

CMS 4 PROFESSIONAL

Quick guide - operation manual
from software version 3.4.5.43

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1 INTRODUCTION

We present to you the next version of CMS 4 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 systems. Please pay your attention to the possibilities that CMS 4 PROFESSIONAL (CMS 4 in short) brings to life and check how much did we change the system, which points to a whole new direction of our evolution as an NVR supplier. This manual has been divided into 4 main topics: [**software installation**] [**basic cms software operations**] [**cms software configuration**] and [**remote server configuration via CMS**] . Below You will find manual unchanging color markings explanation:

RED COLOUR - Important note / information. Please read carefully.
BLUE COLOUR - Link to website or specific part of manual.

1.1 ABOUT SOFTWARE

The latest version of CMS 4 (Central Monitoring Station) is designed to be compatible with all Video Management Systems design by Alnet Systems - NetStation NetHybrid and NetHybrid HD.

New CMS 4 software was designed completely from scratch based on nearly 15 years of experience and more than 100,000 installations worldwide. User-Friendly design, layouts, advanced scheduler and script editor make the CMS 4 look the way you want, and work the way you need.

CMS 4 is a combination of ease of use with virtually unlimited configuration possibilities. Flexible design provides freedom for easy adjustment of the configuration for both small and large installations with thousands of cameras deployed throughout multiple locations. Expanded Scheduler and script editor allow very advanced alarm and tasks settings and action which helps facilitate extensive surveillance of CCTV installations.

Software also allows for nearly unlimited number of servers accessed at one time with display of 144 cameras in one layout on each supported monitor. Thanks to that and nearly free layout manipulation options for each monitor independently, users can create very sophisticated yet still easy to operate monitor walls

Please keep in mind that this manual was written when a specific software version was released. Some options places or availability may vary depending on Your current software version installed.

1.2 REQUIREMENTS

Below You can find minimum and recommended requirements for CMS 4 software.

CMS 4		
SYSTEM REQUIREMENTS	MINIMUM	RECOMMENDED
Operating System	Windows 8.1 64-bit,	Windows 10 64 bit
Motherboard	Intel chipset based (ASUS,Gigabyte, Intel)	
Processor	5th generation Intel Core CPU	8th generation Intel Core CPU or higher, Intel Xeon Gen 2 or higher
MEMORY	8 GB	16 GB or higher
VIDEO CARD	Nvidia Quadro p620 / Nvidia GT 710 or higher	

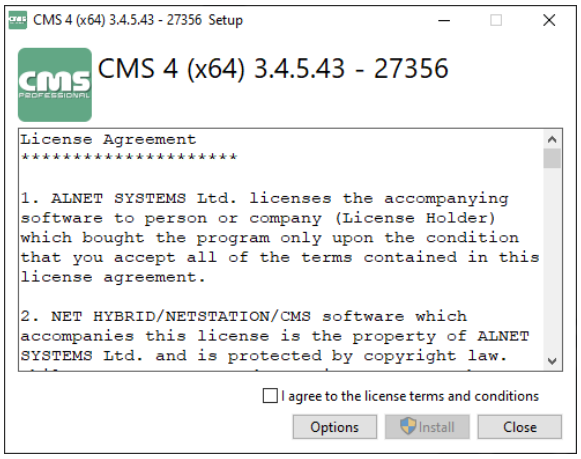
Note: We recommend using Nvidia graphic cards due to fisheye cameras dewarping function. Available monitor count depends on the graphic card model and drivers support.

2 SOFTWARE INSTALLATION AND FIRST STARTUP

Please close / disable all antivirus software and close all other software before proceeding. All installation files can be found on our webpage **WWW.ALNETSYSTEMS.COM** in the DOWNLOAD section.

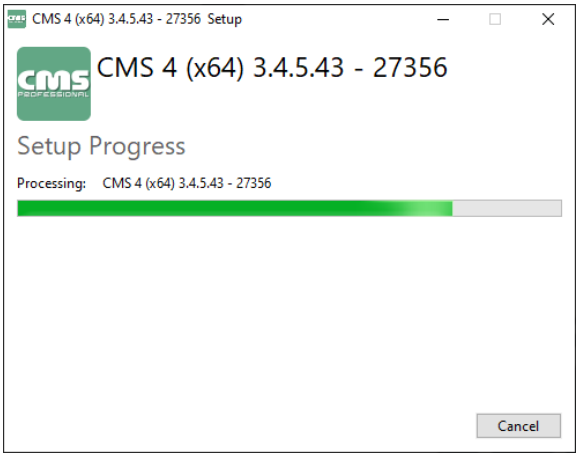
2.1 INSTALLATION PROCESS

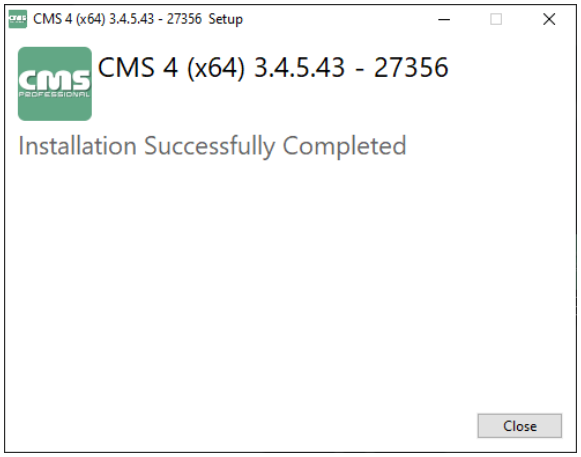
Installation process is easy and requires only a few simple steps:



STEP 1 - After starting the installer please read the License Agreement and select the checkbox in order to be able to proceed with the installation. Click Install when ready.

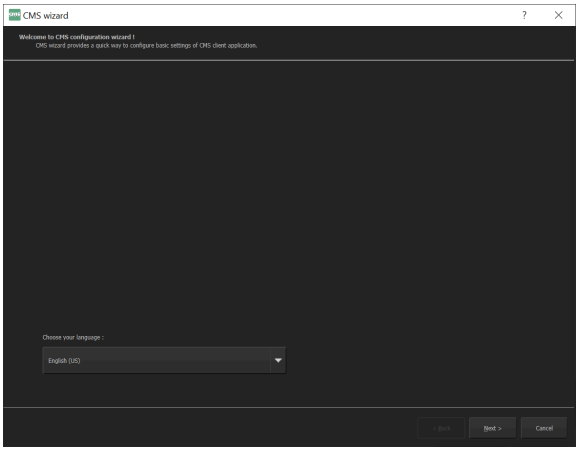
STEP 2 - Please wait until the installer finishes the initial software setup.

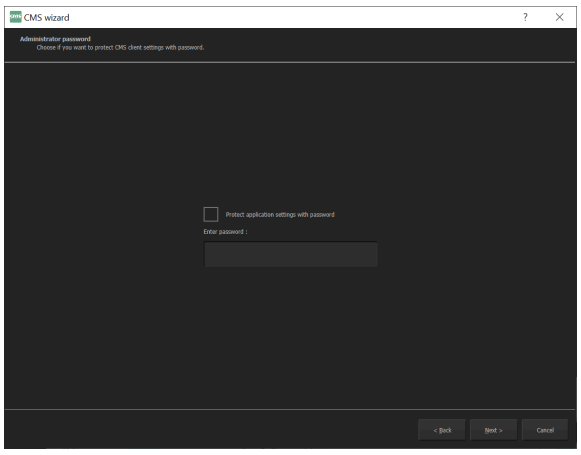




STEP 3 - When the process finishes, You will receive the confirmation information and the installer will immediately initiate the CMS4 wizard. Click close to end the installer (it will not close the already opened wizard window)

STEP 4 - In the first step of wizard please choose the language You want to use in CMS 4 software (can be changed later on in software settings)

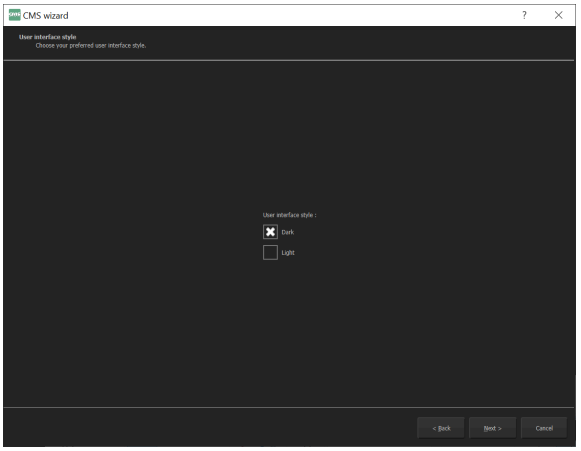


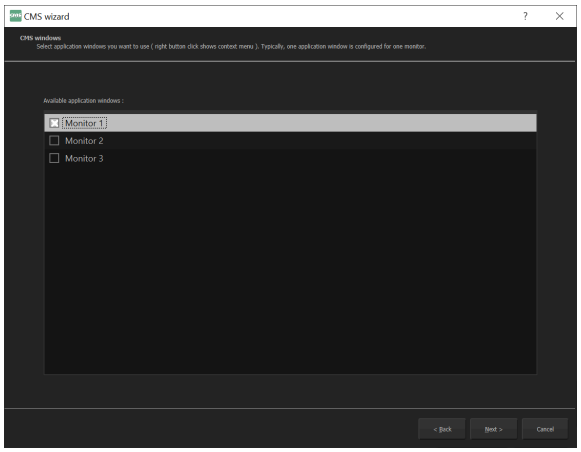


STEP 5 - You can specify the administrator password (not required). If it is provided, You will need to use it each time You enter the Administrator mode in CMS 4 software.

NOTE: Please keep your password stored safe. It cannot be retrieved and the only way to delete it is to remove the whole CMS configuration folder including profile list.

STEP 6 - Here You can choose the dark or light theme for CMS 4 (default is dark)

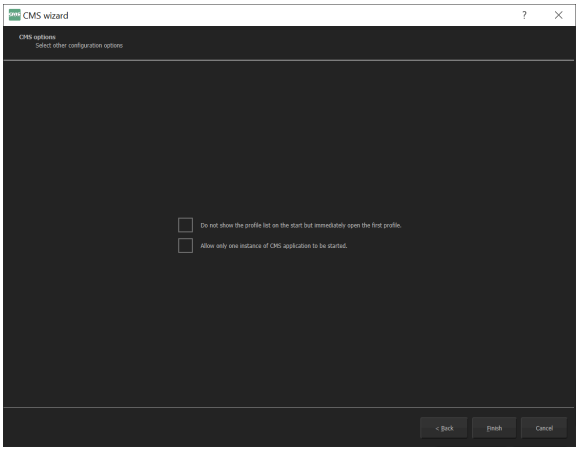




STEP 7 - Next is monitor setup. Here You can specify on how many (and which) monitors will CMS 4 be displayed.

Note: Clicking monitor name will display a small on-screen window on it. This allows you to identify where the monitor is located.

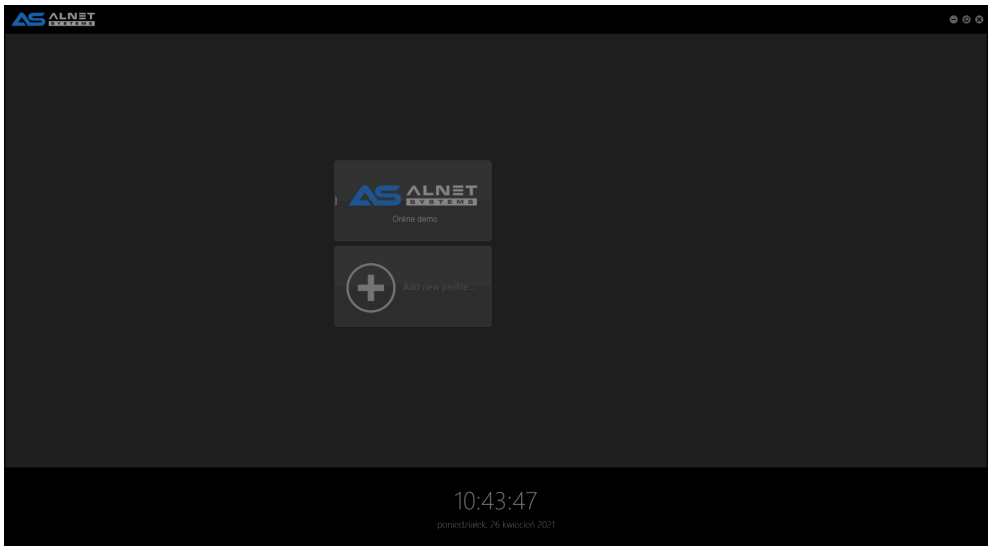
STEP 8 - Final step in wizard. You can choose not to show the profile list and start directly with the first profile after launch of CMS 4. Also there is a block option which prevents the possibility to start more than one windows process of CMS 4 client software.



Note: Wizard can be launched again any time by using “CMS 4 wizard” from START menu or by creating a shortcut on desktop to file CMS.exe and adding a parameter “-wizard” at the end of the “Target” line.
Example of line: "C:\Program Files\ALNET SYSTEMS\CMS 4\CMS.exe" -wizard

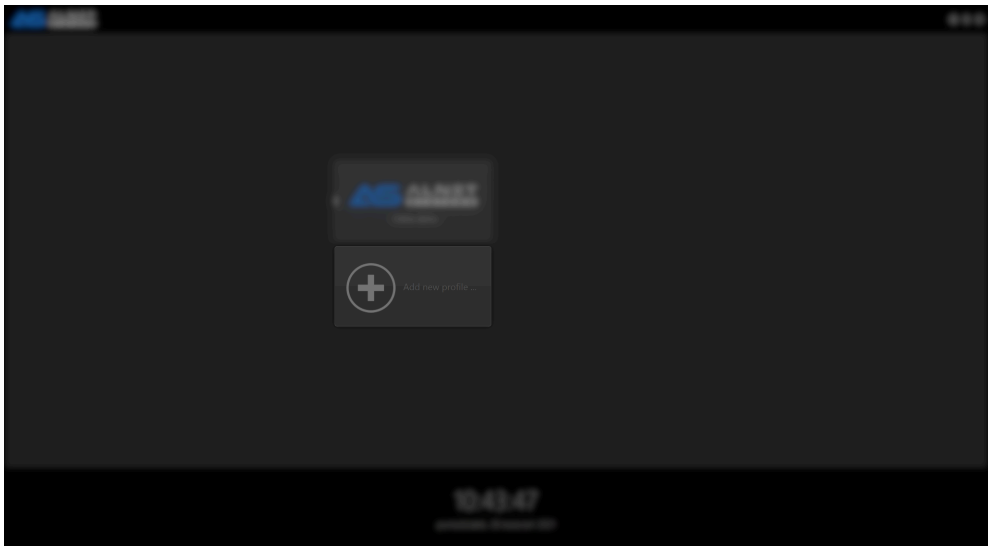
3 CMS - SOFTWARE BASICS

3.1 PROFILES LIST

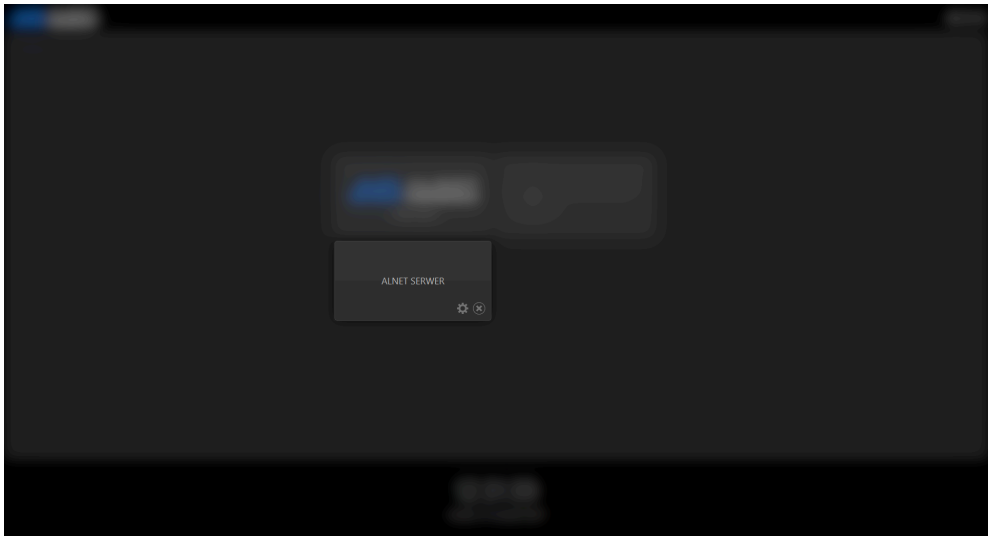


Profile list is the server address group book. Each Windows user has its own profile list stored in C:\Users\<current user>\CMS\ directory. Every profile has its own configuration in terms of layouts, connected servers etc. Profile list can be easily moved to another client station by simply copying the CMS folder to another windows user on the same or different machine with saem CMS 4 software version.

In order to create a new profile You start by clicking “Add new profile …” button.



You can EDIT or DELETE the existing profile by moving the mouse on it and clicking the chosen button.

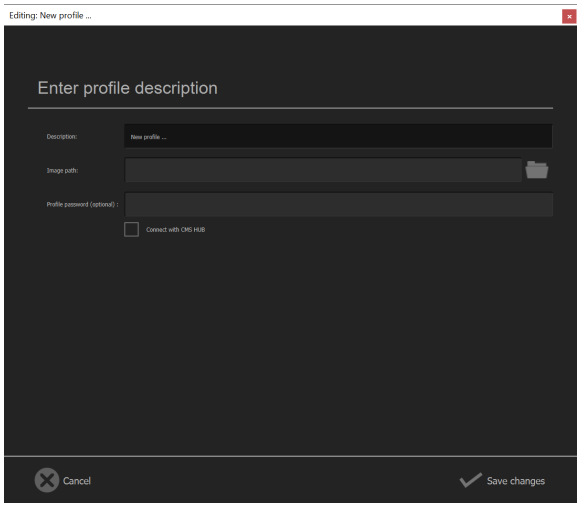


Note: Deleting the profile is irreversible. Make sure You have a backup of the CMS folder before doing so.

Note 2: If You delete the CMS folder from the C:\Users\<current user>\ and start the CMS 4 application, You will get the default settings just like You would start the software for the first time.

3.1.1 CREATING BASIC PROFILE

When adding a new profile the window will pop-up which requires some basic information.



DESCRIPTION - This is the profile name which will be shown in main window after startup

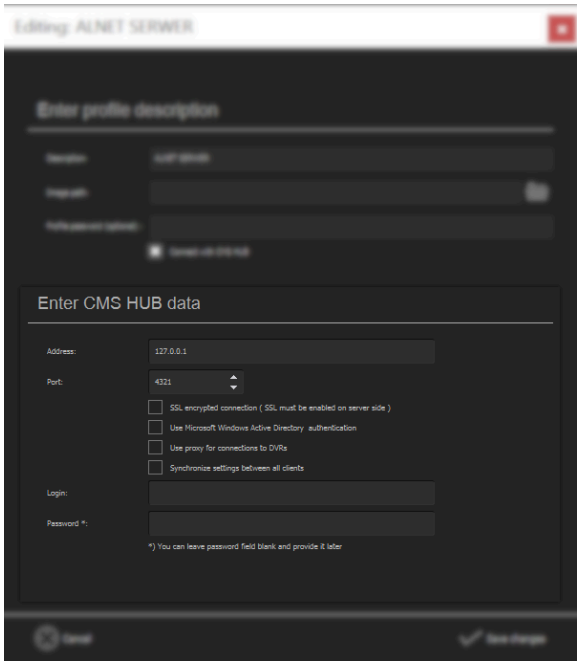
IMAGE PATH - Graphics file with company logo or other visual representation for distinguishing of profiles.

PROFILE PASSWORD - Optional password that will be required to input in order to modify or connect with the selected profile. Leaving this field blank will result in direct access to the profile after clicking.

In order to create a basic profile just type the name of the profile in the description and click “save changes”. This will close the profile creator and start it immediately.

3.1.2 CONNECTING WITH CMS HUB

If Your project includes CMS HUB software, You need to include additional configuration options before You can start.



REQUIRED FIELDS

ADDRESS - IP address or Domain name of CMS HUB server

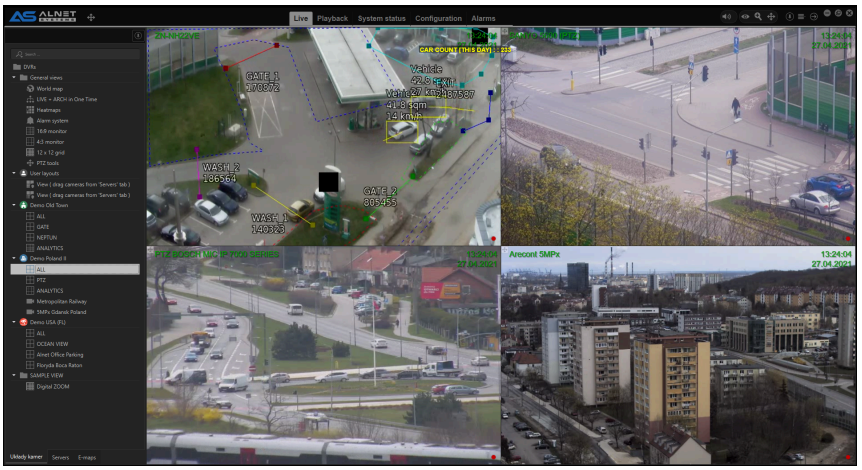
PORT - communication port of CSM HUB

OPTIONAL FIELDS

LOGIN - CMS HUB user login
PASSWORD - CMS HUB user password

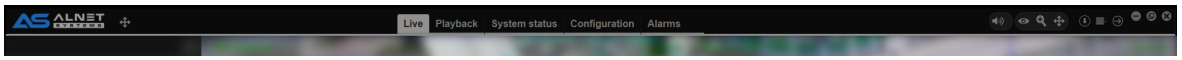
NOTE: Additional connection settings like SSL encryption or Active Directory support must be checked according to the current on-site settings.

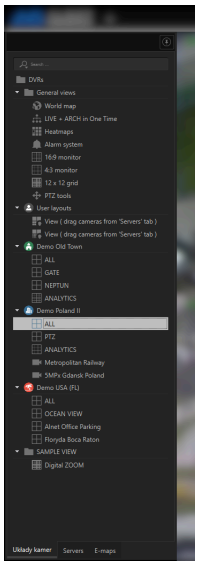
3.2 SOFTWARE GUI DESCRIPTION



Main window of CMS 4 software can be divided into 3 segments, TOP BAR, LAYOUT VIEW and SIDE PANELS.

TOP BAR





SIDE PANEL



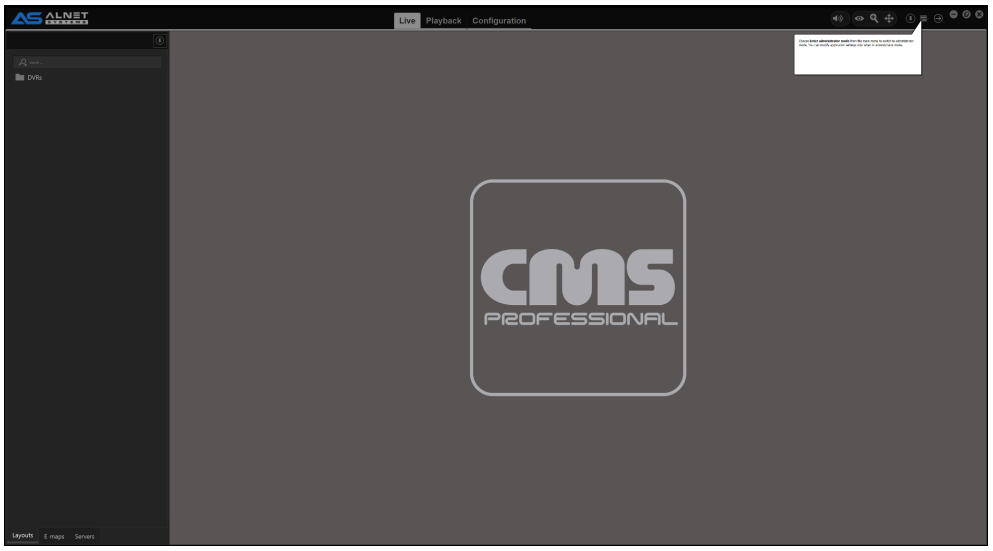
LAYOUT VIEW

Each of the segments allows for different tasks and can be additionally modified with the configuration tools.

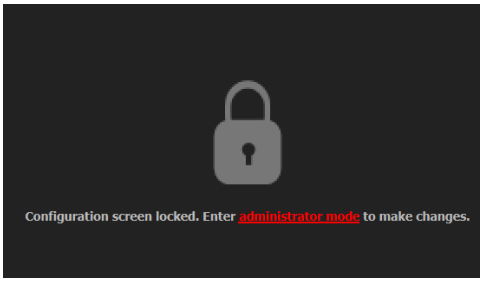
Note: Most of the elements on the GUI can be moved / added or deleted but requires to be in **administrator mode** in CMS 4 application.

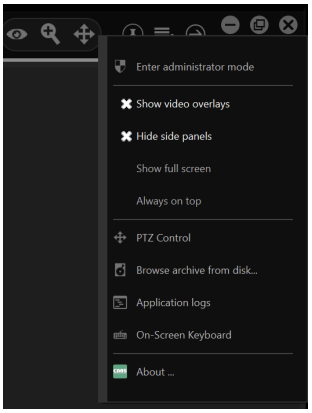
3.3 ADDING FIRST SERVER

At this point You should see something similar to the screenshot below. Empty layout sections with default GUI configuration. You should also see some first time tooltips showing which helps to guide You through the first steps.



To actually get video streams from the NetStation software on the CMS 4 You need to add the server to the DVR list.



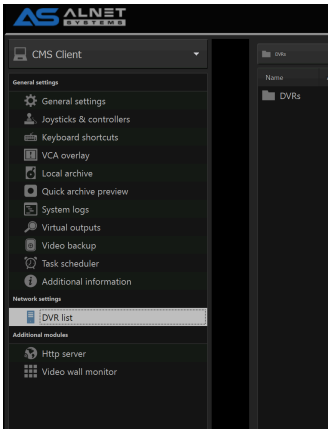


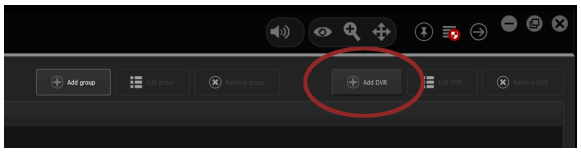
STEP 1 - Go to “Configuration” and enter administrator mode.

It can done either by going to “Configuration” tab and clicking red text/button or by going to MENU and clicking “Enter administrator mode”

STEP 2 - Then from the left sidebar select “DVR list”

NOTE: Other CMS settings visible in this menu are described in **CMS CLIENT CONFIGURATION**.

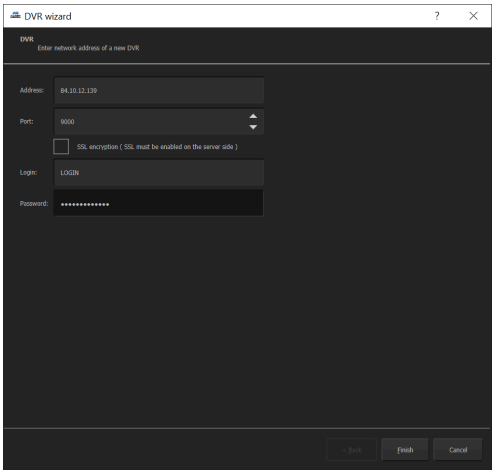




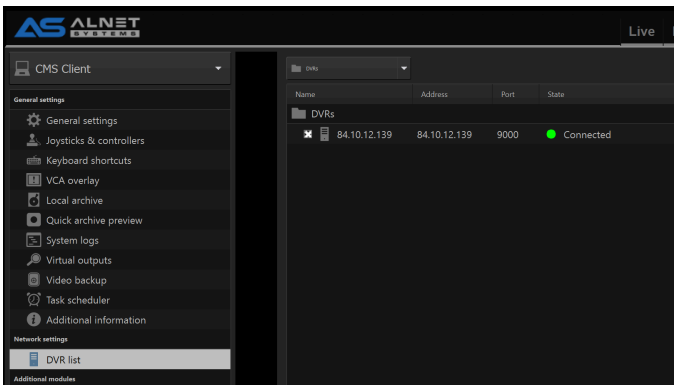
STEP 3 - In the main window click “Add DVR”.

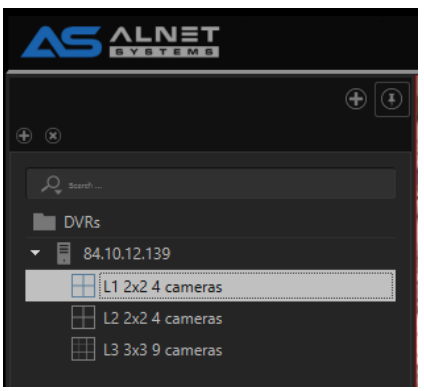
You can also create an additional DVR group which will also automatically be shown in all **layout view tabs**.

STEP 4 - Type the IP address or domain under which You have the NetStation server software running. Also make sure to type the correct communication port, login and password.



After successful connection with the server You should see the green icon with status “Connected”. If adres, port login or password are provided, You will get a red icon with additional information. Also software will automatically create predefined camera layouts.





3.4 BASIC OPERATIONS

In this chapter You can find a basic description of CMS 4 software main sections as well as basic operations You can do with them. Information provided here is for first time users but can also be used as an “basic operation manual” for clients station as a tutorial / operation guide for onsite staff members.

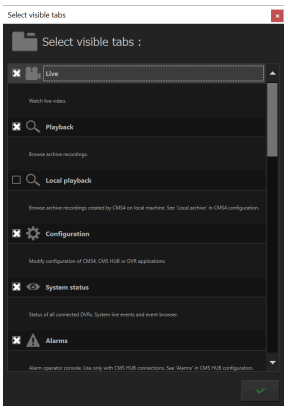
3.4.1 TOP BAR TABS AND SIDE PANELS

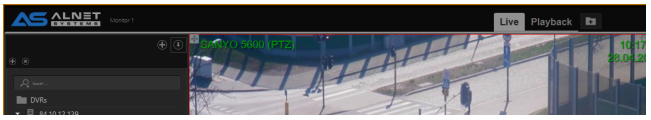
As You already know from the 3.2 section of the manual, the main window of CMS 4 software can be divided into 3 segments, **TOP BAR**, **LAYOUT VIEW** and **SIDE PANELS**. Top bar and side panels are functions / tool containers and can also include additional operational buttons such as alarm output switch for easy and fast operations.

3.4.1.1 TOP BAR

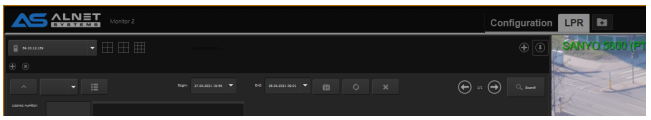
Top bar is a place where You can show or hide CMS 4 function tabs, each with its own predefined sidebar layouts for easier access. In order to show or hide function tabs You need to be in **administrator mode** and simply click the “add”  button. Next in the list You can select / deselect the chosen functions. Position of each tab can be changed by simply clicking and holding the left mouse button and moving the function to the chosen place in line.

Top bars are treated for each monitor individually. It means that each monitor can have a different set of visible tabs. This makes it possible to easily divide the monitors according to their purpose.





MONITOR 1 -LIVE AND PLAYBACK

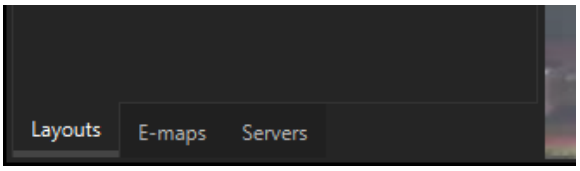


MONITOR 2 - LPR PREVIEW AND CONFIGURATION

Note: Some functions require connection with CMS HUB for proper operation and might not work regardless of availability (for ex. System Status will not show any results without CMS HUB connection). Please check the detailed TOP BAR TABS description of chosen function for requirements.

3.4.1.2 SIDE PANELS

Side panels provide additional workspace for modules and / or other user interface elements which can be dragged from TOOLBOX or be added as the new tab in the sidebar. By default You have one sidebar pinned on the left side of the screen with 3 most commonly used tabs. Also the server tab is used by users without administrator rights in CMS 4 to change cameras on the user layout (see **3.4.3 CAMERA LAYOUTS** for more info)



Layouts - Set of predefined or created layouts and groups organized by user for easy switching between camera groups

E-maps - Access to the e-map module (same function available from the top bar tab list)

Servers - Easy access to the allowed cameras, IO's and any other additional modules components (available elements depending on user rights)

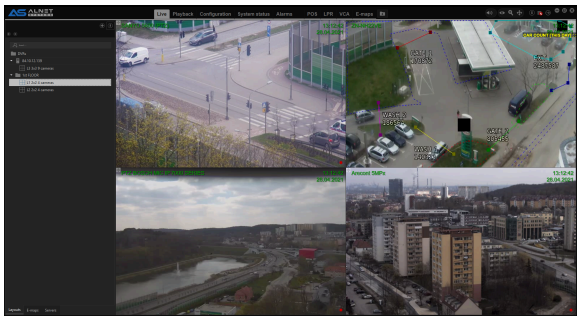
Additionally there are also right and down sidebars with autohiding turned on. In order to see them simply move the mouse cursor to the right side or bottom of the screen. You can also pin the sidebars to stay visible at all times.



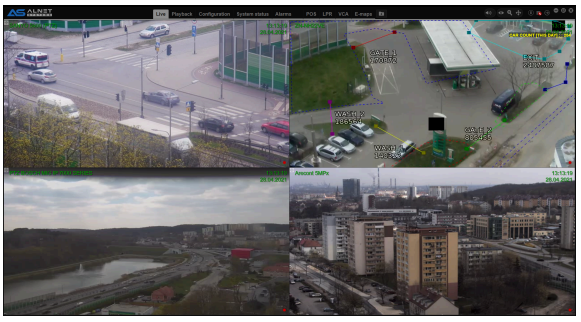
There are 4 buttons available on each sidebar. With them You can easily create complex sidebars with almost endless possibilities. Below are examples of how they work.

1 - sidebar PIN button

BEFORE

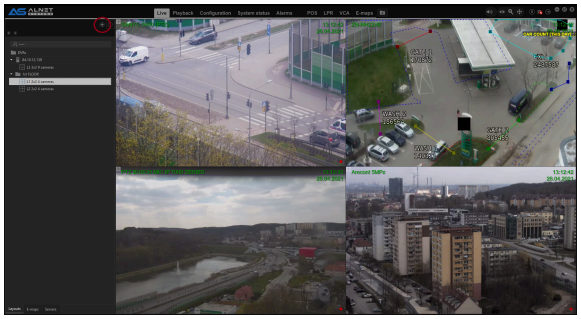


AFTER

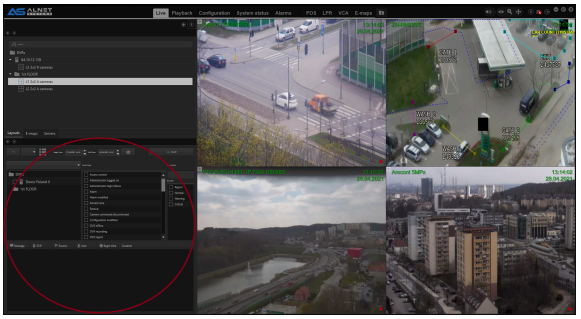


2 - This button adds new tool on same sidebar below the currently displayed

BEFORE

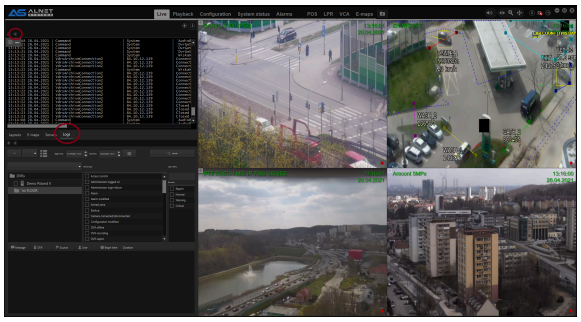


AFTER

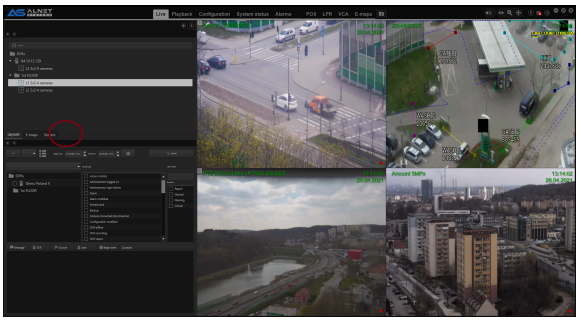


3 - this deletes the tab visible just below the button (in the preview to the right only the upper visible tab from the sidebar will be deleted)

BEFORE

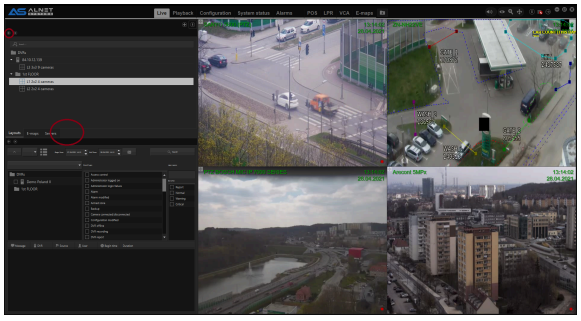


AFTER

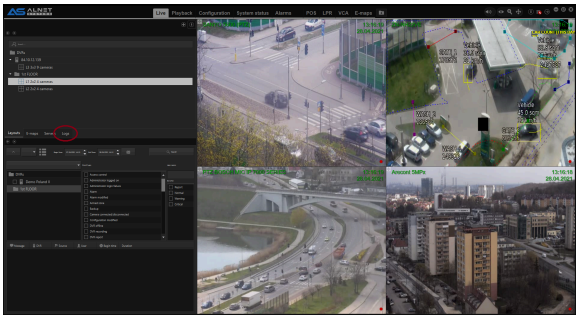


4 - this adds the new tool tab to the same tab group

BEFORE

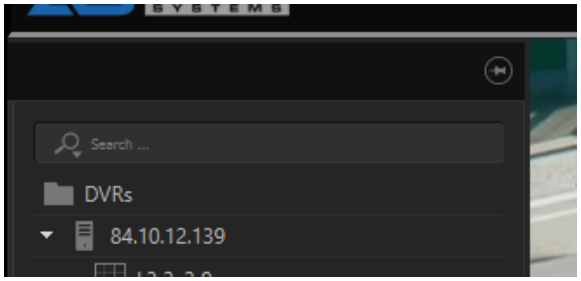


AFTER

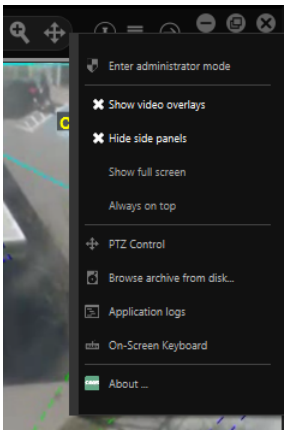


Each sidebar can be expanded to fit all necessary windows or to create a more readable layout.

As far as sidebars are useful, sometimes You would just like to hide them in order to get a better camera preview on more sophisticated layouts or they are just not needed for ex. on overview monitors. The easiest way is to unpin the chosen sidebar. This will automatically hide the side panel. In order to show it back You need to move the mouse pointer to the side of the CMS 4 window.



pinning button



Hide side panels option

With multi monitors placed horizontally, moving the mouse to the side of it might be a bit tricky. That is why there is also a “hide side panels” option in the CMS 4 menu. If it’s disabled, it will show an additional “expand” bar for each sidebar that has any function in it (if the sidebar is not configured in any way, the “expand” option will not show).



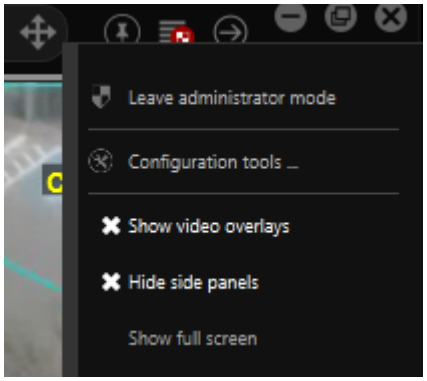
bottom expandable bar

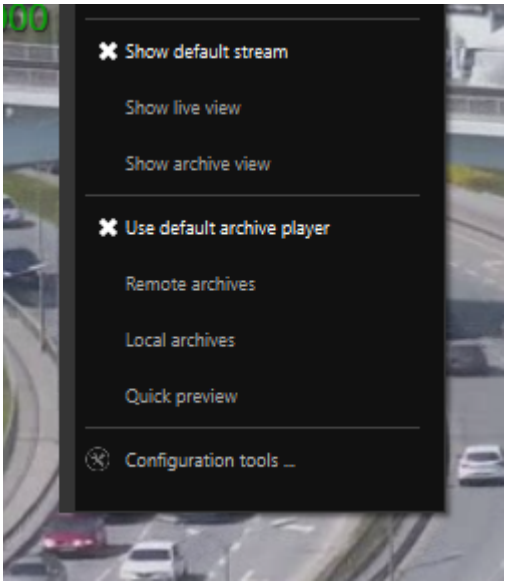
Note: When administrator mode is active, all sidebars can be expanded regardless they're configuration.

Note 2: When the sidebar is pinned, layout will automatically change its width and height to prevent sidebar overlapping the video image.

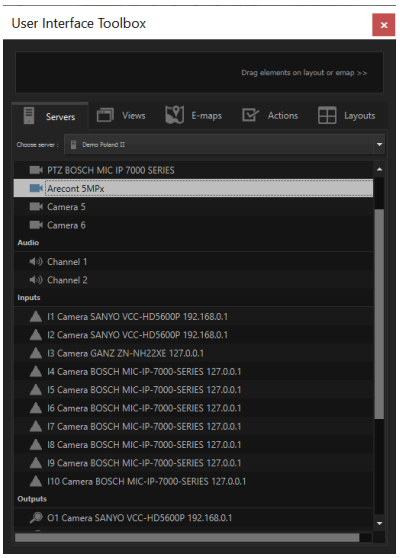
3.4.2 CONFIGURATION TOOLS (TOOLBOX)

Configuration toolbox is a handy tool that allows for easy layout and option manipulation on the CMS 4 GUI. The operator needs to use it in order to place cameras on the layout or to drop additional buttons and function windows either in the layout window or on the GUI net (for ex. on the top bar). There are two places where You can access the toolbox: one is under the menu button in the top right corner of CMS 4 window and the other is under the context menu after right-clicking with the mouse button on the layout window.





Beside setting cameras on the layout, the toolbox also allows for placing other icons like INPUT's (which show their current state), switchable OUTPUTs, PTZ actions, e-maps and much more. All elements from the toolbox can also be placed on the sidebar (it requires "toolbar" to be setted up on the sidebar



Note: In order to enable droppable net on the sidebar You need to set the "toolbar" option on it first with the "add" button.

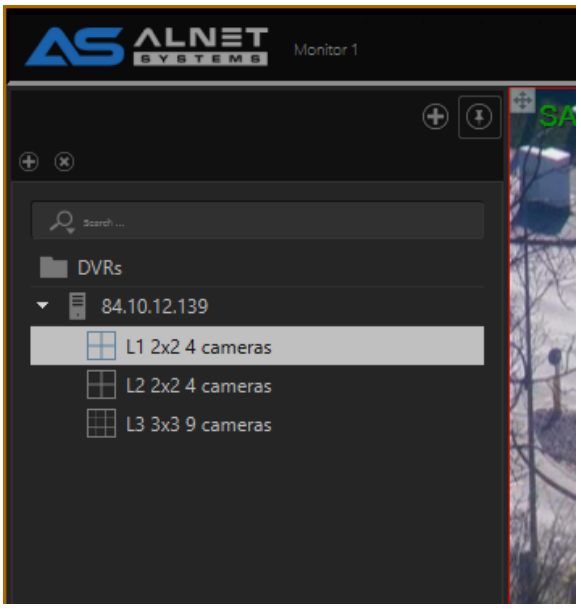
3.4.3 CAMERA LAYOUTS

After adding DVR's the software will autoamticaly create sets of predefined layouts based on the maximum camera count of the added server before adding it in the CMS 4. Since version 3.4.x.36 there are two types of layouts available, global layouts and user layouts:

1. Global layouts can be created and modified ONLY if the user is in administrator mode. Also these layouts can be synchronized with CMS HUB which comes in handy if administrators want to set the same layout tree for all CMS 4 clients connected to the site.

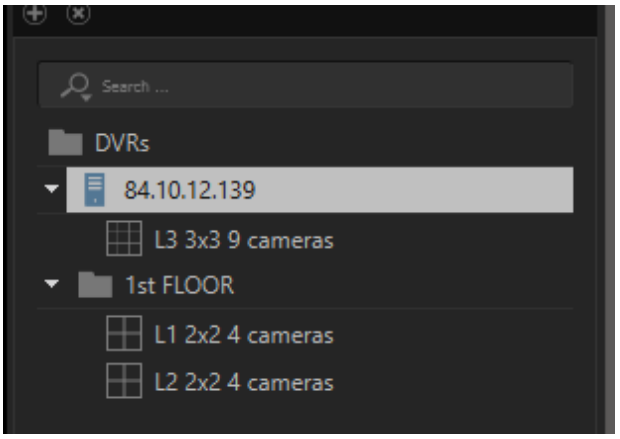
2. User layouts can be created by the administrator, but does not require administrator mode for modification, it means that any operator can change such camera layout. Those layouts do not synchronize with CMS HUB. Due to the fact that only administrators can access the toolbox, the default CMS4 sidebar has been modified (see **3.4.1.2 SIDE PANELS** for more info)

In this example, if we add a server with 6 cameras to the CMS 4, the software will generate two 4-camera layouts and a 9 camera layout to fit all of them in one window.

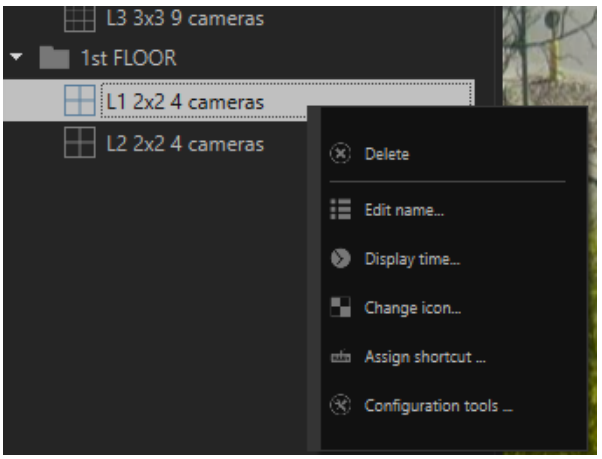


On the layout tree You see groups, servers and layouts. "DVRs" group is the default one and cannot be changed or moved on the tree. You can create subgroups to this or add Your servers directly to the main group. There is no limit for groups and servers in CMS 4, therefore You can create a very complex tree depending on the site You are working in. Also, groups do not have to contain ANY server in them at all, however You cannot add groups to the server tree (in short, groups can contain servers, servers cannot contain groups.)

In the below example You can see that we modified our default layout tree and divided it into the main floor and 1st floor.



Another feature You do on the layout tree is auto change of the layouts in the selected tree. You can set the layout display time by right-clicking it and selecting “display time”



Default value is set to 5 seconds. In order to start the automatic (dynamic) layouts display simply select the “group” You want to preview.

A good practice is to keep the layout names most accurate as possible. At the beginning the tree will be rather simple and not too complicated. However the longer You work with it, the more sophisticated it is starting to be. Proper naming and labeling the layouts and groups allow for faster operations and, thanks to the search bar You can quickly jump between them by typing the whole or only part of the name.

Note: If You add cameras to the server, they will not show by default in CMS4. You need to add them manually to the selected layout.

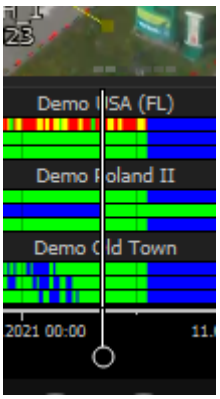
Note 2: Only one group of layouts can be dynamically displayed at a time.

3.4.4 ARCHIVE PLAYBACK

Archive playback is based on the same layout tree as live view. Also those layouts are synchronized, which means that if we are on the specific layout in live view, and jump to archive playback, we will get exactly the same layout and camera setup. You can say that archive playback is the live preview but with a time bar at the bottom.



Timebar can be moved by right-clicking it and holding the mouse button. After that just swipe left or right in order to move on the timeline.



Also You can see different colours on the camera timebar. Each of them have their own meaning:

blue - no recordings

green - recordings OK

red - camera not connected or connection error

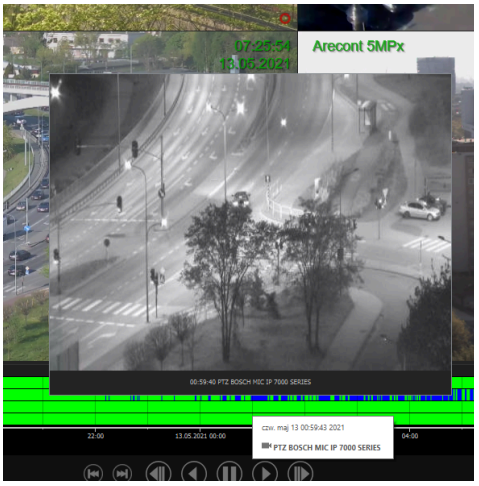
yellow - camera connected but no stream available

gold - recordings downloaded from camera SD card.

Last but not least is the hover mode. You can hover the mouse over the timebar and after a few seconds You will see a small window with FRAME of the VIDEO You are currently pointing at.

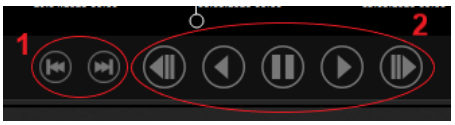
When You move the mouse cursor left or right the window will also change the frame You are pointing on.

This allows for ultra fast preview of the time bar and speeds up searching of the event that is important to You.



Below the time bar You can find two sets of buttons:

1. Playback manipulation buttons



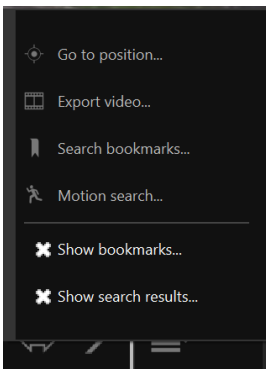
1. step forward / backward (3 frames jump)
2. forward / backward play and fast play buttons

2. time bar manipulation buttons and additional playback menu options



1. playback speed
2. select whole current day and calendar
3. timebar movement buttons and expand time button (also includes hover note with mouse control binding information)
4. additional payback functions menu

3. additional playback menu



- Go to position… - select date and time where You want to set the timebar main marker
- Export video… - export video to mp4 with audio
- Search bookmarks… - search all or private bookmarks (can be filtered for specific cameras)
- Motion detection… - search for motion frames on specific camera (works with motion metadata search if function enabled in camera settings from the server side increasing search speed. Higher requirements for CPU)
- Show bookmarks… - show bookmarks on timebar
- Show search results… - show red markers for searched results

That covers the basic operation guide. More advanced features and in depth descriptions can be found in the full CMS4 manual.