



NET PROFESSIONAL user's manual

User's manual version 3.0 (January 2012)

This manual applies to program version NET PROFFESIONAL 3.0.0.600

Contents

1. Introduction.....	5
1.1 System description	5
1.2 Video capture cards.....	5
1.3 System and hardware requirements	6
2. Installation of the system	7
2.1 Video capture cards installation	7
2.2 Installing USB dongle	7
2.3 Connecting cameras.....	8
2.4 Software installation	8
3.1 Running the program for the first time	9
3.1.1 Configuration Wizard	9
3.1.1.2 Regional settings.....	10
3.1.2 System administrator	17
3.2 Main Program Window	18
3.2.1 Camera view	21
3.3 Scheduler.....	23
3.3.1 Cameras schedule	25
3.3.2 Sounds schedule	26
3.3.3 Alarm inputs schedule	26
3.3.4 System alerts	27
3.3.5 Scheduler – Address book.....	27
3.3 Camera configuration.....	29
3.3.1 ANALOGUE SYSTEM CAMERA CONFIGURATION.....	30
3.3.1.1 Camera	30
3.3.1.2 Resolution.....	32
3.3.1.3 Compression	33
3.3.2 IP CAMERA CONFIGURATION.....	33
3.3.2.1 Resolution.....	35
3.3.2.2 Card	36
3.3.2.3 Network	37
3.3.2.4 Compression	38
3.3.2.5 Advanced	40
3.3.3 Common configuration settings.....	41
3.3.3.1 Frame rate	41
3.3.3.2 Motion.....	42

3.3.3.3 Recording	43
3.3.3.4 Dome	45
3.3.3.5 Sound	46
3.3.3.6 Alarms	47
3.3.3.7 Server.....	48
3.4 Sound configuration.....	49
3.4.1 Format.....	50
3.4.2 Recording.....	51
3.4.2 Alarms.....	52
3.5 Alarm inputs	52
3.6 Output switches.....	54
3.7 Network services.....	55
3.7.1 Video server.....	55
3.7.2 Http	56
3.7.3 Video for Java	60
3.7.4 Dial up	60
3.7.5 Backup.....	61
3.8 Archive storage	61
3.9 User accounts settings	62
3.9.1 User list	62
3.9.2 Synchronization	65
3.9.3 Other – inactivity log off.....	66
3.10 Dome control	67
3.10.1 Setting the parameters and protocols of the domes	67
3.10.2 Dome control panel	70
3.11 E-map editor.....	70
3.12 Program settings.....	73
3.12.1 Mail	73
3.12.2 Photos	74
3.12.3 Event log	75
3.12.4 Snapshots	76
3.12.5 Display.....	76
3.12.6 System settings.....	77
3.12.6 Database settings.....	78
3.13 External Tools	79
3.14 Save configuration	79

3.15 USB dongle update	79
4. System Tools	80
4.1 Browse archives	80
4.1.1 Searching for motion in the archive recordings	82
4.1.2 Export to .avi.....	82
4.1.3 Backup copy.....	83
4.1.4 Watermark check.....	87
4.2 Photo browser	88
4.3 Registering domain.....	89
4.4 Dynamic layout	90
4.5 Watermark export.....	91
4.6 Program console	92
4.7 Import/Export of program configuration.....	93
4.7.1 Configuration export	94
4.7.2 Configuration Import	94
4.8 Log browser	94
4.9 Keyboard shortcuts.....	95

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 VISTA / 7 32 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*)

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 this link <http://mobi.alnetsystems.com/>

1.2 Video capture cards

Video capture cards are mainboard extension placed inside the computer chassis. They use commonly accessible PCI, PCIe x interface on mainboards. Current technology allows image processing from 25 up to 400 frames per second for one card in PAL system.

Whole specification of available devices can be found on our website www.alnetsystems.com.

1.3 System and hardware requirements

NETSTATION CPU SCALABILITY	
Intel CPU	MAX. TOTAL RESOLUTION OF ALL IP CAMERAS*
Atom (2 Core)	5 – 6 MPix
Core 2 Duo ~2.6 – 2.8 GHz	7 – 8 MPix
Core i3 ~3.0 GHz	10 – 11 MPix
Core i5 ~2.8 – 3.0 GHz	18 – 20 MPix
Core 2 Quad 3.0 – 3.2 GHz	37 – 40 MPix
Core i7 ~3.0 GHz	42 – 45 MPix
Note 1: Presented values are calculated, assuming the stable functionality of Netstation software, and desired average framerate of 20 FPS /camera. Note 2: Presented values are approximate, and may vary depending on compression type, quality, etc. settings in the IP cameras.	
* Summary of all resolutions of all connected cameras	

NET PROFESSIONAL MINIMUM SYSTEM REQUIREMENTS					
	General	PRO Series	RT Series	AVC Series	Netstation
CPU Intel CPU Atom, Dual Core	Intel CPU	Atom, Dual Core	RT16: Core 2 Quad, Core i3 RT32: Core i5, Core i7	AVC4-AVC16: Core i3 AVC24-AVC32: Core i5	Core i3 - Core i7 (depending on camera(s) resolution, compression type, desired FPS speed)
Mainboard	Intel chipset based mainboard (ASUS, Gigabyte, Intel)				
RAM	2 GB DDR2 800 MHz	KVR800D2N6K2 /2G	KVR800D2N6K2/2 G	KVR800D2N6K2 /2G	KVR800D2N6K2/2G
Graphics					
Intel integrated graphics, ATI chipset	Intel integrated graphics, ATI chipset based graphics	Intel GMA Graphics	ATI EAH3450	ATI EAH3450	ATI EAH3450
Storage	Every SATA / NAS / RAID configuration providing sufficient data transfer rate and access times	WD Caviar Blue series	WD Caviar Raid Edition Series WD	WD Caviar Raid Edition Series WD	WD Caviar Raid Edition Series WD
PSU	Good brand PSU (Chieftec, Antec, Corsair, BeQuiet, etc.) min. 450W	350W	500W	500W	500W
O/S	Windows Vista / 7 Home Premium 32 Bit	Windows Vista / 7 Home Premium 32 Bit	Windows Vista / 7 Home Premium 32 Bit	Windows Vista / 7 Home Premium 32 Bit	Windows Vista / 7 Home Premium 32 Bit

2. Installation of the system

The way of installing video capture cards and NET PROFESSIONAL system software on PC class computer is presented below.

2.1 Video capture cards installation

Depending on the system You get from one up to four cards¹. Begin installation by

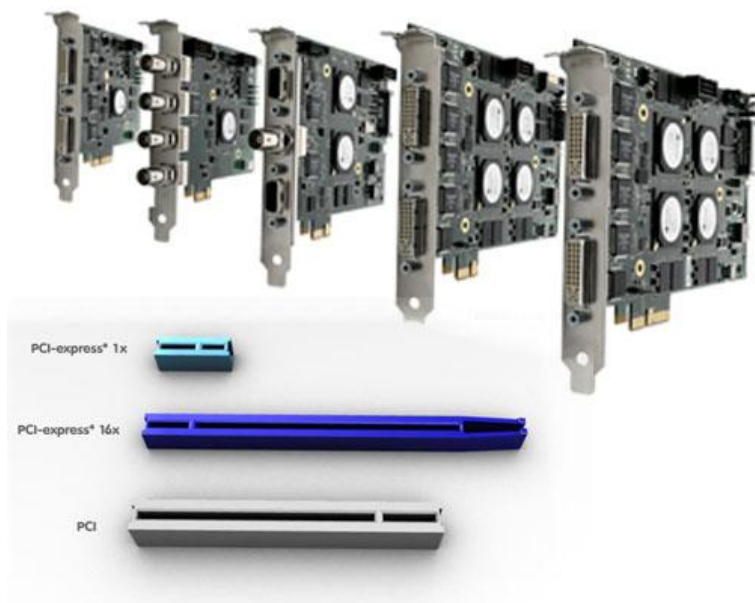


Figure 1 Installing the video card to correct Slot on mainboard.

mounting all of the cards on the mainboard. Cards are placed in PCI, PCix1, PCix4 slots:

Some of cards need additional power supply molex or Sata.

Current technology allows image processing from 25 up to 400 frames per second for one card in PAL system. Whole specification of available devices can be found on our website www.alnetsystems.com.

If you decide to use watchdog function² in this stage it is necessary to connect video card with the mainboard with enclosed cable. On the video capture board find two-pin *watchdog* socket and connect it with *reset* socket placed on the mainboard.

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.

¹In NETSTATION system no video capture cards are needed for image recording

²When the card won't receive a signal from the processor restart of the computer will occur. It is a protection against uncontrolled system failure

2.3 Connecting cameras

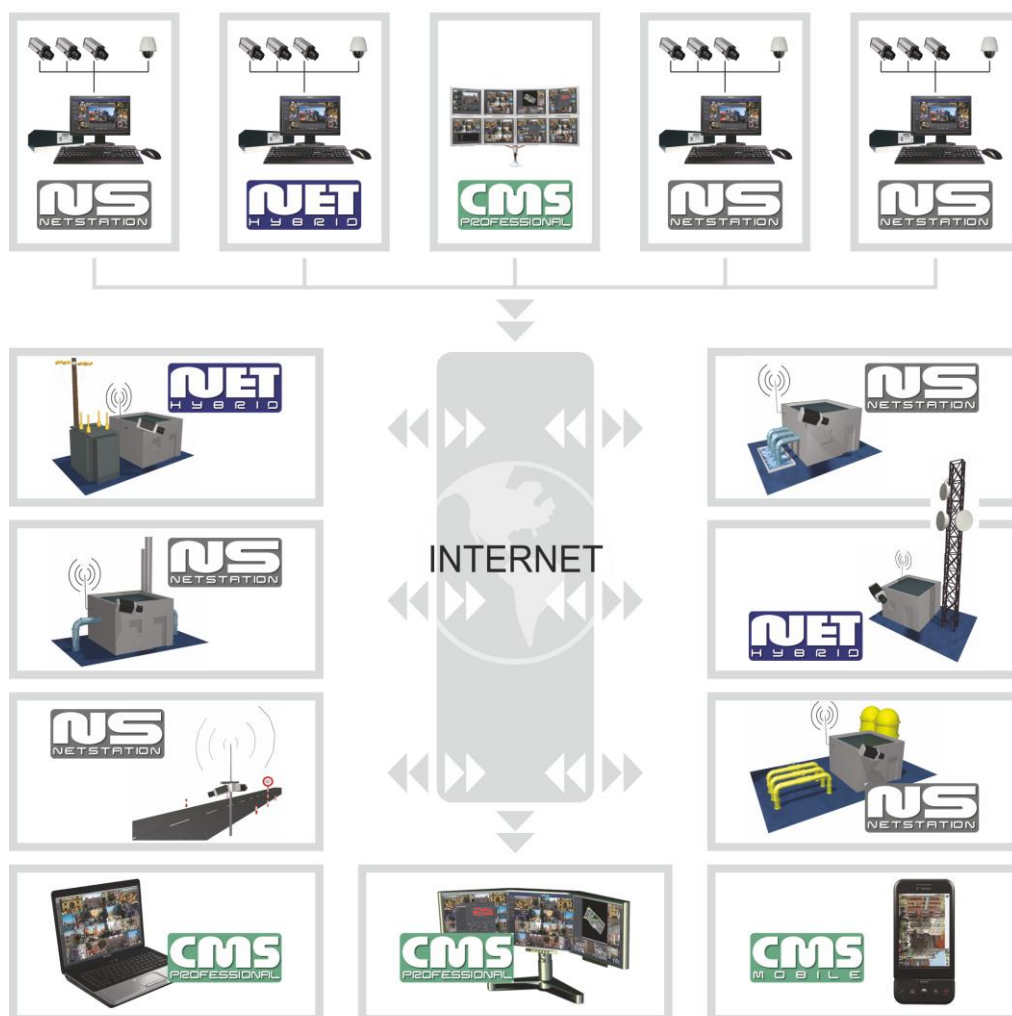


Figure 2 Connecting the cameras

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

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**.

3.1 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.

3.1.1 Configuration Wizard

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

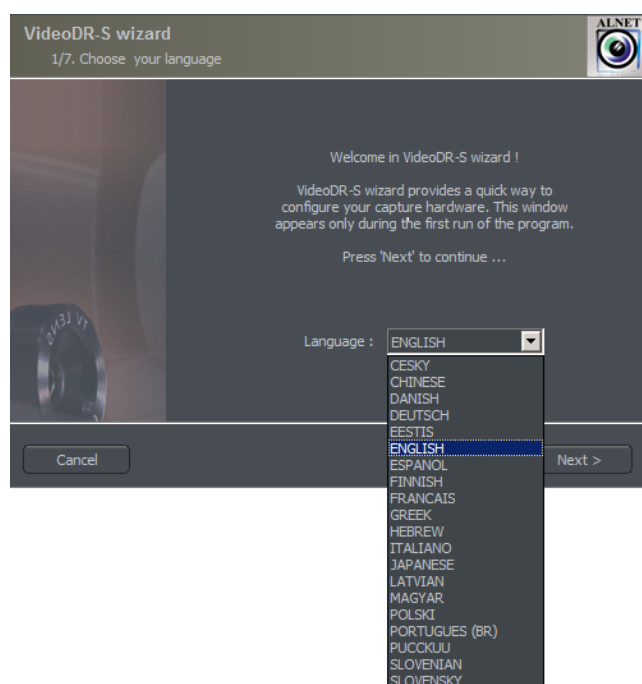


Figure 3 Configuration wizard – choosing the language

3.1.1.1 Choosing the language

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

3.1.1.2 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

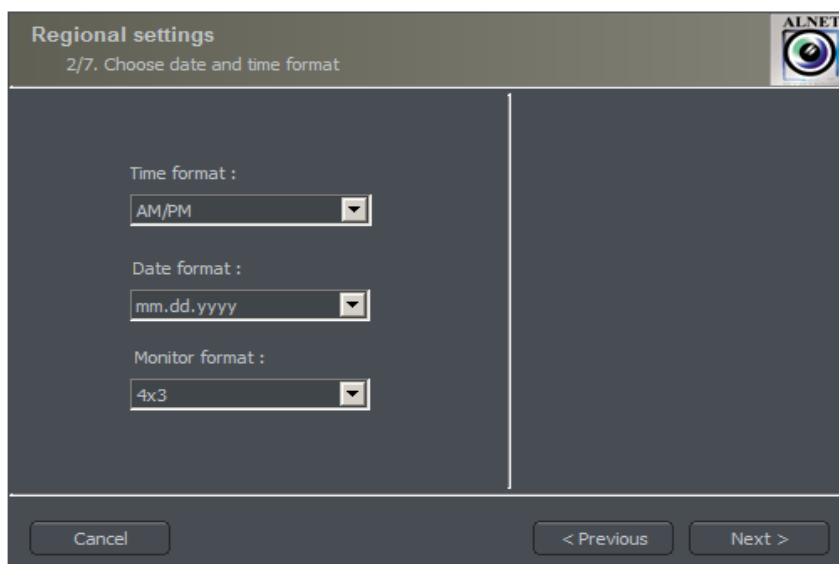


Figure 4 defining regional settings

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

3.1.1.3 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.

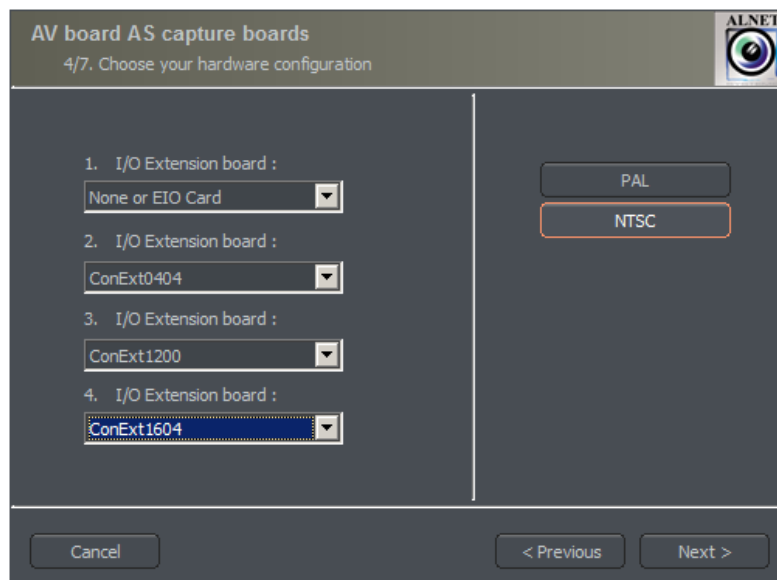


Figure 5 Configuration wizard – video capture cards

3.1.1.4 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

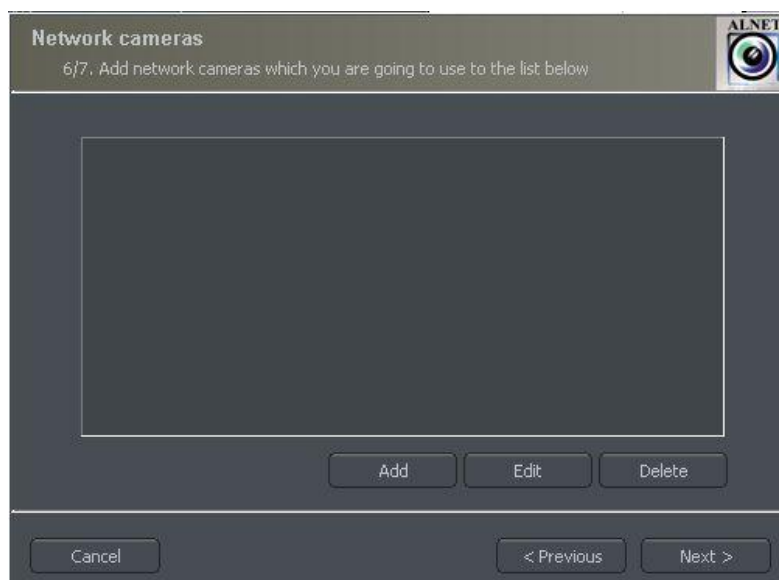


Figure 6 The list of installed IP cameras. To add camera click Add button

3.1.1.4.1 Adding a network camera

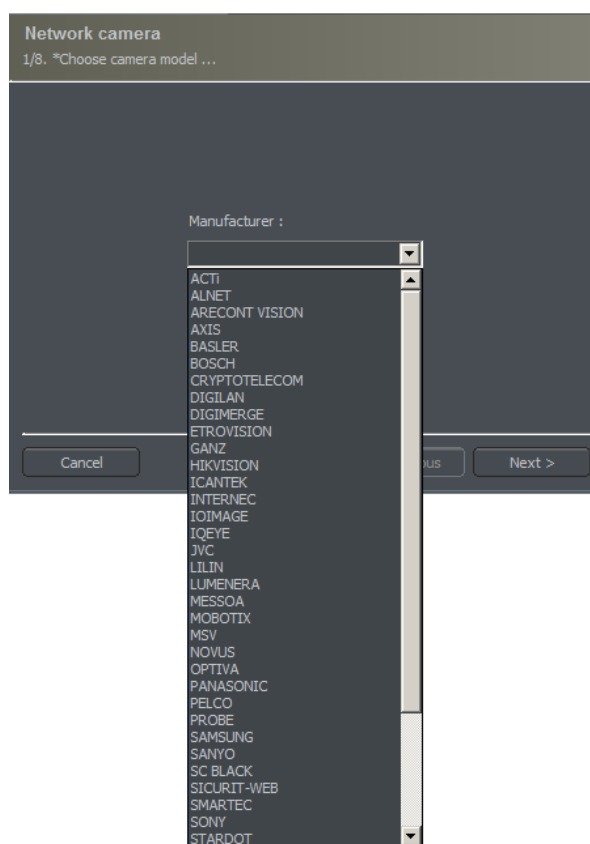


Figure 7 Choosing Network camera

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

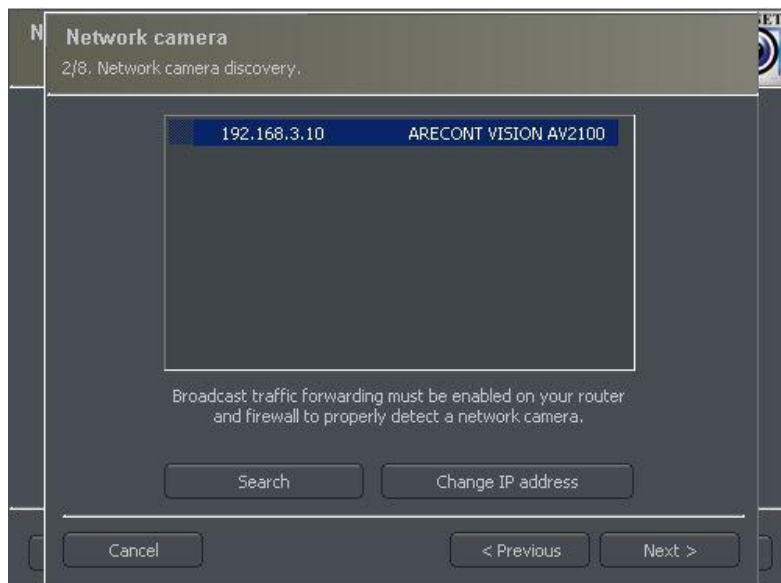


Figure 8 **Search** function automatically detects available network cameras. User can manually change camera IP address – **Change IP address** button.

- ⚠ 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 9 Additional options for the camera – available options differ depending on the manufacturer.

Bookmark	Field	Description
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

3.1.1.5 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.

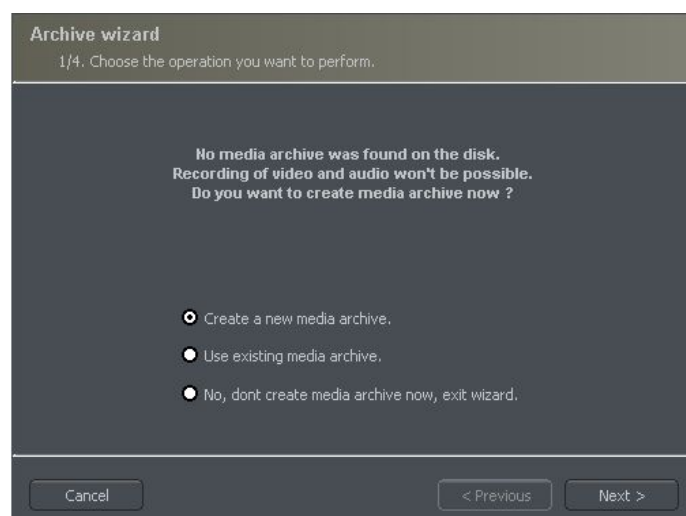



Figure 10 Creating disk archive

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.

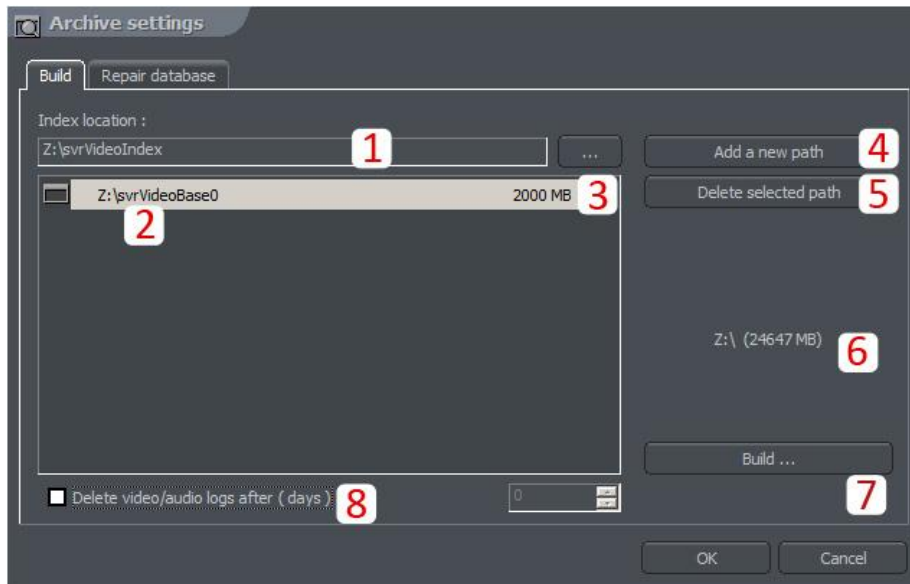


Figure 11 Creating disk archive – path configuration

 **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

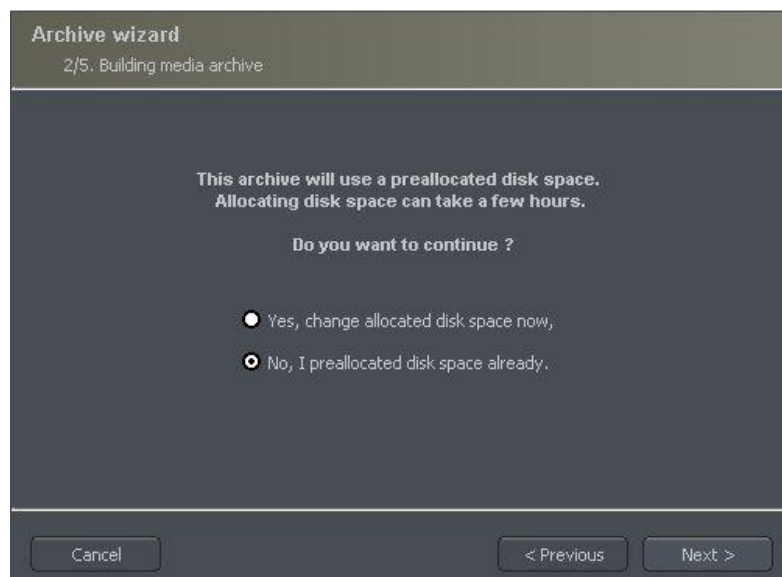


Figure 12 Creating disk archive

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.

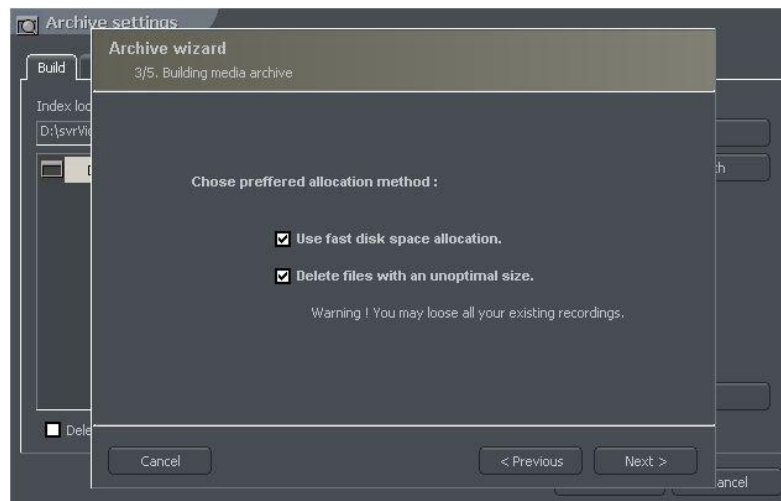


Figure 13 Creating disk archive

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.

3.1.2 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:

o 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

o 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.

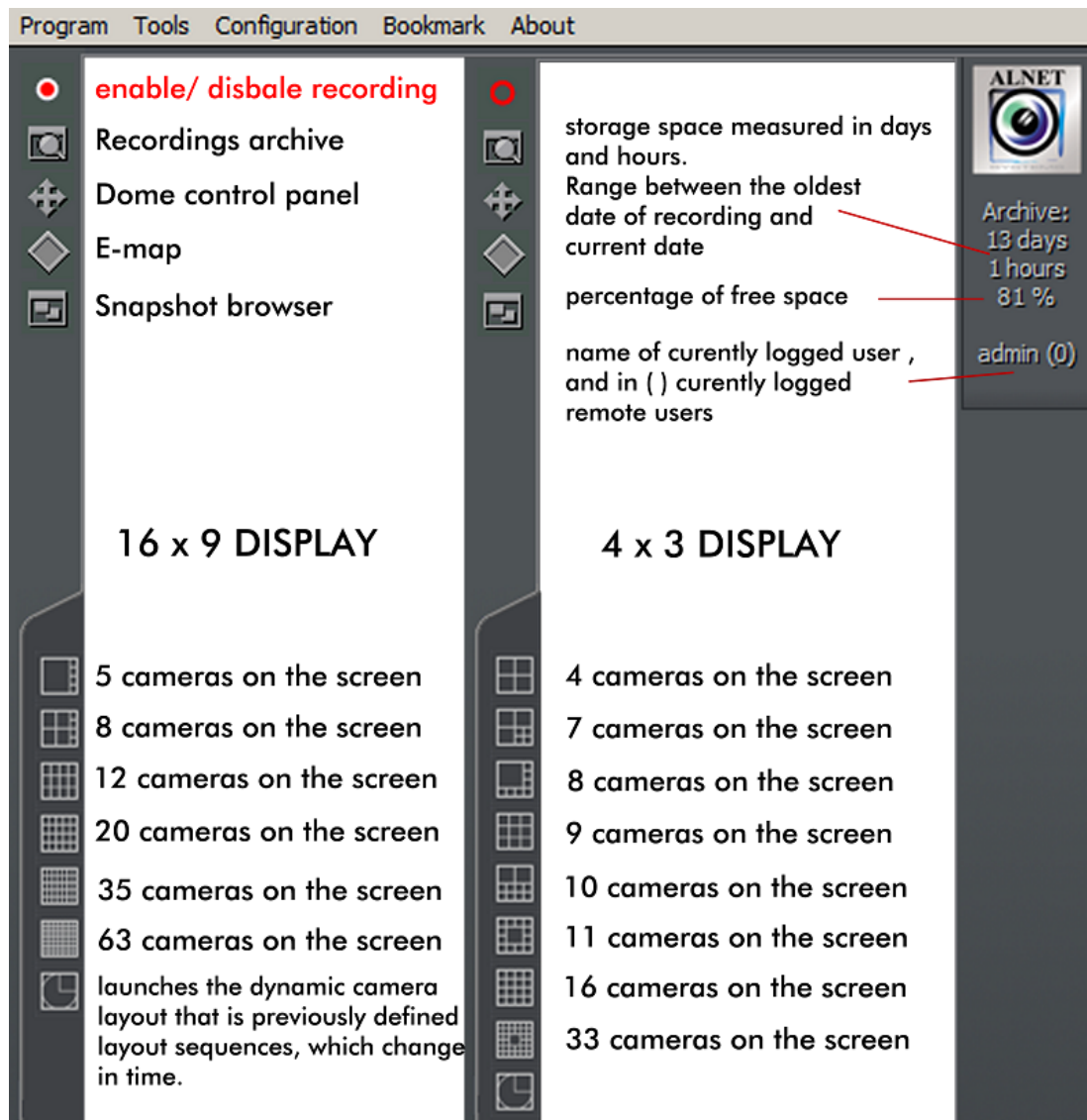


Figure 14 NET Professional Menu

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 it's 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>

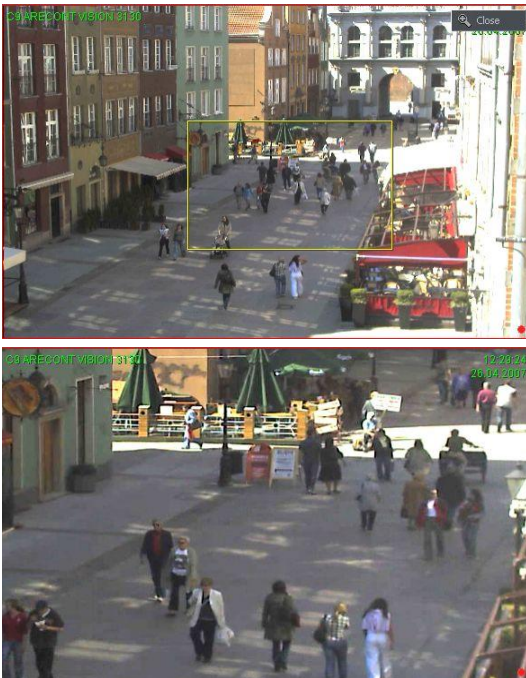
Table 2: Main window – digital inputs/outputs

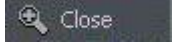
3.2.1 Camera view

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 a 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:

Task no. 1

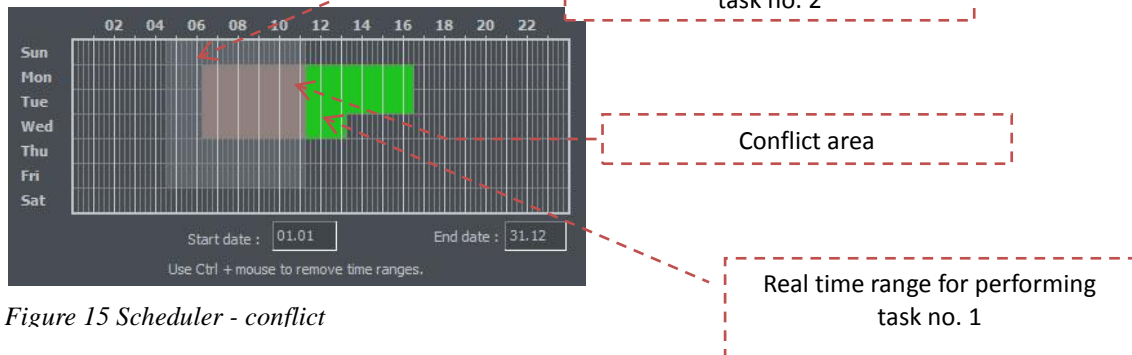


Figure 15 Scheduler - conflict

Task no. 2

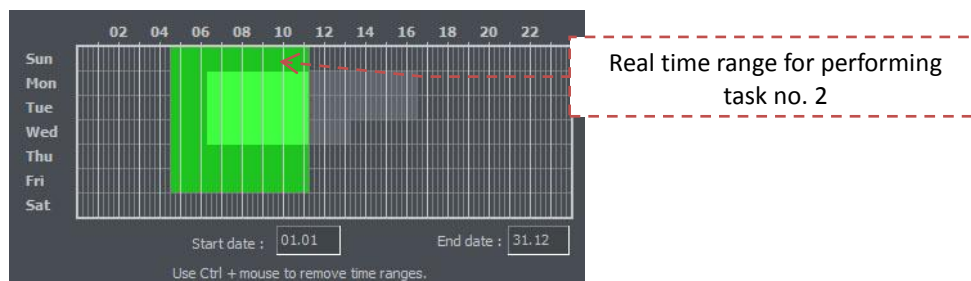


Figure 16 Scheduler - conflict

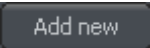
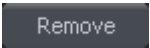




To use e-mail notification in the scheduler access to SMTP server has to be configured in the system (see **Program settings**)

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
-  - 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.

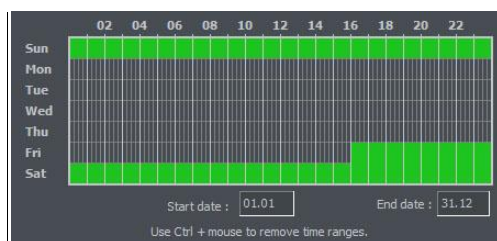


Figure 18 Camera schedule – time axis

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.

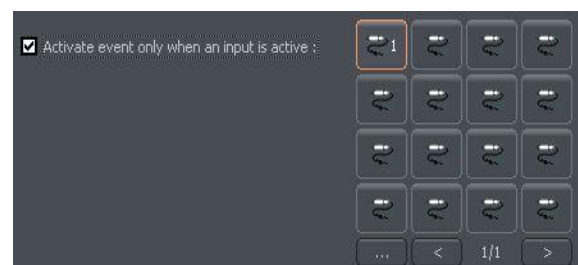


Figure 17 Camera schedule – alarm inputs

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">⑩ Send email - sends email notification on previously given address⑩ 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

The screenshot shows a software window titled "E-mails". It contains two tabs: "Choose address" and "Address book". The "Address book" tab is selected. On the left, there is a list box with the header "Name" and one entry, "Security manager". Below the list box are two buttons: "Add new" and "Remove". To the right of the list box, there are several input fields: "Description :" with the value "Security manager", "E-mail address :" with the value "security@vdr-s.com", "Subject :" with the value "Video server notificaton", "Do not send more often than (s.)" with the value "60", "Attach screenshots" (a button), and "Get screenshots after (s.)" with the value "1". At the bottom right of the window are "OK" and "Cancel" buttons.

Figure 19 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.

The screenshot shows a software window titled "E-mails" with two tabs: "Choose address" and "Address book". The "Address book" tab is active. On the left, there is a list box with a header "Name" and one entry "Security supervisor". Below the list are "Add new" and "Remove" buttons. On the right, there are several input fields: "Description :" with the value "Security supervisor", "E-mail address :" with "secure@vdr-s.com", "Subject :" with "Video server notificaton", "Do not send more often than (s.:" with a value of "60", and "Get screenshots after (s.:" with a value of "1". There is also a button labeled "Attach screenshots". At the bottom right are "OK" and "Cancel" buttons.

Figure 20 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.

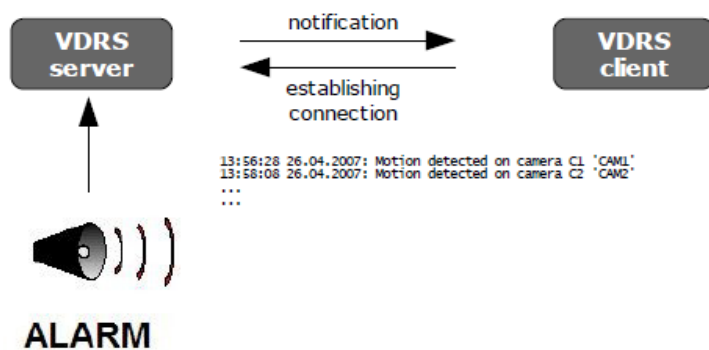


Figure 21: Schema for sending notifications to the client

Figure 21 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 system³. 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 ANALOGUE SYSTEM CAMERA CONFIGURATION

3.3.1.1 Camera

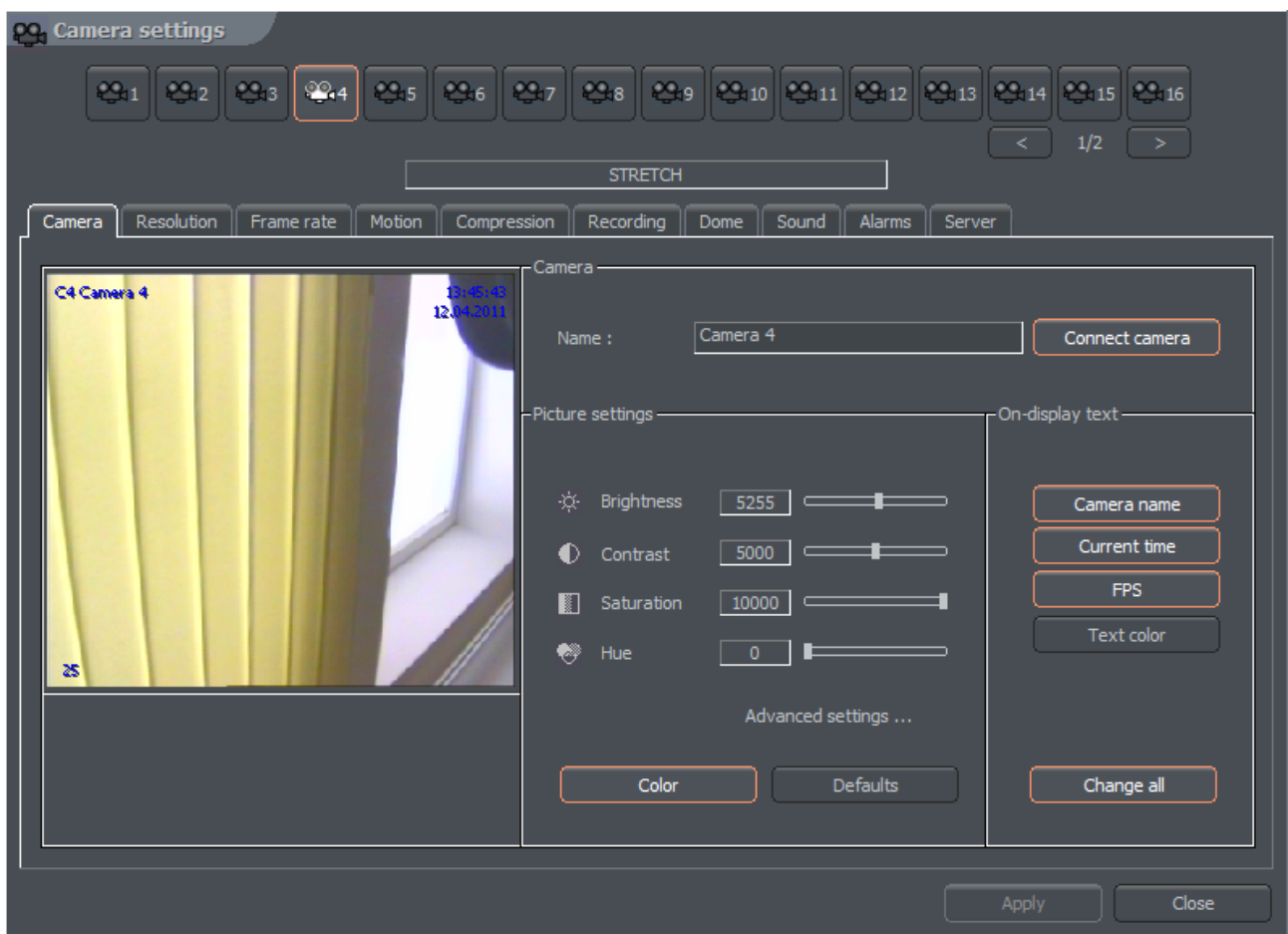


Figure 22 Analogue camera

³It depends on the version of the system

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

3.3.1.2 Resolution

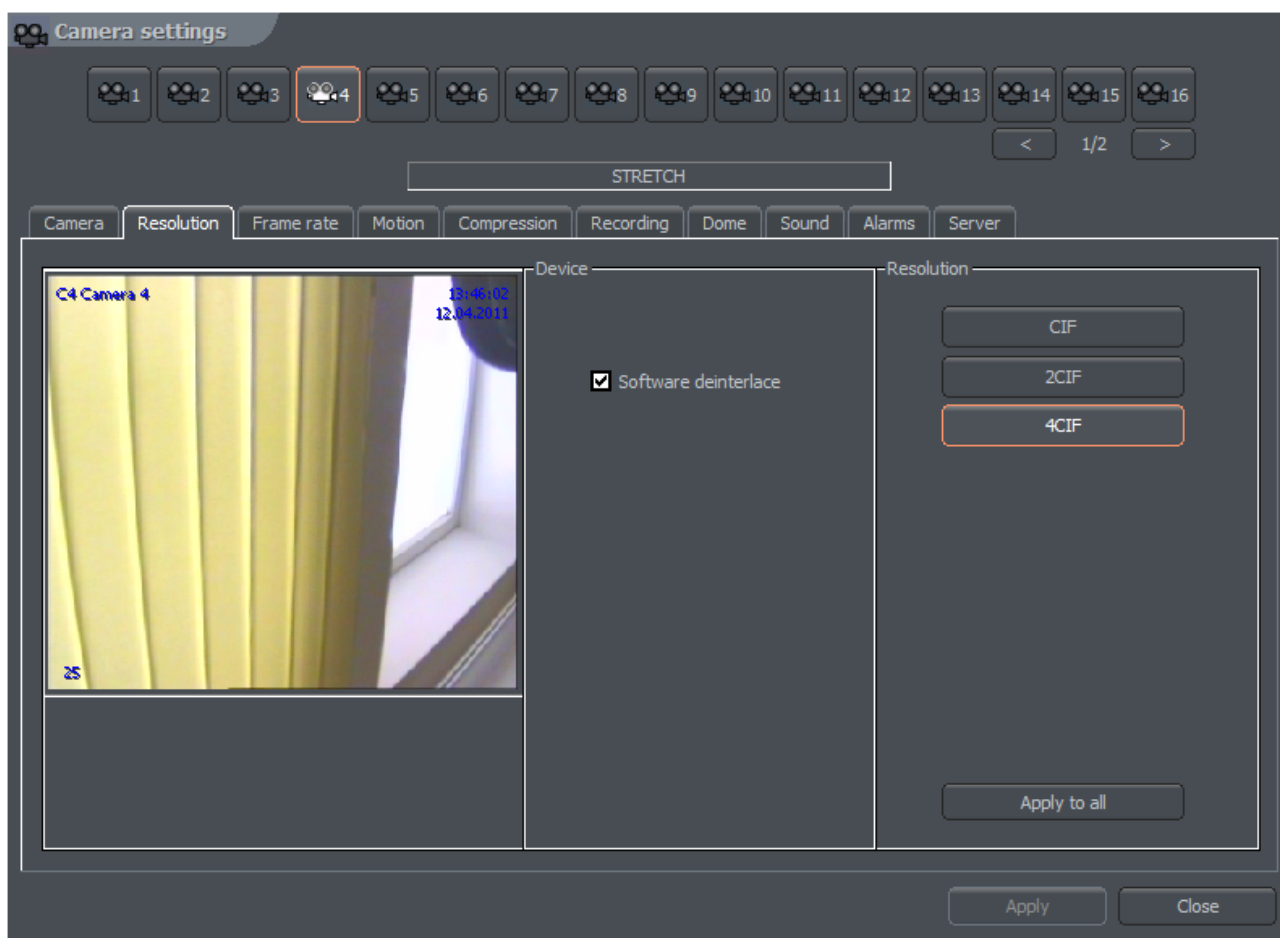


Figure 23 Resolution

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

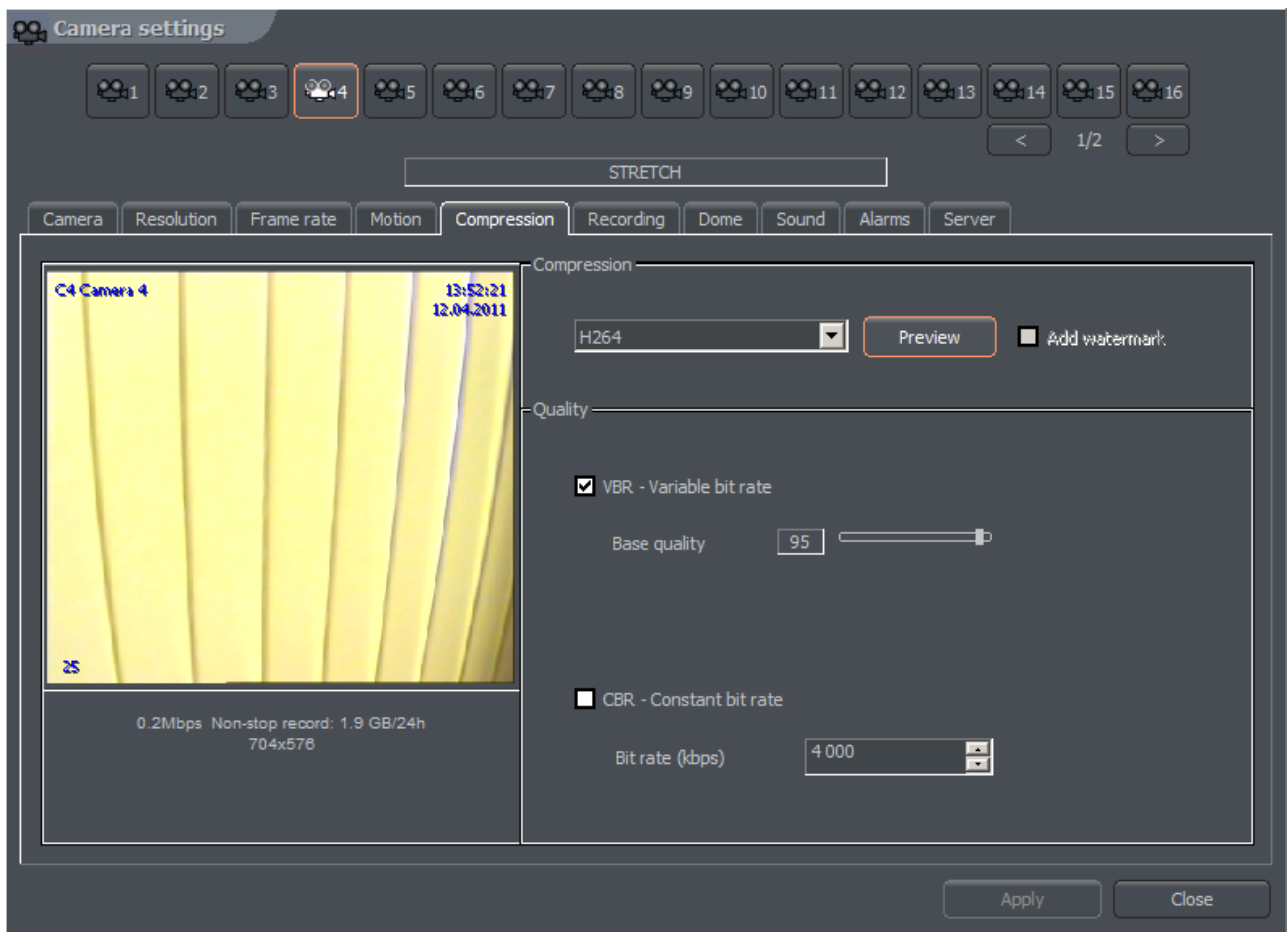


Figure 24 Compression

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

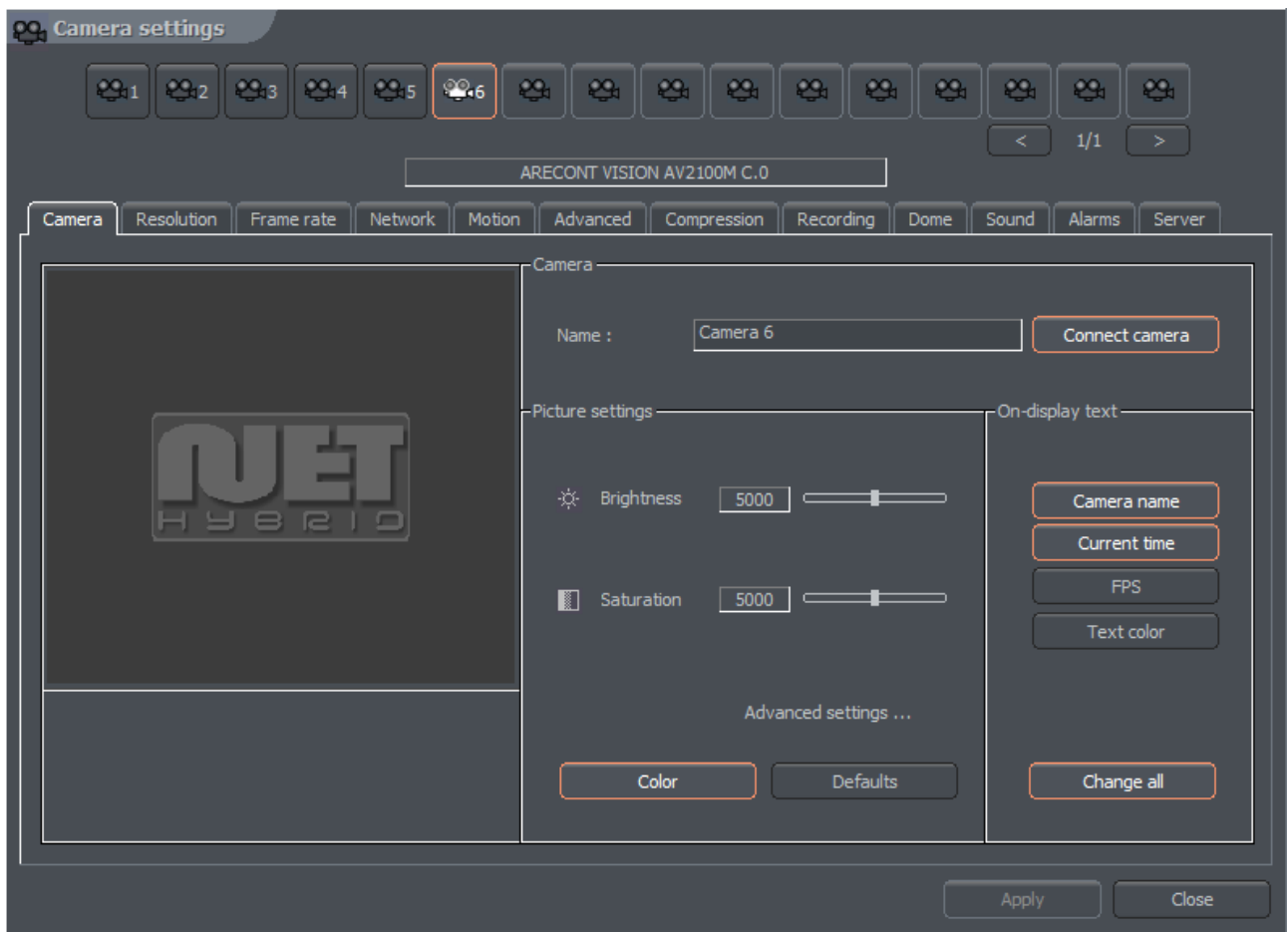


Figure 25 Camera configuration – Camera bookmark

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 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

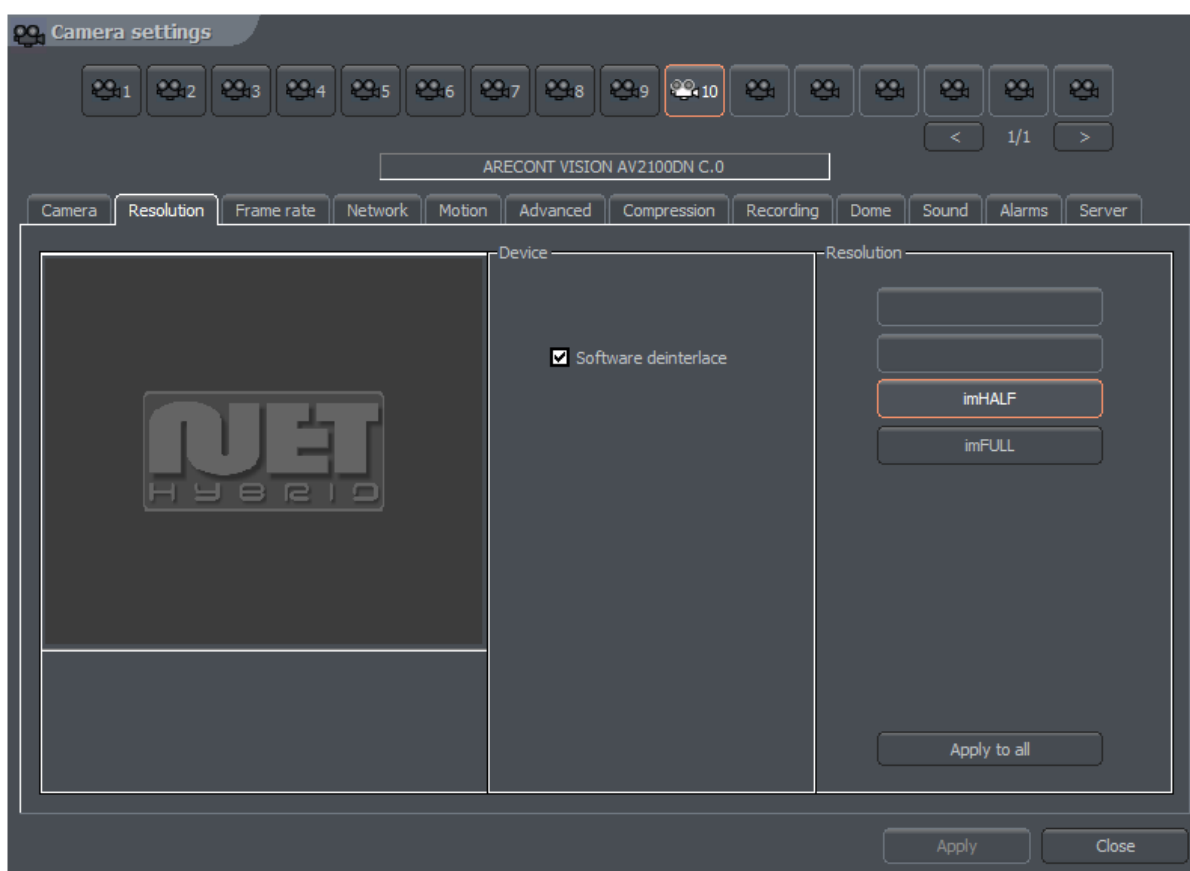


Figure 26 Camera configuration – Resolution bookmark

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

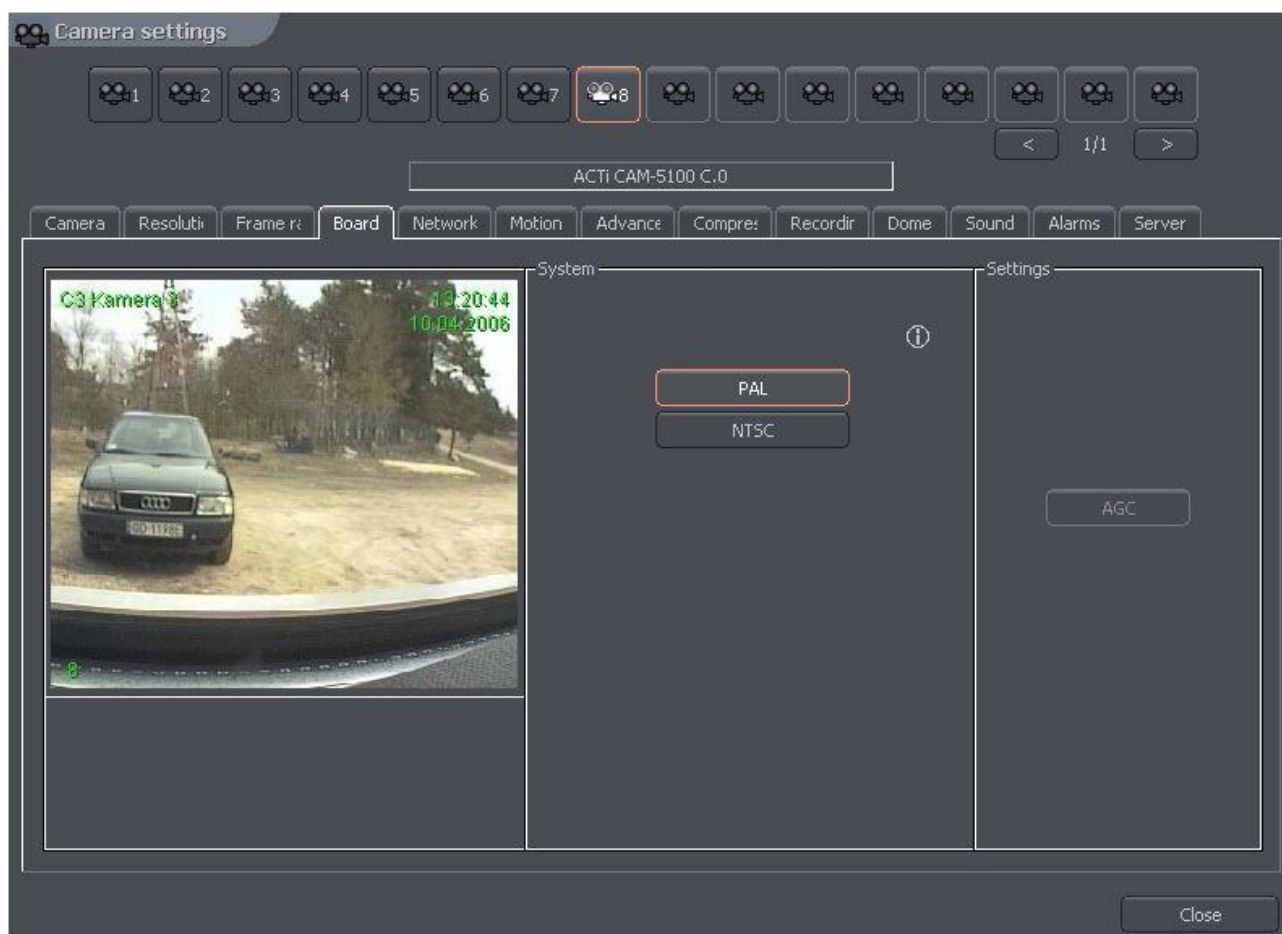


Figure 27 Camera configuration – Board bookmark

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

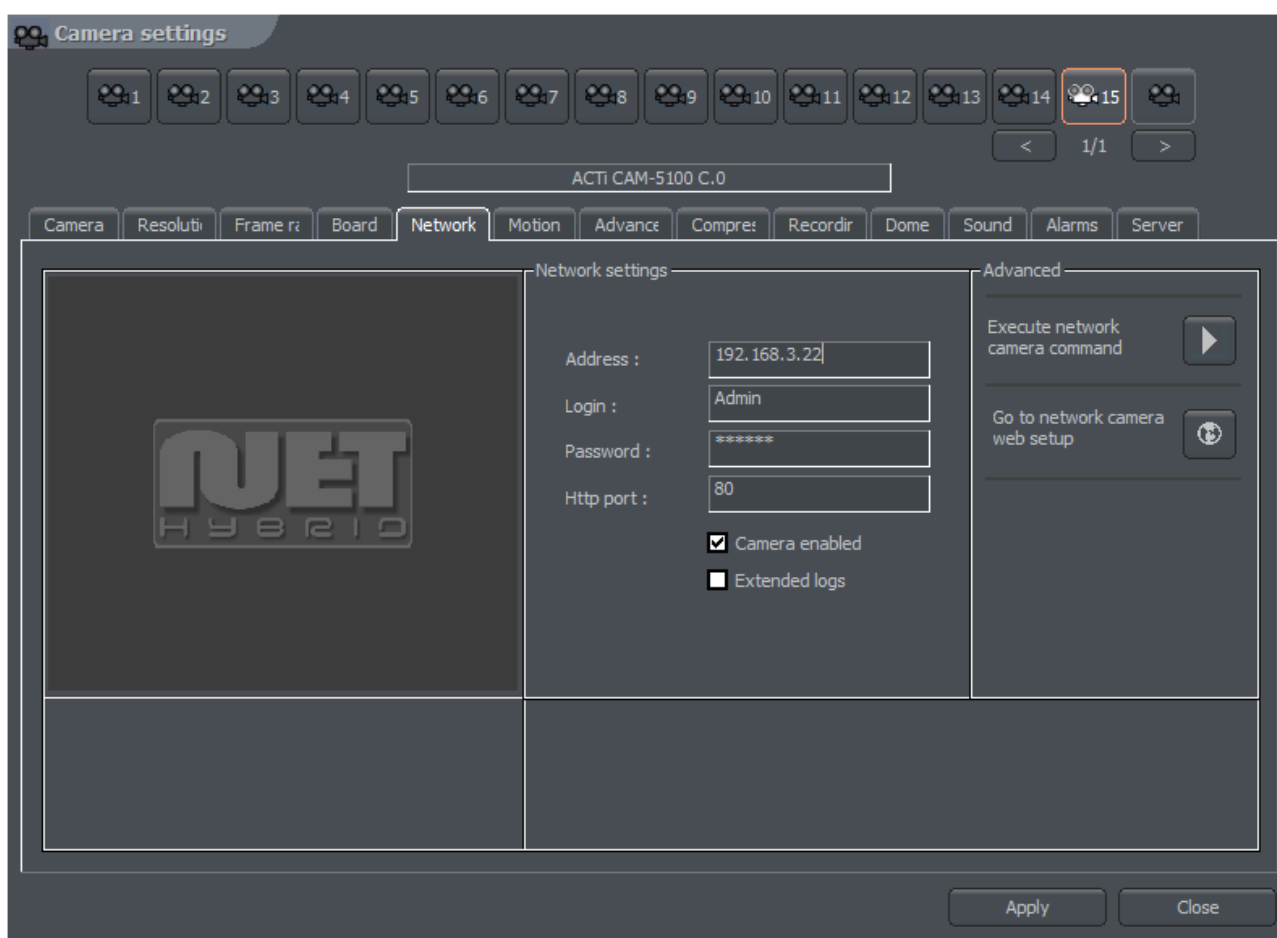


Figure 28 Camera configuration – Network bookmark

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.

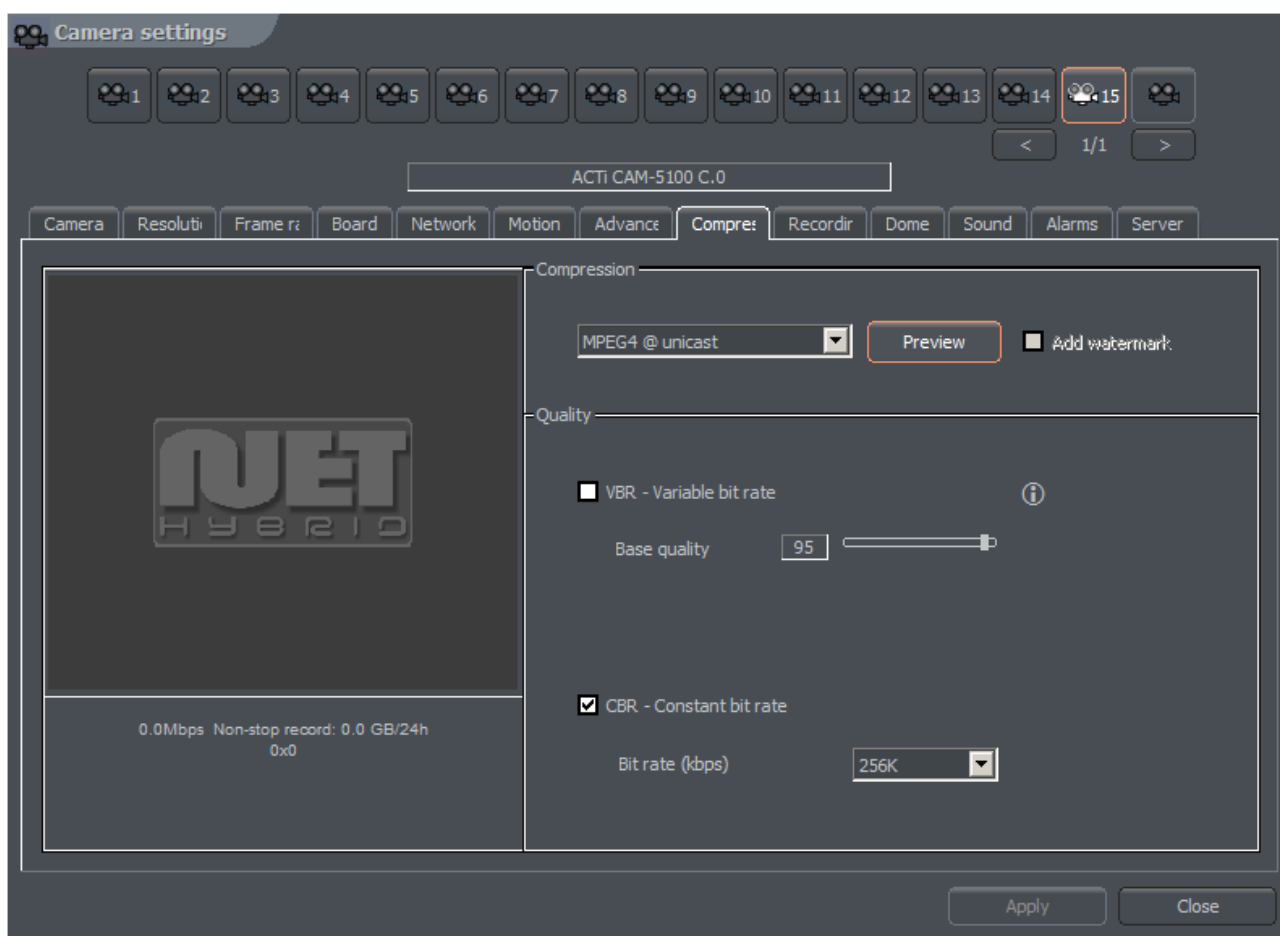


Figure 29: Camera configuration – Compression bookmark

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@rtp-unicast	
	MPEG4@rtp-multicast	
	MPEG4@rtp-tcp	
	MPEG4@rtp-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.

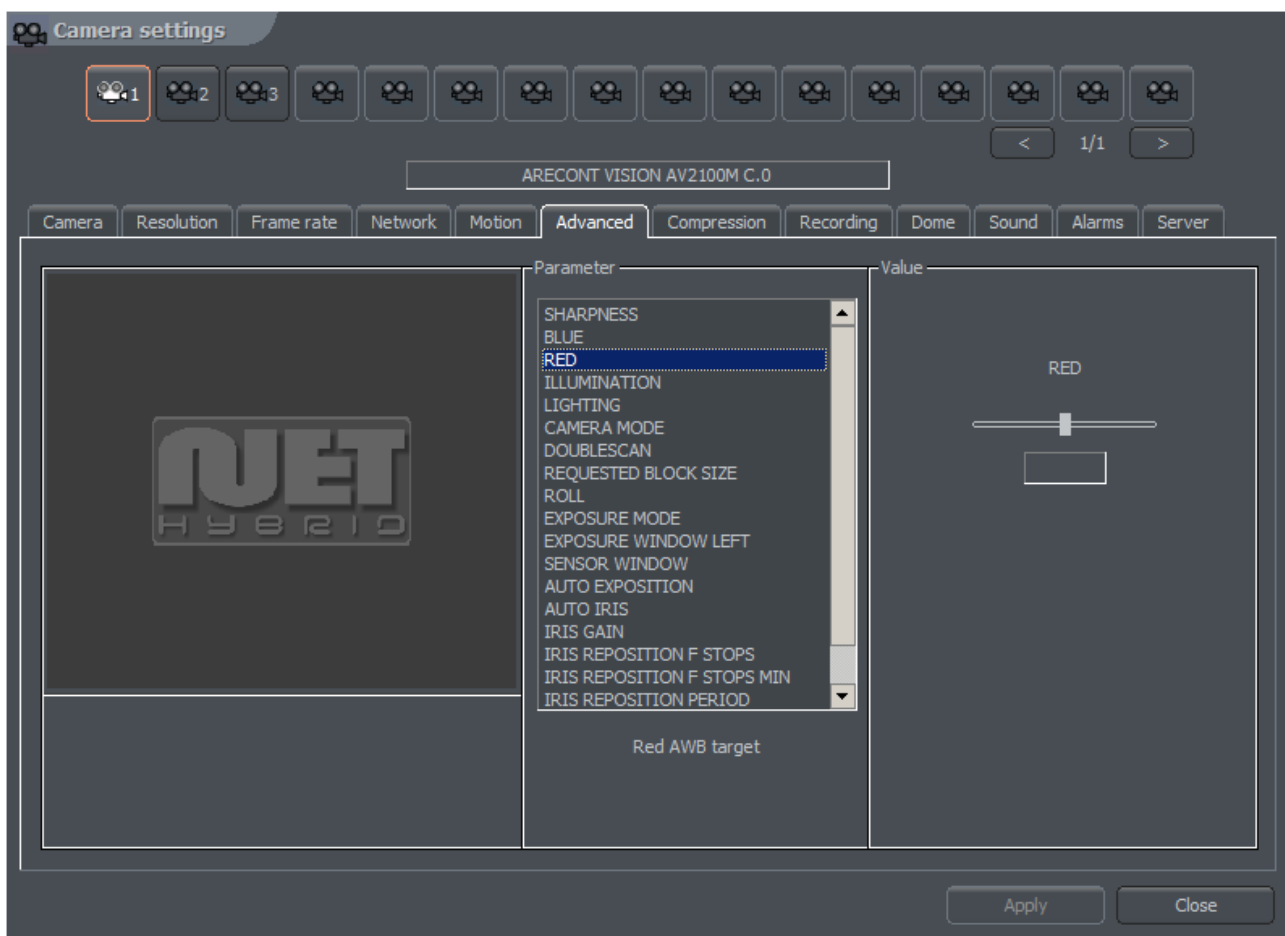


Figure 30: Camera configuration – Advanced bookmark

3.3.3 Common configuration settings

3.3.3.1 Frame rate

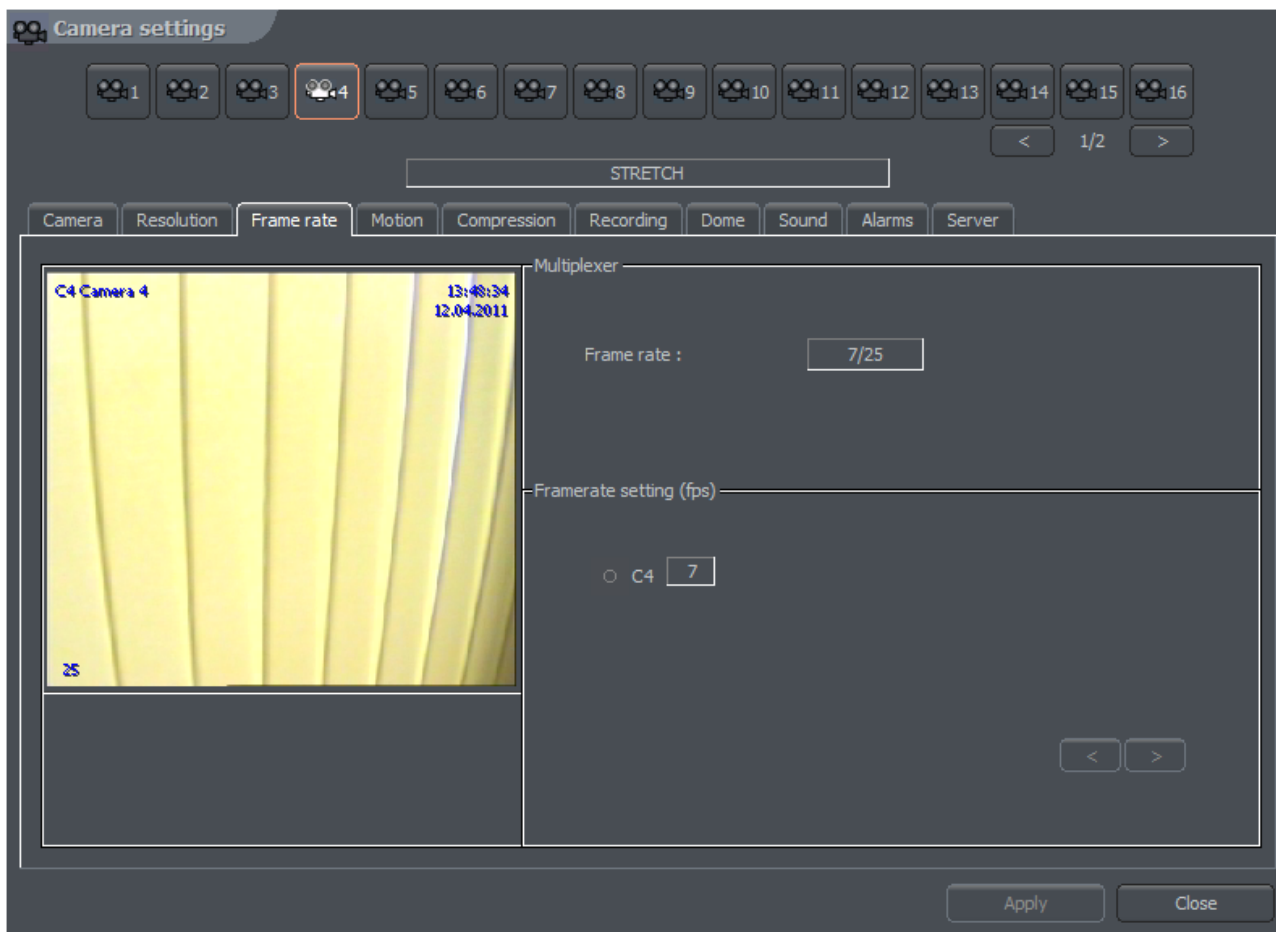




Figure 31: Camera configuration – Frame rate bookmark

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</p>

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 = 16 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 or more cameras, the system assigns unused frames between the cameras evenly.

3.3.3.2 Motion

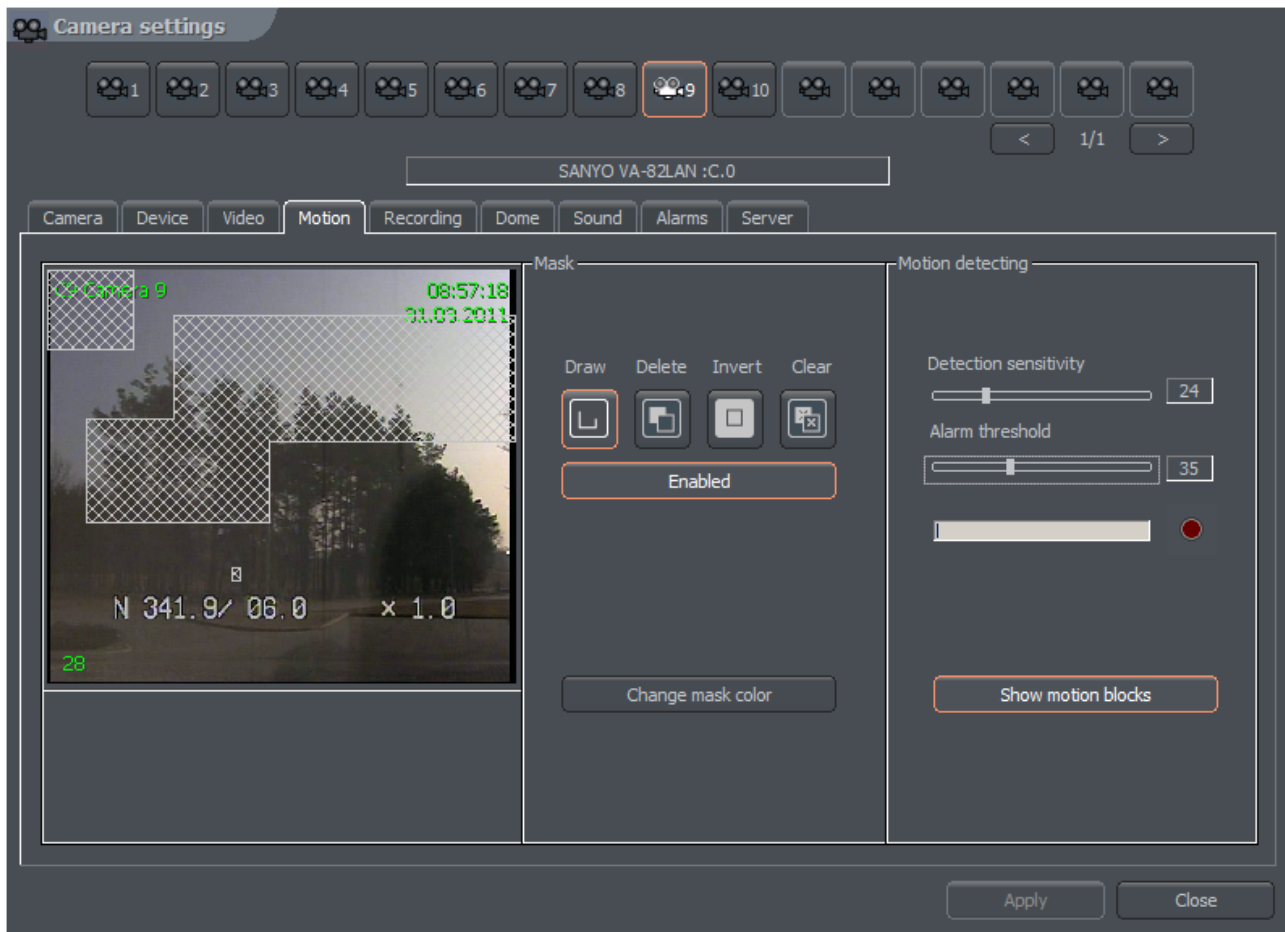


Figure 32: Camera configuration – Motion bookmark

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

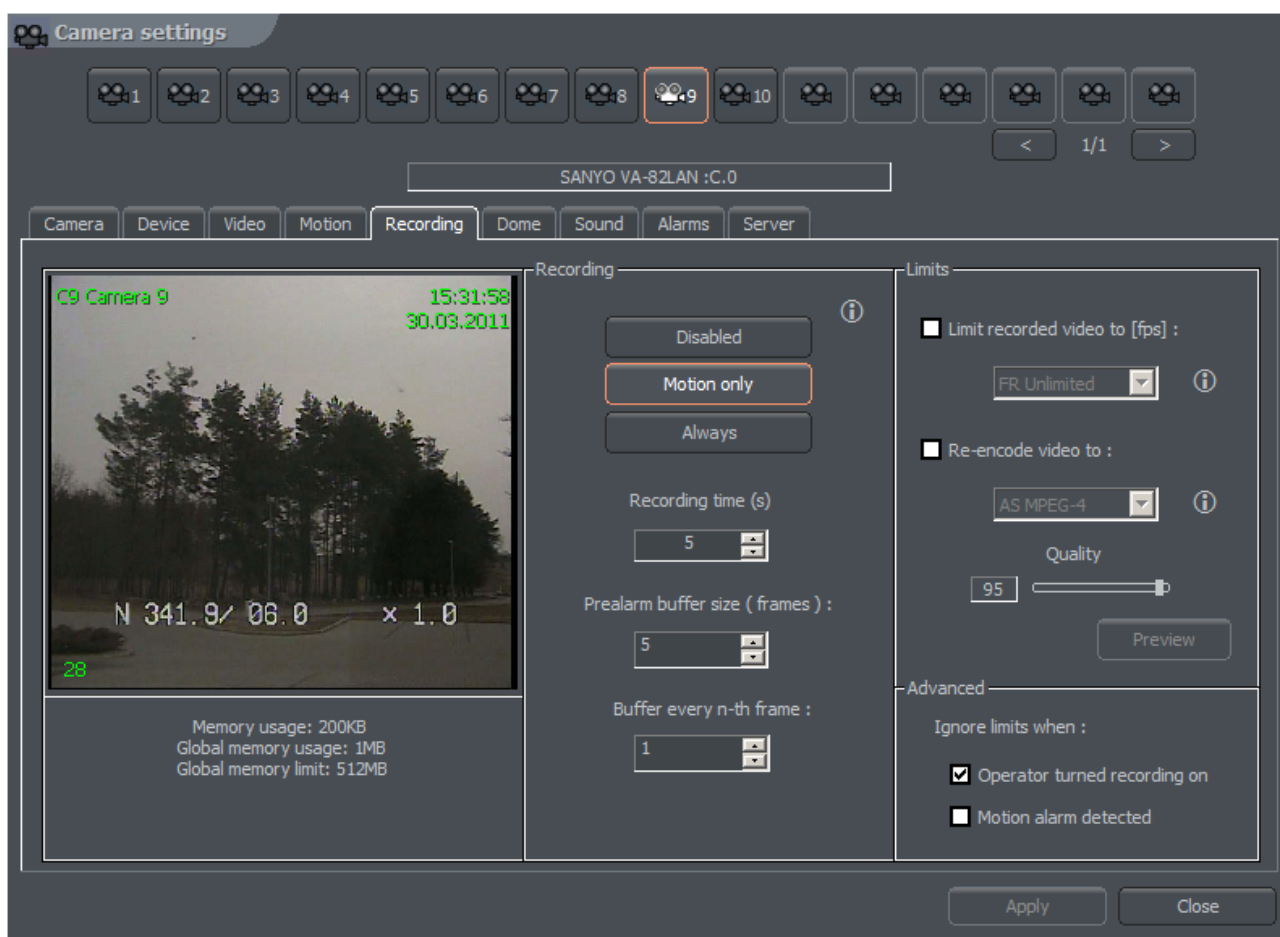


Figure 33: Camera configuration – Recording bookmark

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

<p>Prealarm</p>	<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>	
<p>Advanced</p>	<p>Limit recorded video to [fps]</p>	<p>Function limits fps in the recorded video – this function can be used to save space on a hard drive</p>
	<p>Re-encode video to:</p>	<p>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</p>
	<p>Quality</p>	<p>Setting for quality of re-compressed video</p>
	<p>Ignore limits when:</p>	<p>Option ignores limits mentioned above in two defined cases: - Recording is triggered manually by the operator - Motion detection alarm has occurred</p>

3.3.3.4 Dome

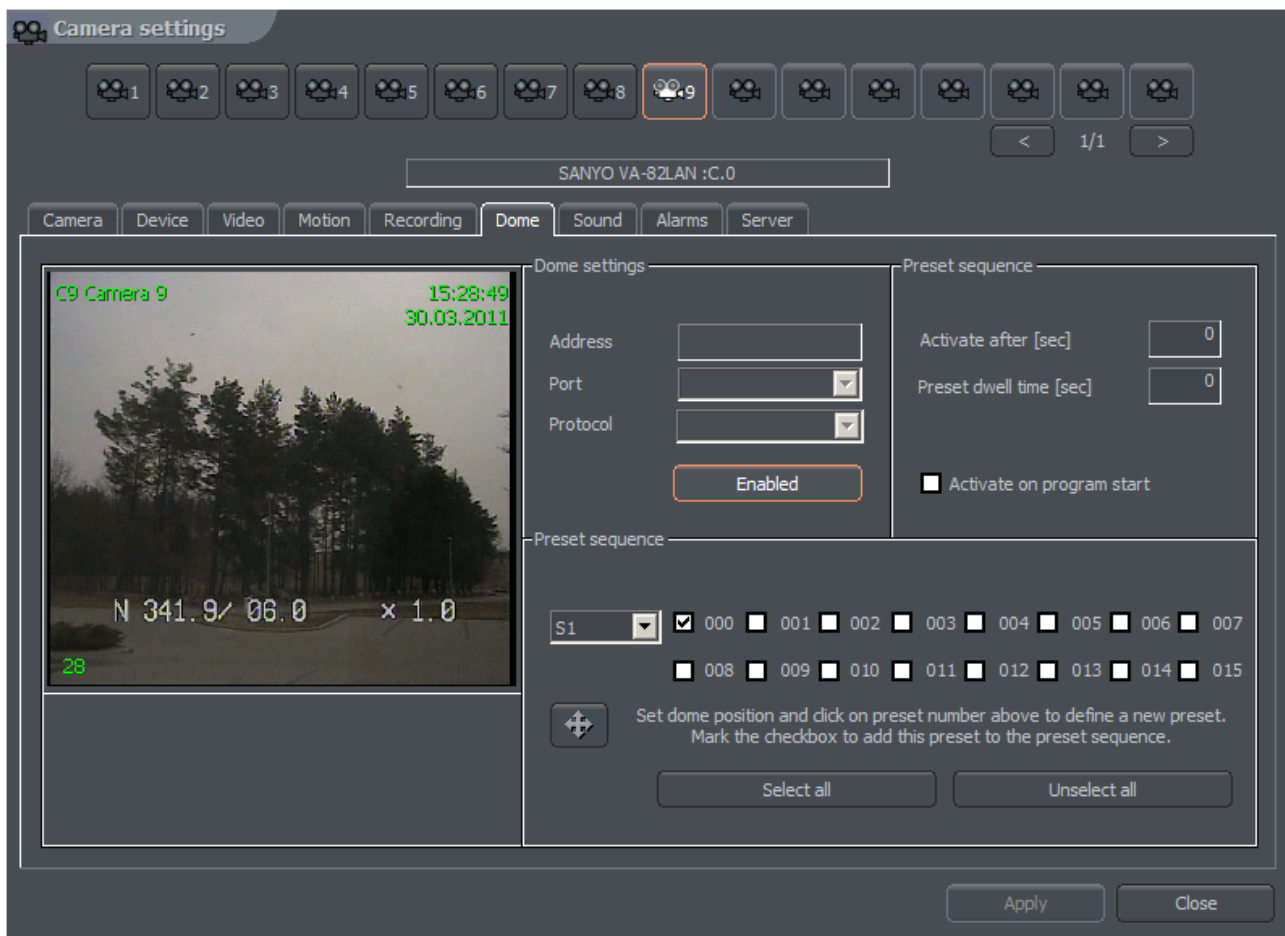




Figure 34: Camera configuration – Dome bookmark

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

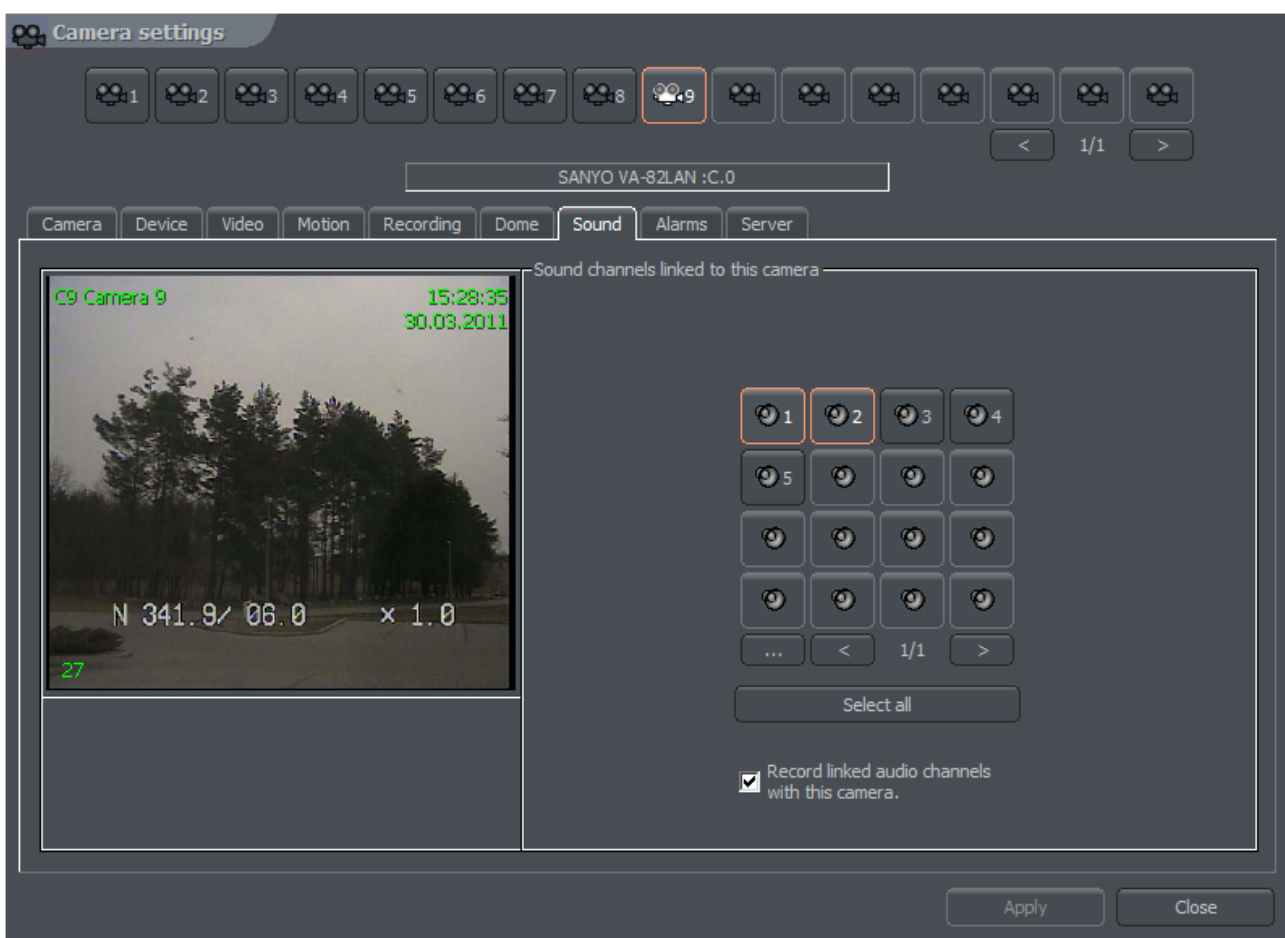



Figure 35: Camera configuration - Sound bookmark

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

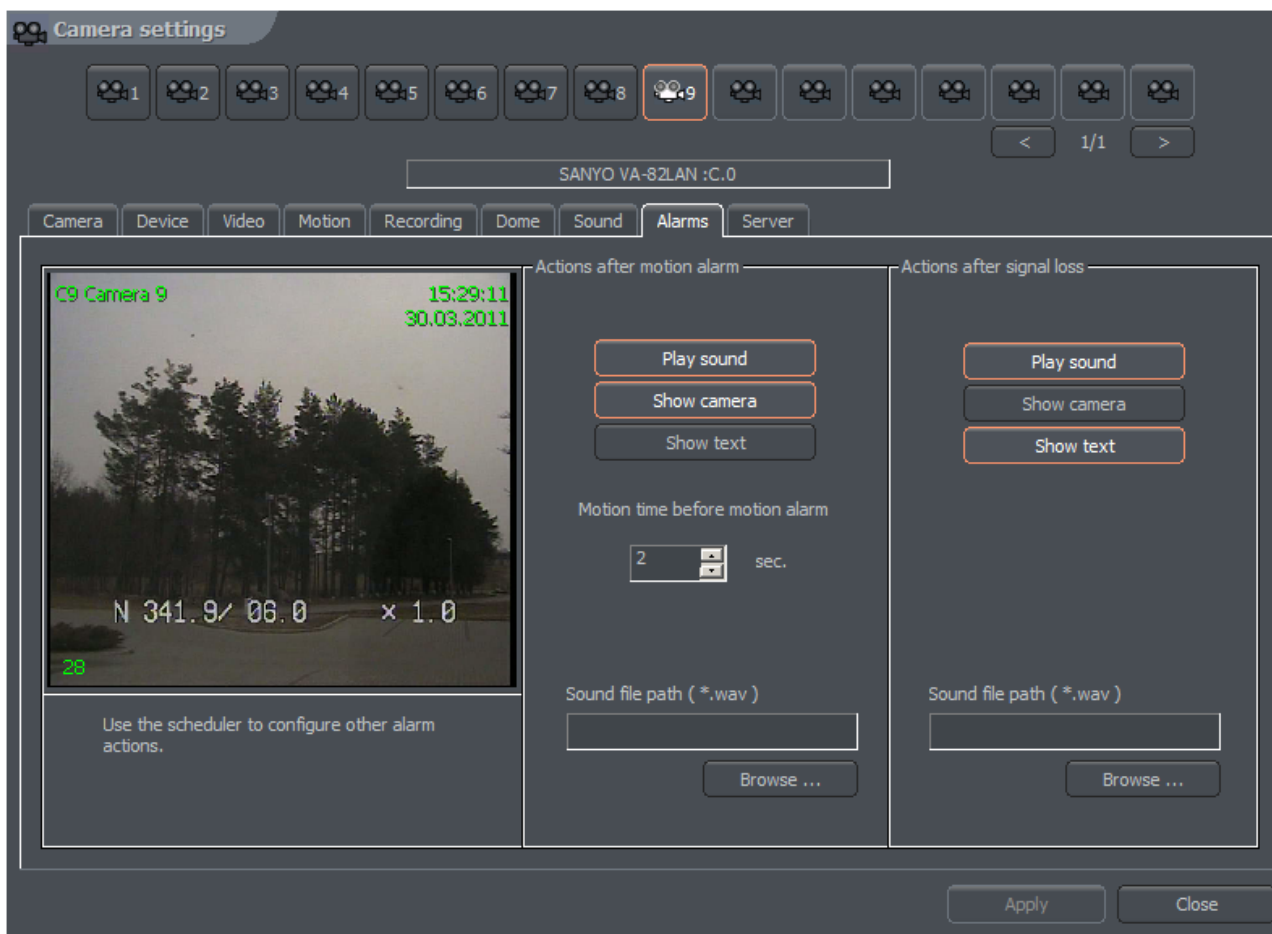


Figure 36: Camera configuration - Alarms bookmark

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

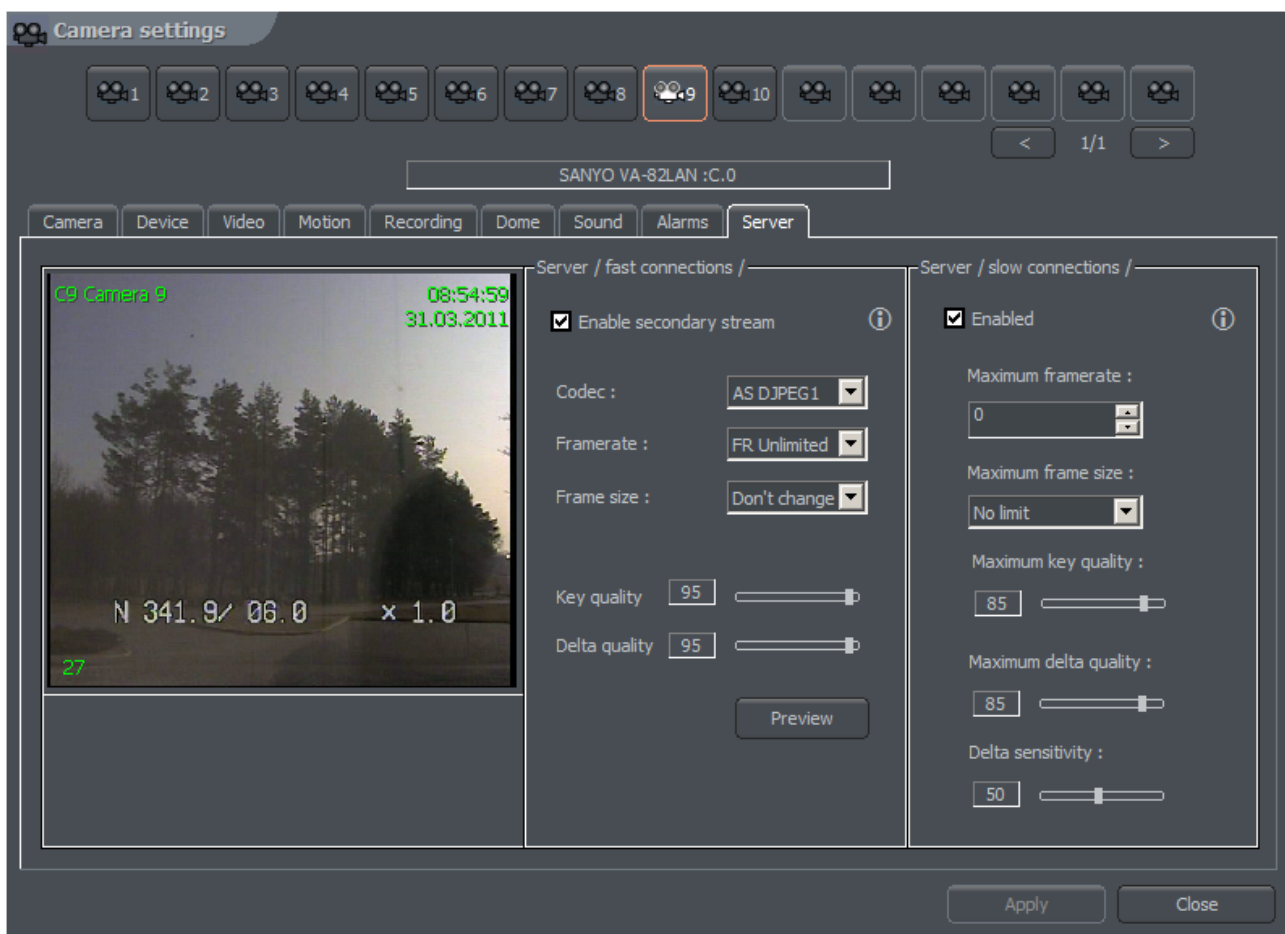


Figure 37: Camera configuration - Server bookmark

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

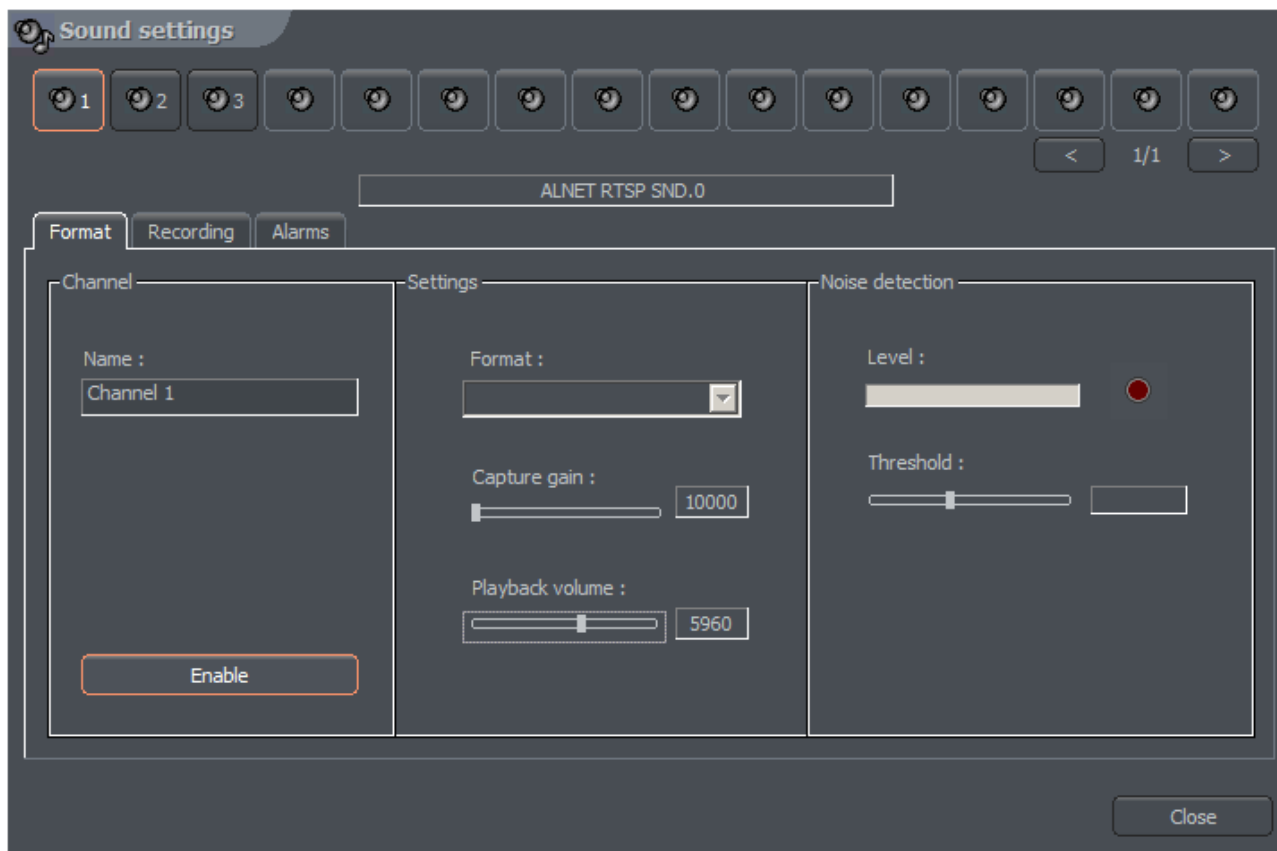


Figure 38: Sound configuration – Format bookmark

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	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 Volume	Playback 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

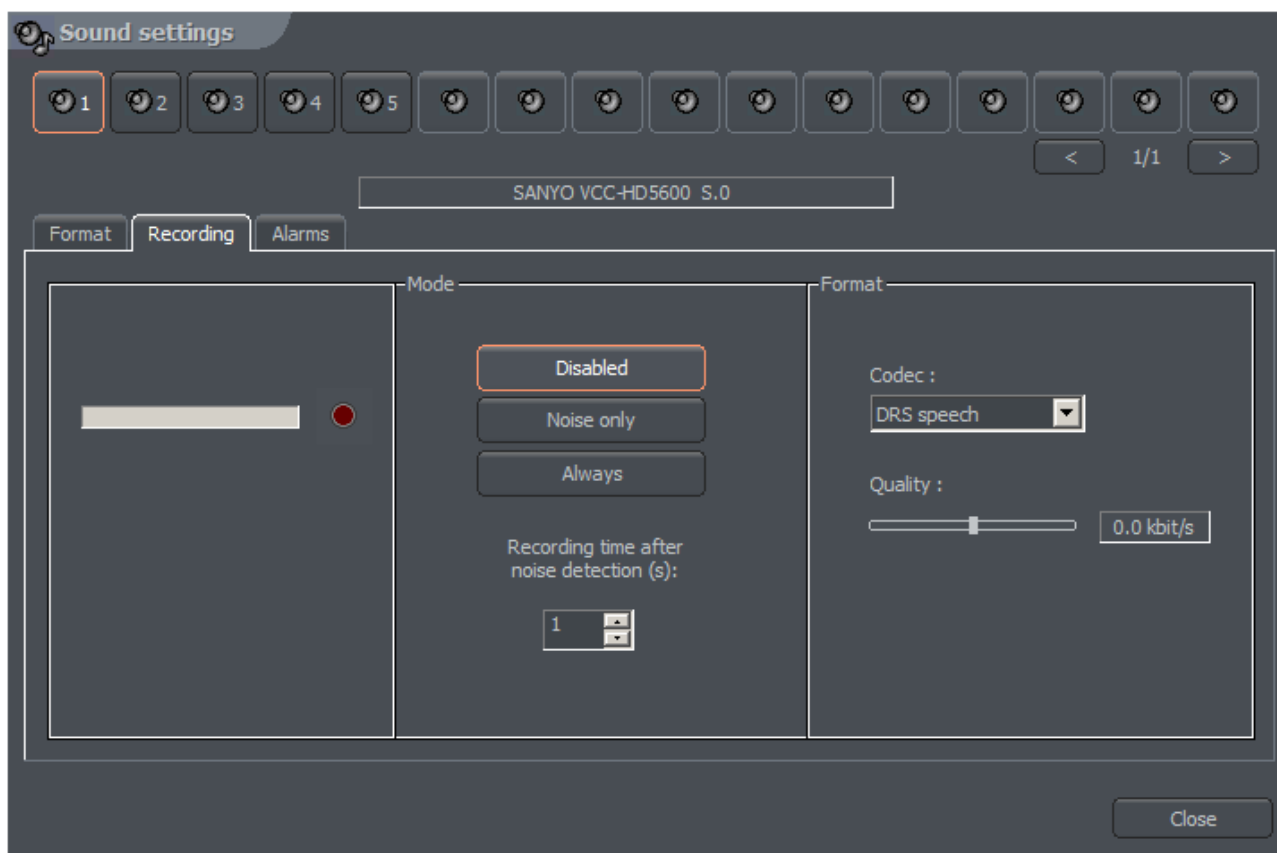


Figure 39: Sound configuration - Recordings

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

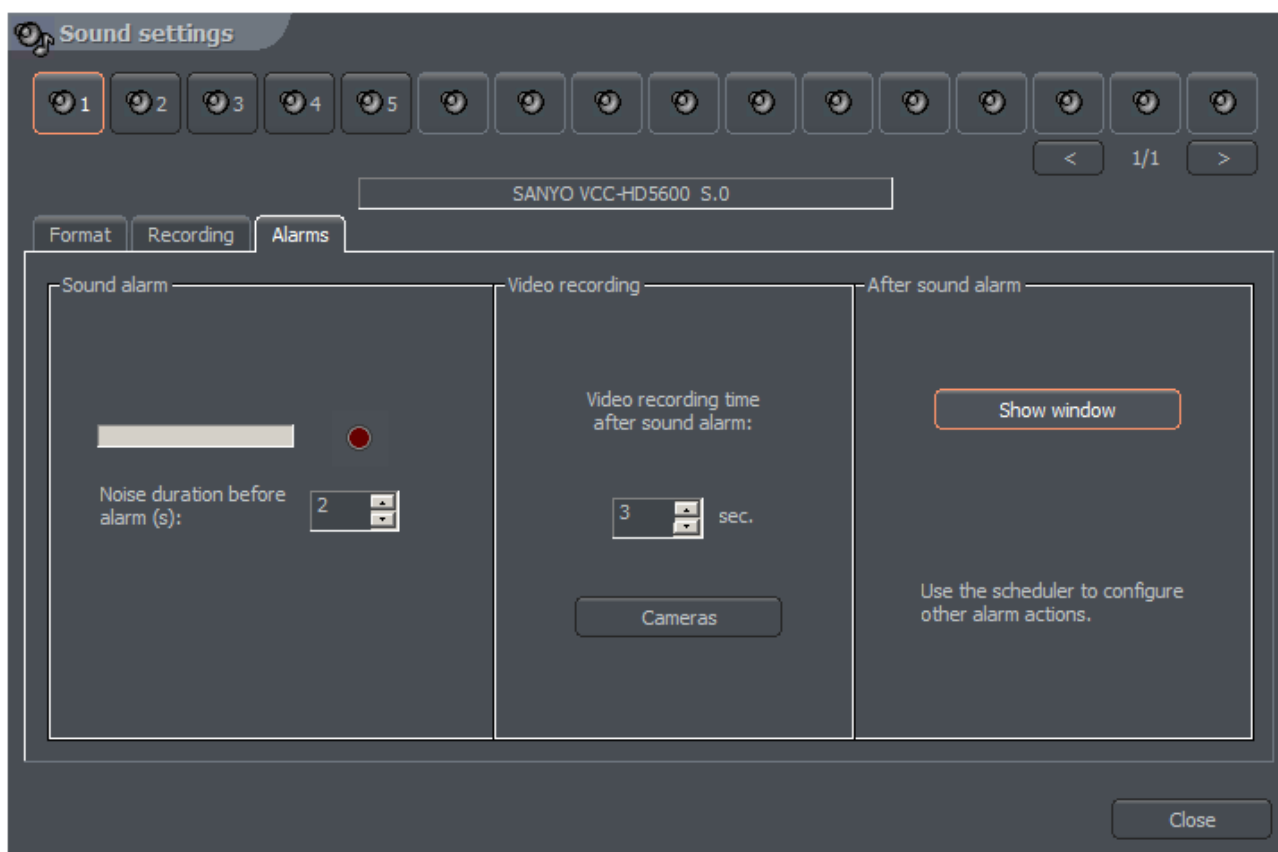


Figure 40: Sound configuration - Alarms

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 the top menu:

Configuration -> Alarm inputs

Input settings

1 2 3 4 5 6 7 8 9 10 < 1/1 >

SANYO VCC-HD5600 IN.0

Input Alarm

Input name :
GATE 1

Normal state : NC

Recording time after input activation :
1 sec.

Cameras

OK Cancel

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

Input settings

1 2 3 4 5 6 7 8 9 10 < 1/1 >

SANYO VCC-HD5600 IN.0

Input **Alarm**

Alarms

Invoke alarm after :
1 sec.

Play sound

Show text

Show camera

Go to preset

Preset on alarm

Dome/Camera : C1

Go to preset : 0

Options and settings

Sound file path (*.wav):
C:\WINDOWS\Media\yingin.wav

Browse...

☒ Play sound once

Use the scheduler to configure other actions.

OK Cancel

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 pre-set	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 pre-set	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 pre-set	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

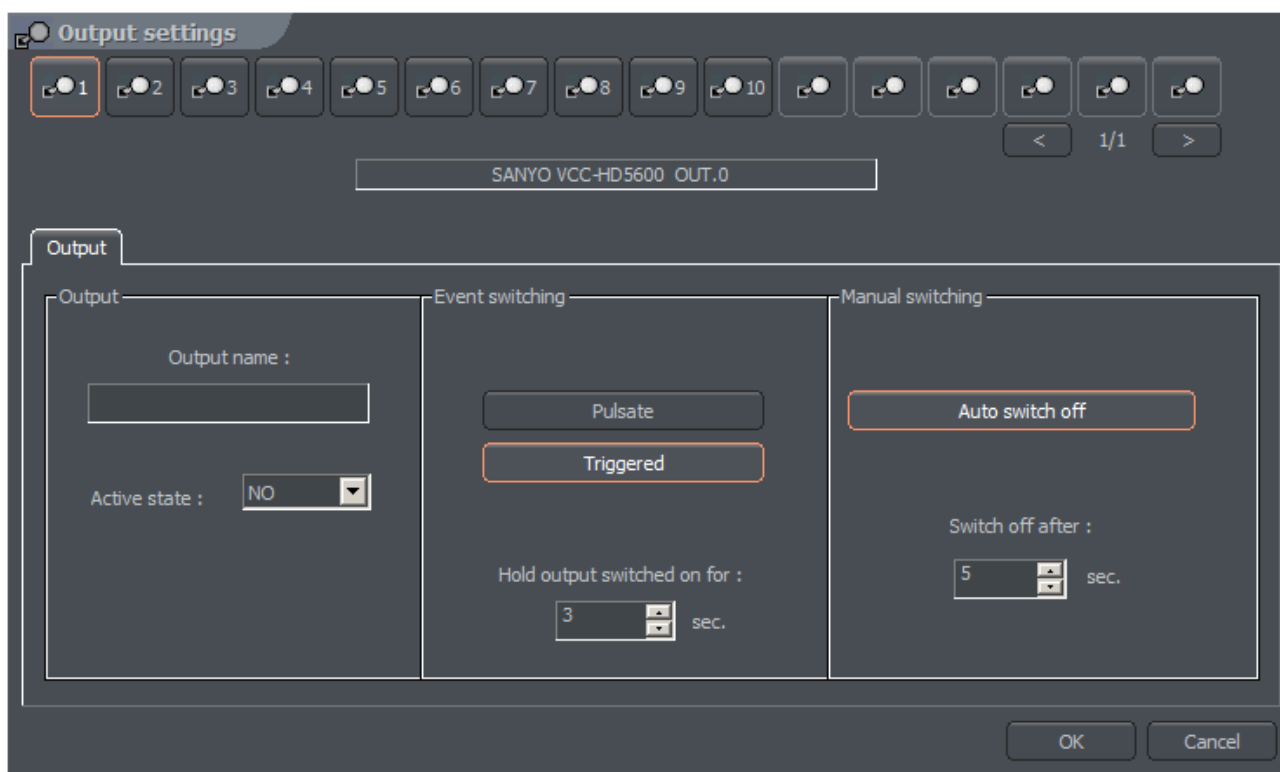


Figure 43: Output switches

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

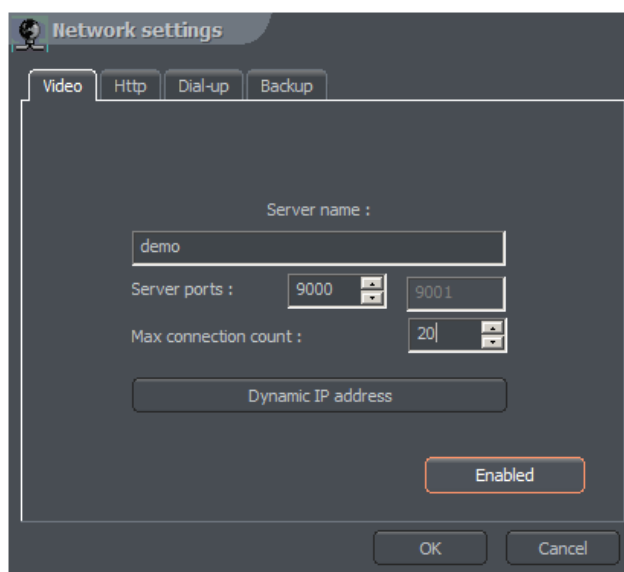


Figure 44: Network settings - video server

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 is possible to connect to the server by using Internet browser.

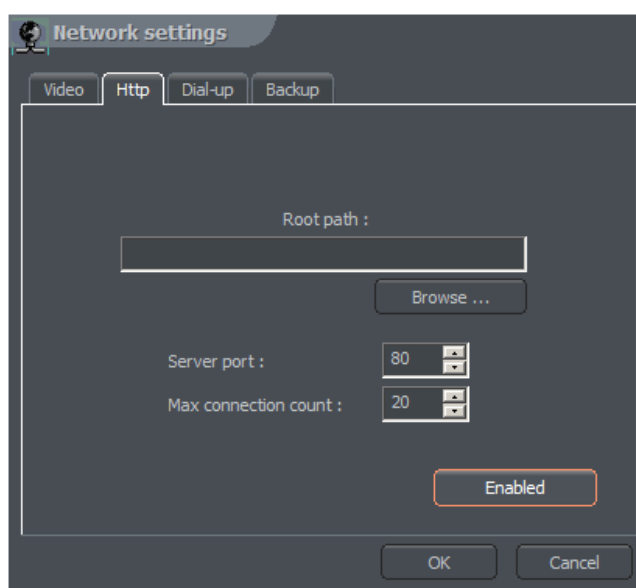
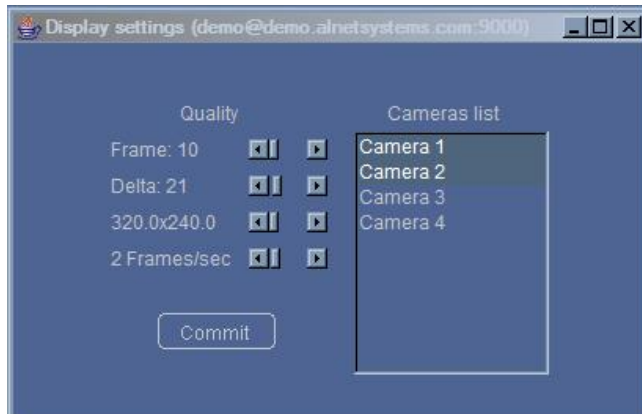


Figure 45: Network settings – www server

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

To test the http connection You can type local host number in Your Internet browser `http://127.0.0.1/`

By default java applet connects to the AL-NET demo server. Applet consists of the following windows:



Window with image parameters.
Changes refer to all of the cameras

- ⑩ Frame – quality of the frame
- ⑩ Delta – quality of the Delta frame
- ⑩ Resolution
- ⑩ Number of frames per second

The list of cameras is on the right side of the window. Clicking on the camera name will open/close the window with camera view.

Main applet window. It contains a list of active connections, alarm inputs and output switches control module.



Opens a window with connections list. Choosing the connection from the active connections list and clicking the icon will disconnect from this particular server.



Opens a window with image parameters

To add or modify network connection parameters it is necessary to edit and modify **index.htm** file, which is placed in the folder defined in http settings. In the file there are some connections created by default. One block refers to one connections. It consists of five parameters:

Connection name

```
<param name="Server1Name" value="localhost">
```

Server address

```
<param name="Server1Address" value="127.0.0.1">
```

Port number

```
<param name="Server1Port" value="9000">
```

User name

```
<param name="Server1Login" value="admin">
```

User password

```
<param name="Server1Password" value="1">
```



Attention: Single connection is defined in two places in the file! In <param> section and <embed> section. The reason is that different Internet browsers interpret it variously.

It is possible to implement the applet on Your own website. The example of single frame, which can be displayed, is included in single.html file. The code responsible for displaying the window with camera is presented below.

```
<OBJECT
  classid="clsid:CAFEEFAC-0014-0000-0000-ABCDEFFEDCBA"
  WIDTH = "322" HEIGHT = "264" NAME = "TestApplet" ALIGN = "middle" VSPACE = "0"
  HSPACE = "0"
  codebase="http://java.sun.com/products/plugin/autodl/jinstall-1_4_0-
    win.cab#Version=1,4,0,0">
  <PARAM NAME = CODE VALUE = "pl.npc.kamery.Main.class" >
  <PARAM NAME = CODEBASE VALUE = "." >
  <PARAM NAME = ARCHIVE VALUE = "kamerys.jar" >
  <PARAM NAME = NAME VALUE = "TestApplet" >

  <PARAM NAME="type" VALUE="application/x-java-applet;jpi-version=1.4">
  <PARAM NAME="scriptable" VALUE="false">
  <PARAM NAME = "progressbar" VALUE = "true">
  <!--Here we put text, which will be displayed during loading -->
  <PARAM NAME = "boxmessage" VALUE = "Loading applett, please wait">
  <!--Name of the first server on the list -->
  <param name="Server0Name" value="AL-NET demo server">
  <!--Address of the first server on the list -->
  <param name="Server0Address" value="demo.alnetsystems.com">
  <!--Port number of the first server on the list -->
  <param name="Server0Port" value="9000">
  <!--Login for the first server on the list -->
  <param name="Server0Login" value="demo">
  <!--Password for the first server on the list -->
```

```
<param name="Server0Password" value="demo">
```

```
<!--Similarly for the next servers -->
```

```
<param name="Server1Name" value="tescik">
```

```
<param name="Server1Address" value="address">
```

```
<param name="Server1Port" value="1111">
```

```
<param name="Server1Login" value="login">
```

```
<param name="Server1Password" value="password">
```

```
<param name="DefaultCamera" value="0">
```

```
<!--Language of the messages -->
```

```
<param name="Language" value="ENGLISH">
```

```
<!--Autoconnect after start -->
```

```
<param name="AutoConnect" value="yes">
```

```
<!--It is necessary to repeat all of the parameters for Netscape -->
```

```
<COMMENT>
```

```
<EMBED
```

```
type="application/x-java-applet"
```

```
CODE = "pl.npc.kamery.Main.class"
```

```
CODEBASE = "."
```

```
ARCHIVE = "kamerys.jar"
```

```
NAME = "TestApplet"
```

```
WIDTH = "322"
```

```
HEIGHT = "264"
```

```
ALIGN = "middle"
```

```
VSPACE = "0"
```

```
HSPACE = "0"
```

```
progressbar = "true"
```

```
boxmessage = "Loading applett, please wait"
```

```
scriptable=false
```

```
pluginspage="http://java.sun.com/products/plugin/index.html#download"
```

```
Server0Name="AL-NET demo server"
```

```
Server0Address="127.0.0.1"
```

```
Server0Port="9000"
```

```
Server0Login="login"
```

```
Server0Password="haslo"
```

```

DefaultCamera="0"

Language="ENGLISH"
AutoConnect="yes">
</EMBED>
</COMMENT>
</OBJECT>

```

3.7.3 Video for Java

This panel controls all the image transfer parameters for the cell-phone client applications made for JAVA environment.

Field	Description
Server port	Port number for the connection
Max. Connection count	Max number of simultaneous connections
Picture quality	Quality of transmitted image
Enabled/Disabled	Enables/Disables the video server for JAVA

3.7.4 Dial up

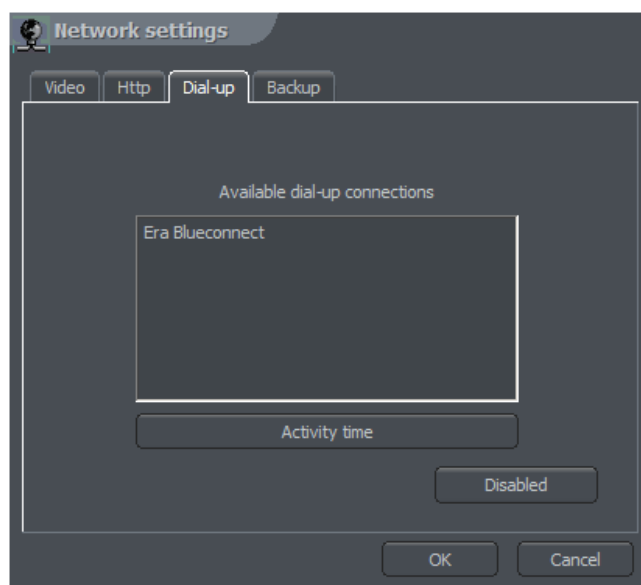


Figure 46: Network settings – dial-up server

Dial up connection can be used when there is no Internet connection or the Internet connection failure occurs. NET PROFESSIONAL allows both making and receiving calls. The bookmark shows available modem connections. If there is no connection on the list, it has to be configured in Windows OS. **Activity time** option allows to define the time range for the modem connections.

3.7.5 Backup

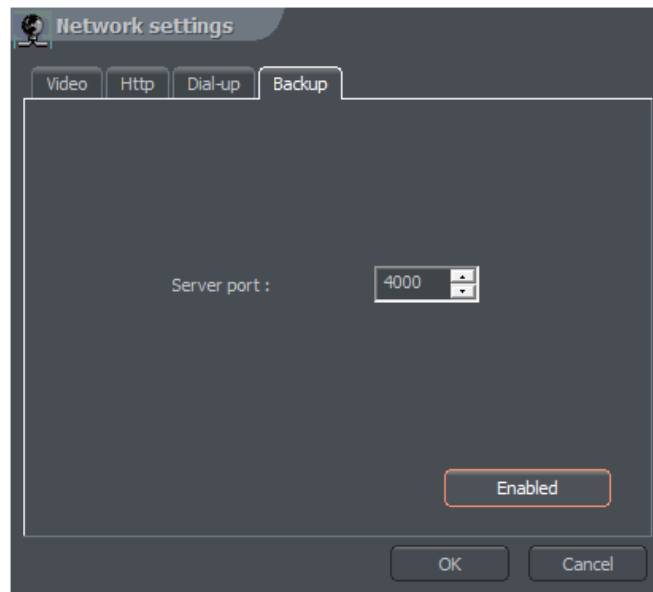


Figure 47: Network settings - Backup

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

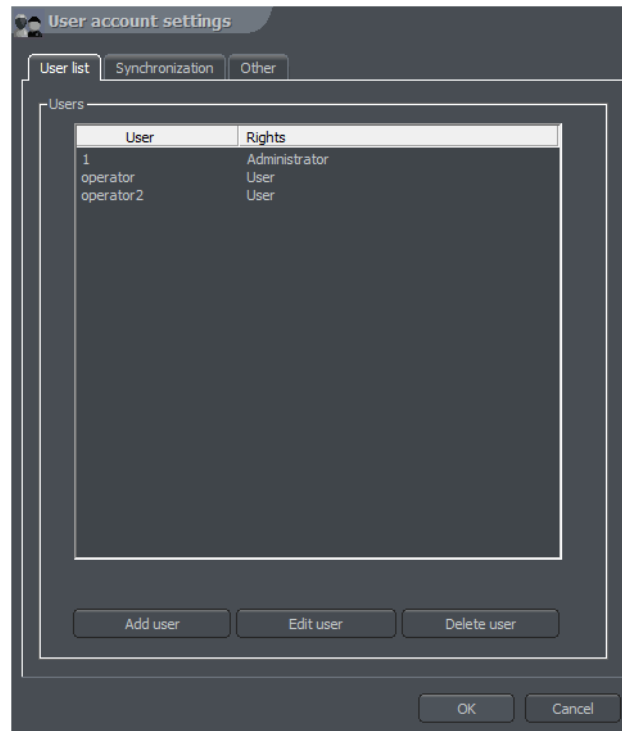


Figure 48: User list

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**.

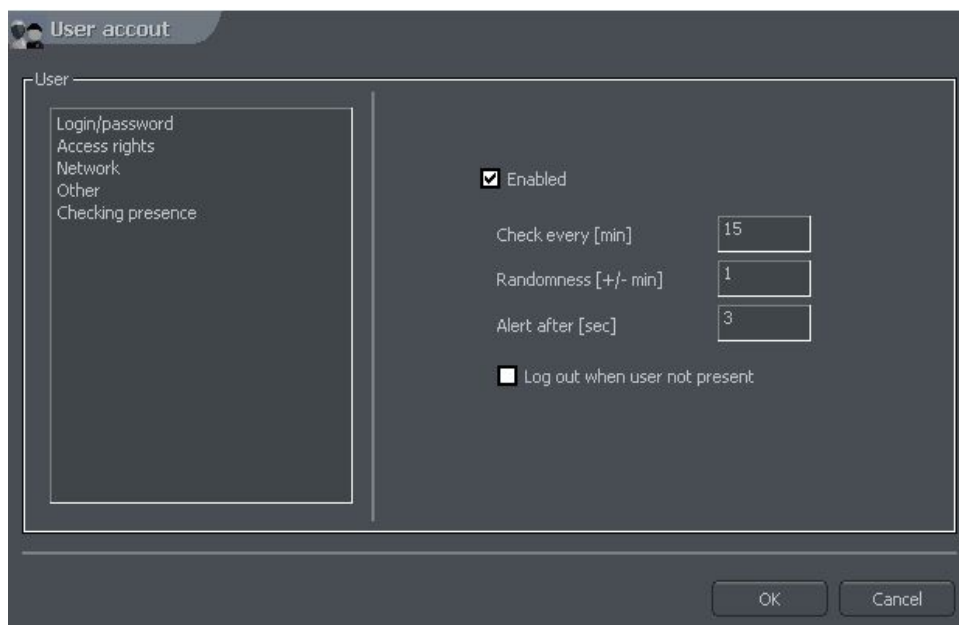


Figure 50: User account – **Checking presence** function

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.

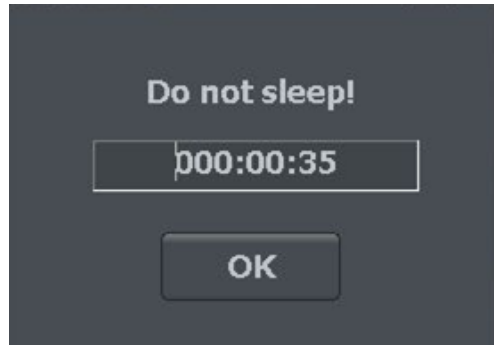


Figure 51: User account –*Checking presence function*

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. 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.

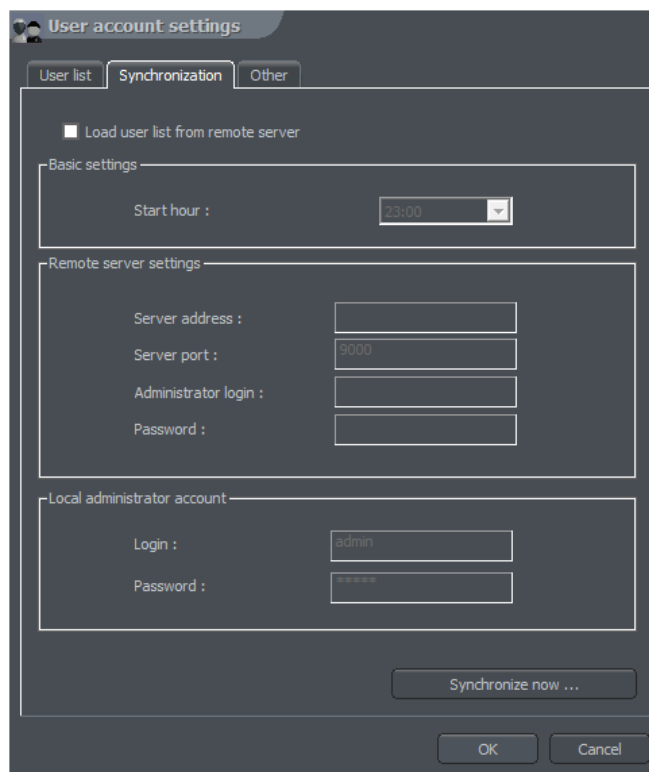


Figure 52: Synchronization

Panel	field	Description
Basic Settings	Start Hour:	Set a fixed hour at which the server will synchronize with the remote server
Remote server settings	Server address:	IP or domain address of the remote server
	Server port:	Remote server port number
	Administrator login:	Administrator login for the remote server
	Password:	Password for the above inputted login
Local administrator account	This will create an extra local account with administrator privileges beside the downloaded user account list	
	Login:	New local administrator login which will be created during synchronization
	Password:	New password for the above inputted login

NOTE: During synchronization all user accounts on the local server will be deleted and replaced with the remote sever user accounts.

3.9.3 Other – inactivity log off

The inactivity log off is located the **Other** tab. It can be activated by selecting **Log off user when inactive**. The inactivity time required for log off can be defined in minutes below.

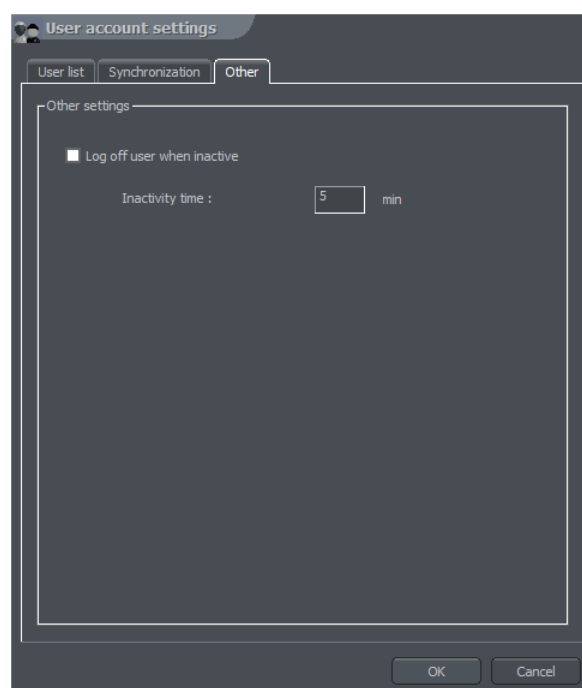


Figure 53: Inactivity log off

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

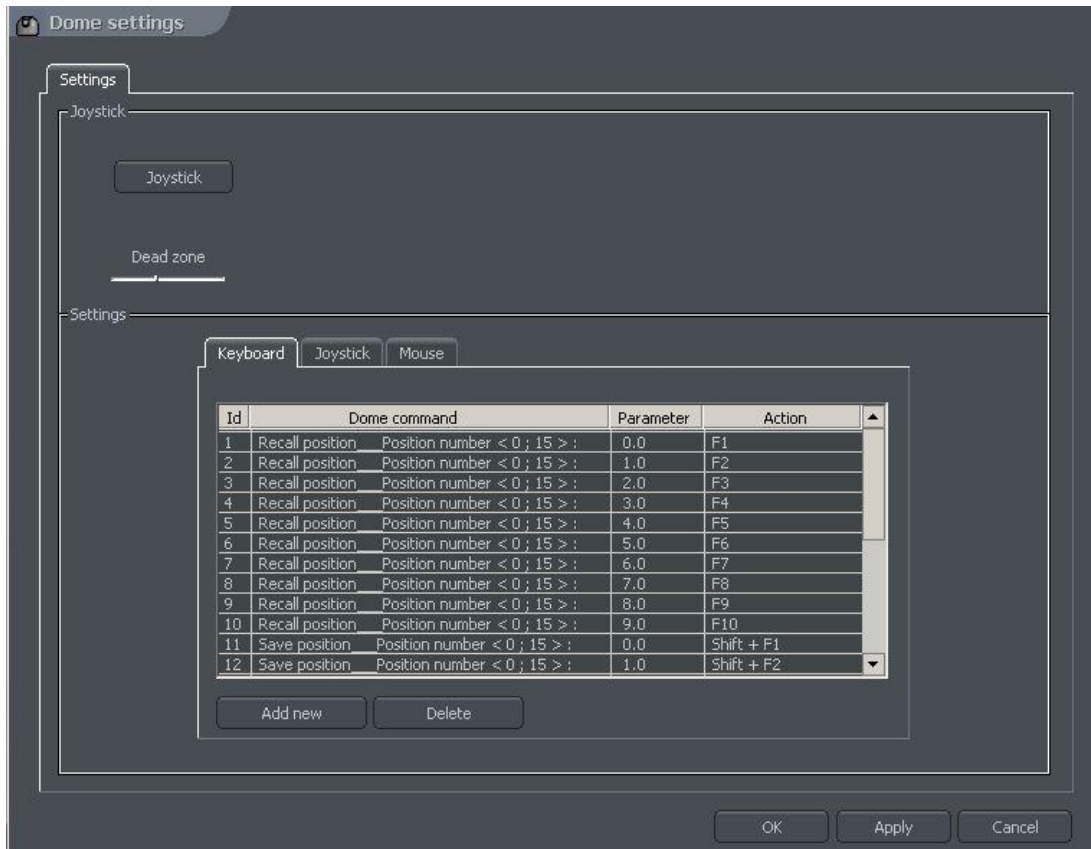


Figure 54: Dome settings

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
Protocol	This panel assigns dome control protocol to selected COM port. In order to add a protocol select COM port, click " Set protocol " button and choose the protocol from the list	
Settings	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	
	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

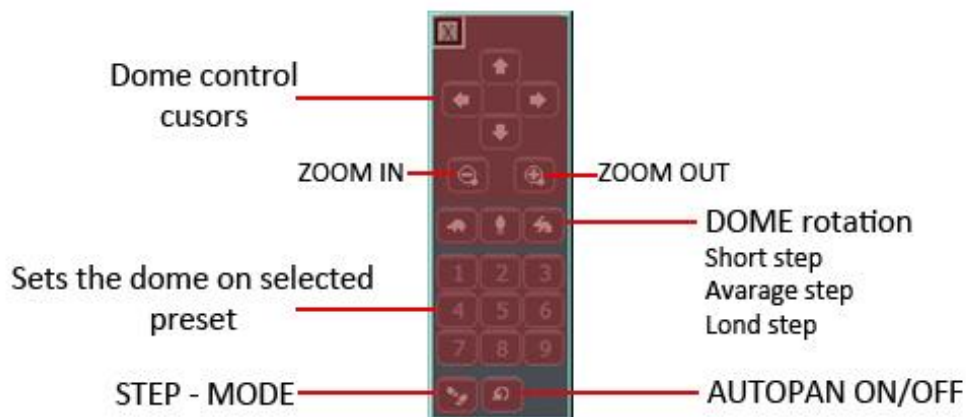


Figure 55: Dome settings

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:

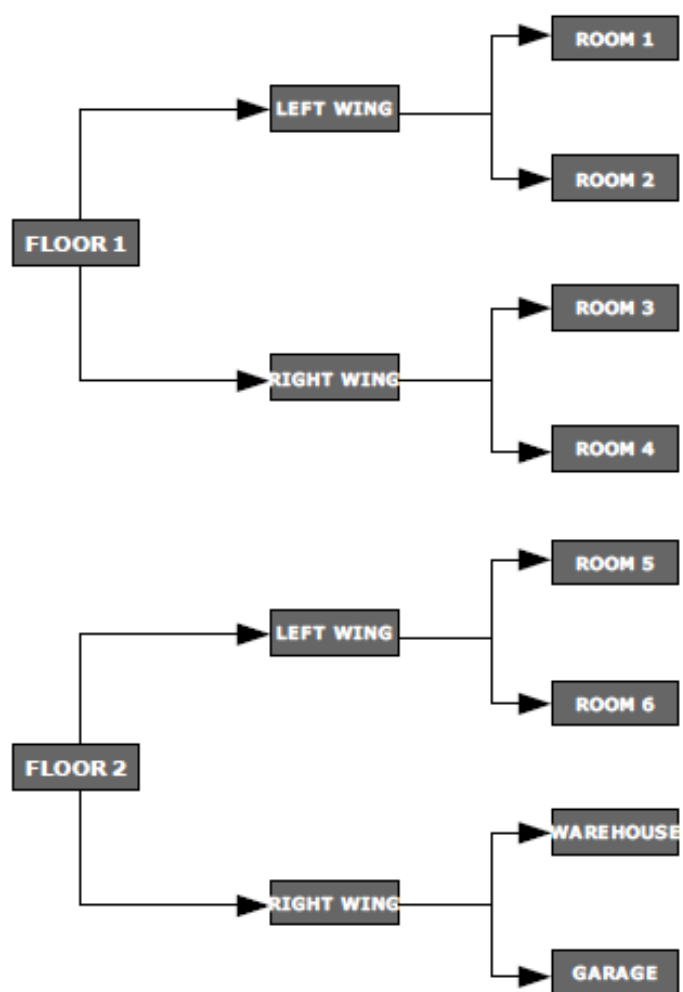
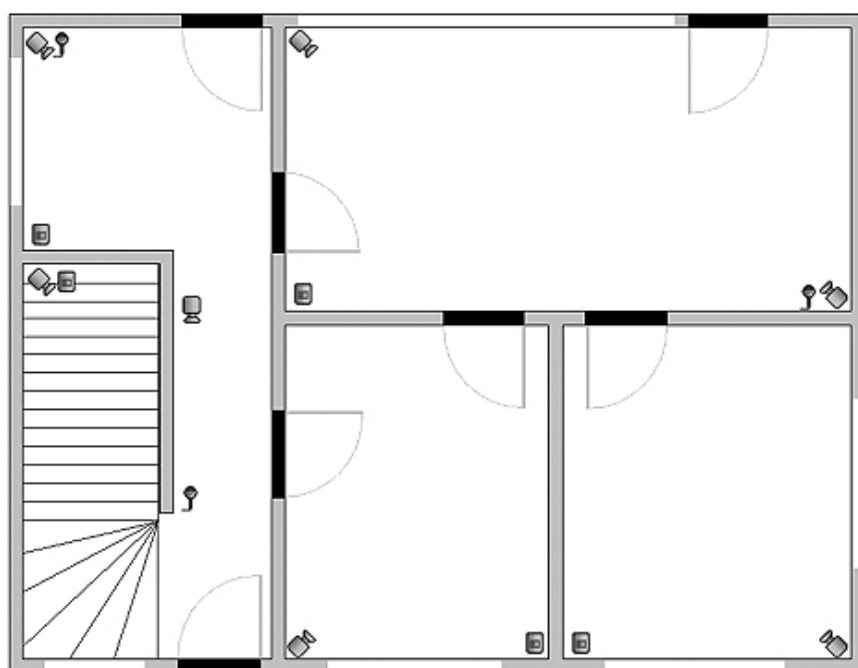


Figure 56: Example of E-map structure



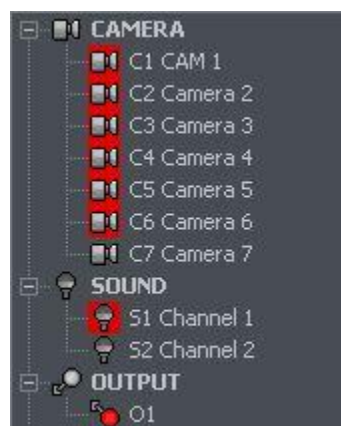
The above figure shows an example of e-map editor with already placed indicators.

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.

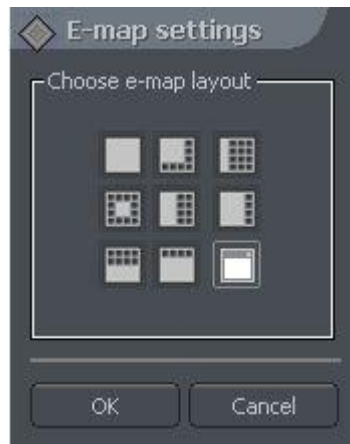
In the top left corner the panel with a tree of objects is placed. In the example above, **Building** object is divided into 2 floors. Different elements are assigned to the floors. Selecting one of the objects will result in displaying its schema. By clicking with right mouse button a context menu will 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 monitor⁴.



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**.

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.

⁴If multidisplay graphic card is in use

Program settings

Mail | Photos | Event log | Snapshots | Display | System settings | Database

E-mail settings (SMTP server)

Server address and port :
 mail.servername.com 25

Sender address : account@mail.servername.com

Login :

Password :

☒ Use secure SSL connection
☐ Direct SSL/TLS mode

Test

OK Cancel

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 Sender field
User	User name
Password	Password necessary for authentication
Test	Click this button to send test message to the address given in Sender field

3.12.2 Photos

Program settings

Mail | Photos | Event log | Snapshots | Display | System settings | Database

Photos

File folder :
 C:\svrSnapshots

Browse...

Printer

Printer name :
 Always ask

Paper orientation :
 Portrait

Print scale :
 80 %

OK Cancel

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

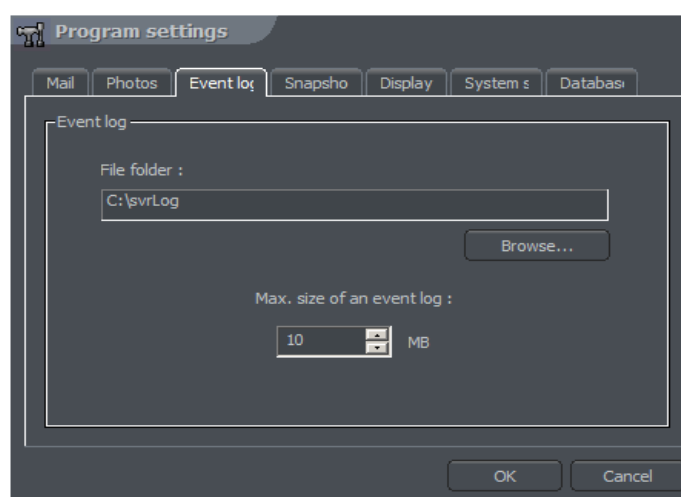


Figure 59: Program settings – event log

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.

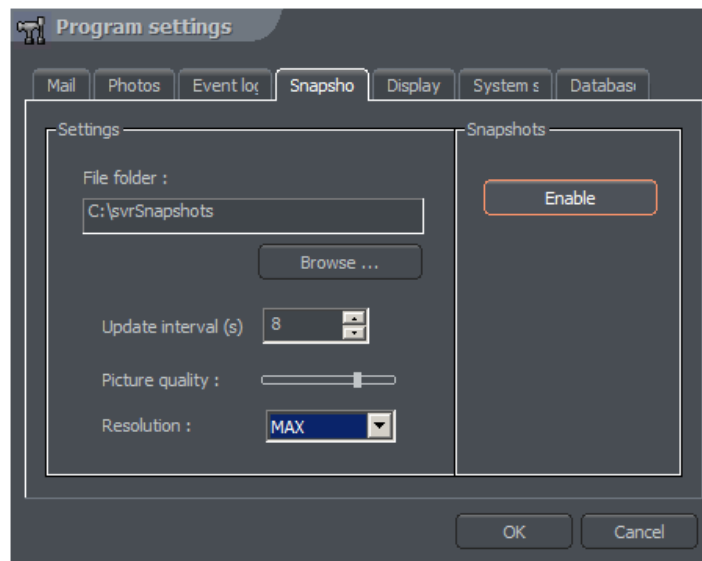


Figure 60: Program settings - Snapshots

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

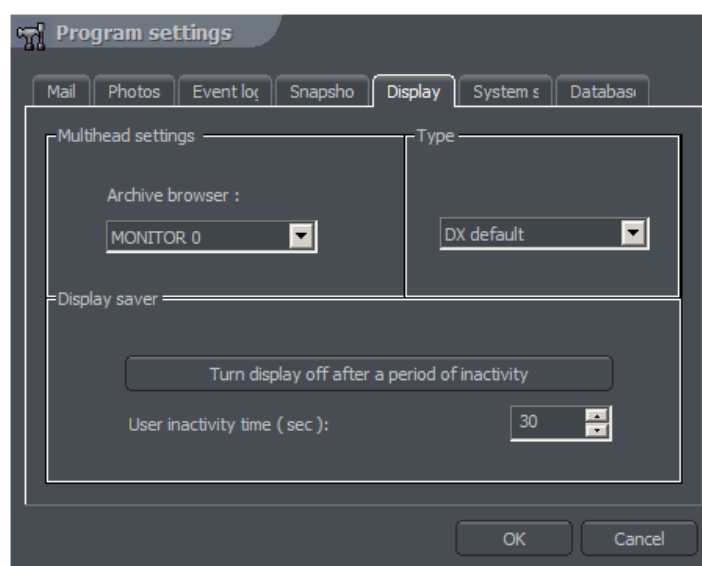


Figure 61: Program settings - Display

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

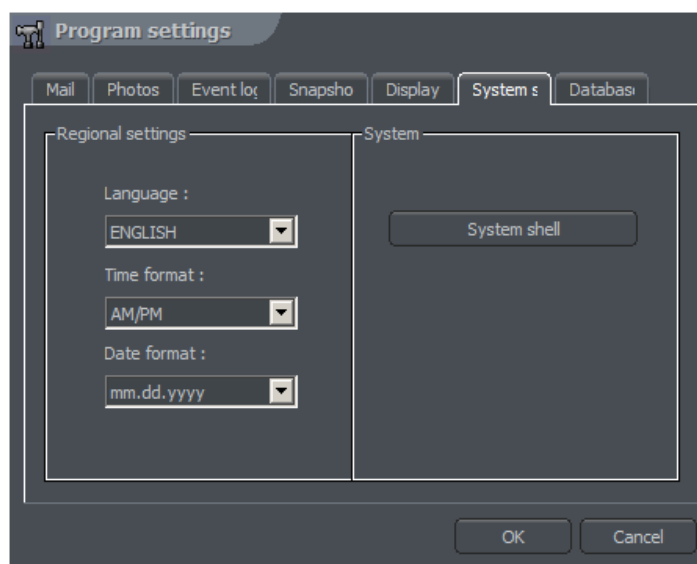


Figure 62: Program settings – System settings

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

3.12.6 Database settings

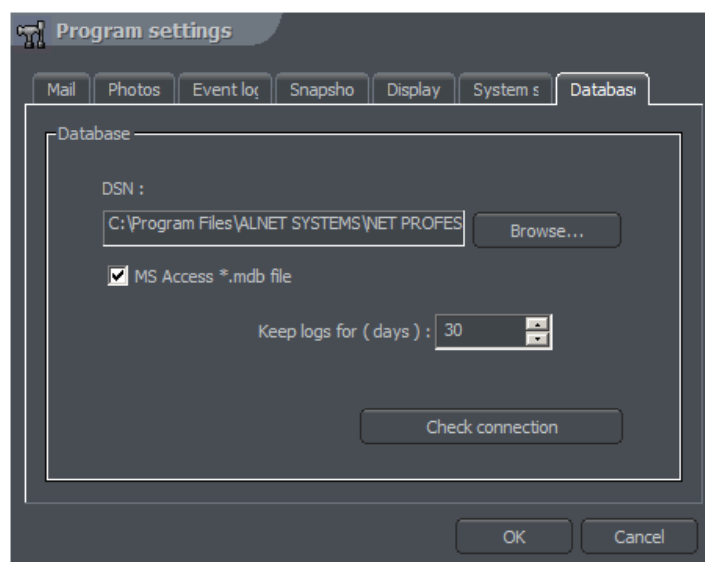


Figure 63: Program settings – System settings

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.

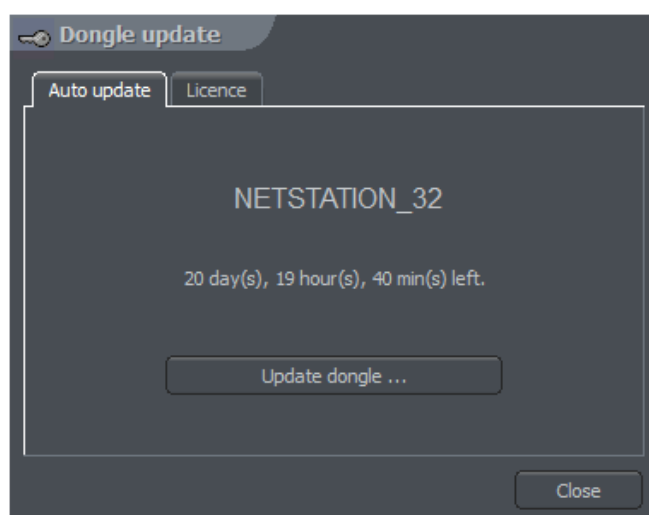




Figure 64: Dongle update

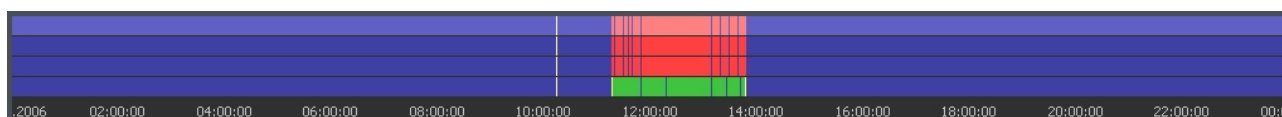
4. System Tools

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



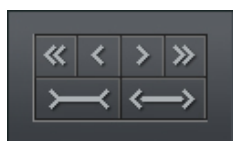
Icon	Description
	Play backwards
	Pause
	Play forwards
	Play speed x2
	Play with maximum possible speed
	One frame step forward
	Shows the bar with audio recordings
	One frame step backward

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 ½ 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 ½ 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 .

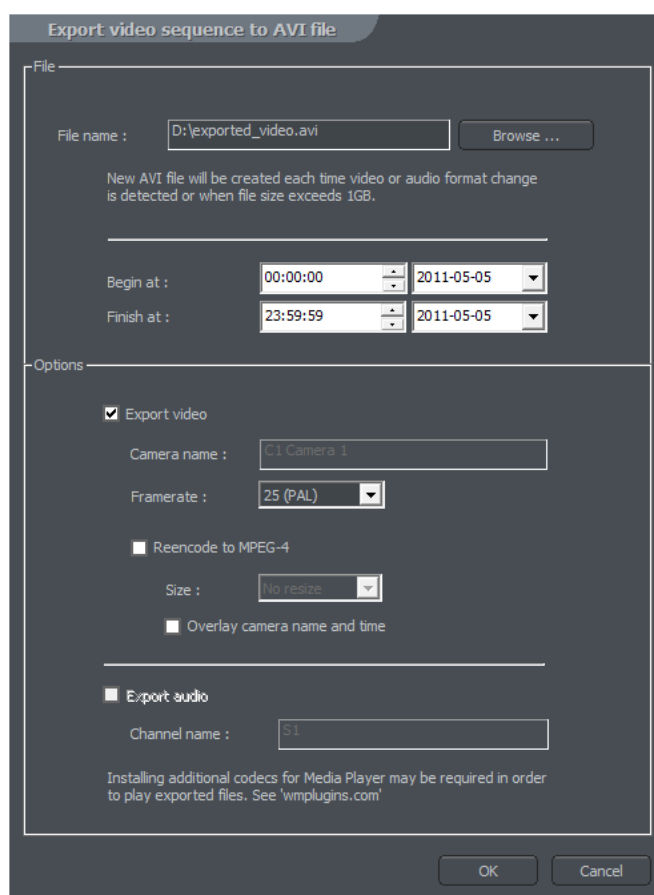
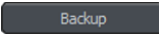


Figure 65 Archive – export to .avi

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:

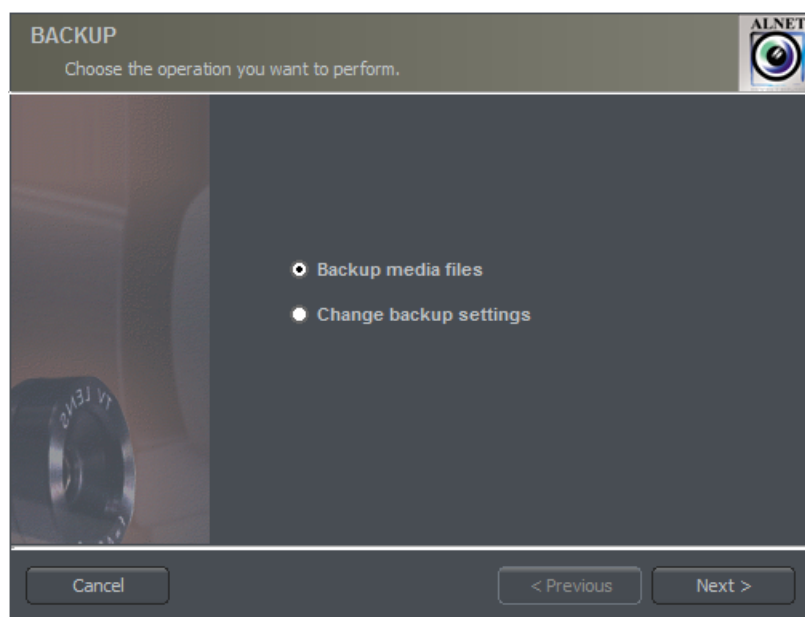


Figure 66: Backup option selection

- ❖ **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.

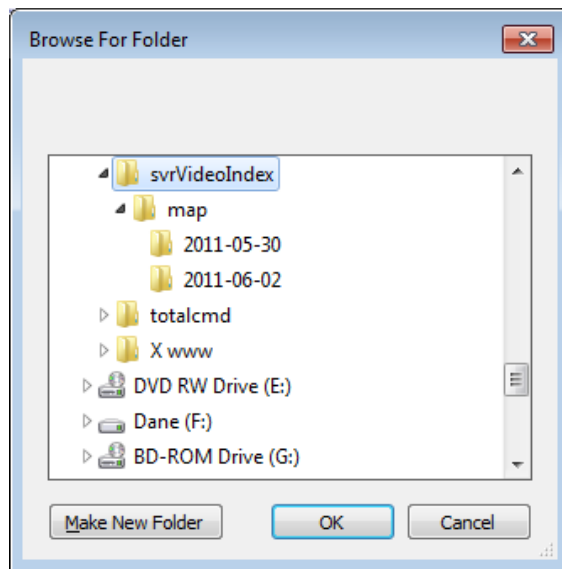


Figure 67 Choosing designated folder

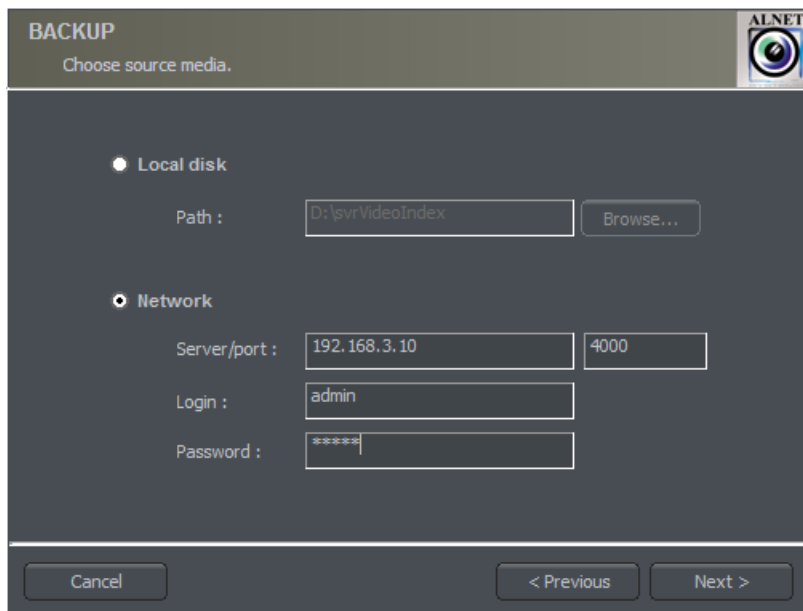


Figure 68 Choosing backup option.

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.

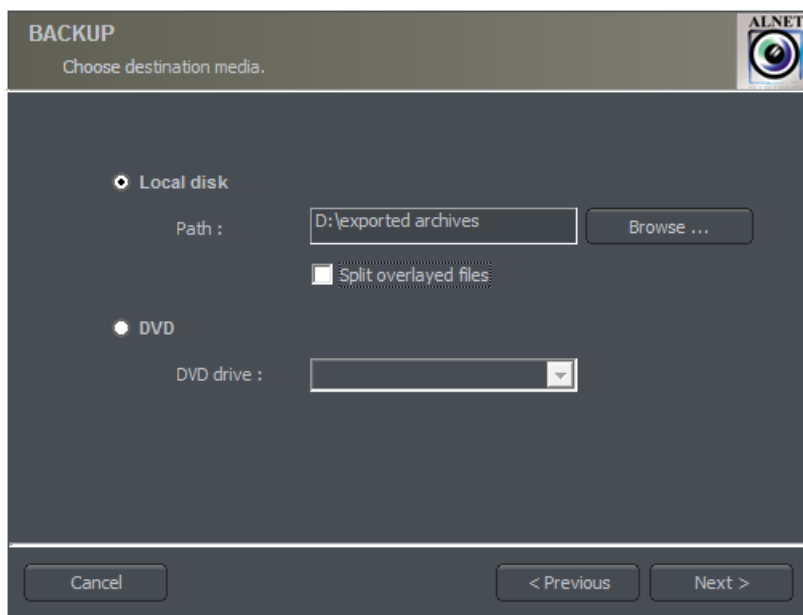


Figure 69: Backup - destination

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.

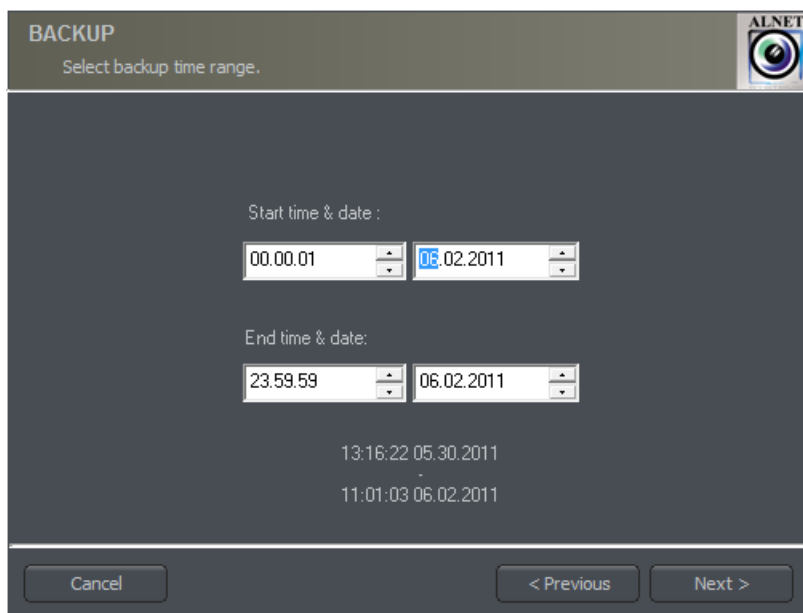


Figure 70: Backup – time range

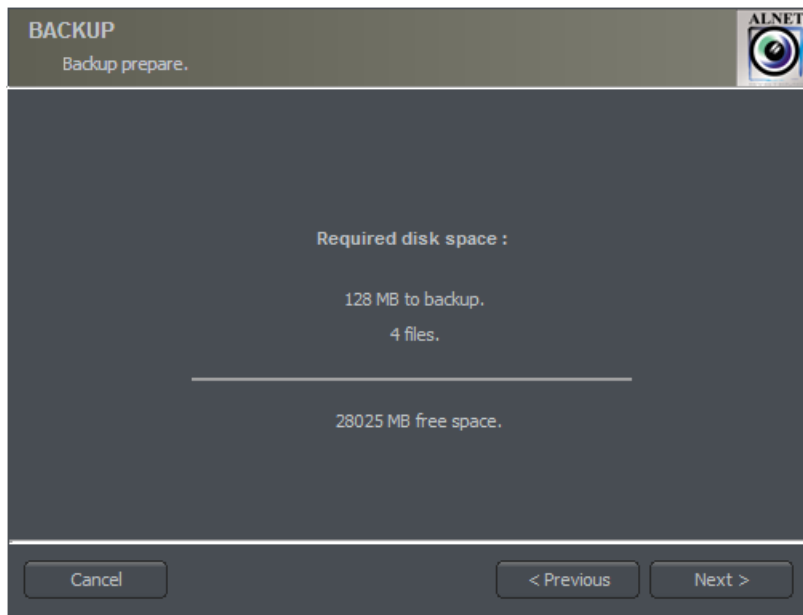


Figure 71: Required disk space for backup.

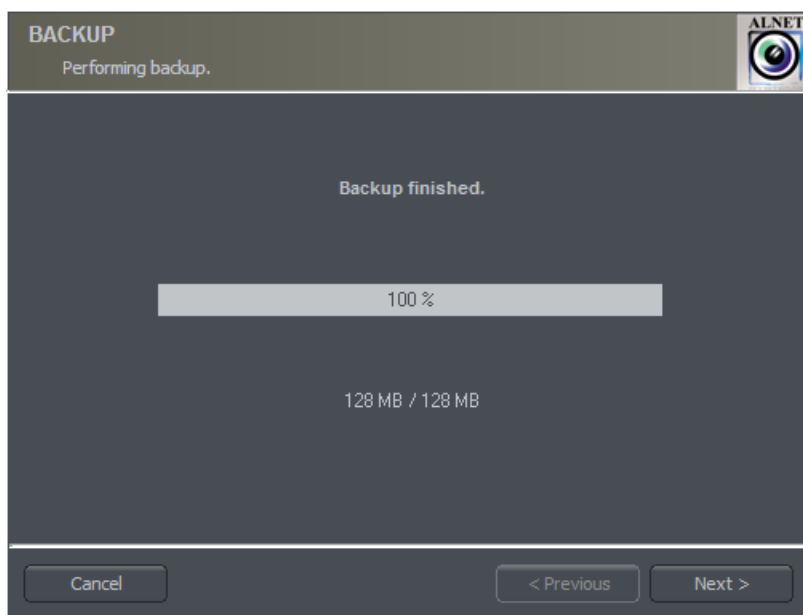


Figure 72: Backup finished

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.

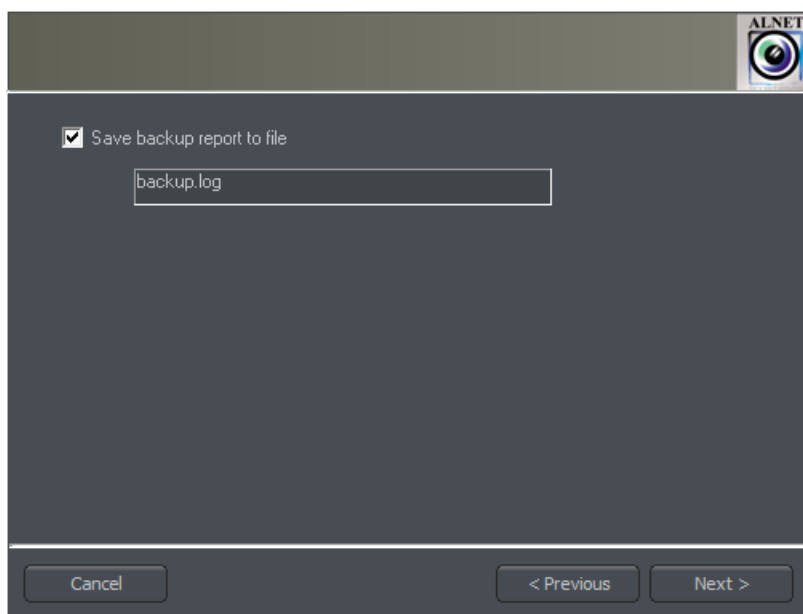
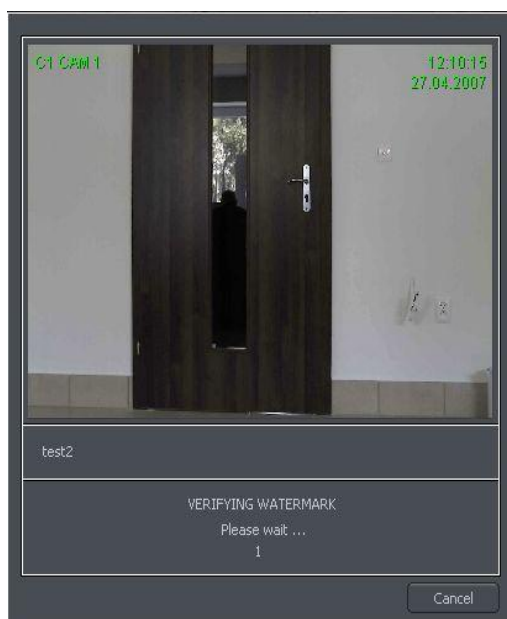


Figure 73: Change backup

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

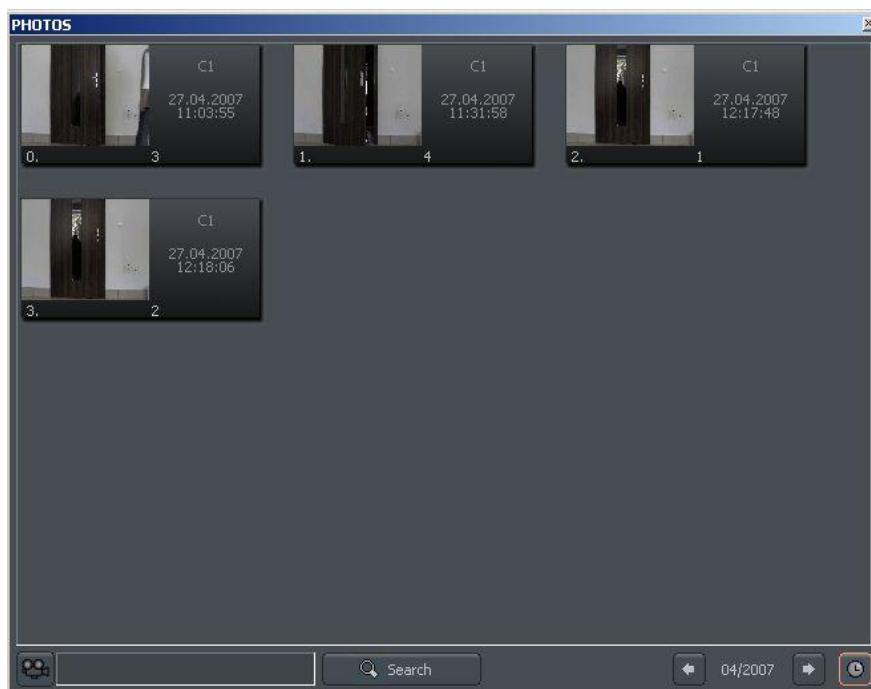
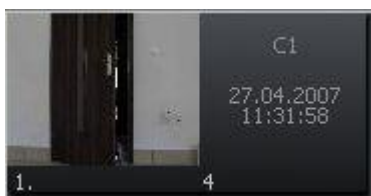



Figure 74: Photo browser

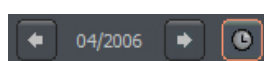
Photo browser displays all the photos taken during the work with the system. It is possible to sort photos by particular cameras and months and search for photos.



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:

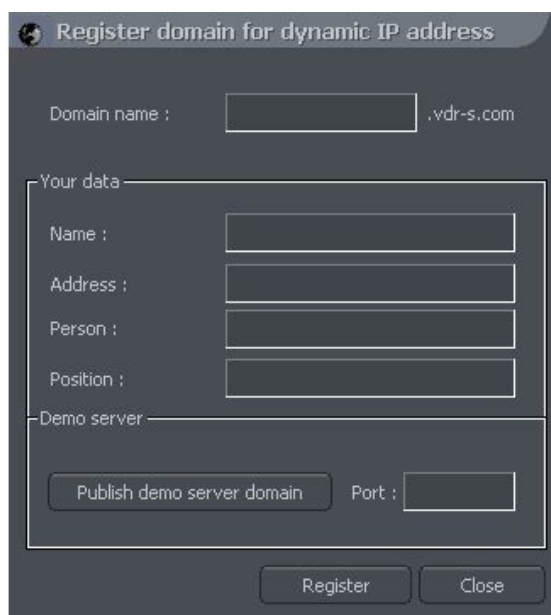


Figure 75: Domain register

Tools -> Register Domain

Field	Description
Domain name	Domain name, for instance server will be shown as <i>server.vdr-s.com</i>
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 <i>demo</i> and pass <i>demo</i> and assigned proper cameras.
Port	Port for NET PROFESSIONAL data transfer



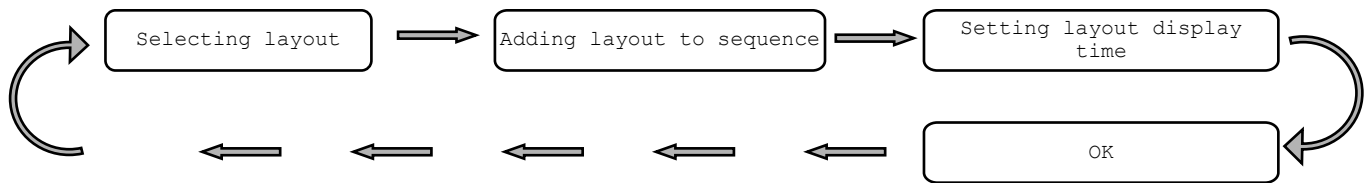
ATTENTION: In order to register the domain it is necessary to enter proper product license number! In other case system will deny to register domain. User can enter license number in About menu.

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

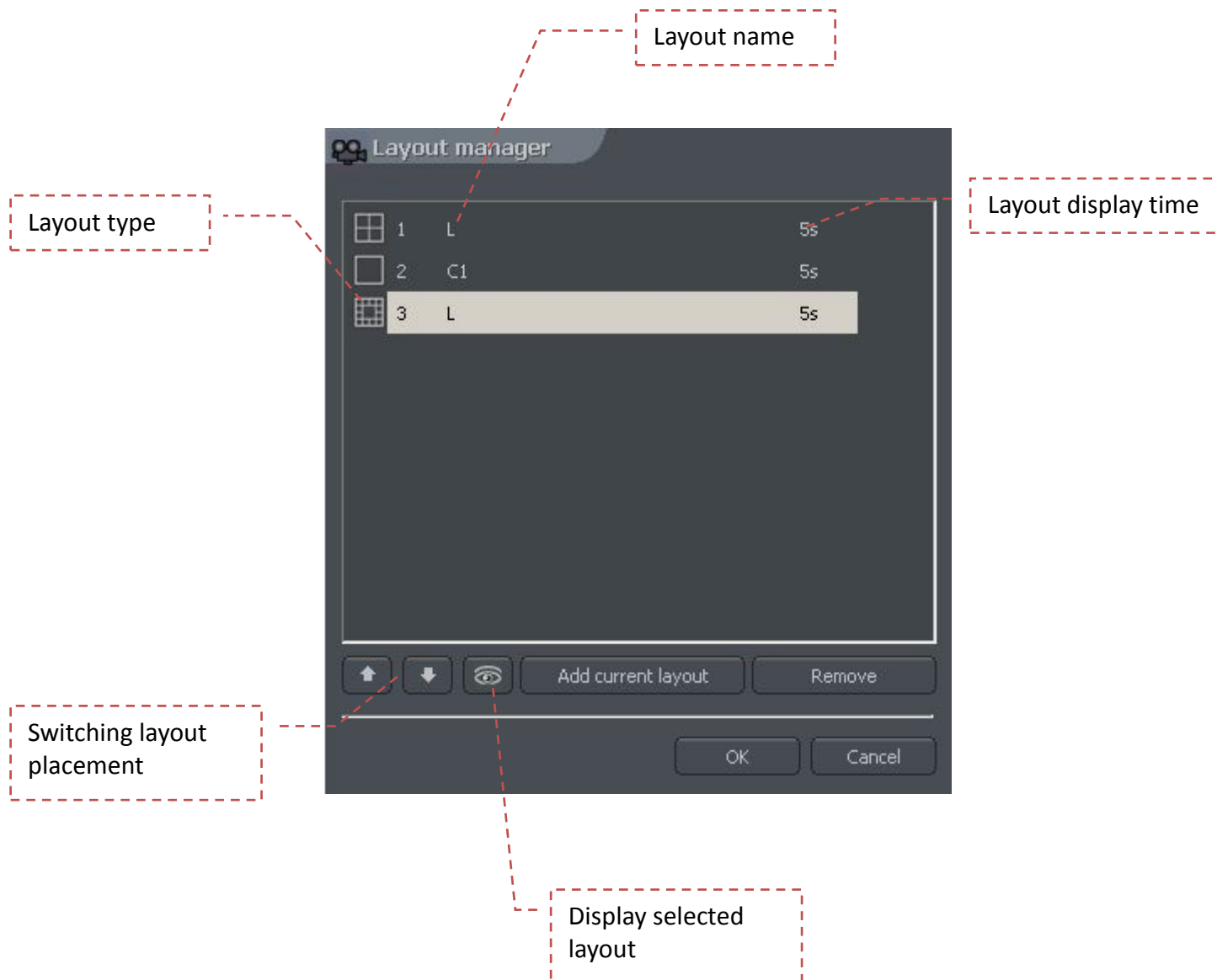
Menu: Tools -> Dynamic layout -> Add current layout

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.

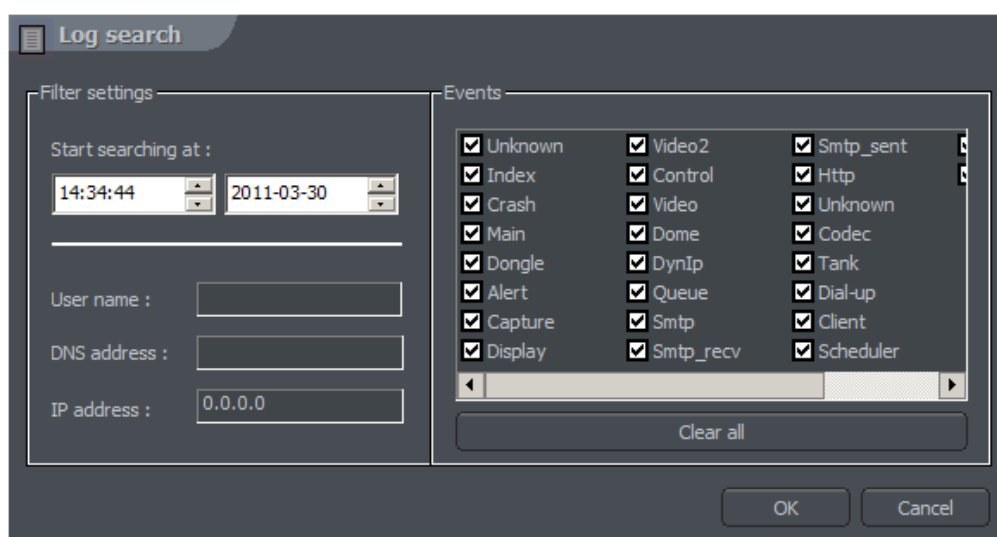


Figure 76: Domain register

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.

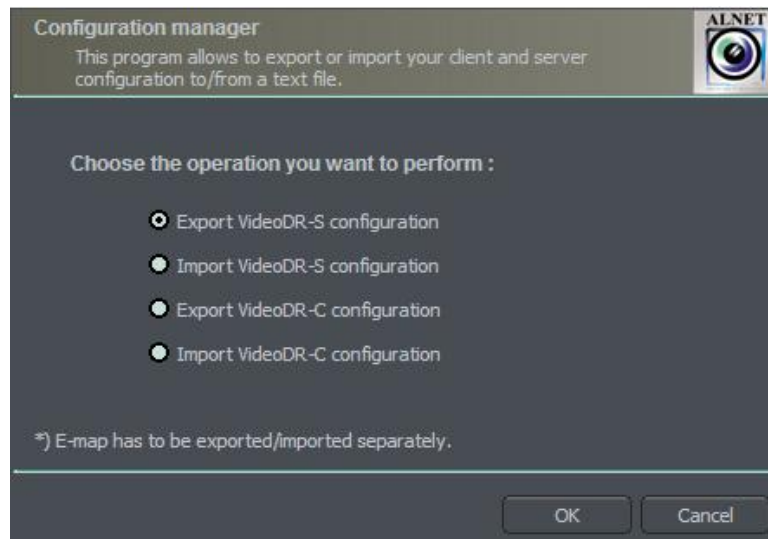



Figure 77: Program configuration Import/Export

 **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