



Net Station Enterprise Manual

1. Introduction

We present to you next version of NET PROFESSIONAL system with many new functions and modules. Many of these changes are the effect of our cooperation with You and our Partners. Part of them are our ideas which extend capabilities of digital video recording. Please pay your attention to the possibilities of simultaneous image recording from network cameras and, widely used so far, analogue cameras, developed archives and wider capabilities of controlling the whole system.

1.1 System description

NET PROFESSIONAL is a digital video recorder designed for cooperation with CCTV cameras. It uses PC class computers which work under control of Microsoft Windows 10 64 bit operating system. New NET PROFESSIONAL system version can record image from up to 32 cameras, servicing 32 output switches and 32 alarm inputs. Moreover the system can be hybrid that is one system can service both analogue and IP cameras – thanks to this it is possible to upgrade an existing installation and add IP or analogue cameras. Managing the video server through the network is possible. Program allows wide possibilities of motion detection settings, searching the motion in archives, servicing alarm events. Differential image-compression method guarantees image recording longer than in other systems of that type without changing the image quality and storage space.

Software for managing NET PROFESSIONAL system consists of two independent applications:

1. NET PROFESSIONAL (*Video Digital Recording - Server*)
2. CMS (*Client Mobile Software – Client*)
3. CMS HUB

The first application is a server: processes image from the cameras, manages user accounts, tasks, controls the cameras. The second one is used as a client. We can connect to the server by a local network and do remote monitoring. Client application is available on mobile device (mobile phones, Pocket PC, Tablets) which allows access to camera images from any place in the world. Every installation of mobile application you will find in Google Play/App Store/Microsoft Store. CMS Hub is used to synchronize settings between many server application, manage user accounts, adding CMS HUB to your network also allows to integrate Satel alarm, POS functions, Polon fire alarm.

2.1 Video capture cards installation

In our current offer we have 2 card models : **ds-4316hfvi-e** and **ds-4308hfvi-e**
Those cards allow for capturing analog camera signal. They are placed in PC in PCI slot on your motherboard.



2.2 Installing USB dongle

The system needs USB dongle installed for proper work. Plug it to USB port in Your computer. Remember to have it plugged permanently, if else the system will shut down. During the work of the system the dongle glows green, which indicates it's proper functioning.

To connect cameras plug camera cables with BNC connectors to video capture cards.



Figure 1 Connecting the cameras

If Your video capture card has 15 pin connector, it is necessary to plug "transition cable" to the card and then connect cameras to it. Lower input on the card connects cameras from numbers 1 to 8, the upper one cameras from 9 to 16, and the same for another card.

2.4 Software installation

When all the devices are connected correctly You can begin to install software. Turn on the computer and when Your OS detects new devices **do not install it until NET PROFESSIONAL software is installed**. Leave the system window without clicking. Next run application **NET_PROFESSIONAL_INSTALL.exe** from the delivered cd with software.



ATTENTION: during installation of NET PROFESSIONAL application, drivers for capture boards are installed at the same time, which can cause "Windows warning" displayed regarding lack of Microsoft digital signature in the installed drivers. In this case press "Continue anyway" in order to install the drivers properly.

After the software is installed You will be asked to restart the computer. At this stage select **"No, I will restart later"**. Begin video capture cards' drivers installation. If the Operating System still shows the system window regarding new devices, follow the steps of the installation panel. If else, You have to install devices manually. Click right mouse button on **My computer** icon, select **Properties**, **Hardware** bookmark, **Device manager** button. Next choose **Scan for hardware changes**. System will initiate a creator for installing new devices. Follow the steps. To check if video capture card is installed properly go to **Device manager** and "unroll" **Sound, video and game controllers menu** (or **DVR boards** when DSP boards are used). After successful installation of all of the devices **restart Your computer**.

3. Running the program for the first time

When running the program for the first time it is necessary to define some parameters, which are essential for proper work. Explanation of this matter is presented below.

3.1 Configuration Wizard

When running the program for the first time it is necessary to define some parameters, which are essential for proper work.

3.1.1 Choosing the language



Figure 2 Configuration wizard – choosing the language

Pick the language from the list. After this click **next** button.

3.1.2 Regional settings

In the next window set the time format: **24 hour** (24 hour) or **AM/PM** (12 hour).

Below there are three data display formats.

Symbols explanation:

dd – day, **mm** – month, **yyyy** – year

Monitor format:

4:3 - normal

16:9 - widescreen

Go to the next step by clicking **next**.

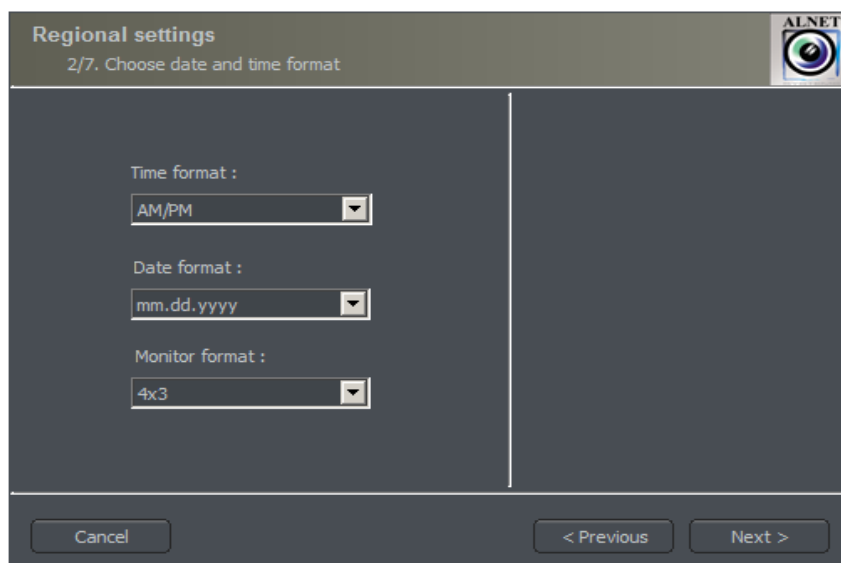


Figure 3 defining regional settings

3.1.3 Video capture cards

In this part point if the **ConExt** extensions are installed in the system. If yes, choose the proper type from the list. If you will be using VRC6008ALM then choose None or EIO Card.



ATTENTION: It is very important to check to which video capture card the extension board is connected. For instance first position corresponds with the first video capture card installed on the mainboard.

Next step is to choose between **PAL** and **NTSC** video recording standard. Countries

and areas which use above-mentioned standards can be found in the "Image transmission standards" supplement.

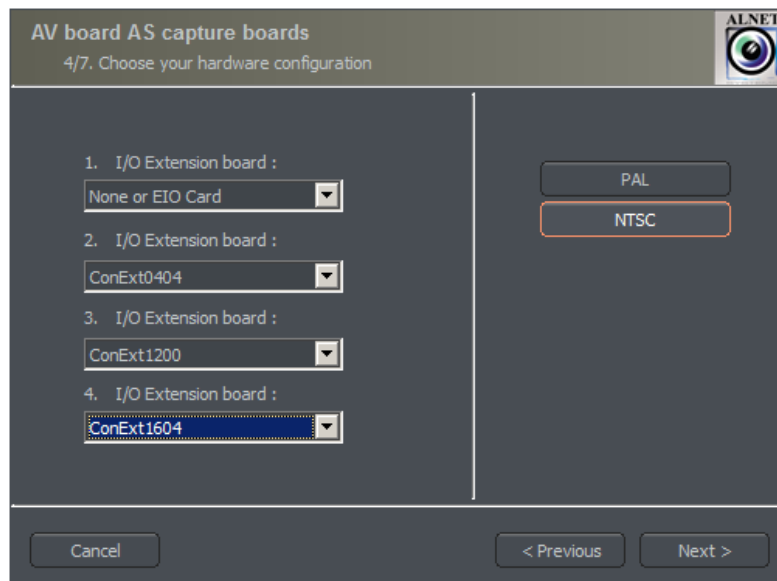


Figure 4 Configuration wizard – video capture cards

3.1.4 Network cameras

Next panel allows to add network cameras (*IP cameras*) to the system. In the main window there are positions defined by You. When starting NET PROFESSIONAL for the first time they are blank. To add network camera click **Add** button. System will display additional window. After finishing click **OK**. This will end the first stage (camera configuration) and the system will proceed to creating video archives. It is important to remember that the wizard can be accessed later from Windows Start Menu – NET PROFESSIONAL PROFESSIONAL WIZARD.

Buttons **Edit** and **Delete** are responsible for editing and deleting the marked position

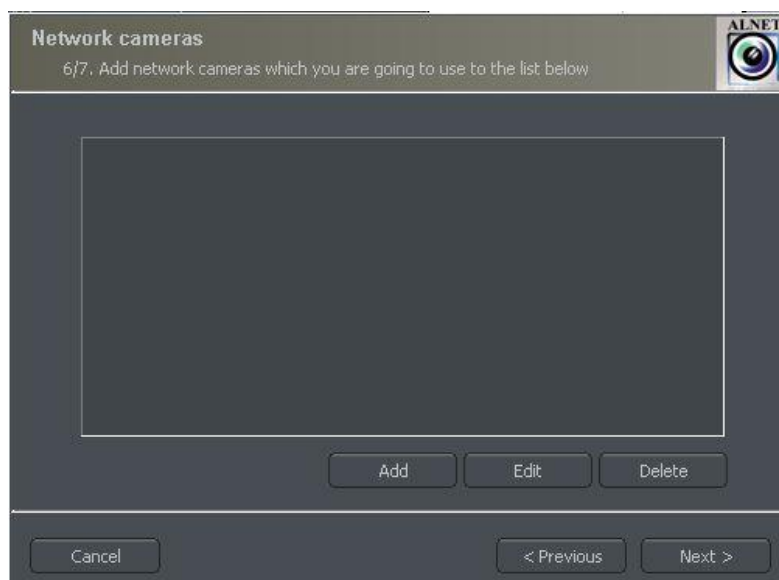


Figure 5 The list of installed IP cameras. To add camera click Add button

3.1.4.1 Adding a network camera

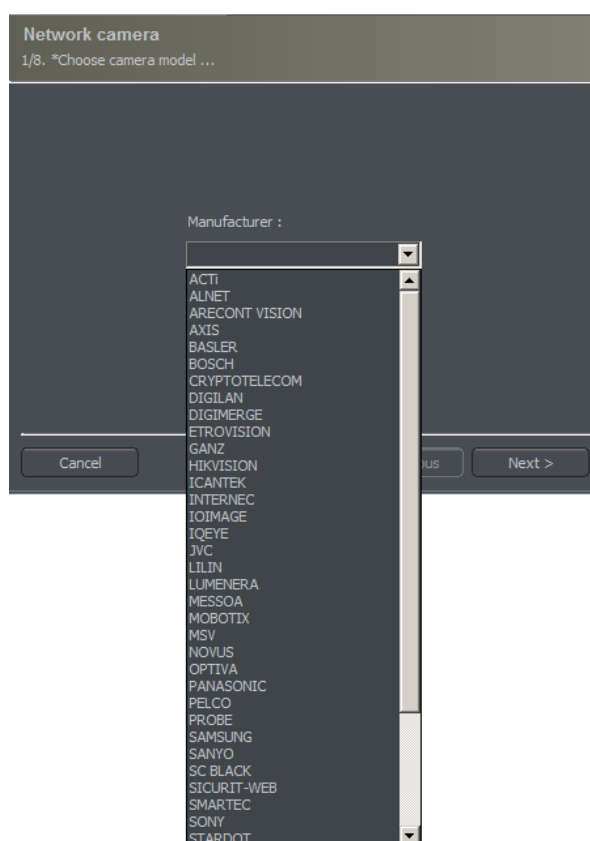


Figure 6 Choosing Network camera

An example below shows step by step how to add Arecont Vision IP camera.

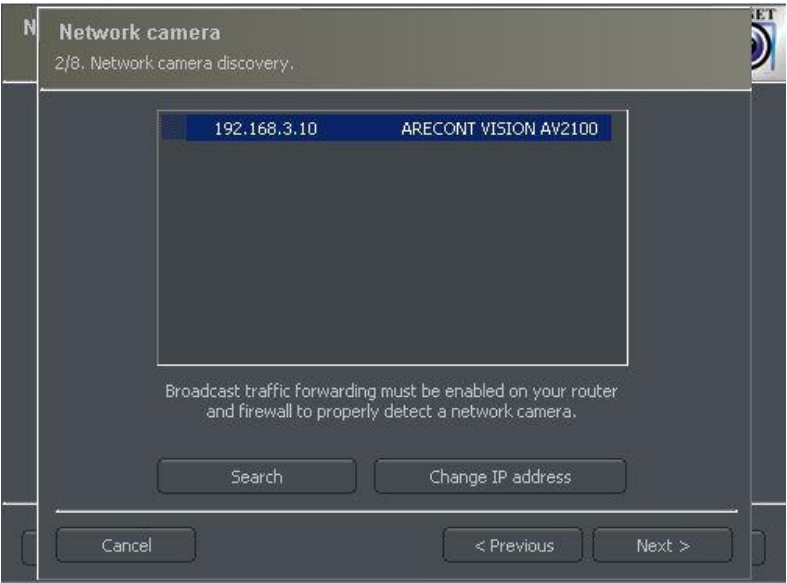



Figure 7 **Search** function automatically detects available network cameras. User can manually change camera IP address – **Change IP address** button.

 Attention: A window presented above and **Search** function is not available for all IP cameras. In this case it is necessary to enter camera data manually (IP address, port, user name, password etc).

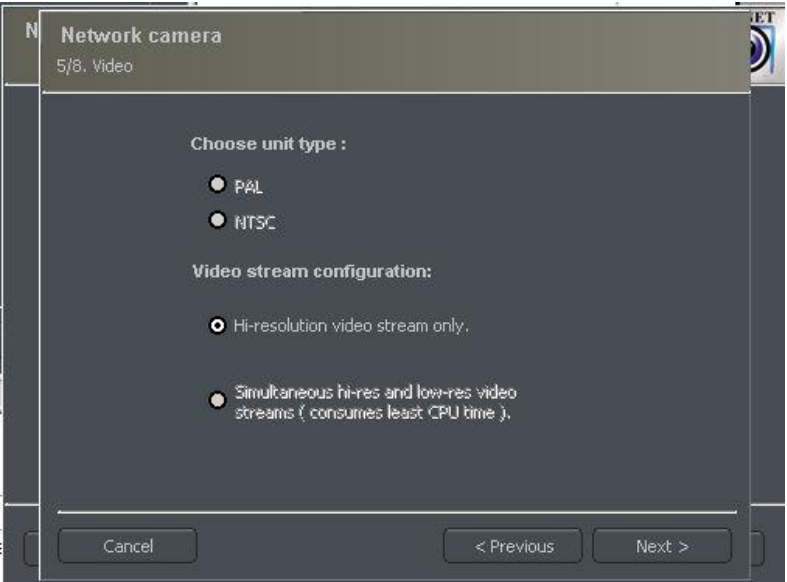


Figure 8 Additional options for the camera – available options differ depending on the manufacturer.

Bookmark	Field	Description
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Network	Model	Camera model, which we are currently using
	Address	Address (IP number or domain name)
	User	Name of the user which has full image streaming rights
	Password	Password of the user
	HTTP port	Number of the port on which camera transmits its image
Video	Camera Type	Choose PAL or NTSC format for image transmission for the camera
	Video stream configuration	Video stream quality choice. When using many of cameras it is recommended to choose second or third option. Selecting the second option will cause the image to be displayed with less fps (only the key frame will be displayed). Recording will remain at full fps though. The third option creates two separate connections: one for recording, one for displaying the image. The recorded and displayed image can be diverted. Low display quality saves the computational power of the processor
	Sound configuration	Enable the sound transmission through the camera

Table 1: Configuration wizard -network cameras

3.1.5 Disk archive

For the proper work of the system it is necessary to configure the disk archive, that is to point the disk space which will be used for storing the camera image and sound. The more space will be used, the more archive recordings will be stored.

Disk archive is created in the second stage of configuration wizard – after the camera configuration is completed.




Figure 9 Creating disk archive

First window of archive creator offers 3 choose options:

Create a new media archive – create new disk archive

Use existing media archive – configuration of the existing disk

No, don't create media archive now, exit wizard – closing wizard, without creating disk archive

 **ATTENTION:** In case of using the above option, recording function will not be available. Later configuration and editing the archive will be available by "Archive Storage" function in the "Configuration" menu of NET PROFESSIONAL application.

In next step, must be defined, what type of archive will be created. By marking "Create archive which will use preallocate disk space" will cause creating disk archive, with size defined by user. Otherwise, archives will be build increasingly, which means that it will increase it's size during data recording, until it fills whole disk space of selected partition.

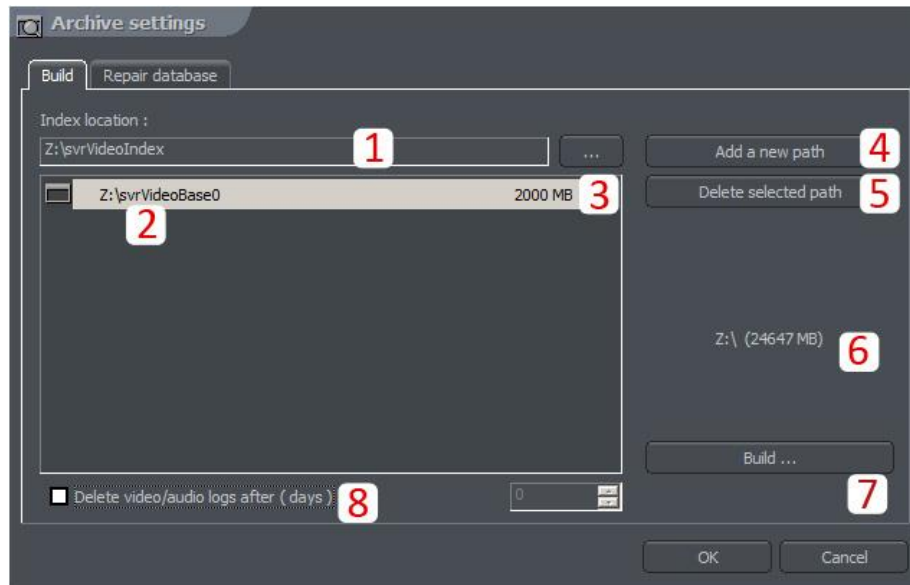


Figure 10 Creating disk archive – path configuration

⚠ ATTENTION: After filling assigned disk space, NET PROFESSIONAL system continues recording, successively overwriting the "oldest" archives.

Next, location of the archive files have to be defined:

1. **Index folder path** - this folder contains information about stored archives - it must be defined in the first place.
2. **Archive folder path** - in defined folder archives will be stored. At the same time, configuration of multiple archive path's is possible.
3. **Size of disk archives** - defined size of archive folder - changing is possible after double-click on numerical value.



ATTENTION:

1. Option presented above is available only when the disk archive is created with preallocated disk space (see figure 10). If the increasing archive is created the option will not be available.

2. Minimum disk space **cannot be lower than:**

[number of connected cameras] x 32 MB,

- lower disk space can cause recording malfunctions.

4. **Adding path to archive** – allows to add another paths to disk archive

5. **Deleting archive path** – erases the selected disk archive path

6. **Declaring the available archive size** on selected disk partition

7. **Creating archive** – after defining index paths and archive use this option to create archive for the recordings

8. **Erasing recordings** older than defined number of days

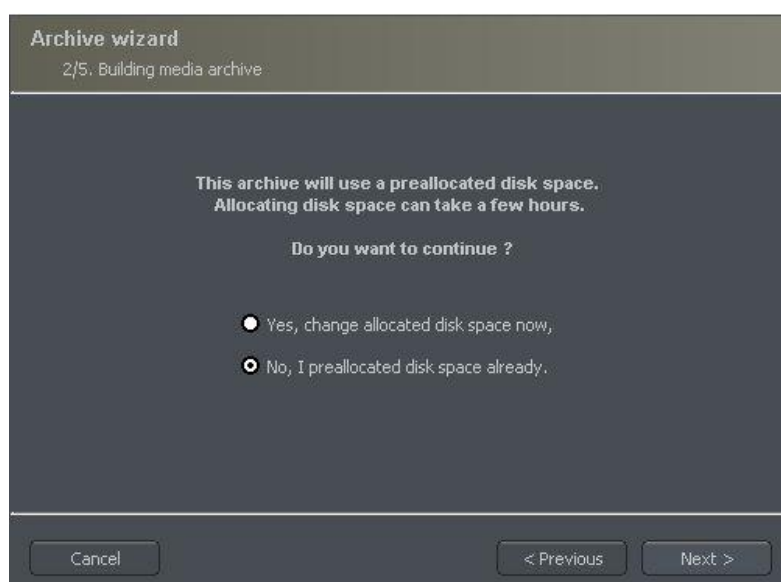


Figure 11 Creating disk archive

Clicking **OK** button after defining the paths to index folder and disk archives folder will make system to proceed to the next stage of archive configuration:

1. **Yes, change allocated disk space now** – this option should be checked when creating new archive or adding new path for data storage. After choosing this option system shows the next stage of configuration (see figure 13)

2. **No, I preallocated disk space already** – this option must be selected when

path of the existing archive is added, or recording path is deleted.

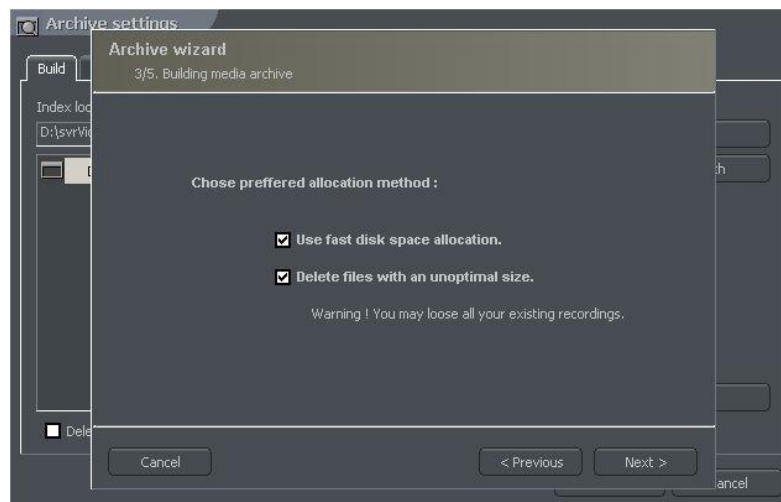


Figure 12 Creating disk archive

Use fast disk space allocation – fast allocation of disk space - It lasts considerably faster than standard. However, it can cause archive files fragmentation.

Delete files with an unoptimal size – archive files which have unoptimal size will be deleted (for example when adding existing archive, which was created increasingly)

On this stage, the configuration of disk archives is finished.

3.1.6 System administrator

When running the system for the first time it will ask to define system administrator's login and password. Administrator is a person who possesses all the rights to change system parameters and control system's work. It's very important to remember administrator's login and password because once given they can not be changed. Also administrator shouldn't pass these parameters to anyone and keep it confidential.

Next step is to put the product license number. You can find the number printed on the attached Dongle Key. If this step is skipped some program functions will be unavailable. Every one hour system will automatically display notification and ask about license number.

After these actions NET PROFESSIONAL system is ready for use.

3.2 Main Program Window

Main program window is designed to give immediate access to the most important program functions. It is possible to simultaneously watch the image from the cameras, monitor alarm inputs status, switch between displayed cameras and make snapshots.

Main menu is placed at the top of the screen. It's structure looks as follows:

> Program

- ♡ **Minimize** – minimizes the application window
- ♡ **Log out** – logs out the user
- ♡ **Shutdown system** – shuts down the OS
- ♡ **Restart system** – restarts the OS
- ♡ **Exit** – closes the application

> Tools

- ♡ **Browse archives** – opens the recordings archives
- ♡ **Browse photos** – opens the snapshots browser
- ♡ **Register domain** – domain registration
- ♡ **Layout manager** – edits layout manager
- ♡ **Analogue video output** – analogue video output configuration
- ♡ **Export watermark** – exports watermark to the file
- ♡ **Program console** – opens text console
- ♡ **Program update** – checks if any program updates are available
- ♡ **Sound control** – opens system sound mixer
- ♡ **On-screen keyboard** – launches the on-screen keyboard

- ♡ **Dome panel** – opens dome control panel
- ♡ **E-Map** – displays graphic camera layout at particular area
- **Configuration**
 - ♡ **Scheduler** – task scheduler tool
 - ♡ **Cameras** – camera settings
 - ♡ **Sound** – sound channels settings
 - ♡ **Alarm inputs** – alarm inputs settings
 - ♡ **Output switches** – output switches settings
 - ♡ **Network services** – remote access settings
 - ♡ **Archive storage** – disk space for archive storage settings
 - ♡ **User accounts** – NET PROFESSIONAL user accounts settings
 - ♡ **Dome control** – dome control settings
 - ♡ **E-map editor** – allows creating graphic layout of the devices at particular area
 - ♡ **Program settings** – global program settings
 - ♡ **External tools** – Windows tools access
 - Time and day settings
 - Mouse properties
 - Modem options
 - Network settings
 - ♡ **Save configuration** – confirms all the program changes and saves them
- **Bookmark** - adds a bookmark in the archives
- **About** – information about NET PROFESSIONAL server

At the left side of the screen You can find icons, which are shortcuts to the most important tools.

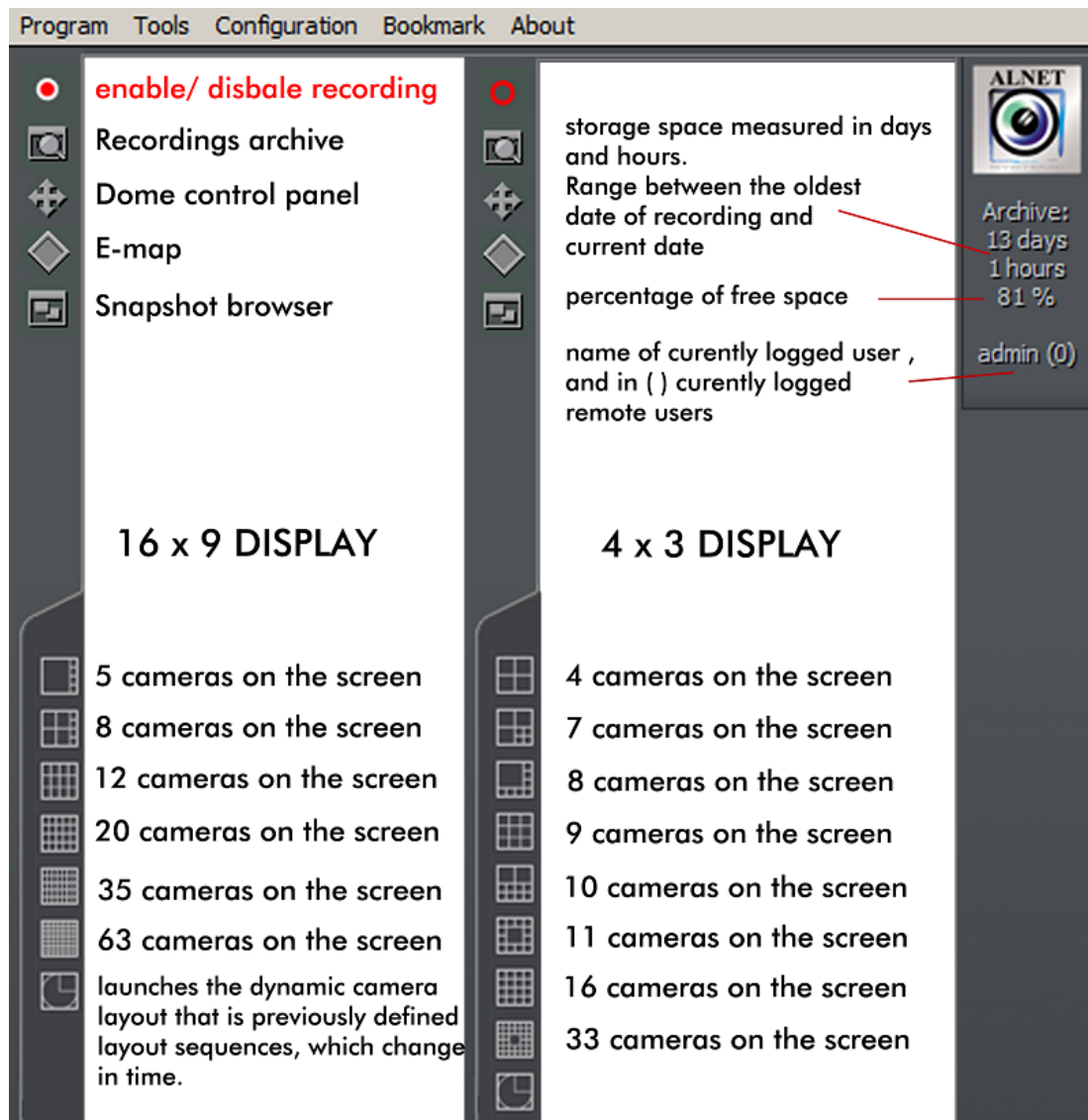


Figure 13 NET Professional Menu

Icons on the bar at the bottom of the screen represent the status of available cameras and audio channels. Each icon consists of number of camera/channel and its name. Red rectangle, which appears beside the number symbolizes motion detection on the camera or sound detection if it appears beside audio channel number. If the icon is all red it means channel failure – the signal is not transmitted.



Clicking with left mouse button on the icon will maximize the camera view on full screen.

On the left side of the screen available layouts are placed. Layouts are different ways of placing camera views on the screen. Dependent on the system version different layouts are available.



If NET PROFESSIONAL system has integrated ConExt or VRC6008ALM ,type extensions icons with available inputs/outputs are displayed on the right side of the screen. A table below describes the meaning of each icon. Also if IP cameras have available inputs/outputs it will also be shown on this screen.

	<i>Inactive output switch</i>
	<i>Active output switch</i>
	<i>Inactive alarm input</i>
	<i>Active alarm input</i>
	<i>Unconfirmed alarm</i>

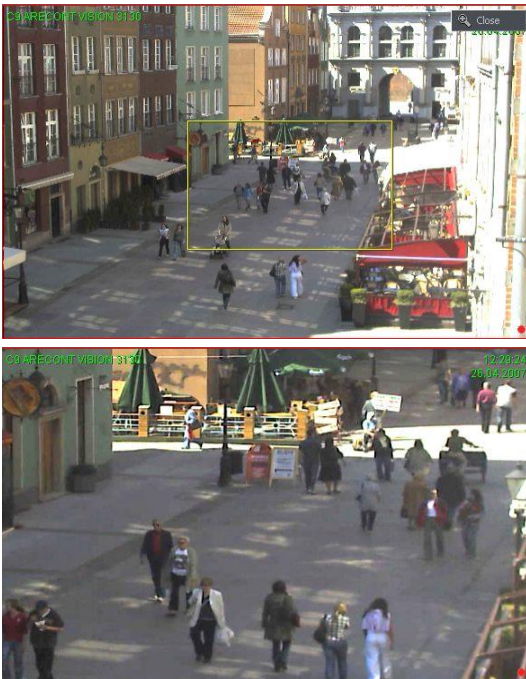
Table 2: Main window – digital inputs/outputs


3.2.1 Camera view

In the center of the screen the most important elements of the system are placed. These elements are camera views. On each screen system can display information such as: camera name, current time, number of captured frames per second. Double clicking by left mouse button on the camera view will bring this view full screen. Another double click will bring back previous state of the view. When You put the cursor in the top right corner of the camera view an additional menu will appear.

	<i>Starts recording regardless of the scheduler settings, motion detection or complete disabling of the recording</i>
	<i>Makes a snapshot</i>
	<i>Selecting this option allows to enlarge the camera view. The example is presented below</i>
	<i>When a camera works as a dome the icon starts the "mouse control" mode. To change the position just click with left mouse button on the desired place in the camera view</i>
	<i>Remote microphone. Enabling this option allows to transmit the voice from the sound card to the IP camera (if enable microphone option was selected in the network cameras wizard)</i>

Zooming the image



While holding the left mouse button pressed select the area to be zoomed. **This action does not affect the image size stored in the archives.** After releasing left mouse button the image will be digitally zoomed. This operation won't affect the size of the image recorded in the archives. This function may be useful when cameras with optical zoom are used. To go back to normal state select the button .

If You click with right mouse button on the camera view area during the system work menu will appear. All available commands are described on the next page.

Active camera	<i>Displays the list of available cameras. Marked position means that the camera is assigned to the particular area. To assign other camera choose it from the list</i>
Sound channels	<i>List of sound channels assigned to the particular camera</i>
	Auto – assigns the channels as in camera configuration
	Edit channels – opens panel with sound channels
Displaying mode	Normal - displays whole application window with tool bars
	Fullscreen – displays only camera image on fullscreen
	Preview – displays application window at the size controlled by user. Changing the size is done by resizing window (catching it's corner with left mouse button)
	Stay on top – in a preview mode application window will stay on top (that is it won't be covered by other active programs)
	Show menu – shows/hides menu bar at the top

	Hide buttons – hides the bottom bar with camera symbols
	Small buttons – small camera icons at the bottom bar
	Large buttons – large camera icons at the bottom bar
	Show tool buttons – shows/hides toolbar at the bottom
Layout	Switches to selected camera layout. Enables dynamic mode. Dynamic – if Camera pop-up after alarm option was selected in camera configuration, it is possible to temporarily disable/enable this option by marking it
Add bookmark	Adds a bookmark to archive recording
Snapshot	Makes screenshot (photo)

Most of the options mentioned above refer to single camera. It is very important to choose the proper camera (by clicking with left mouse button on it's display area) before selecting any option. Selected camera has a red border.

3.3 Scheduler

NET PROFESSIONAL system allows to configure schedule for: cameras, sound recording, alarm inputs and system alerts. It allows to diverse the work of the system, it's reactions to alarms on working days of the week, weekends or in night hours. It is a very strong and versatile tool, which can help You to adjust the system to all of Your needs. Activation of the scheduler events can be achieved either by defining the time range or activation of the alarm input.

During the work with scheduler it is necessary to pay attention to the order of the scheduled tasks. The higher the task is on the list the lower is it's priority. For example if the first task on the list activates continuous image recording for all cameras and the second task disables the recording at the same time – then the system will disable recording as the second task has higher priority. In case on task conflict (overlapping) proper marks will be shown on the time axis. Suppose two positions were defined, which "time borders" overlap

each other. Time axis will be displayed as follows:

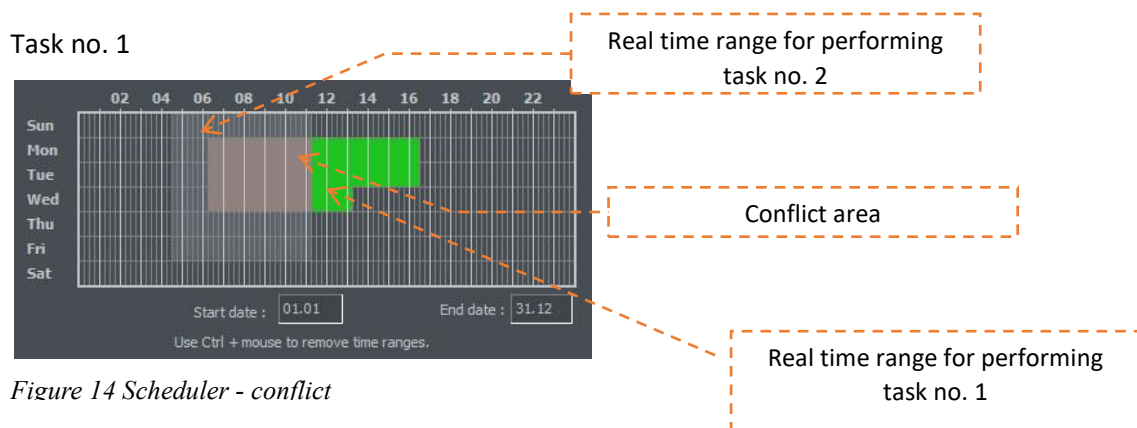


Figure 14 Scheduler - conflict

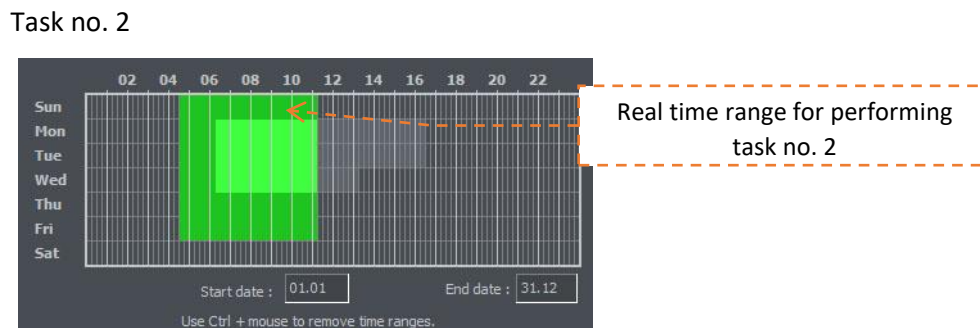



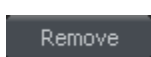
Figure 15 Scheduler - conflict

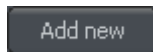
 To use e-mail notification in the scheduler access to SMTP server has to be configured in the system (see **Program settings**)

The scheduler can be opened from the upper menu:

Configuration ➡ **Scheduler...**

Buttons (the same for all bookmarks) are described below.

- | | |
|---|-----------------------------|
|  | - adds new position |
|  | - deletes selected position |



- adds new position



- moves selected position one level up



- moves selected position one level down

3.3.1 Cameras schedule

To add a new task select **Add new**. A new position will appear on the list – select it. Beside the positions list **Activation condition** panel is placed. It characterizes the task to be controlled by the time or alarm input activation.



- launching the task in due time



- launching the task by alarm input activation

When task is time-controlled, it is necessary to mark the days of the week and time of a day in which the task should be enabled. The vertical axis represents the days of the week (from Saturday to Sunday) and the horizontal axis is a time range. Single rectangle represents 15 minutes time. To mark a rectangle click it with left mouse button. To select larger time range – hold left mouse button and drag the mouse pointer.

The image below is an example of an event, that will be executed in the weekend, that is from 16.00 on Friday to 0:00 on Sunday. In the fields below the time axis You can define the date to begin (start date) and finish (end date) the task.

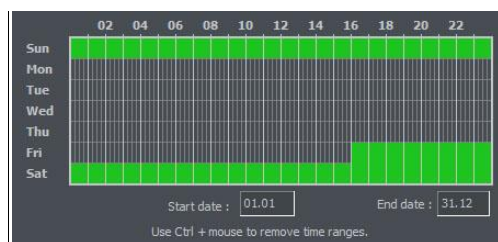


Figure 17 Camera schedule – time axis

When task is activated by alarm input, choose the proper alarm input and mark the time range on the time axis, in which the alarm input activated events will be executed.

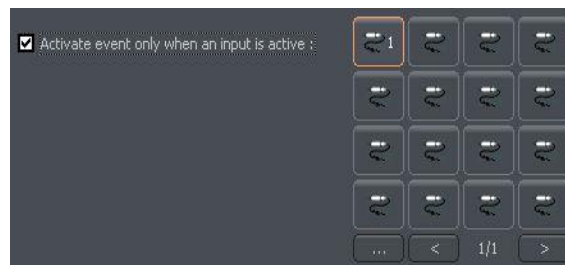


Figure 16 Camera schedule – alarm inputs

Description of other options:

Name	Description
Task name	Name of the task, which will appear on the task list
Cameras	To which cameras the task will apply
Recording	Image recording options
Options	Recording time after motion detection – if motion option was selected it determines how much time (in seconds) after the motion detection the recording will last; motion time before motion alarm – determines how long (in seconds) must the motion last, to activate the alarm event.
After motion alarm	The way that systems informs about alarm event. There are three possibilities: <ul style="list-style-type: none"> Send email - sends email notification on previously given address Set outputs - activates selected output switches
	Connect to client – activates the connection with selected remote client, used for example in monitoring headquarters

3.3.2 Sounds schedule

"Schedule sounds" bookmark allows to "plan" system reactions to sound events. Activation conditions are the same as in camera schedule. The difference is that You choose sound channels. Additional reaction to alarm event is starting the image recording

from selected cameras. Recording time is set in **Options** field.

Night can represent an example situation. Cameras have limited possibilities to detect motion but sensitive microphone can detect noise, start the alarm and enable output switch, which will turn on the light and this will make image recording possible.

3.3.3 Alarm inputs schedule

This module is used for programming the behavior of the alarm inputs and their reactions on alarm. Programming the event looks the same as in camera and sound schedule. Additionally, after the alarm detection system can add bookmark to archives and enable the output switch (for example with connected siren). In the **Options** panel **Activation time before alarm** can be set (a time needed for the system to recognize the input activation as an alarm).

3.3.4 System alerts

System alerts are responsible for notifications about changes in system work. You can set notifications for example about application shutdown, remote user login or camera signal lost. The list of available alerts is presented below:

- Program start up**
- Program shut down**
- Recording on**
- Recording off**
- Camera connected**
- Camera disconnected**
- Remote user login**
- Remote user login failed**
- Remote user logout**
- Video signal restored**
- Video signal lost**
- User is sleeping (no user reaction for system popups)**

Defining new task process is the same as in previous modules.

3.3.5 Scheduler – Address book

Address book manages the contacts to which the alarm notifications are sent or to connect with remote clients.

3.3.5.1 E-mail address

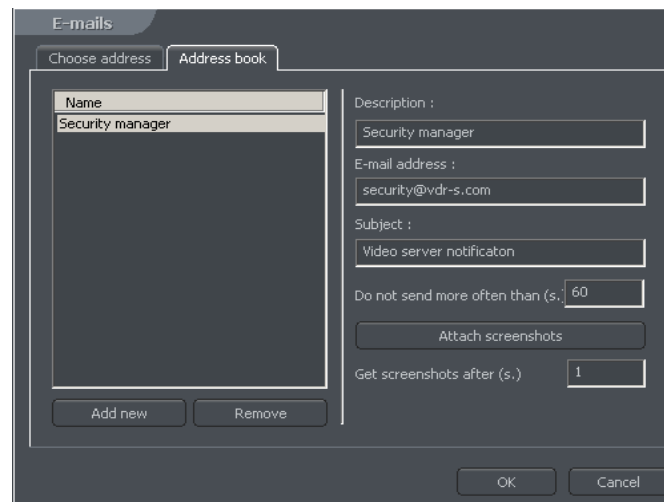


Figure 18 Address book – e-mail addresses

Address book panel consists of two bookmarks: **Choose address** and **Address book**. First bookmark displays the list of available contacts, the second one allows to add, remove and edit contacts. To add new contact choose "Add new" button in the **Address book** bookmark. After filling all of the empty fields click "Ok" button or "Add new" button if You want to add new address.

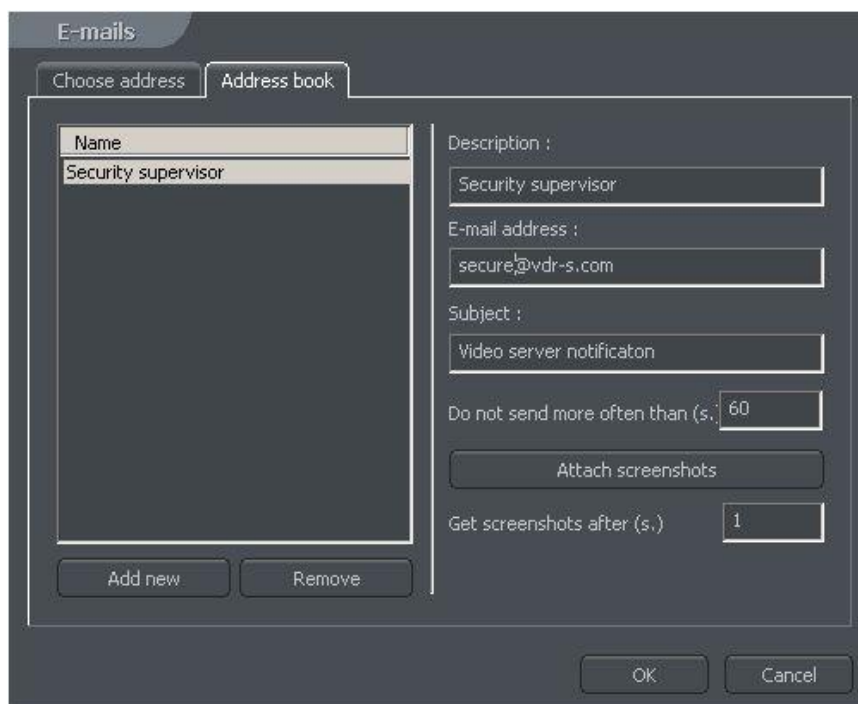


Figure 19 Address book – e-mail addresses

Field	Description
Description	Name which will appear in the contact list
E-mail address	E-mail address to which notification will be sent
Subject	Subject of an e-mail notification message
Do not send more often than (s.)	The minimum time gap between two messages
Attach screenshots	Allows to attach screenshots from selected cameras to e-mail notification message
Get screenshots after (s.)	Time gap between alarm activation and camera image snapshot

After filling all the fields select **Ok** to finish or **Add new** (to add new contact).

3.3.5.2 Client addresses

In this place You can add addresses of the remote client applications to which server application will send notifications. The way server sends notifications to client applications is presented on a diagram below.

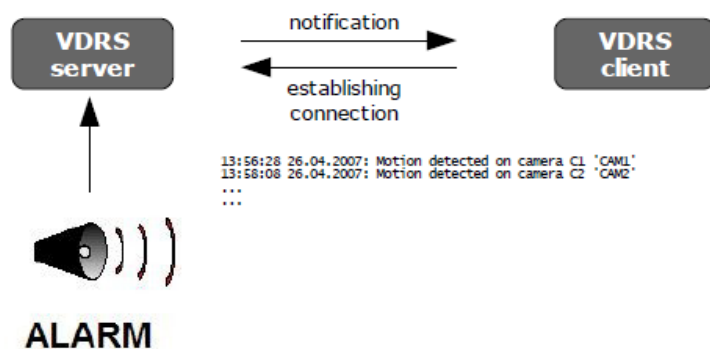


Figure 21: Schema for sending notifications to the client

Figure 20 Schema for sending notifications to the client

To add new contact it is necessary to fill all the blank fields:

Field	Description
Description	Name which will appear in the contact list
Client address and port	Address and port of the remote client
Client password	Password selected for sending notifications

Server user	Server user login
Server password	Server user password
Dial-up connection	If dial-up connection is configured it is possible to "call" client application

After filling all the fields select **Ok** to finish or **Add new** (to add new contact).

3.3 Camera configuration

NET PROFESSIONAL system allows to configure many camera parameters. Quality of displayed image, compression settings, drawing a mask of areas, in which motion detection will be omitted. Configuration panel can be reached from the top menu bar:

Configuration ➡ **Cameras**

or by **Ctrl+C** shortcut combination.

At the top of the window there are placed icons, which represent cameras. By clicking on them You can switch between configuration panels for each camera. Icons with white border refer to cameras, which are not serviced by the system¹. In NET PROFESSIONAL PRO 4 AV first four cameras will be available, the rest will be inactive. Camera settings are divided into several sections. To switch between sections click on the bookmarks.

3.3.1 ANALOG SYSTEM CAMERA CONFIGURATION

3.3.1.1 Camera

¹It depends on the version of the system

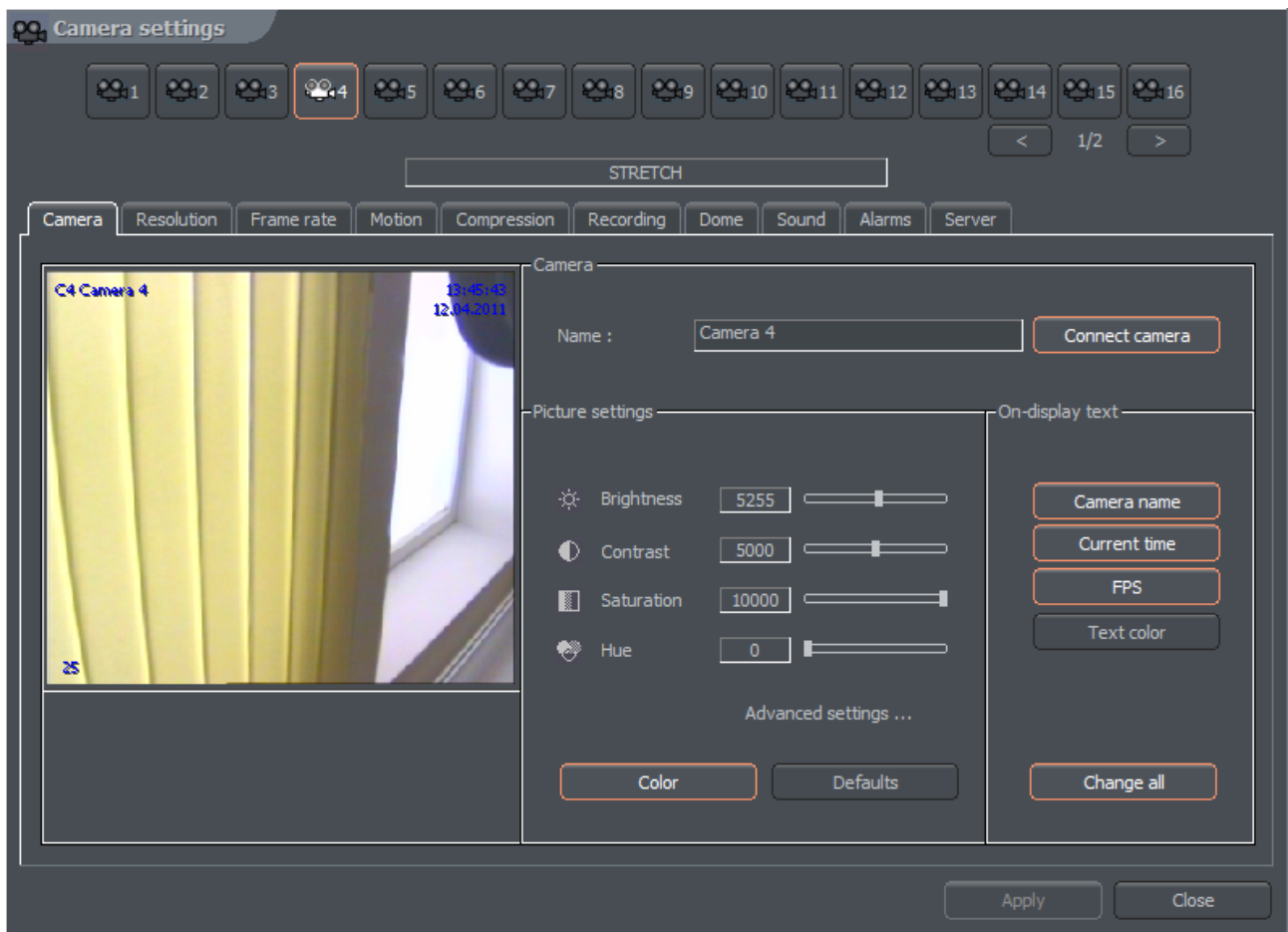


Figure 21 Analogue camera

Panel	Field	Description
Camera	Name	Name describing camera
	Connect camera	Enables the video stream capture
Picture settings	Brightness, Contrast, Saturation, Hue, Sharpness	Parameters characterizing the image. To change parameter move the slider
	Color	Enables the color mode (if color camera)
	Default	Restores the default settings
On-display text	Camera name	Display camera name on the screen
	Current time	Display current time on the screen
	Fps	Display the number of captured fps on the screen
	Text color	Changes the text color
	Change all	Changes the settings for all connected

		cameras
Advanced settings (applies only to small camera view)	Sharpen	Sharpen the image on small view
	Software deinterlace	During the analogue – digital signal conversion, semi-images are not created in the same time but gathered one after another. After they are put together there is a visible effect of shift between even and odd lines. It is especially visible in fast-changing scenes. Selecting this option will remove the effect.
	Decode scale	1:1 1:2 1:4 1:8
	Decode framerate	Unlimited – the same amount of frames as on live view. Medium – half of the frames on live view Low – 1/4 quarter Lowest – 1/8 of the frames on live view
On-display text	Camera name	Display camera name on the screen
	Current time	Display current time on the screen
	Fps	Display the number of captured fps on the screen
	Text color	Changes the text color
	Change all	Changes the settings for all connected cameras

3.3.2.1 Resolution

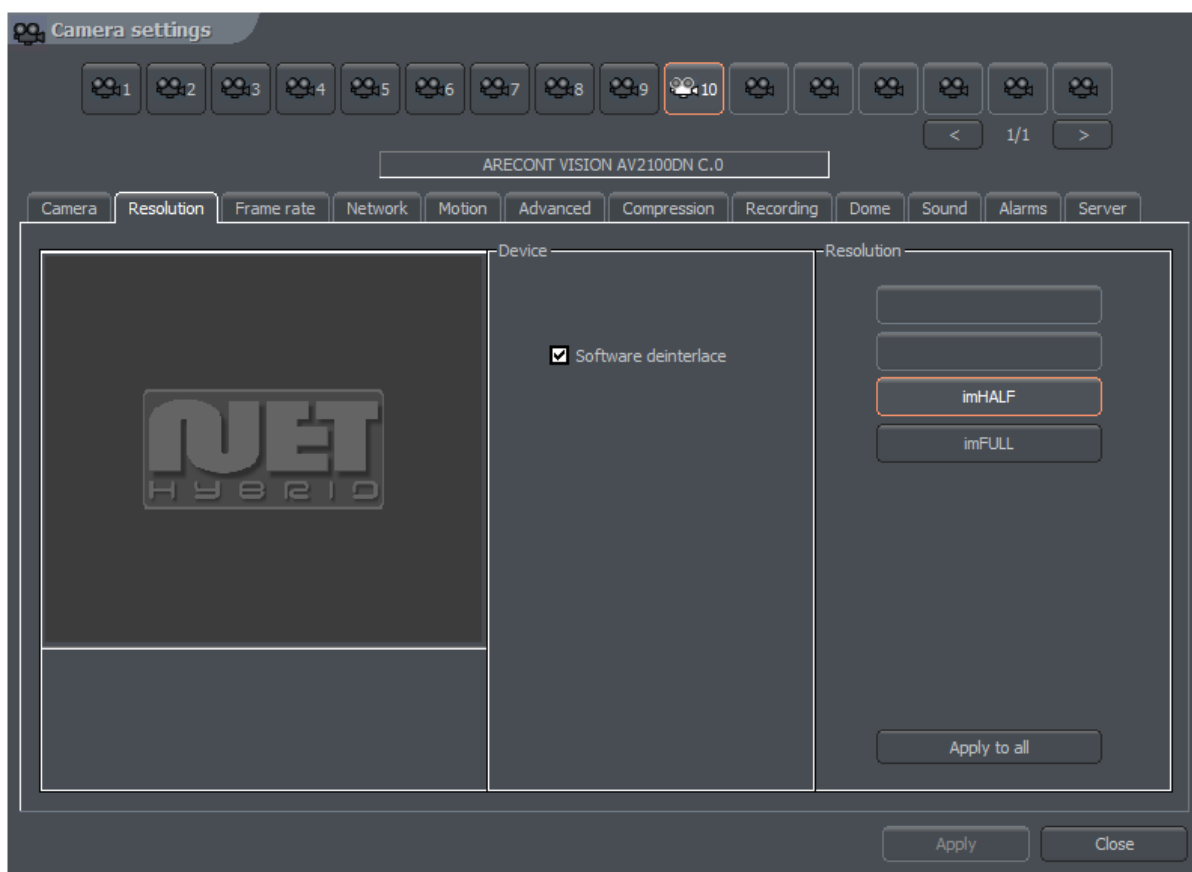


Figure 22 Camera configuration – Resolution bookmark

Panel	Field	Description
Device	Software deinterlace	During the analogue – digital signal conversion, semi-images are not created in the same time but gathered one after another. After they are put together there is a visible effect of shift between even and odd lines. It is especially visible in fast-changing scenes. Selecting this option will remove the effect.
Resolution	Resolution of captured image. The higher resolution the better image quality and more space is required for archive recordings storage. Some cameras, instead of specific resolution can provide only ImHalf and ImFull – it means that the image is in half and full available resolution for particular camera	
	Apply to all	Applies the changes to all connected cameras

3.3.2.2 Board

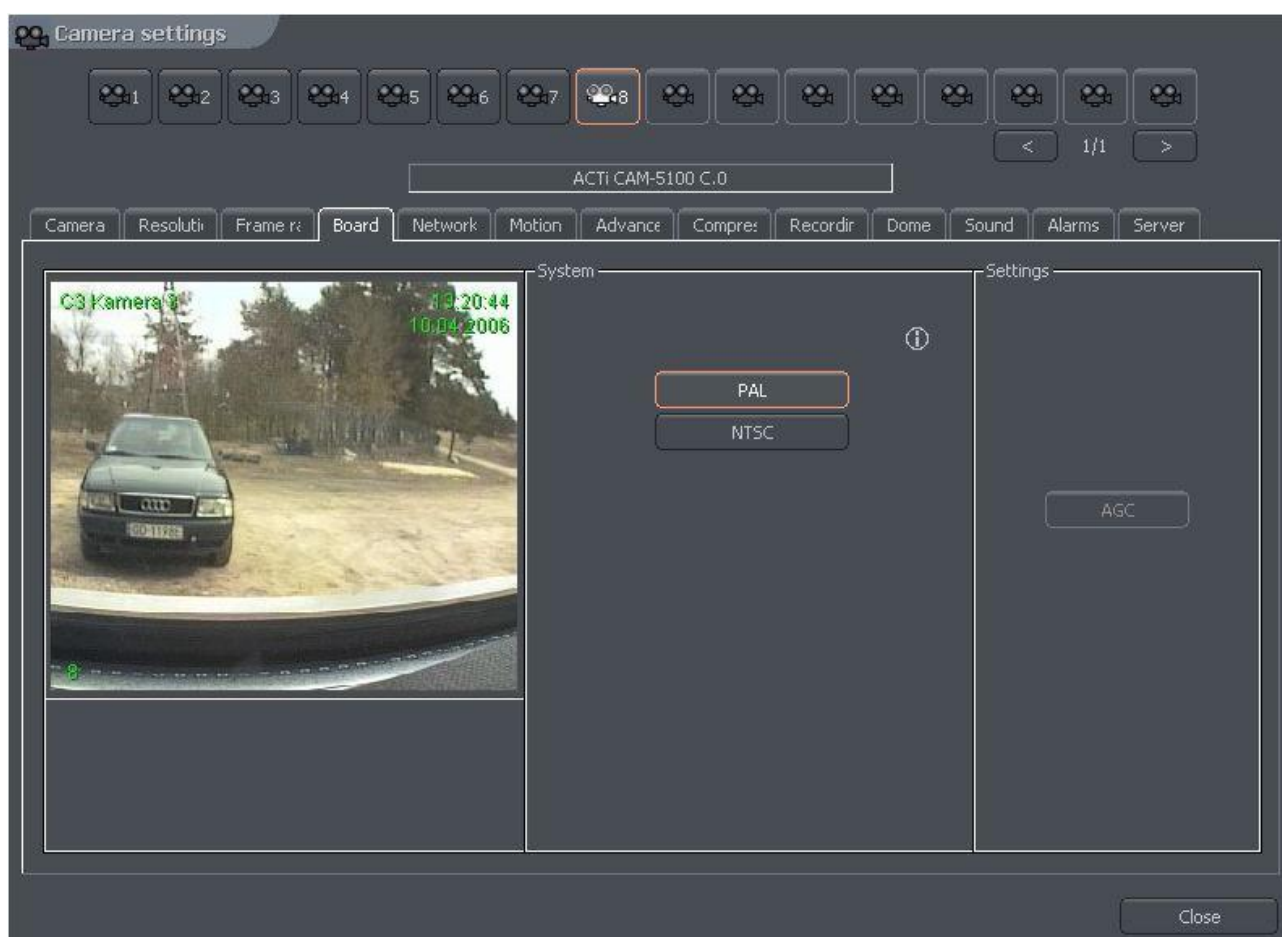


Figure 23 Camera configuration – Board bookmark

Panel	Description
System	Camera image transmission standard PAL/NTSC
Skip frames	Option allows to set the number of frames to skip. Increasing the parameter lowers the number of displayed and recorded frames. It lowers both the CPU usage and storage place needed on the hard disk
Settings	AGC – Automatic Gain Control. Auto regulation of source amplifier

3.3.2.3 Network

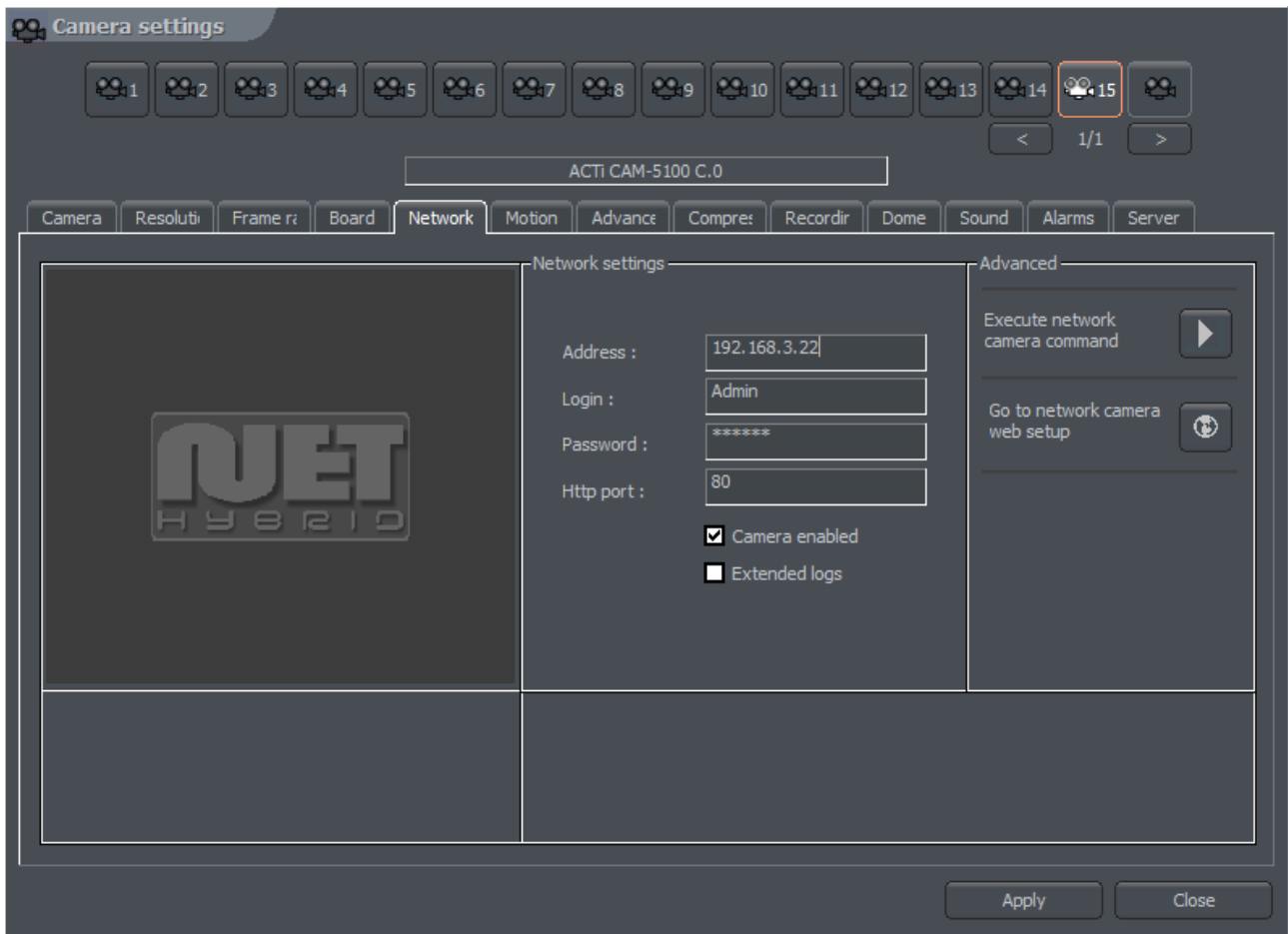


Figure 24 Camera configuration – Network bookmark

Panel	Field	Description
Network Configuration	Address	Camera address (IP number or domain name) which was put in configuration wizard. This field can be modified
	Login	Name of the user which has rights to connect with the camera
	Password	User password
	Http port	Port through which the camera sends an image
	Camera enabled	Deselecting this field causes the system not to service the camera (including digital inputs/outputs, sound)
	Extended log	System administrator help in solving problems with network cameras. After marking this option every command sent to camera and every camera reply is saved to logs
Advanced	Go to configuration on the website	Opens internet browser on the camera configuration web page
	Execute network camera command	Loads the camera configuration (brightness, contrast, resolution etc.) from

		the camera to NET Professional. If the camera configuration is changed from the www browser level it is possible to download these new settings to VDRS, set factory defaults or restart the camera.
--	--	--

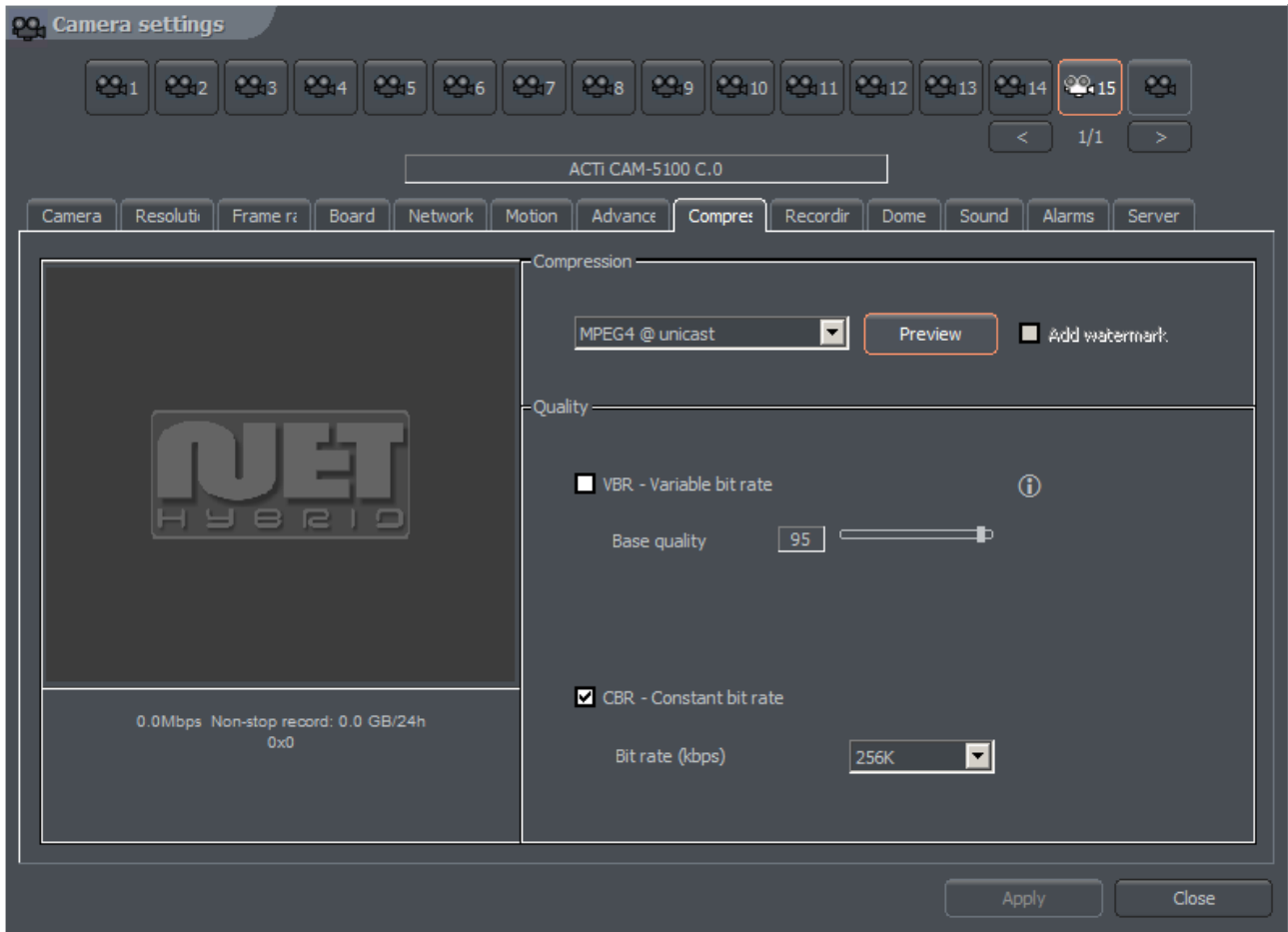


Figure 29: Camera configuration – Compression bookmark

3.3.2.4 Compression

Panel	Field	Description
Compression	Analogue cameras	
	MJPEG	Records the individual frames as JPEG images – each frame is coded individually (every frame is a key frame). It requires plenty of hard disk space but gives good image quality. It uses average CPU power. Amount of generated data doesn't depend on amount of motion on the screen
	MPEG-4	Encoding and decoding uses a lot of CPU power. Uses key and delta frames. Delta is an ordinary full

		frame calculated from a difference between previous frame and current frame. That's why big amount of data is generated when there are no changes in the image (but less when changes are big). It guarantees high image quality
	DJPEG	Codec developed by Alnetsystems Company. Codes only image areas which are changed – uses key and delta frames. When image doesn't change system is not generating any data. CPU usage is low and hard disk space for archive storage strongly depends on how much motion is on the screen.
	Digital cameras	
	MPEG4@rtsp-unicast	
	MPEG4@rtsp-multicast	
	MPEG4@rtsp-tcp	
	MPEG4@rtsp-http	
	MJPEG@http	
	Frames	Quality of key frames, which are background to delta frames. The higher value the higher quality (and more hard disk space needed for the archives)
	Delta	Quality of Delta frames (the part of the image which changes)
	Delta Sensitivity	Parameter which allows to set how system reacts on changing image. When set too low delta frames won't be replaced (for instance person in motion wearing clothes which color match the background color)
Quality	VBR	Variable Bit Rate – codec generates a stream of compressed data with variable intensity (which depends on amount of motion on the screen). The image quality is at the same level
	CBR	Constant Bit Rate – codec changes the image quality so the data stream will have approximately constant bit-rate. This option is useful for network cameras, which use UDP protocol
	Target bit rate (kbps)	Bit-rate value for CBR
Mode	Watermark	Certain value (pattern) "entangled" with recorded video image. Prevents archives from modification. Watermark is not visible on the screen, but it is possible to check (by VDR-A application) if it exists in the archives or not. Watermark is unique for each VDR-S system. Every modification of the recorded video destroys the watermark and during the watermark check the system will pop up error. To make checking watermark function possible it is necessary to export it first:

		Tools -> Export watermark
Preview decoding	Preview framerate	Only for IP cameras – frames per second for the stream sent to: - display - motion detection - remote clients with free bandwidth
	Preview scale	Applies only for IP cameras with MJPEG codec
Preview	Allows to calculate approximate size of recorded data and video stream for specified image quality settings	

3.3.2.5 Advanced

Bookmark and the options in it depends on type of connected camera. With that bookmark, it is possible to control the advance parameters of the camera.

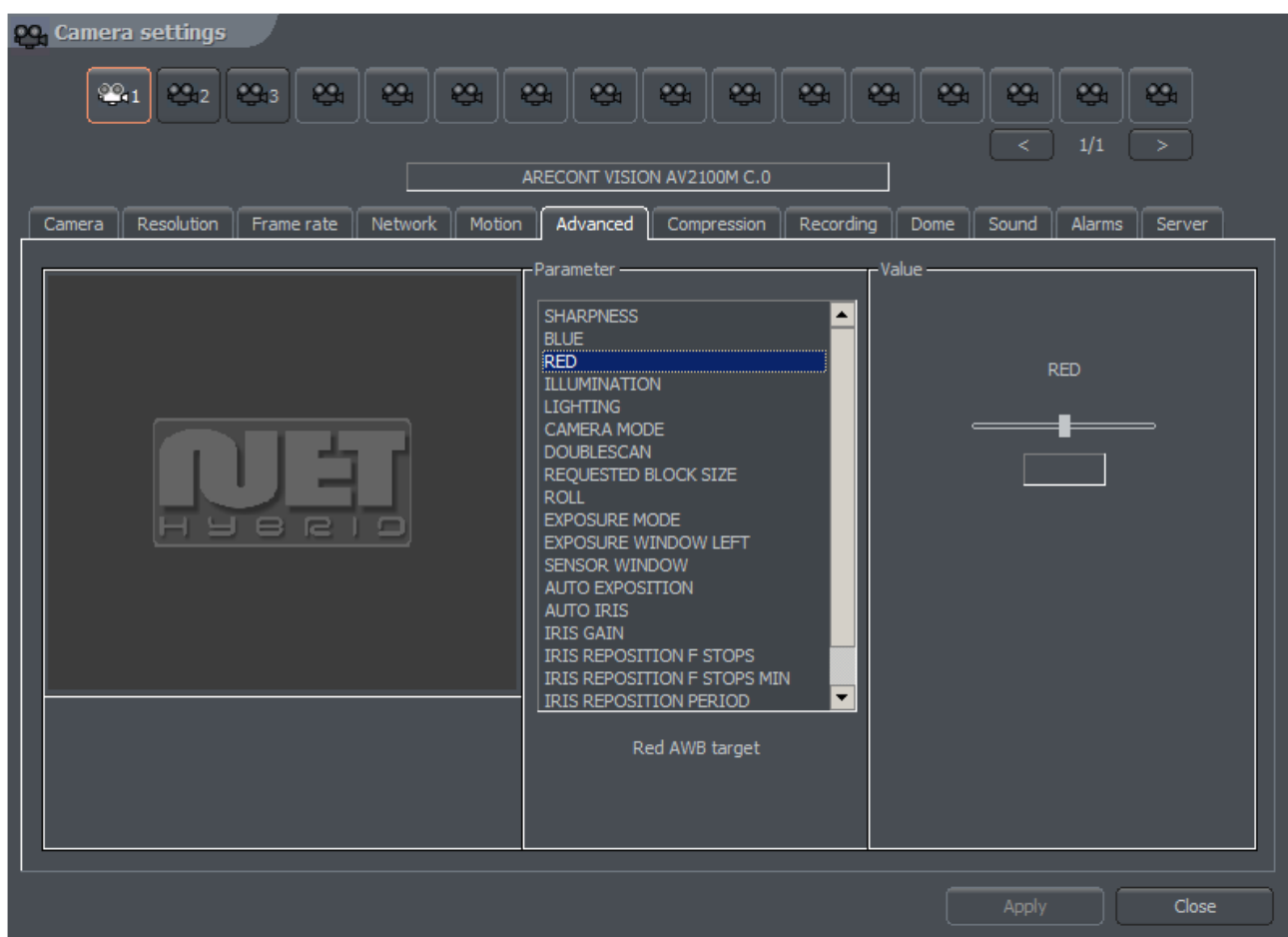


Figure 30: Camera configuration – Advanced bookmark

3.3.3 Common configuration settings

3.3.3.1 Frame rate

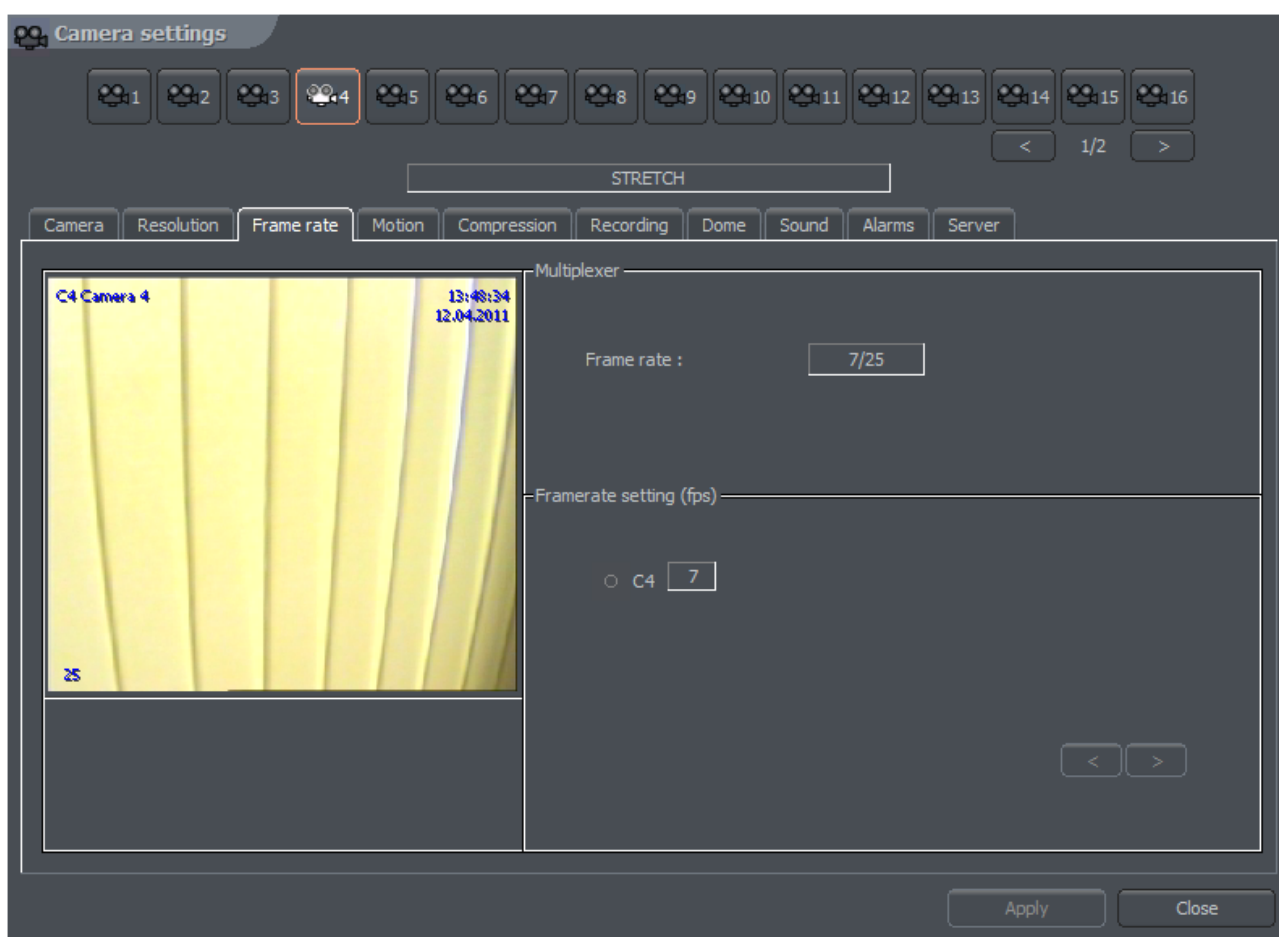




Figure 31: Camera configuration – Frame rate bookmark

Panel	Description
Multiplexer	Enables the mode for dynamic frame assigning for each camera. In the window You can see frames used / frames available. In the configuration presented above there are 24 frames used (6 frames x 4 cameras).
Framerate settings (frames per second)	<p>Panel shows a list of available cameras in the system and number of frames per second assigned to them. It is possible to enable the dynamic frames assigning by clicking the icon with a camera number</p> <p> C1 - means that the dynamic mode is enabled</p> <p> C1 - means that frame assigning is constant</p> <p>Dynamic mode assigns all available frames per second to the camera, which detected motion and entered the recording mode. Suppose we have PRO4 system (25 fps). We set the constant number of frames per second for each camera on 4. 9 frames per second stay unused (25 fps - [4 cam. X 4 fps] = 9 fps). These 9 unused frames can be assigned to any camera by enabling it's dynamic mode. If the dynamic mode is enabled for two</p>

or more cameras, the system assigns unused frames between the cameras evenly.

3.3.3.2 Motion

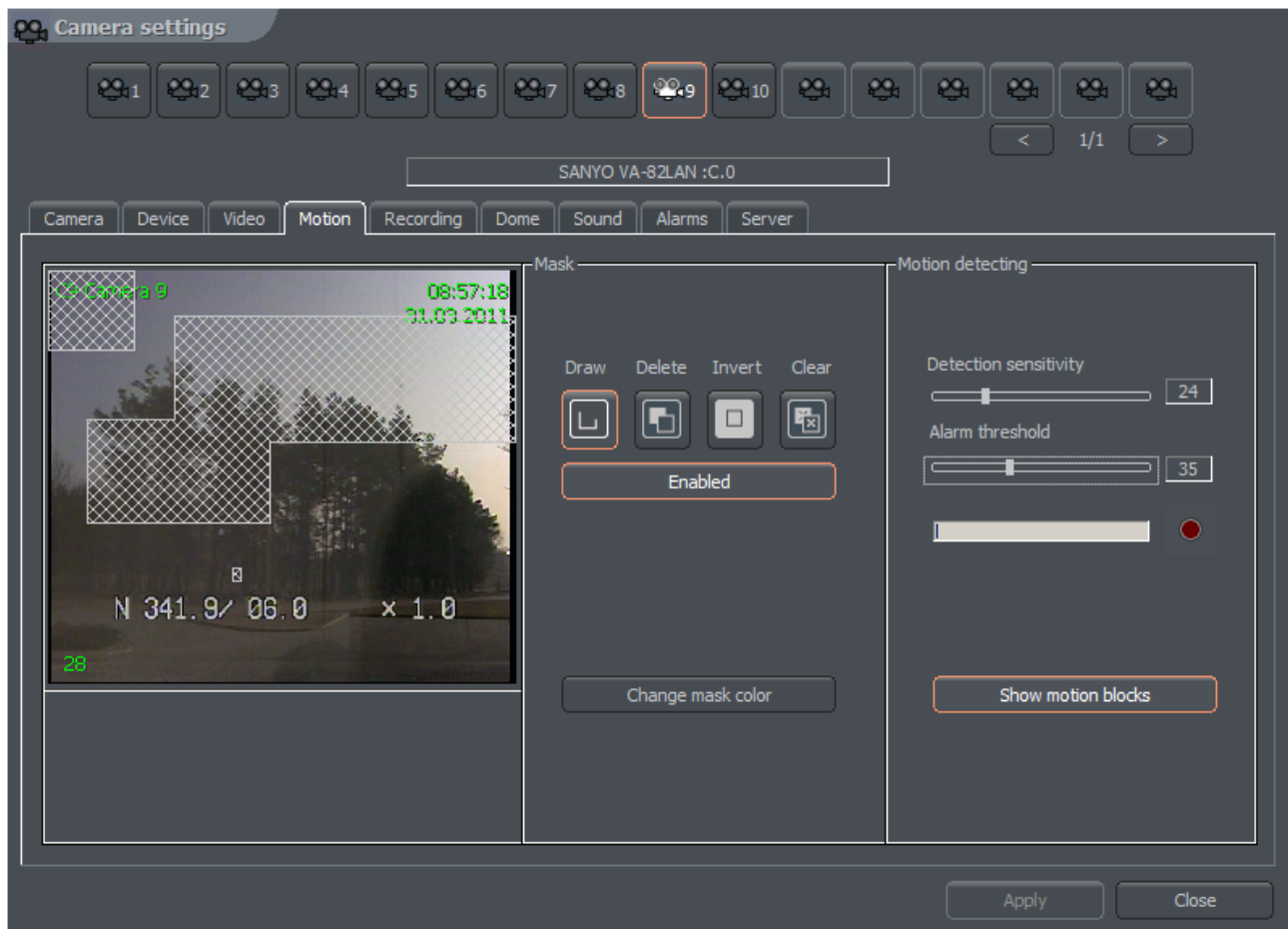


Figure 32: Camera configuration – Motion bookmark

Panel	Field	Description
Mask	Allows to mark areas on which any motion will be skipped	
	Draw	Enables the mask drawing mode. Drawing is realized by drag-and-drop method
	Delete	Mask delete mode. Cutting the areas from previously masked areas
	Invert	Invert the marked mask. Masked areas become unmasked and vice versa
	Clear	Clears the mask
	Enabled	Sets the mask active
	Change mask color	Changes the mask color
Motion detection	Detection sensitivity	The system detects motion as changes in the image. Application analyses the data and classifies them as a motion detection or not. The slider allows to set the sensitivity level for these changes

	Alarm threshold	Level, from which the system reacts to changes in the image. It is recommended to set the threshold when the image is in stillness. It will help to eliminate recording of the insignificant motion, such as leaves motion on the wind and camera noise. Below the slider there is a field which shows current alarm level
	Show motion blocks	Enables plotting the motion blocks on the image, in which the system detects motion. This option is useful while modifying the motion detection settings

3.3.3.3 Recording

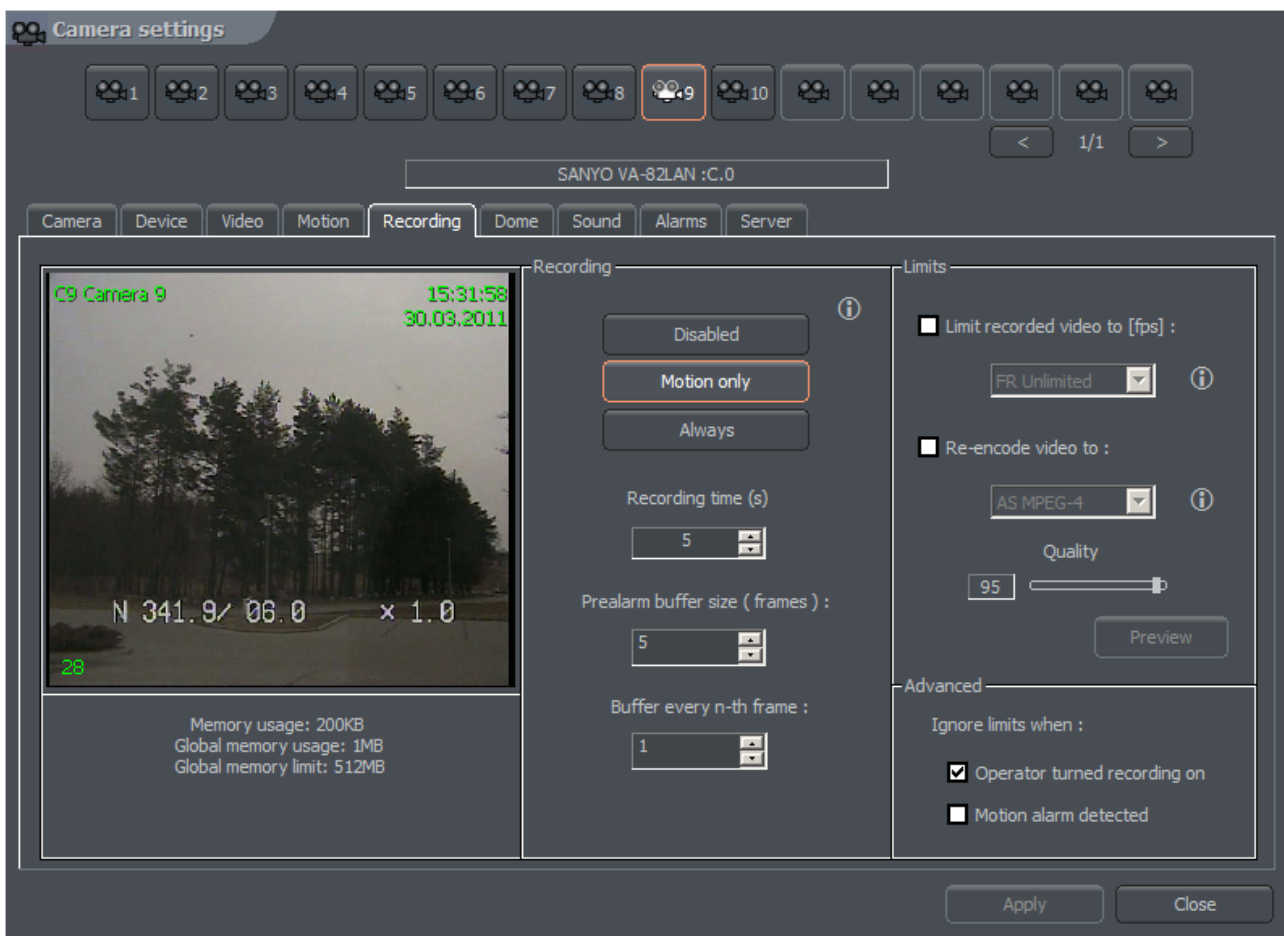




Figure 33: Camera configuration – Recording bookmark

Panel	Field	Description
Recording	The options are set only when no scheduled task is active. Scheduler tasks have higher priority!	
	Disabled	Recording is disabled
	Motion only	Recording will start on motion detection
	Always	Continuous recording
	Recording time (s)	Recording time after motion detection

Prealarm	<p>Prealarm is function of early reaction for alarm. It enables to recreate recordings from moments before activating alarm. When the function is enabled, the application is buffering image, and when movement is detected (and recording is set on) the frames recorded before alarm remain to user's disposal. The length of buffered image in case of network cameras depends on memory size reserved for prealarm. For analogue cameras two parameters are being set up: Prealarm buffer size (frame) – quantity of buffered frames Buffer every n-th frame – ratio of buffered frames to non-buffered</p> <p>Example: Camera in the system records 5 fr/sec. If define 5 buffered frames and quantity of buffered frames for one the result will be 1 second of buffered recording. The formula for calculating length of the buffer is presented below.</p> $\text{Buffer} = \frac{\text{Prealarm buffer size(frame)} * \text{Buffer every n-th frame}}{\text{Number of recorded frames}}$ <p>For the example above: $(5 * 1) / 5 = 1 \text{ sec}$</p>	
Advanced	Limit recorded video to [fps]	Function limits fps in the recorded video – this function can be used to save space on a hard drive
	Re-encode video to:	Function allows to re-compress video stream to other format independently on the input video stream which is sent by camera or video capture card
	Quality	Setting for quality of re-compressed video
	Ignore limits when:	Option ignores limits mentioned above in two defined cases: - Recording is triggered manually by the operator - Motion detection alarm has occurred

Figure 34: Camera configuration – Dome bookmark

Panel	Field	Description
Dome settings	Address	Address, which was set on hardware, for example by jumpers on the dome. It is necessary to pay attention which address is assigned to particular setting (dome manual). Sometimes position '1' means address number '0', and not '1' as one may suppose (for instance Pelco D protocol)
	Port	COM port, to which the dome control is plugged. If the protocol is set in Dome control panel it's name will be visible

	Protocol	Protocol for dome control
	Dome enabled	Enables the dome control in the system
Preset Sequence	Automatic dome control. Switching between previously set positions. This option works only with domes, which support saving and recalling presets. It is possible to set up to 128 positions. For proper work the dome protocol has to have two command included: 'Save preset' and 'Recall preset'.	
	Activate after [sec]	The time gap between last manual command (for example from the keyboard) and Preset activation
	Preset dwell time [sec.]	The time the dome stops on a preset for
	Activate on program start	Activates sequence on Net Professional system start
Preset Sequence	<p>On the left side there is a list, from which the set of presets can be chosen. One set is 16 positions. To save the dome position under desired preset click on its number. To add preset to AutoPan  sequence mark it's checkbox.</p> <p>ATTENTION! To activate AutoPan it is necessary to mark option in the dome control panel. You can call dome control panel using the Ctrl+D keyboard shortcut or  from the current bookmark</p>	

3.3.3.5 Sound

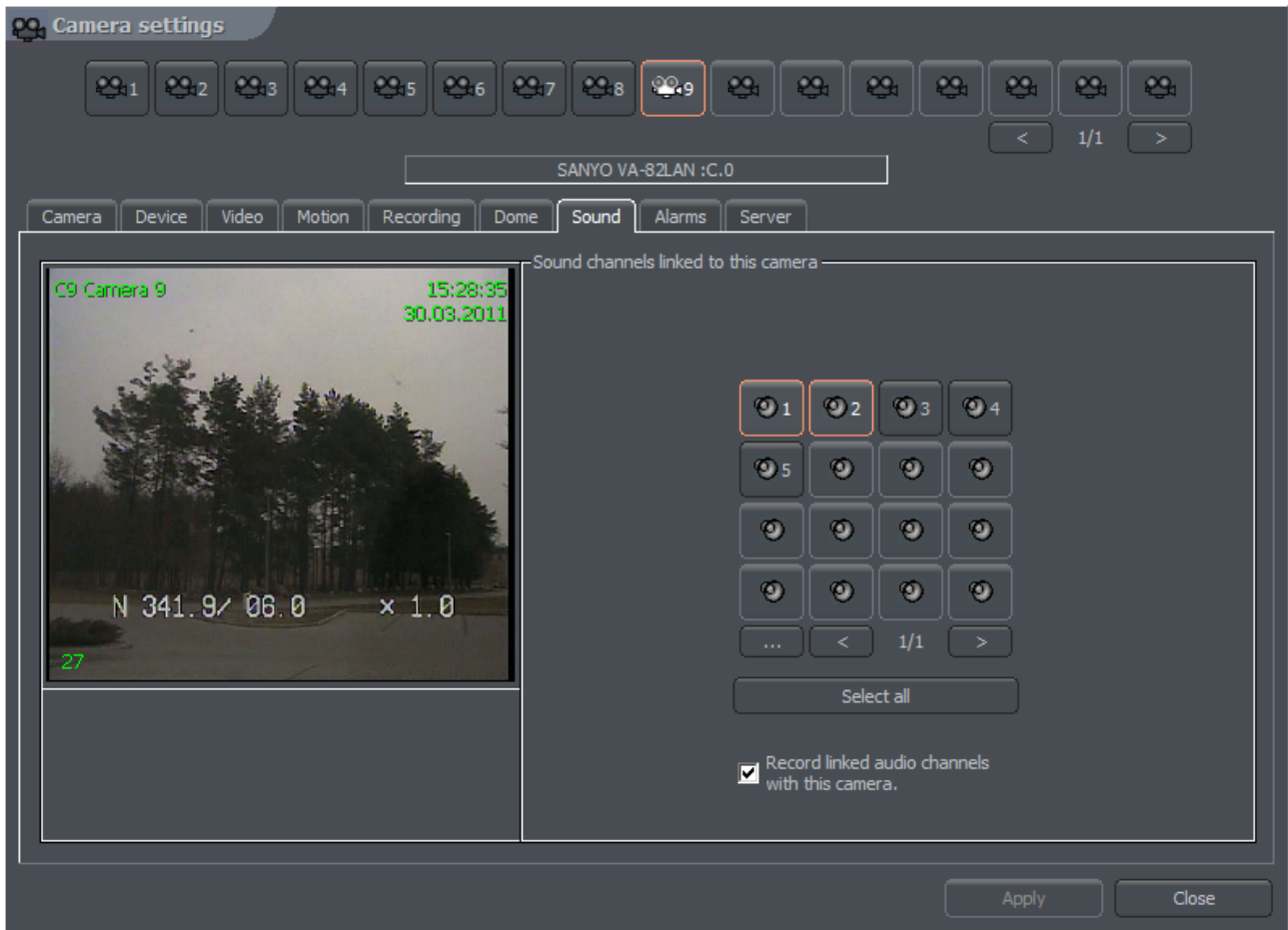



Figure 35: Camera configuration - Sound bookmark

The panel is responsible for connecting particular camera with sound channels. It is made by choosing numbered buttons or from the list. Selection mode is made by clicking  button. Connecting camera with a sound channel means that during live monitoring when camera is marked the system will play sound from the previously chosen channels.

3.3.3.6 Alarms

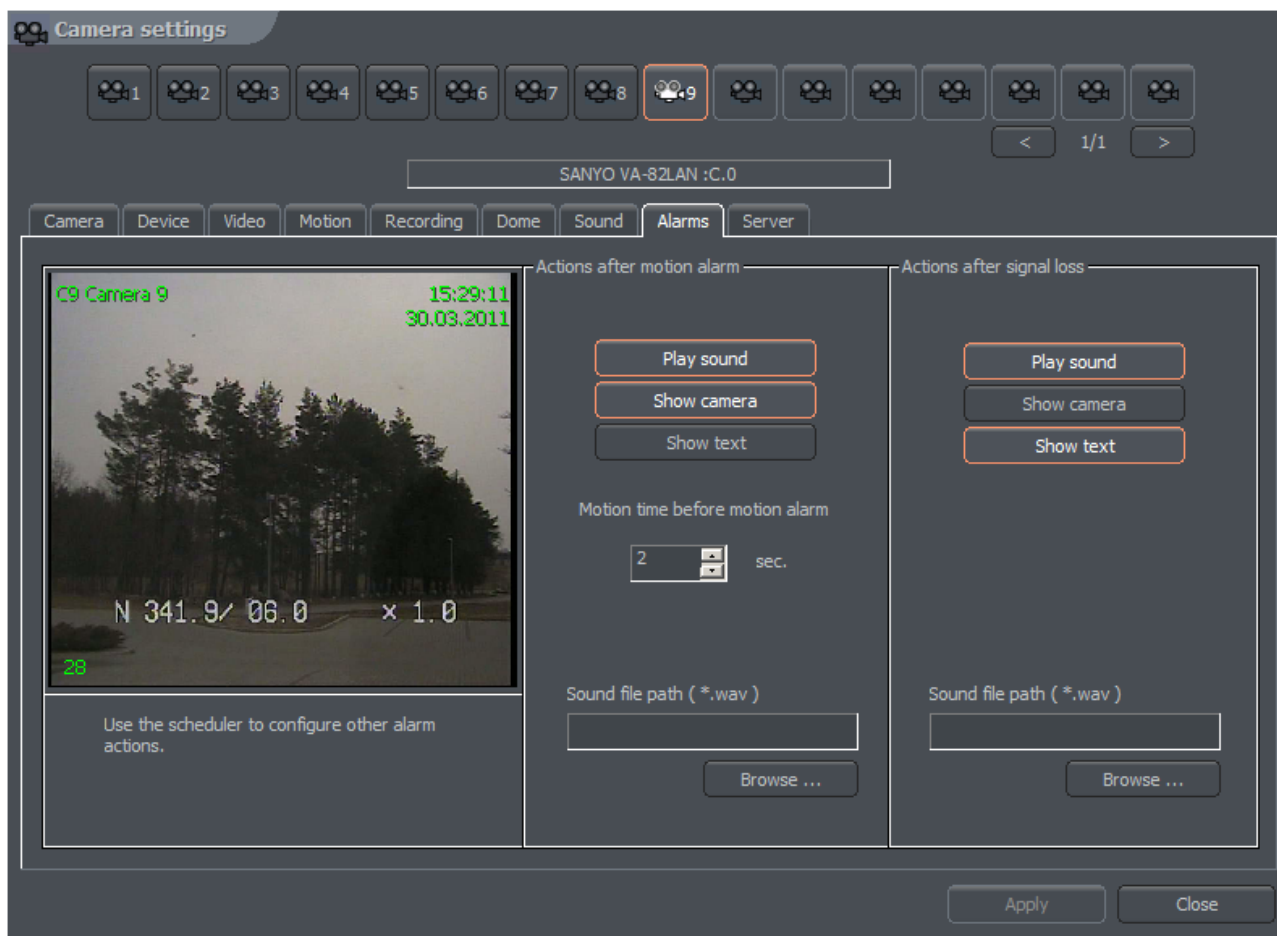


Figure 36: Camera configuration - Alarms bookmark

Panel	Field	Description
Actions after motion alarm	Play sound	Activates sound alarm. System will play sound defined below in sound file path.
	Show camera	Marking this option will cause the camera image to be shown in full screen. When application is minimized after the motion detection the program window will be maximized and will show the camera, on which the motion was detected. The the program window will minimize. During the normal work the system will show the camera on full screen and will back to the previous layout
	Show text	Shows pop up message from the VDRS system tray icon
	Motion time before motion alarm	Determines the time which should last before the motion is detected as an alarm
	Sound file	

	path	
Actions after signal loss	Play sound	Activates sound alarm. System will play sound defined in settings panel
	Show camera	Marking this option will cause the camera image to be shown in full screen. When application is minimized after the motion detection the program window will be maximized and will show the camera, on which the motion was detected. The the program window will minimize. During the normal work the system will show the camera on full screen and will back to the previous layout
	Show text	Shows pop up message from the VDRS system tray icon
	Motion time before motion alarm	Determines the time which should last before the motion is detected as an alarm

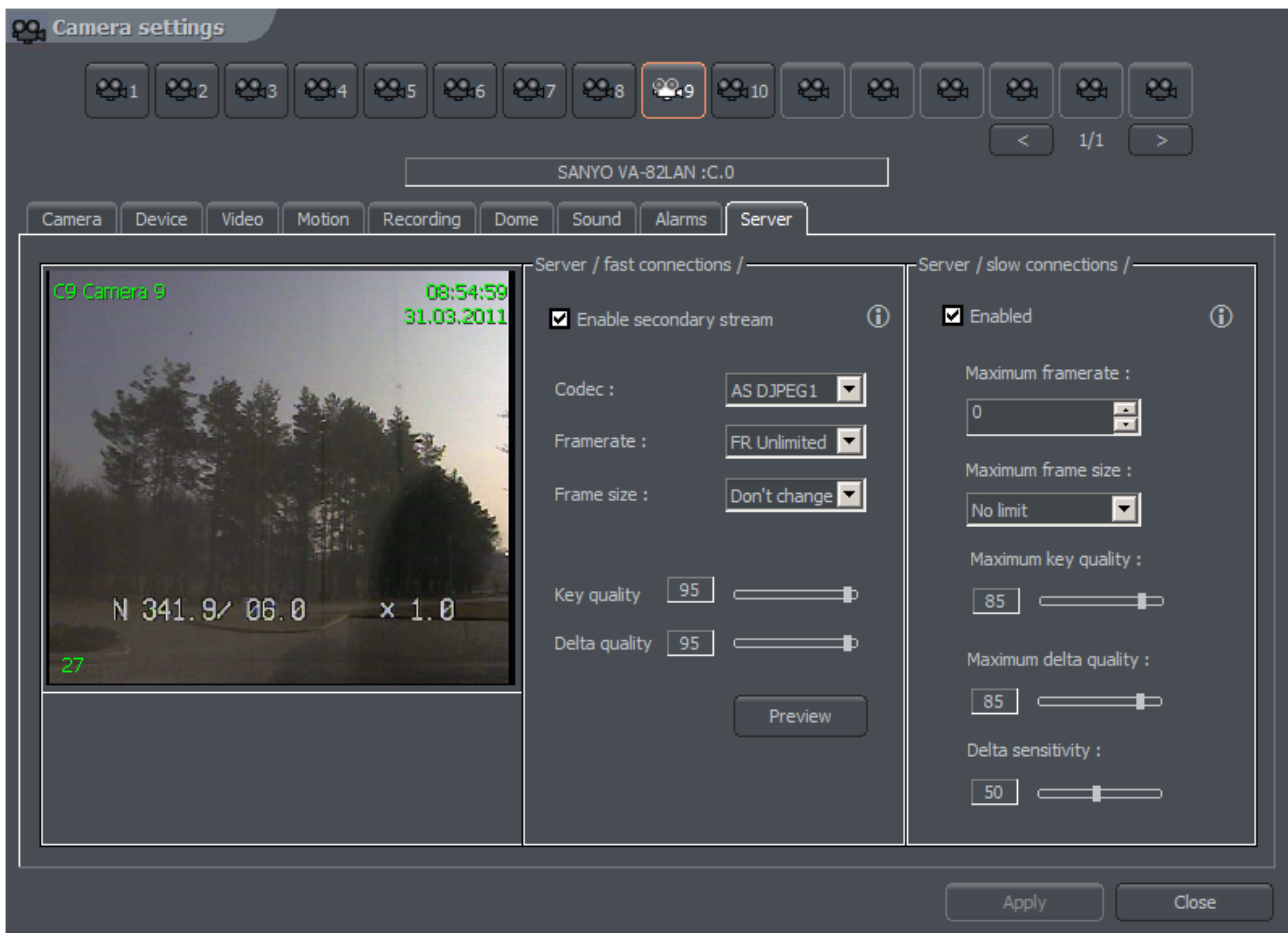


Figure 37: Camera configuration - Server bookmark

3.3.1.2 Resolution

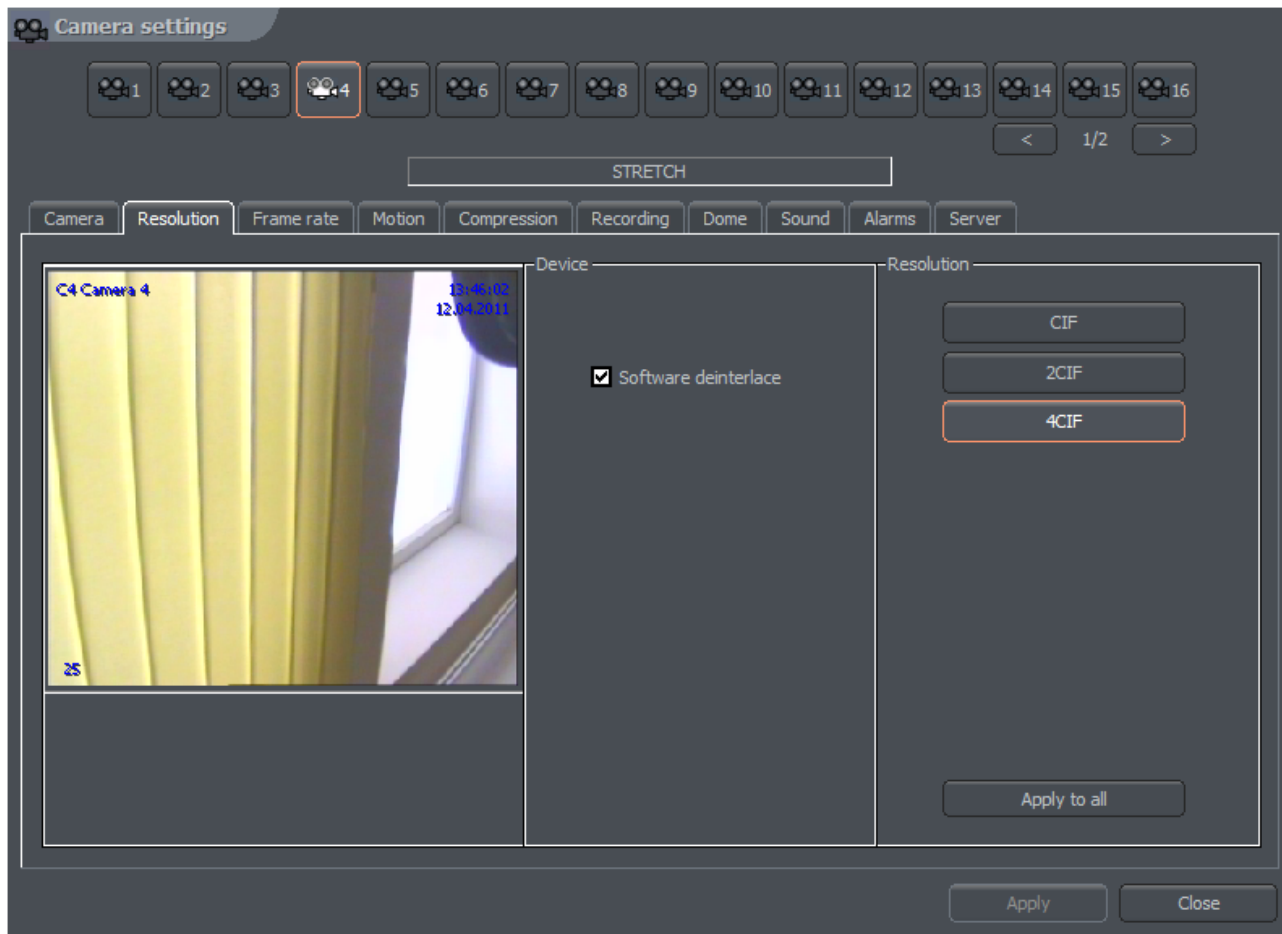


Figure 25 Resolution

Panel	Field	Description
Device	Software deinterlace	During the analogue – digital signal conversion, semi-images are not created in the same time but gathered one after another. After they are put together there is a visible effect of shift between even and odd lines. It is especially visible in fast-changing scenes. Selecting this option will remove the effect.
Resolution	CIF	Display the camera at 352 x 288
	2 CIF	Display the camera at 704 x 288
	4 CIF	Display the camera at 704 x 576
	D1	Display the camera at 720 x 576
	Apply to all	Applies the changes to all connected cameras

3.3.1.3 Compression

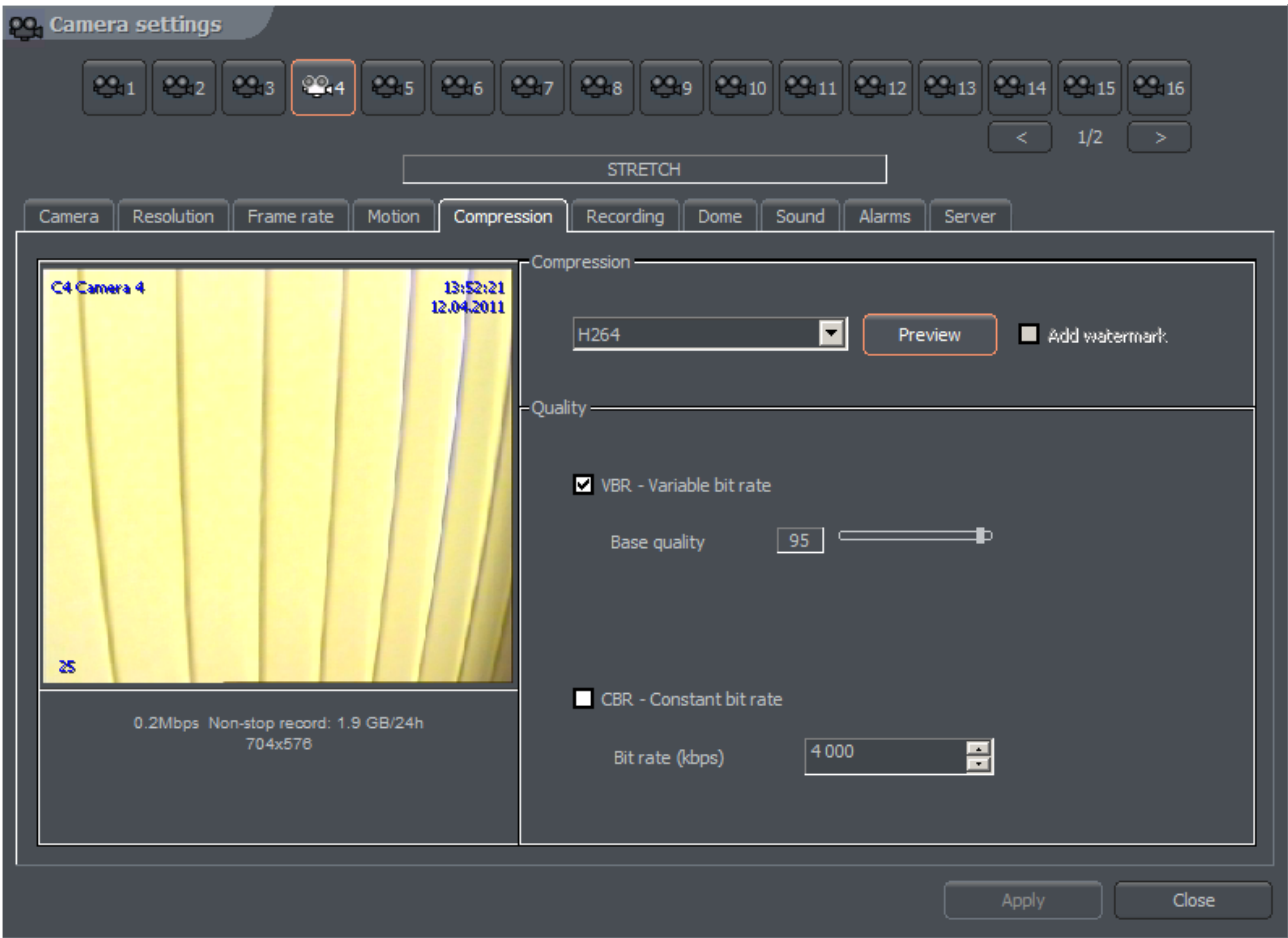


Figure 26 Compression

3.3.2 IP CAMERA CONFIGURATION

Depending on the IP camera, the tags can be different. Most of the new IP devices need to be set on www and the stream

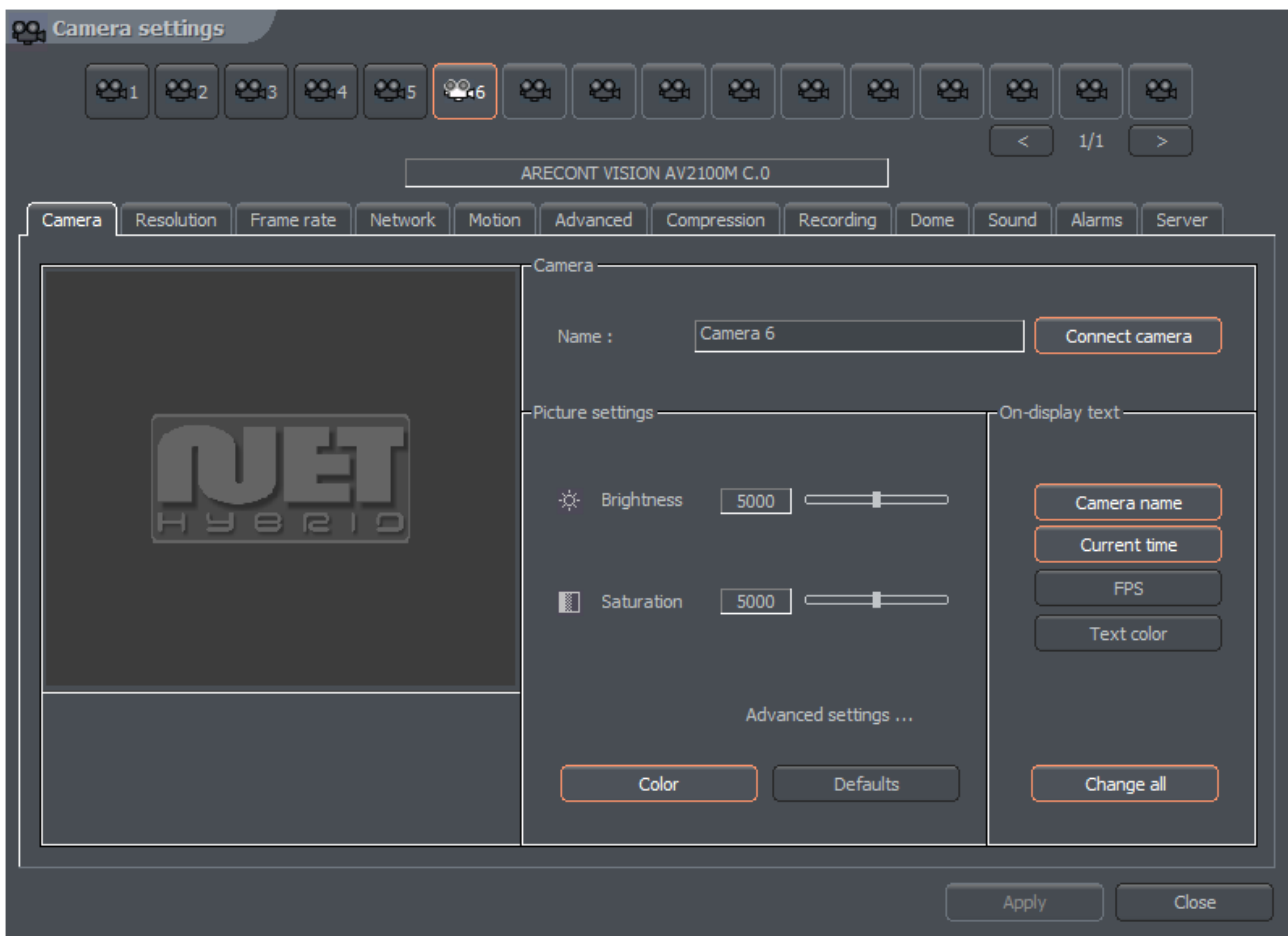


Figure 27 Camera configuration – Camera bookmark

Panel	Field	Description
Camera	Name	Name describing camera
	Connect camera	Enables the video stream capture
Picture settings	Brightness, Contrast, Saturation, Hue, Sharpness	Parameters characterizing the image. To change parameter move the slider
	Color	Enables the color mode (if color camera)
	Default	Restores the default settings
On-display text	Camera name	Display camera name on the screen
	Current time	Display current time on the screen
	Fps	Display the number of captured fps on the screen
	Text color	Changes the text color
	Change all	Changes the settings for all connected cameras
Advanced	Sharpen	Sharpen the image on small view

settings (applies only to small camera view)	Software deinterlace	During the analogue – digital signal conversion, semi-images are not created in the same time but gathered one after another. After they are put together there is a visible effect of shift between even and odd lines. It is especially visible in fast-changing scenes. Selecting this option will remove the effect.
	Decode scale	1:1 1:2 1:4 1:8
	Decode framerate	Unlimited – the same amount of frames as on live view. Medium – half of the frames on live view Low – 1/4 quarter Lowest – 1/8 of the frames on live view
On-display text	Camera name	Display camera name on the screen
	Current time	Display current time on the screen
	Fps	Display the number of captured fps on the screen
	Text color	Changes the text color
	Change all	Changes the settings for all connected cameras

3.3.2.1 Resolution

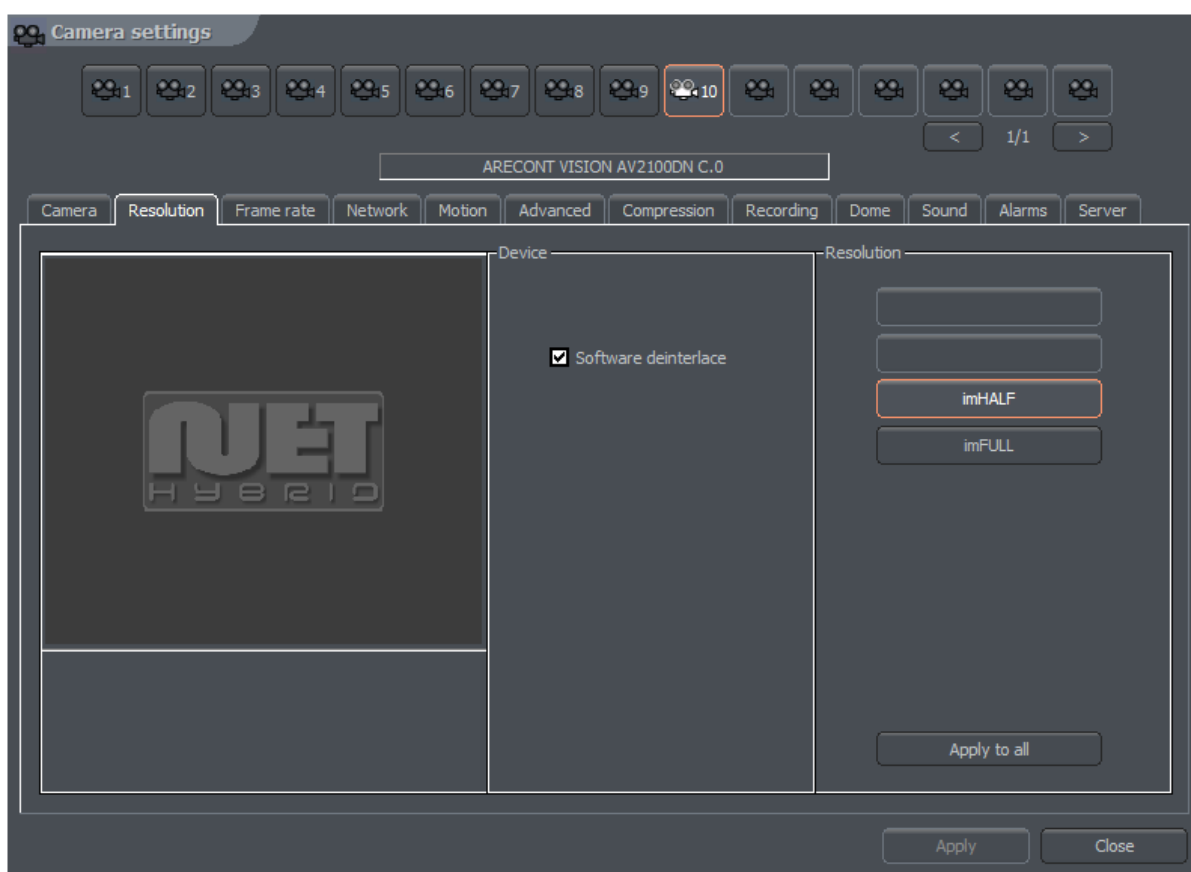


Figure 28 Camera configuration – Resolution bookmark

Panel	Field	Description
Device	Software deinterlace	During the analogue – digital signal conversion, semi-images are not created in the same time but gathered one after another. After they are put together there is a visible effect of shift between even and odd lines. It is especially visible in fast-changing scenes. Selecting this option will remove the effect.
Resolution	Resolution of captured image. The higher resolution the better image quality and more space is required for archive recordings storage. Some cameras, instead of specific resolution can provide only ImHalf and ImFull – it means that the image is in half and full available resolution for particular camera	
	Apply to all	Applies the changes to all connected cameras

3.3.2.2 Board

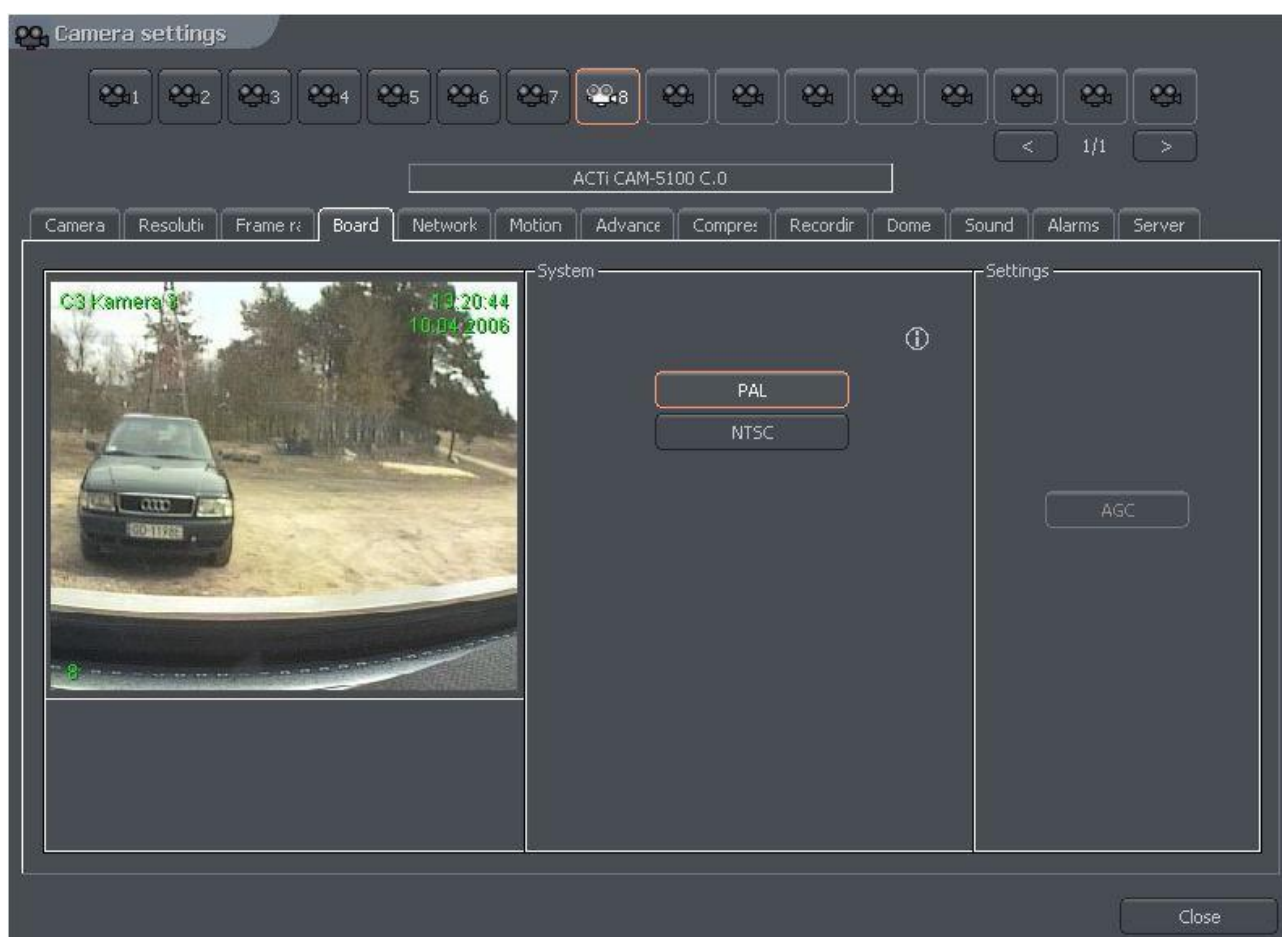


Figure 29 Camera configuration – Board bookmark

Panel	Description
System	Camera image transmission standard PAL/NTSC
Skip frames	Option allows to set the number of frames to skip. Increasing the parameter lowers the number of displayed and recorded frames. It lowers both the CPU usage and storage place needed on the hard disk
Settings	AGC – Automatic Gain Control. Auto regulation of source amplifier

3.3.2.3 Network

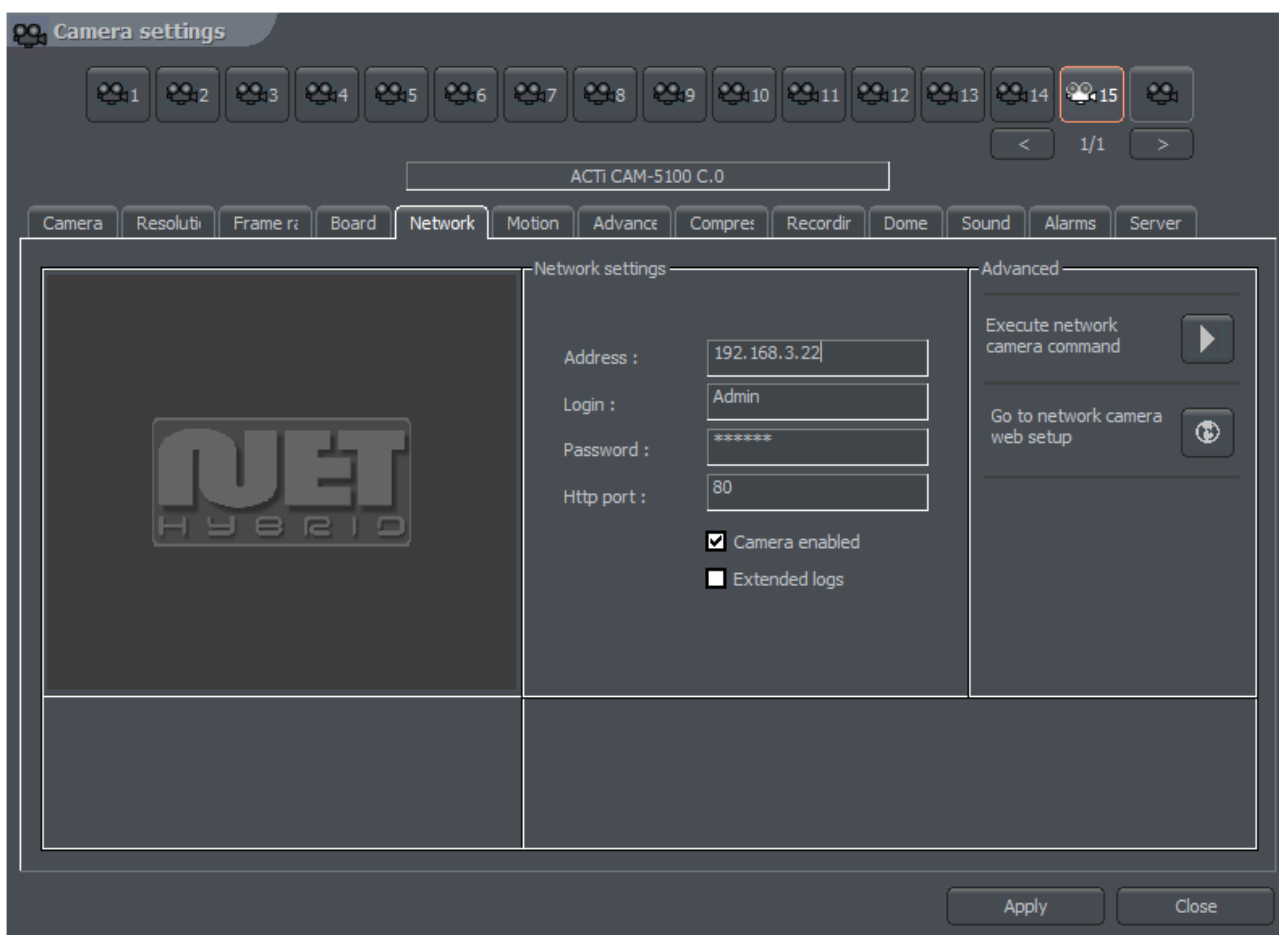


Figure 30 Camera configuration – Network bookmark

Panel	Field	Description
Network Configuration	Address	Camera address (IP number or domain name) which was put in configuration wizard. This field can be modified
	Login	Name of the user which has rights to connect with the camera
	Password	User password
	Http port	Port through which the camera sends an image
	Camera enabled	Deselecting this field causes the system not to service the camera (including digital inputs/outputs, sound)
	Extended log	System administrator help in solving problems with network cameras. After marking this option every command sent to camera and every camera reply is saved to logs
Advanced	Go to configuration on the website	Opens internet browser on the camera configuration web page
	Execute network camera command	Loads the camera configuration (brightness, contrast, resolution etc.) from

		the camera to NET Professional. If the camera configuration is changed from the www browser level it is possible to download these new settings to VDRS, set factory defaults or restart the camera.
--	--	--

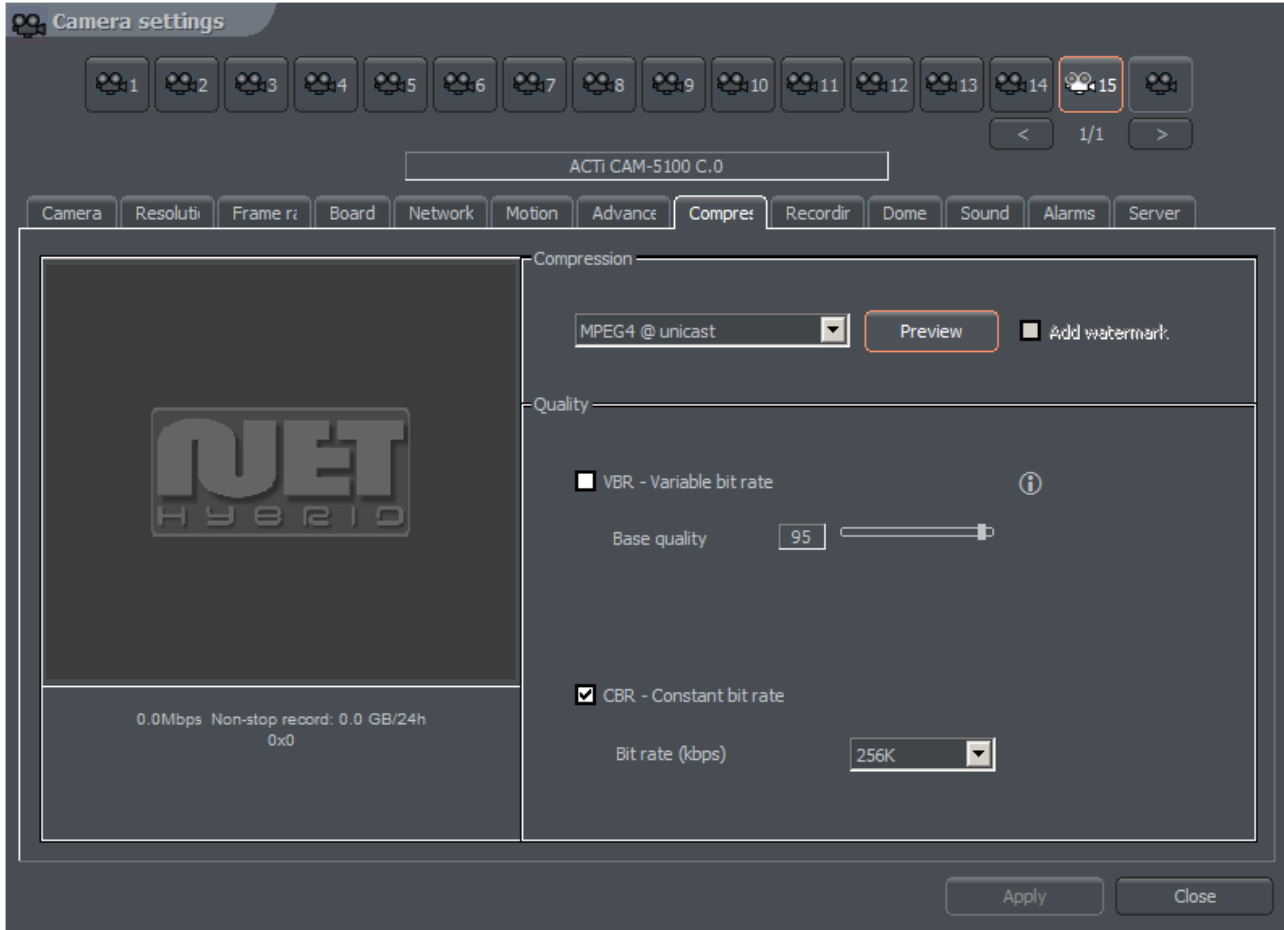


Figure 29: Camera configuration – Compression bookmark

3.3.2.4 Compression

Panel	Field	Description
Compression	Analogue cameras	
	MJPEG	Records the individual frames as JPEG images – each frame is coded individually (every frame is a key frame). It requires plenty of hard disk space but gives good image quality. It uses average CPU power. Amount of generated data doesn't depend on amount of motion on the screen
	MPEG-4	Encoding and decoding uses a lot of CPU power. Uses key and delta frames. Delta is an ordinary full

		frame calculated from a difference between previous frame and current frame. That's why big amount of data is generated when there are no changes in the image (but less when changes are big). It guarantees high image quality
	DJPEG	Codec developed by Alnetsystems Company. Codes only image areas which are changed – uses key and delta frames. When image doesn't change system is not generating any data. CPU usage is low and hard disk space for archive storage strongly depends on how much motion is on the screen.
	Digital cameras	
	MPEG4@rtsp-unicast	
	MPEG4@rtsp-multicast	
	MPEG4@rtsp-tcp	
	MPEG4@rtsp-http	
	MJPEG@http	
	Frames	Quality of key frames, which are background to delta frames. The higher value the higher quality (and more hard disk space needed for the archives)
	Delta	Quality of Delta frames (the part of the image which changes)
	Delta Sensitivity	Parameter which allows to set how system reacts on changing image. When set too low delta frames won't be replaced (for instance person in motion wearing clothes which color match the background color)
Quality	VBR	Variable Bit Rate – codec generates a stream of compressed data with variable intensity (which depends on amount of motion on the screen). The image quality is at the same level
	CBR	Constant Bit Rate – codec changes the image quality so the data stream will have approximately constant bit-rate. This option is useful for network cameras, which use UDP protocol
	Target bit rate (kbps)	Bit-rate value for CBR
Mode	Watermark	Certain value (pattern) "entangled" with recorded video image. Prevents archives from modification. Watermark is not visible on the screen, but it is possible to check (by VDR-A application) if it exists in the archives or not. Watermark is unique for each VDR-S system. Every modification of the recorded video destroys the watermark and during the watermark check the system will pop up error. To make checking watermark function possible it is necessary to export it first:

		Tools -> Export watermark
Preview decoding	Preview framerate	Only for IP cameras – frames per second for the stream sent to: - display - motion detection - remote clients with free bandwidth
	Preview scale	Applies only for IP cameras with MJPEG codec
Preview	Allows to calculate approximate size of recorded data and video stream for specified image quality settings	

3.3.2.5 Advanced

Bookmark and the options in it depends on type of connected camera. With that bookmark, it is possible to control the advance parameters of the camera.

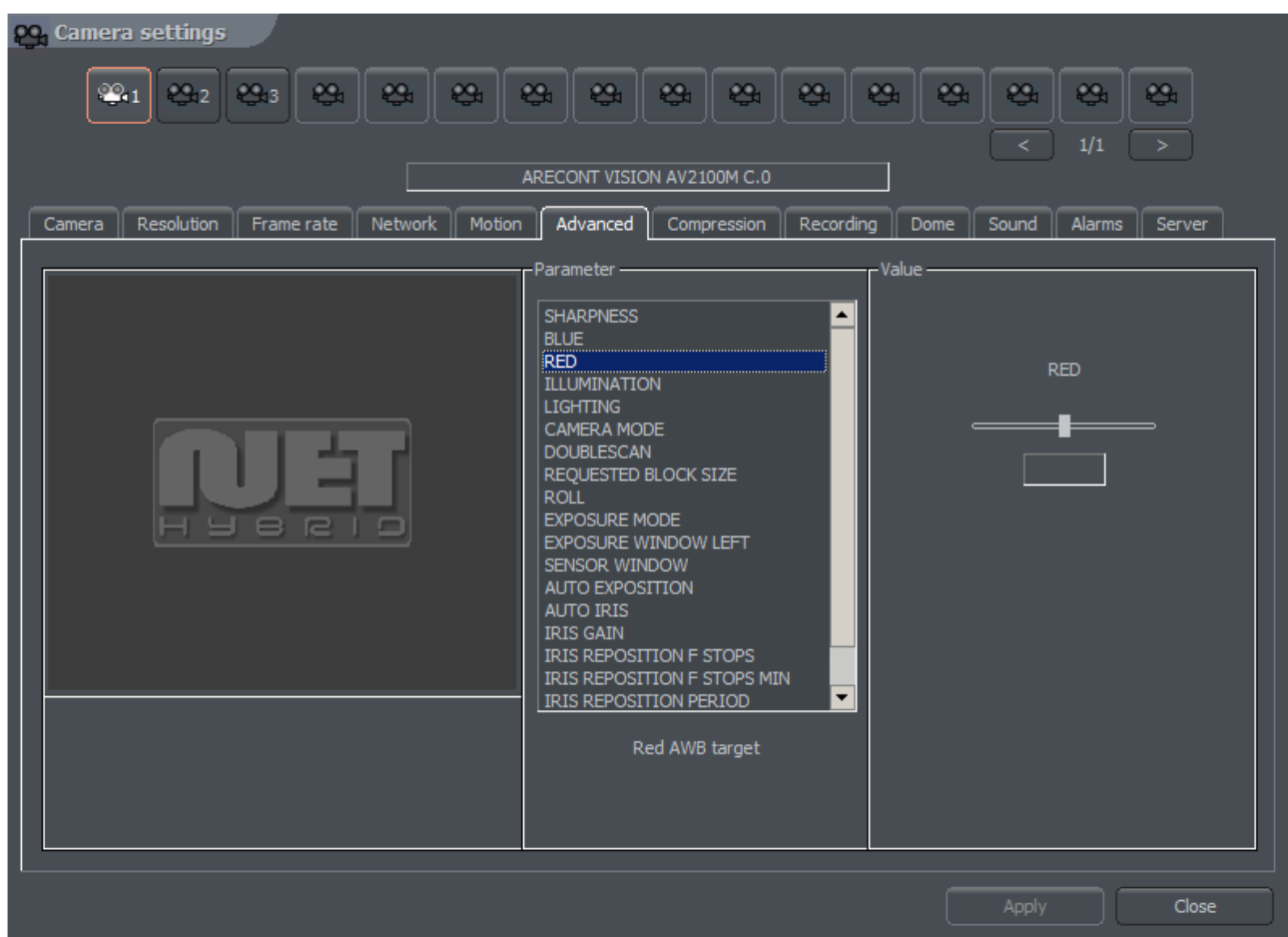


Figure 30: Camera configuration – Advanced bookmark

3.3.3 Common configuration settings

3.3.3.1 Frame rate

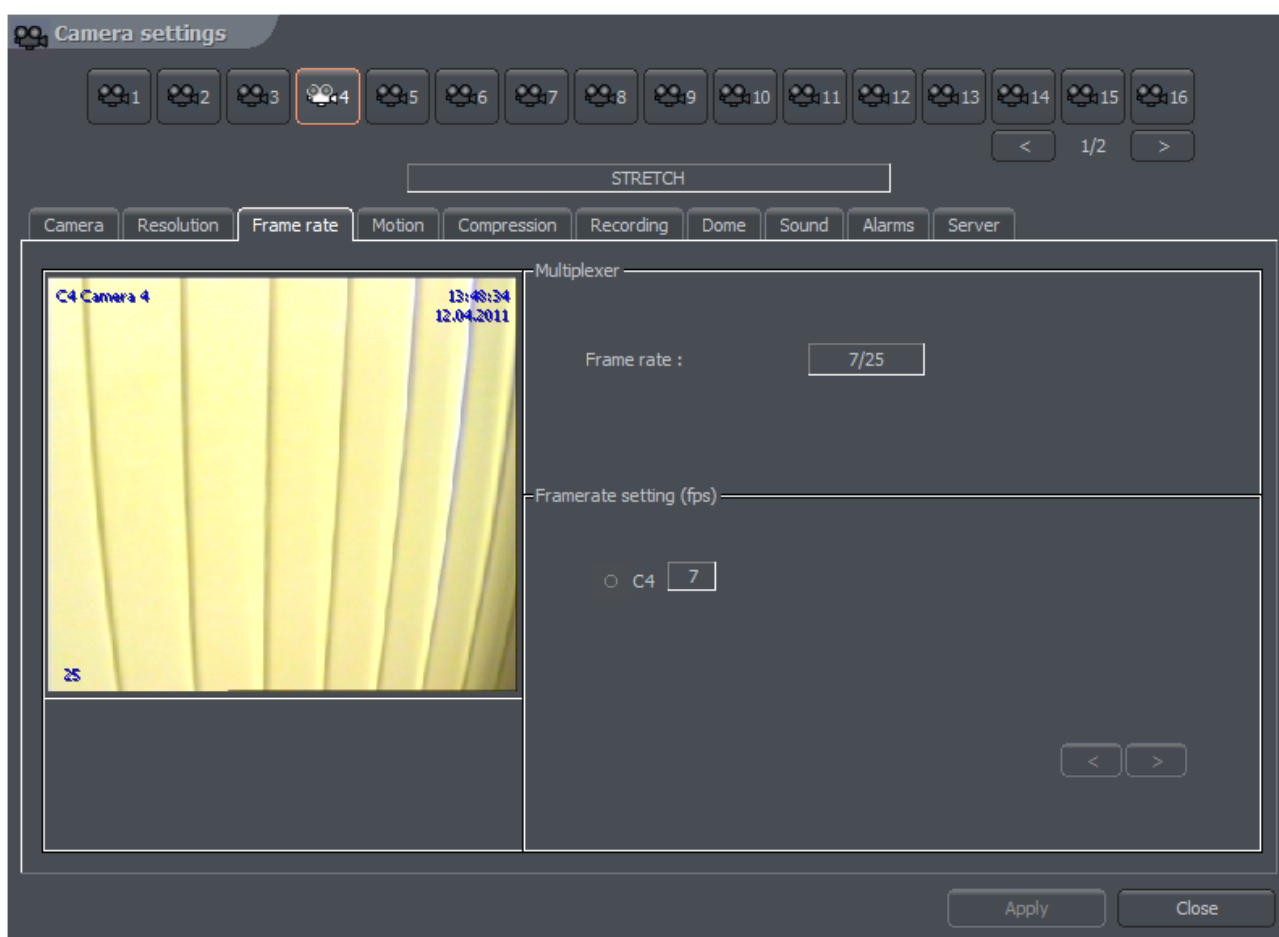




Figure 31: Camera configuration – Frame rate bookmark

Panel	Description
Multiplexer	Enables the mode for dynamic frame assigning for each camera. In the window You can see frames used / frames available. In the configuration presented above there are 24 frames used (6 frames x 4 cameras).
Framerate settings (frames per second)	<p>Panel shows a list of available cameras in the system and number of frames per second assigned to them. It is possible to enable the dynamic frames assigning by clicking the icon with a camera number</p> <p> C1 - means that the dynamic mode is enabled</p> <p> C1 - means that frame assigning is constant</p> <p>Dynamic mode assigns all available frames per second to the camera, which detected motion and entered the recording mode. Suppose we have PRO4 system (25 fps). We set the constant number of frames per second for each camera on 4. 9 frames per second stay unused (25 fps - [4 cam. X 4 fps] = 9 fps). These 9 unused frames can be assigned to any camera by enabling it's dynamic mode. If the dynamic mode is enabled for two</p>

or more cameras, the system assigns unused frames between the cameras evenly.

3.3.3.2 Motion

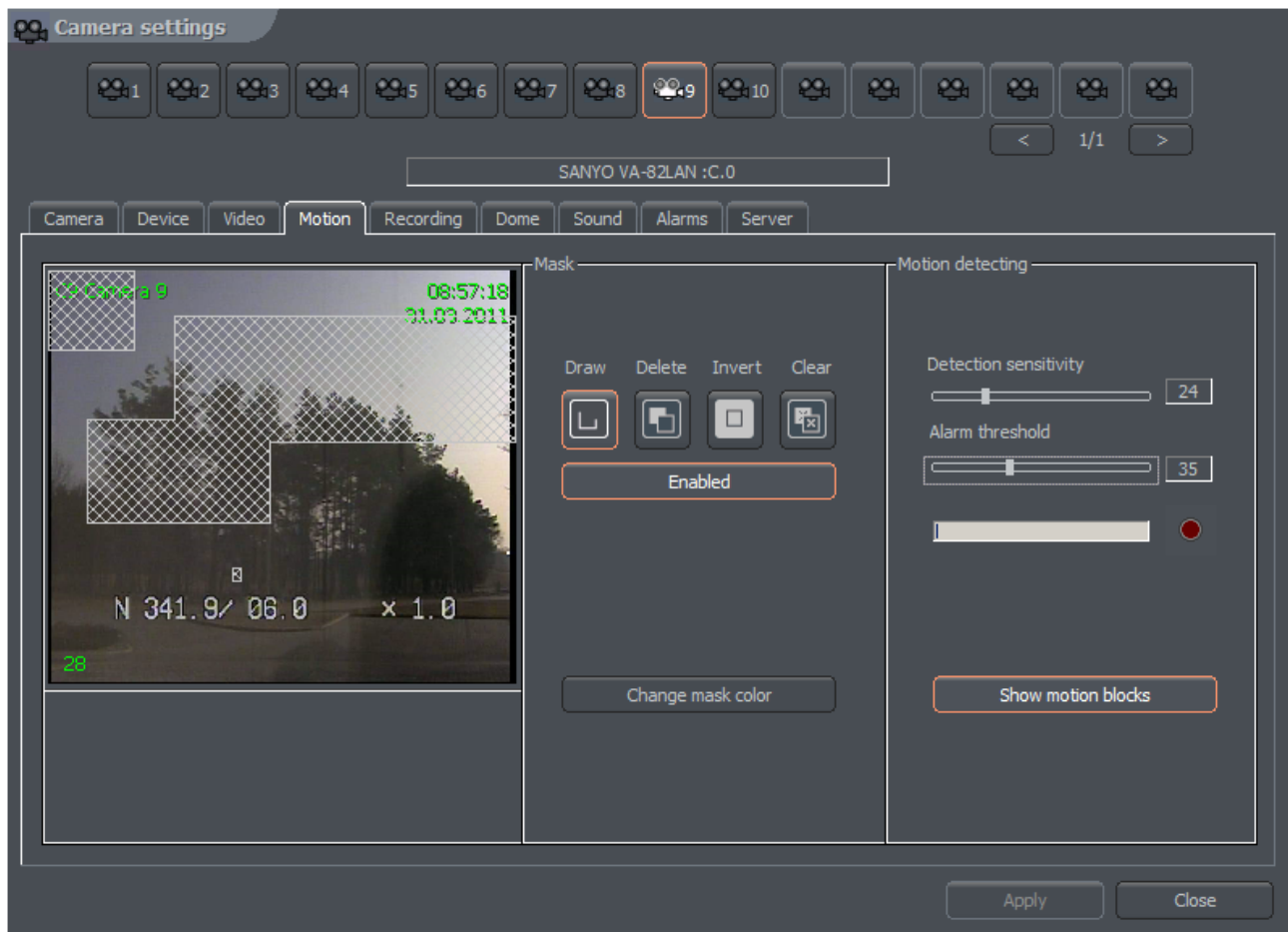


Figure 32: Camera configuration – Motion bookmark

Panel	Field	Description
Mask	Allows to mark areas on which any motion will be skipped	
	Draw	Enables the mask drawing mode. Drawing is realized by drag-and-drop method
	Delete	Mask delete mode. Cutting the areas from previously masked areas
	Invert	Invert the marked mask. Masked areas become unmasked and vice versa
	Clear	Clears the mask
	Enabled	Sets the mask active
	Change mask color	Changes the mask color
Motion detection	Detection sensitivity	The system detects motion as changes in the image. Application analyses the data and classifies them as a motion detection or not. The slider allows to set the sensitivity level for these changes

	Alarm threshold	Level, from which the system reacts to changes in the image. It is recommended to set the threshold when the image is in stillness. It will help to eliminate recording of the insignificant motion, such as leaves motion on the wind and camera noise. Below the slider there is a field which shows current alarm level
	Show motion blocks	Enables plotting the motion blocks on the image, in which the system detects motion. This option is useful while modifying the motion detection settings

3.3.3.3 Recording

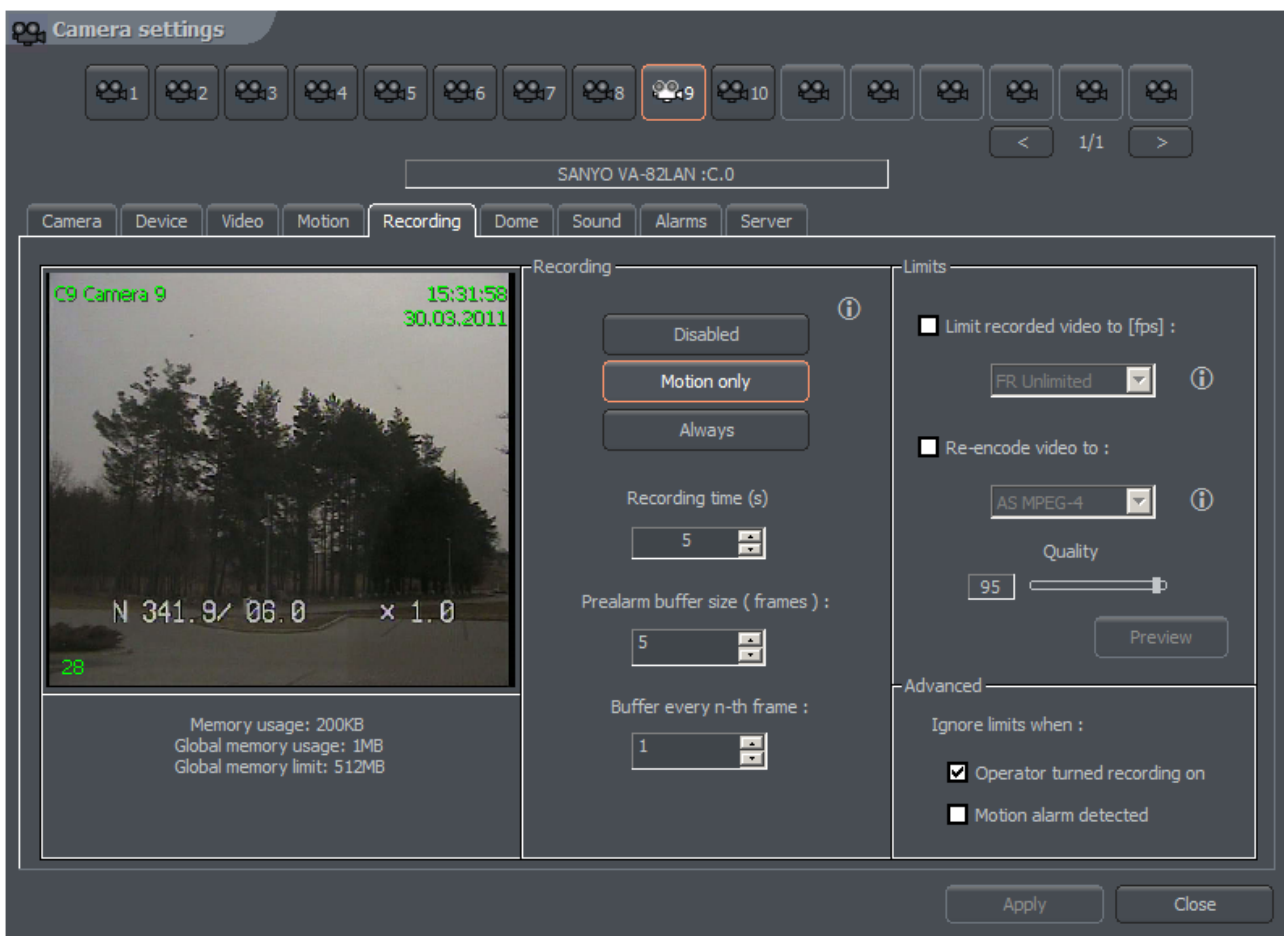


Figure 33: Camera configuration – Recording bookmark

Panel	Field	Description
Recording	The options are set only when no scheduled task is active. Scheduler tasks have higher priority!	
	Disabled	Recording is disabled
	Motion only	Recording will start on motion detection
	Always	Continuous recording
	Recording time (s)	Recording time after motion detection

Prealarm	<p>Prealarm is function of early reaction for alarm. It enables to recreate recordings from moments before activating alarm. When the function is enabled, the application is buffering image, and when movement is detected (and recording is set on) the frames recorded before alarm remain to user's disposal. The length of buffered image in case of network cameras depends on memory size reserved for prealarm. For analogue cameras two parameters are being set up: Prealarm buffer size (frame) – quantity of buffered frames Buffer every n-th frame – ratio of buffered frames to non-buffered</p> <p>Example: Camera in the system records 5 fr/sec. If define 5 buffered frames and quantity of buffered frames for one the result will be 1 second of buffered recording. The formula for calculating length of the buffer is presented below.</p> $\text{Buffer} = \frac{\text{Prealarm buffer size(frame)} * \text{Buffer every n-th frame}}{\text{Number of recorded frames}}$ <p>For the example above: $(5 * 1) / 5 = 1 \text{ sec}$</p>	
Advanced	Limit recorded video to [fps]	Function limits fps in the recorded video – this function can be used to save space on a hard drive
	Re-encode video to:	Function allows to re-compress video stream to other format independently on the input video stream which is sent by camera or video capture card
	Quality	Setting for quality of re-compressed video
	Ignore limits when:	Option ignores limits mentioned above in two defined cases: - Recording is triggered manually by the operator - Motion detection alarm has occurred

3.3.3.4 Dome

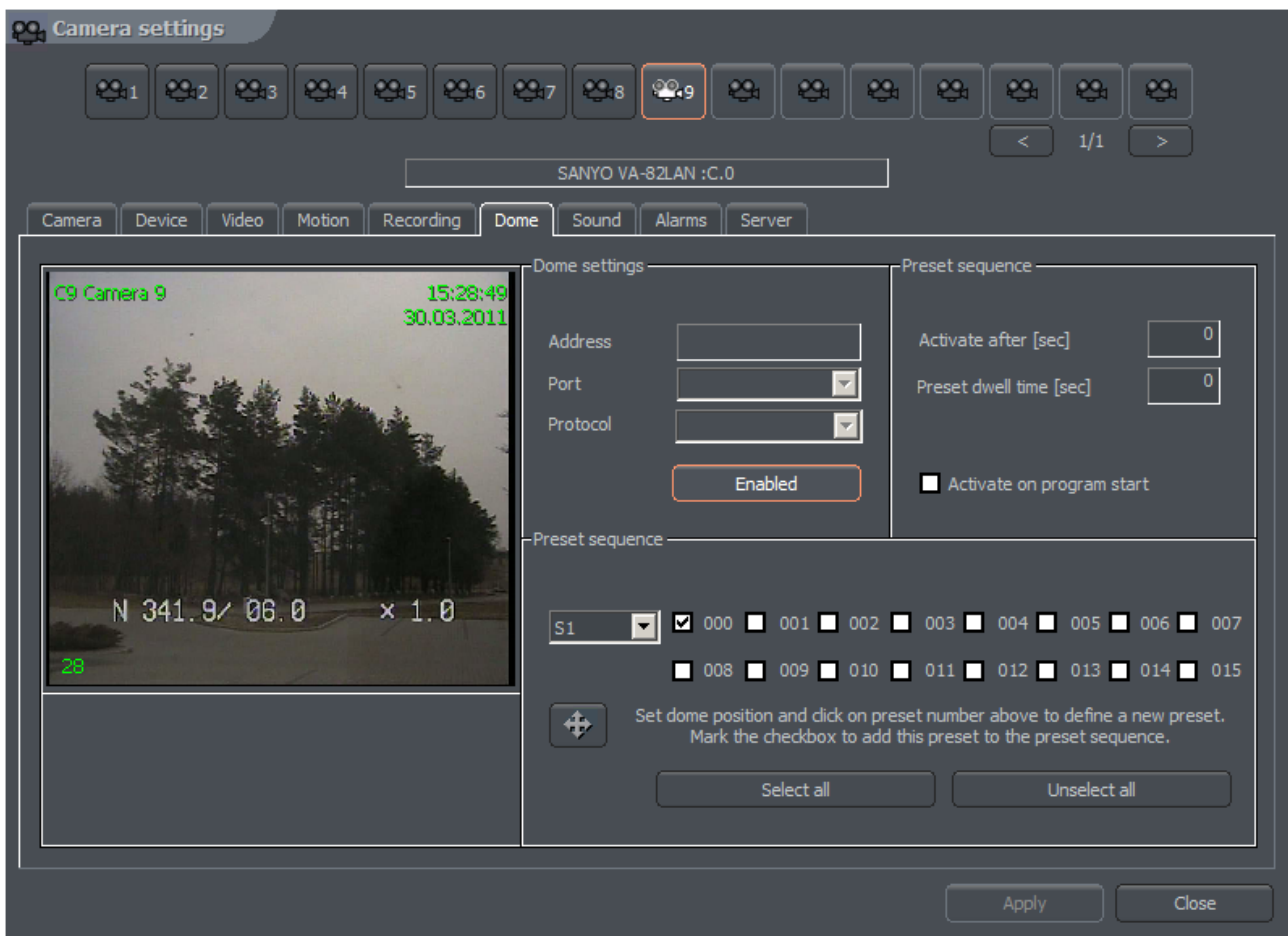




Figure 34: Camera configuration – Dome bookmark

Panel	Field	Description
Dome settings	Address	Address, which was set on hardware, for example by jumpers on the dome. It is necessary to pay attention which address is assigned to particular setting (dome manual). Sometimes position '1' means address number '0', and not '1' as one may suppose (for instance Pelco D protocol)
	Port	COM port, to which the dome control is plugged. If the protocol is set in Dome control panel it's name will be visible

	Protocol	Protocol for dome control
	Dome enabled	Enables the dome control in the system
Preset Sequence	Automatic dome control. Switching between previously set positions. This option works only with domes, which support saving and recalling presets. It is possible to set up to 128 positions. For proper work the dome protocol has to have two command included: 'Save preset' and 'Recall preset'.	
	Activate after [sec]	The time gap between last manual command (for example from the keyboard) and Preset activation
	Preset dwell time [sec.]	The time the dome stops on a preset for
	Activate on program start	Activates sequence on Net Professional system start
Preset Sequence	<p>On the left side there is a list, from which the set of presets can be chosen. One set is 16 positions. To save the dome position under desired preset click on its number. To add preset to AutoPan  sequence mark it's checkbox.</p> <p>ATTENTION! To activate AutoPan it is necessary to mark option in the dome control panel. You can call dome control panel using the Ctrl+D keyboard shortcut or  from the current bookmark</p>	

3.3.3.5 Sound

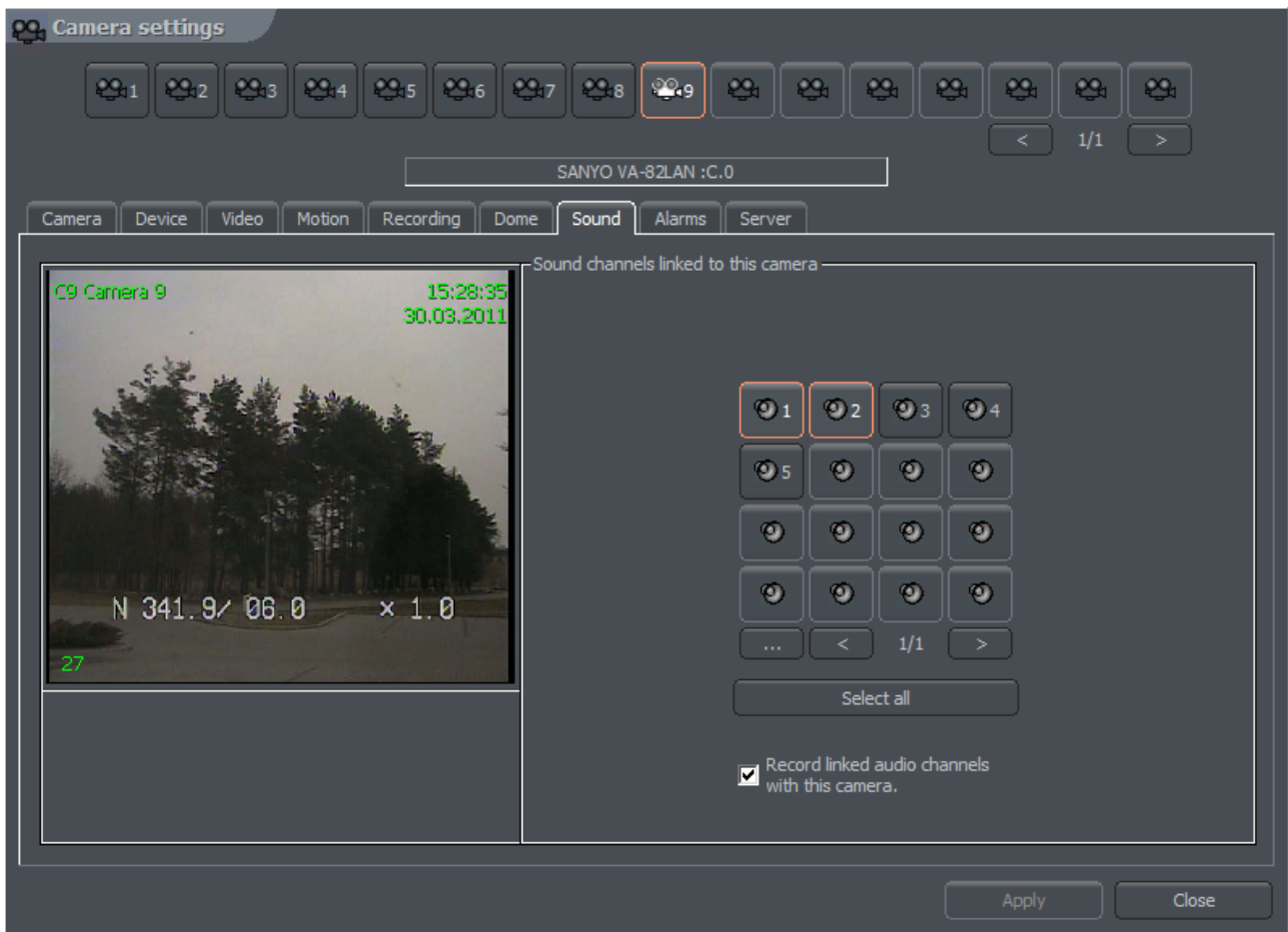



Figure 35: Camera configuration - Sound bookmark

The panel is responsible for connecting particular camera with sound channels. It is made by choosing numbered buttons or from the list. Selection mode is made by clicking  button. Connecting camera with a sound channel means that during live monitoring when camera is marked the system will play sound from the previously chosen channels.

3.3.3.6 Alarms

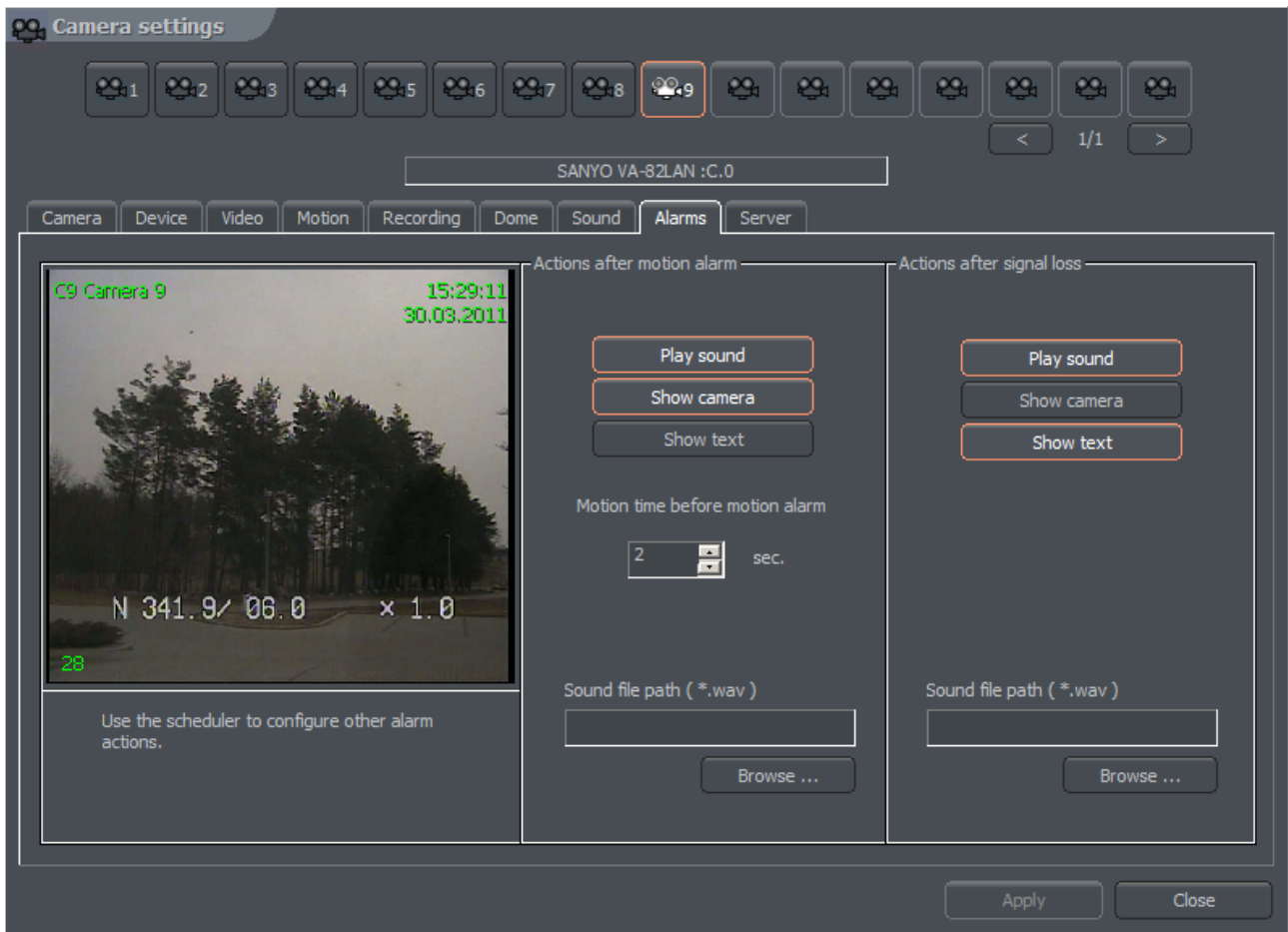


Figure 36: Camera configuration - Alarms bookmark

Panel	Field	Description
Actions after motion alarm	Play sound	Activates sound alarm. System will play sound defined below in sound file path.
	Show camera	Marking this option will cause the camera image to be shown in full screen. When application is minimized after the motion detection the program window will be maximized and will show the camera, on which the motion was detected. The the program window will minimize. During the normal work the system will show the camera on full screen and will back to the previous layout
	Show text	Shows pop up message from the VDRS system tray icon
	Motion time before motion alarm	Determines the time which should last before the motion is detected as an alarm
	Sound file	

	path	
Actions after signal loss	Play sound	Activates sound alarm. System will play sound defined in settings panel
	Show camera	Marking this option will cause the camera image to be shown in full screen. When application is minimized after the motion detection the program window will be maximized and will show the camera, on which the motion was detected. The the program window will minimize. During the normal work the system will show the camera on full screen and will back to the previous layout
	Show text	Shows pop up message from the VDRS system tray icon
	Motion time before motion alarm	Determines the time which should last before the motion is detected as an alarm

3.3.3.7 Server

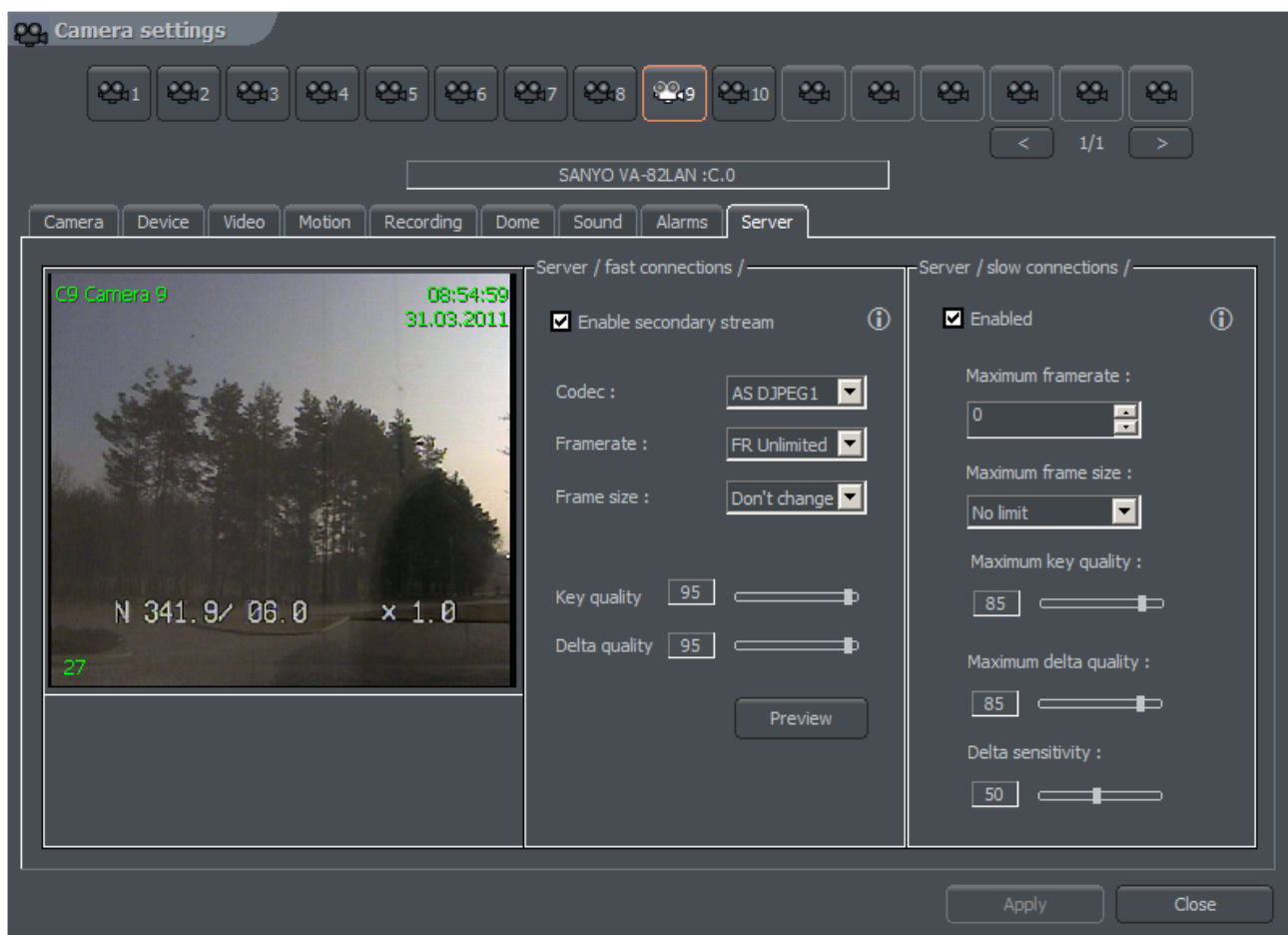


Figure 37: Camera configuration - Server bookmark

Server bookmark allows activation and configuration of additional video streams for remote clients for fast and slow connections.

Panel	Field	Description
Server /fast connections/	Codec	Choice of codec for video stream transmission
	Framerate	Amount of frames per second in transferred image
		FR unlimited
	Frame size	Frame size of the image
	Key quality	See paragraph 3.3.7 Compression
	Delta quality	See paragraph 3.3.7 Compression
Server /slow connections/	Maximum framerate	Maximum frames per second for video stream transmission
	Maximum frame size	Maximum frame size
	Maximum key quality	See paragraph 3.3.7 Compression
	Maximum delta quality	See paragraph 3.3.7 Compression
	Delta sensitivity	See paragraph 3.3.7 Compression
Preview	See paragraph 3.3.7 Compression	

3.4 Sound configuration

NET PROFESSIONAL System allows sound capture by extension cards or sound card. It is possible to capture up to 32 channels. You can set system to enable alarm inputs on sound, control the dome. For each channel the panel below allows to configure recording quality, volume and way the system reacts on sound detection.

3.4.1 Format

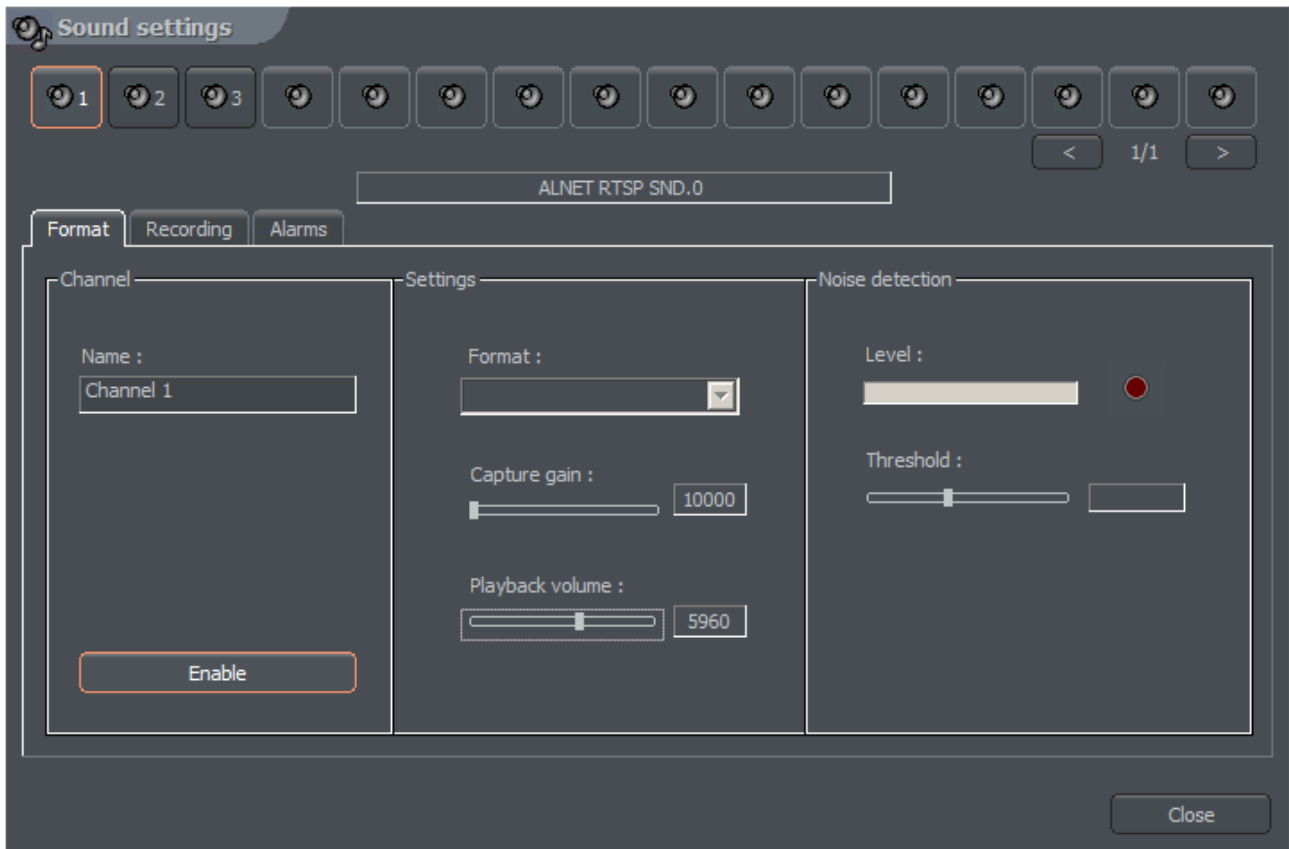


Figure 38: Sound configuration – Format bookmark

Panel	Field	Description
Channel	Name	Channel name which will be visible in the system, for example hall, office. The device, from which the sound will be captured, is listed under the window. ALNET – channel from AudExt extension boards DIRECT SOUND – sound card channel When sound is captured from IP camera, it's IP will be visible
	Enable	Marking this option activates the channel in the system
Settings aassasa	Format	Sound sample frequency. The higher it is, the better quality. This parameter is limited by the device, from which the sound is captured
	Capture gain	electronic sound amplification
	Playback	Playback volume

	Volume	
Noise detection	Level	Threshold for the system to qualify sound as alarm
	Threshold	Settings for quality of recorded sound. Window beside shows current bits per second size

3.4.2 Recording

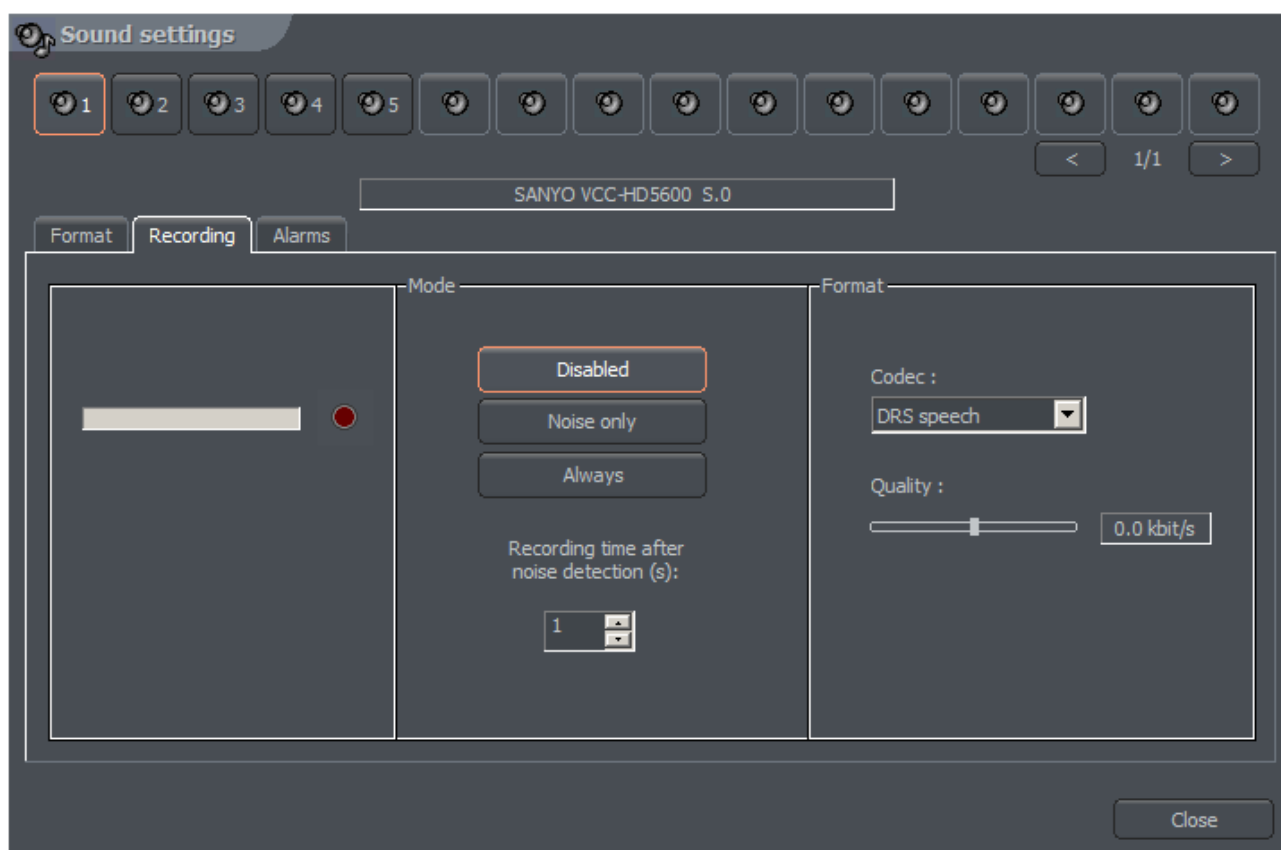


Figure 39: Sound configuration - Recordings

Panel	Field	Description	
Mode	Disabled	Sound level to be classified as an alarm	
	Noise only	The number of seconds the sound has to last (sound above the threshold) to be classified as an alarm	
	Always	Continuous recording	
Format	Codec	DRS speech	Codec designed for VDRS system adapted mainly for human voice recording. Good sound quality is achieved by multiple compression (comparing to RAW audio)
		RAW audio	Format without any compression. Occupies much more disk space but has lower CPU usage. Useful for high quality recordings
	Quality	Settings for quality of recorded sound. Window beside	

		shows current bits per second size
--	--	------------------------------------

3.4.2 Alarms

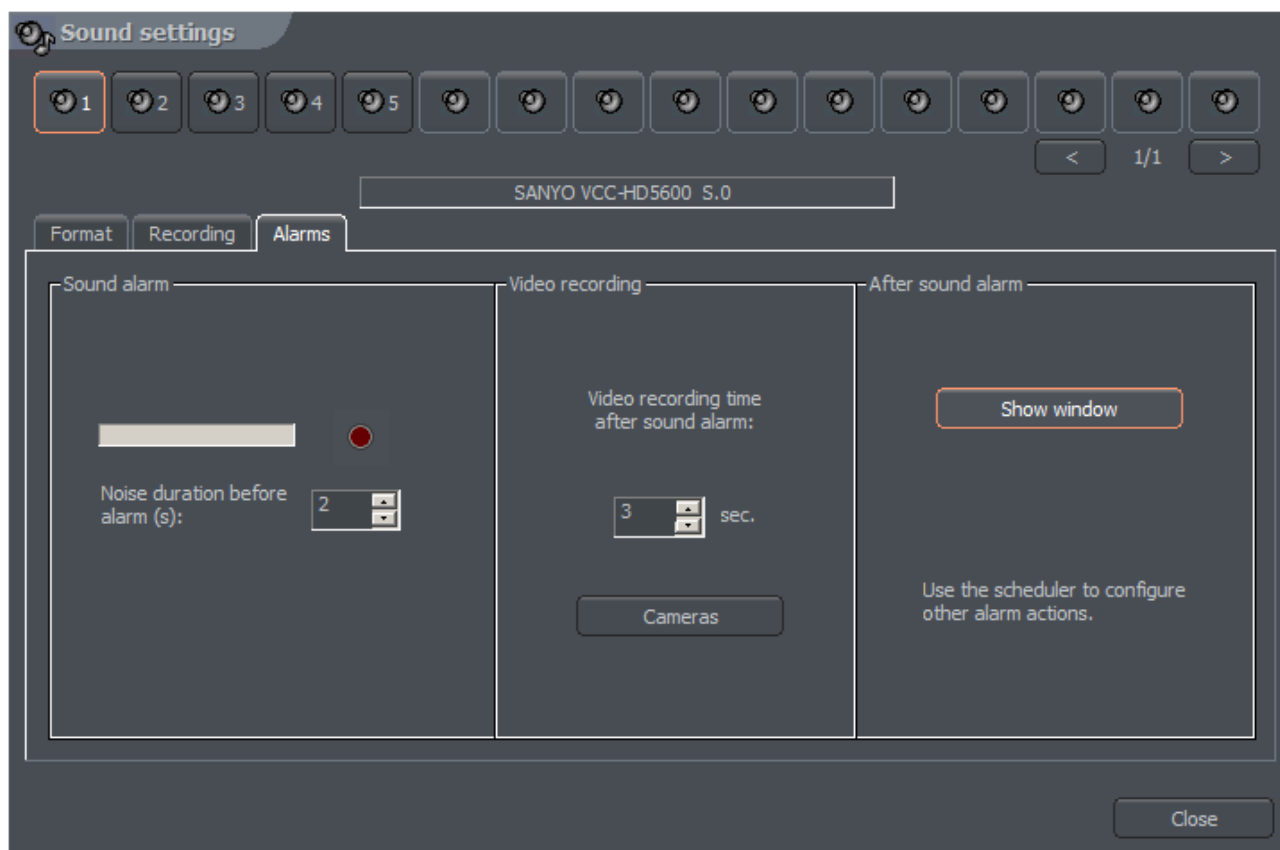


Figure 40: Sound configuration - Alarms

Panel	Field	Description
Sound detection	Alarm threshold	Sound level to be classified as an alarm
	Noise duration	The number of seconds the sound has to last (sound above the threshold) to be classified as an alarm
Video recording	Minimal video recording time after sound detection	Recording time after sound detection
	Cameras	Cameras, which will record image after the alarm
After sound detection	Show window	When program works minimized it will be maximized

3.5 Alarm inputs

NET PROFESSIONAL system allows cooperation with digital in/out extension cards. These

cards allow to gather signals from the PCB sensors, reed relays etc. Alarm inputs configuration menu is available from from the top menu:

Configuration -> Alarm inputs

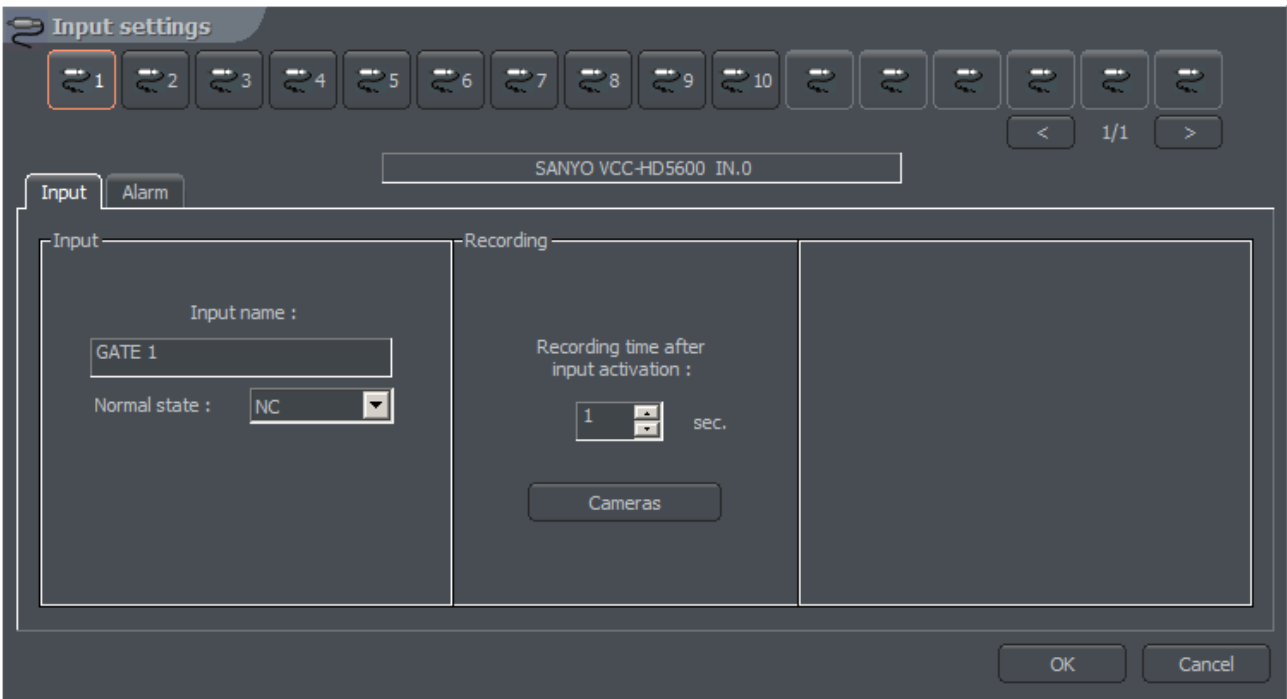


Figure 41: Alarm inputs – Input

Panel	Field	Description
Input	Input name	Input name
	Normal state	State, which doesn't enable the alarm NC – normally closed NO – normally open
Recording	Recording time after input activation	
	Cameras	Button allows to select cameras, which image will be recorded after input activation

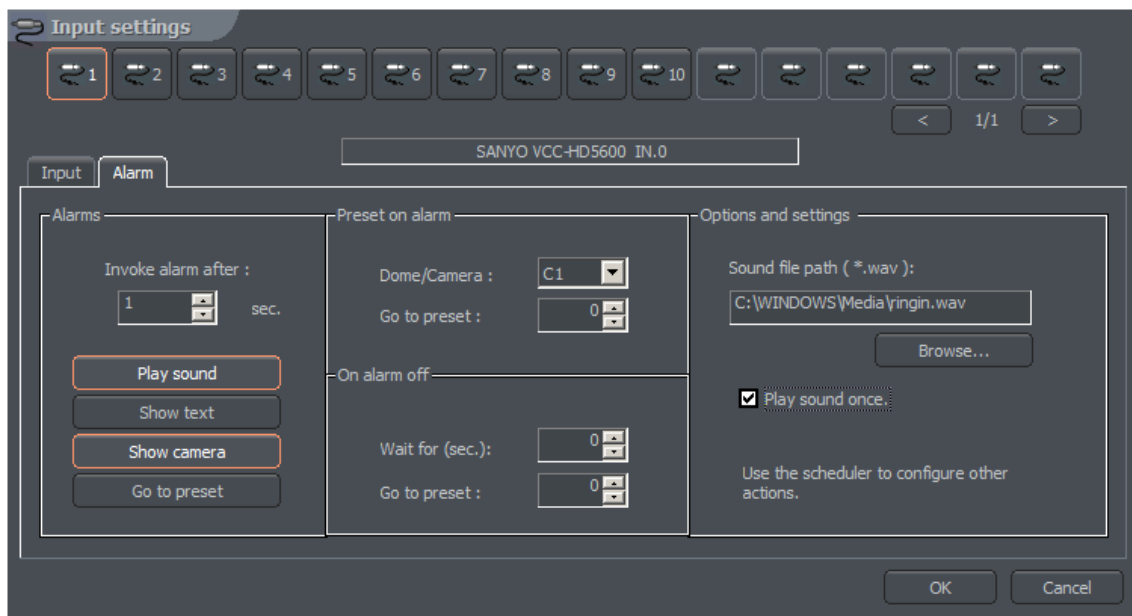


Figure 42: Alarm inputs - Alarms

Panel	Field	Description
Alarms	Play sound	Plays sound from the "settings" panel in current window
	Show text	Shows notifications which pop up over the VDRS icon in tray
	Show window	When program is minimized it will maximize after the alarm
	Go to preset	Sets the dome on the preset chosen in panel beside
	Invoke alarm after :	Time before input activation and raising the alarm
Preset on alarm	Dome	List of available cameras. It is necessary to choose the dome camera
	Go to preset	Dome position, to which camera should go after the alarm Defining presets was described in paragraph 3.3.9
On alarm off	Wait for (sec)	Time, after which the dome moves to the preset defined below
	Go to preset	The position the dome goes after the finished alarm
Options and settings	Path to the sound file, which will be played during the alarm	
	Play sound once	

3.6 Output switches

Output settings

SANYO VCC-HD5600 OUT.0

Output

Output name :

Active state : NO

Event switching

Pulsate

Triggered

Hold output switched on for : 3 sec.

Manual switching

Auto switch off

Switch off after : 5 sec.

OK Cancel

Figure 43: Output switches

Output switches allows to manipulate with devices, for example with light, gates, sirens etc. The cooperation between output switches and alarm inputs can be defined in the scheduler.

Panel	Field	Description
Output	Output name	Name of the output, for example "Gate"
	Active state	State, which doesn't enable the switch NC – normally closed NO – normally open
Event switching	Activation by the events defined in the scheduler	
	Pulsate	The switch will pulsate (will change it's state every 1 second)
	Triggered	Enables the possibility to define the time of switch activation
	Hold output switched on for :	Time of switch activation
Manual switching	Auto switch off	If user manually activates the switch the system can automatically disable the switch
	Switch off after :	Time to elapse before the auto switch off

3.7 Network services

Network services are designed to allow access to the server from outside, for example from the Internet. The access may be realized by four ways:

1. by CMS PROFESSIONAL client application
2. by using mobile devices (Pocket PC, cell phones)
3. by using Internet browser (java applets)
4. by dial-up connection

3.7.1 Video server

The bookmark concerns server access settings for CMS PROFESSIONAL client application

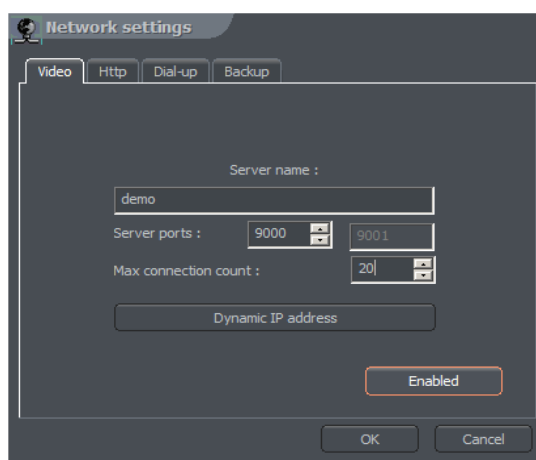


Figure 44: Network settings - video server

Field	Description
Server name	Name of the video server
Server ports	NET PROFESSIONAL uses two (following) ports. Here You can define port for connection between server and client. By default it's port 9000 (and the following – 9001)
Max. Connection count	Number represents the maximum amount of simultaneous connections. When the bandwidth is low it is possible to limit the number of connections
Dynamic IP address	This option allows to use ALNET DNS server. When using the connection with dynamic IP address it's very difficult and sometimes impossible to connect to the server because dynamic IP address can change even several times a day. The solution is to register a domain. By the first configuration of the Network Services, if the option is marked, the form will appear. To register domain it is necessary to fill this form. These subject will be described in the further part of the manual.
Enabled/Disabled	Enables/Disables the access to the server from outside network

3.7.2 Http

Server configuration for WWW services. It allows to connect

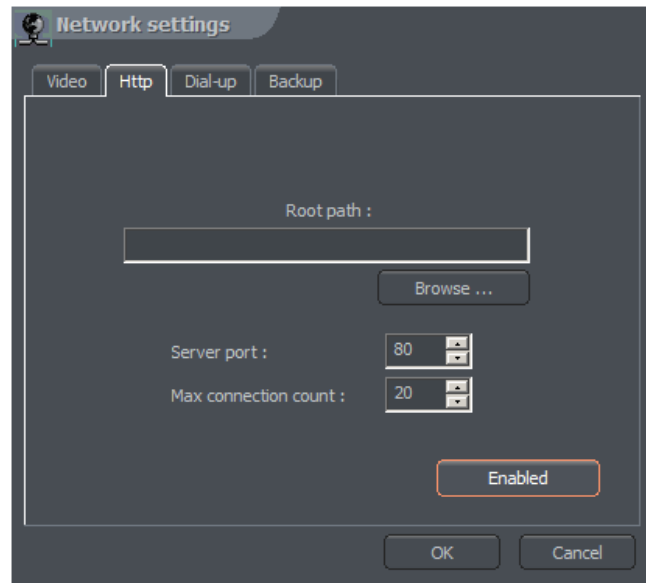


Figure 45: Network settings – www server

Field	Description
Root path	Path to the folder, where HTML files are located. If the field stays blank, the application will set root path as "http" subfolder in the NET PROFESSIONAL installation folder. If other than default folder is defined as the "root path" it is necessary to copy all the files from "http" subfolder where NET PROFESSIONAL application is installed to the place where "root path" leads
Server port	Port number for the connection by Internet browser
Max. Connection count	Maximum number of simultaneous connections
Enabled/Disabled	Enables/Disables the WWW server service

3.7.5 Backup

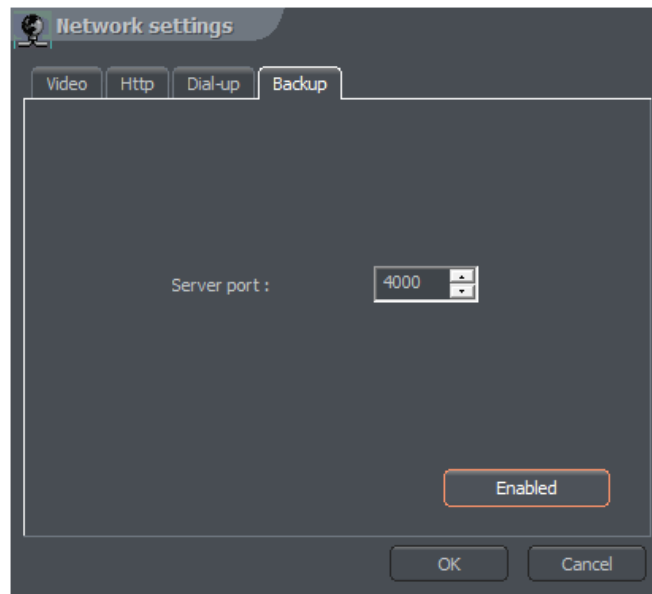


Figure 47: Network settings - Backup

This tool when activated allows to backup video recordings from any cameras on a remote machine with client version CMS, or NET Professional.

3.8 Archive storage

Very important matter is to define a storage space for archives in the system. Many different parameters (such as codec type, image resolution, Delta and Key frames quality, motion frequency) have influence on the archives size. User can access the configuration of archive storage from menu:

Configuration -> Archive Storage

There will be information displayed, regarding application shutdown. In case of serious changes, when recording is turned on, it is necessary to close the application. Archive configuration was described in chapter 3.1.1.5

3.9 User accounts settings

3.9.1 User list

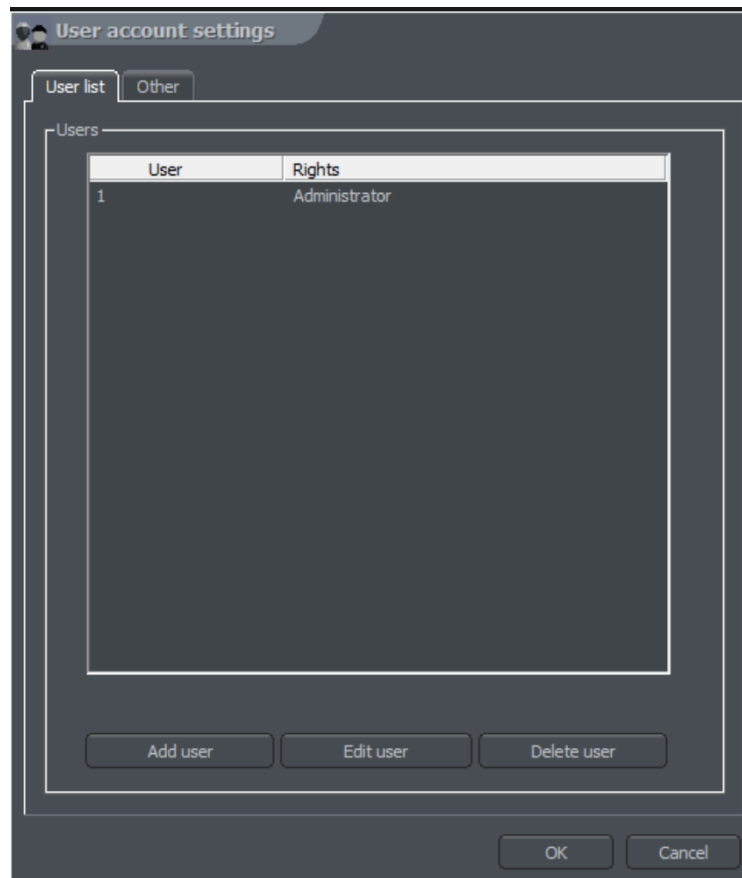


Figure 48: User list

NET PROFESSIONAL user account management module. Allows to create a complex hierarchy of rights (for example different rights for security manager and different for security workers), time restrictions for individual accounts. Also allows to assign selected cameras, inputs, outputs and sound channels to particular users.

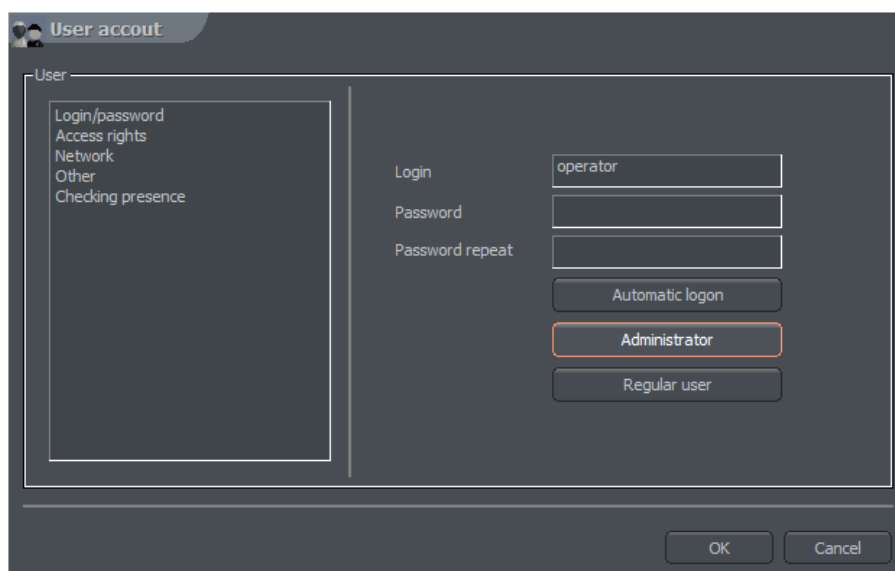


Figure 49: User account configuration

On the first launch of the system the only account available is the administrator account. It possesses all the possible rights. New user can be added by clicking **Add user** button.

Panel	Field	Description
User details	Login	User name
	Password	User password
	Password repeat	Password repeat in order to check if it is correct
	Automatic logon	Marking this option will autologon this user on system start
External connections	Check IP address	This option allows to check user IP. It is helpful when access to the server has to be blocked from certain hosts
	IP address	IP address, from which particular user can access the server
User rights	Administrator	Marking this option will grant user all highest rights. He will be available to access all functions of the system
	Regular user	Marking this option will assign the lowest rights to the user (only possibility to logon). All the rights have to be assigned manually from the beginning
	Live video	Allows user to watch live camera image
	Live sound	Allows user to hear live sound from available channels
	Archive video	Allows user to watch archive camera image
	Archive sound	Allows user to hear archive sound from available channels
	Visible inputs	Alarm inputs available to the user
	Visible outputs	Relay outputs available to the user
	Dome control	Speed Domes available to the user
	Time restrictions	Determines the time, when user is allowed to connect.

	Special rights	Additional rights
--	----------------	-------------------

In case of editing of existing user (button **Edit**) image of window varies from presented above although given options remain in the same shape. One difference is appearance of the new option **Checking presence**.

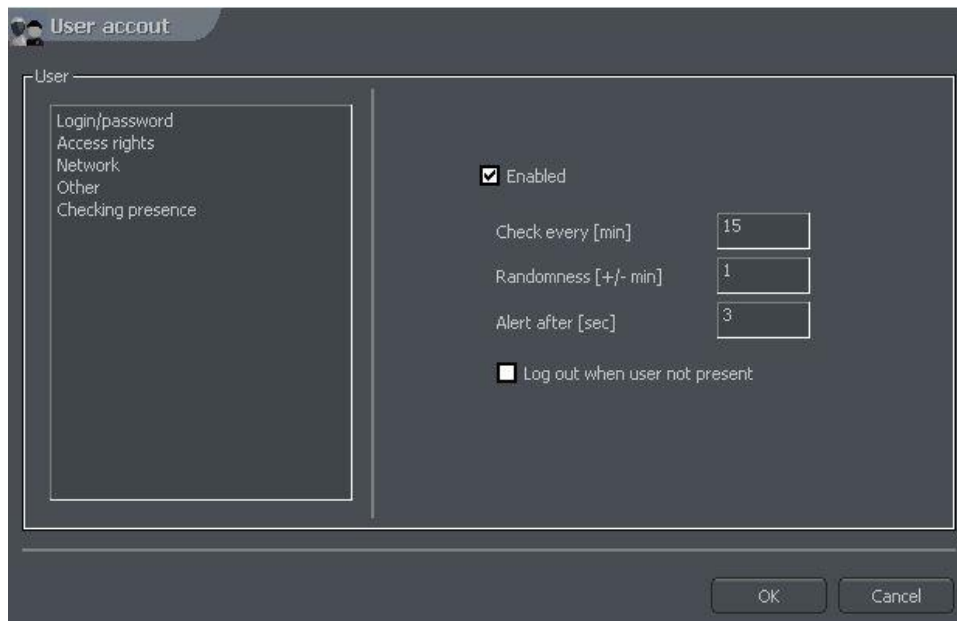


Figure 50: User account – **Checking presence** function

Setting on this option is aimed at checking user's activity periodically.

Check every [min]	This parameter determines the time periods between following presence checking
Randomness [+/- min]	Random time shift for presence checking
Alert after [sec]	Time period after which ' User is sleeping ' message will be saved in the system logs and system alert will be activated

User should in this case in defined period of time (he is informed by white task bar) press the accurate button to confirm his presence. Sequence of buttons is random which makes impossible to use macro which automatically confirms presence. In case of lack of user's reaction alarm "**User is sleeping**" is being activated. This event is being written to the

application log. Window with timer which measures user's reaction time appears.

3.9.2 Synchronization

This function is designed to allow user account synchronization between servers. A remote server user list can be downloaded to the local server replacing the local user list.

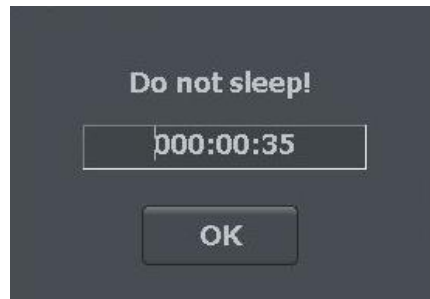


Figure 51: User account –*Checking presence* function

It can be accessed on the **Synchronization** tab in the **User account settings**. Synchronization is activated by selecting **Load user list from remote sever** and defining the connection parameters. This will set auto synchronization which will occur every 24 hours. A manual synchronization can be performed by selecting **Synchronize now** button.

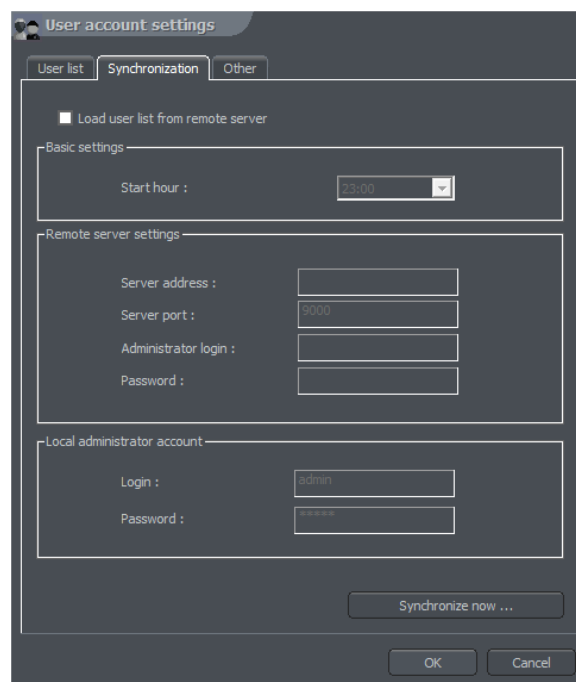


Figure 52: Synchronization

3.10 Dome control

NET PROFESSIONAL System allows to control analogue dome cameras (with ConExt extension boards) and digital cameras (control by TCP/IP protocol). The unique function is possibility to add new protocols and edit protocols already implemented. The devices

used to control domes are for example: keyboard, mouse, dome control panel from the application level, joystick, industrial panels connected by USB or MIDI/Gameport (which was used in older sound cards).

3.10.1 Setting the parameters and protocols of the domes

3.10.1.1 Settings

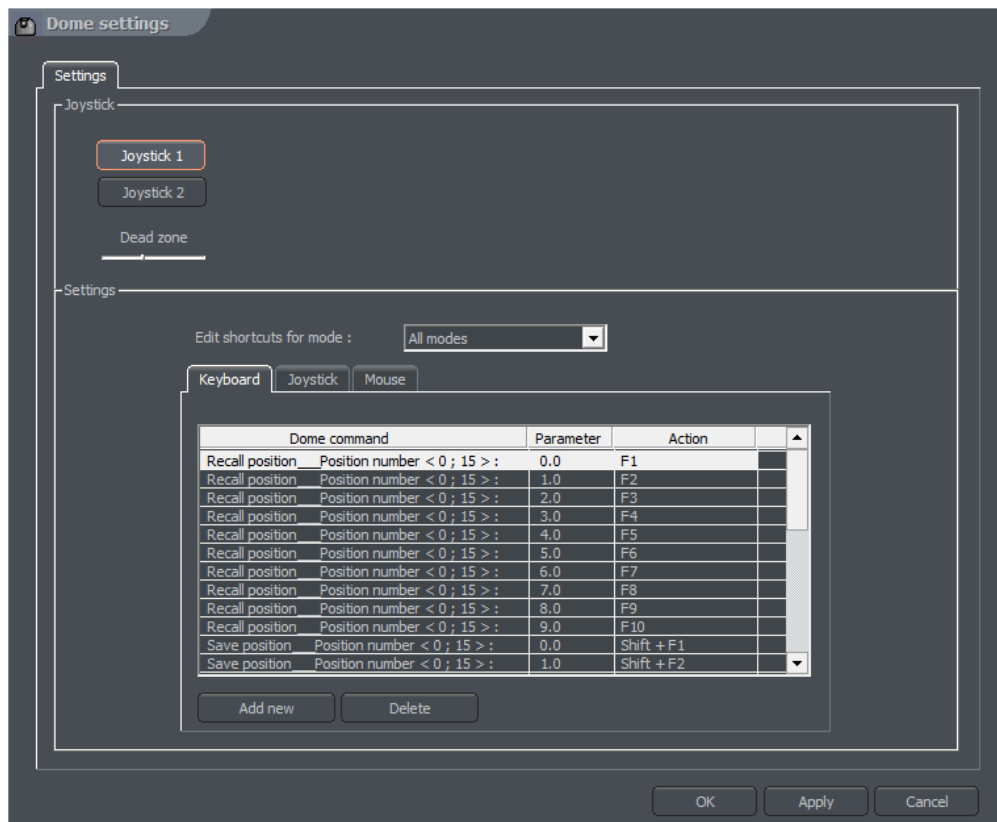


Figure 54: Dome settings

Panel	Field	Description
Control	Enable	Enables the dome control function in NET PROFESSIONAL
Joystick	Joystick	Activates joystick. If any error occurs the message will appear
	Dead zone	Joystick "motion range" on which system will not react

Settings	<p>Edit shortcuts for mode: This menu allows configuration of shortcuts for specific program modes. It is used with professional input devices (eg. Joysticks, CCTV keyboard, etc.). The available options are:</p> <p>All modes – configuration of shortcuts for all available modes. This mode has priority over other modes.</p> <p>Camera view - configuration of shortcuts for camera image viewing</p> <p>PTZ control - configuration of shortcuts for PTZ cameras</p> <p>TEXT input - configuration of shortcuts for inputting numeric values</p>	
	<p>Settings which concern control commands. This panel is divided into three sections: Keyboard, Joystick and Mouse. It is possible to add new command and edit existing ones. To edit command double-click on command name. To add command select "Add new" button</p>	
	Dome command	Command name (describes it's action)
	Parameter	Parameter value, which is transmitted to the dome during the command execution
	Action	Keyboard shortcut to selected command (for mouse and joystick these options are permanently assigned to their functions)

3.10.1.2 Protocols

Protocols located in the NET PROFESSIONAL system are recommended by manufacturers. If there is no need to change their parameters. Before adding protocol to application the technical specification should be obtained (for e.g. from dome manufacturer) to fill in required gaps

AD/SENSORMATIC
AXIS
CANON VC-C4
COLOR CCD AN800's
ACTI-ACM85xx
DSCP
HISHARP (HSCP)
HN
HNHG
HUAREN
HY
JFKJ
JVC
KALATEL1
KALATEL2
KALATEL KTD-312
KELI
LILIN PIH-717A
LILIN PIH-717
NV-2050P
PANASONIC-CONV
PANASONIC-NEW
PELCO 'D'
PELCO 'D' 9600
PELCO 'D' ver.4
PELCO 'P' 2400
PELCO 'P' 4800
PELCO 'P' ver.II
PHILIPS TC-8560
SAMSUNG
SONY EVI-D3x
SVE
TELECOM
VIDO B01

WD

ZC-NAF27

SONY-VISCA CAM

SONY-VISCA PTZ

DYNACOLOR

ACTI-CAM66xx

D-MAX SUPERIOR DSC-2xxS

3.10.2 Dome control panel

Panel allows to steer the domes. It is a substitute for control devices such as joystick or industrial keyboard

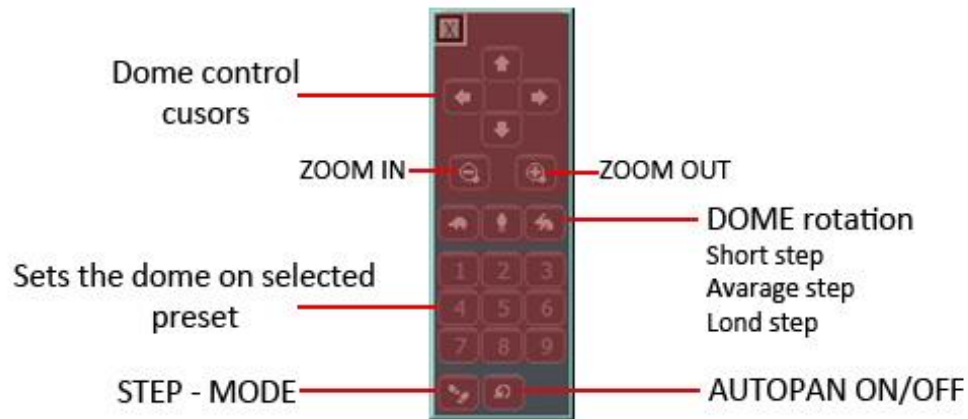


Figure 55: Dome settings

3.11 E-map editor

E-map is a tool which allows to design a graphic plan of cameras, switches and alarm inputs placement. Additionally it is possible to activate switches, monitor the activity of alarm inputs, cameras and sound channels. Graphic files (.jpg .gif .png) can be used as E-map background. E-map editor can be accessed from menu panel:

Configuration -> E-map editor

E-map can have a tree structure. An example is presented on the next page:

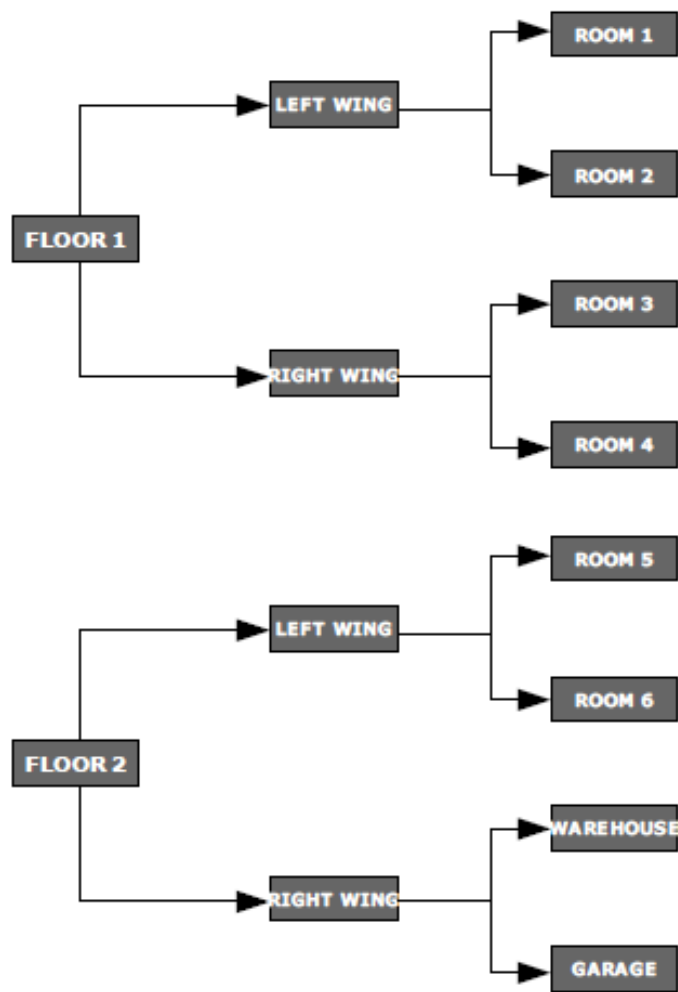
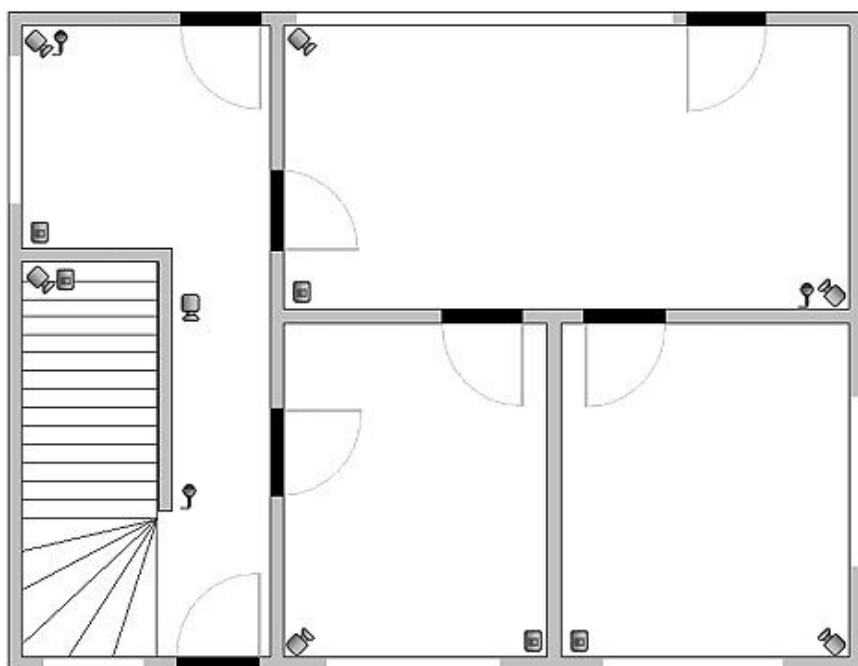


Figure 56: Example of E-map structure



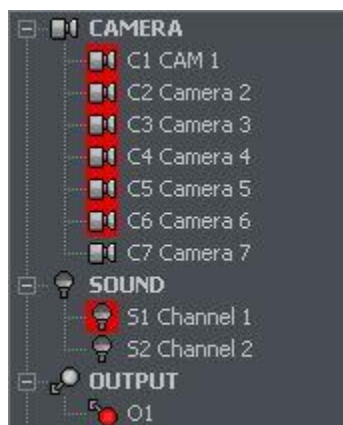
The above figure shows an example of e-map editor with already placed indicators.

In the main part there is a rooms schema with visible cameras, digital inputs and outputs and sound channels. By clicking on the map area with right mouse button we can change the name and background of current level and add new level (**properties** menu). When adding new level it is necessary to check which object is selected on the list. As an example – if we try to add floor, it is necessary to select **Building** object, if we try to add rooms on the 1st floor , object **1st floor** should be selected.

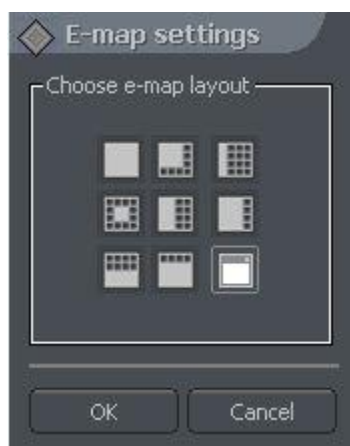
In the top left corner the panel with a tree of objects is placed. In the example above, **Building** object is divided into 2 floors. Different elements are assigned to the floors. Selecting one of the objects will result in displaying its schema. By clicking with right mouse button a context menu will appear:

Option	Description
Raise item	Moves selected item one position up. When the whole "branch" is selected it will be moved with all its elements
Lower item	Th same as the action described above but one position down
Delete item	Deletes selected element
Properties	Properties of selected item. When the "branch" is selected it will be possible to change its name and graphic plan. When the camera, input etc. is selected it is possible to change the type of displayed icon

Below the panel with "tree" schema the list of available devices (cameras, microphones etc.) is placed. These devices can be easily placed on the e-map plan by drag&drop method. Red background means that the indicator is already placed on the map.



In the top right corner of the window **E-map layout** button is placed. It displays all available e-map layouts along with cameras. One of nine possible layouts can be chosen. The light area indicates that the e-map will be displayed in this particular place. The last icon allows to display e-map on the separate monitor².



When the e-map project is ready it can be saved and then loaded after the reinstallation. To do this use two buttons placed in the lower right corner: **Import e-maps** and **Export e-maps**.

²If multidisplay graphic card is in use

3.12 Program settings

3.12.1 Mail

Parameters of e-mail server, which will be used for sending messages from the NET PROFESSIONAL server to the users.

The screenshot shows a 'Program settings' window with a 'Mail' tab selected. The 'E-mail settings (SMTP server)' section contains the following fields and options:

- Server address and port :** A text field with 'mail.servername.com' and a port spinner set to '25'.
- Sender address :** A text field with 'account@mail.servername.com'.
- Login :** An empty text field.
- Password :** An empty text field.
- ☒ Use secure SSL connection
- ☐ Direct SSL/TLS mode
- Test** button
- OK** and **Cancel** buttons at the bottom.

Figure 57: Program settings -Mail

Field	Description
Server address	Mail server IP address or domain name
Server port	Mail server SMTP port
Sender address	Address visible in <i>Sender</i> field
User	User name
Password	Password necessary for authentication
Test	Click this button to send test message to the address given in <i>Sender</i> field

3.12.2 Photos

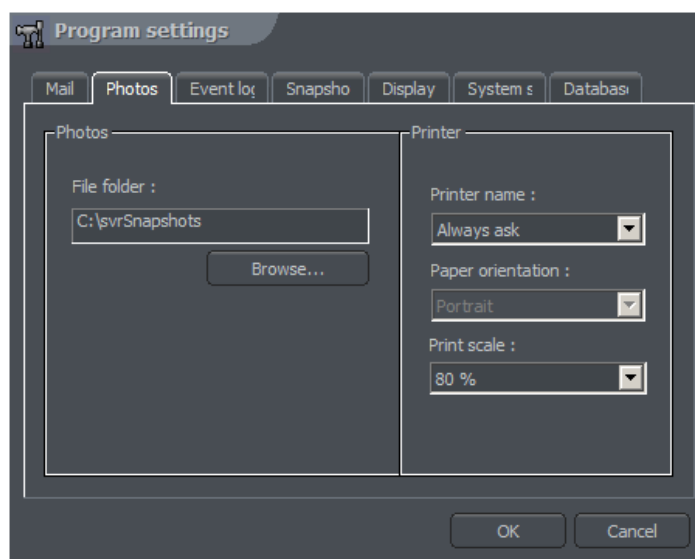


Figure 58: Program settings -photos

Panel	Field	Description
Photos	File Folder	Place on the disk where photos will be saved
Printer	Printer name	The choice of default printer. If Always ask is selected every time before printing the system will ask to choose the printer
	Paper orientation	Paper orientation in the printer
	Print scale	Percent scale for image printing

3.12.3 Event log

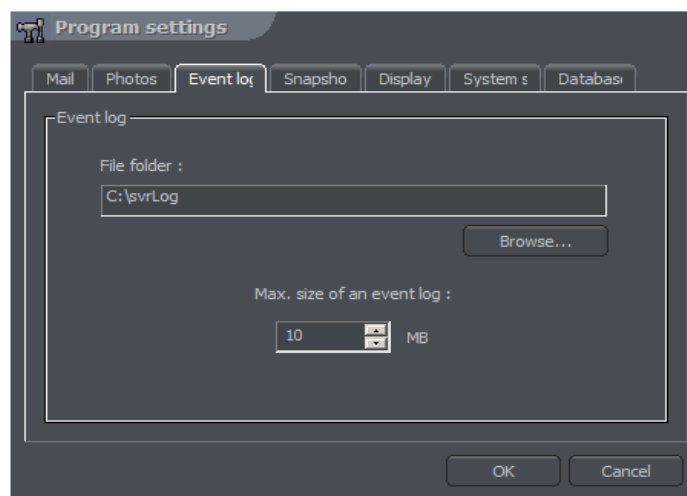


Figure 59: Program settings – event log

Field	Description
File Folder	Place on the disk where logs will be stored
Max. size of an event log	The size of a single file with a log

3.12.4 Snapshots

Here You can enable the Auto image screenshots.

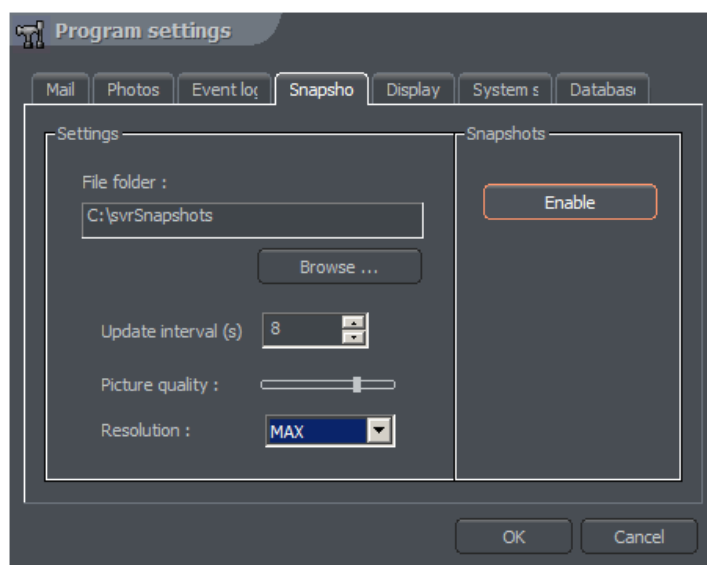


Figure 60: Program settings - Snapshots

Field	Description
File folder	Place on the disk where auto screenshots will be stored
Update interval (s)	Time gap between two following snapshots
Picture quality	Picture quality. Moving the slider to the right will raise the quality of the image
Enable	Activates Auto snapshots service

3.12.5 Display

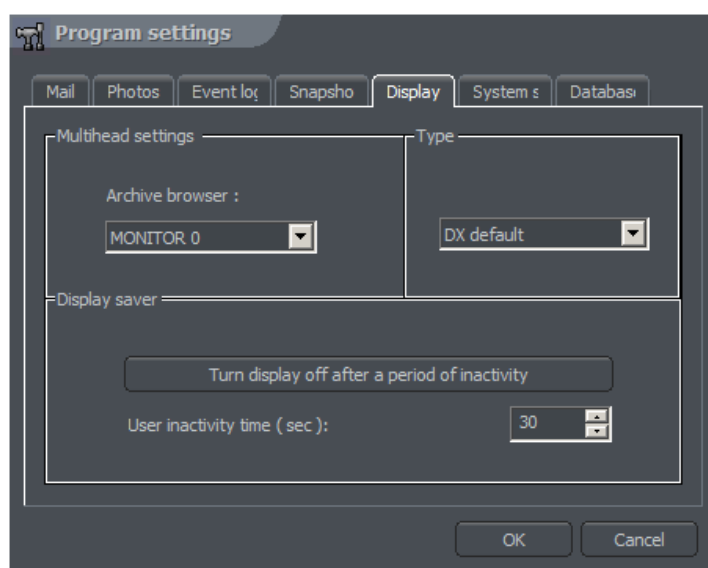


Figure 61: Program settings - Display

Panel	Field	Description
Multihead settings	Archive browser	Selection of system monitor on which archive browser module will be displayed
Type	Method of image display. It differs depending on which graphic card is used and which display modes are supported.	
	DX default	System will automatically try to choose between one of the options presented below.
	DX Overlay	
	DX YUV12	
	DX YUY2	
	DX RGB565	
	GDI	
Display server	Turn display off ...	Saves the CPU resources by disabling display (after a period of inactivity)
	User inactivity time (sec)	Time of inactivity, after which camera image display will be disabled

To restore image display it is necessary to double click anywhere on the image display area.

3.12.6 System settings

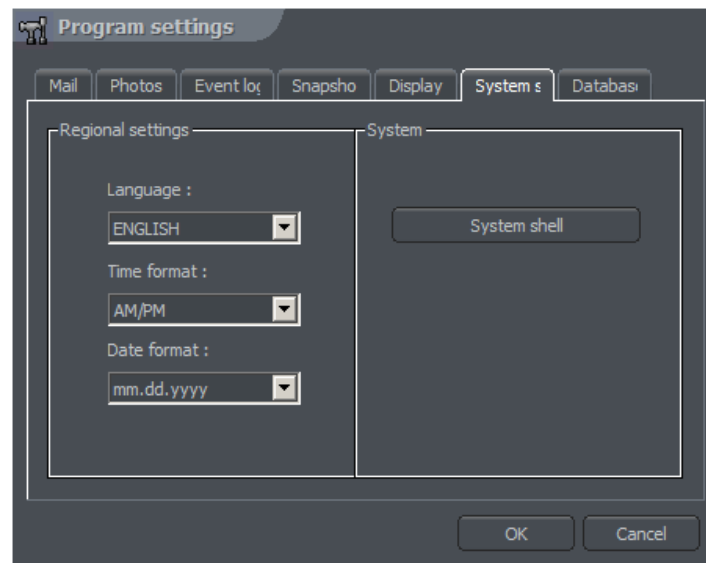


Figure 62: Program settings – System settings

Panel	Field	Description
System	Language	Application language
	Time format	Displayed time format: 12 or 24 h
	Date format	Date format Displayed date format: dd – day mm – month yyyy – year
	Watchdog(this function is available only with video capture board based systems which watchdog jumper)	Hardware monitor that watches over the computer system. If the computer system doesn't react it resets and restarts it. To activate this function it is necessary to connect video capture card with reset pins on the motherboard with the black "watchdog" cable.
	System shell	Enables VDRS to work as a system shell. It means that it replaces standard Windows interface and disables all the other applications (for example Games, Accessories, Internet Explorer). The Device Manager is also disabled (so the VDRS cannot be shut down and other applications cannot be started). Shutting down VDRS in System shell mode will cause shutting down Windows. VDRS minimize option is also disabled

3.12.7 Database settings

Database settings

Database type: Local database

Database directory: D:/VDRSData/Database

☐ Automatically remove entries older than: 30 days

Apply

Database open.

Advanced

Cleanup database now ...

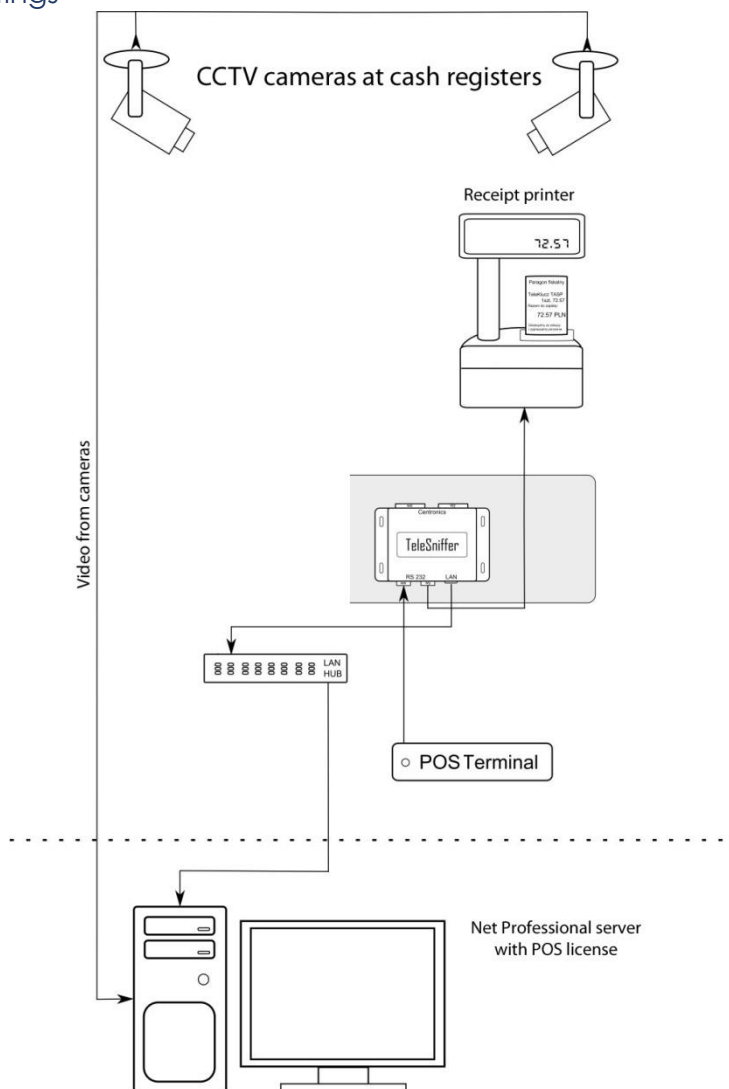
Load old format VCA data ...

Database will keep log of all system events. It is required for most application functions to work correctly. Audio and video database is configured separately. Automatic cleanup doesn't apply to the reports database.

OK Cancel

3.12.8 Advanced Settings

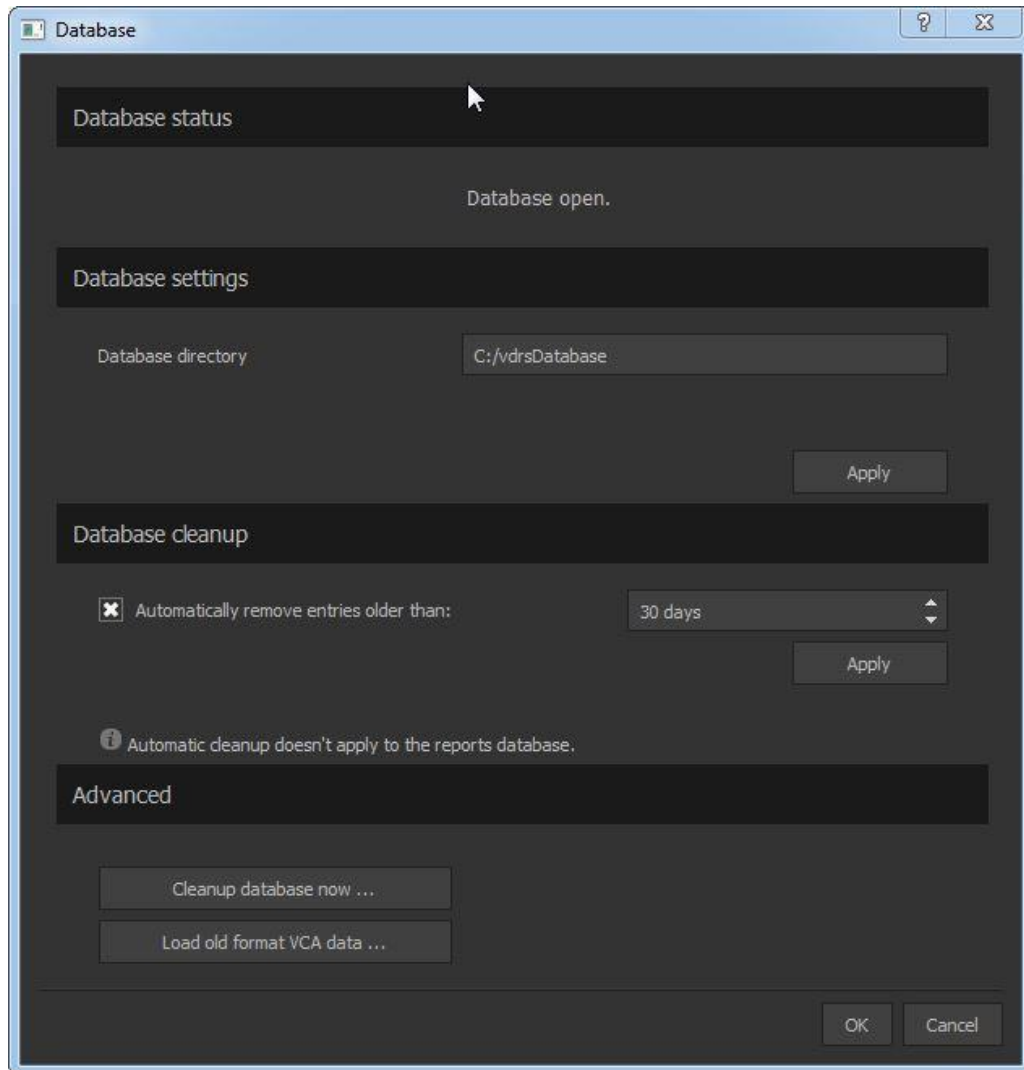
3.12.8.1 POS Settings



Alnet sniffer is connected through serial ports between cash register and printer. It allows to capture transaction data transparently for both devices and transfer it in real time by TCP/IP protocol to main server with NET PROFESSIONAL running. Application with POS license displays transactions in real time on selected cameras and saves it to the database, for the future management (search, browse, selection). As a final outcome user gets list of transactions correlated with video stream.

3.12.8.1.1. Database configuration

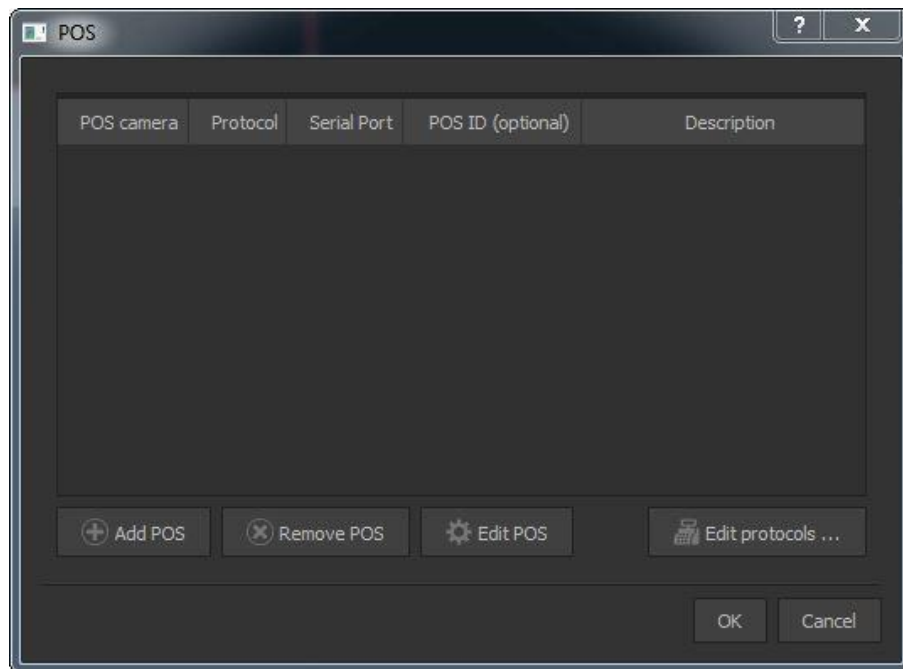
As a first step, database has to be created and properly configured – it's necessary condition for storing transaction data. Database is configured by choosing relevant option from Configuration menu of Net Professional: Configuration -> Database settings.



- **Database status:** Actual status of the database. If there's no configuration issues state should be: Database Open.
- **Database directory:** location (path) of data storage.
- **Automatically remove entries older than:** this feature allows you to delete records older than selected days count.
- **Cleanup database now:** purging all records.
- **Load old format VCA data:** import of old database format.

3.12.8.1.2. POS configuration

Configuration wizard runs from configuration Menu > Advanced > POS Settings.



- **POS camera:** particular camera (number) on which transactions are visible.
- **Protocol:** communication protocol between cash register and recipe printer (used for sending transactions data)
- **Serial port:** Physical or virtual – it's used for data gathering from transactions. In case of using POS Sniffer, it's IP address of the device.
- **POS ID (optional):** additional description e.g. number of cash register or fuel pump.
- **Description:** Additional information (comments) from users
- **Add POS:** Assigning POS protocol to camera (detailed description in 1.2.1 – Adding POS protocol)
- **Remove POS:** removes marked POS protocol from camera.
- **Edit POS:** settings edition for POS
- **Edit protocols:** adding and setting edition of present POS protocols.

3.12.8.1.2.1 Adding POS protocol

Choosing **Add POS** button will open additional configuration window, where relevant protocol is assigned to camera.

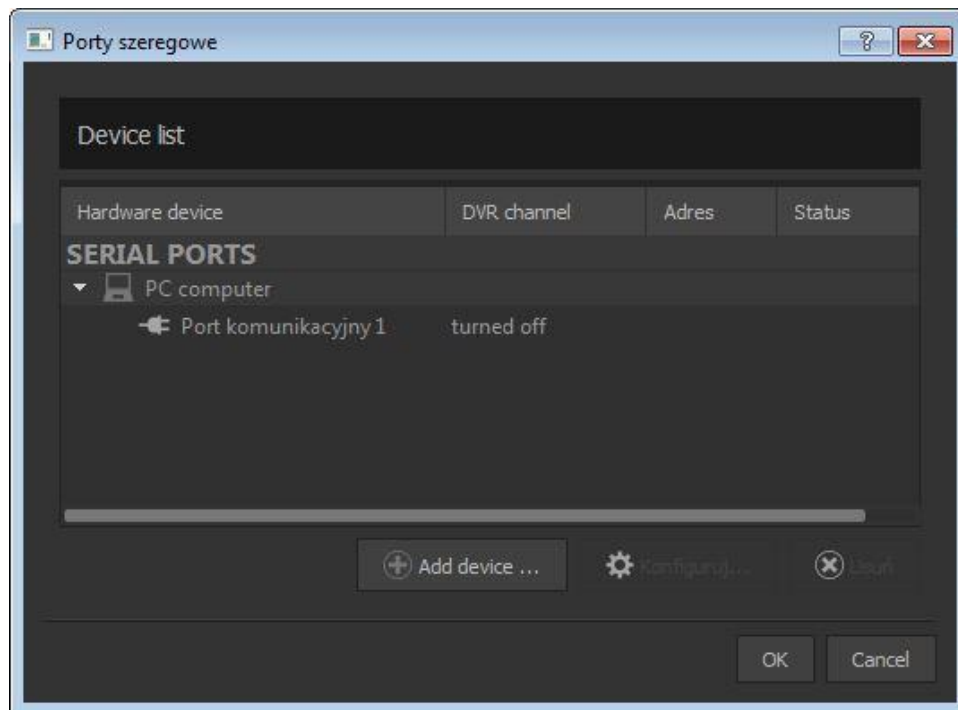
- **POS Camera number:** Camera number where transactions will be visible.
- **Optional POS ID:** additional description e.g. number of cash register or fuel pump.
- **Protocol:** Transactions transmission protocol – choose the right one from drop-down menu depending of the brand of cash register or printer.
- **Serial port:** Physical or virtual – it's used for data gathering from transactions. Button next to drop-down menu allows you to configure serial port (detailed description in **1.2.2**).
- **Description:** Additional information (comments) from users

Properly added and configured POS protocol is listed like on screen below:

POS camera	Protocol	Serial Port	POS ID (optional)	Description
1	POSNET_Win1250			

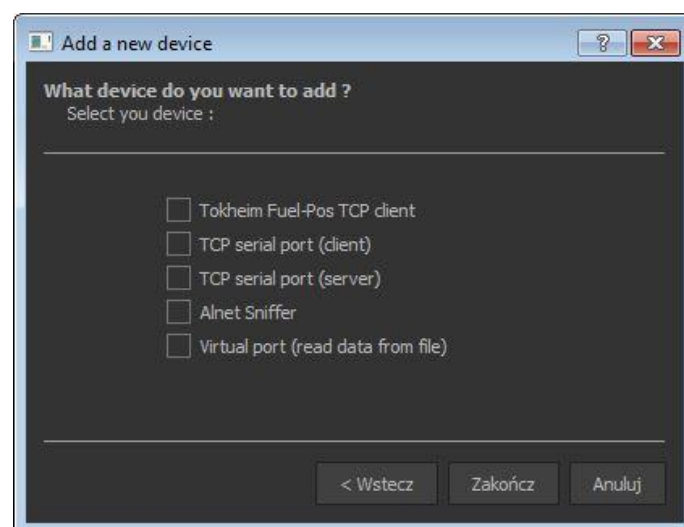
3.12.8.1.2.2 Serial port configuration

Button next to drop-down menu opens a window with list of fully configured serial ports:



- **Hardware device:** Device with port configured.
- **DVR channel:** the name of the capture channel and its status (turned on/off)
- **Address:** in case of POS Sniffer, IP address is displayed.
- **Status:** port status (connection parameters)

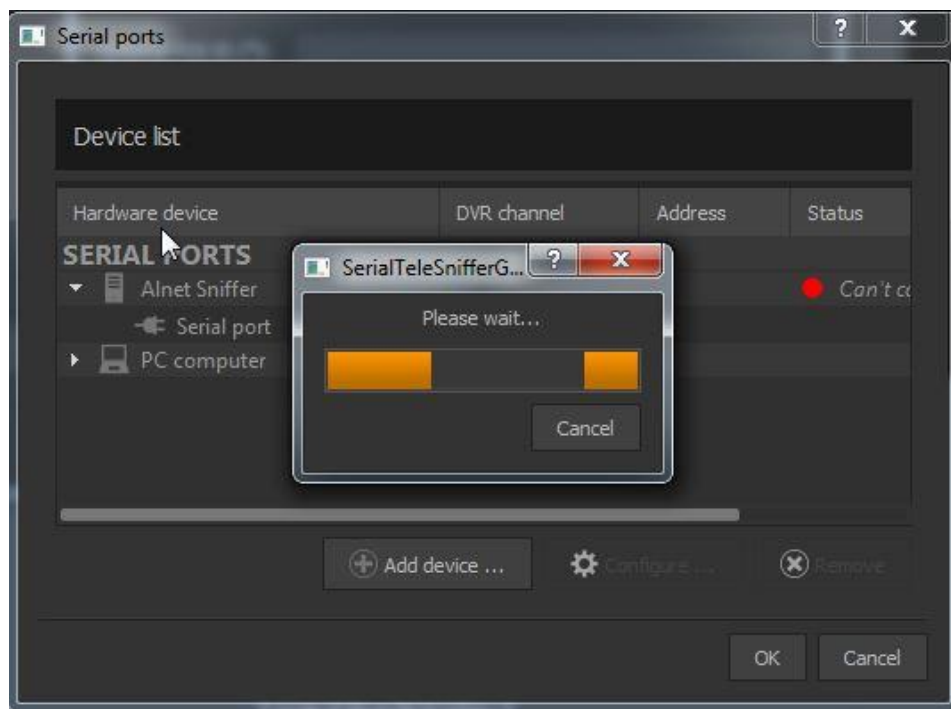
Add device: Contributes adding additional device with serial port configured (physical or virtual).



When it comes to adding devices, it's available to select from list below:

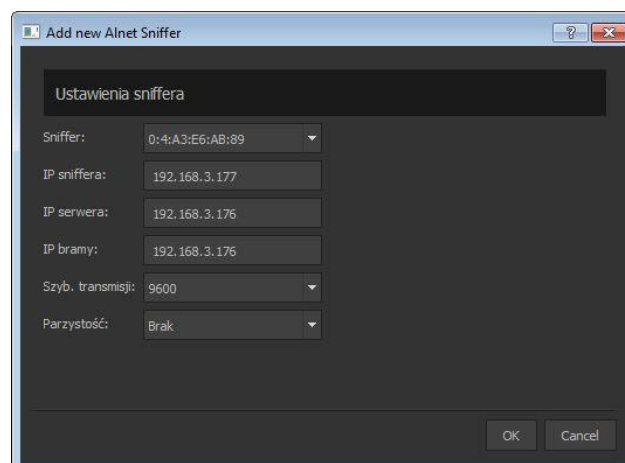
- **Tokheim Fuel-Pos TCP client:** Cash system Tokheim client
- **TCP serial port (client):** Communication using TCP as a client
- **TCP serial port (server):** Communication using TCP as a server
- **Alnet Sniffer:** communication through POS Alnet sniffer
- **Virtual Port (read data from file):** data provided from file.

In case of choosing "Alnet Sniffer" (POS Sniffer), **OK** button starts automated searching for all the sniffers connected (picture below):



IMPORTANT! Searching is based on broadcast transmission – always make sure, that network configuration allows proper broadcast working.

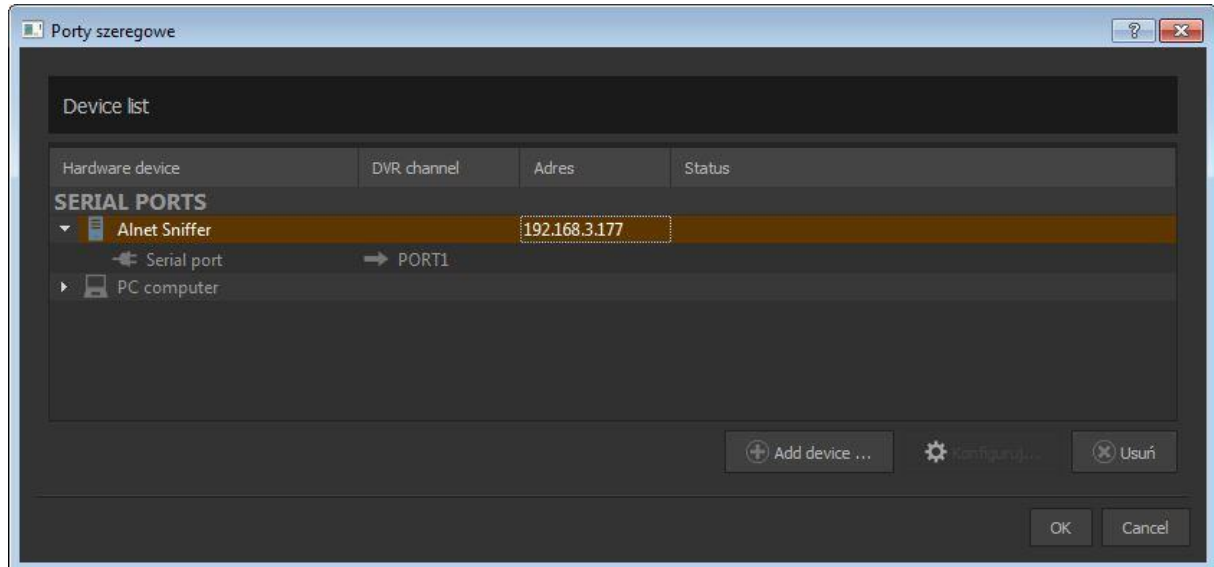
After successful sniffer detection additional window appears with all the details.



- **Sniffer:** MAC address.

- **Sniffer's IP:** Sniffer's IP address – in case of empty space or address is from different sub-network some amendments are necessary for proper working. Address has to be from the same network range as NET Professional server.
- **Server IP / Gateway IP:** In both fields please provide NET Professional Server IP address.
- **Transmission Speed:** data transmission speed (default 9600).
- **Parity:** No is default setting.

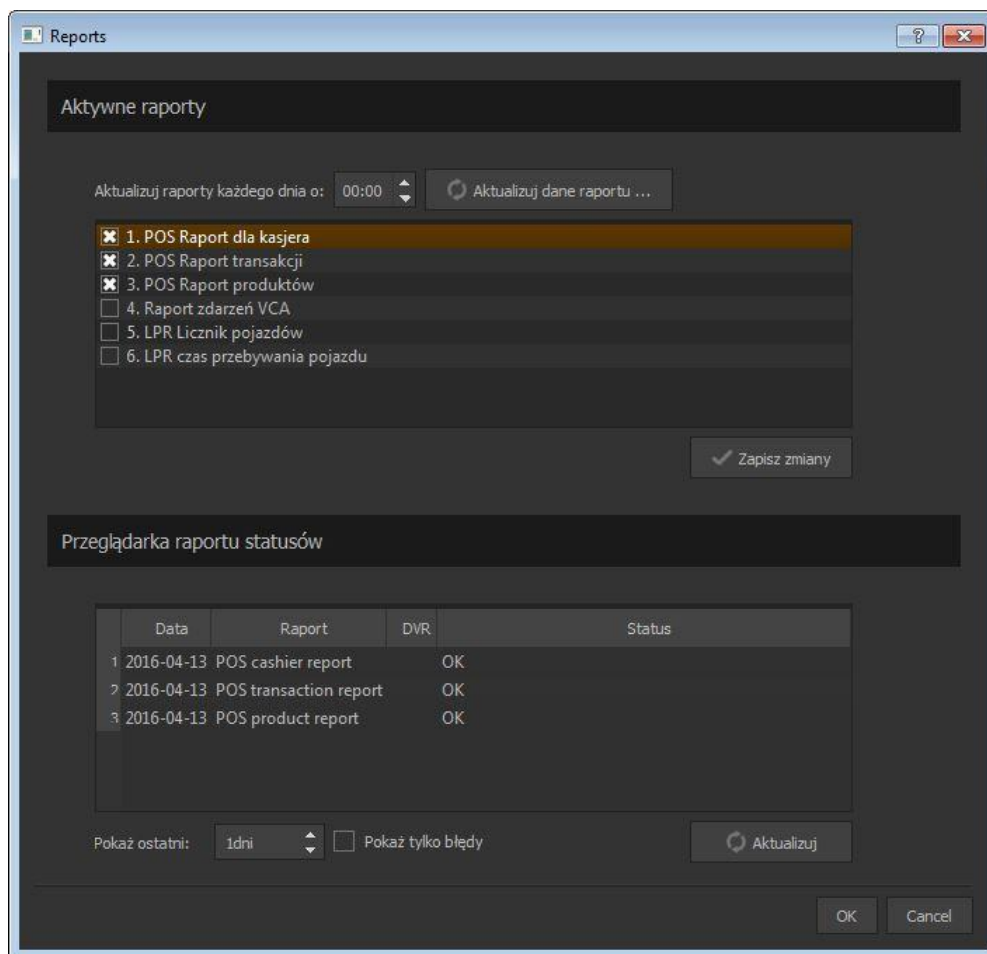
Properly configured port is listed like on screen below:



After changes confirmation, serial port is available from drop-down menu in POS configuration window (**1.2.1 Adding POS protocol**).

3.12.8.1.2.3 Reports settings

Transaction reports may need some settings adjustments for proper working. Reporting settings are in advanced part of configuration menu: Configuration -> Advanced -> Reports.



Update report data every day at: Automatic report updates - at particular hour.

Update report data now...: Manual report update.

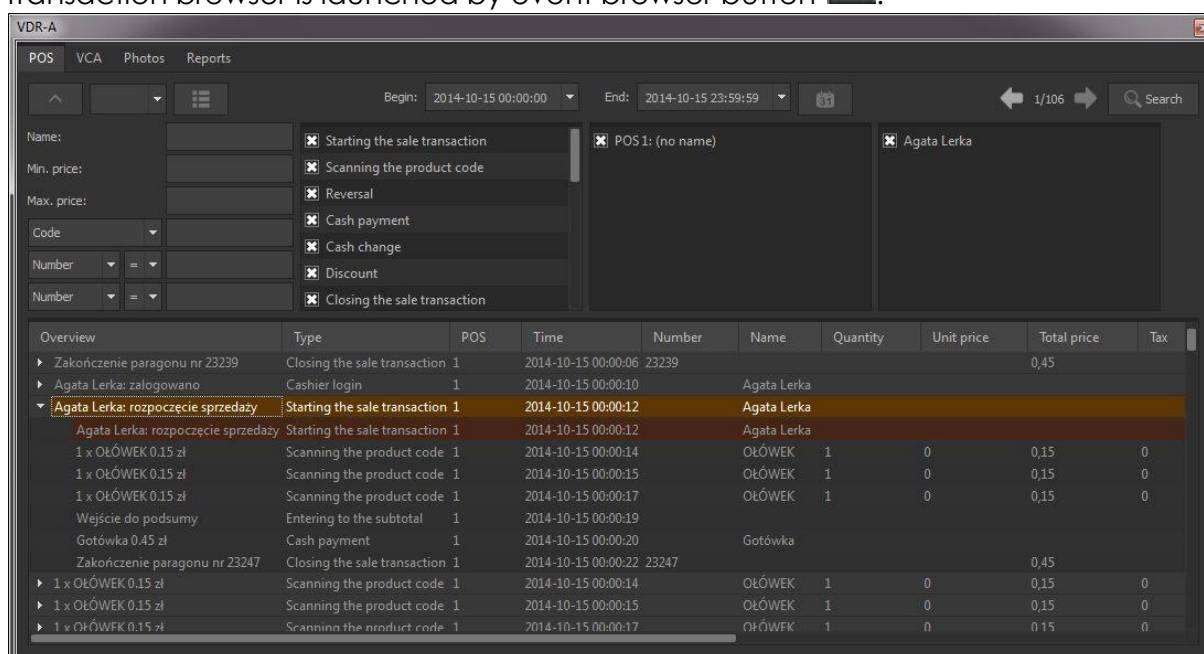
List contains available reports, user has to mark only those which need to be updated accordingly. In case of any changes, operator has to confirm them by **Apply changes** button.

Report status browser: Browsing reports results from last **X** days allows you to check if they have run successfully. Additional setting may be applied when we only need errors report – box **Show only errors** has to be checked

3.12.8.2.1. Filtering of POS transactions

Archived POS transactions are stored in NET Professional Archive: Tools -> Browse Archives

Transaction browser is launched by event browser button .



POS tab in the event browser allows you to run some filter settings on raw transaction data.

 button hides / shows search parameters.

 button expands function menu with predefined filter sets:

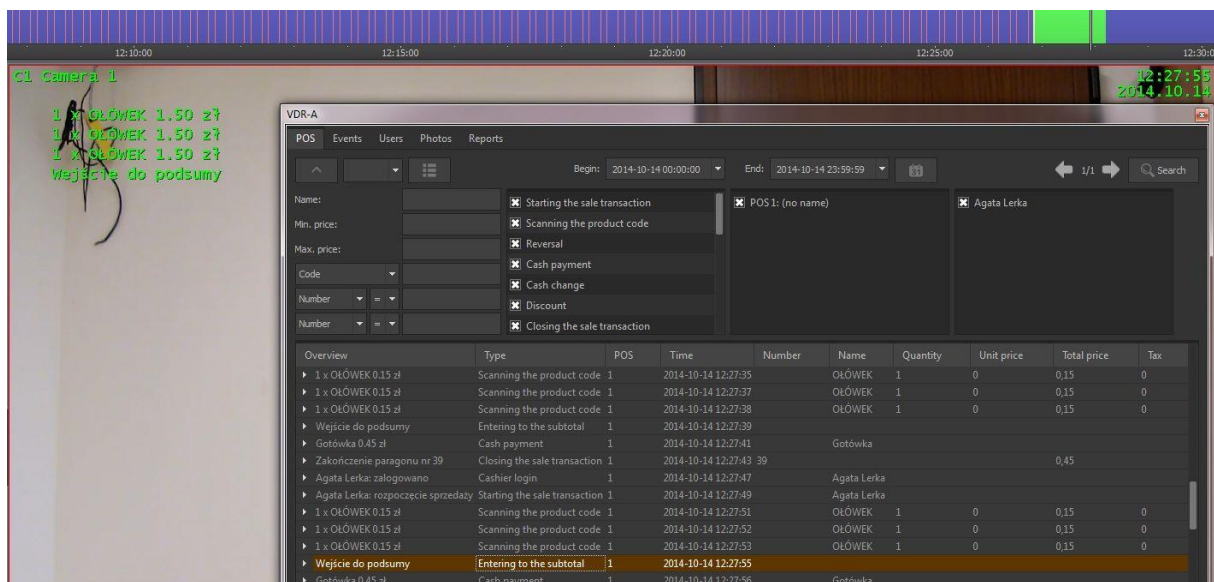
- **Add predefined report:** adds current filter settings as predefined set;
- **Delete predefined report:** removes currently chosen predefined filter set;
- **Update list:** data refresh;
- **Transaction view:** detailed transaction view;
- **Simplified view:** displays only data, which is visible on relevant camera;
- **Export to CSV file:** data export to CSV file;
- **From - To:** Range of time for reports purposes;
- **Arrows icons:** navigation between pages of reports results;
- **Search:** starts searching for data with current filter settings;
- **Transaction:** Transaction's number filter;
- **Name:** text filter;
- **Min / max price:** value filter regarding top or lowest price.

Additional filters – types of filters present on dropdown menu depending on actually used POS protocol:

- Code

- Card
- Payment type
- Raw data
- Transaction
- Quantity
- Unit price
- Tax
- Discount
- To pay
- Payment
- Change

Double-click on any element of received data report causes moving of the archive cursor on particular point on time scale and display of the video from exact moment.



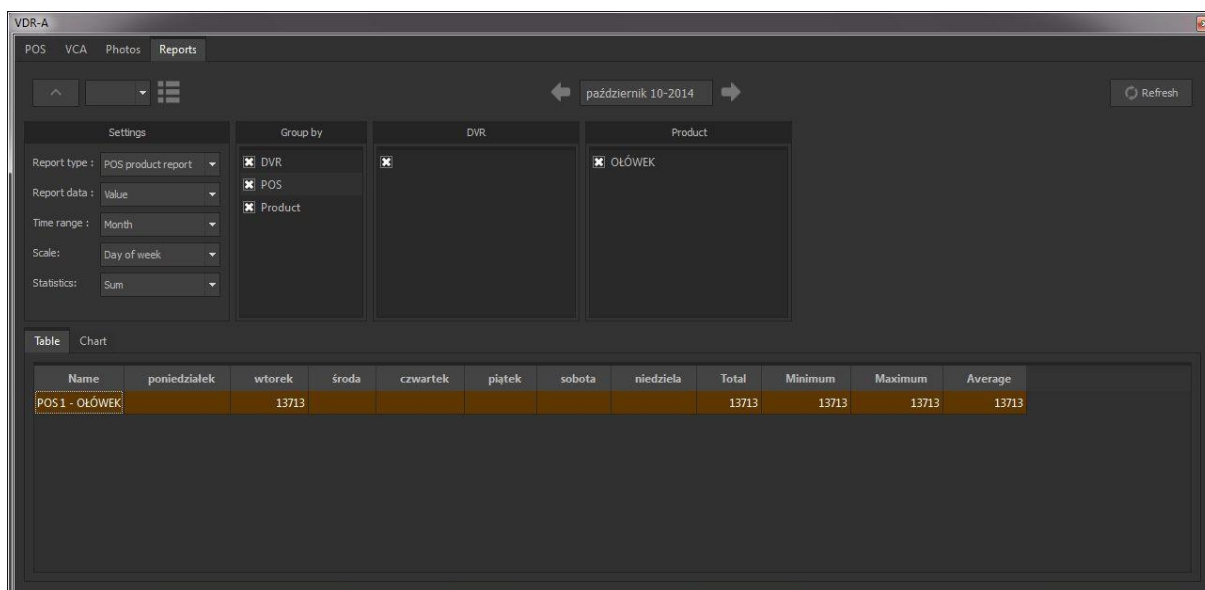
Clicking ► icon next to report result, displays whole transaction where this particular element present is:



► Zakończenie paragonu nr 23239	Closing the sale transaction	1	2014-10-15 00:00:06
► Agata Lerka: zalogowano	Cashier login	1	2014-10-15 00:00:10
▼ Agata Lerka: rozpoczęcie sprzedaży	Starting the sale transaction	1	2014-10-15 00:00:12
Agata Lerka: rozpoczęcie sprzedaży	Starting the sale transaction	1	2014-10-15 00:00:12
1 x OŁÓWEK 0.15 zł	Scanning the product code	1	2014-10-15 00:00:14
1 x OŁÓWEK 0.15 zł	Scanning the product code	1	2014-10-15 00:00:15
1 x OŁÓWEK 0.15 zł	Scanning the product code	1	2014-10-15 00:00:17
Wejście do podsumy	Entering to the subtotal	1	2014-10-15 00:00:19
Gotówka 0.45 zł	Cash payment	1	2014-10-15 00:00:20
Zakończenie paragonu nr 23247	Closing the sale transaction	1	2014-10-15 00:00:22
► 1 x OŁÓWEK 0.15 zł	Scanning the product code	1	2014-10-15 00:00:14
► 1 x OŁÓWEK 0.15 zł	Scanning the product code	1	2014-10-15 00:00:15
► 1 x OŁÓWEK 0.15 zł	Scanning the product code	1	2014-10-15 00:00:17

3.12.8.2.2. Creating reports

Our software allows you to make additional reports and charts from previously archived transaction data. Report module is run from event browser (**2.1 Searching for POS transactions**) and choosing **Reports** tab.

3.12.8.2.2.1 Table report



Report results are displayed in table, depending on chosen filters.   icons and dropdown-menu have the same meaning as in transaction browser. Arrows icons let to change range of dates for past/next day/month/year (depending on fields **From** and **To**).

Report settings:

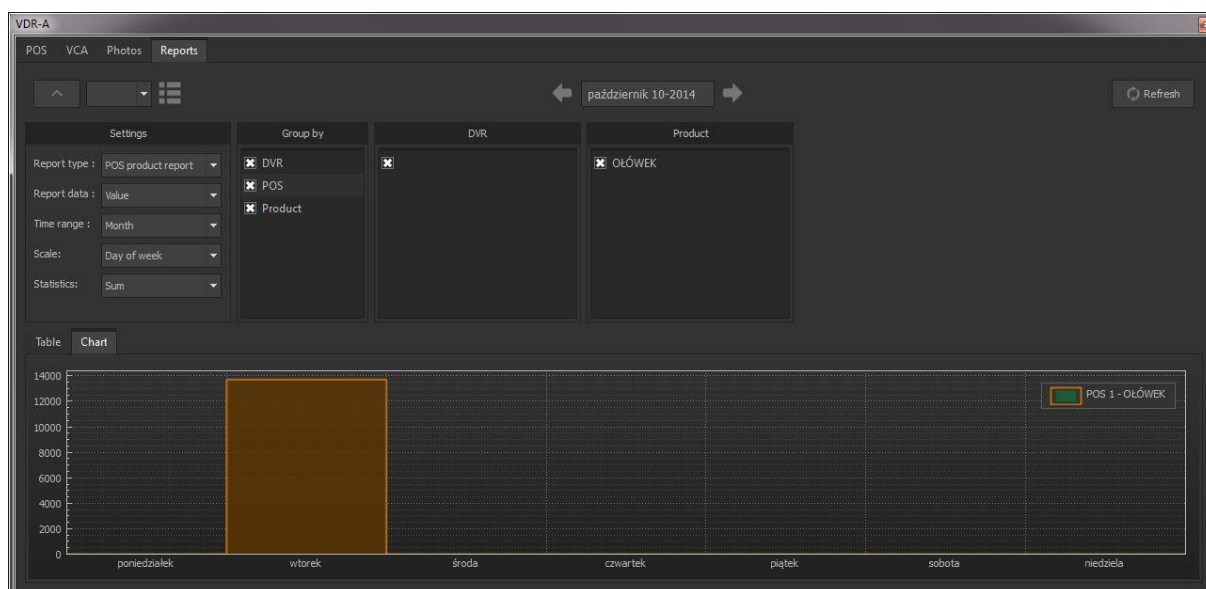
- **Report type:** (values are indicated by previously used POS protocol) e.g. product, cashier etc.
- **Report data:** (values are indicated by previously used POS protocol), e.g. products value, number of products, scan number.
- **Scale:** timescale for reports (minute/hour/day etc.)
- **Statistics:** only for sorting by particular variable – time (Sum, average, etc.)

Group by:

- DVR - recorder
- POS – POS source data
- Item – part of data (e.g. item from transactions)
- Time

3.12.8.2.2 Charts

Report is able to create chart depending on data used. In order to create new table report we choose Chart tab.



All of the filtering parameters are exactly the same as in table report.

3.12.8.2 LPR Settings

LPR is one of advanced functions of NET Professional system. It allows to analyze videos for vehicle data. After obtaining data from stream it allows to process and integrate with other functionalities of NET Professional.

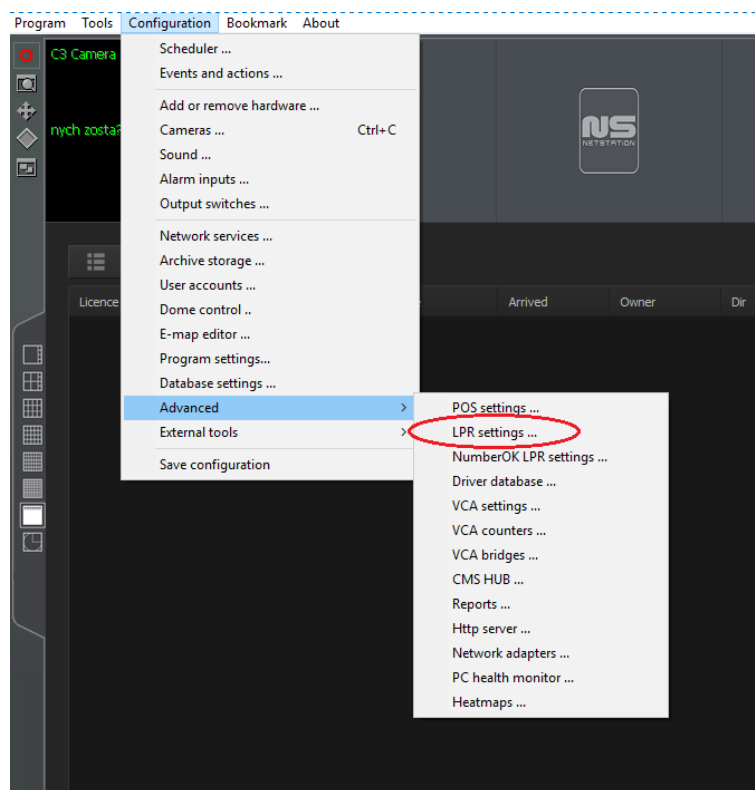


In order to run NET POS on your system, some requirements has to be fulfilled:

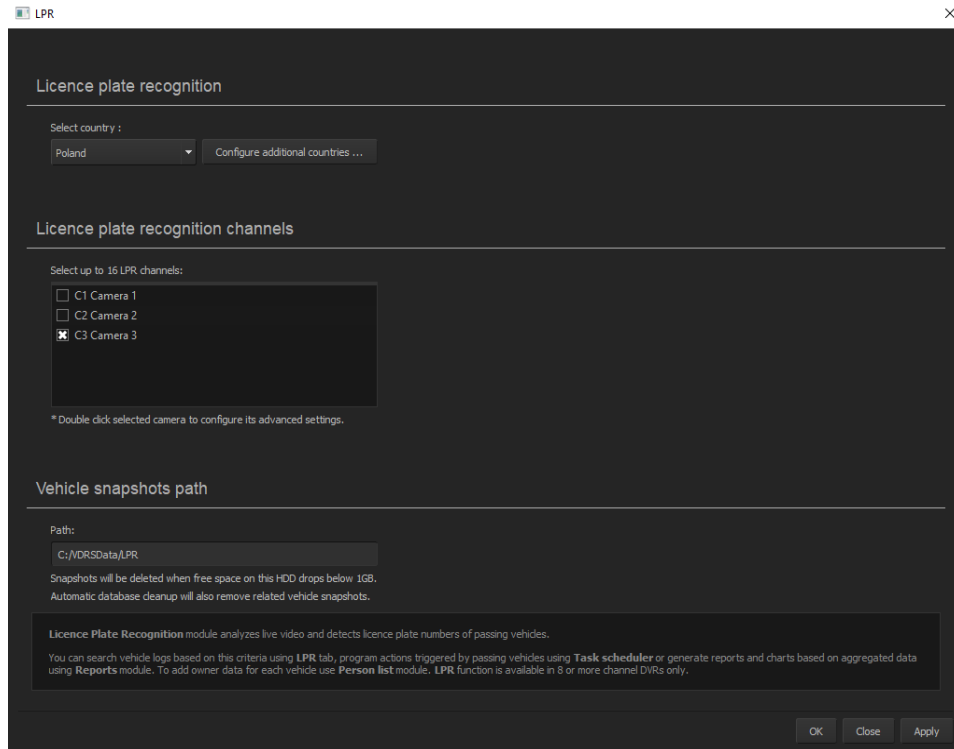
- NET PROFESSIONAL has to be properly configured with any software license (Analogue, IP, HD-SDI, Hybrid). Details of installation and setup parameters are detailed in its own operating manual.
- POS license for chosen number of video channels (license is treated as extension of the NET PROFESSIONAL)

Note: in some cases (older licenses) updating Net Professional license or/and software may be needed.

3.12.9 Configuration

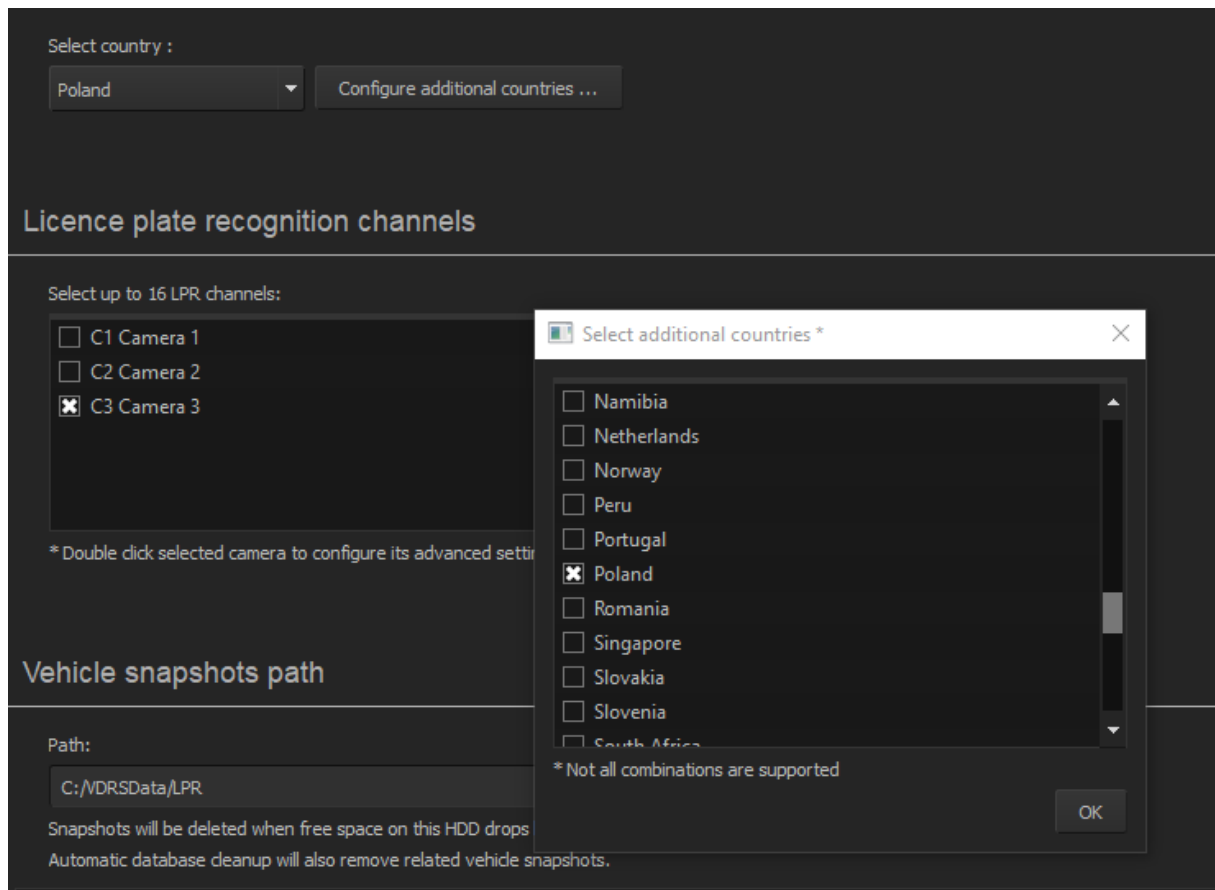


First step to activate LPR functions is to click LPR settings in Advanced Configurations.



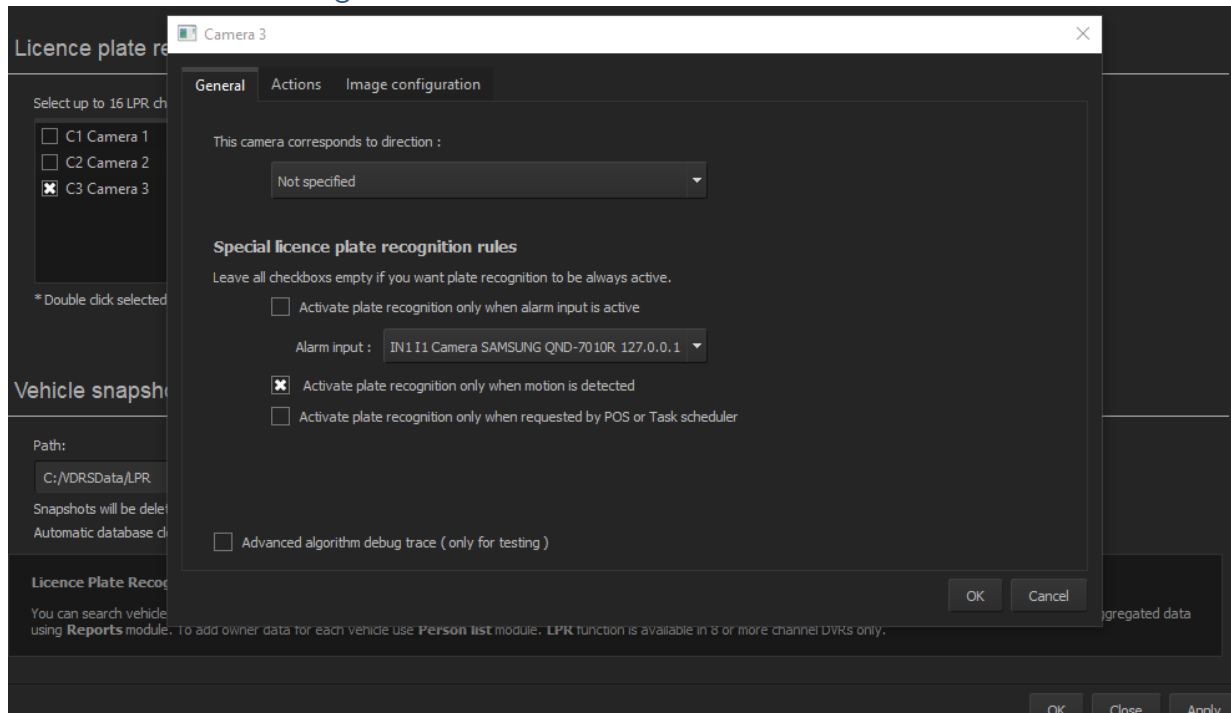
Each instance of NET Professional allows for 32 cameras, one server allows for 4 instances, each instance allows for up to 16 LPR cameras.

Warning : Every LPR camera impacts heavily on CPU, it is not recommended to run constantly LPR function. Use trigger options like POS actions or I/O to activate LPR to minimize impact.



First option will allow you to choose pattern of license plates – unique for each country, select the one that you expect most of the cars will be coming from. Under country settings you can choose on which cameras, you want to have LPR to be active. By double clicking on specific camera you can configure its advanced settings. Vehicle snapshot path, here you can define path, where you want snapshots to be saved.

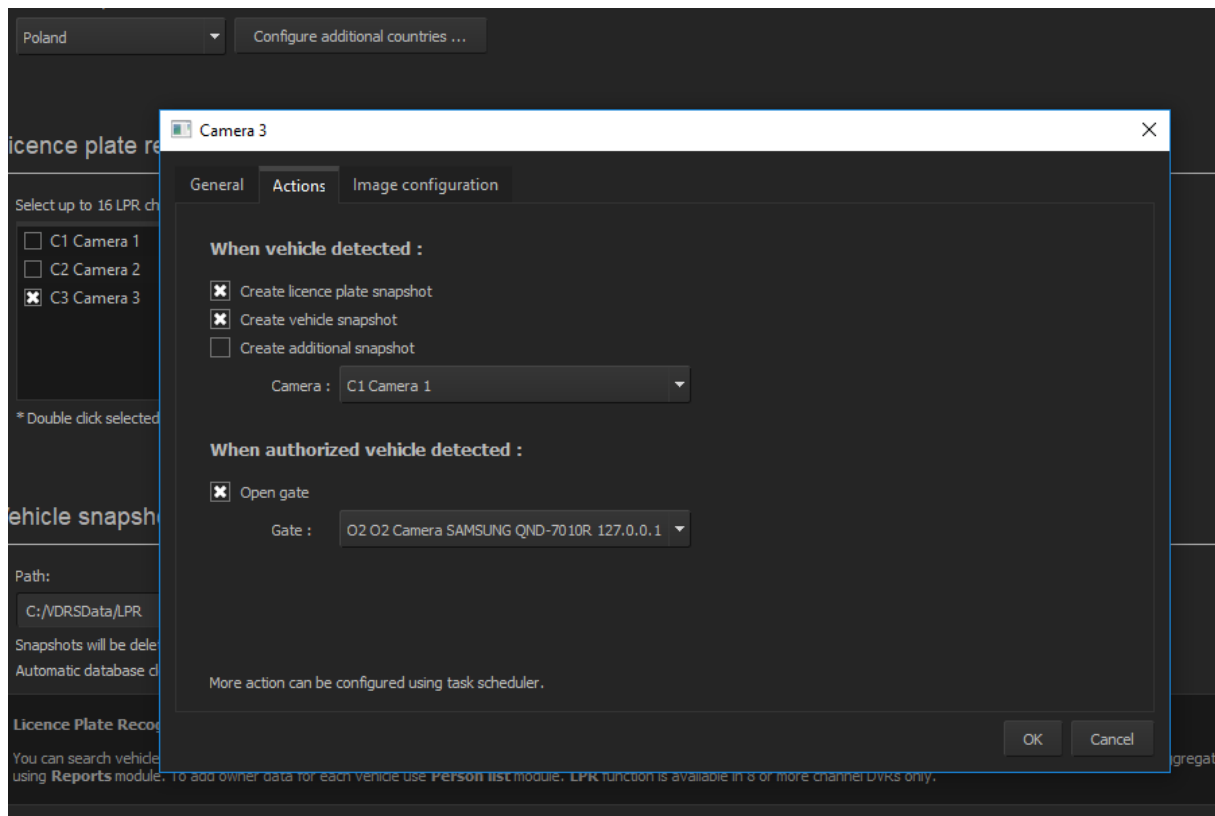
3.12.9 Advanced settings



First bar specifies direction of the camera, setting up this option is necessary to statistics of exit/entry being correct

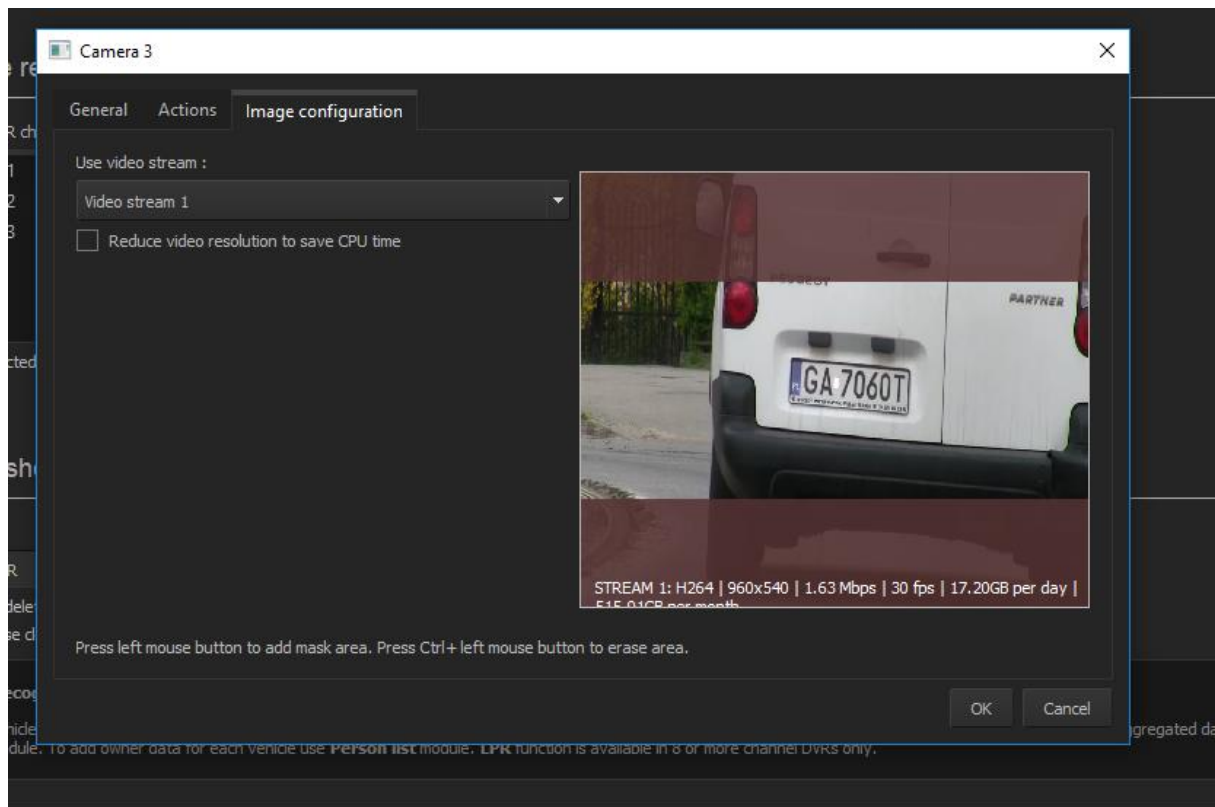
Next options is defining rules when license plates recognition shall be activated, it helps to lower CPU usage when configured correctly. It allows to choose what action triggers LPR, default action is motion detection, but you can choose I/O action, for example : induction vehicle sensor, pressure plate, laser bridge. Last option is POS action or task scheduler event, those options are dependent on your system configuration.

Advanced algorithm debug trace is an option to log values received by system.



In actions tab you can define what action are taken when system recognizes license plate on stream. First Options allows you to choose how many data shall be saved about the vehicle, you can take a snapshot of only license plate, license plate and whole vehicle and snapshot from other camera, possibly from other angle to capture driver's face.

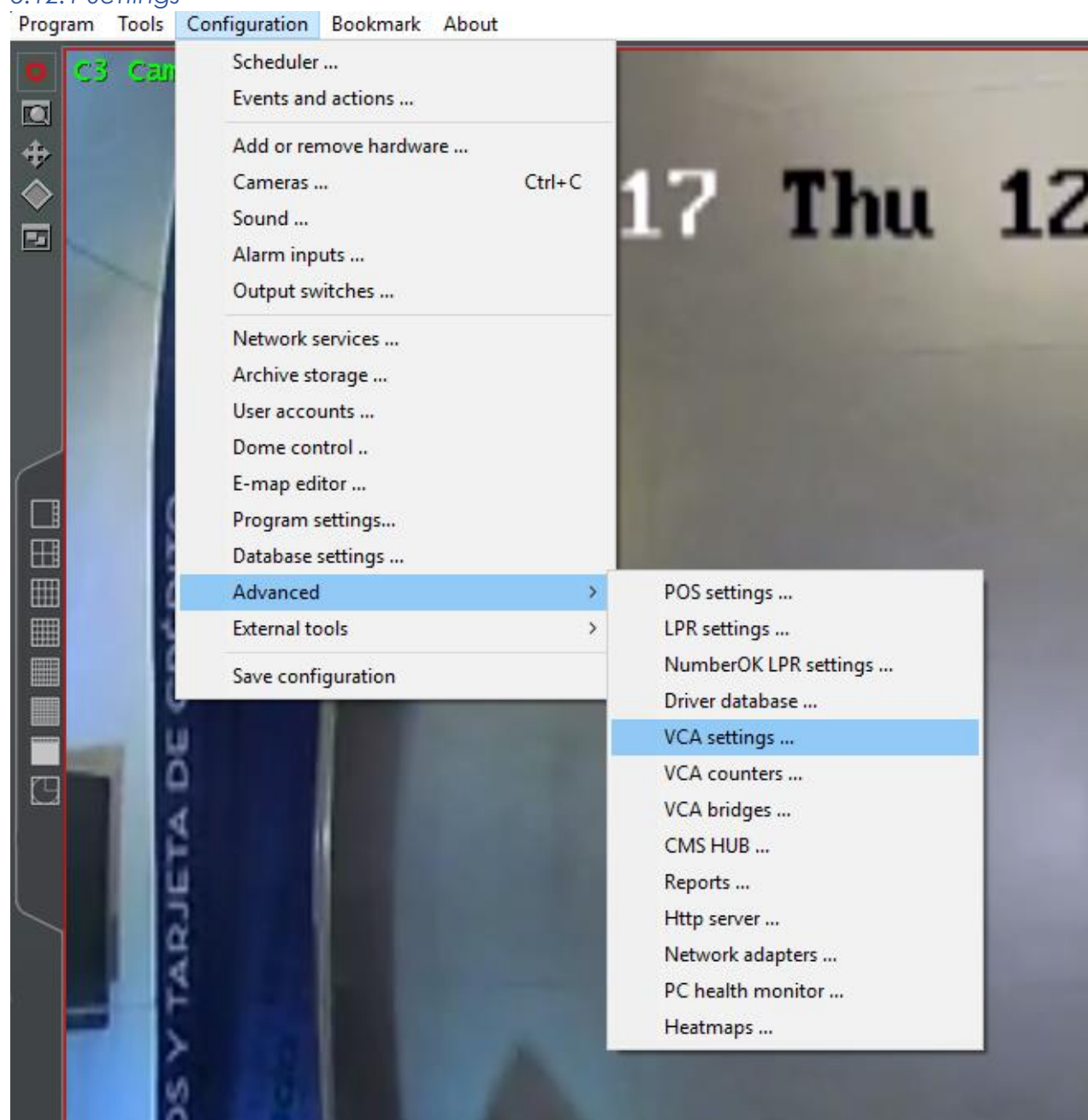
Optionally it is possible to synchronize gate control to open gate when authorized vehicle approaches. Here you can choose which gate shall be opened when chosen camera detects pre-defined license plates.



Here you can configure area that you want to exclude from LPR and choose between high and low resolutions. Lower resolution sometimes may improve accuracy of LPR as it often benefits from higher frame rate, not from higher resolution when license plate is well in close view.

3.12.8.3 VCA Settings

3.12.1 Settings



VCA

×

Active licenses

ID	Used channels	Description
0	1/1	Pro MS Windows Evaluat...

Register New License

Deactivate License

VCA channels

☐ C1 Camera 1

☐ C2 Camera 2

☒ C3 Camera 3

Double click selected camera to configure its VCA settings.

Video Content Analysis module analyzes live video and detects additional video alerts like zone enter, exit, line cross and object counter, abandoned and missing object, speed and direction violation, loitering and more.

VCA alerts will be visualized on live video. You can search alert log using **VCA tab**, program actions triggered by VCA alerts using **Task scheduler** or generate reports and charts based on aggregated data using **Reports** module.

You will need to obtain additional license to activate module. Press **Register new license** to see the details. You don't need to activate this module if your network camera already has built-in VCA functionality.

OK

Close

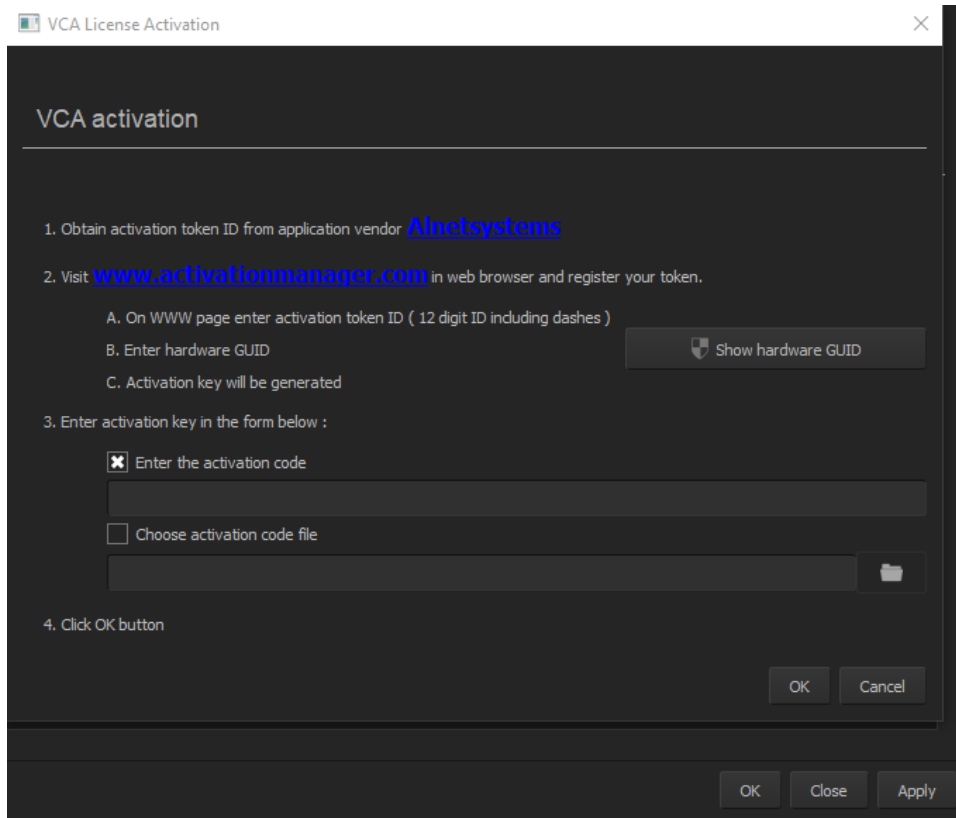
Apply

Instructions for Use

To activate this token on a target system, please follow these steps:

- Save the hardware GUID from the target system.
- Visit <http://www.activationmanager.com> in a web browser.
- Enter the token ID (12 digit ID (including dashes) at the top of this document).
- Enter the hardware GUID.
- Confirm the token is for the correct product.
- The activation key will be generated.
- Apply the activation key to the target system.

If you lose the activation key, it's possible to return to the activation site and re-generate it by following the steps above.



VCA License Activation

VCA activation

1. Obtain activation token ID from application vendor Alnetsystems
2. Visit www.activationmanager.com in web browser and register your token.
 - A. On WWW page enter activation token ID (12 digit ID including dashes)
 - B. Enter hardware GUID Show hardware GUID
 - C. Activation key will be generated
3. Enter activation key in the form below :

☒ Enter the activation code
☐ Choose activation code file
4. Click OK button

OK Cancel

OK Close Apply

This token has already been redeemed. Please see the details below.

PC version of VCAprofessional open – 1 channel

The product has been successfully activated.

Redeemed	14/06/18 08:02:42
Serial Number	FD00F8270000DC258F633B00C51
Email Address	k@gmail.com
Comments	123

The activation code for your product is:

518404FFFFFFFF30C349E6D0469DC00343E1FA89AA9B80AE3770DFD0BB29290973DE0CB8B57CB648

Please apply the activation code to your product to activate the features purchased.

Thank you for activating your product.

- [Redeem another token](#)

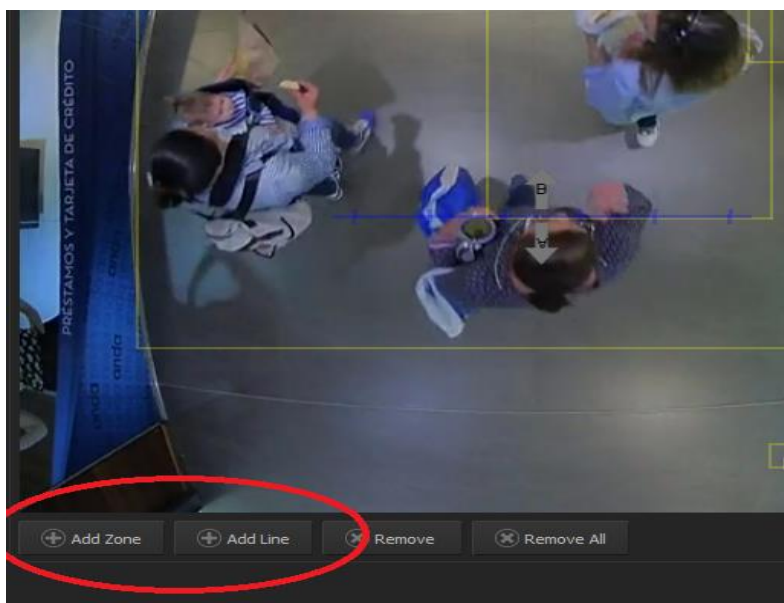
- [Click here to log in](#)

Creating Detection Zones and Lines

In order to detect events of interest, detection zones and lines must be defined. Detection zones define an area of interest. Detection lines are similar to detection zones but they define a perimeter instead of a region.

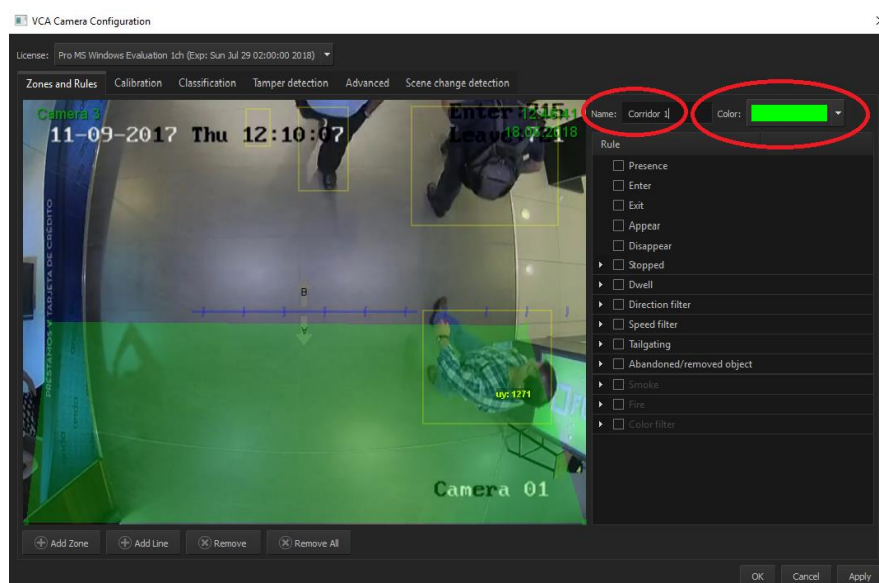
Creating a Zone or Line

To create a zone, either double click the left mouse button or right click and select Zone/Line... Create zone: To create a line, right click and select Zone/Line... Create line:



Editing Zones and Lines

Zones and lines can be edited to be any shape or size. Zones and lines are controlled by manipulating "nodes" that represent the zone/line vertices. To change the shape of a zone or line, simply grab a node with the left mouse button and drag it to the desired location:

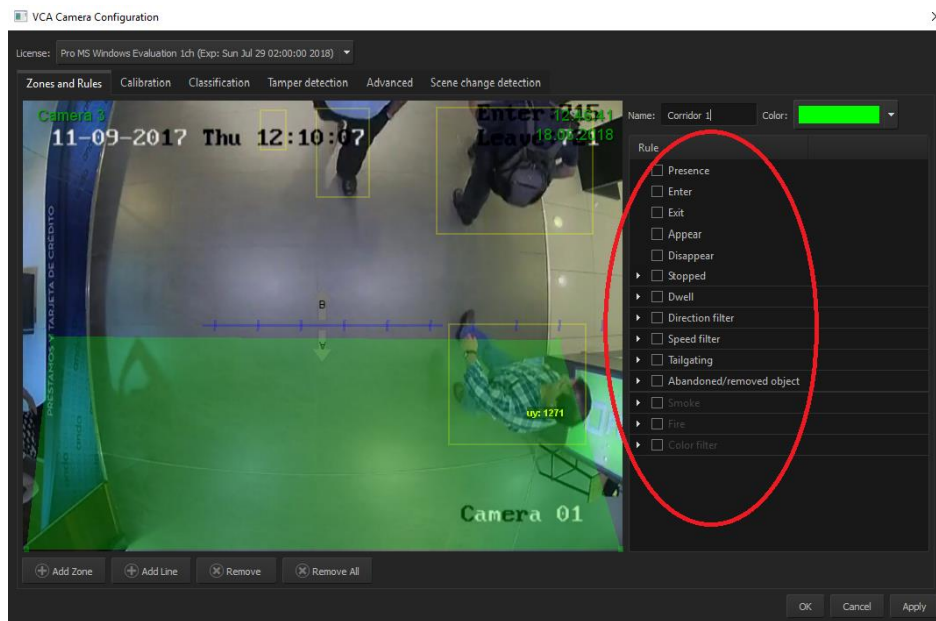


Detection Rules

Once some detection zones and/or lines have been configured, it's possible to define some detection rules

that apply to the zones/lines. By default, zones and lines are automatically configured to detect object presence.

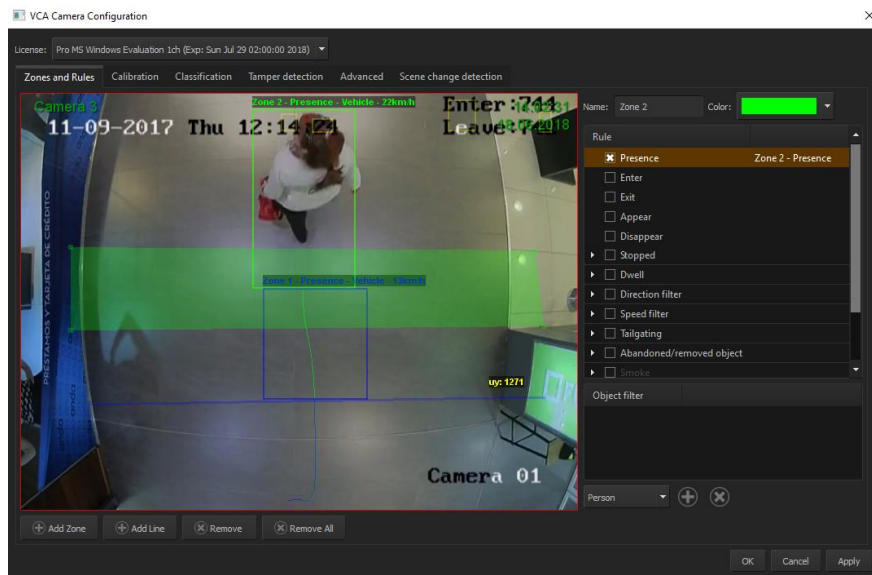
The rules are defined in the Properties Inspector:



The properties inspector is context-sensitive to the zone selected. As different zones/lines are selected, so the properties inspector changes to reflect the rules currently configured on that zone. Defining a rule is a simple matter of checking the box next to the rule required. In all cases, the rules are configured with sensible default values. Of course, these can be customized to suit the detection scenario. The selection of multiple rules on a detection zone is supported

Object Presence

Enable the object presence rule on the selected zone by checking the Presence box in the properties inspector and click apply. Objects that are present inside a zone or pass through a line will trigger the rule and raise an alarm



Object Enter and Exit

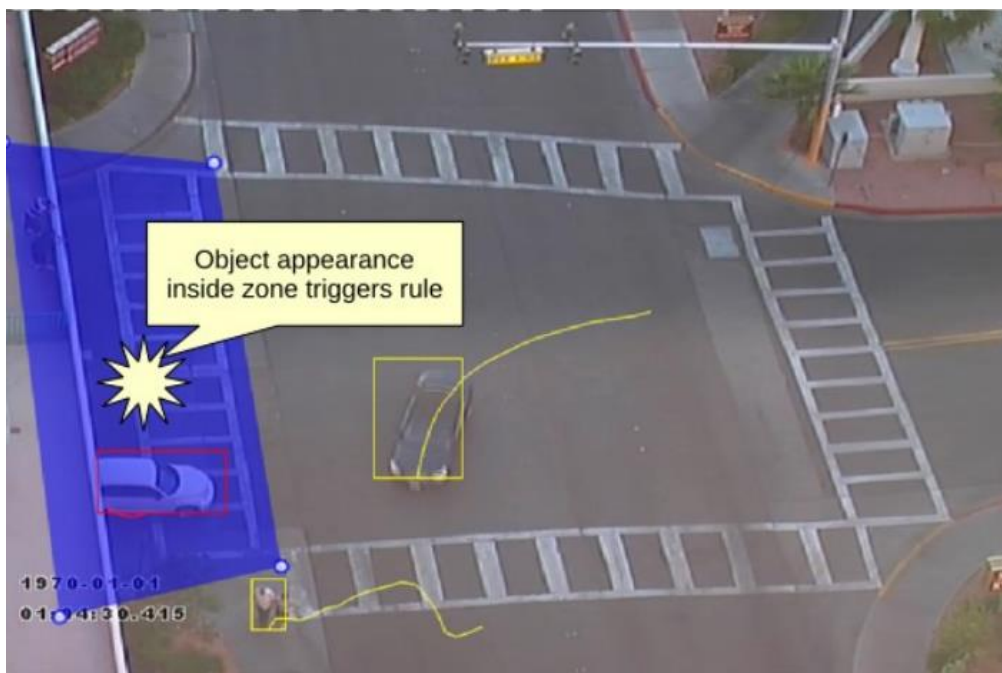
Enable the object enter and exit detection by checking the corresponding check boxes in the properties inspector and click apply. An object entered alarm is raised when an object crosses from the outside to the inside of a detection zone. Conversely, an object exited alarm is raised when an object crosses from the inside to the outside of a detection

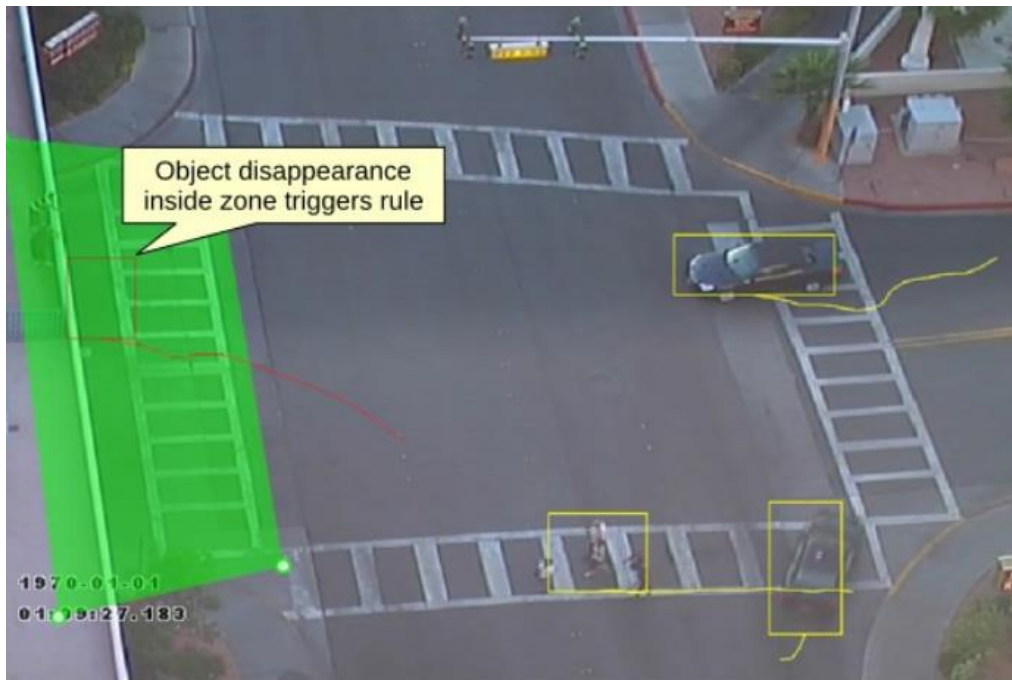
zone:



Object Appear and Disappear

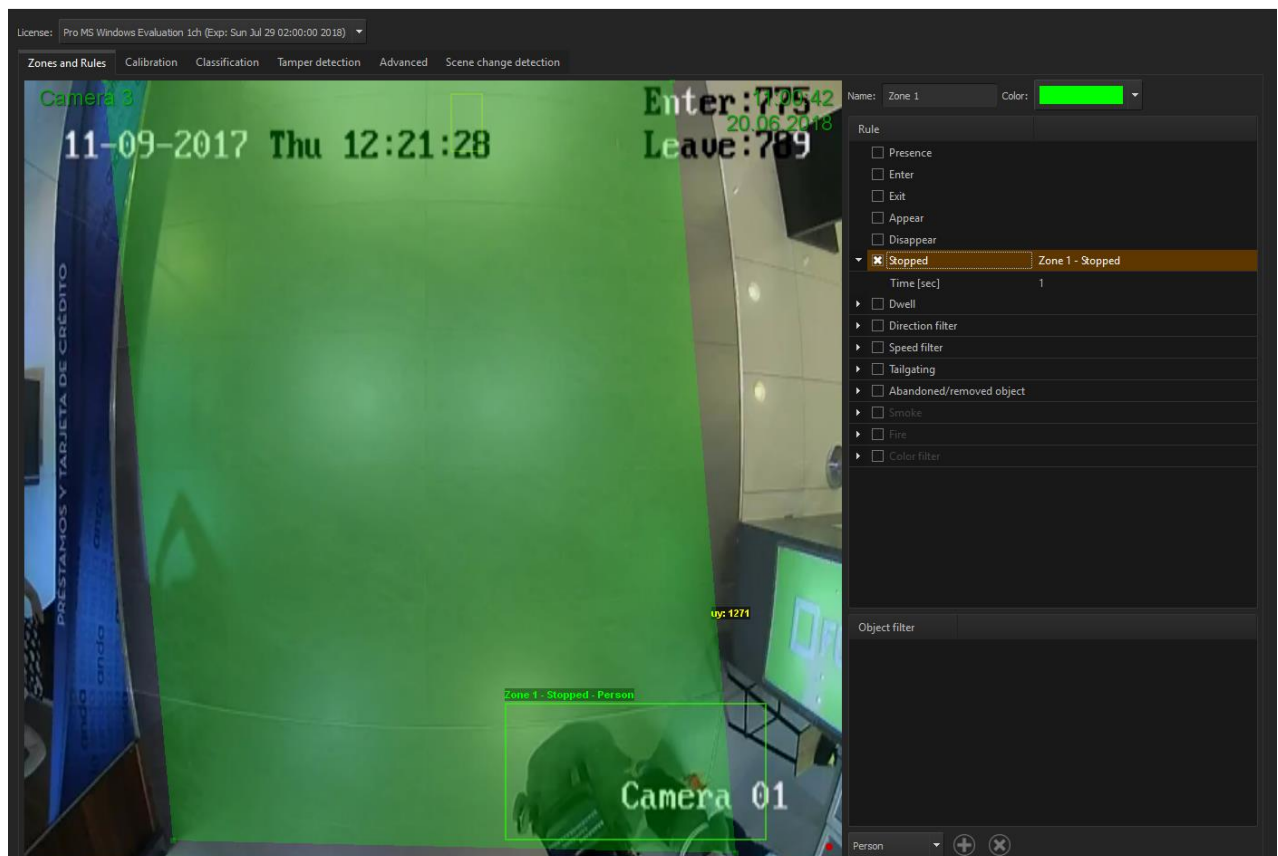
Enable the object appear and disappear detection by checking the corresponding check boxes in the properties inspector and click apply. An object appear alarm is raised when an object appears inside a detection zone. Note that this is different from object entered detection since the object must be initially detected inside the zone without entering, e.g. people appearing in a doorway, or cars appearing from an underground carpark. Conversely an object disappear alarm is raised when an object disappears inside a detection zone. Again, this is different from object exit detection since the object must be tracked into the zone and then disappear without exiting the zone.





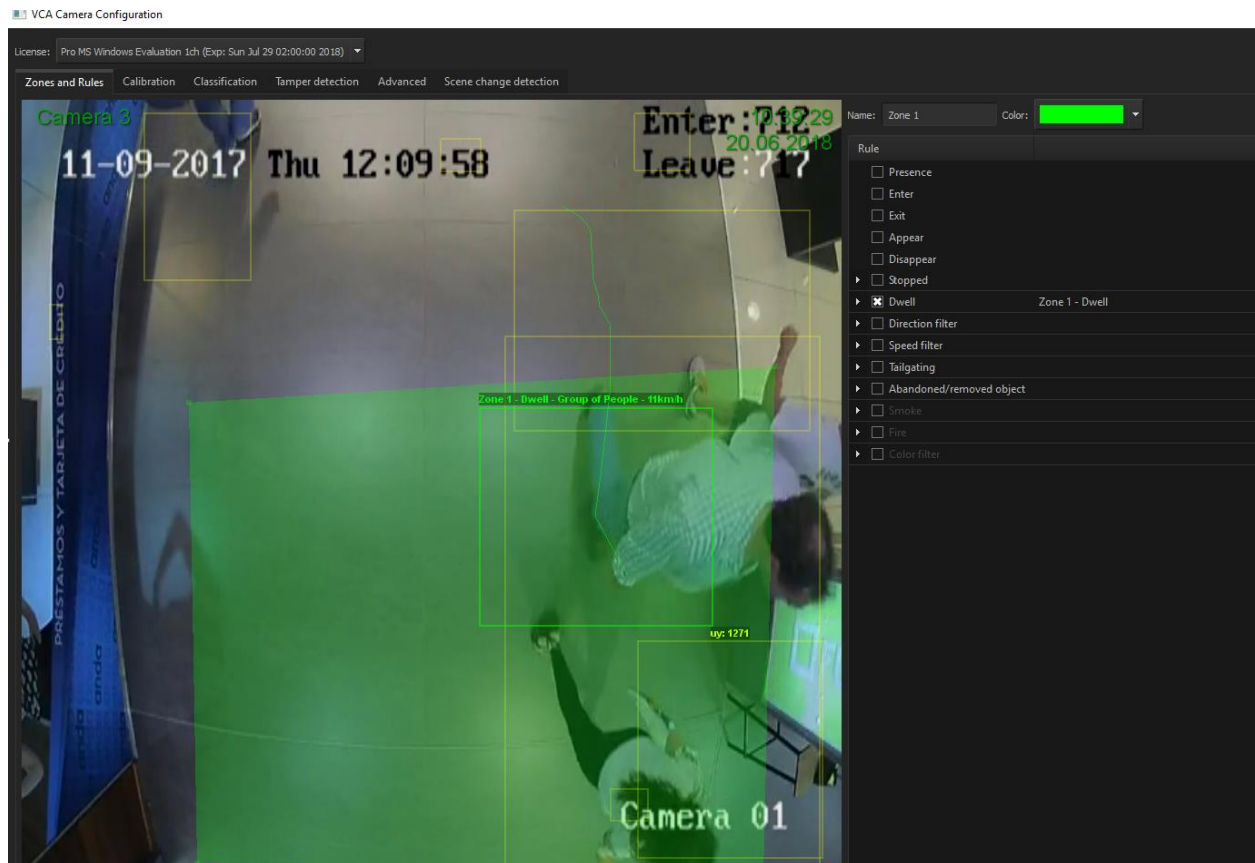
Object Stopped

Enable the object stopped rule on the selected zone by checking the Stopped box in the properties inspector and click apply. Objects that are stopped inside a zone for longer than the defined amount of time will trigger the rule and raise an alarm. The stopped time can be configured by simply clicking in the Time box on the rule control and editing the value in-place.



Object Dwell

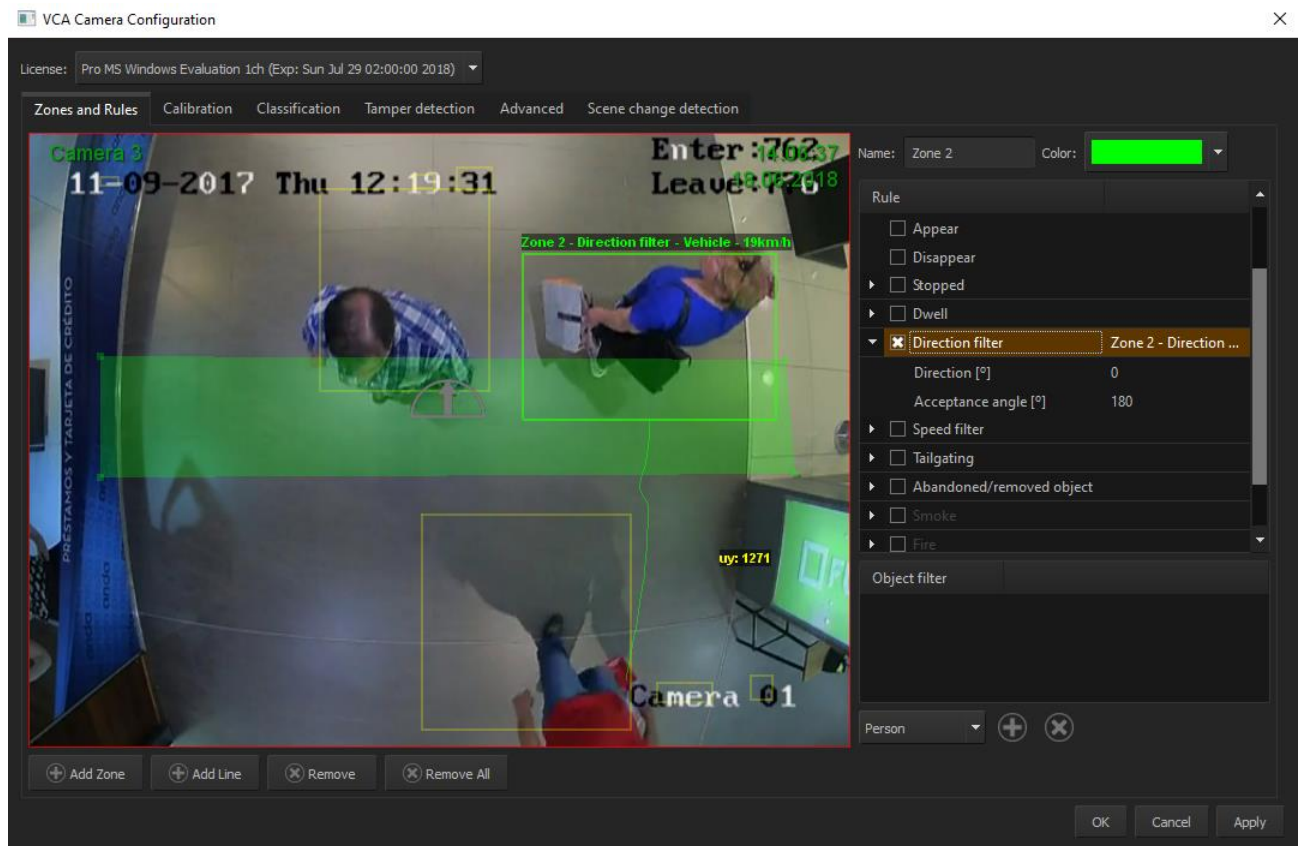
Enable the object dwell rule on the selected zone by checking the Dwell box in the properties inspector and click apply. Objects that dwell inside a zone for longer than the defined amount of time will trigger the rule and raise an alarm.



Direction Filter

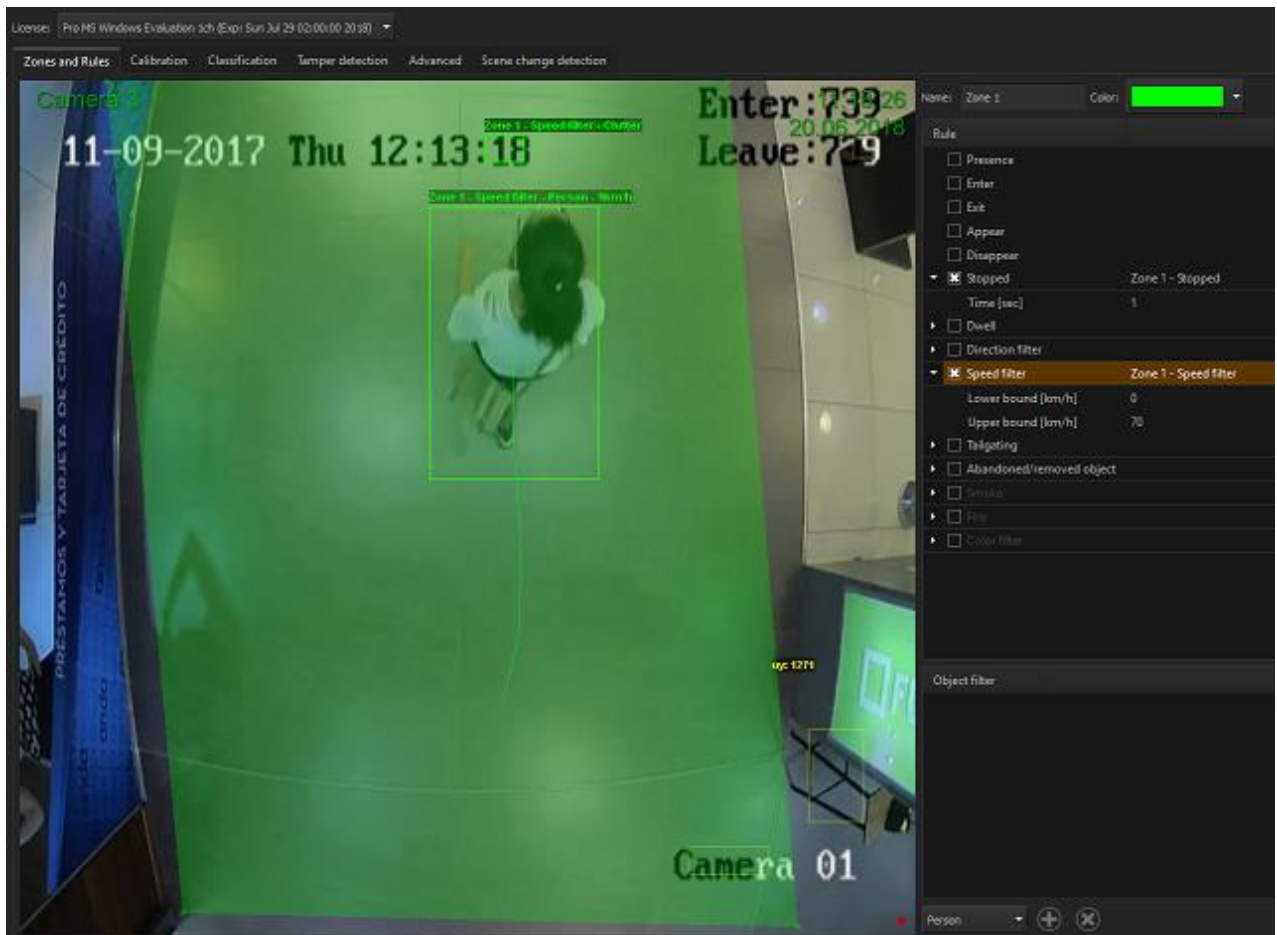
Enable the object direction rule on the selected zone by checking the Direction Filter box in the properties inspector. Adjust the direction and acceptance angle to suit

the detection scenario. Objects that travel in the configured direction (within the limits of the acceptance angle) through a zone or over a line trigger the rule and raise an alarm.



Speed Filter

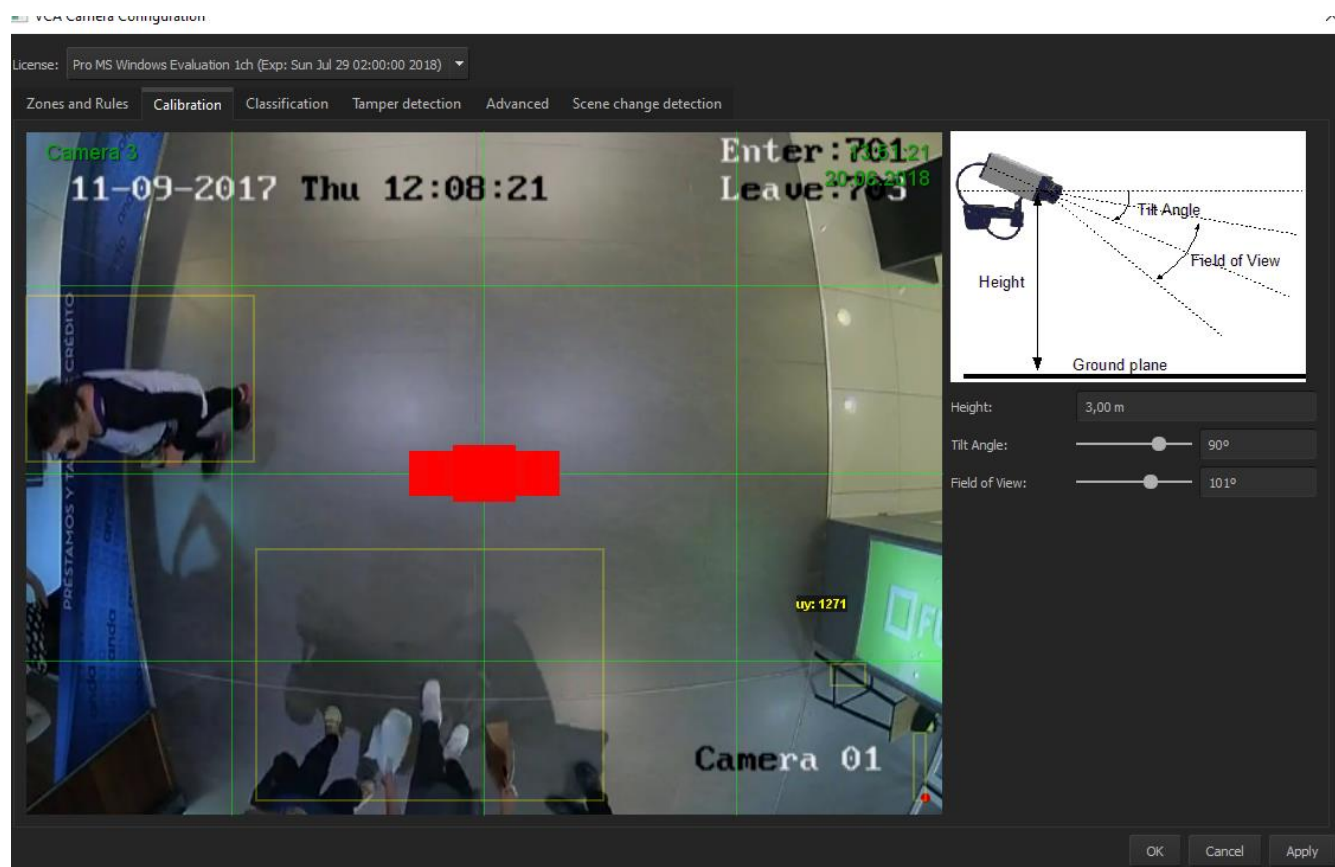
Enable the object speed rule on the selected zone by checking the Speed Filter box in the properties inspector. Adjust the lower and upper speed limits to suit the detection scenario. Objects that travel within the bounds of the configured speeds, through a zone or over a line trigger the rule and raise an alarm. Note that the camera must be calibrated for this function to be available.



Tailgating

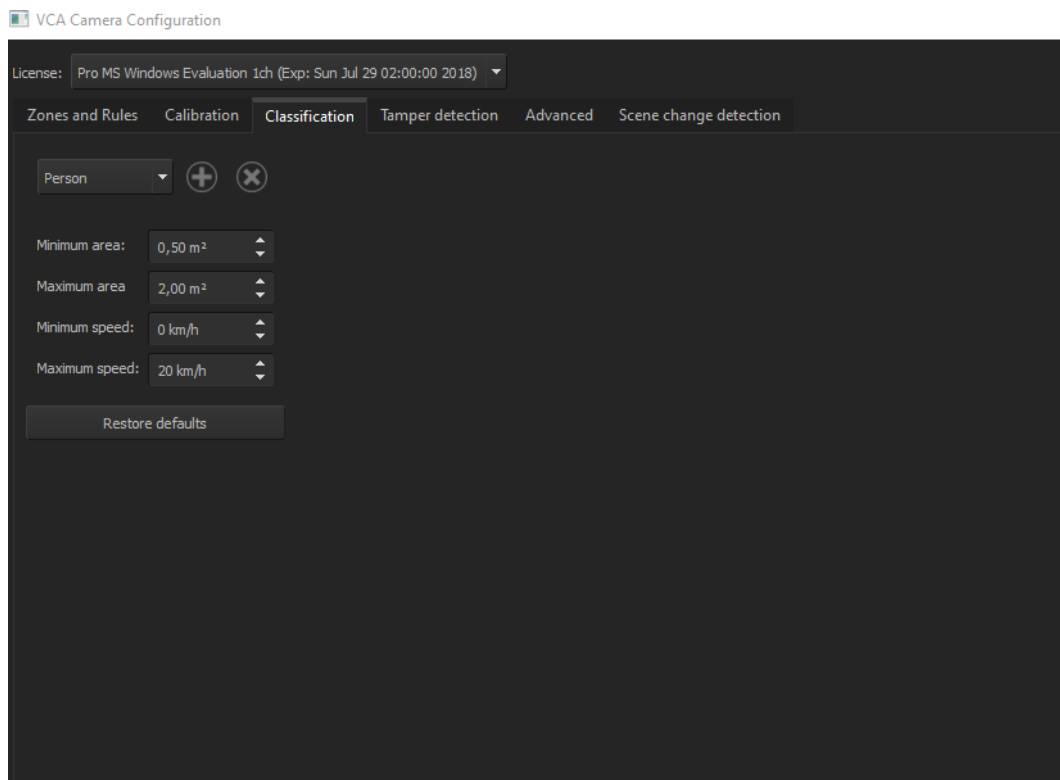
Enable the object tailgating rule on the selected zone by checking the Object Tailgating box in the properties inspector. Adjust the time threshold to set the minimum allowable time between successive object detections. Object tailgating is defined as an object crossing a line or zone within a certain time after an object has already crossed the line or zone. If an object crosses a line or zone, and another object crosses the same line or zone within the specified time window, the Object Tailgating filter will be triggered.

Calibration



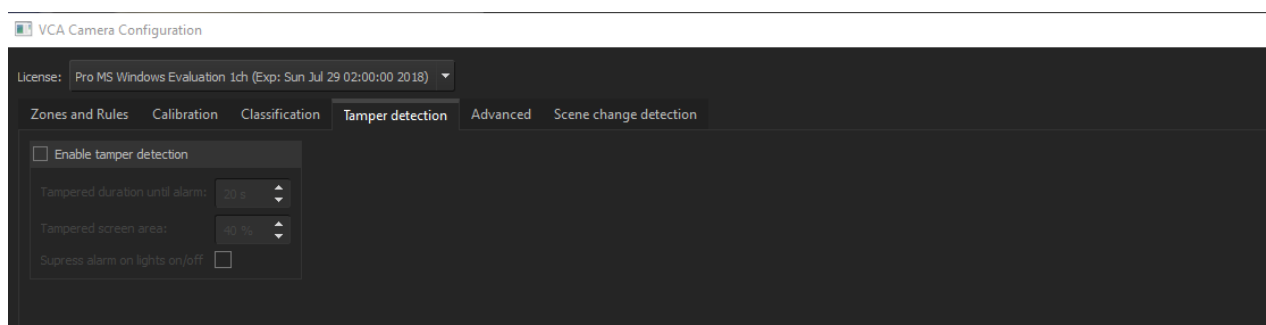
This tab allows to calibrate position of camera in reference to horizon on video. The more precise the calibration is, the more accurate is VCA data. 1 square in the picture should be equal to 2m x 2m in reality.

Classification



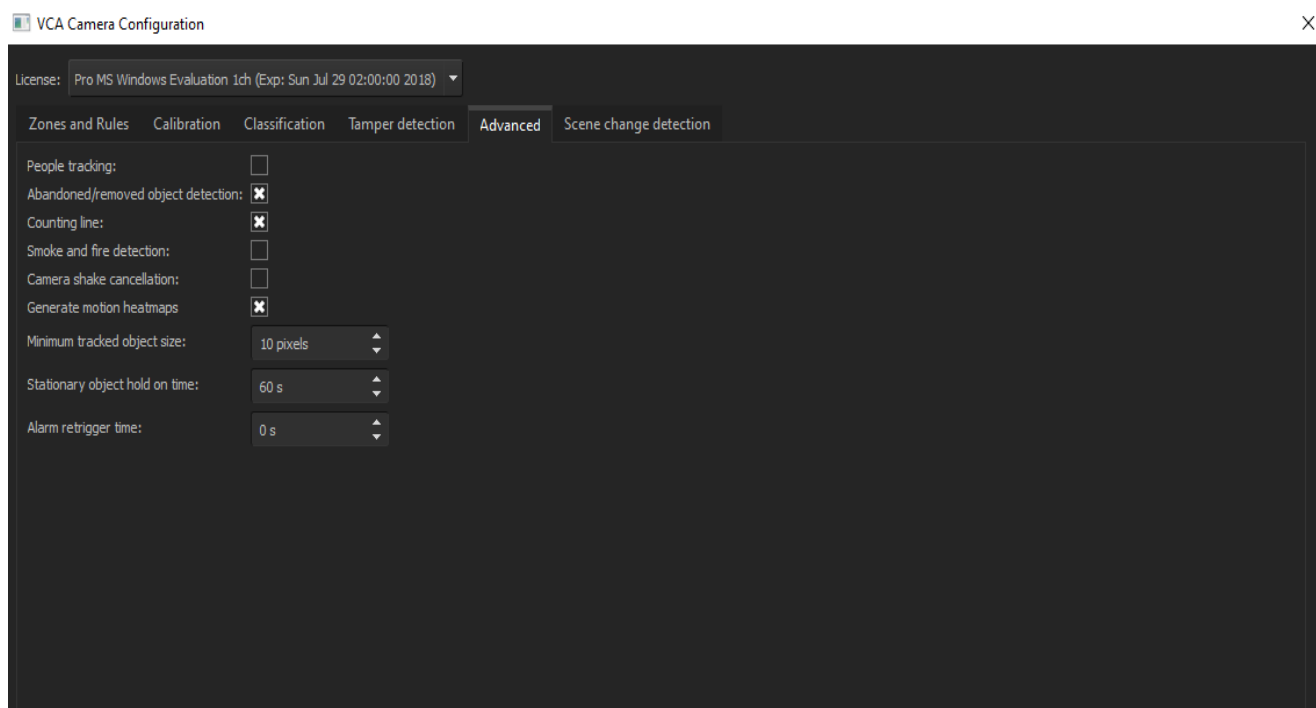
Here we can define parameters of certain objects detected by camera like people, groups, vehicles.

Tamper Detection



This option allows to enable sabotage by covering the camera, here you can configure parameters of the detection.

Advanced Settings



Here you can adjust advanced options like :

- People tracking – enables people recognition
- Abandoned/removed objects detection – enables detection of left objects
- Counting line – allows to create object counting line
- Smoke and fire detection – allows for smoke and fire detection analytics
- Camera shake cancelation – digital image stabilization
- Generate motion heatmaps – allows for motion heat map – available in CMS
- Minimum tracked object size – define size in pixel of smallest object
- Stationary object hold on time – how much time passes to define object as abandoned
- Alarm retrigger time – how much times passes between alarms

Scene change detection

VCA Camera Configuration

License: Pro MS Windows Evaluation 1ch (Exp: Sun Jul 29 02:00:00 2018) ▼

Zones and Rules Calibration Classification Tamper detection Advanced **Scene change detection**

Mode

☒ Automatic ☐ Manual ☐ Disabled

Manual mode settings

Changed time: 1 s ▲ ▼

Changed image area: 50 % ▲ ▼

IR cut filter detection

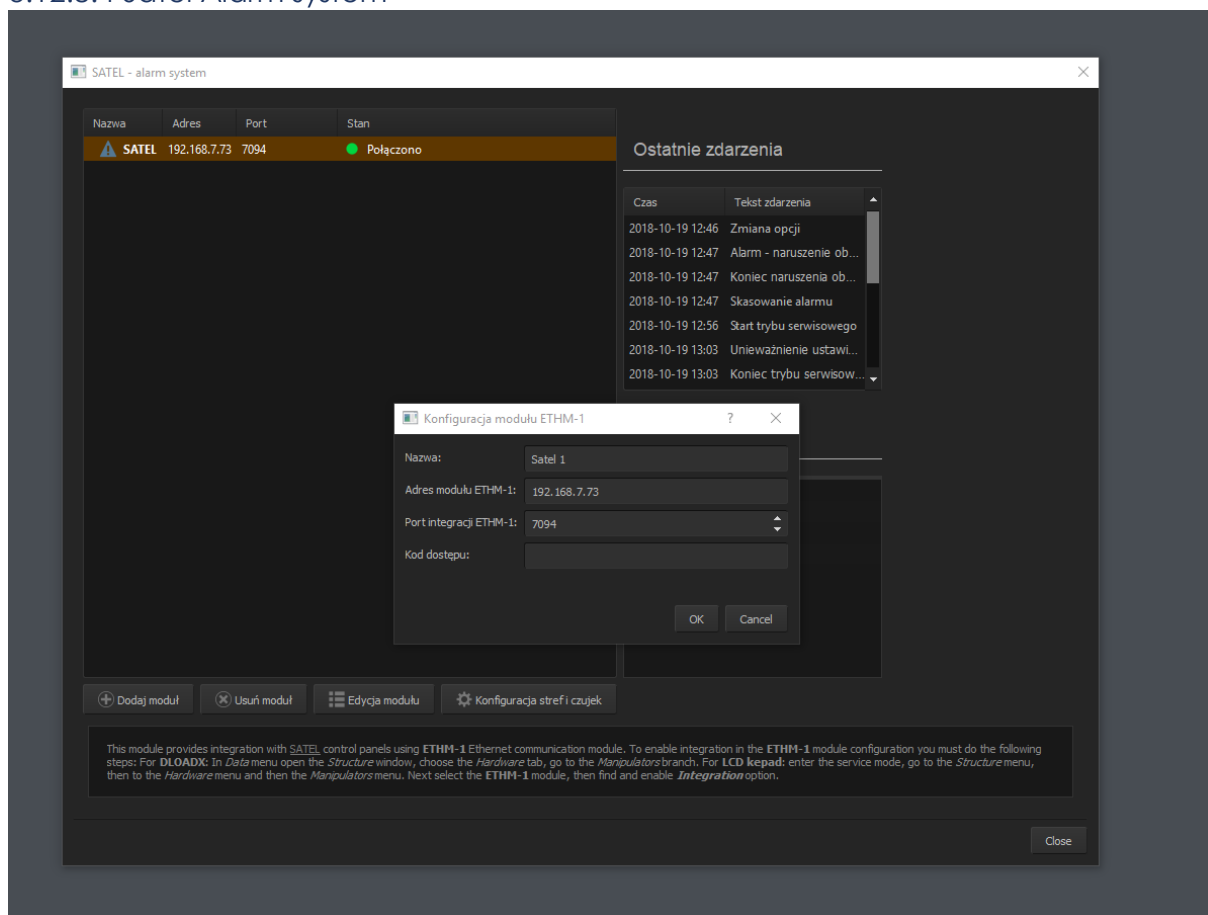
☐ Enable grayscale transition detection

☐ Enable filter rim detection

Here you can define settings regarding scene change. This means that camera detects rapid changes in scene layout, when on manual mode, you can set exact time and percentage of changing scene that will trigger the alarm.

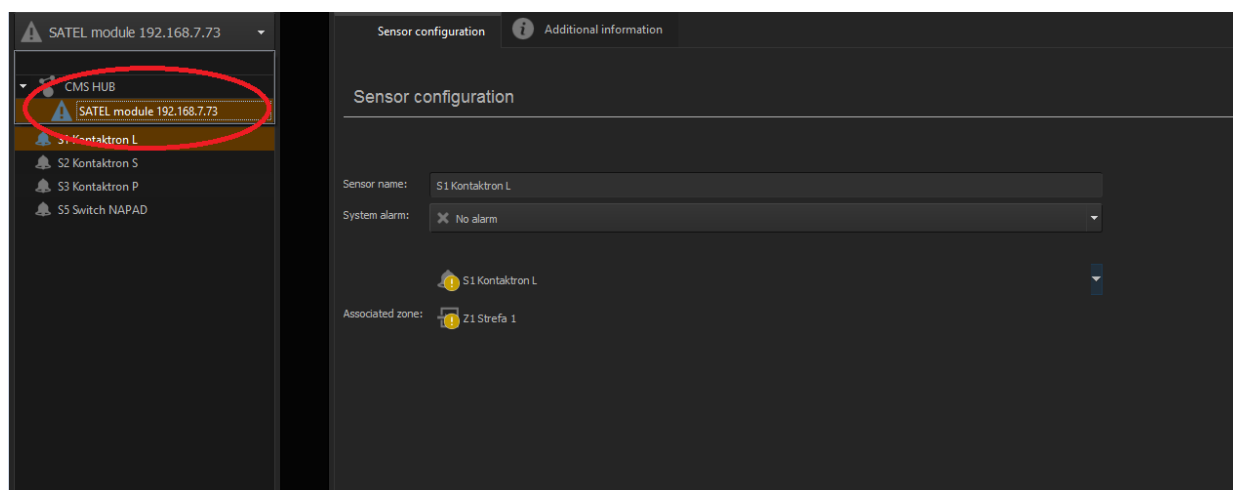
IR cut filter detection is an option that allows to enable to options regarding IR illumination. If not enabled, IR illumination could trigger scene change detection.

3.12.8.4 Satel Alarm system



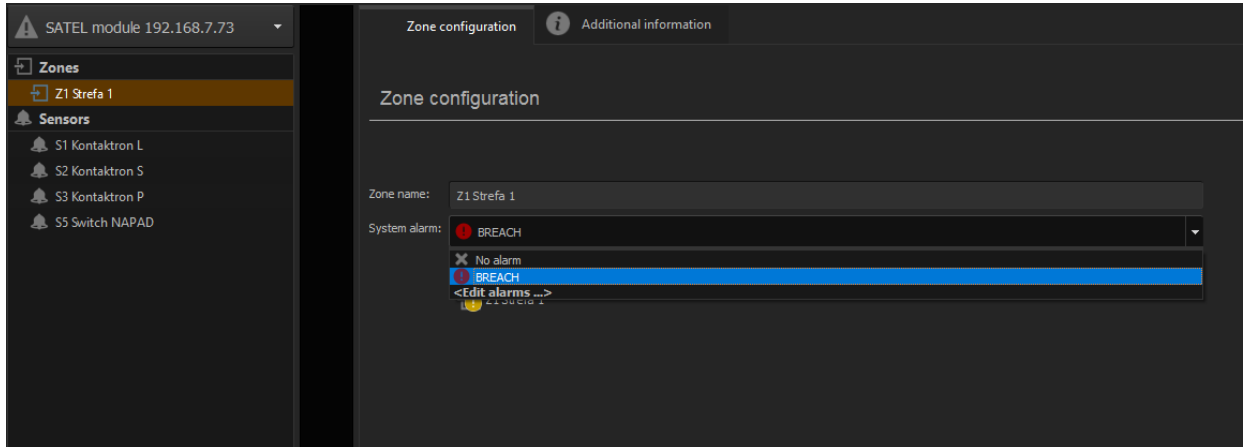
Entering Satel module data.

To connect Satel Alarm you need to add in settings, press Add Module and fill all needed info about the module.



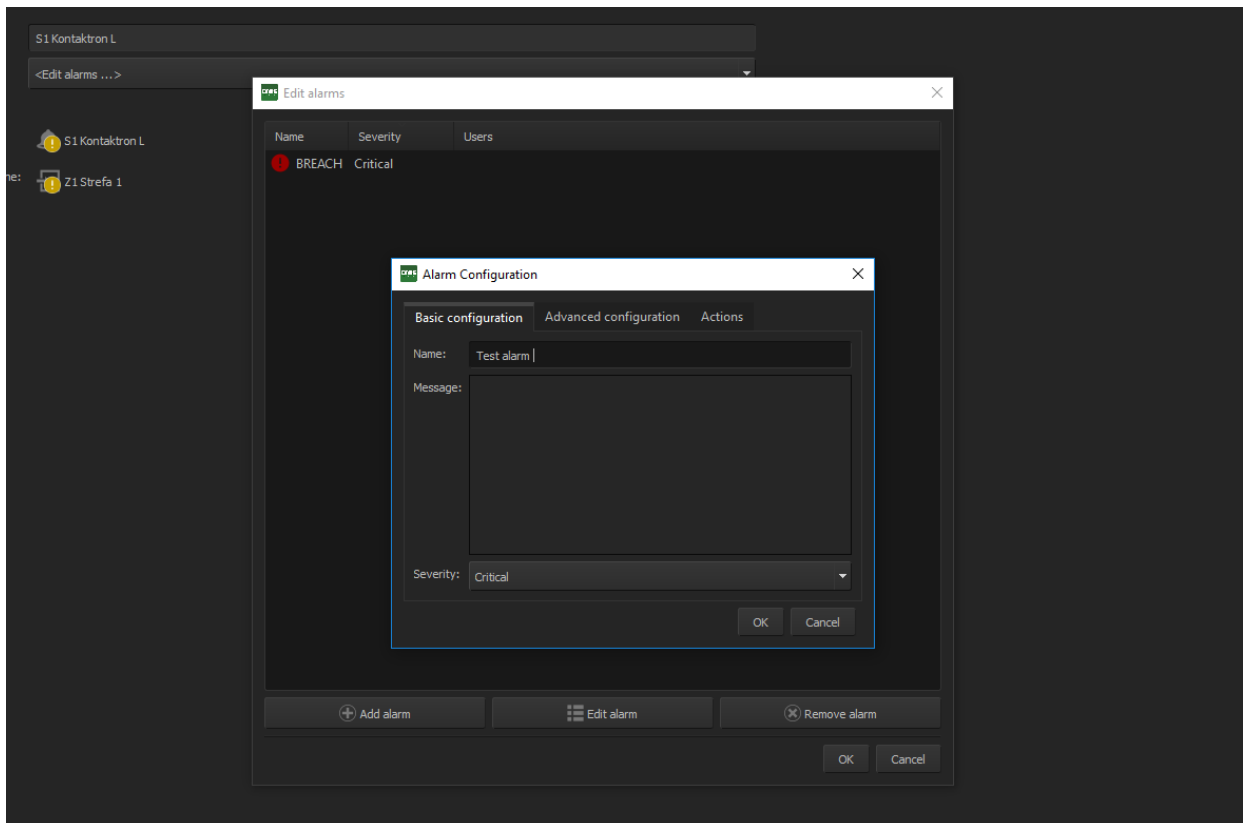
Accessing advanced settings

To access advanced settings of the module, expand the list of devices in top left corner

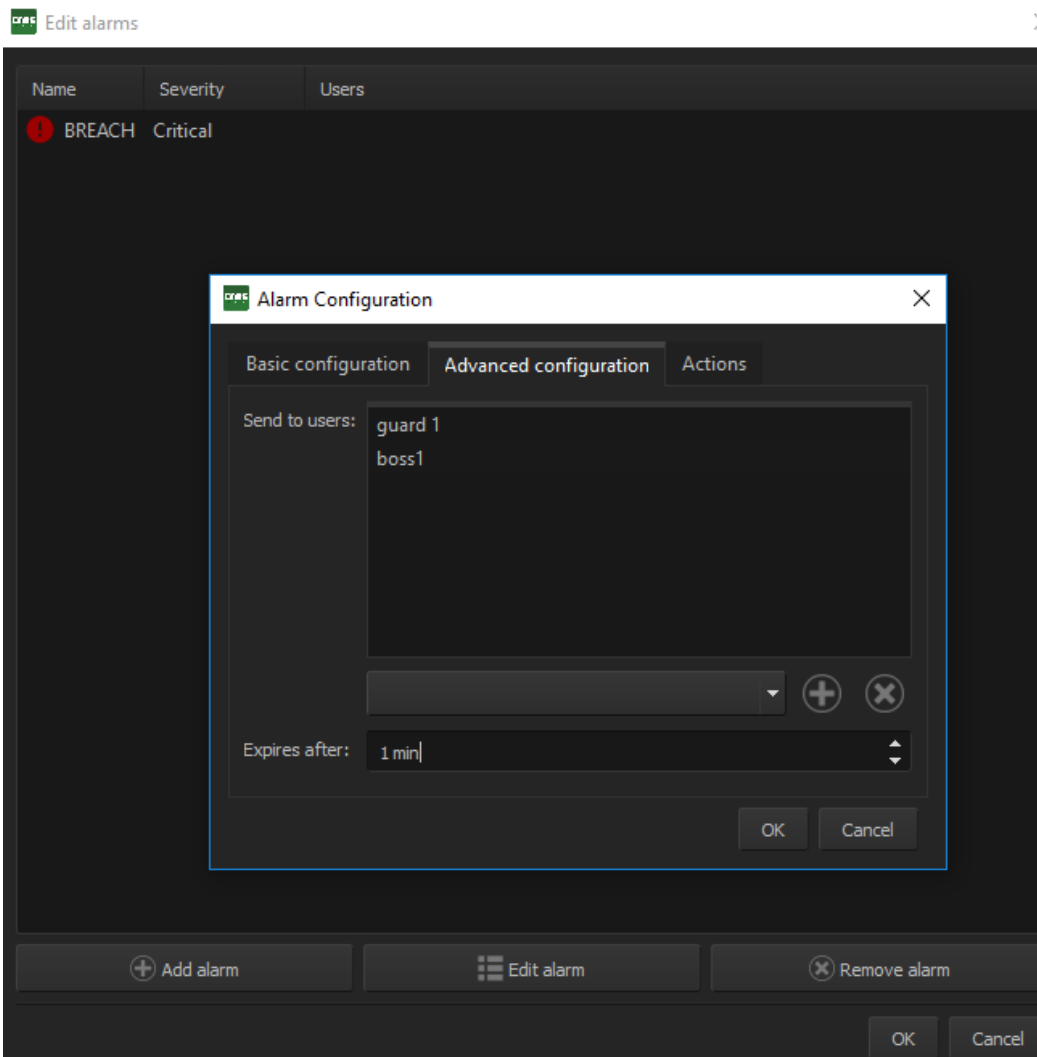


Choosing System Alarm

In basic zone configuration you can choose which alarm protocol is assigned to certain zone, you can configure separate alarm for each zone.

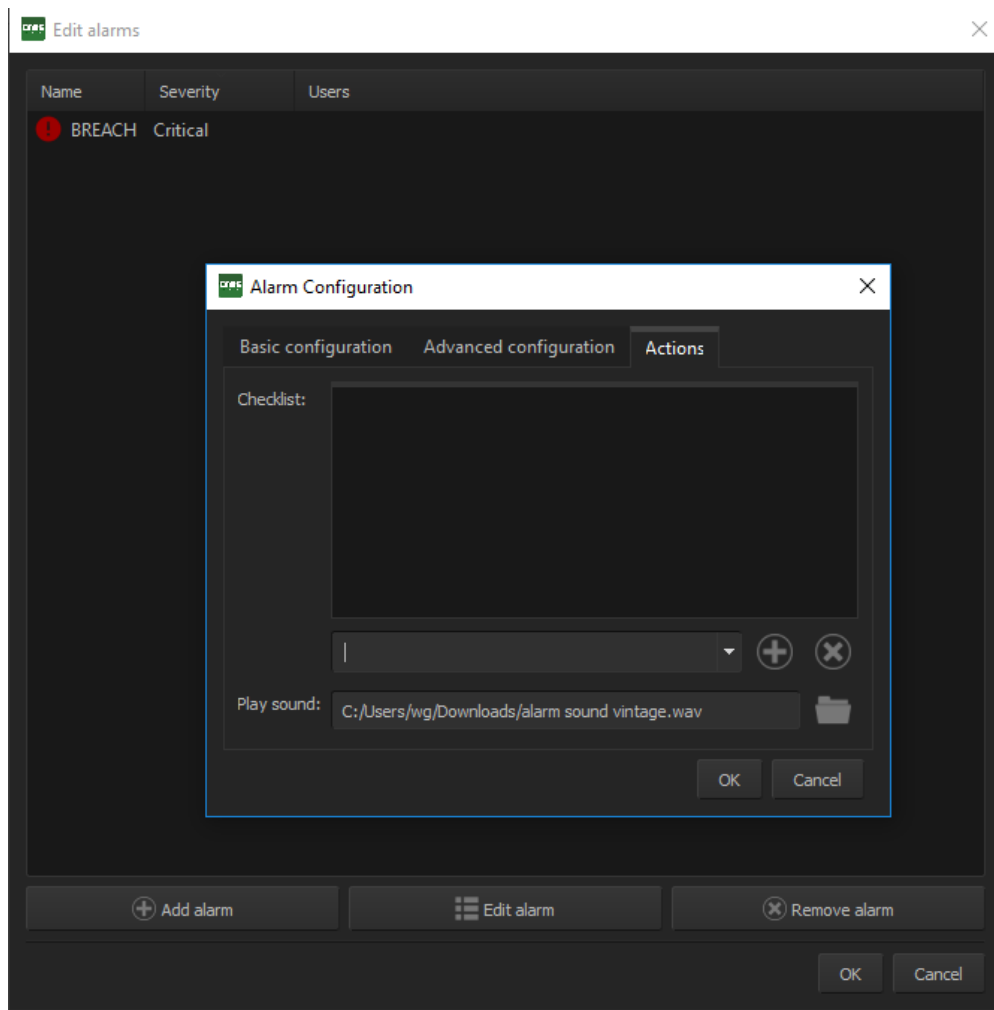


Basic alarm configuration



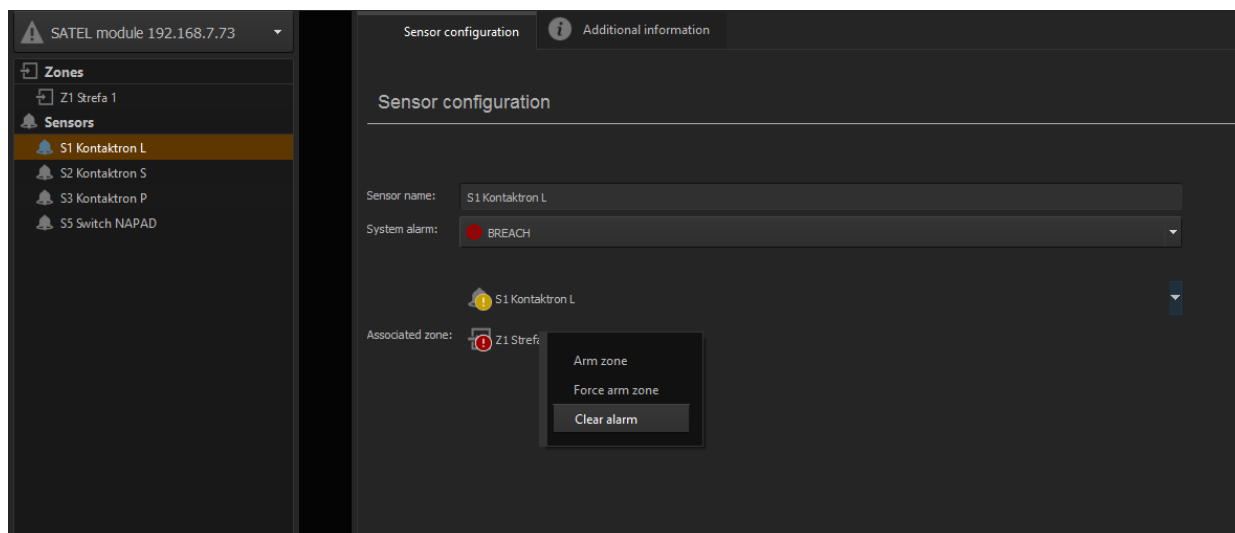
Advanced alarm configuration

Here you can send HUB users which will be informed about the alarm and expire time



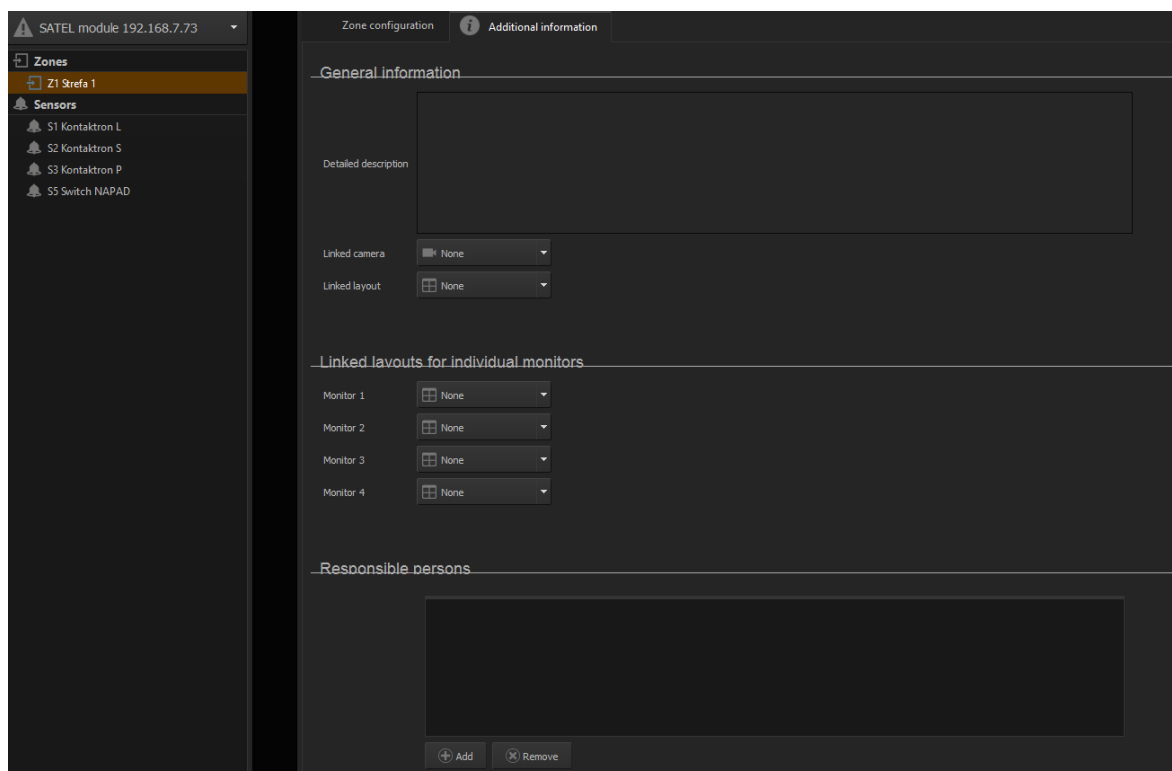
Alarm action configuration

Here you can set up check list to be fulfilled by guards after alarm and add sound that shall be played when during alarm.



Arming/Disarming zone

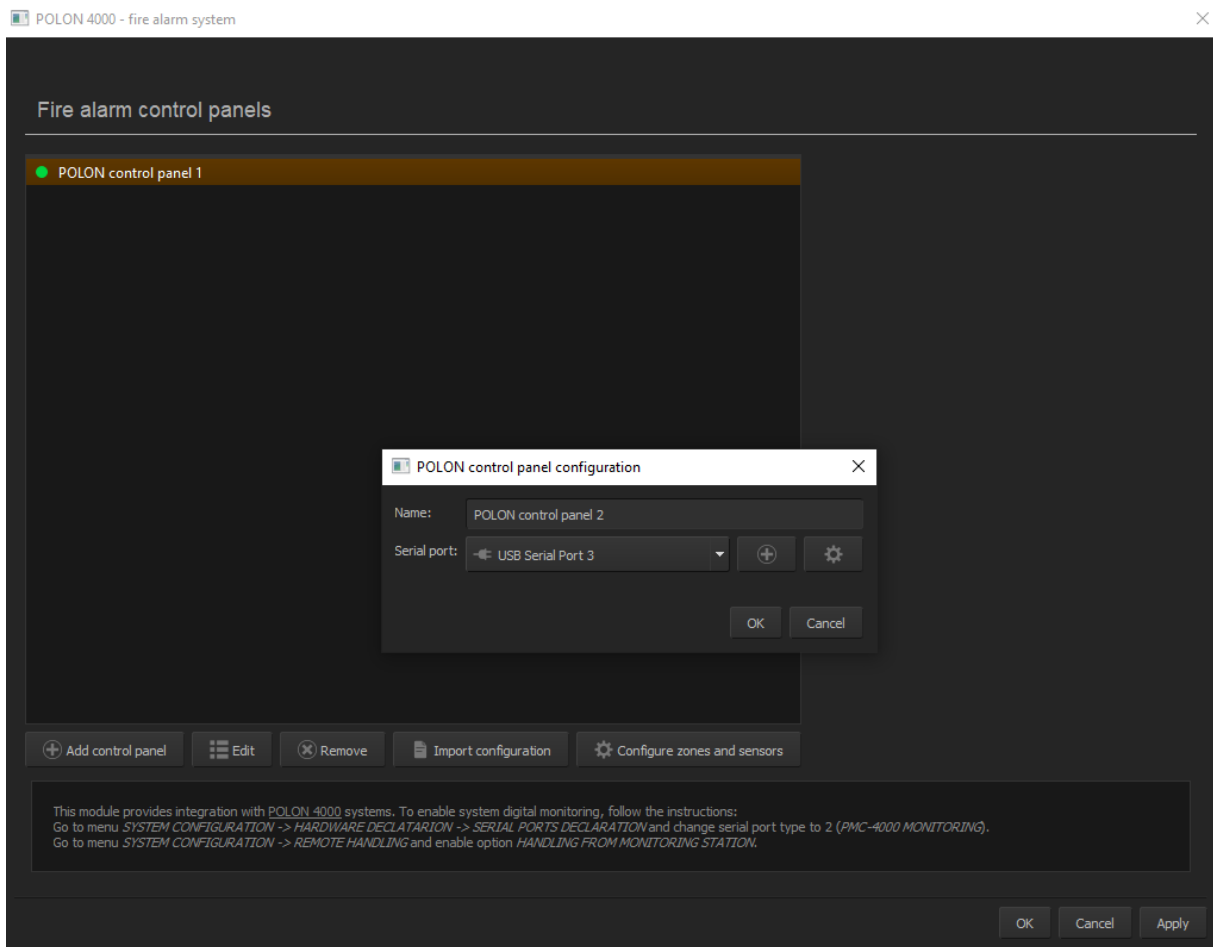
Here you can clear alarm or arm/disarm zone. Force arm zone alarm allows to arm the zone even though the reed switch is opened (see Satel manual)



General Settings

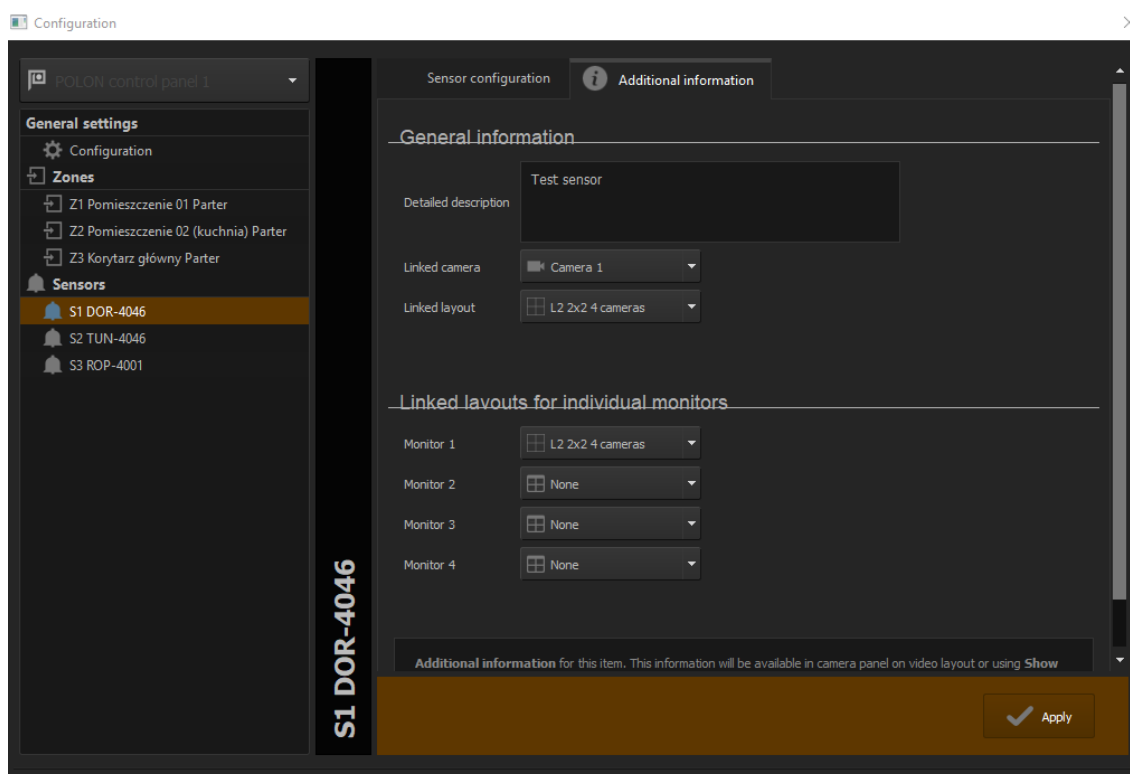
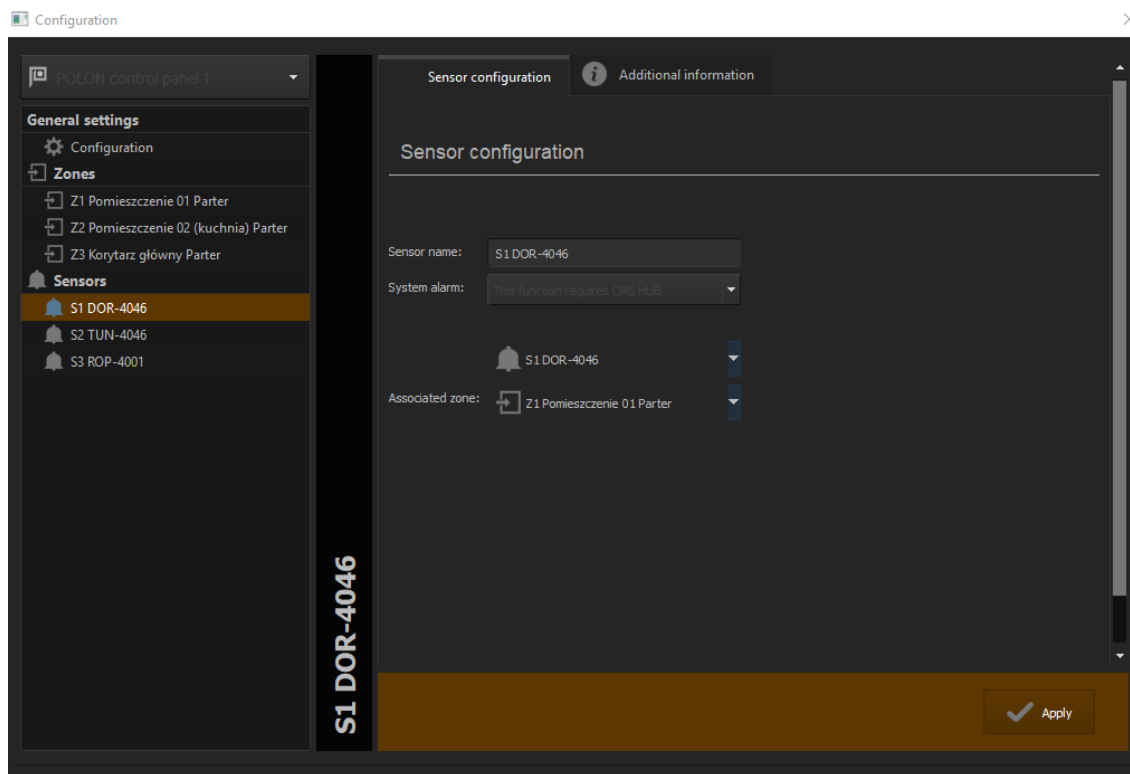
Here you can define informations about the zone, link camera, camera layouts and layouts for individual cameras.

3.12.8.4 Polon Fire alarm system

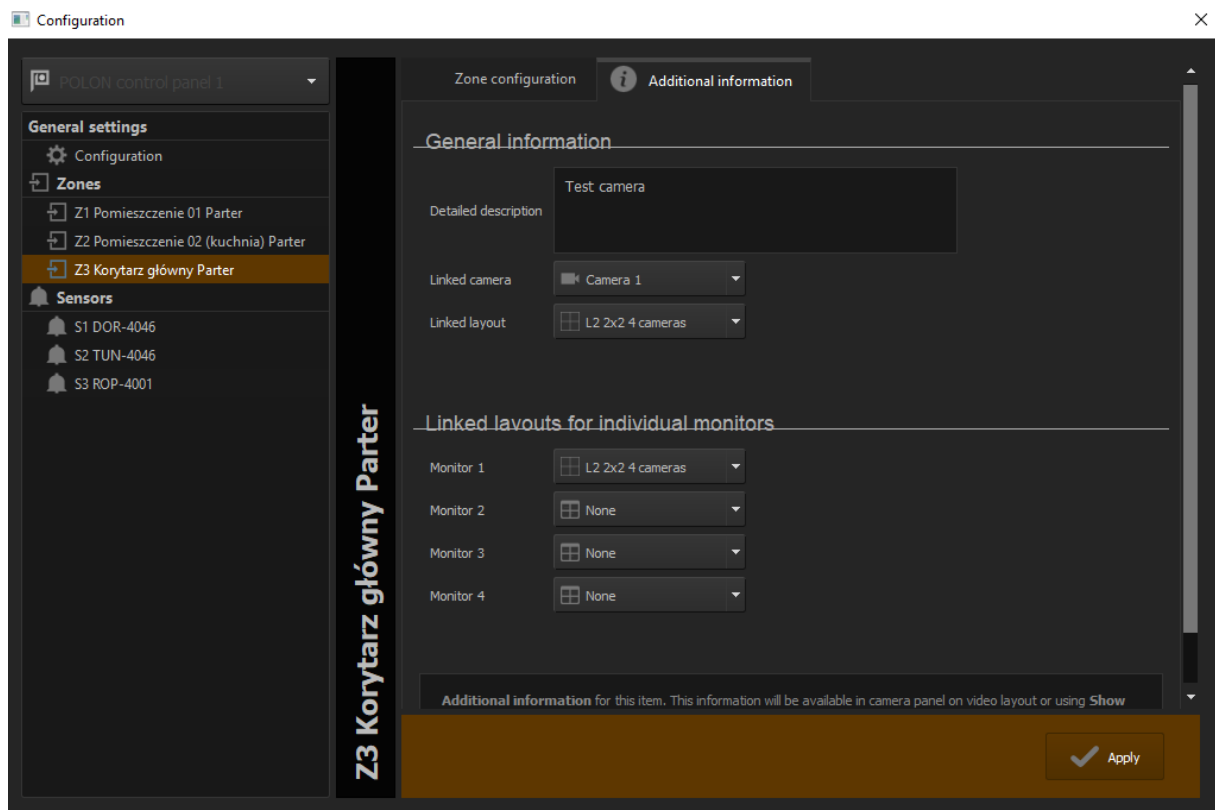


Same as Satel, Polon can be added to NetStation, it needs to be plugged with RS232 or USB to RS adapter. According to manufacturer USB is preferred. In the central unit you have to enable remote control and port has to be declared as PMC – 4000 Monitoring

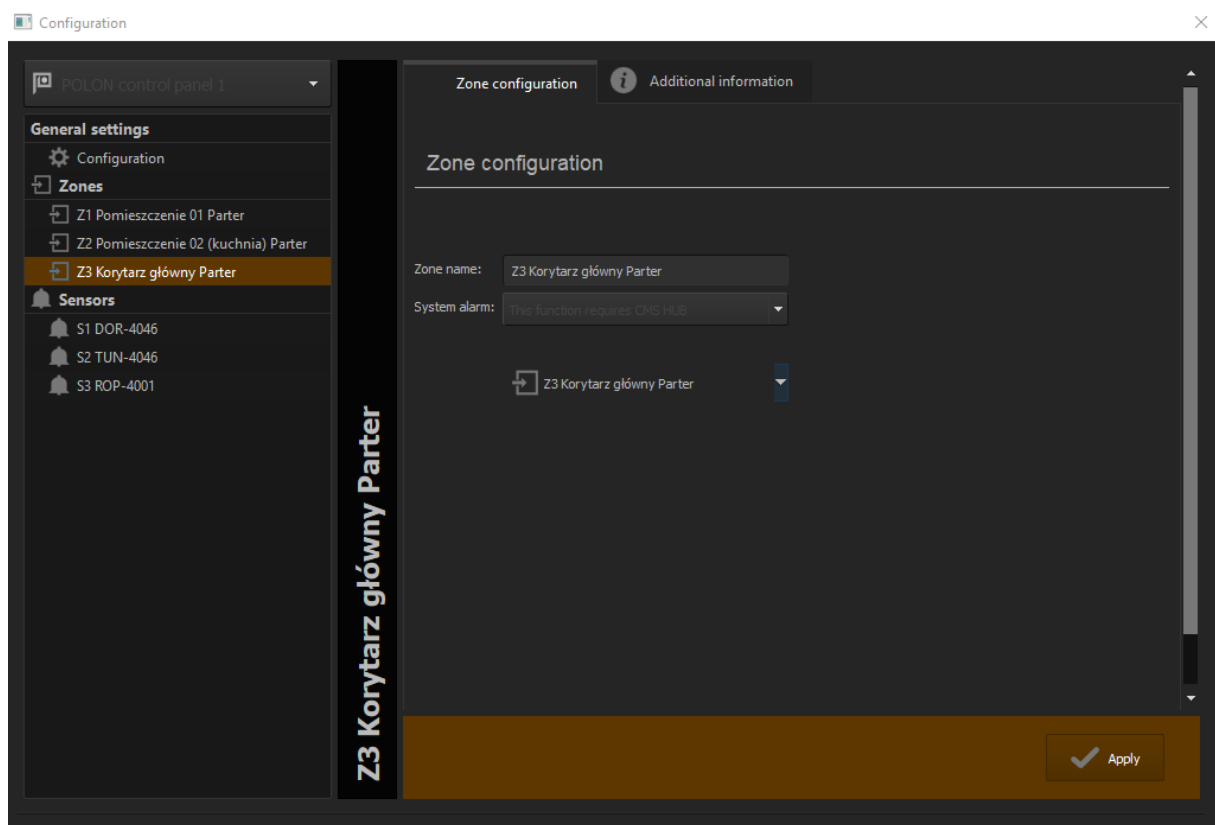
After adding module, you have to import configuration generated from Polon software in XML.



In Sensors you configure sensor name, associated zones and linked layouts.



In general information you can configure Layouts and Cameras connected with this alarm zones.



3.13 External Tools

Access to basic tools of OS system:

- ❖ Time and day settings
- ❖ Mouse properties
- ❖ Modem options
- ❖ Network settings

3.14 Save configuration

Saves all the changes made in the system. Every change in system configuration has to be saved!

3.15 USB dongle update

In order to upgrade the system, for example from NET8 to NET16, it is possible to update the security dongle license. From **About** menu choose **Dongle update** option. System automatically will try to connect via Internet to update the dongle. This update goes thru port 13000, so this port need to open.

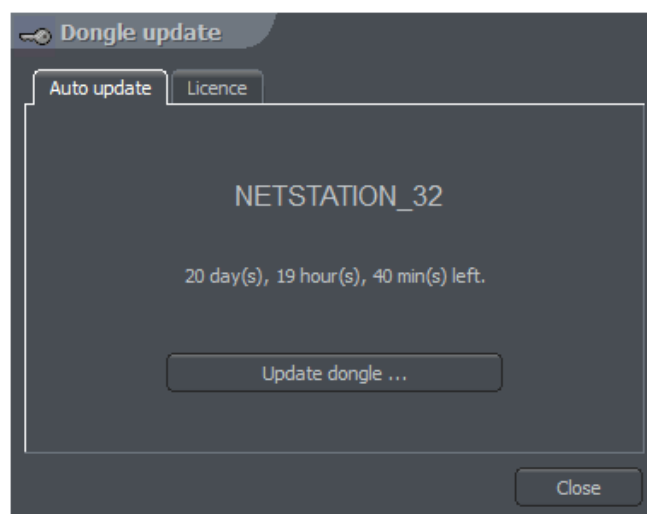




Figure 64: Dongle update

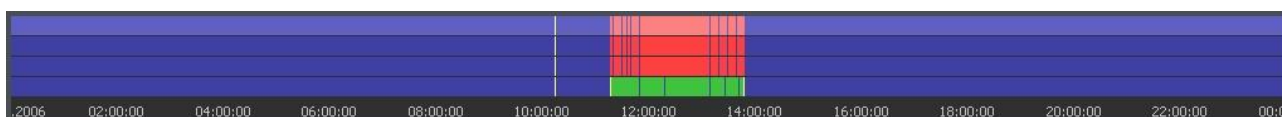
4. System Tools

NET PRO system tools will be described in this paragraph. Archives are one of them. The multitude of included functions allows to quickly find particular events, prepare backup copies and export recording to popular .avi format.

The efficiency of archives depends mainly on hardware specification of the computer (Processor, HDD interface, RAM memory).

4.1 Browse archives







Archives can be accessed by Ctrl+A keyboard shortcut, from the menu bar (Tools) at  the top or by clicking icon .





Green bar represents the recording from the camera. Red bar represents the time when the signal from cameras is lost. Vertical yellow line points the time the NET PROFESSIONAL system was started or shut down. If the mouse indicator is moved over the camera recording bar the camera name, date and time of the recording will be displayed. If the mouse indicator is kept for a while longer an additional window with camera image will appear. In this mode it is possible to move the mouse along the recording bar and watch video recordings. By clicking with right mouse button it is possible to add or remove a bookmark sign. You can mark special events by bookmark like unusual situations or alarms.

On the left side of the screen the function panels are placed. The first is the panel which controls the replay












Icon	Description
	Play backwards
	Pause
	Play forwards
	Play speed x2
	Play with maximum possible speed
	One frame step forward

	Shows the bar with audio recordings
	One frame step backward







Below is the panel with archive tools:



Icon	Description
	Allows to mark an area on the camera image
	Enlarges, by marking the area, displayed camera image
	Seeks for motion in the selected area
	Launches the screenshot browser
	Go to previous bookmark
	Go to next bookmark
	Make snapshot of the selected camera image
	Export to .avi file
	Image parameters from the selected camera

The following panel controls the range of displayed time.



Icon	Description
	Goes 1/2 of the selected time period back
	Goes 1/8 of the selected time period back
	Goes 1/8 of the selected time period forward
	Goes 1/2 of the selected time period forward
	Tightens the selected time period
	Widens the selected time period



For example if 1 day archives are displayed, the time period will move adequately for 12 hours and 3 hours.


Function buttons are described below:

- ❖ Show a whole day – shows a whole day recordings

- ❖ Calendar – launches calendar
- ❖ Backup – launches the backup copy tool

4.1.1 Searching for motion in the archive recordings

NET PROFESSIONAL system allows to search for motion in the recorded video. It is possible to select particular area on the camera image. To search for motion click icon  and select the area or whole image. To start the search procedure click icon .

System will start to play the video. If the motion is detected it will stop playing the video, which will indicate motion. Additionally the system will play sound. User can also control the motion sensitivity during the search by clicking and moving the first bar **(motion search level)**  in the panel. To search further click again.

4.1.2 Export to .avi


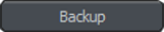
This function allows to export the selected recording from a single camera to .avi file. During this process system uses codecs installed in the operating system. Uncompressed image can be also exported.  Select the camera, from which You want to export image, and choose the time range on the time axis. Then click .

Figure 65 Archive – export to .avi

In this window user can set number of frames per second or if camera name and time will be put in the .avi video. The next step is to name the file. After these actions click **OK**. The following step is to choose codec for image compression. You can choose one of the codecs installed in Windows OS. You can resign from image compression by selecting **Full frames (uncompressed)**. The export process can take some time. It depends on video length, compression level and CPU computational power.

4.1.3 Backup copy

This tool allows to backup video recordings from any cameras without changing the file format. Copy which was made in this way can only be seen by using CMS PROFESSIONAL client application with full archive functionality.

Backup tool can be opened in the archives, by selecting the  button. Next it's necessary to type login and password of user with rights to perform the "backup", and chose one of the options:

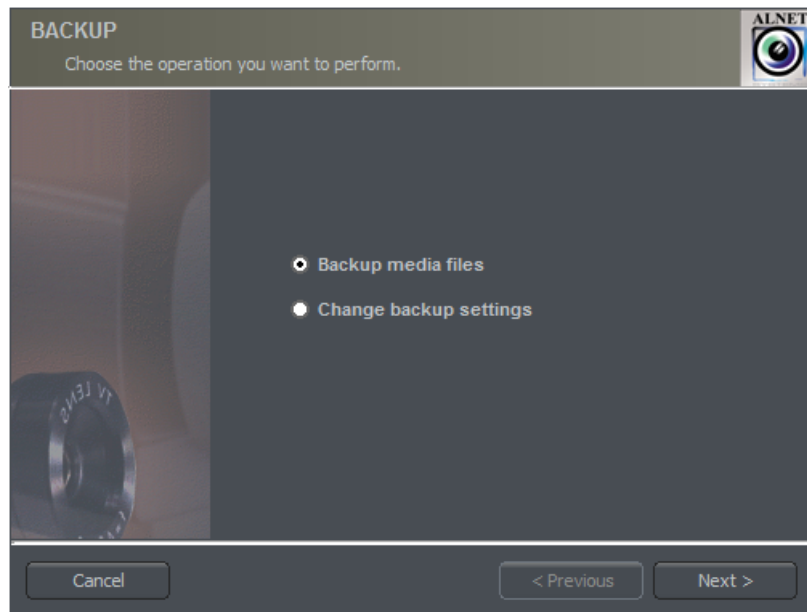


Figure 66: Backup option selection

- ❖ **Backup media files** – performs archive backup copy
- ❖ **Change backup settings** – change of settings of backup function

In order to make the archive backup copy from local machine archives, first select the path to the `svrVideoIndex` on your local machine. Then press next.

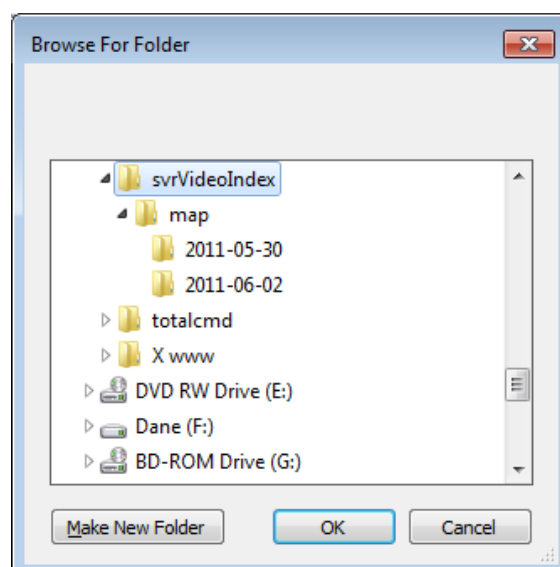
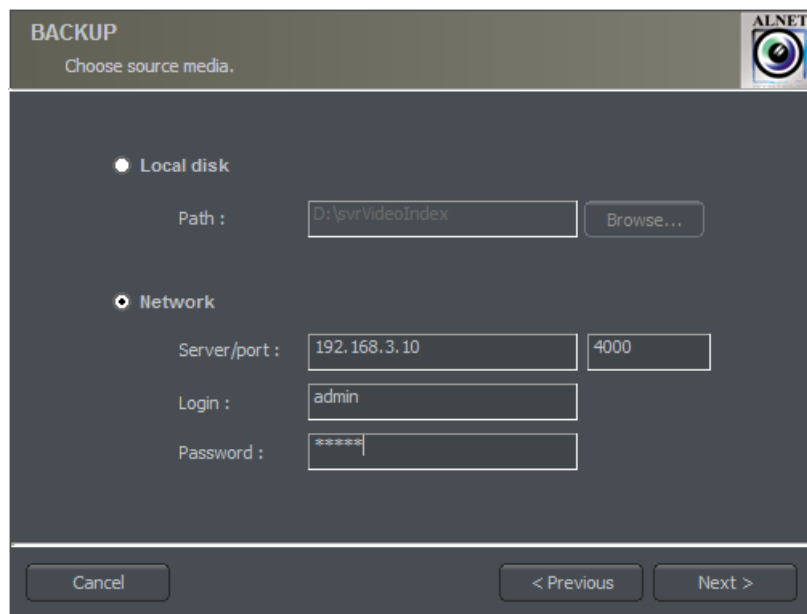


Figure 67 Choosing designated folder



BACKUP

Choose source media.

☒ Local disk

Path : D:\svrVideoIndex Browse...

☐ Network

Server/port : 192.168.3.10 4000

Login : admin

Password : *****

Cancel < Previous Next >

Figure 68 Choosing backup option.

Second option to do backup remotely over the network. Select correct option and put server Ip, port login and password. In order to do this the backup option in network services need to be active. Check chapter 3.7.5 backup to which the archive files will be copied, then select the cameras and sound source, from which the recording will be archived.

Next stage is selecting the time range of the recordings. After that, the program will show required and free space in the specified location of the disk and will start the backup process.

After creating the backup copy, backup application will show the summary of made operations, and end action.

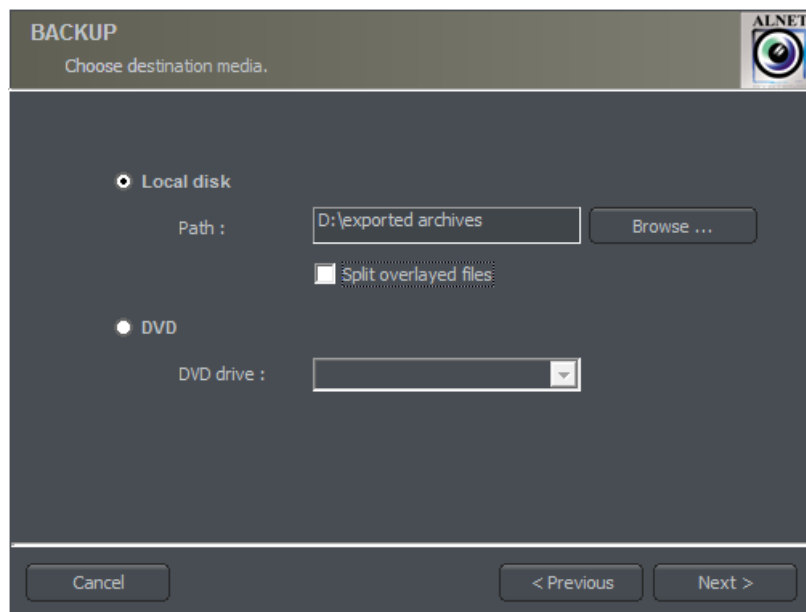


Figure 69: Backup - destination

Creating backup copy can be very long-lasting and CPU power demanding process. It is recommended to create backup copy when the system is not heavy loaded, for example in evening hours where there is less motion.

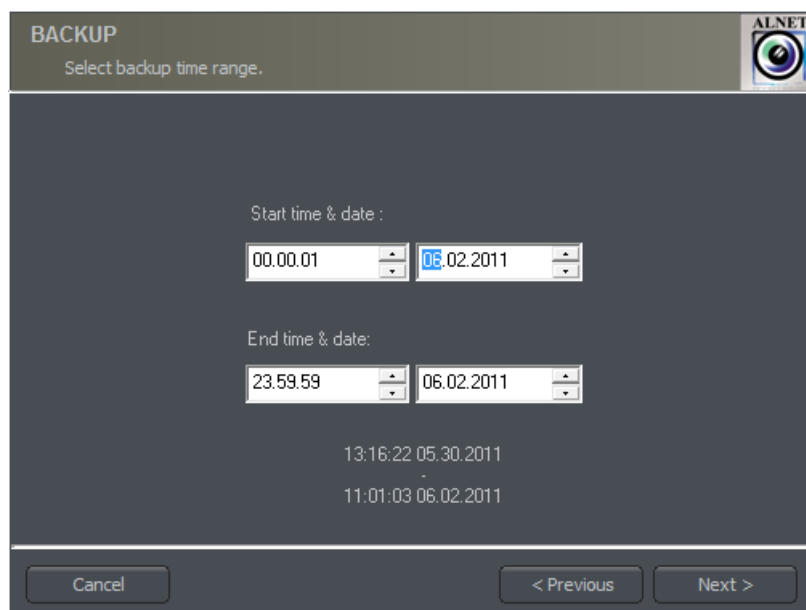


Figure 70: Backup – time range

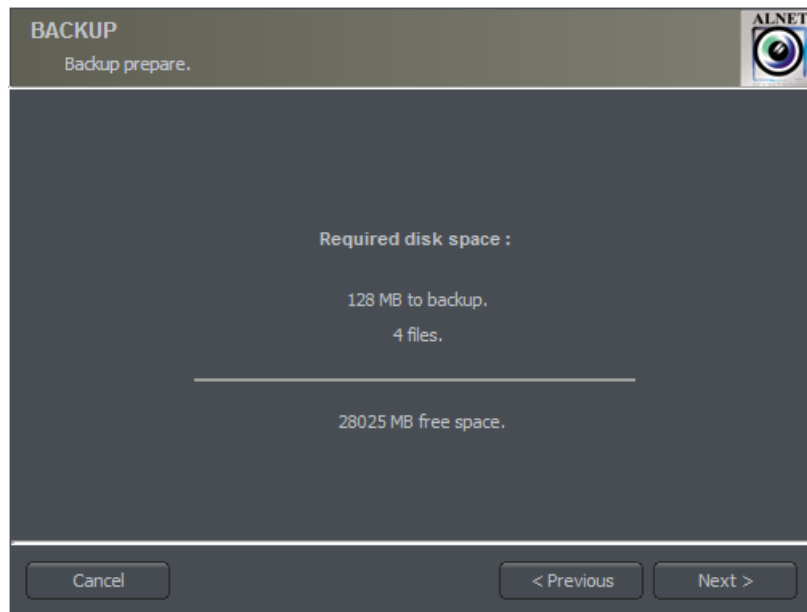


Figure 71: Required disk space for backup.

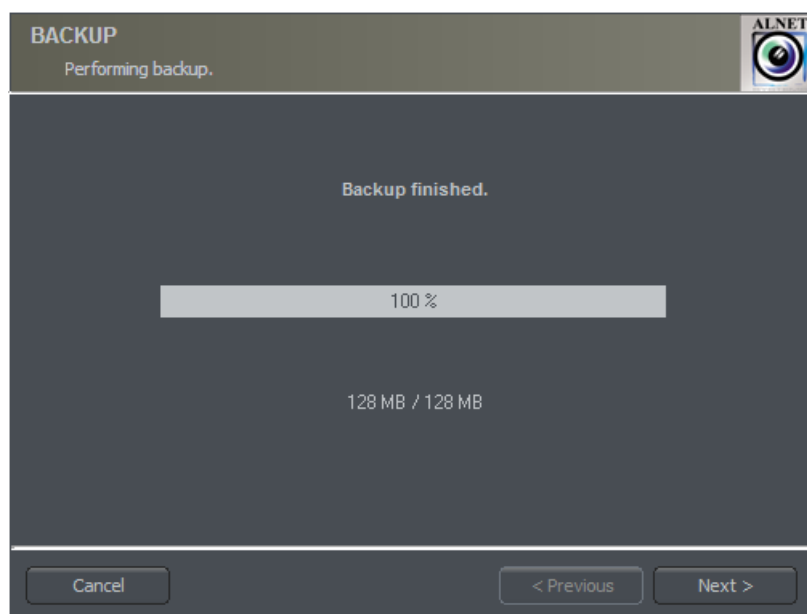


Figure 72: Backup finished

If you choose to change backup settings, then in file backup.log in location C:\Program Files\ALNET SYSTEMS\NET PROFESSIONAL\PROFESSIONAL you can see extended logs about archives.

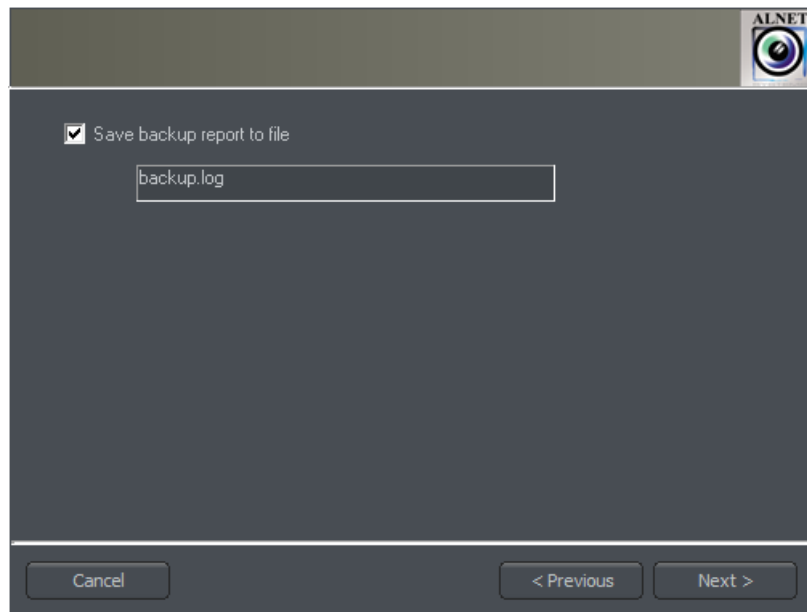
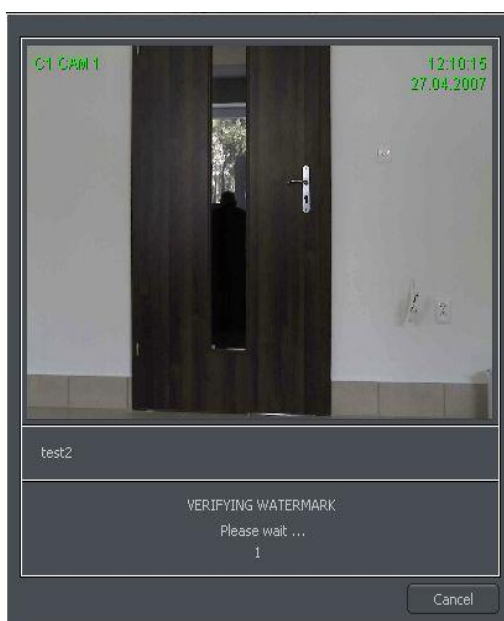


Figure 73: Change backup

4.1.4 Watermark check



This function allows to check the authenticity of the recordings. It is available for the cameras which have **Watermark** option checked in the camera configuration menu (compression bookmark). Additional condition is that the watermark is exported to file.

Watermark is checked for particular time period of the recordings. It is necessary to choose the time period on the time axis. Then click with right mouse button on the camera image will show option **Check watermark**. After choosing it system

will begin to track the changes frame by frame. When violation of authentication of the recordings is detected the error will be submitted. In other case the system will successfully finish the watermark check.

4.2 Photo browser

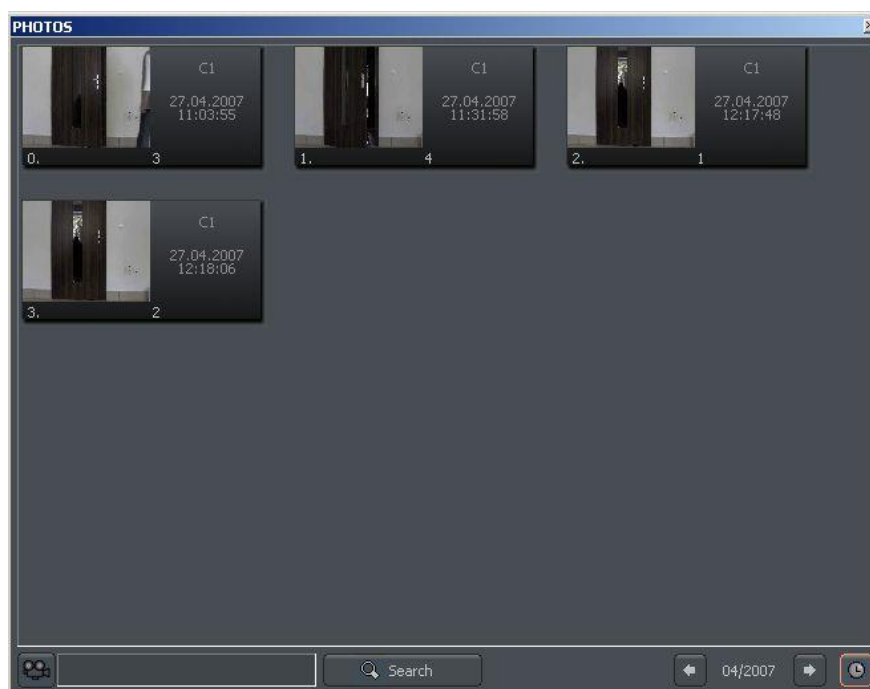
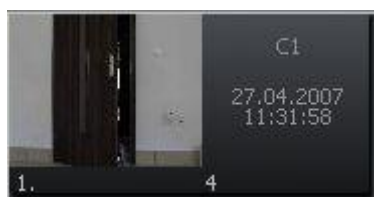



Figure 74: Photo browser

Photo browser displays all the photos taken during the work with the system. It is possible to sort photos by particular cameras and months and search for photos.



Single photo is described by camera number, date and hour and also name under which it was saved. Double click on the area enlarges the picture.

In order to display photos only from particular cameras choose the camera icon and then cameras from the palette.

Choosing  icon will show the photos from particular month. Beside the icon there is symbol, which describes currently browsed month. User can jump to another months using arrows.



After filling the text field and clicking **Search** system will display pictures which name includes the submitted sequence of signs. Additionally it is possible to delete

photos from the browser level. To this select picture and press Delete key on keyboard.

4.3 Registering domain

AL-NET Company offers DDNS (Dynamic Domain Name Server) for NET PROFESSIONAL system. It is possible to register domain in our database for Video server. It is very useful in systems which have dynamic IP address. To register domain it is necessary to fill all the fields in the form, which is accessible from the menu:

Tools -> Register Domain




Figure 75: Domain register

Field	Description
Domain name	Domain name, for instance server will be shown as server.vdr-s.com
Name	Name of Your company
Address	Address of Your company
Name and surname	Name and surname of the person, who registers the domain
Position	Position in the company
Demo server	Marking this option You inform us that the server will have also demo function. To make demo server create user demo and pass demo and assigned proper cameras.
Port	Port for NET PROFESSIONAL data transfer



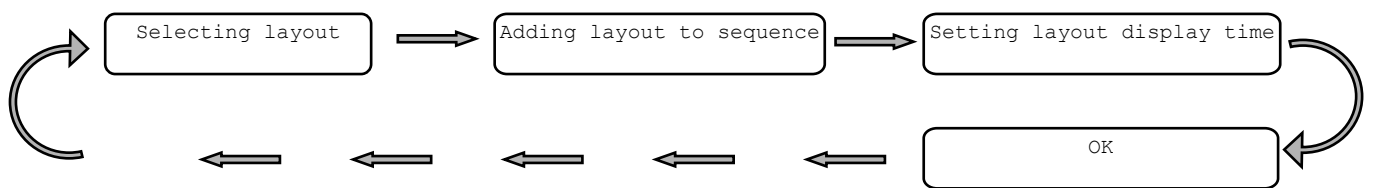
ATTENTION: In order to register the domain it is necessary to enter proper product license number! In other case system will deny to register domain. User can enter license number in About menu.

Right from the moment of registration it is possible to connect to server (it is necessary to remember the domain name and port).

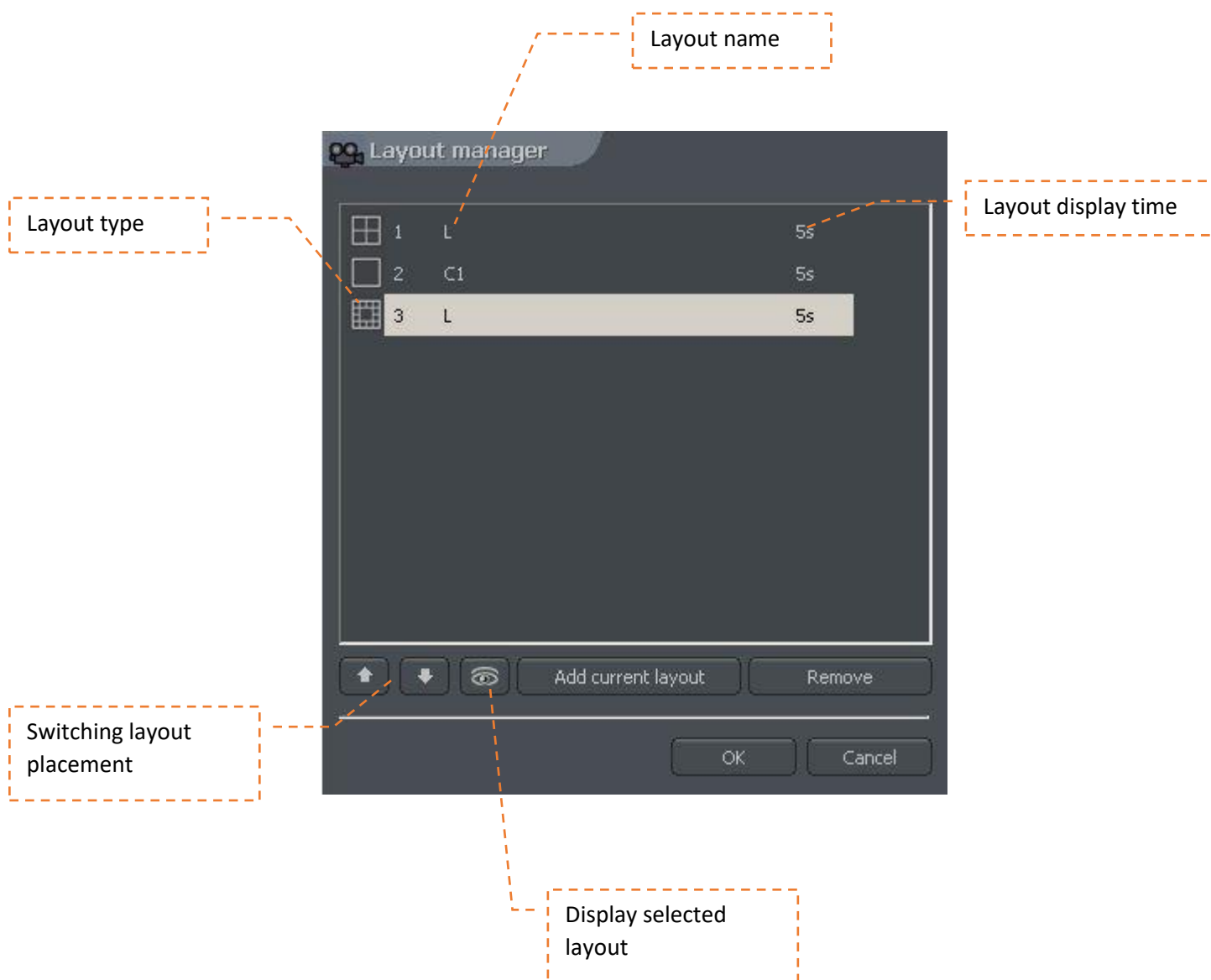
4.4 Dynamic layout

The function allows to set the sequence of camera picture layouts. For example in the 16 camera system it is possible to create a program, which will display each camera on fullscreen for 5 seconds, and then at the the end of the sequence all cameras all together.

Setting of dynamic camera layout mode is made in the following steps:



Selecting layout	Choosing of one of the available layouts (paragraph 3.2)
Adding layout to sequence	Menu: Tools -> Dynamic layout -> Add current layout
Setting layout display time	When in the dynamic layout menu double click on particular layout time field to set it's display time
OK	Confirm changes



4.5 Watermark export

This tool allows to export watermark to file. This action is necessary for checking the authenticity of the recordings (paragraph [4.1.4](#)).

Tools -> Export watermark

Field	Description
Watermark description	Name which describes the watermark
Destination path	Place on the hard disk where the watermark will be stored

4.6 Program console

The tool for server administrators. It shows current report of all video server actions. It gives useful information and allows to optimize system work and solve problems. Additionally it allows to search system log for events by category, for example action taken by particular user and so.

Format of shown data goes as follows:

[time][date]:[category]:[user]:[cam/client network address]:[message]

Field	Description
[time][date]	Time and date of the event
	Announcement type
	Index
	Crash
	Main
	Dongle
	Alert
	Capture
	Display
	Video2
	Control
	Video
	Dome
	DynIP
	Queue
	SMTP
	SMTP_recv
	SMTP_send
	HTTP
	Codec
	Tank
	Dial-up
	Client
	Scheduler
[user]	Name of the user who causes the event. "*" symbol represents global announcement which applies to whole system
[cam/client network address]	Address of remote camera or client
[message]	Announcement content

Server log bookmark allows to search to browse and search saved logs. To start search click **Search** button and choose criterion.

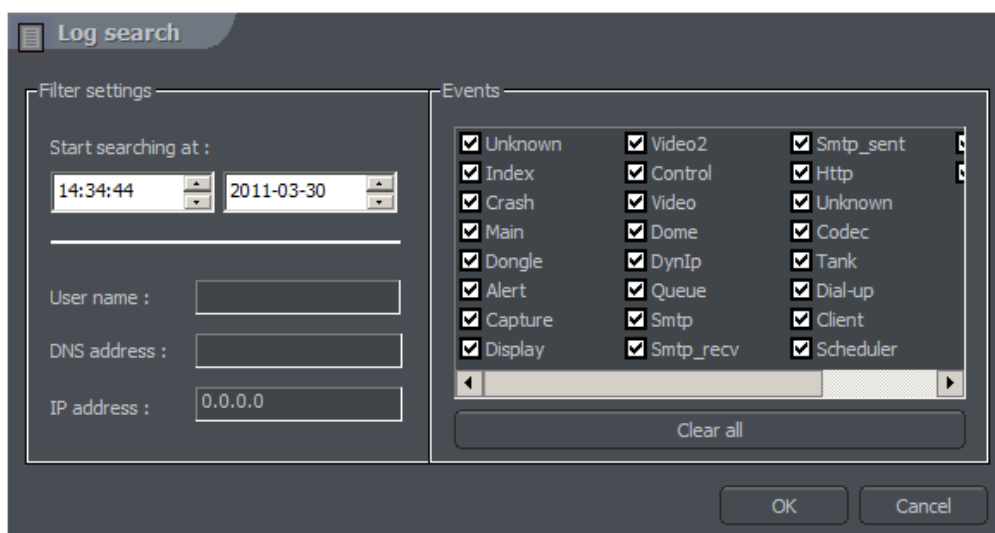


Figure 76: Domain register

Panel	Field	Description
Filter settings	Start searching from	Time from which system will search for
	User	Name of the user, who caused the event
	DNS address	Domain type address, for instance:
	IP address	IP type address
Events	Type of the event to search for	

4.7 Import/Export of program configuration

„NET PROFESSIONAL CONFIG EXPORT” tool allows to export and import NET PROFESSIONAL server configuration to (and from) text file. It creates a copy of all the settings in order to restore the configuration later. It is possible to use the copy of settings in the other NET PROFESSIONAL PRO server.

User can access this tool either from Windows start menu or from software installation folder. To run this application it is necessary to enter administrator login and password.

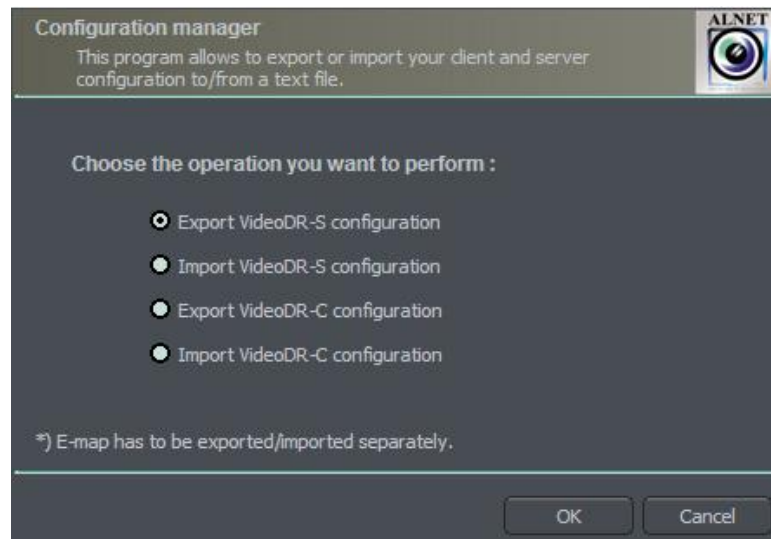


Figure 77: Program configuration Import/Export

⚠ ATTENTION: Settings for e-map are not saved during the export. Saving and restoring e-map is described in paragraph [3.9](#)

4.7.1 Configuration export

Choose the first option from the list - **Export VideoDR-S configuration** and click **OK** button. Then select folder for data store.

4.7.2 Configuration Import

Choose the second option from the list - Import VideoDR-S configuration and click OK button. Select source file from which the configuration will be read.

4.8 Log browser

The tool, that is very similar to described in Chapter **4.6 Program console**. It supports advanced searching, filtering and browsing of NET PROFESSIONAL system and alarm events.

4.9 Keyboard shortcuts

NUMERICAL KEYBOARD	Description
+ , -	change selected camera,
ENTER	switch selected camera to fullscreen,
.	camera selection
0	enter / exit the archive
*	layout change,
/	sound channel selection
4 , 6	moving the cursor (archive)
5	setting the cursor position (archive)
9 , 3	play forward / stop (archive)
7	play backward / stop (archive)
Combination	Description
Ctrl + N	normal display
Ctrl + P	preview display
Ctrl + F	full screen
Ctrl + T	always on top
Ctrl + U	show menu
Ctrl + S	screenshot from selected camera
Ctrl + M	minimize
Ctrl + X	exit program
Ctrl + C	connect to server (client)
Ctrl + D	dome control panel
Ctrl + V	volume control (client only)
Ctrl + A	local archive (client only)
F1	help