bookmark**).

Archive export

To export a clip, choose **Control panel** and select **Additional** in the **Main menu**, and then **Archive export**: the **Archive export** window will open.



Also, the **Archive Export** window can be accessed 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 will be displayed 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.

The format of the resulting video archive is indicated in the **Export options** combo box.



Eocortex Client allows to export your video archive to the files of the following formats:

MCM is an internal **Macroscop** format. Viewing of 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 export to 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 the one without recoding, but it is faster than export to AVI (300-400 fps). The export speed depends primarily on the processor performance.

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.



When the **Copy Eocortex Player installer** option is selected, the **Eocortex Player** must be installed 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.

Insert watermark: 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 encode 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.

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 appeared 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**.



The camera name and the frame time will be saved in the upper left corner of the frame.

If you want to save the frame fragment zoomed in, zoom the image before saving.

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  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**. Then in the appeared window select the printer, adjust the print settings, if necessary, then press **Print**.



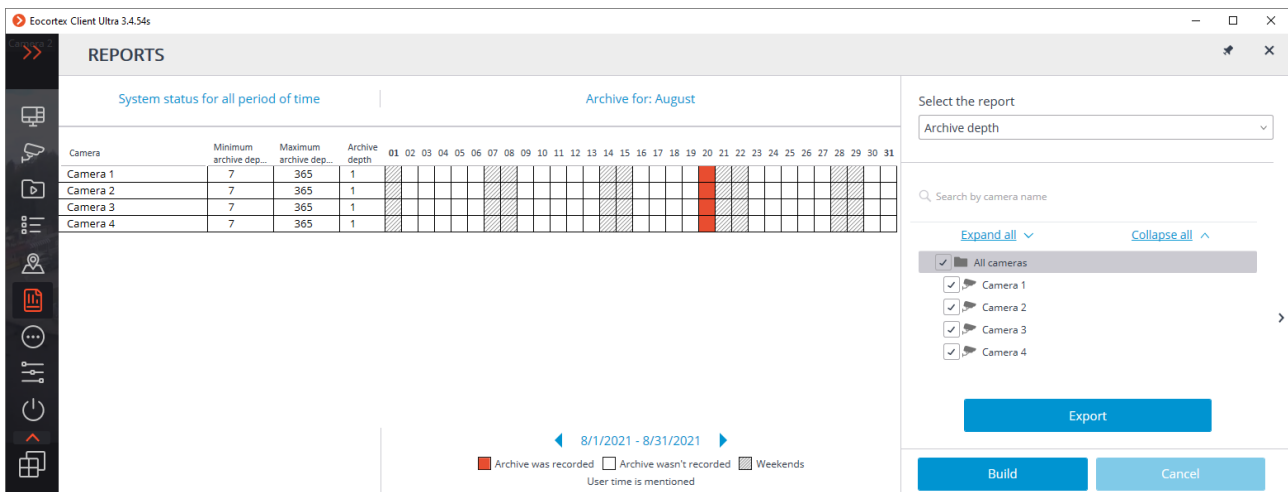
The camera name and the frame time will be displayed in the upper left corner of the frame.

If you want to print the frame fragment zoomed in, zoom the image before printing.

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.



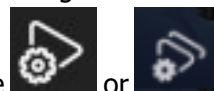
Selected channels are listed in the lines of the report. The columns of the report show the archive depth settings for each channel, actual depth of the archive, and the archive for each month number.

To select another month, use time slot selector, located at the bottom of the page above the legend.

By clicking the **Export** button, report shall be saved to a CSV file.

User tasks

If user tasks are set up on a camera, and the user has the rights to execute these tasks, then, in the obser-

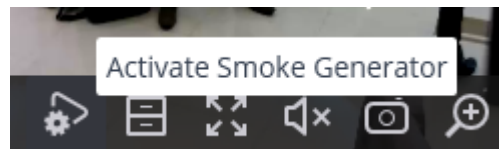


vation mode, during the activation of such camera, the button will be displayed in the cell, depending on the quantity of tasks that can be launched on the camera (one or more).

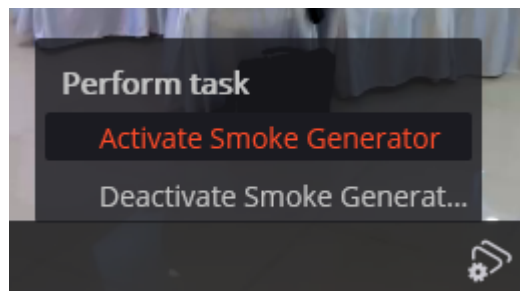
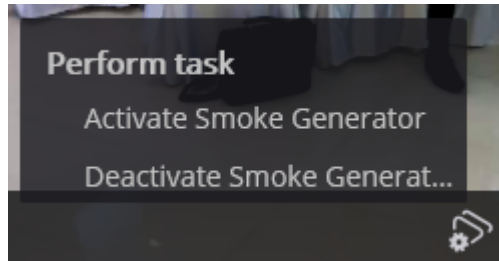


User tasks are configured by the administrator of the video surveillance system.

If only one task is set up on the camera, it will be executed upon pressing the button.

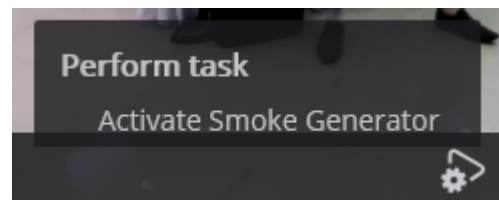


If there are several tasks set up on the camera, a list of those tasks will open upon pressing the button, and the task will be executed only as it is selected in the list.

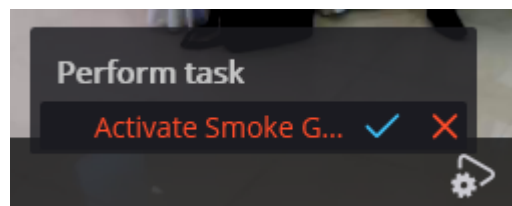


If the launch confirmation has been set in the configuration of the task, a dialog will open before the launch. In this dialog, it will be possible to confirm or cancel the launch.

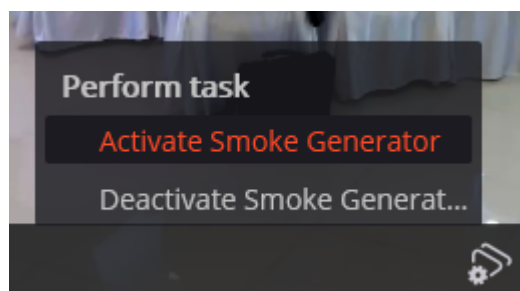
Selection one task with confirmation:



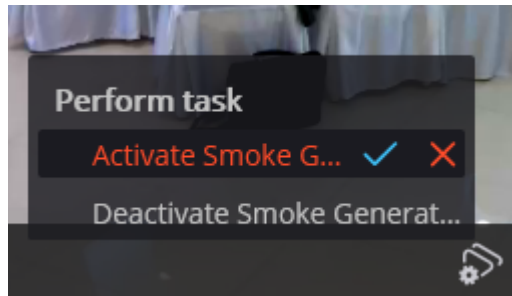
Confirmation of one task:



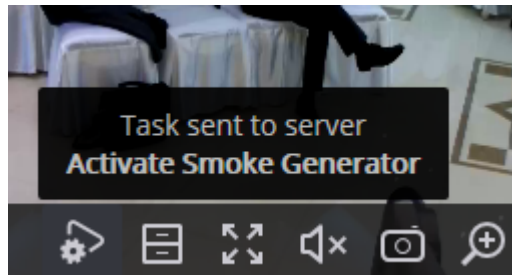
Selection one of several tasks with confirmation:



Confirmation of one of several tasks:



After launching the task, the corresponding notification will appear on the screen.



Video wall

Eocortex has implemented the possibility to build 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.

In order to increase efficiency it is advised to use client computers (Remote Work Station - RWS) with several monitors; herewith the RWS hardware configuration must provide the performance required to show the set number of channels.



This capability is not present in all types of licenses.

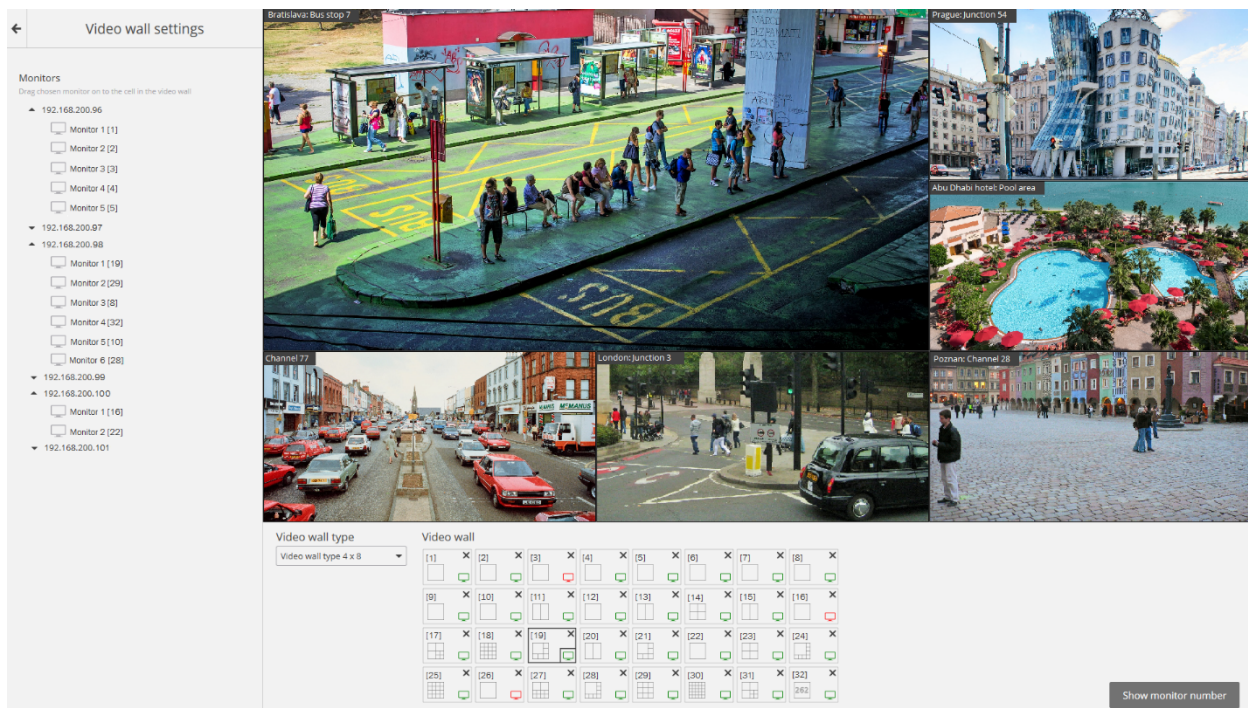
[Video wall setting](#)

[Video wall management](#)

Video wall setting

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.



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.

In order 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, in order to setup grids and the displayed channels, it is necessary to move to [Video wall management](#).

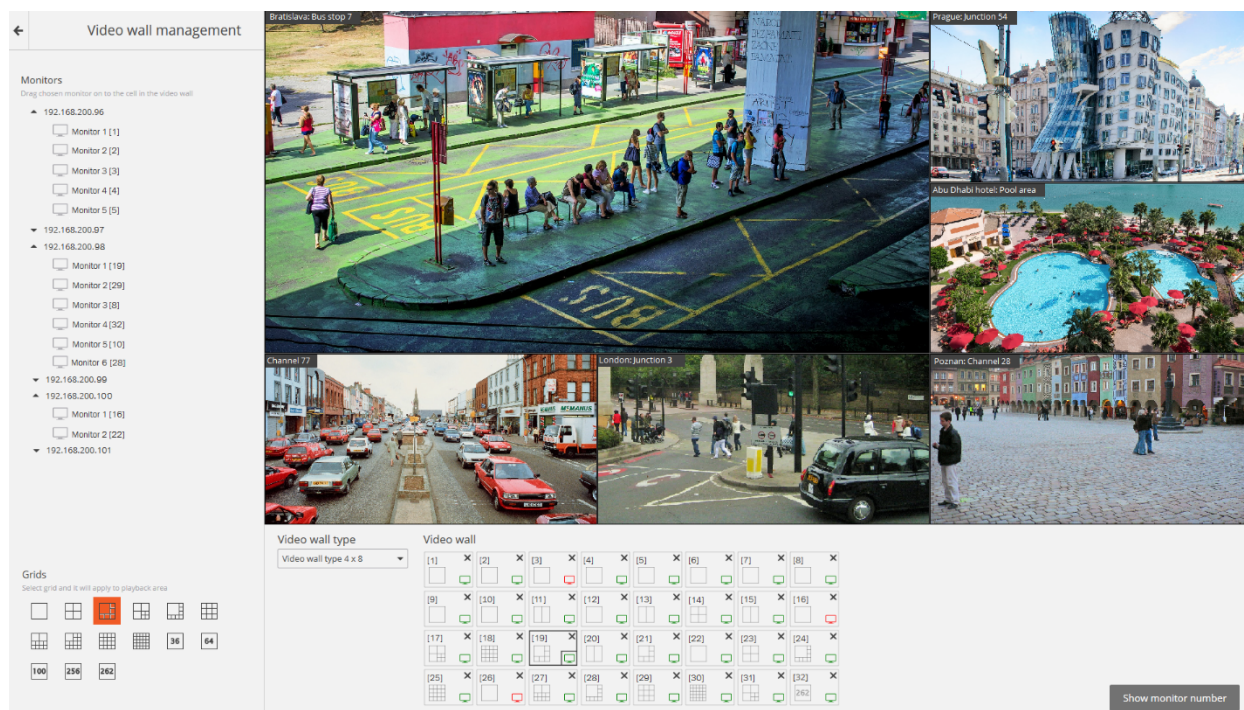


Hereafter, during operation, separate RWS can be disconnected from the system. In this case the pictograms of these monitors will be red.

Video wall management

In order to manage the video wall it is necessary to open the Control panel and select in the Main menu the **ADDITIONAL** option, and 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.

Visual control over monitors position number is implemented by a **Show monitor number** button; when pressed, each video wall monitor will show its position number for several seconds.



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 it is recommended to 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.


In the left part of the page is displayed the hierarchical list of cameras connected to the system and the panel with the available channels. In case of multiserver configuration, the list will show all the cameras connected to all the servers of this configuration.

In order to display a certain channels network, it is necessary to mark that monitor and then select the grid.

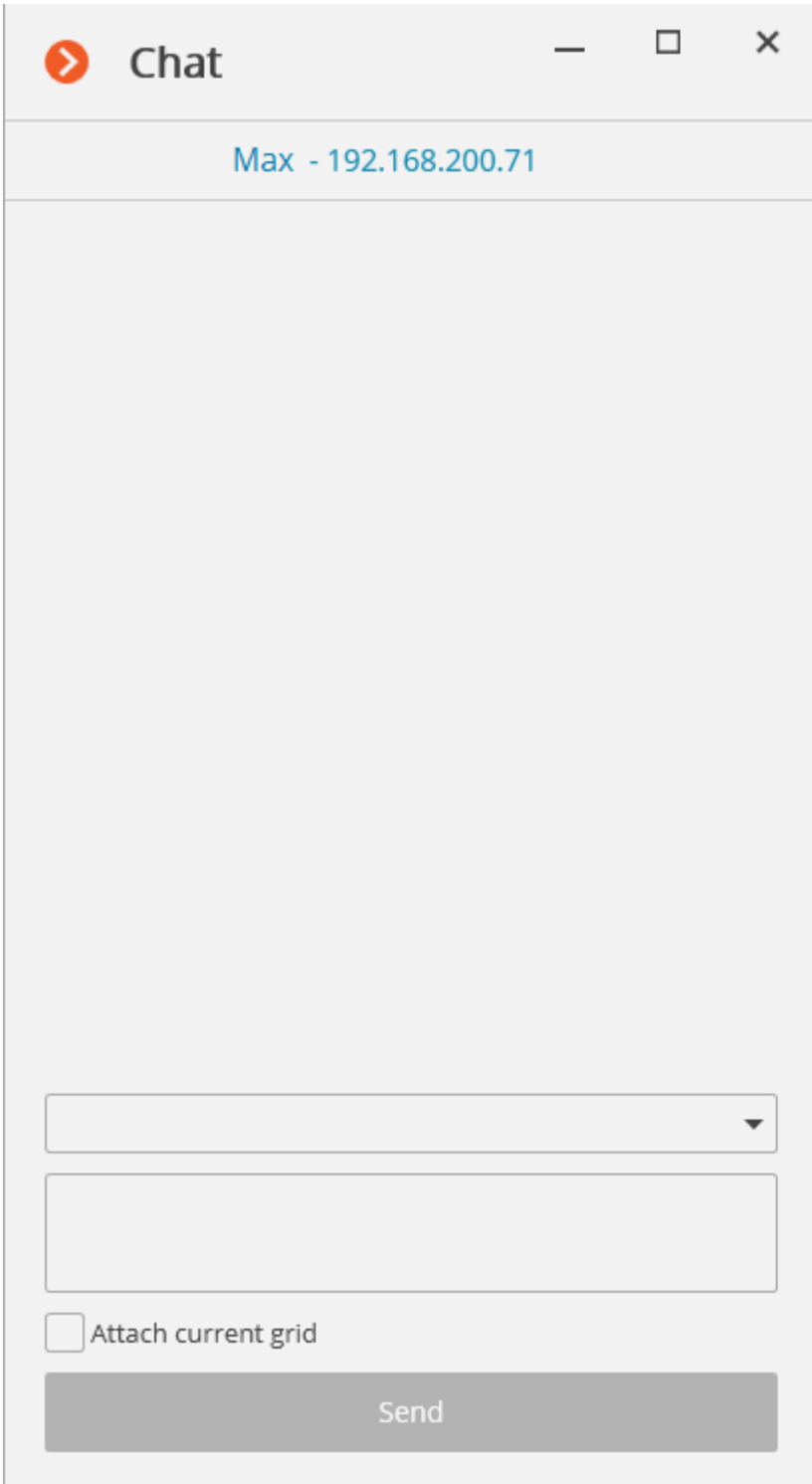
In order to place certain cameras in the grid's cells, it is possible to move these cameras to the relevant cells in the view window, or click inside the cell in the view window and select a camera with the help of the cell context menu.

Internal chat

Eocortex has implemented the possibility to exchange messages between the system users — internal chat.

-  Internal chat is available only for those users who have relative authority given by the system administrator; and only at those **Eocortex Client** workstations with the set up permission for chatting.

In order to open the internal chat, it is necessary to open the Control panel and select in the Main menu the **ADDITIONAL** option, then the **Chat** sub-option. This will open the **Messages** window, containing the following interface elements:



The screenshot shows a window titled "Chat" with a red arrow icon. Below the title bar, the text "Max - 192.168.200.71" is displayed. The main area is a large, empty chat box. At the bottom, there is a drop-down list of recipients, a text input field, a checkbox labeled "Attach current grid", and a "Send" button.

Current user's name and IP address, on which Ultra Client application is running

Chat box

Drop-down list of recipients

Typing field

Grid attachment option

Send button

The chat window opens automatically at those who receive the message.
Sending a message

In order to send a message to one or several system users, it is necessary to select these users in the drop-down list, then type the text in the text field and click on the Send button.

Turning the Attach current grid option on, the message will be attached with a grid of channels open at the sender at the time of sending a message — including all the channels in the cells.

The drop-down list shows only those users who are currently in the system. If there is no user in the system, the list will be empty.

The length of the message is up to 50 characters, including spaces.

The recipient will be able to open the attached grid only if he is authorized to view the grid channels, and his work place has access to this grid of channels (available channel grids are set in the Setup of current workstation on the Available grids page (see Administrator guide, section Setup of current workstation).

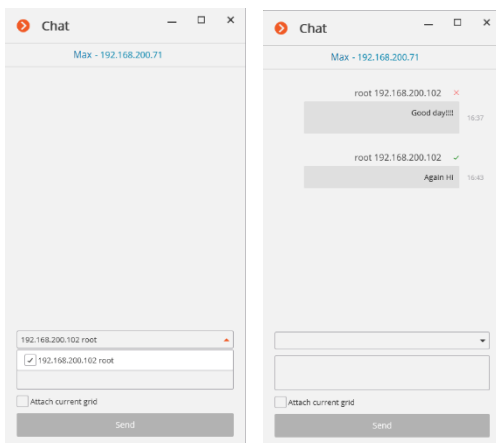
Receiving a message

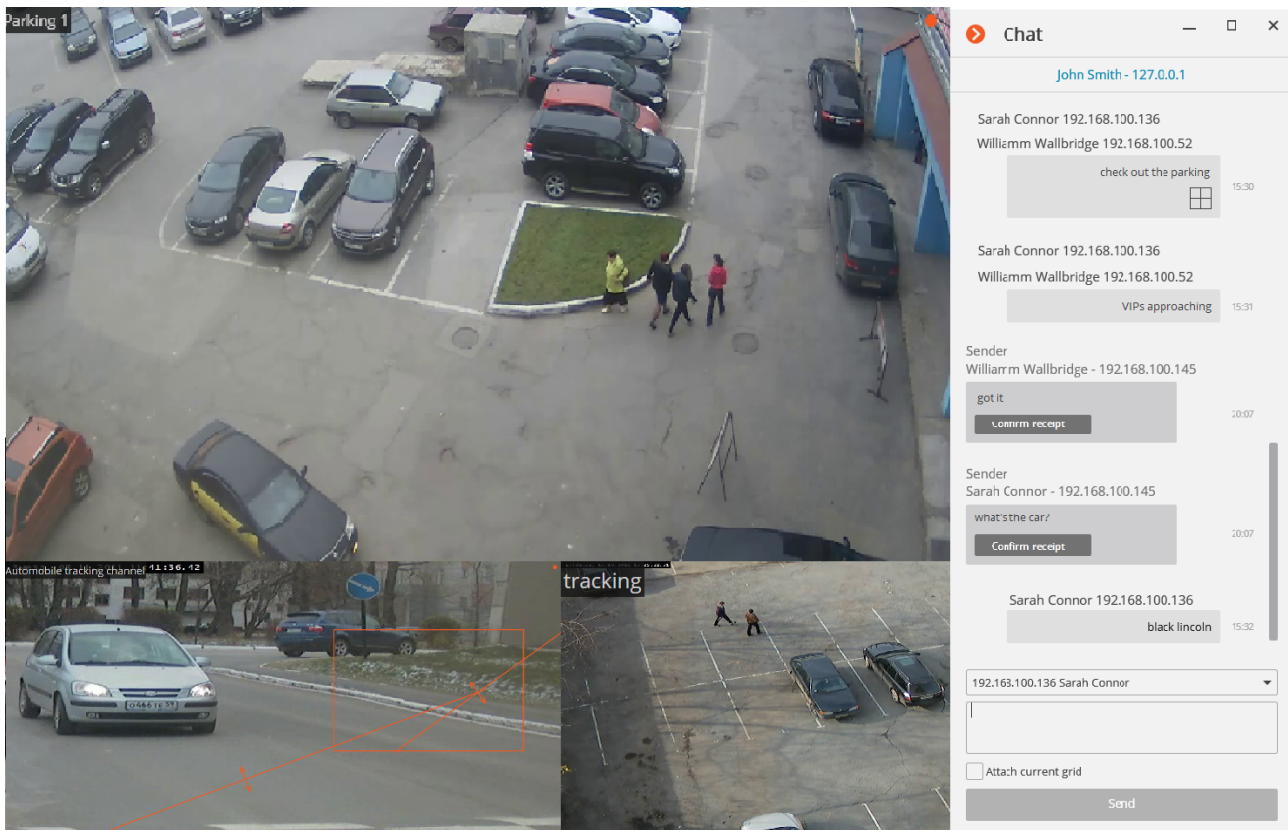
To confirm a message it is necessary to click on the Confirm a message button located under the message text. If the message is not confirmed within a period set by the system administrator in the Setup of current workstation (see Administrator guide, section Setup of current workstation), the [Event log will have a relevant record of a missed message.](#)

In order to open the channels grid attached to the message at the current workstation, it is necessary to click on the relevant pictogram to the left of the confirmation button.

Responding a message

In order to respond to a message it is necessary to create a new message and state the list of recipients.





Workplace settings

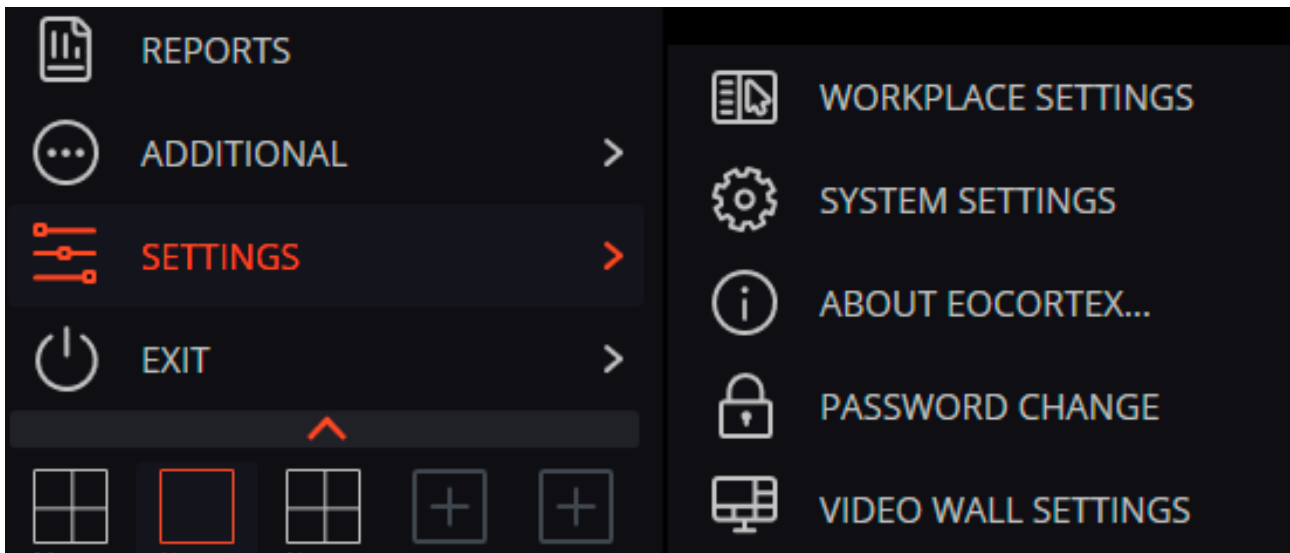
These settings allow you to specify operating parameters for **Eocortex Client** on the applied computer.

To configure the current workstation, open the Control Panel in **Eocortex Client** and select

Workplace settings under **Settings**.



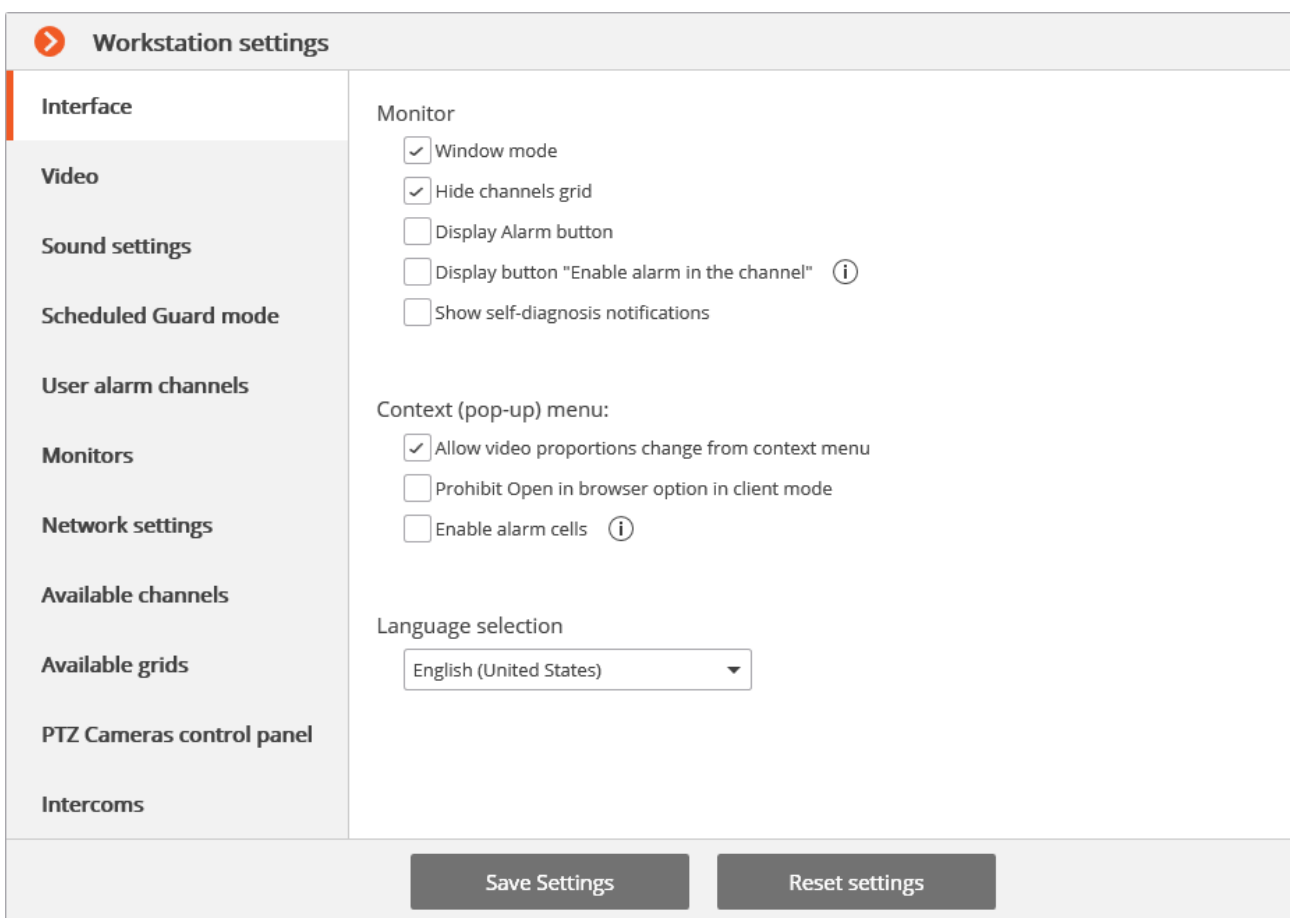
The **Workplace settings** menu item is available only if a user with configuration rights is logged in.



The **Workplace settings** window will open. To implement the changes made, click **Save Settings** — **Eocortex Client** 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 checked, **Eocortex Client** will run in the window mode; otherwise — fullscreen.

Hide channels grid — if checked, the lines separating channel cells will not be displayed; otherwise they will be separated by thin lines.

Display Alarm button — if checked, the **Eocortex Client** toolbar will contain the **Alarm** button; otherwise the button will not be displayed.

Display button "Enable alarm in the channel" — if checked, the item **Enable alarm in the channel** will be displayed in the context menu of the channel cells.

Show self-diagnosis notifications — if checked, the system notifications about possible problems (including recommendations for their elimination) will be displayed.

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 the channel cells.

Language selection — allows selecting one of the interface languages available for **Eocortex Client**.

Video

The screenshot shows the 'Workstation settings' window with the 'Video' tab selected. The sidebar on the left lists the following categories: Interface, Video (selected), Sound settings, Scheduled Guard mode, User alarm channels, Monitors, Network settings, Available channels, Available grids, PTZ Cameras control panel, and Intercoms. The main settings area includes:

- Channel cell**
 - Video proportions: Stretch (dropdown)
 - Preferred video stream for display: Auto (dropdown)
 - ☐ Show info about codec, resolution, bitrate and frequency
 - ☐ Show debug info
 - Font size: 12 (input field)
 - Horizontal alignment: Left (dropdown)
 - Vertical alignment: Top (dropdown)
- Display quality**
 - ☐ Use high quality
- Video processing**
 - ☒ Allow H.264 decoding on video card
 - ☐ Enable display speed limitation (only for MJPEG) 5 frames/sec (input field)

At the bottom of the dialog are two buttons: 'Save Settings' and 'Reset settings'.

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.

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

Workstation settings

Interface

Video

Sound settings

Scheduled Guard mode

User alarm channels

Monitors

Network settings

Available channels

Available grids

PTZ Cameras control panel

Intercoms

Audio settings

☐ Play only for the active Channel

i

Sound transmission:

Preferred microphone

Default microphone

Sound transmission button mode in channel:

Hold

Switching mode

Save Settings

Reset 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.

Scheduled Guard mode

Workstation settings

Interface

Video

Sound settings

Scheduled Guard mode

User alarm channels

Messenger

Monitors

Network settings

PTZ Cameras control panel

Intercoms

Export

Notification settings in case of missed alarms:

- ☐ Display only on the alarm monitor
- ☐ Allow full-screen mode in the alarm monitor
- ☐ Set the limit of an alarm display period on the alarm monitor seconds
- ☐ Automatically accept the alarm seconds
- ☐ Disable popup alarm notifications
- ☐ Enable display of alarms on plan
- ☐ Alarm in Guard mode

Select Listen

Guard mode on the schedule

- ☒ Enable scheduled Guard mode

Search by camera name

Expand all Collapse all

- ☒ All cameras
- ☐ Camera 1

To configure guard mode schedule on camera, tick the box of that camera and click on its name

Save Settings Reset settings



Scheduled Guard is the mode, in which a user is notified (in **Eocortex Client**) if the alarm is generated. If you want an alarm to generate in response to a specific event in the system, configure the appropriate scenario in **Eocortex Configurator**.

Display only on the alarm monitor: if checked, visual and audible alerts will be displayed only on the alarm monitor; otherwise they will also be displayed on the monitors used for observation.

Use optimized grid on alarm monitor: if checked, the grid on the alarm monitor shall be selected dynamically, depending on the number of channels, on which the alarm has been triggered; if unchecked, the channel grid, selected by the user, shall be used.

Allow full-screen mode in the alarm monitor: if checked, you can expand the channels to full-screen mode on the alarm monitor; if unchecked, it shall be prohibited.

Set the limit of an alarm display period on the alarm monitor: if checked, in the box on the right you can specify how long will the alarm be displayed; otherwise, the alarm will be displayed until the operator's response. In either case, an alert will be aborted if the operator responds to it.

Automatically accept the alarm: if checked, you can specify in the box on the right, how long the alarm will be accepted automatically, if the operator does not respond to it; otherwise, the alarm will be displayed in accordance with the setting Set the limit of an alarm display period on the alarm monitor.

Disable alarm: if checked, the alarm state of any of the Scheduled Guard channels will not be indicated in the lower right corner of the screen by an exclamation mark.

Enable display of alarms on plan: if this checkbox is ticked, the [alarms will be displayed on site plans](#).

Alarm in Guard mode: if checked, the alarm state of any of the Guard channels will be indicated by an audio file. Only WAV files (*.wav) are supported. To select a file, click Select. To listen to the selected file, click Listen.

Enable scheduled Guard mode: if checked, you can schedule Guard modes for the channels.

To enable the Guard mode, select the camera in the list, click it and set up a schedule under the list.

The Searching cameras field allows you to quickly find and select cameras and security objects containing the entered text.

☒ Enable scheduled Guard mode

☒ ☐ ☐

Searching cameras...

X

▼ ☐ Object 3

▼ ☐ Object 6

▲ ☒ Object 8

▲ ☐ Office

☐ Entry

☐ Hall 🔍

▲ ☒ Street

☒ Yard

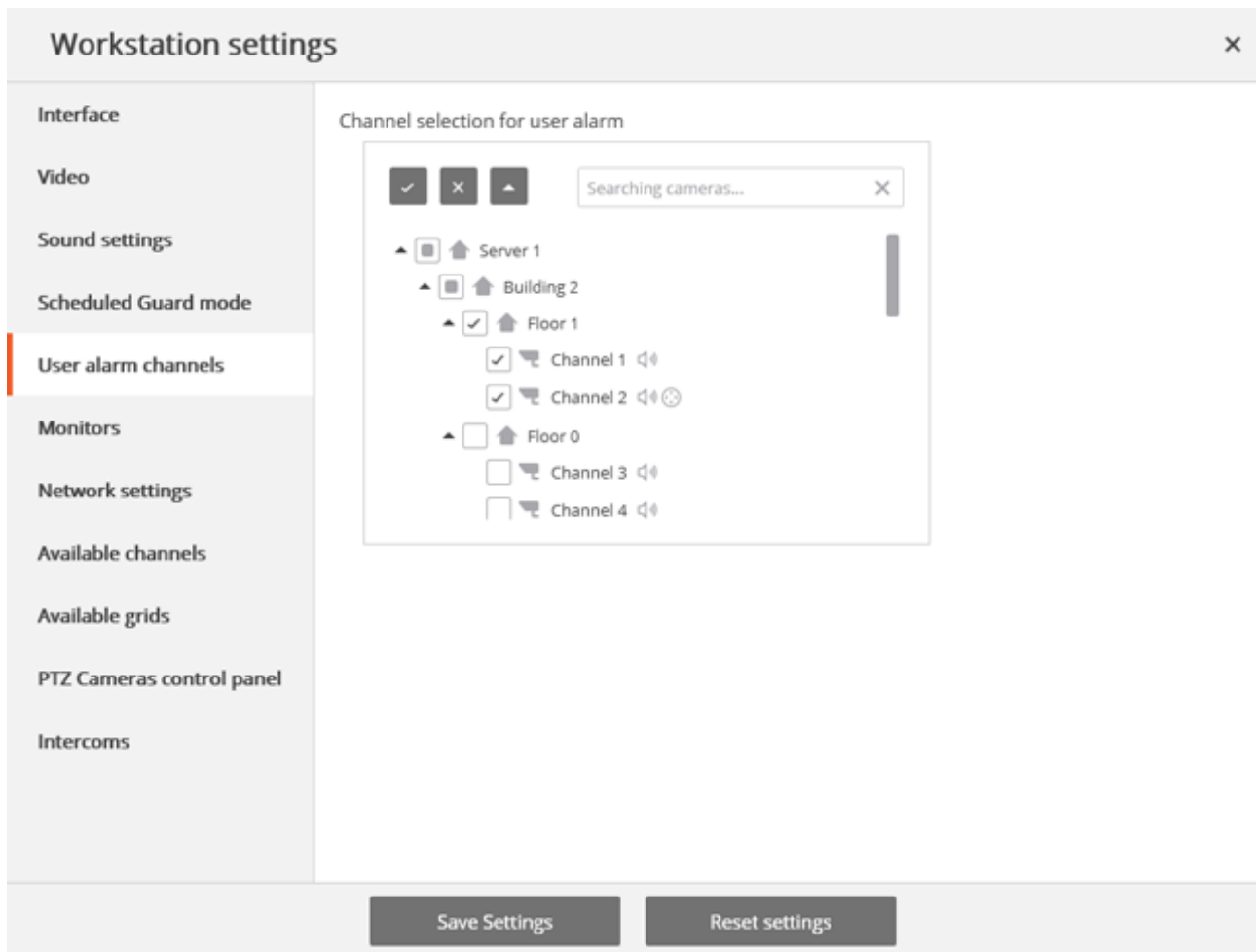
In order to configure the protection on schedule regime on the channel, it is necessary to put a tick at the channel and click on its name

☐ Use one schedule for all days of the week

	00:00	02:00	04:00	06:00	08:00	10:00	12:00	14:00	16:00	18:00	20:00	22:00
Monday	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Tuesday	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Wednesday	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Thursday	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Friday	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Saturday	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Sunday	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue

Blue periods mark when the channel should be in the Guard mode. Left-click the schedule to set a mark and right-click to remove it. If Use one schedule for all days of the week is selected, the schedule will be the same for the whole week.

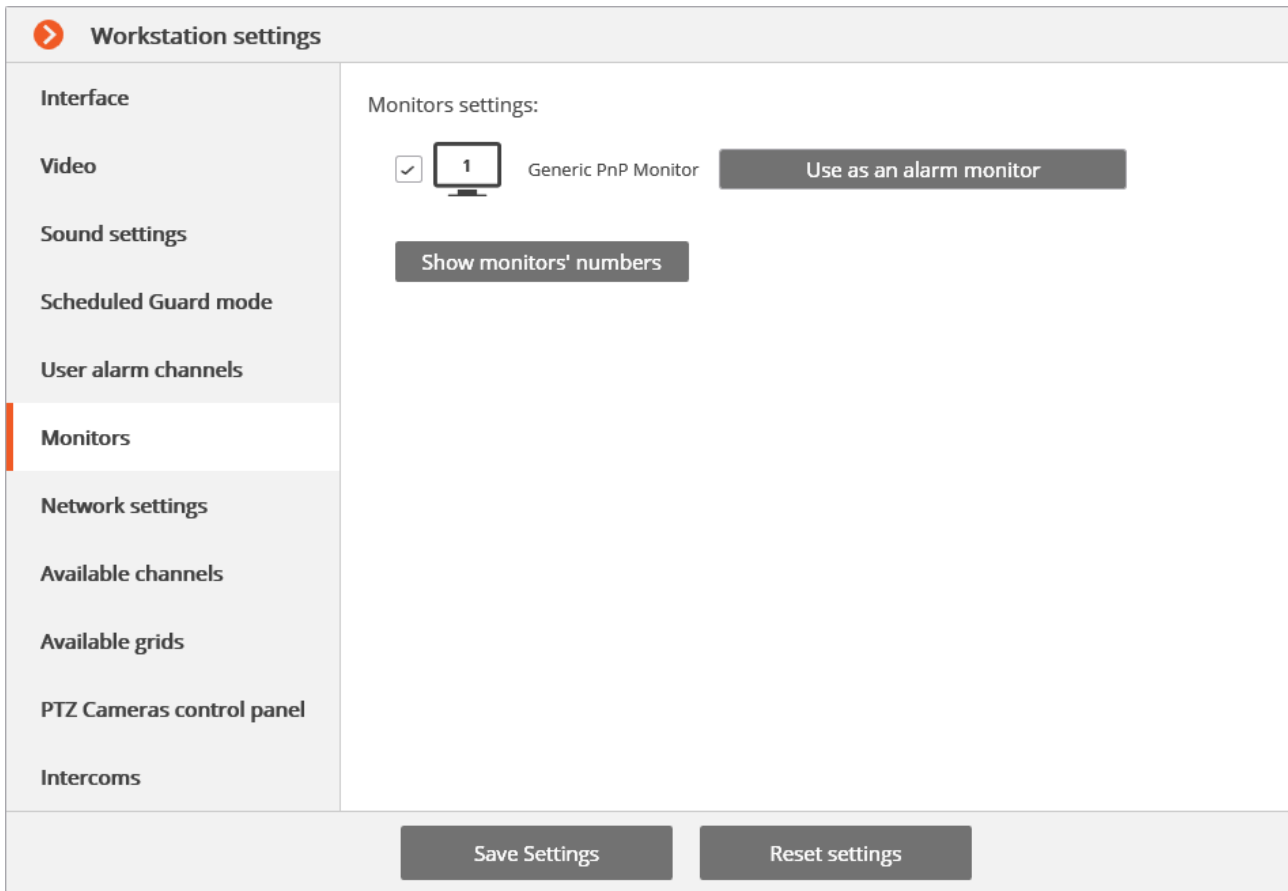
User alarm channels



User alarm is an alarm that is generated in Eocortex Client if the operator presses the Alarm button located on the Control panel near the clock. Action to be performed in this case is set in Configurator on page Cameras in the Scenarios settings group.

To set cameras to generate User alarm after the Alarm button is pressed, select these cameras in the list. The Searching cameras field allows you to quickly find and select cameras and security objects containing the entered text.

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, you can enable the Use as an alarm monitor option for one of them — in this case Alarm channels will be displayed on this monitor.

When clicking Show monitors numbers button on the monitors, their numbers are displayed.

Network settings

Workstation settings

Interface

Video

Sound settings

Scheduled Guard mode

User alarm channels

Monitors

Network settings

Available channels

Available grids

PTZ Cameras control panel

Intercoms

Network settings

☐ Connection in proxy mode i

Multicast setting

Multicast, if available

Save Settings

Reset 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: only unicast (default) channels will be received.

PTZ Cameras control panel

Workstation settings

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Available channels

Available grids

PTZ Cameras control panel

Intercoms

PTZ control settings

Selected joystick/board:

Refresh

Axis settings...

Action settings:

Action	Runtime environment
Camera left	<div>Assign hot keys...</div>
Camera up	<div>Assign hot keys...</div>
Camera right	<div>Assign hot keys...</div>
Camera down	<div>Assign hot keys...</div>
Image Zoom In	<div>Assign hot keys...</div>
Image Zoom Out	<div>Assign hot keys...</div>
Distant Focus	<div>Assign hot keys...</div>
Near Focus	<div>Assign hot keys...</div>
Auto Focus	<div>Assign hot keys...</div>
Switch to archive/real time	<div>Assign hot keys...</div>
Play archive forward	<div>Assign hot keys...</div>

Save Settings

Reset settings

On the PTZ Cameras control panel tab you can configure the remote control or joystick parameters.

Eocortex Web-client

Eocortex Web-client the allows to view live video and video surveillance archive in the web browsers, which support HTML5 technology.

The following features are available:

- viewing of one or more cameras in a live view;
- playback of the archive of the certain camera;
- listening to the sound from the certain camera;
- control (PTZ) of the certain camera;
- snapshot - both in a live view, and in an archive playback;
- view the zoomed frame area - both in a live view, and in an archive playback.

Start

To start a 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:

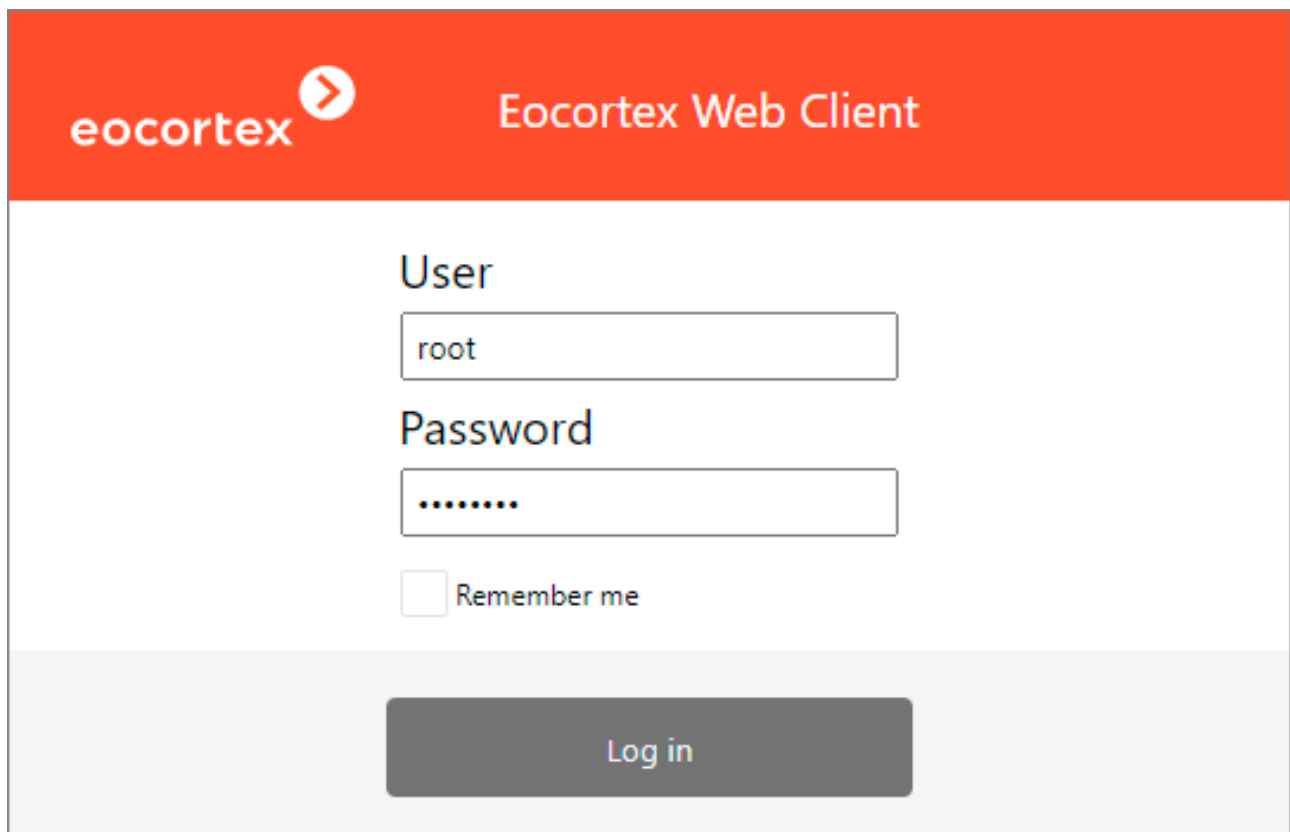
http://192.168.1.100:8080

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.

The screenshot shows the Eocortex Web Client login interface. At the top, there is an orange header bar with the 'eocortex' logo on the left and the text 'Eocortex Web Client' on the right. Below the header, the form has a white background. It contains two input fields: 'User' with the text 'root' and 'Password' with masked characters '.....'. Below the password field is a checkbox labeled 'Remember me'. At the bottom of the form, there is a grey button with the text 'Log in'.

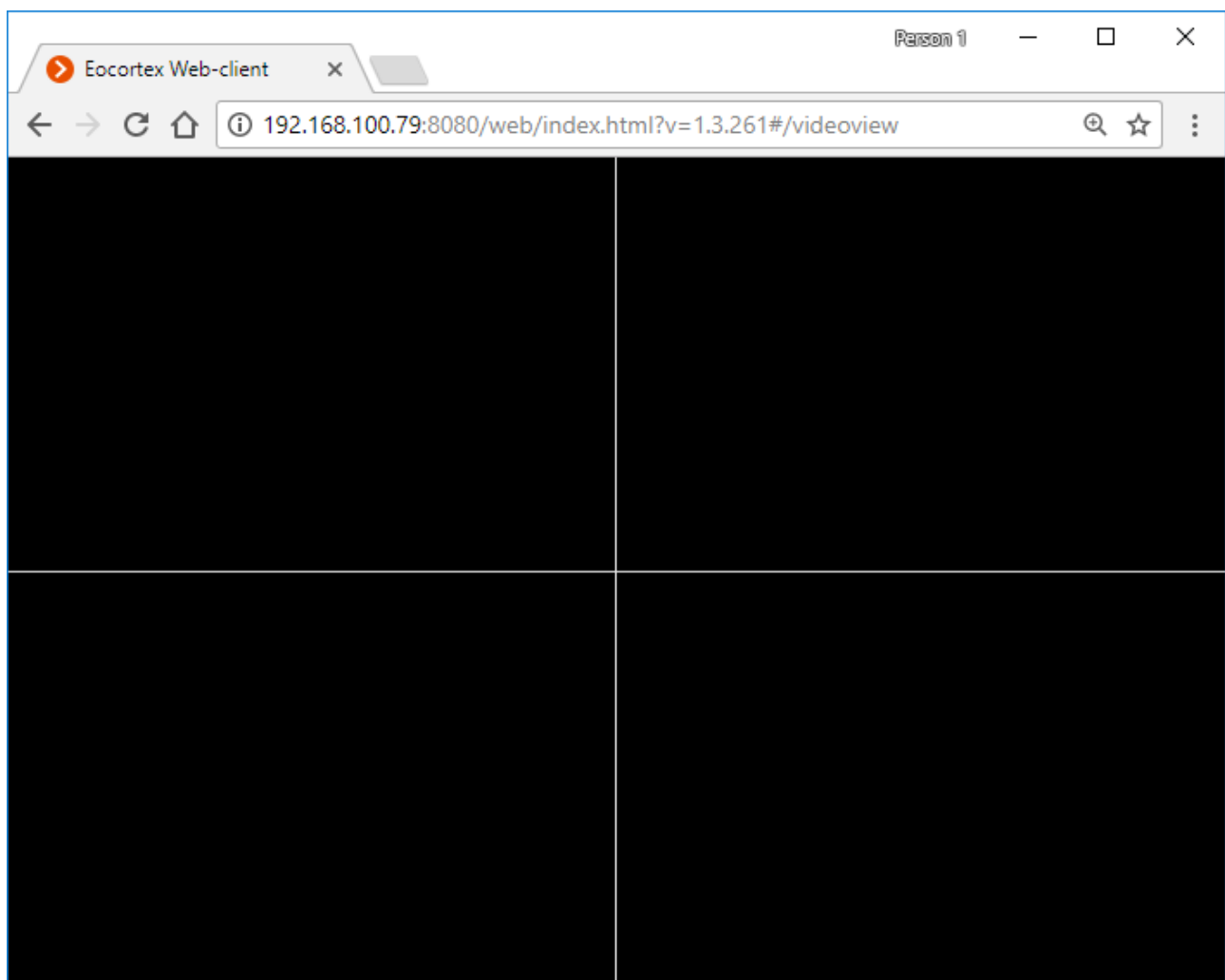
For **Active Directory** accounts, the user name is specified as: **username@domain**; where **domain** is the domain name, **username** is the name of the user in the domain.

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



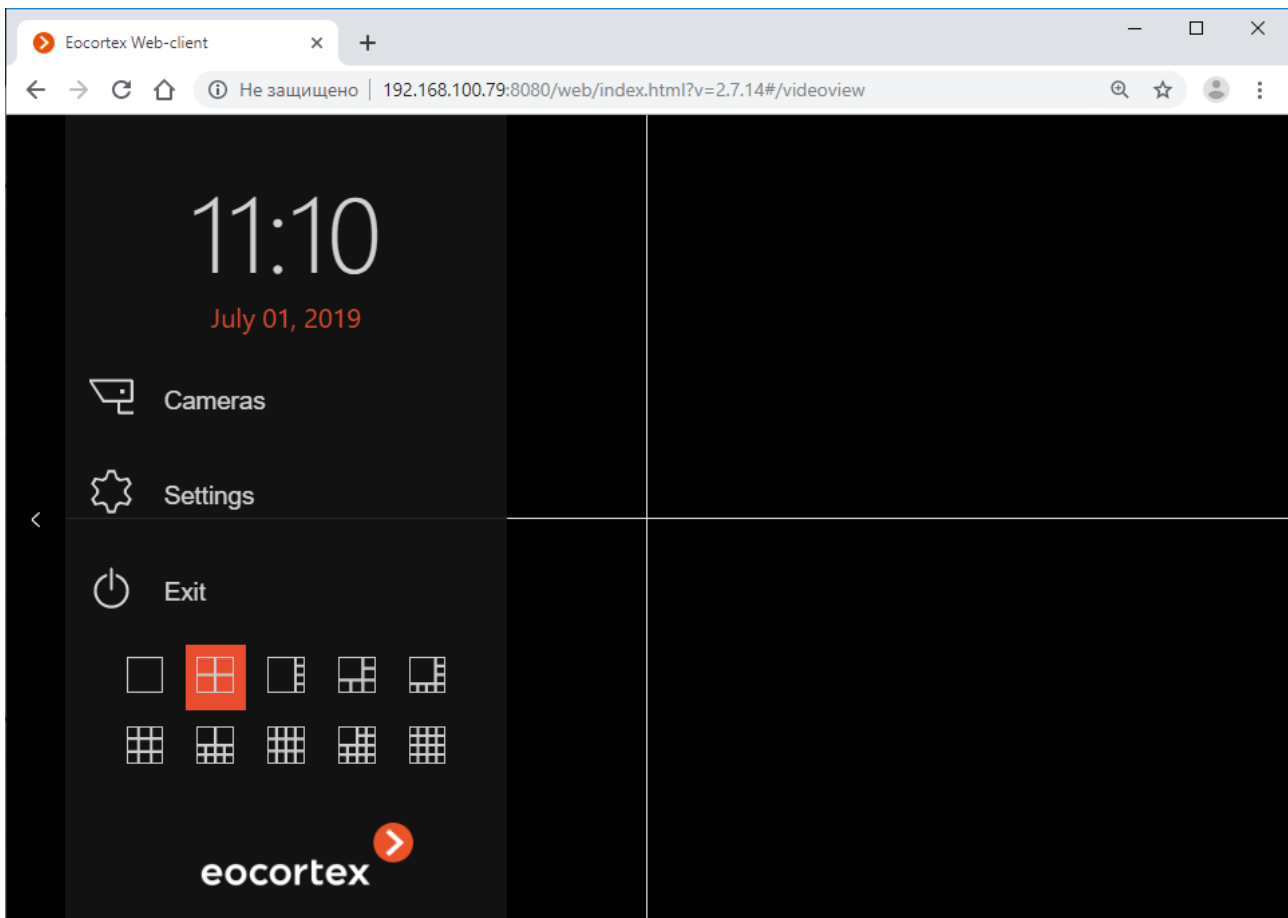
The image shows the login interface of the Eocortex Web Client. It features a red header bar with the 'eocortex' logo and the text 'Eocortex Web Client'. Below the header, there is a 'User' label followed by a text input field containing 'username@mycompany.com'. A 'Password' label is followed by a password input field with masked characters. Below the password field is a checkbox labeled 'Remember me'. At the bottom, there is a large grey 'Log in' button.

In the course of first starting, a blank page (without display from the cameras) will be opened.

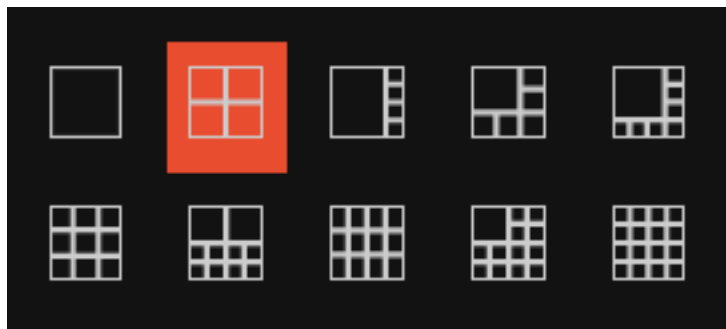


Control panel

The controls in the Eocortex Web Client are similar to the controls in Eocortex Client application. Clicking by the left border of the window opens the control panel.





At the bottom of the control panel, you may select the on-screen grid of the channels.



Exit is a return to authorization form.

Settings opens the settings form, in which you may set the default frame proportions, limit the display frequency for the MJPEG-encoded channels, and select the interface language.

 Settings 

Video proportions

Stretch ▼

Enable display speed limitation (only for MJPEG)

5

frame/sec

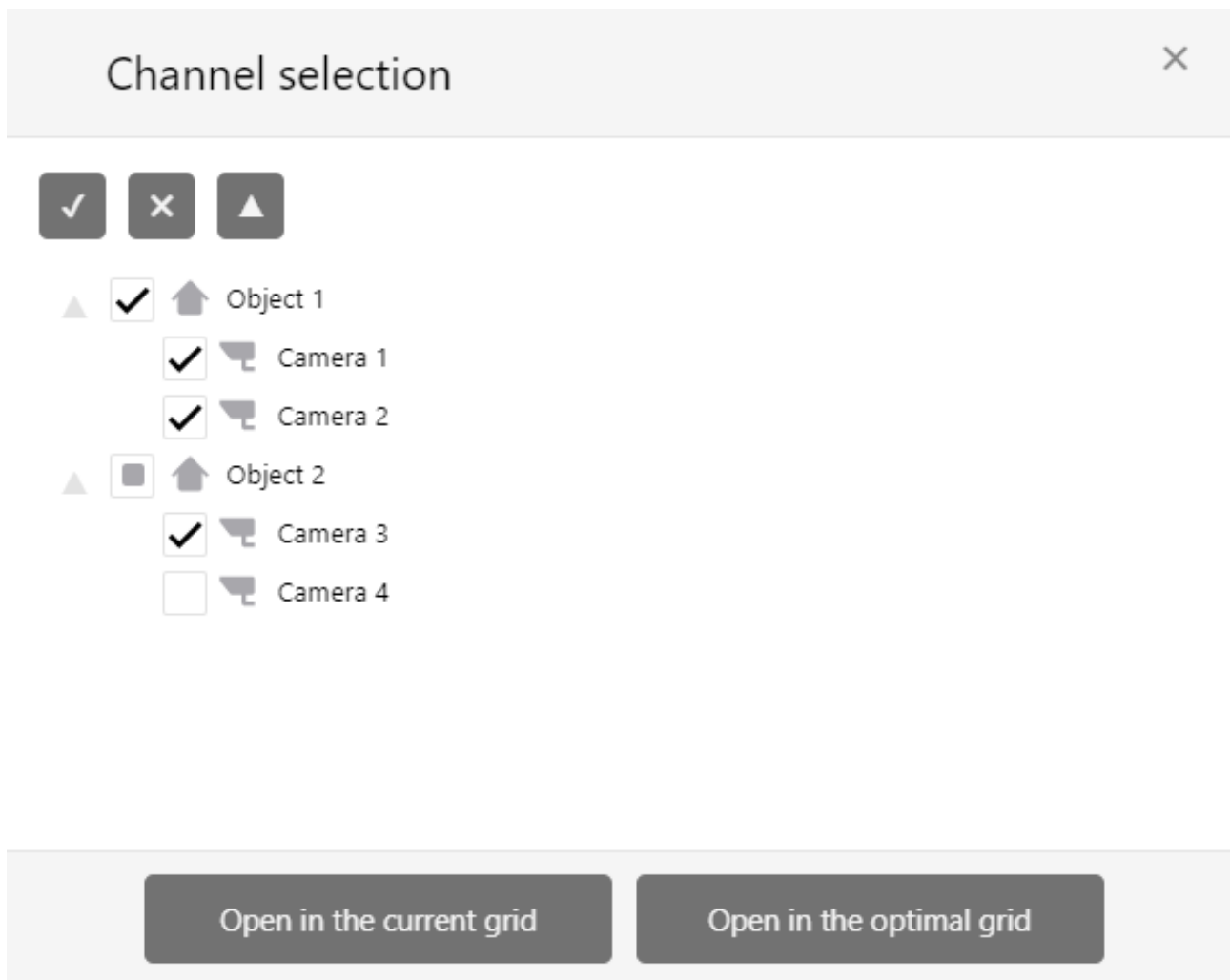
Language selection

English (United States) ▼

Apply


Cancel

Camera opens the selection form of displayed cameras.



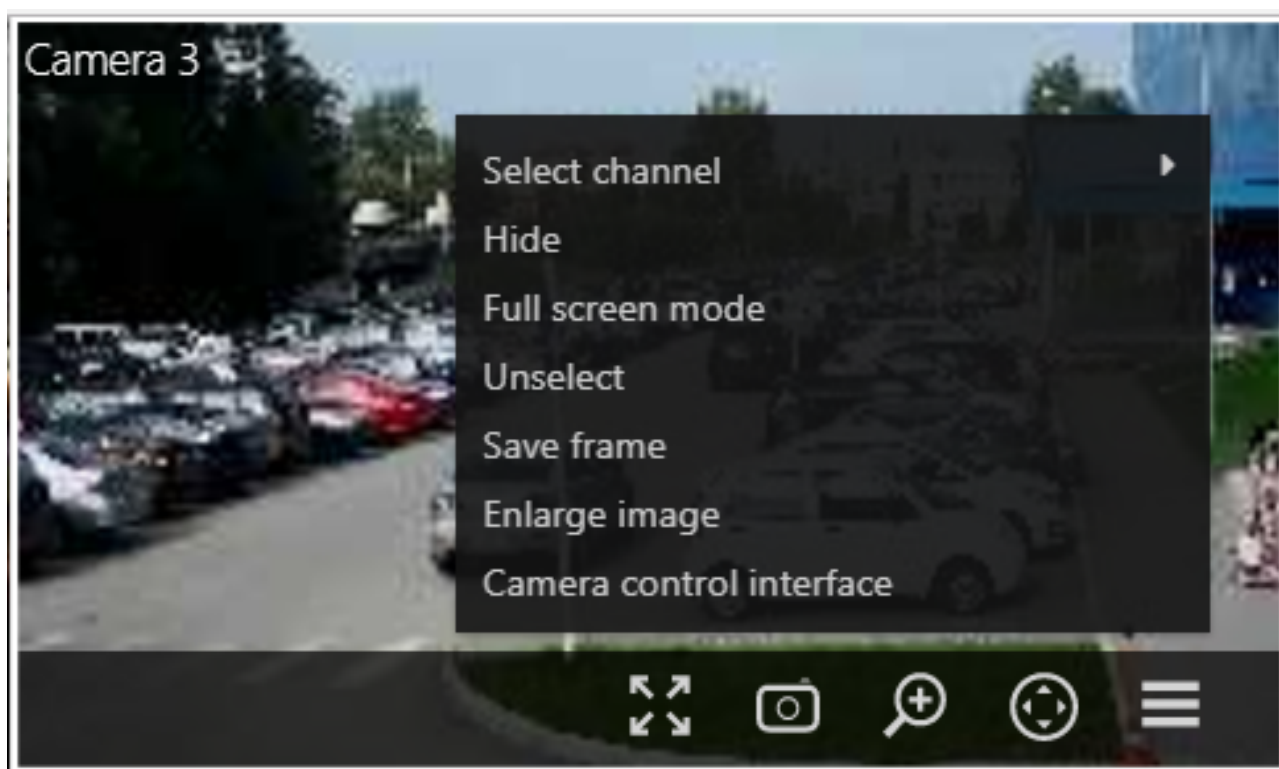
Cell of on-screen grid of channels

In the cells of the on-screen grid a live video from selected cameras is broadcast. One of the cells may be 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 on  icon in the active cell.



Composition of the context menu items and buttons of the active cell depends on the channel settings.



Description of the context menu items and buttons is specified below:

Select camera allows to select the camera which will be displayed in the cell.

Hide camera hides the camera (frees the cell).



Full-screen mode expands the cell to the entire browser window.



The change between the grid mode and full-screen mode is also performed by double-clicking in the grid cell.

Remove selection removes the selection from the cell (makes the cell inactive).



Snapshot 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 is opened.

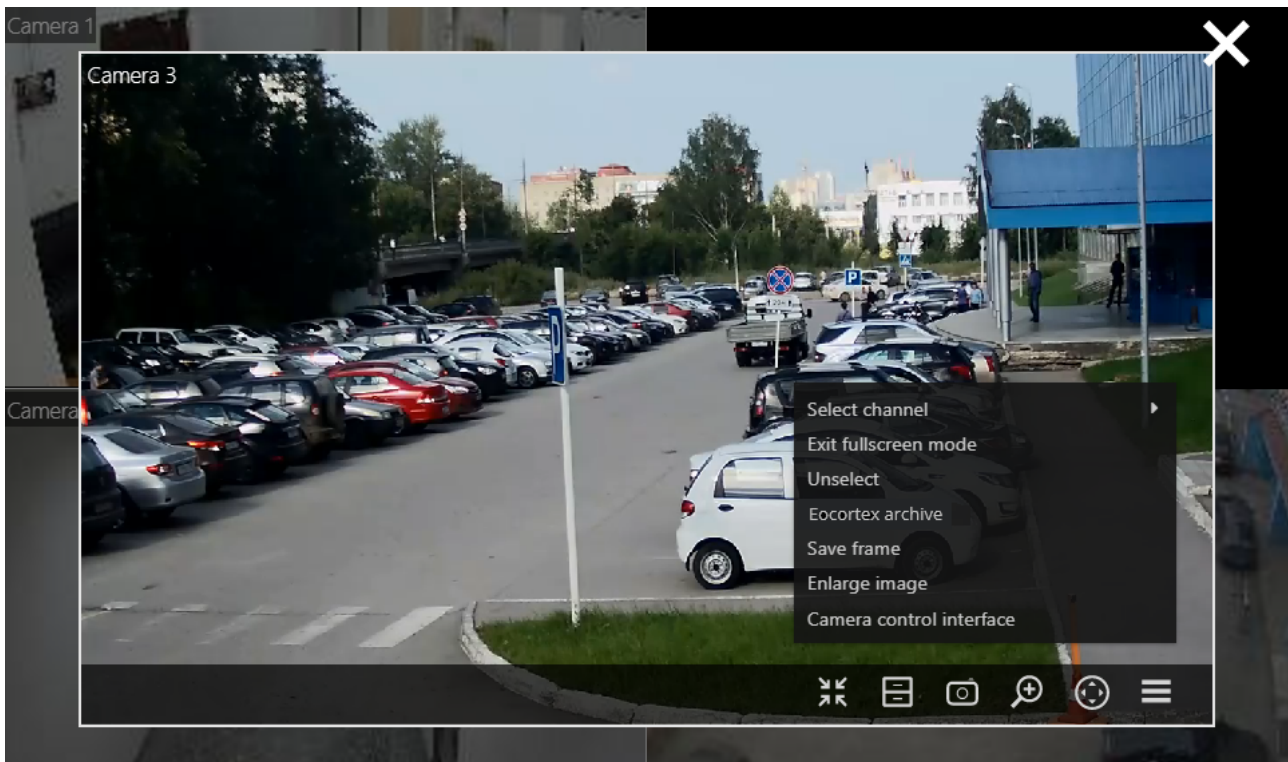


Zoom in displays the enlarged area of the frame. If this menu item is selected (or after clicking on the icon), you should set a frame of zoom area, using a mouse. Multiple zoom is allowed. To return to the full frame display, press the middle mouse button.




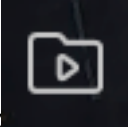
Camera control interface displays PTZ control elements.

Full-screen live viewing



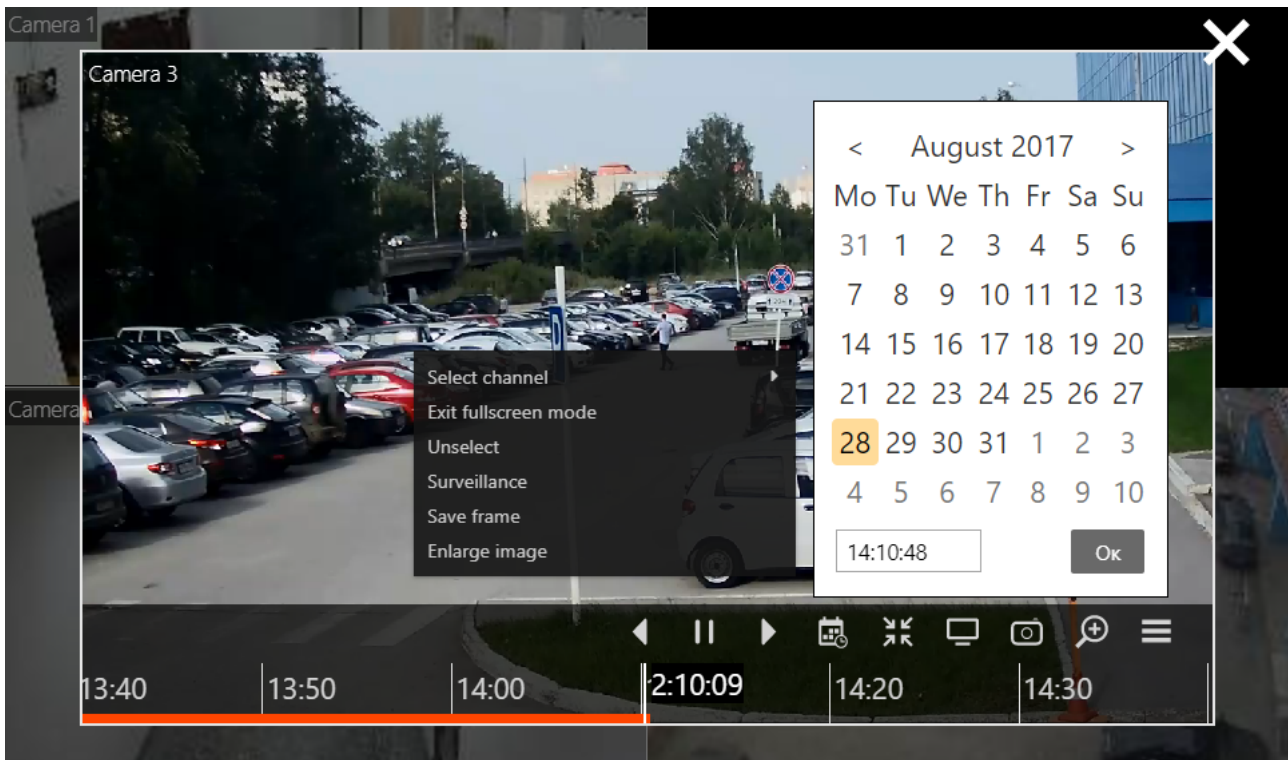
Below you shall find the context menu items and buttons which are specific to full-screen viewing:

Exit full screen mode  is the return to the on-screen grid of channels.

Archive Eocortex  is the switch to the archive playback.

Turn on / off the sound  is turning on / off of the audio broadcast.

Playback of archive



Below you may find a context menu items and buttons which are specific to the archive playback mode:



— player buttons: backward / pause / forward.

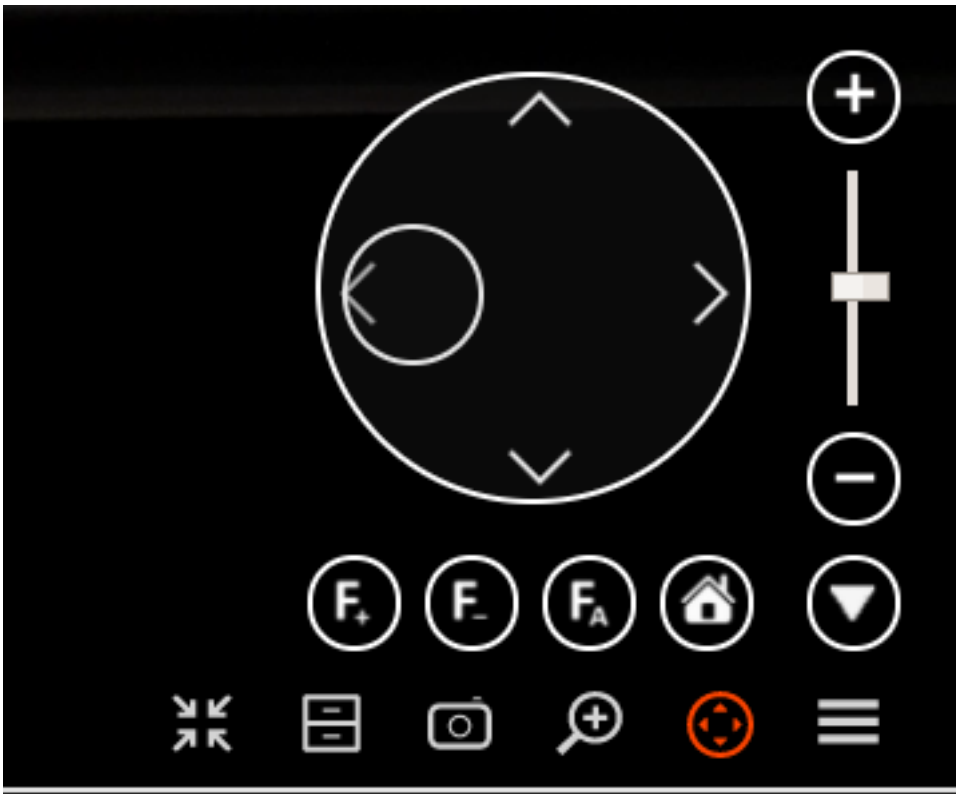


— calendar button for specification of date / time in the archive.



Surveillance is switching to the live view mode.

PTZ control



PTZ controls in the Eocortex web client are similar to the controls in Eocortex Client application.

Camera rotation doing is performed by the joystick: by dragging the target with a mouse (a small circle inside a large circle).

Mobile client for Android

Mobile client for Android is the Android application designed for watching video and listening to audio in real-time mode and from the archive. Connect to the **Eocortex** remote server to access the video. Use IP-address or URI to connect to server. Any available network connection type may be used to connect to the server. The connection must provide access to the server by its address and have adequate bandwidth.



Connect to the **Eocortex** remote server to access the video. Use IP-address or URI to connect to server. Any available network connection type may be used to connect to the server. The connection must provide access to the server by its address and have adequate bandwidth.

Installation of the mobile client

To install **Mobile client for Android** mobile client app on an Android device, find the installation package using **Macroscop** key word in Google Play, then download and install it.

Operation of the mobile client

The control is performed using **Android** standard methods.



The app can operate both in portrait and landscape mode.

When the application is launched for the first time, a login page opens with two buttons: **Connect to video system** and **Log in eocortex Cloud**, which are used to connect to the **Eocortex** and **Eocortex Cloud** video surveillance systems respectively, as well as to configure these connections.

At the bottom of the screen there is a button for viewing the **Demo server**, whose address is located in the cloud. It is also possible to add, edit and delete own servers.



Connect to the video system

Log in the Eocortex Cloud

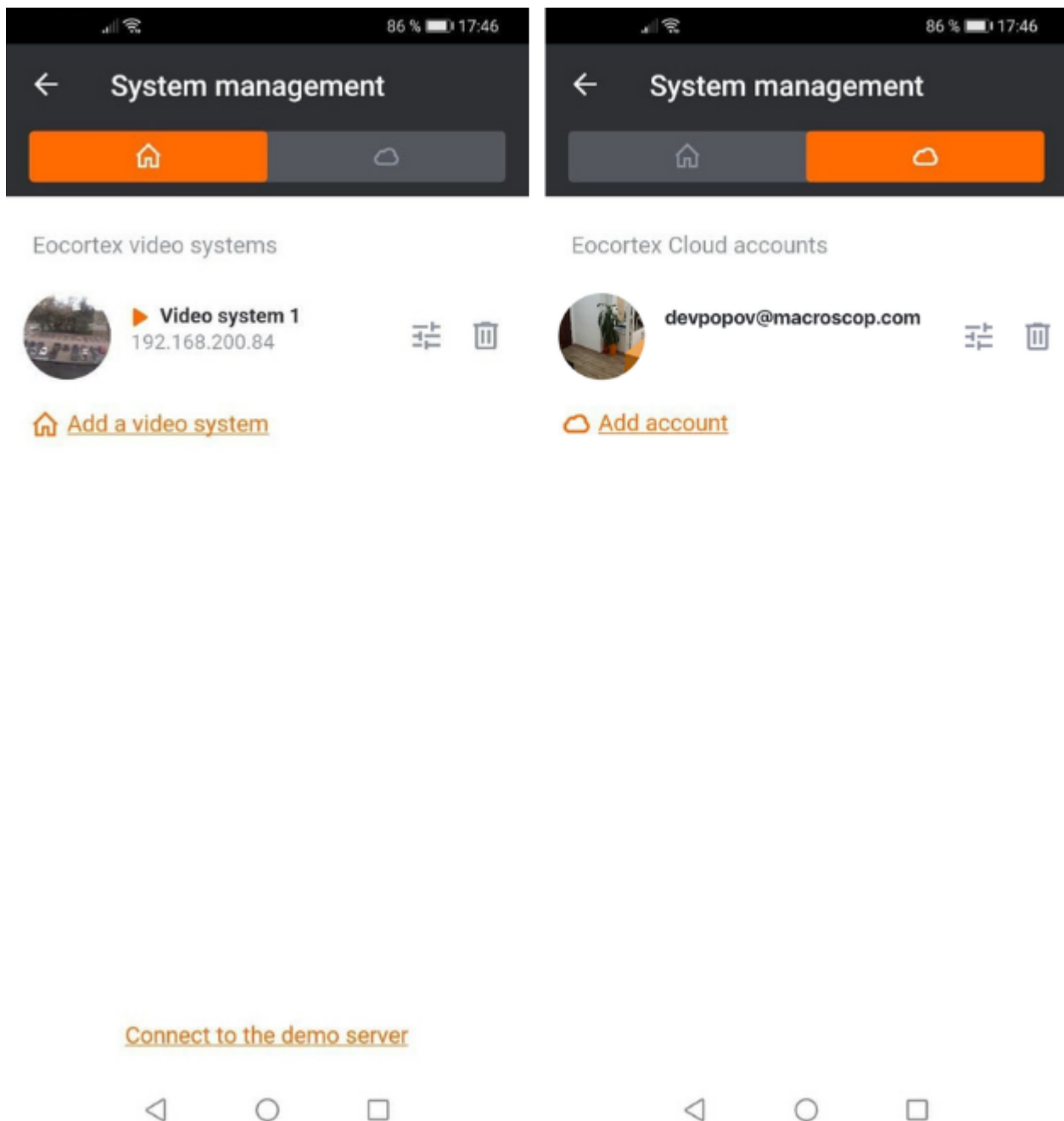
[Connect to the demo server](#)



If there is at least one system, a **Video Surveillance Server**, or a **Cloud Account**, then when the application is launched, a list of available systems is displayed. Switching between the lists is performed using the buttons on top: **Video surveillance servers** and **Cloud accounts**.



If the connection to the server has been successful, the list for this server will display a preview of the first frame received from the server instead of the icon.

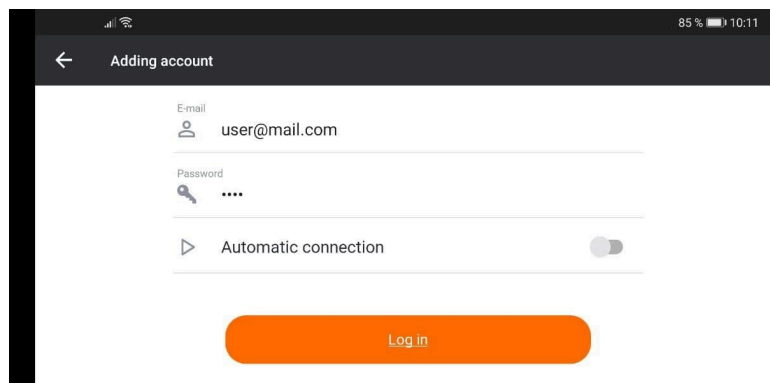



Upon selecting a system, a window with the real-time video from the cameras connected to the system is opened.

To add a cloud account, it is required to enter the username and password.

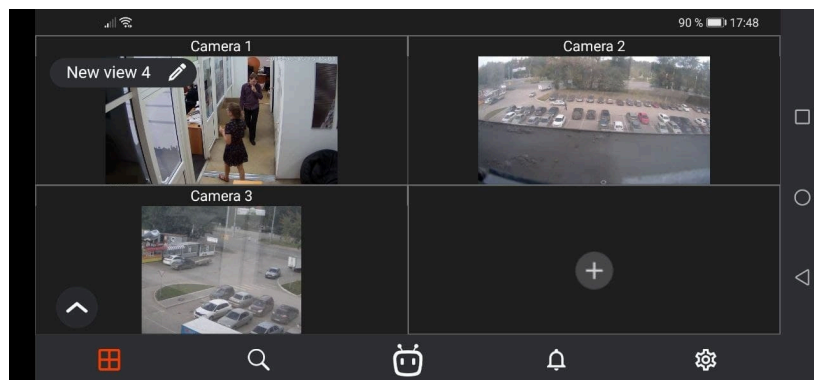


The email must comply with the applicable standard, and the password field cannot be empty. It will not be possible to save an account with the data entered incorrectly.



-  If there is no available system, then, when a cloud account is added, it automatically becomes an auto-connection server. This setting, however, is not displayed in the list.






Viewing in the grid mode



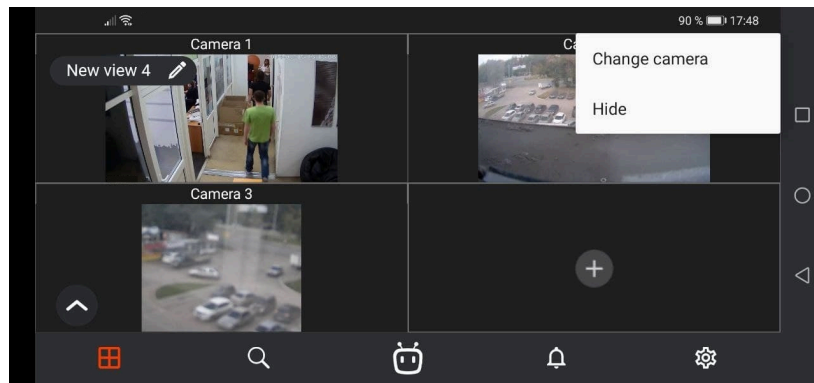
Touching a camera in a cell expands the image from this camera to full screen.

Upon a long press in a camera cell a context menu is opened allowing to select another camera in this cell for viewing or clear the cell.

The following navigation buttons are located in the lower part of the screen:

-  : View selection.
-  : Selection of camera for full screen viewing.
-  : Activation of voice assistant.
-  : Reviewing notifications.
-  : Opening settings.


A long press in the cell opens the context menu that allows to change or hide a camera in this cell.

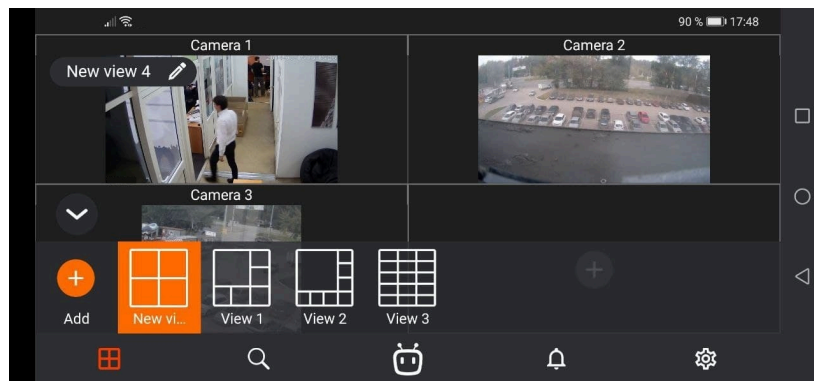


If no camera is selected in the cell, then the menu allowing to select a camera can be opened by pressing

the  button.

Selecting a view


The view selection menu is opened when the  button is pressed.

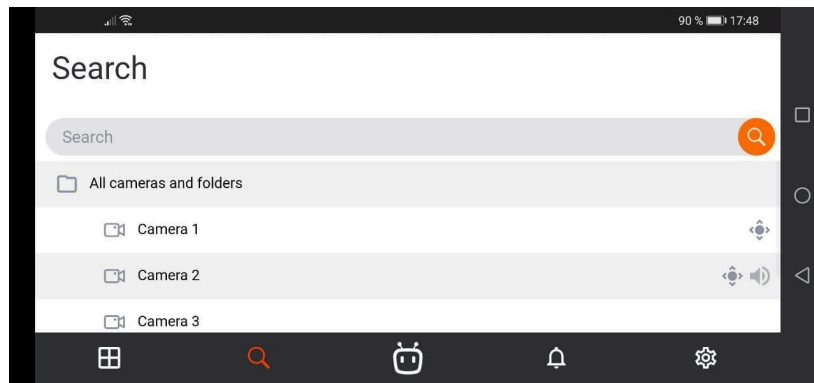


A view is the preliminarily set up screen grid with the cameras already placed in the cells.

It is possible to select views preset centrally by the system administrator as well as the views set by the current user of a given device.

Selecting a camera

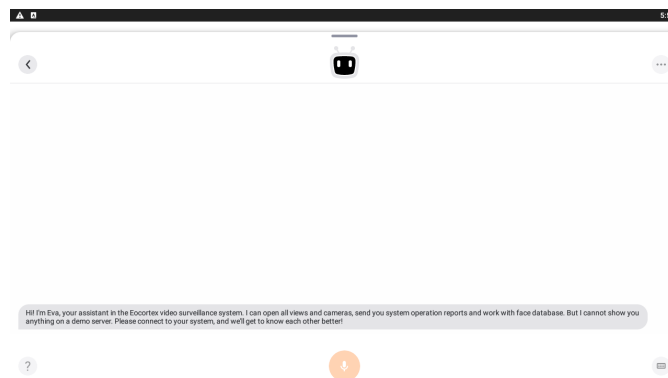
Pressing the  button opens the camera selection window. When a camera is selected, it is opened in a full screen mode.



Smart assistant



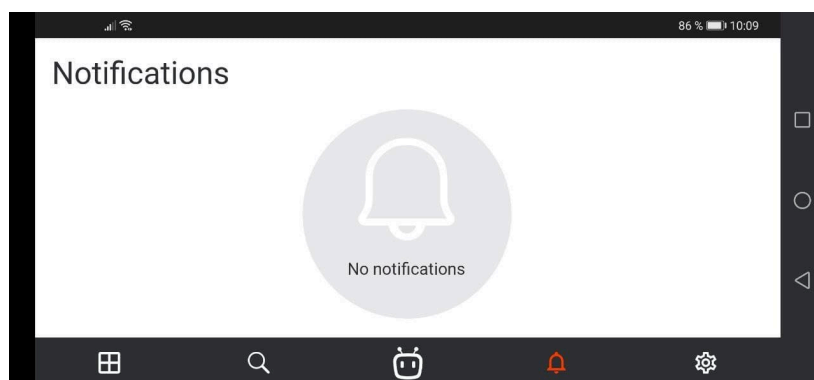
The smart assistant window is opened by pressing the button. The smart assistant allows to interact with the application using voice or text commands.



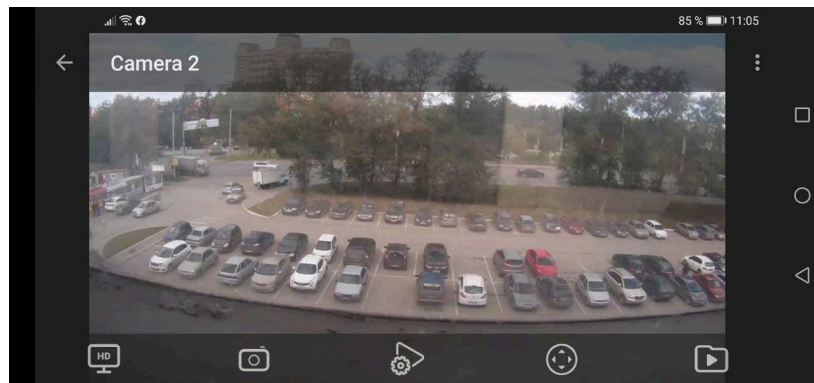
Notifications








Pressing the button opens the notifications window.




Full screen view



In the full screen mode, the following actions are available by pressing the corresponding buttons:


-  : Save a frame to your device's Images.
-  : Start a user task (only for those cameras that have user tasks set).
-  : Open PTZ camera controls (only for PTZ cameras).
-  : Go to viewing video archives.
-  : Image quality.


 If HD quality is enabled and the transcoding to MJPEG option is disabled, the main stream is requested.

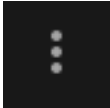
If both HD quality and the transcoding to MJPEG option are enabled, the main stream in MJPEG format is requested. In this case, if the original stream is encoded in a different format, the high-quality recoded stream is requested.

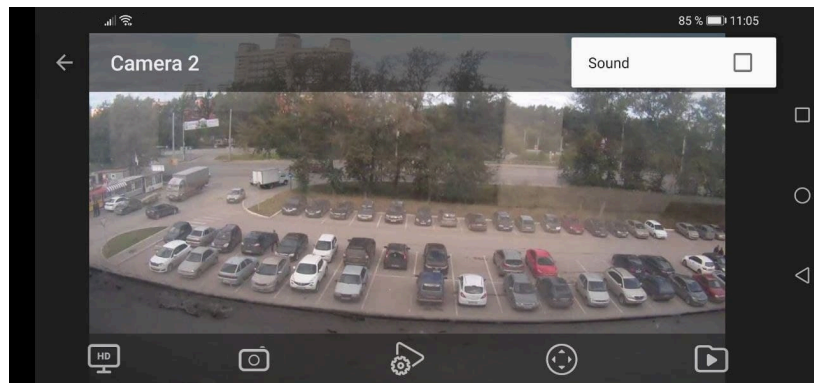
If both HD quality and the transcoding to MJPEG option are disabled, an alternative stream is requested. In this case, if the alternative stream is not configured on the camera, a medium-resolution stream intended for mobile devices is requested.

If HD quality is off and the transcoding to MJPEG option is on, an alternative stream is requested. In this case, if the alternative stream in MJPEG format is not configured on the camera, the medium-resolution stream intended for mobile devices is requested.

 By default, when opening the camera, the high image quality is turned on.

 The higher the quality, the larger the amount of data transmitted over the network.

If the camera is broadcasting audio, the audio on/off button  is displayed.



User tasks



If one or more user tasks have been set for a camera, pressing the button will open the task start menu.

Some tasks require a confirmation to be started.

PTZ

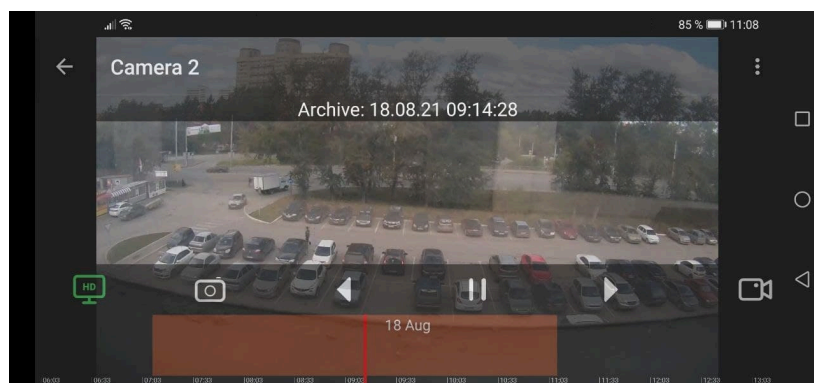


For PTZ cameras, pressing the button displays the on-screen joystick and other camera controls.

Archive

To play back the camera archive, it is required to expand it to the full screen mode in the viewing mode

and press the button on-screen.






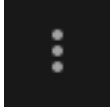
The archive fragment panel superimposed on the timeline is located in the lower part of the screen.

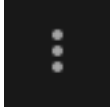
To find a required point in the archive, touch the screen in the corresponding place.

The timeline scale can be increased/decreased by expanding/contracting the scale using two fingers.

The following actions are available in the archive playback mode by pressing the corresponding on-screen buttons:

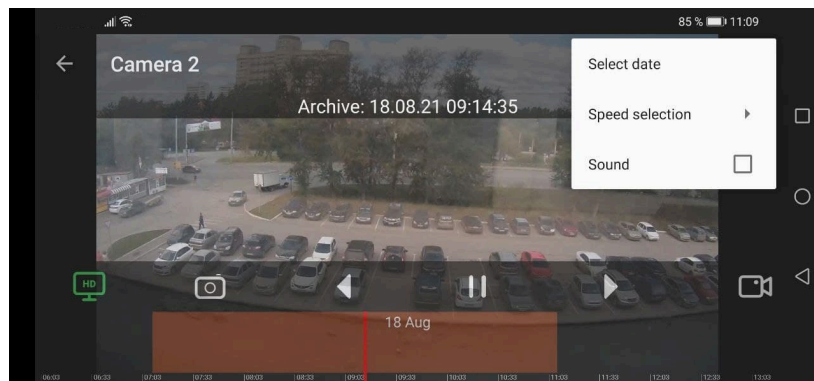
-  : Save frame to your device's Images.
-  : Return to viewing real-time video.
-  : Image quality.



Pressing the  button opens the menu where it is possible to turn on and off the sound on a channel, playback speed and the date and time to start the playback from.



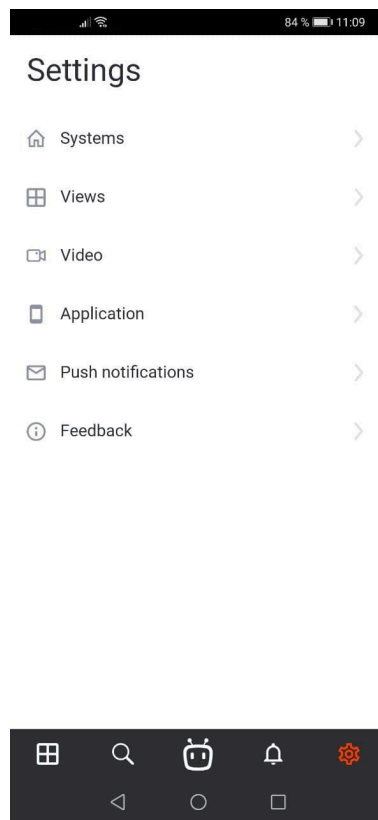
However, the higher the quality and speed, the larger is the amount of data transmitted via the network.



Settings

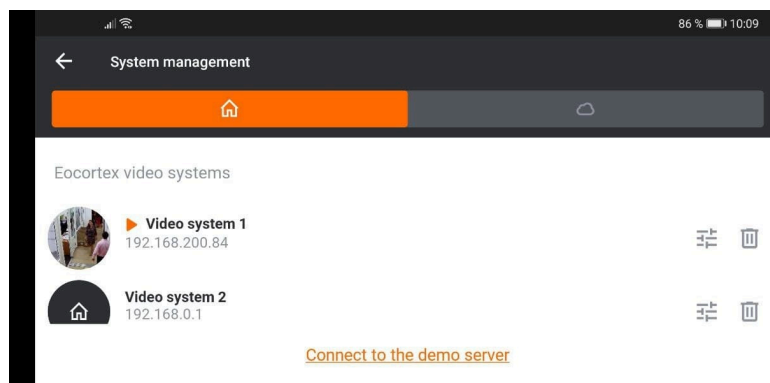



Press the  button to go to settings.



Settings screens are described below.

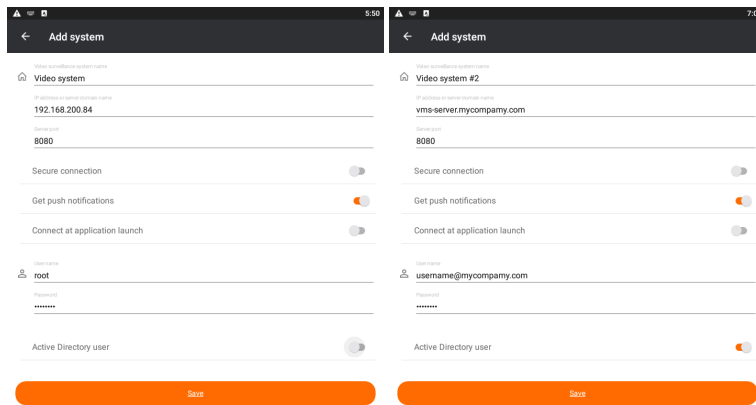
System settings



-  By default, the list of systems contains demo servers. A user has no access to the parameters of connection to the demo servers. At the same time, the demo servers can be deleted from the list of systems.

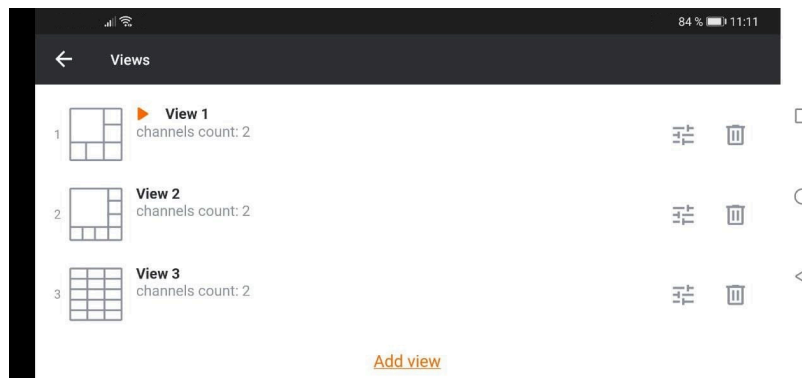
To connect to a video surveillance system, it is required to specify the corresponding IP address and port or the domain name of one of the video surveillance servers, user name and password of the video surveillance system user, as well as some other parameters.

-  The connection parameters are provided by a video surveillance system administrator.

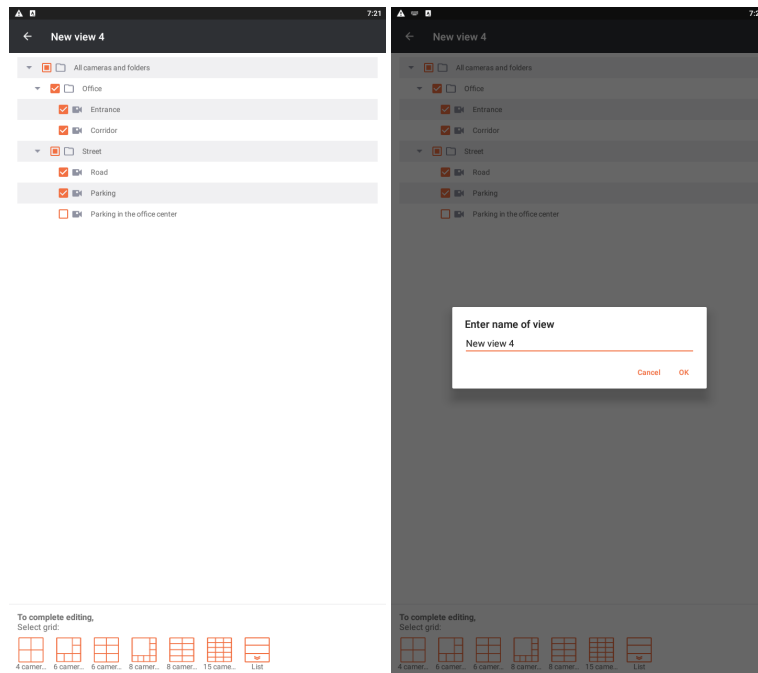


Views

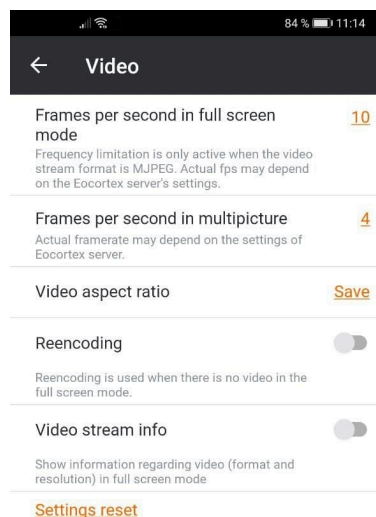
Views are screen grids with cameras placed on them.



When adding and modifying a view, it is required to select the cameras, then choose a screen grid, and finally name the view.



Video setup

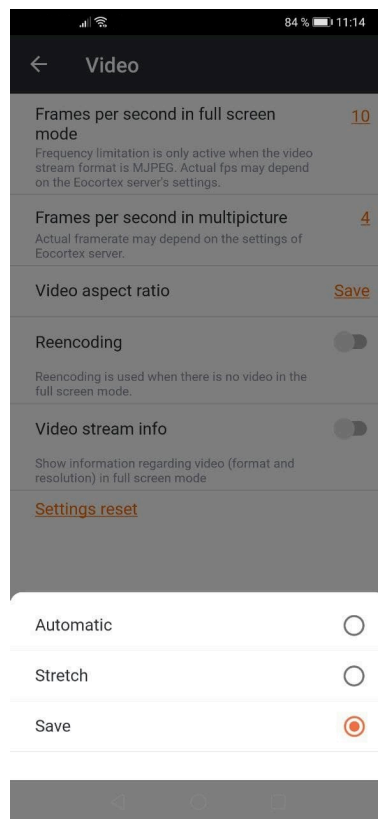


Before setting framerate and reencoding, it is advisable to consult the video surveillance system administrator since these settings may not work on all the cameras and may also be ineffective.

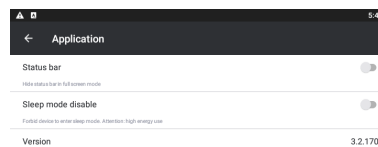
The **Video aspect ratio** setting allows to choose how the video will be scaled in the cells:

- **Automatic:** the application automatically determines if the image is to be stretched or the aspect ratio is to be preserved.

- **Stretch:** the image will be stretched in the cell;
- **Save:** the aspect ratio set by the camera will be used.



Application settings



Mobile client for iOS

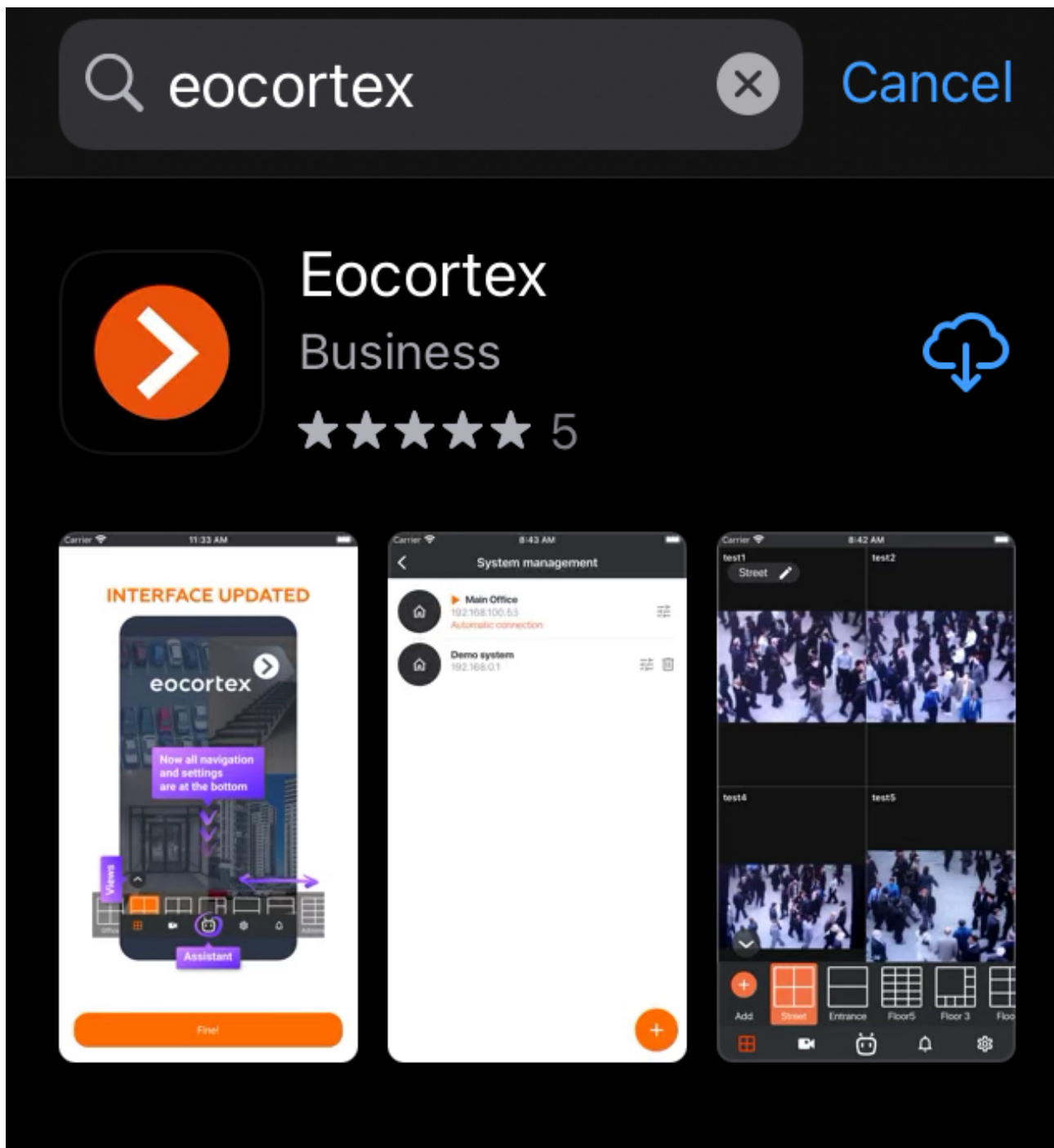
Mobile client for iOS is the iOS application designed for watching video and listening to audio in real-time mode and from the archive.



Connect to the **Eocortex** remote server to access the video. Use IP-address or URI to connect to server. Any available network connection type may be used to connect to the server. The connection must provide access to the server by its address and have adequate bandwidth.

Installation of the mobile client

To install **Mobile client for iOS** mobile client app on an **iOS** device, find the installation package using **Macroscop** key word in **App Store**, then download and install it.



The application operates under **iOS** of version 8.0 and later.

Operation of the mobile client

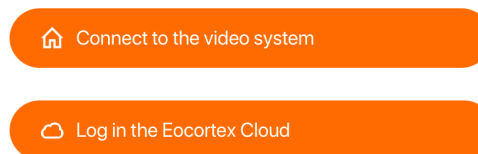
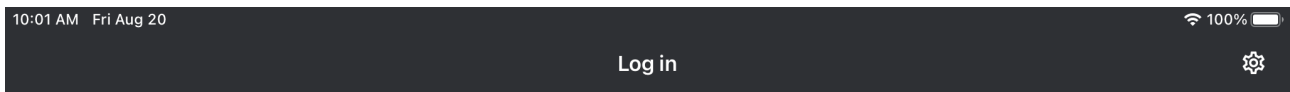
The control is performed using **iOS** standard methods.



The app can operate both in portrait and landscape mode.

When the application is launched for the first time, a login page opens with two buttons: **Connect to video system** and **Log in eocortex Cloud**, which are used to connect to the **Eocortex** and **Eocortex Cloud** video surveillance systems respectively, as well as to configure these connections.

At the bottom of the screen there is a button for viewing the **Demo server**, whose address is located in the cloud. It is also possible to add, edit and delete own servers.



[Connect to the demo server](#)

If there is at least one system, a **Video Surveillance Server**, or a **Cloud Account**, then when the application is launched, a list of available systems is displayed. Switching between the lists is performed using the buttons on top: 🏠 **Video surveillance servers** and ☁️ **Cloud accounts**.



If the connection to the server has been successful, the list for this server will display a preview of the first frame received from the server instead of the icon.

10:10 AM Fri Aug 20

98%

Log in

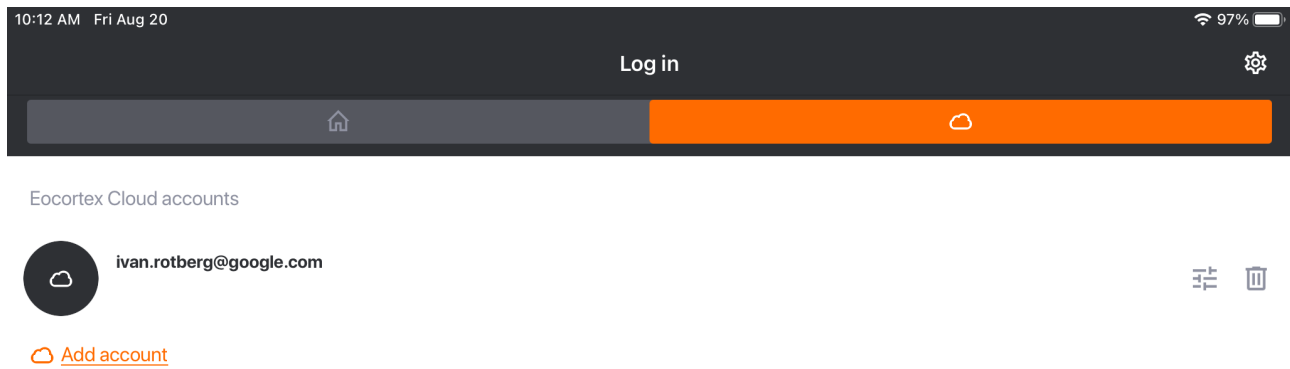
Eocortex video systems

Video system 1
192.168.0.1

Video system 2
vms-server.mycompany.com

[Add a video system](#)

[Connect to the demo server](#)



Upon selecting a system, a window with the real-time video from the cameras connected to the system is opened.

To add a cloud account, it is required to enter the username and password.



The email must comply with the applicable standard, and the password field cannot be empty. It will not be possible to save an account with the data entered incorrectly.

2:03 PM Sat Aug 21

76%

< Adding account

E-mail
username@maildomain.com

Password

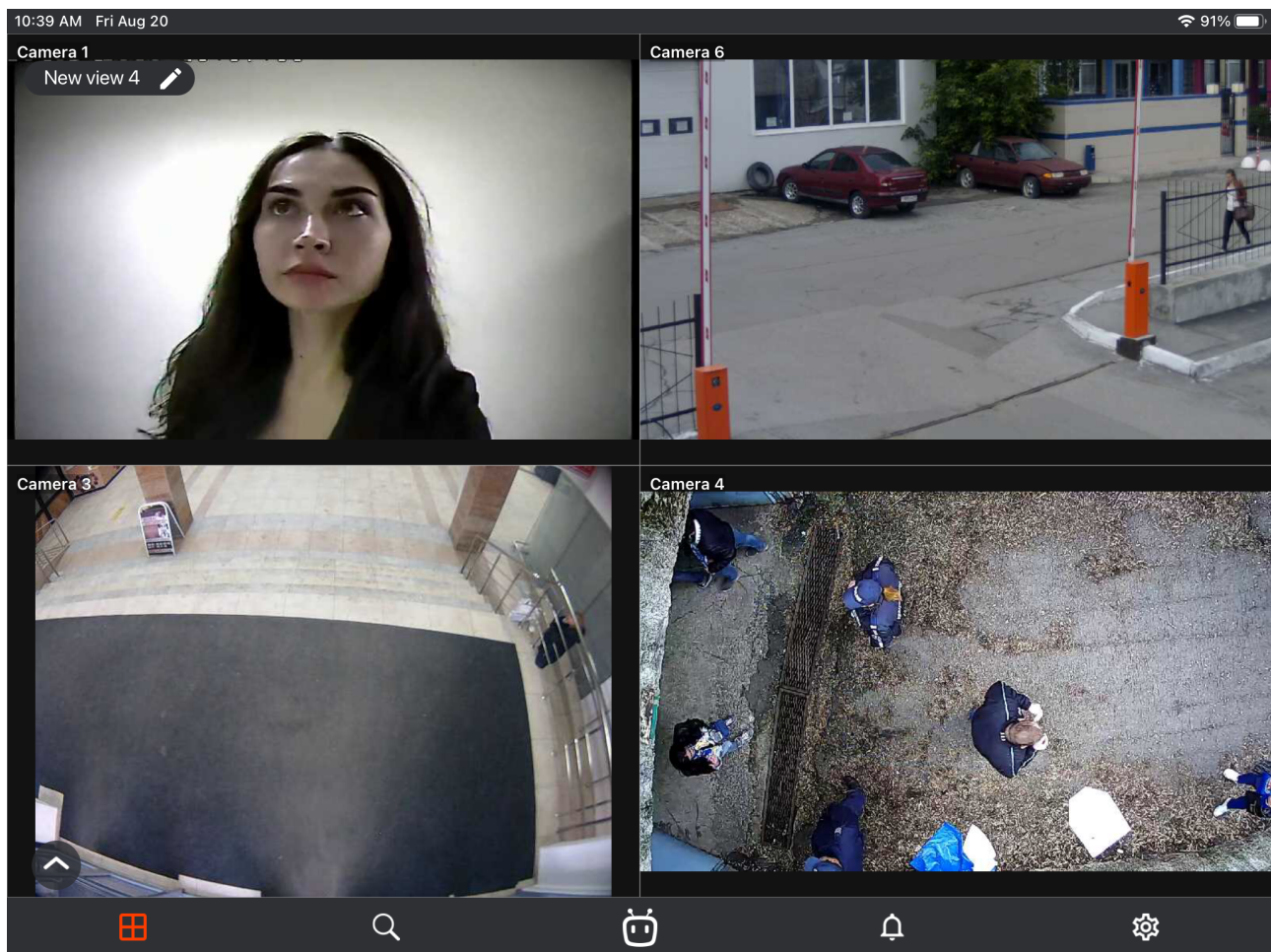
Automatic connection ☒

[Log in](#)



If there is no available system, then, when a cloud account is added, it automatically becomes an auto-connection server. This setting, however, is not displayed in the list.






Viewing in the grid mode



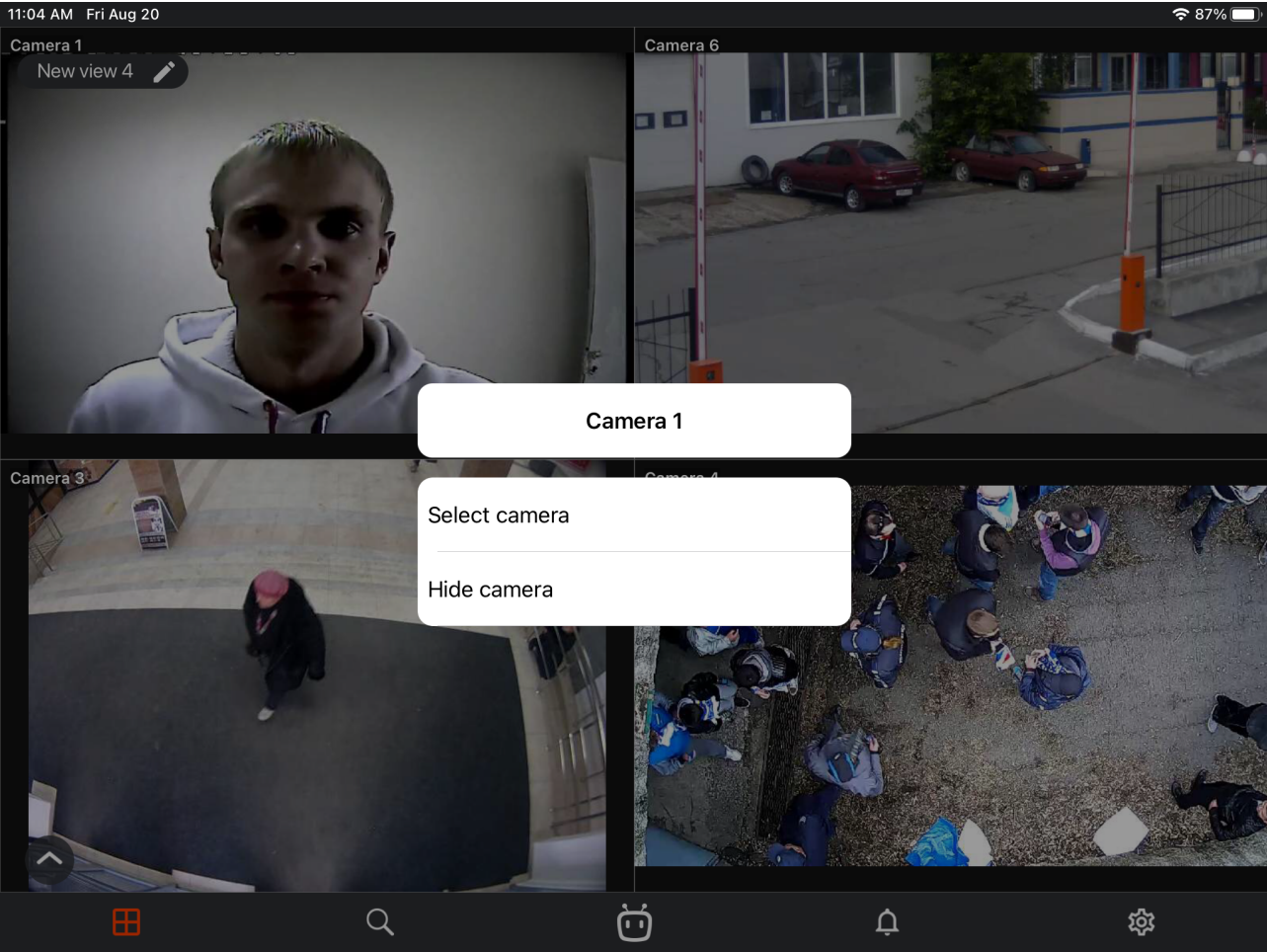
Touching a camera in a cell expands the image from this camera to full screen.

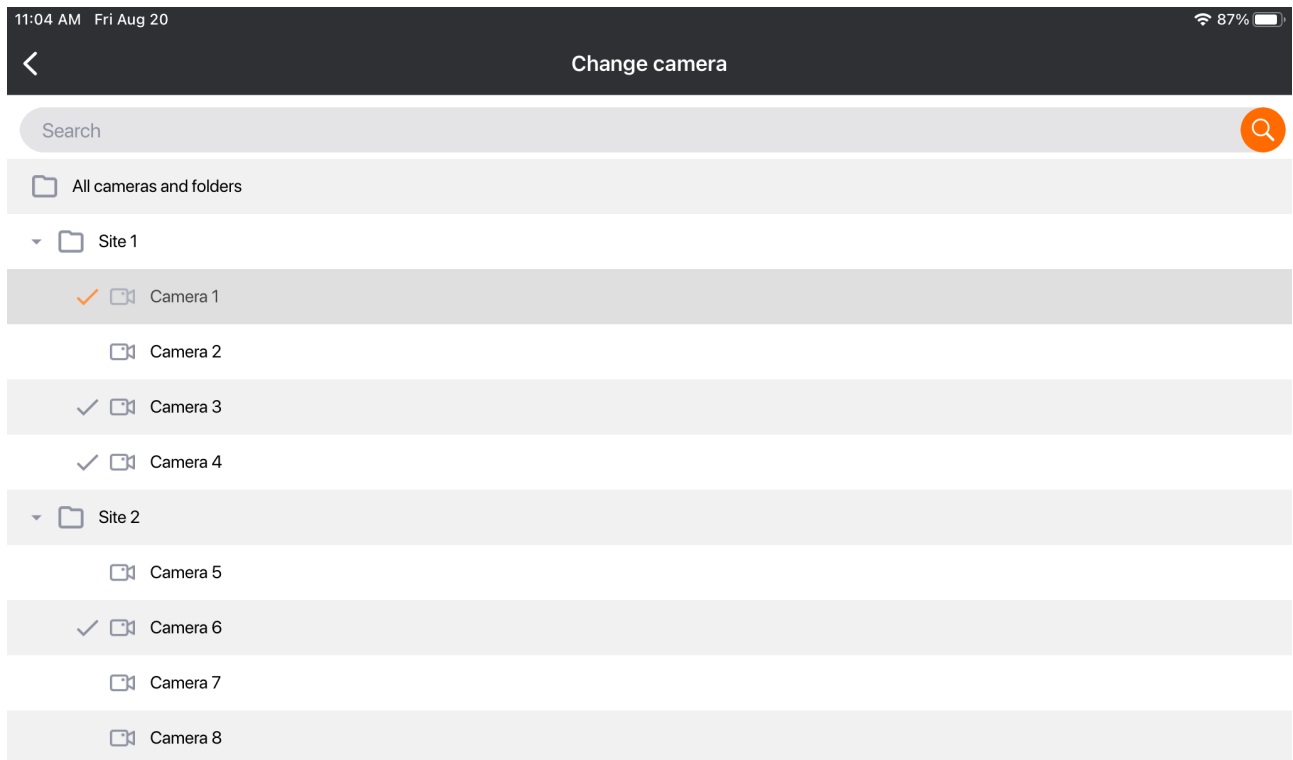
Upon a long press in a camera cell a context menu is opened allowing to select another camera in this cell for viewing or clear the cell.

The following navigation buttons are located in the lower part of the screen:

-  : View selection.
-  : Selection of camera for full screen viewing.
-  : Activation of voice assistant.
-  : Reviewing notifications.
-  : Opening settings.

A long press in the cell opens the context menu that allows to change or hide a camera in this cell.




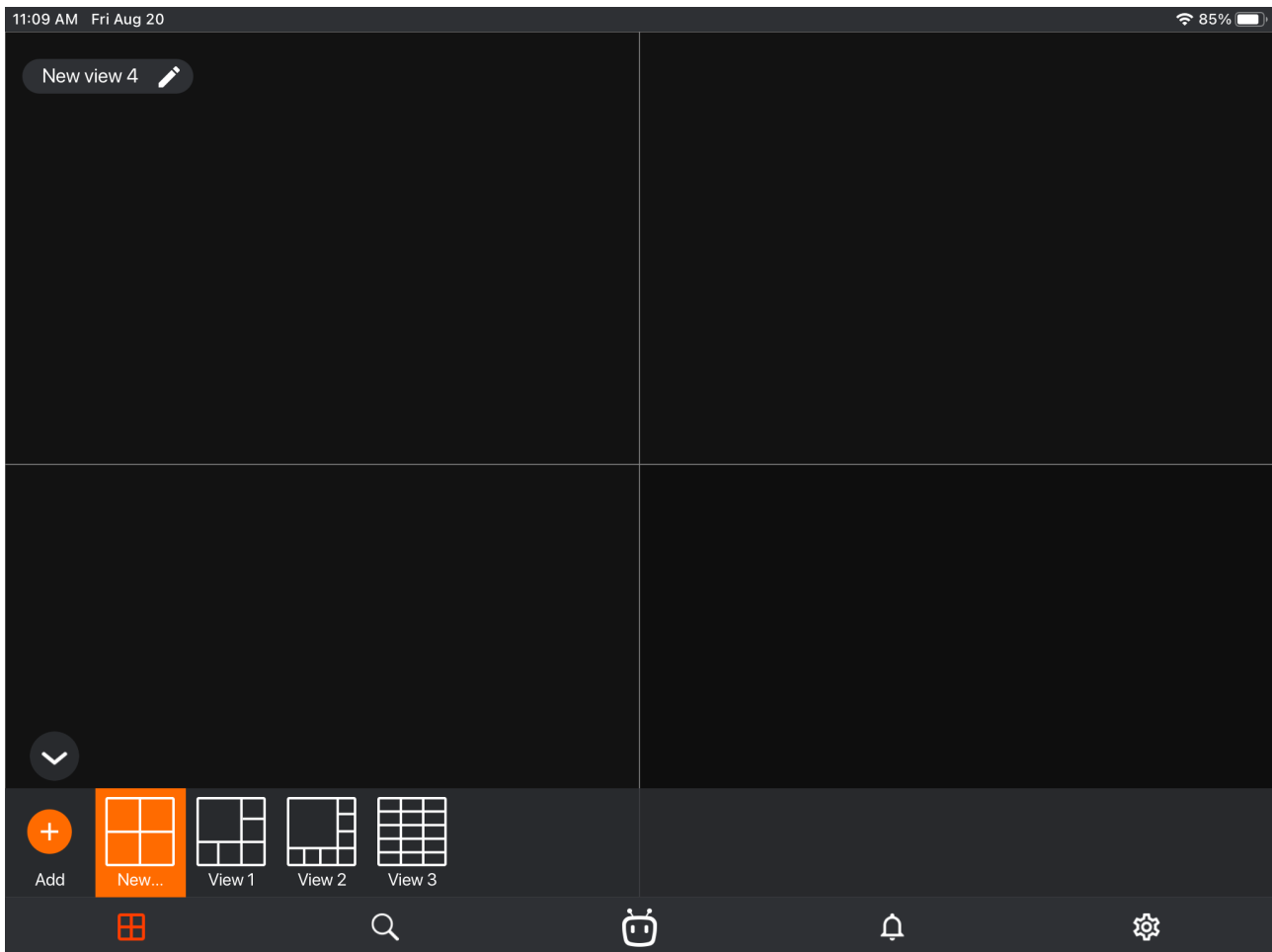


If no camera is selected in the cell, then the context menu allowing to select a camera can be opened by

pressing the  button.

Selecting a view

The view selection menu is opened when the  button is pressed.



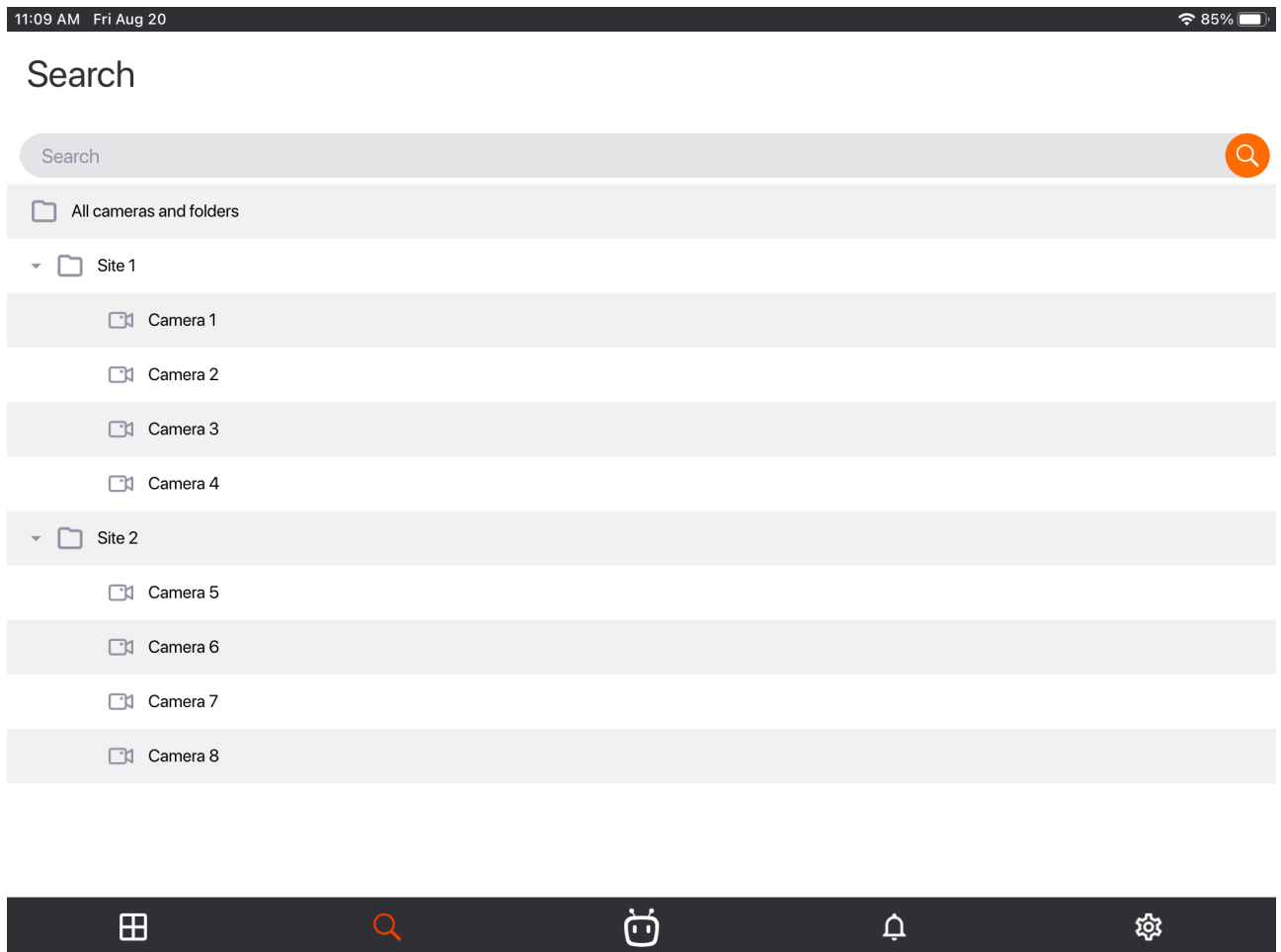
A view is the preliminarily set up screen grid with the cameras already placed in the cells.

It is possible to select views preset centrally by the system administrator as well as the views set by the current user of a given device.

Selecting a camera



Pressing the button opens the camera selection window. When a camera is selected, it is opened in a full screen mode.



Smart assistant



The smart assistant window is opened by pressing the button. The smart assistant allows to interact with the application using voice or text commands.



Hi! I'm Eva, your assistant in the Eocortex video surveillance system. I can open all views and cameras, send you system operation reports and work with face database. But I cannot show you anything on a demo server. Please connect to your system, and we'll get to know each other better!



Notifications

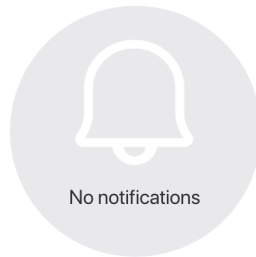


Pressing the button opens the notifications window.

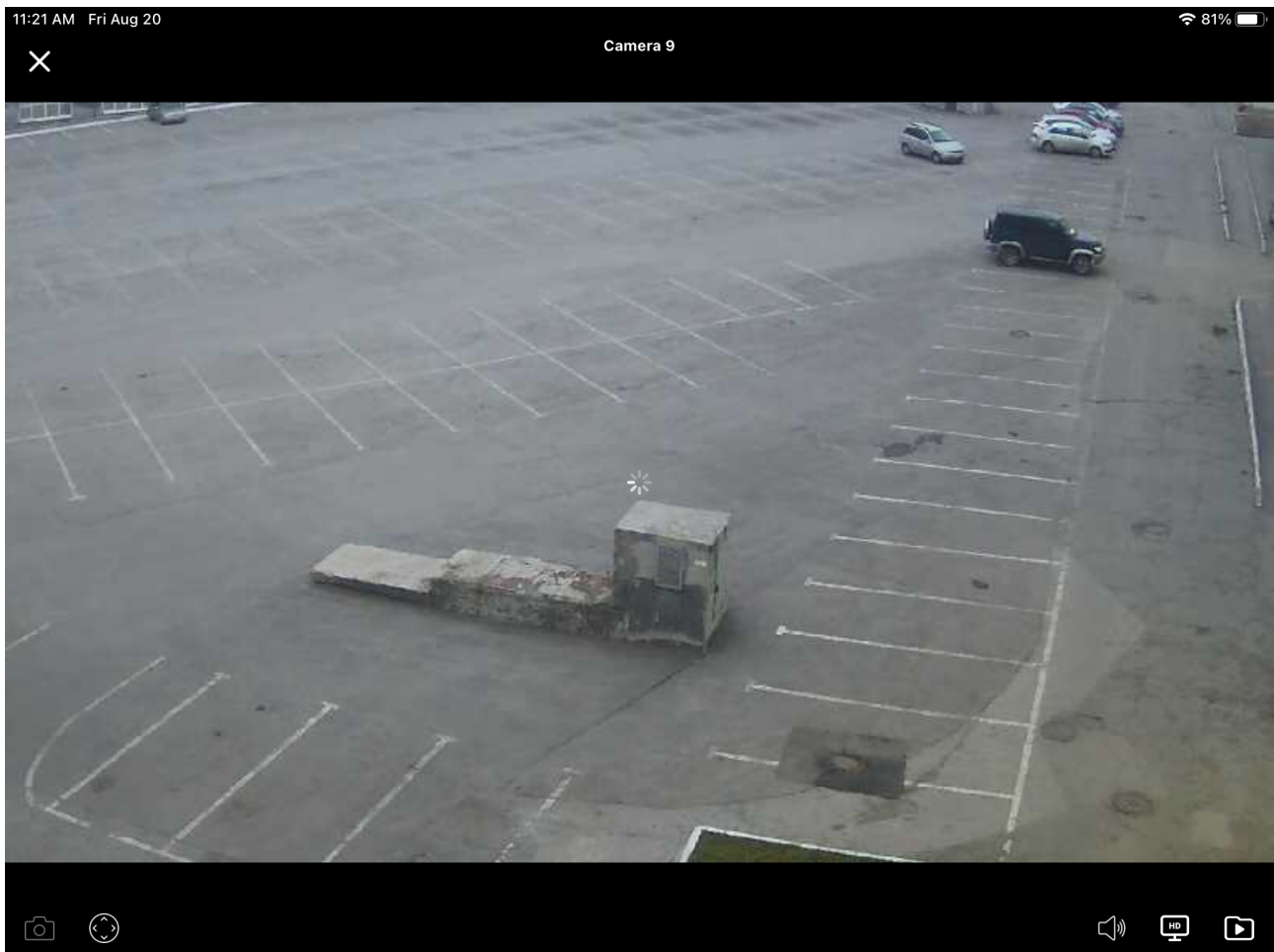
11:12 AM Fri Aug 20

84% 






Notifications




Full screen view



In the full screen mode, the following actions are available by pressing the corresponding buttons:

-  : Save a frame to your device's Images.
-  : Start a user task (only for those cameras that have user tasks set).
-  : Open PTZ camera controls (only for PTZ cameras).
-  : Image quality.
-  : Go to viewing video archives.

 If HD quality is enabled and the transcoding to MJPEG option is disabled, the main stream is requested.

- ① If both HD quality and the transcoding to MJPEG option are enabled, the main stream in MJPEG format is requested. In this case, if the original stream is encoded in a different format, the high-quality recoded stream is requested.

If both HD quality and the transcoding to MJPEG option are disabled, an alternative stream is requested. In this case, if the alternative stream is not configured on the camera, a medium-resolution stream intended for mobile devices is requested.

If HD quality is off and the transcoding to MJPEG option is on, an alternative stream is requested. In this case, if the alternative stream in MJPEG format is not configured on the camera, the medium-resolution stream intended for mobile devices is requested.

- ① By default, when opening the camera, the high image quality is turned on.
- ① The higher the quality, the larger the amount of data transmitted over the network.



If the camera is broadcasting audio, the audio on/off button is displayed.

User tasks



If one or more user tasks have been set for a camera, pressing the button will open the task start menu.

Some tasks require a confirmation to be started.

PTZ



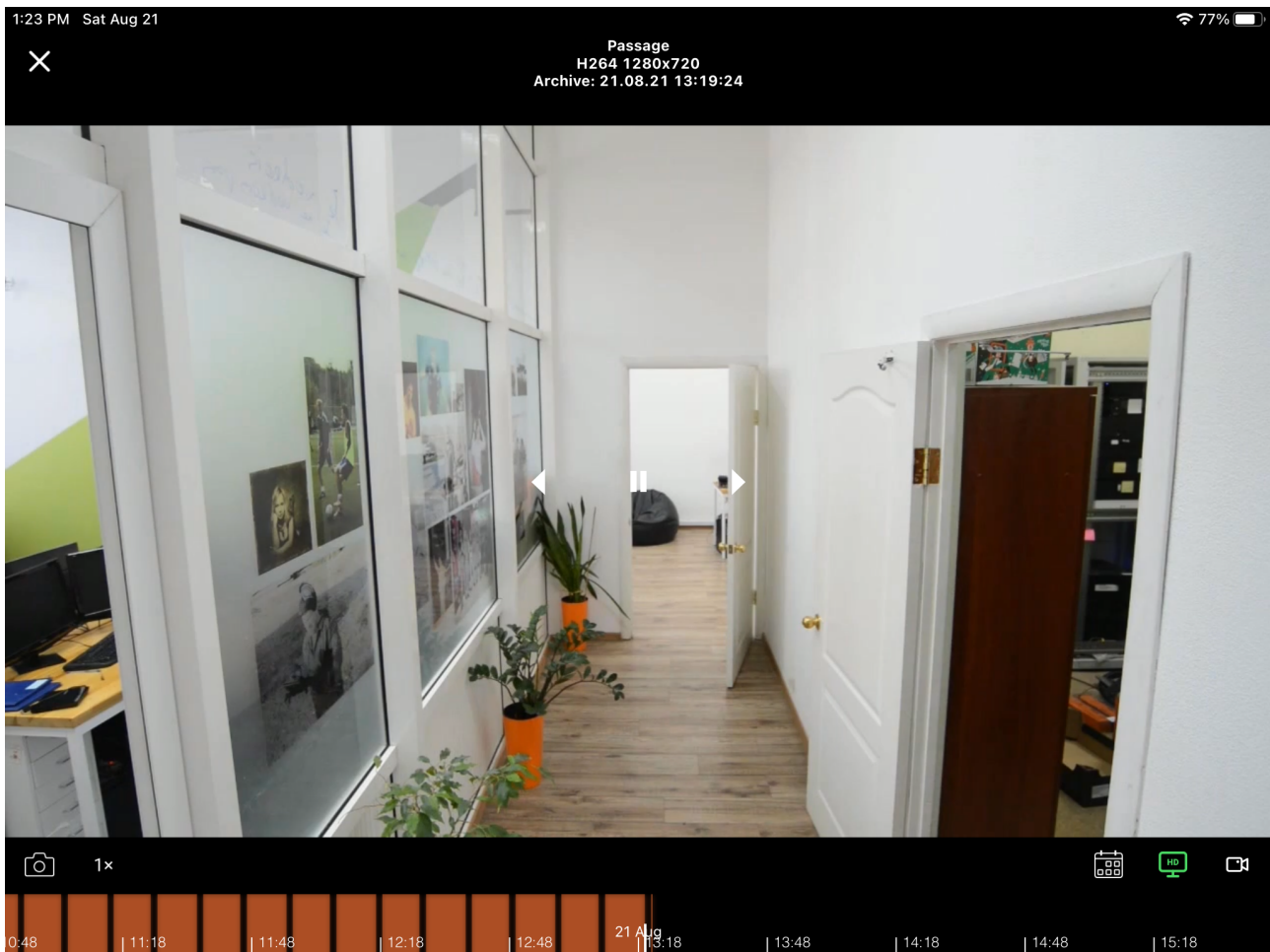
For PTZ cameras, pressing the button displays the on-screen joystick and other camera controls.

Archive

To play back the camera archive, it is required to expand it to the full screen mode in the viewing mode



and press the on-screen button.








The archive fragment panel superimposed on the timeline is located in the lower part of the screen.

To find a required point in the archive, touch the screen in the corresponding place.

The timeline scale can be increased/decreased by expanding/contracting the scale using two fingers.

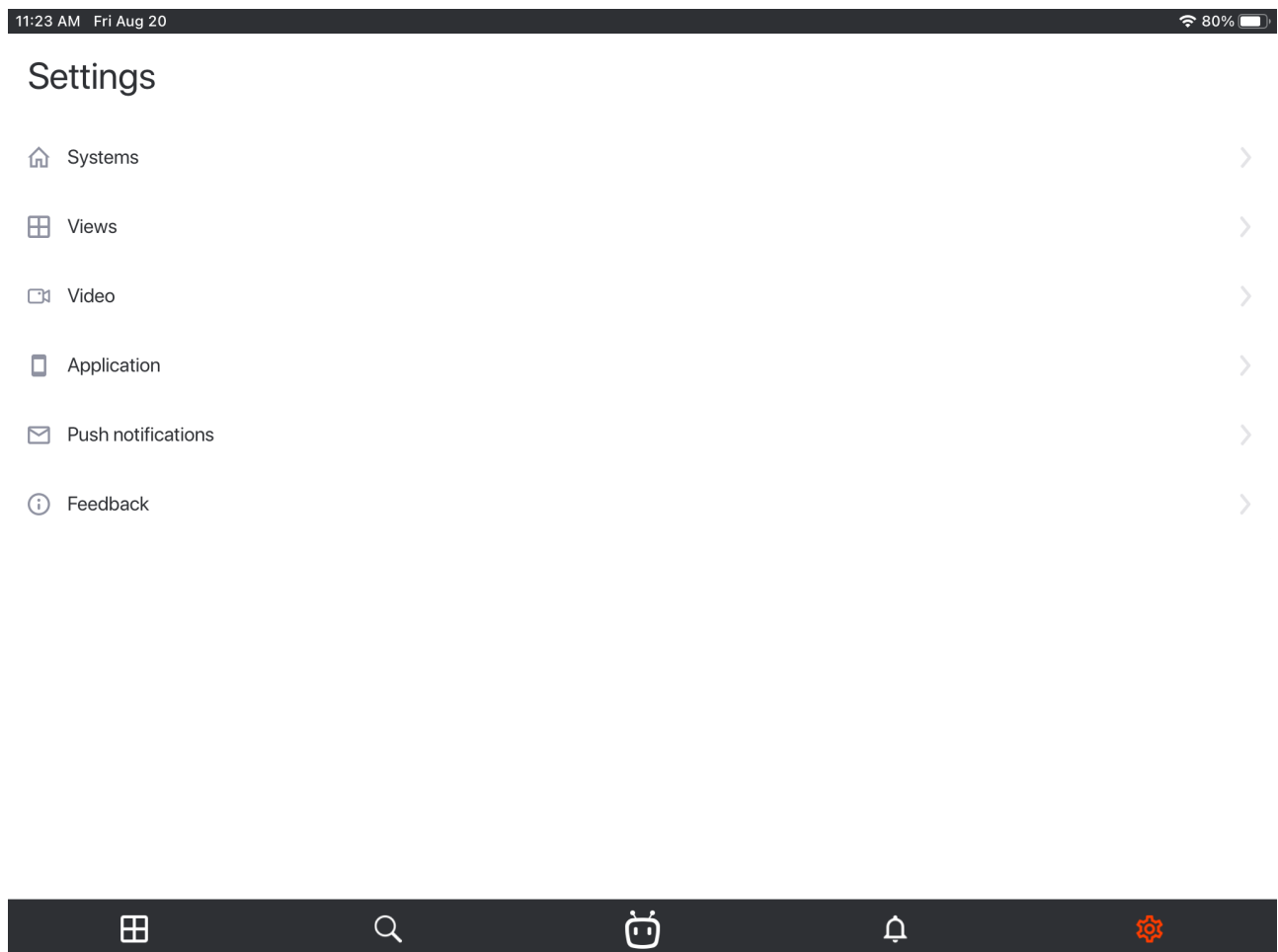
The following actions are available in the archive playback mode by pressing the corresponding on-screen buttons:

-  : Save frame to your device's Images.
-  : Playback speed.
-  : Date and time from which to start playback.
-  : Image quality.
-  : Return to viewing real-time video.

Also it is possible to select the video quality. It should be borne in mind that the higher the quality, the larger is the amount of data transmitted via the network.

Settings

Press the  button to go to settings.



Settings screens are described below.

System settings



By default, the list of systems contains demo servers. A user has no access to the parameters of connection to the demo servers. At the same time, the demo servers can be deleted from the list of systems.

To connect to a video surveillance system, it is required to specify the corresponding IP address and port or the domain name of one of the video surveillance servers, user name and password of the video surveillance system user, as well as some other parameters.



The connection parameters are provided by a video surveillance system administrator.

Video surveillance system name

Video system 1

IP address or server domain name

192.168.0.1

Server port

8080

User name

root

Password

Secure connection

Automatic connection

AD Active Directory user

Connect

10:10 AM Fri Aug 20

98%

<

Adding system

Video surveillance system name

Video system 2

IP address or server domain name

vms-server.mycompany.com

Server port

18080

User name

user1@mycompany.com

Password

Secure connection

Automatic connection

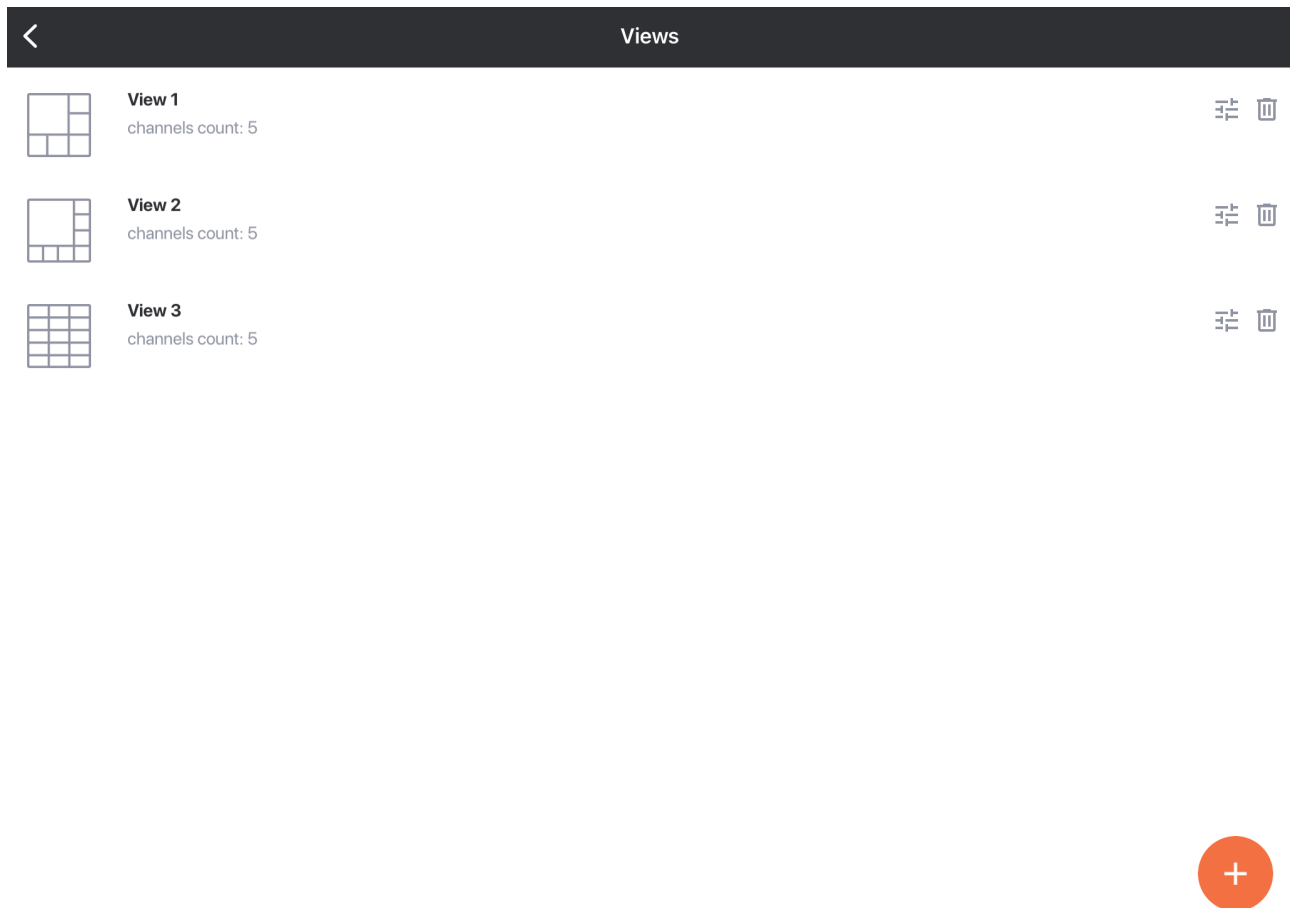
AD

Active Directory user

Connect

Views

Views are screen grids with cameras placed on them.



When adding and modifying a view, it is required to select the cameras, then choose a screen grid, and finally name the view.

11:25 AM Fri Aug 20

New view 4

79%

Search

All cameras and folders

Site 1

Camera 1

Camera 2

Camera 3

Camera 4

Site 2

Site 3

Camera 9

Camera 10

cameras selected: 4

4 cameras

6 cameras

6 cameras

8 cameras

8 cameras

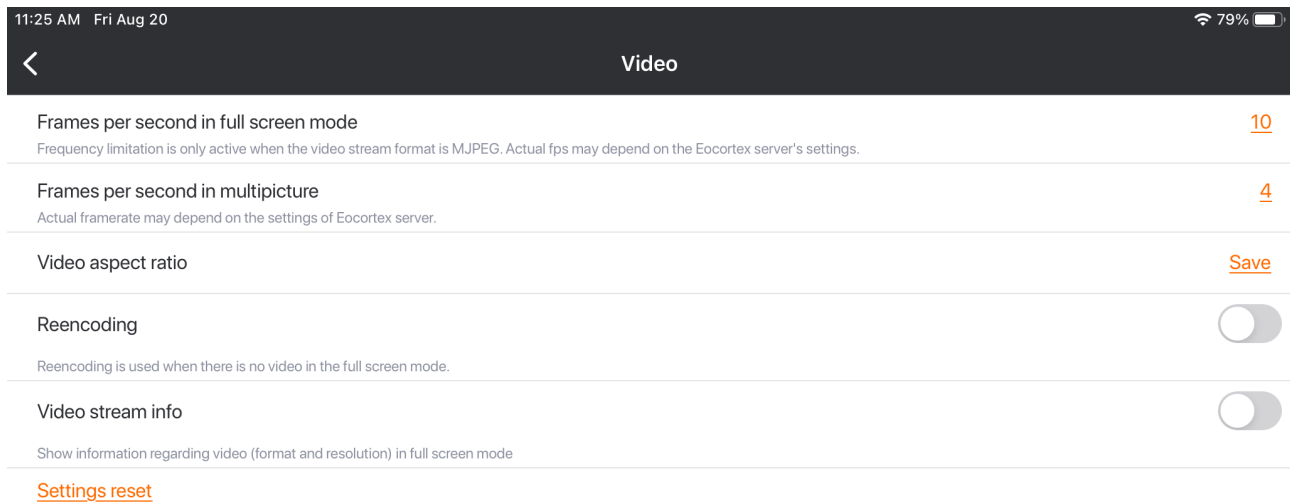
15 cameras

List

New view 4

Save

Video setup

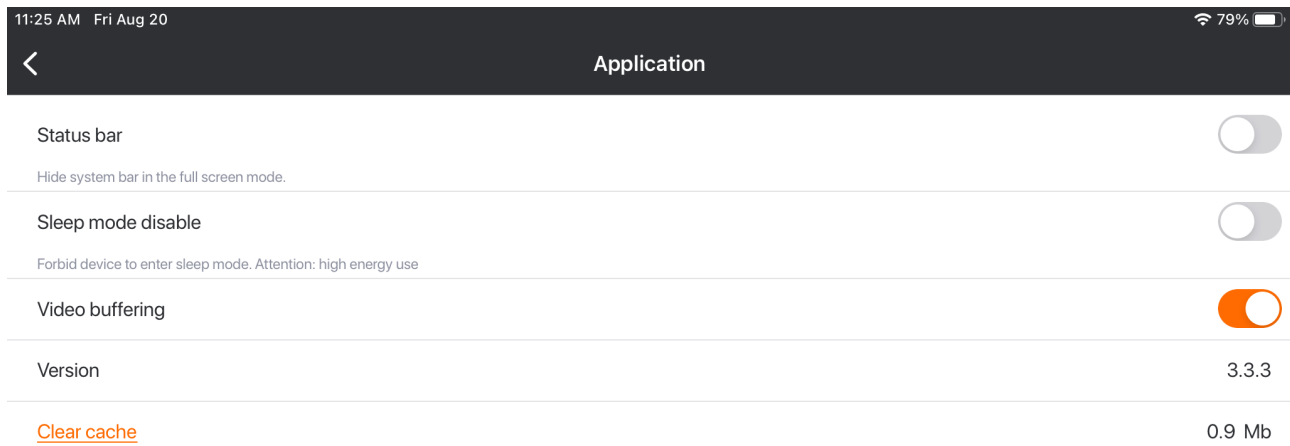


Before setting framerate and reencoding, it is advisable to consult the video surveillance system administrator since these settings may not work on all the cameras and may also be ineffective.

The **Video aspect ratio** setting allows to choose how the video will be scaled in the cells:

- **Automatic:** the application automatically determines if the image is to be stretched or the aspect ratio is to be preserved.
- **Stretch:** the image will be stretched in the cell;
- **Save:** the aspect ratio set by the camera will be used.

Application settings



Smart assistant (Eva)

The smart assistant called Eva allows the users of the mobile application to use voice and text commands for interacting with the **Eocortex** system.

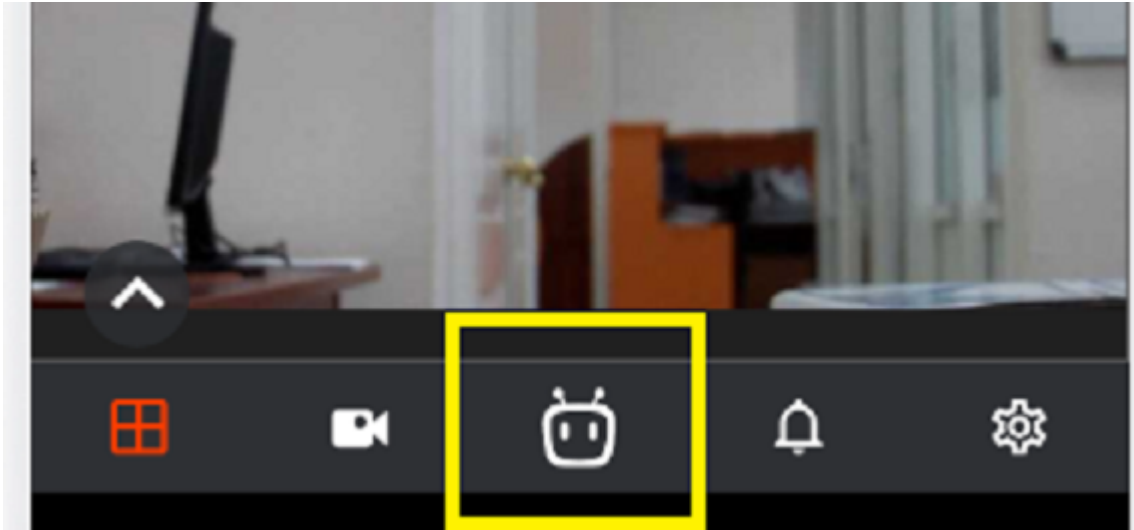
In order to start using the smart assistant, it is required to install the **Eocortex** server of the version 3.2 or later, or update all the system's servers to such version. Then it is necessary to install the **Eocortex** mobile application or update the existing one. No other settings are required – the smart assistant will be immediately available in the mobile app. When the mobile assistant is opened, it will greet you and tell you about its capabilities.



At the present moment, the smart assistant is only available in the **Eocortex** mobile application for Android.

Assistant in the application

To start working with Eva, it is required to press the smart assistant button in the lower panel.



Availability

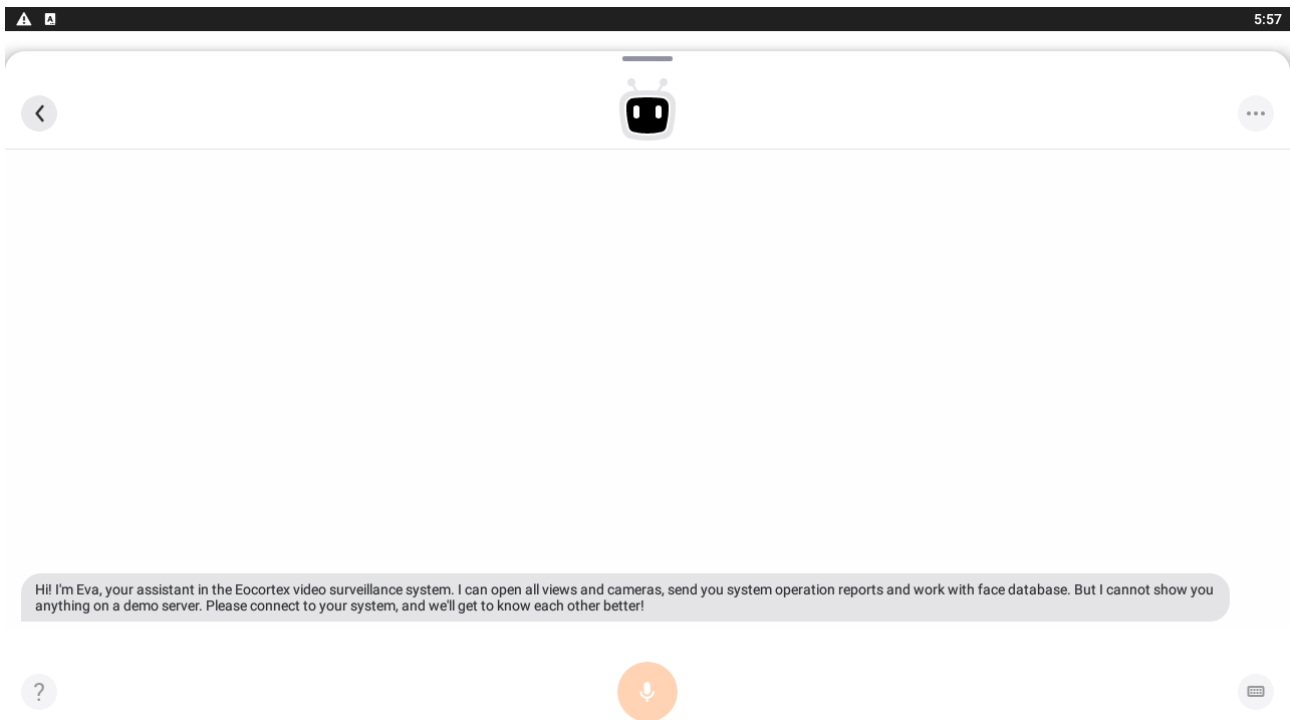
Primarily, it is required to understand that Eva needs a server with the version of at least 3.2 to operate in the mobile application. Otherwise, Eva will say that she cannot work and all the features related to her will be unavailable.

Working with microphone

If your server supports Eva, she will greet you and await your commands. You can communicate with Eva using your voice or a keyboard. When you press the microphone button, Eva will listen and recognize your speech. The recognized message will be shown on the screen. As soon as your phrase is finished, it will be sent.

The recognition algorithm has a peculiarity: recognition lasts no more than 5 seconds. It works as follows:

- If the user has not been saying anything, the recognition will stop and Eva will be waiting for new commands;
- If the user has said something, the recognition will stop in five seconds and Eva will receive everything that was successfully recognized.



Help and quick commands

Pressing the question mark, you enter the quick command description menu. There you can also activate any of the commands and read the information about all the visual states of the assistant.

In this mode, the lower panel of working with the assistant is not shown. To leave the mode, press on the back arrow.

Menu

Pressing the menu with three dots will enable you to:

- clear the message history (all the history of messages exchanged with Eva is stored on the device, so it will be possible to view it during the subsequent launchings of the application)
- enable the Quiet Mode in which the assistant does not vocalize the phrases
- go to Help and learn about the assistant's capabilities.

End of work

To stop working with the assistant, press the Back button or hide the panel by pulling it down.

Quiet Mode

When this mode is enabled, Eva will not vocalize her messages and the assistant's icon will look like this:

What other Eva's modes of operation are available?

All the modes are shown on the image in Help.

It is important to mention the "No Connection" mode. It appears in two instances:

- by the timeout, approximately 30 seconds after the loss of an internet connection by the smartphone;
- when the voice recognition button is pressed, in case of absence of the Internet connection, the recognition will not start and No Connection status will be displayed, because the Internet connection is required for voice recognition.

When Eva's status is "No Connection", the lower panel as well as the Go to Help Item disappears from the menu with three dots.

In approximately 30 seconds after the restoration of the Internet connection, Eva will resume her normal status and be ready for work.

Commands

Show camera

In response to this request, the assistant will offer the available cameras. If there are many cameras in the system, the first 20 cameras from the configuration of the server to which the mobile application is connected will be displayed.

It is possible to select a camera from those offered, or name a specific camera; in any case, Eva will open the required camera in the full screen mode.

Leaving the full screen mode will mean going back to the Eva window.

Show view

In response to this command, the assistant will offer the available views (there are no limitations as regards the number of offered views).

It is possible to choose a view out of those offered, as well as name a specific view; in any case, Eva will open the required view in the multipicture mode.

To go back to the assistant, it is required to press its icon again.

System status report

The assistant will provide the following information:

- quality of connection with servers and cameras (operational / not operational)
- archive status (recording or not; archive depth)

Notify when

Eva will ask for the name of a person to be notified about; at that:

- if the person appears in the field of view of the cameras when the application and Eva are still open, the notification will appear immediately in the assistant's chat
- if the user has closed or hid the application, the notification will come as a push notification.

When left

The assistant will prompt the user to enter the name of a person first and then provide the information regarding the time and place of the last appearance (during the whole period of time) of the person in question.

It is required to bear in mind that the local time of the device used for sending the request will be indicated.

When came

The assistant will first ask for the name of a person, and then give the information regarding the time and place of the first appearance of the person in question during the current day.

It is required to bear in mind that the local time of the device used for sending the request will be indicated.

Add to database

The assistant will request the user to do the following:

- first, enter the name of a person
- then, add their photo from the gallery or take a photo.

After that, the newly added person will be highlighted in violet and it will be possible to continue working with them. For example, you will be able to ask Eva to notify you when the specified person arrives. Pressing on the cross on the specified person will stop the assistant from working with that person at the moment.

Notify me when

If a person appeared before the cameras at the moment when the application was not loaded, and if Eva needs to notify the user about the arrival of that person, a push notification will be sent to the user. Pressing on the push notification will:

- open the mobile application
- open the full screen mode of archive viewing.

Find in archive

In response to this request, the assistant will ask for the name of a person whose appearances are required to be found. If the assistant is already working with this person, it will be necessary to select the period of time within which the appearances to be found happened:

- the last appearance (Eva's answer is similar to that of the "last appearance" request)
- today (Eva will show the number of appearances during the current day)
- yesterday (Eva will display the number of appearances during the previous day)
- two past days (Eva will show the number of appearances during the last two days)

- three past days (Eva will display the number of appearances during the last three days)
- time of arrival of the person (Eva's answer is similar to that of the "when came" request)

Show file

First, the assistant will ask you to enter the person's name, and then show you their information (full name and group).

Add to group

The assistant will ask you to enter a person's name and offer the available groups (there are no limitations as regards the number of offered groups).

Delete from group

The assistant will ask you to enter a person's name and offer groups the person belongs to (there are no limitations as regards the number of offered groups).

It is required to select a group to delete the person from, or cancel the action.

move person

The assistant will ask you to enter the person's name and ask for a confirmation to delete the entry.

Special contextual clues

Standard contextual clues (orange buttons at the bottom of the chat), when pressed, are sent to Eva and are shown in the chat. However, there are two clues that respond differently when pressed:

- help (opens the help topic)
- all commands (opens the section with all commands)

Topology

The "brain" of the smart assistant is located on the cloud server. It processes all the user commands and interacts with the mobile client and the server (or a group of servers).

First, the mobile application connects to the **Eocortex** server, as during the normal operation. After connecting to the mobile client, the server connects to the cloud server of the smart assistant. After that, the user becomes able to open the smart assistant in the mobile application, and the latter will create a connection with the cloud server.

To operate, the smart assistant requires the following conditions to be fulfilled:

- The **Eocortex** server's version must be 3.2 or later
- The server which the mobile client connects to must have a connection to the Internet
- The mobile application must have a connection to the Internet.

For the smart assistant to work with the **Eocortex** server, the server is not required to have a public IP address. However, the public IP address will be required for the connection of the mobile application to the server, if such connection is made via the Internet.

A system may have several mobile clients using the smart assistant. They may be connected to one server as well as to the different servers in the system. In such a case, each server the mobile client is connected to must have access to the Internet.

In a multiserver system, the server the mobile client is connected to also connects to the smart assistant. At that, the smart assistant does not require all the system servers to be connected to its cloud service to work. The server connected to the smart assistant will gather the required data from the other servers or send the smart assistant's commands to them.

For the proper operation of the smart assistant in a multiserver system, the server the mobile client is connected to must have access to all the system's servers. It will allow the smart assistant to operate in the systems where not all the servers have access to the Internet.