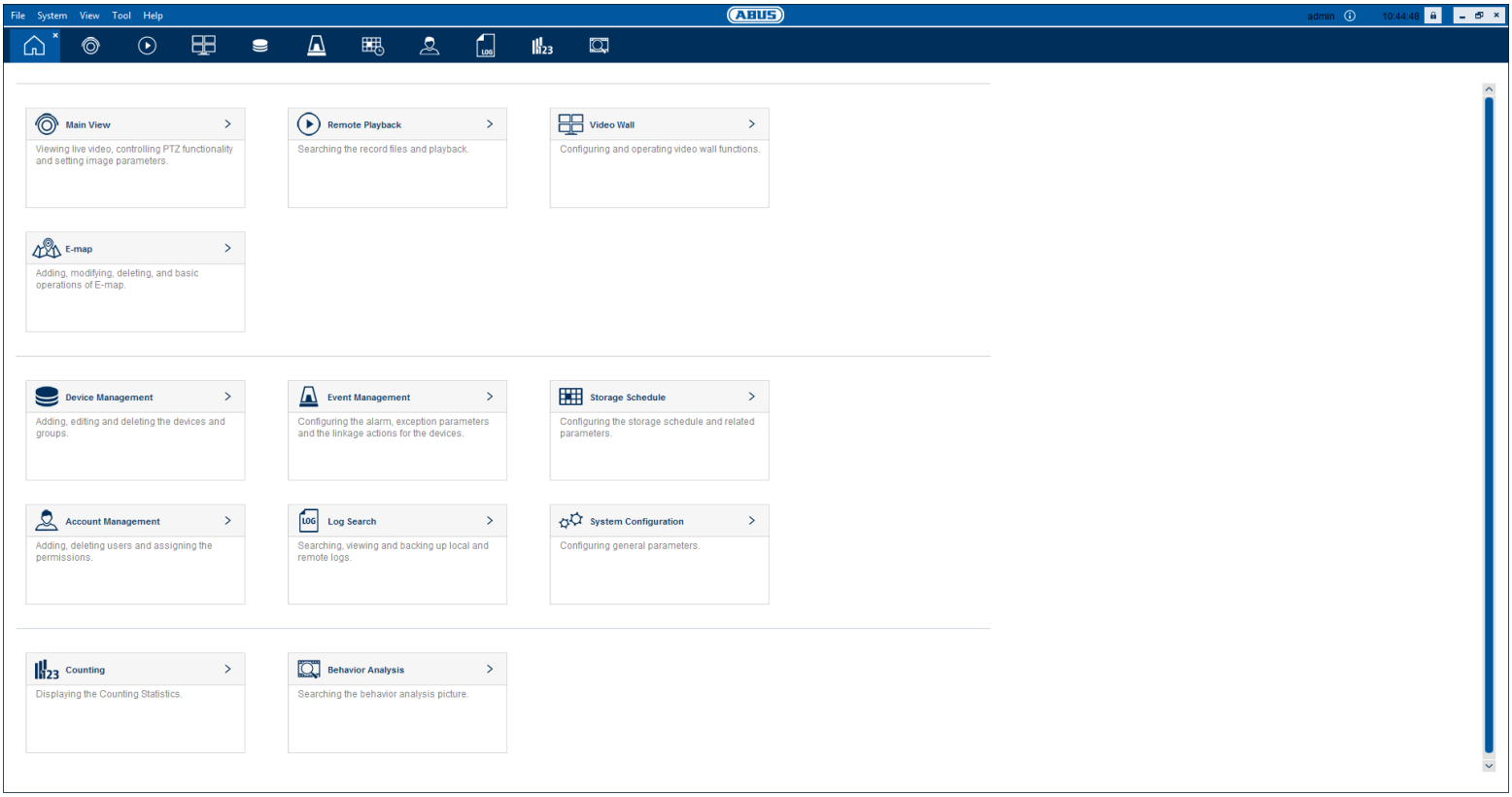
ABUS CMS software

(**C**entral **M**onitor **S**tation)



GB **User guide**

Manual Version 1.1
Software Version: 2.6.2.72

Deutsch

Diese Bedienungsanleitung enthält wichtige Hinweise zur Inbetriebnahme und Handhabung.

Achten Sie hierauf, auch wenn Sie dieses Produkt an Dritte weitergeben.

Heben Sie deshalb diese Bedienungsanleitung zum Nachlesen auf!

Eine Auflistung der Inhalte finden Sie im Inhaltsverzeichnis mit Angabe der entsprechenden Seitenzahlen.

English

This user guide contains important information on starting operation and using the device.

Make sure that this user guide is handed over when the product is given to other persons.

Keep this user guide to consult later.

A list of contents with the corresponding page number can be found in the index.

Note that the software is being continually developed and these instructions may not always reflect the most up-to-date version. For this reason, carefully check the release notes for the CMS version at http:///www.abus.com for further information.

Introduction

Dear Customer,

Thank you for using this software product.

To guarantee safe operation, it is essential that you observe these operating instructions.

Please read the entire user manual carefully before putting the product into operation and pay attention to all operating instructions and safety information.

All company names and product descriptions are trademarks of the corresponding owner. All rights reserved.

If you have any questions, please contact your specialist installation contractor or specialist dealer.

Disclaimer

This user manual has been produced with the greatest of care. Should you identify any omissions or inaccuracies, please contact us at the address shown on the back of the manual. ABUS Security-Center GmbH does not accept any liability for technical and typographical errors, and reserves the right to make changes to the product and user manuals at any time and without prior warning. ABUS Security-Center GmbH is not liable or responsible for direct or indirect damage resulting from the features, performance or use of this product. No guarantee is made for the contents of this document.

General information

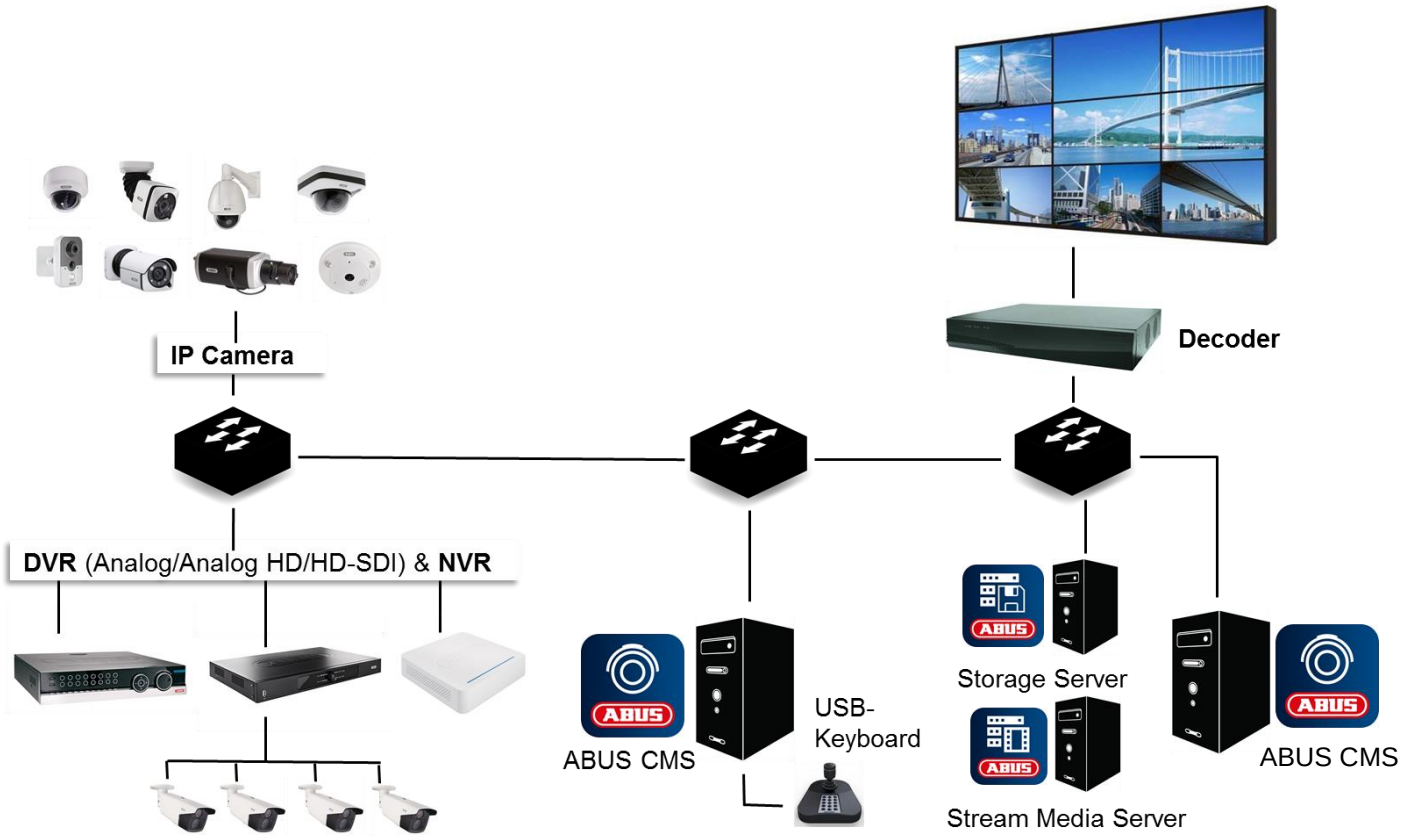
To use the product properly, read this user manual thoroughly and retain it for later use.

This manual contains instructions for the operation and maintenance of the software. If you have any problems, please contact an authorised specialist company.

Scope of delivery

- ABUS CMS software
- Storage Server
- Stream Media Server

Compatibility



General

The ABUS CMS software is compatible with a variety of cameras, recorders and additional components. Check the compatibility and limitations to the use of the software with your device before use.

Some functions of this software depend on the basic features of the device (e.g. fisheye view of hemispheric cameras or PTZ cameras).

Please keep in mind that older devices may not be supported or may be only partially supported.

Note

Check http://www.abus.com to find any additional information on compatibility with your camera/recorder.
The following tables show the current versions at the time of publication of this manual (Q3/2015).
IP cameras with the remark 'Directly supported' can be programmed into the ABUS CMS software without additionally being taught into an ABUS NVR.

Recorders

Device type	Item number
NVR	TVVR35002, TVVR35010, TVVR35011, TVVR36000, TVVR45020, TVVR45021, TVVR45030, NVR10010; NVR10020; NVR10030; NVR10040
NVR Hybrid	TVVR60010, TVVR60011, TVVR60020, TVVR60021
DVR analogue	TVVR30004, TVVR41100, TVRR41110, TVVR41120, TVVR41200, TVVR41210, TVVR41220
DVR analogue HD	HDCC90000, HDCC90010, HDCC90020, HDCC90001; HDCC90011; HDCC90021
DVR HD-SDI	TVHD80000, TVHD80010, TVHD80100, TVHD80110, TVHD80120

Video walls/decoders

Device type	Item number
Video Wall Decoder	TVAC26100, TVAC26110, TVAC26120, TVAC26130

IP cameras

IP camera type	Item number
IP camera (directly supported)	TVIP11560, TVIP41500, TVIP52502, TVIP61500, TVIP61550, TVIP70000, TVIP72000, IPCA33500, IPCA53000, IPCA62520, IPCA63500, IPCA66500, IPCA72520, IPCA73500, IPCA76500, IPCB42500, IPCB42501, IPCB42550, IPCB42551, IPCB62500, IPCB71500, IPCB72500, IPCB72501, IPCS10020, IPCS62520, IPCS72520, IPCB42510A IPCB62510B IPCB62510C IPCB64510A IPCB42510B IPCB42510C IPCB42515A IPCB64510B IPCB64510C IPCB44510A IPCB44510B IPCB68510A IPCB68510B IPCB44510C IPCB62510A IPCB68510C IPCB62520 IPCB64520 IPCB68520 IPCB72520 IPCB74520 IPCB78520
IP camera PTZ (directly supported)	TVIP21560, TVIP41660, TVIP81000, TVIP81100, TVIP82000, TVIP82100, IPCS82500, IPCS82520, IPCS835xx
IP camera Hemispheric (directly supported)	TVIP82900, TVIP83900, TVIP86900 , IPCS24500
ABUS NVR + CMS Software	All ABUS network cameras (depends on the supported model list of used ABUS NVR) ONVIF cameras, RTSP-Stream

Keyboards

Device type	Item number
USB keyboard	TVAC26010

Table of contents

Overview **9**
Description 9
System requirements 9
Installation 9

Initial setup **10**
User registration 10
User login 10
Setup wizard 11
Step 1: Start the wizard 11
Step 2: Add devices 11
Step 3: Create groups 13
Step 4: Set up records 13

System operation **15**

Live image **17**
General information on live image 17
Activating live image 17
Live image function areas 17
Selecting views 18
Selecting groups 18
PTZ control 19
3D control mode 19
Preset control 20
Pattern control 20
Patrol control 21
Operating live view 21
Basic commands 22
Local export and playback 22
Accessing exported data 22
Live view context menu 24
Time-shift playback 24
Two-way audio control 25
Fisheye view 25
Operating the toolbar 26
Creating a view window 26
Saving custom views 27
Controlling the sequencer 27

Alarm manager **29**
General information on the alarm manager 29
Operating the alarm manager 29
Analysing the alarm list 29
Analysing the alarm pop-up 30
Storage Server for alarm pop-up 31
Deactivating the alarm manager 31

Remote playback **32**
General information on remote playback 32
Activating remote playback 32
Remote playback function areas 32
Simple remote playback 33
Operating the timeline 34

Operating the file list....35
Playback context menu....35
Fisheye view....35
Event playback....36
SMART playback....36
Smart Search....37
Tripwire Detection....37
Intrusion Detection....37

Storage schedule....38
General information on the storage schedule....38
Managing local recording....38
Managing schedules....39
Editing schedules....39
Advanced settings....39
Managing Storage Server recording....40
Setting up the Storage Server....40
Copying settings....41

Event management....42
General information on event management....42
Camera events....43
Visual event rules....43
Configuring camera events....44
Event: Activation....44
Event: Analysis....44
Event: Action....44
Copying settings....45
Alarm input....45
Input: Activation....45
Input: Action....45
Copying settings....46
Exception....46
Exception: Activation....46
Exception: Action....46
Copying settings....47

E-map....48
General information on the e-map....48
Operating the e-map....48
Creating an e-map....49
Editing an e-map....49

Device for Management....51
General information on device management....51
Server....51
Groups....51
Managing devices....52
Device type....52
Device search on LAN....52
Activate....53
Reset Password....54
Add Device....55
Editing devices....56
Managing groups....56
Creating a group....57
Edit group....57

Account management....60

General information on account management 60
Creating a user 60
Editing a user 62
Switching users 62
Logbook manager 63
General information on the logbook manager 63
Analysing client logs 63
Analysing server logs 64
Logbook export 64
System configuration 65
General information on system configuration 65
General settings 66
Image settings 66
File settings 66
Keyboard and joystick settings 66
Alarm sound settings 67
Email settings 67
Storage Server 68
General information on the Storage Server 68
Installing the Storage Server 68
Setting up the Storage Server 69
Assigning the Storage Server 70
Stream Media Server 71
General information on the Stream Media Server 71
Installing the Stream Media Server 72
Setting up the Stream Media Server 73
Assigning the Stream Media Server 73
Multi-screen decoder 74
General information on the multi-screen decoder 74
Multi-screen decoder performance data 74
Compatibility 74
Video wall 75
General information on the video wall 75
Adding a decoder 75
Selecting the video wall screen layout 76
Video Wall Settings 76
Define the video wall view 77
Defining the decoding output 77
Specify the background picture 78
Defining the virtual LED 79
Operating the video wall 79
Display options 80
Live image control 80
Playback controls 81
USB keyboard 82
General information on the USB keyboard 82
USB keyboard operating modes 82
Setting the mode 82
Key assignment in Joystick mode 83
Key assignment in Keyboard mode 83
Setting shortcuts 84

Technical data **85**

Overview

Note

Use a 64-bit operating system with 4 GB or higher, if possible, in order to achieve optimal performance. The following performance table provides the performance data for using and selecting a suitable CPU (newer i7 gen. with 4 cores ore more)

Description

The ABUS CMS software is versatile management and display software for remote access to ABUS embedded recorder systems. The scalable software can be used in both small surveillance solutions and in large installations that span multiple locations. Its main functions include live image display, data playback, data export and deep integration of recorders. The software can exceed purely embedded recorder functionality; it can also optionally activate and control additional devices, such as IP cameras, USB keyboards or decoders for using a video wall.

System requirements

Use up-to-date PC hardware (no older than two years) in order to ensure the smooth operation of the software in combination with cameras and the recorder. The requirements for your PC system increase with the number of camera channels, as well as with the related video resolution and bit rate of the cameras. The camera display (resolution, bit rate and number of channels) strongly depends on the software functions used (live image display, playback, time of analysis). The following table provides a starting point and reference for the PC configuration required:

Recommended requirements:

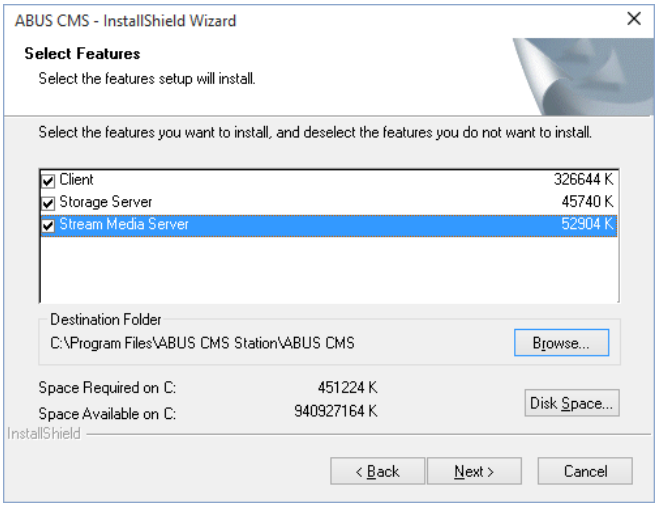
Operating system (64-bit)	Windows 7, Windows 8, Windows 8.1, Windows 10, Windows Server 2008, Windows 2012
CPU	Intel® Core™ i7-6700K @ 4GHz
RAM	4 GB or higher
VGA	NVIDIA GeForce GTX1070

Minimum requirement:

Operating system (32-bit/64-bit)	Windows 7, Windows 8, Windows 8.1, Windows 10, Windows Server 2008, Windows 2012
CPU	Intel® Xeon® E3-1226 V3 @ 3.30GHz
RAM	2 GB or higher
VGA	Intel® HD Graphics P4600

Installation

Click on the SETUP icon to run the software installation. The following options are available during installation of the software:



Parameter	Description
Client	Installs the ABUS CMS software on your PC.
Storage Server (optional)	Installs the Storage Server on your PC. This feature can be used to operate your PC as an NVR within the CMS in order to save video data to local data carriers on the PC. Further details on this can be found in the following descriptions.

Stream Media Server (optional)	Installs the Stream Media Server on your PC. This feature can be used to forward video streams from individual network devices to the CMS software. Further details on this can be found in the following descriptions.

Note

The Storage Server and Media Server are optional software modules and are not required for normal operation of the CMS. A detailed description can be found in chapters 'Storage Server' and 'Stream Media Server' at the end of these instructions.

Initial setup

User registration

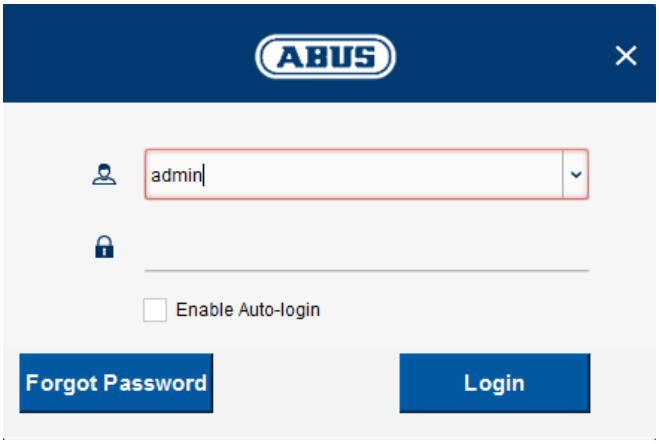
When the software is started for the first time, an Administrator user account must be created. You can change the setting in the Account Management at a later time.

Parameter	Description
Administrator	User name of the Administrator account
Password	Password for the Administrator account
Confirm new password	Re-enter the password for the Administrator account in order to confirm correct entry.

Note

Use a secure password that is at least eight characters long (consisting of uppercase and lowercase letters, numbers and special characters).

User login

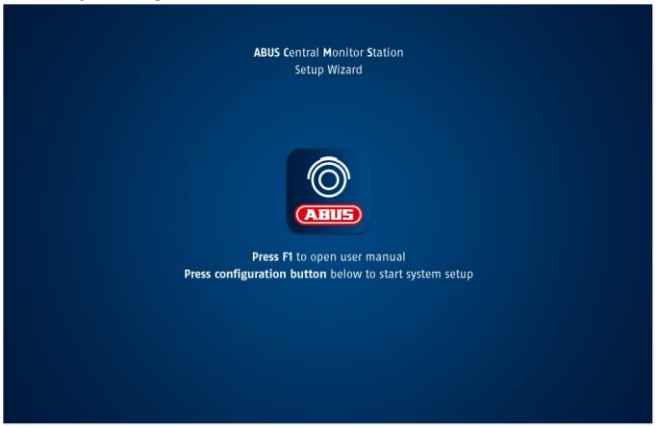


Parameter	Description

	Enter a user name here or select one from the dropdown list.
	Enter the password for the user.
Enable Auto-login	Enable this function to start the software in future without user authentication.
Forgot Password	Use this function to reset the user password.
Login	Log into the CMS software with the entered user name and password.

Setup wizard

When you log into the CMS software for the first time,

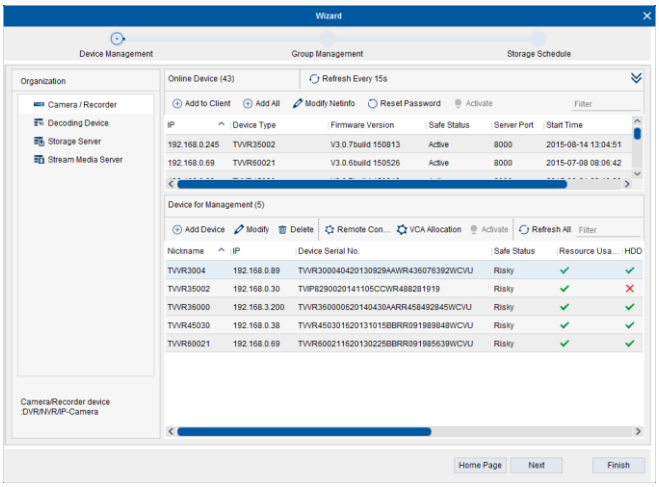


a setup wizard helps with the basic configuration. Before running the wizard, make sure that your PC can access all ABUS network devices.

Step 1: Start the wizard

Parameter	Description
Device and Storage Schedule Configuration	Run the setup wizard, starting with the device configuration.
Close	Exit the setup wizard. You can also quit the wizard at any time using the X icon.

Step 2: Add devices



Select 'Camera / Recorder' on the left-hand side. The wizard searches your network for compatible devices and displays these in the 'Online Device' pane. Use the following functions to add devices to the CMS software:

Online Device

This list contains all compatible devices found on the network:

Parameter	Description
Add to Client	Select an entry from the list and press this button to add the device.
Add All	Press this button to add all devices found.
Modify Netinfo	Change the network parameters for the selected device directly.

Alternatively, you can drag and drop an entry from the 'Online Device' table to the 'Device for Management' table to add the device.

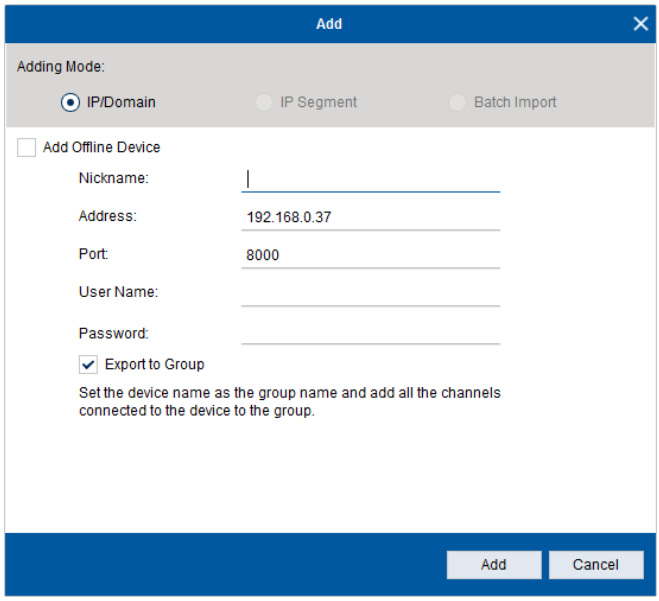
Device for Management

All added devices are listed here and their current status is displayed.

Parameter	Description
Add Device	Add a device by manually entering the network parameters.
Modify	Change the network parameters for a selected device.
Delete	Remove the device from the CMS software.
Remote Configuration	Set the remote configuration for the network device here if desired.

Note

A detailed description of all setting options can be found in the manual under '***Device management***'. This section only describes the most important steps for setup.



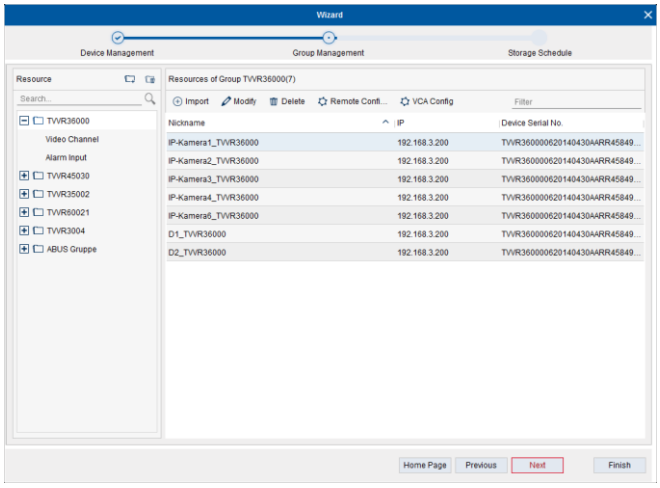
Enter the required parameters in the pop-up box.

Parameter	Description
Nickname	Assign a meaningful device name.
Address	Enter the IP address of the device.
Port	Connection port of the network device (usually 8000)
User Name	User name of the network device
Password	Password for the user
Export to Group	Enable this option to create a camera group at the same time as adding the device.
Cancel	Quit the setup wizard.
Add	Add the device to the CMS software.

Ensure that the 'Export to Group' option is enabled in order to complete the setup as quickly and easily as possible.

Once all devices have been added, press the 'Next' button to switch to the next setup step.

Step 3: Create groups



The CMS software manages all camera channels in groups. If the 'Export to Group' option was selected in the previous setup step, groups have already automatically been created for your devices.

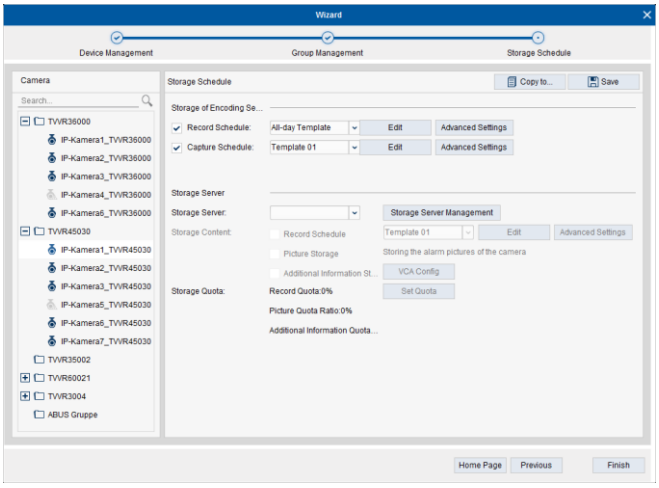
Note

A detailed description of all setting options can be found in the manual under '***Device management***'. This section only describes the most important steps for initial setup.

If no groups are listed, go back to the previous setup step by clicking the 'Previous' button and create the devices again using the 'Export to Group' option.

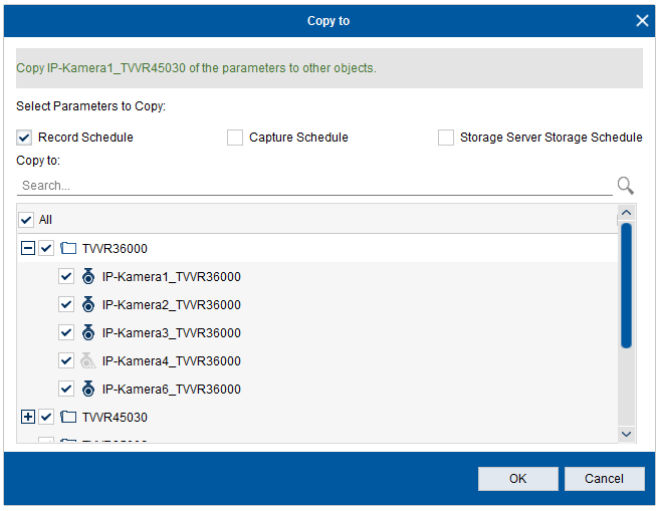
Press the 'Next' button to proceed to the next setup step.

Step 4: Set up records



In the final setup step, the schedules for set-up recorders and cameras can be directly adjusted. Open your groups by clicking on and select the camera channel ( ).

To set up a record as quickly as possible, select the 'All-day Template' setting (continuous capture) under 'Storage of Encoding Server' and enable the 'Record Schedule' option. Then click 'Copy to' to copy the setting to additional channels in your group.



Select all channels for which identical record settings are desired.

Then press 'Save' to save the settings.

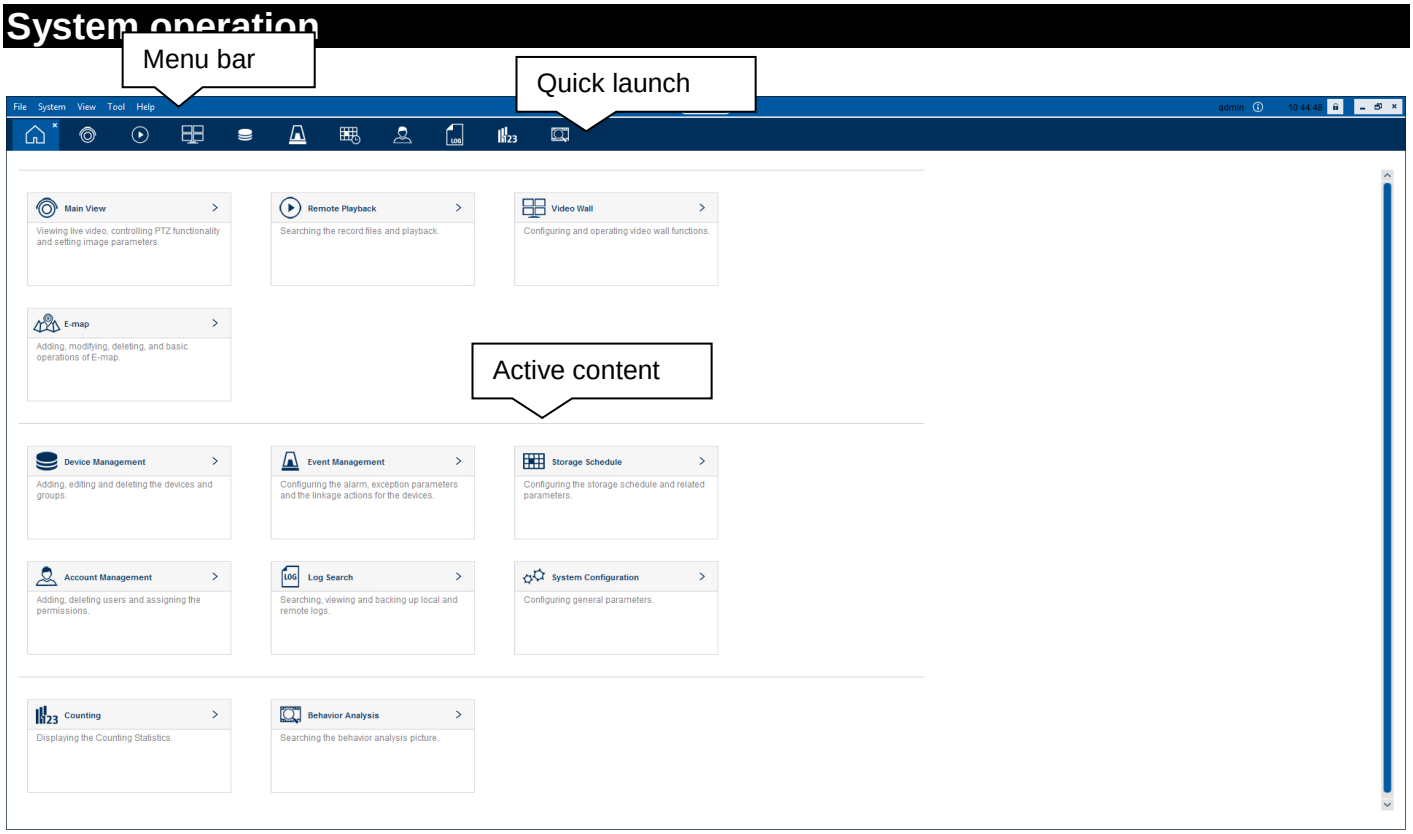
Repeat step 4 for all available groups if records are desired.

Note

A detailed description of all setting options can be found in the manual under '***Storage schedule***'.

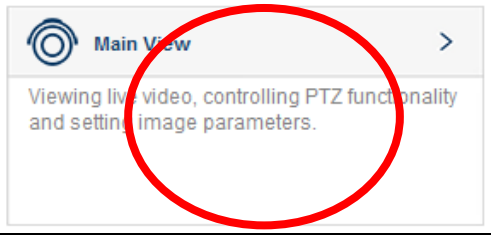
This section only describes the most important steps for setup.

Click on 'Finish' to complete the initial setup.

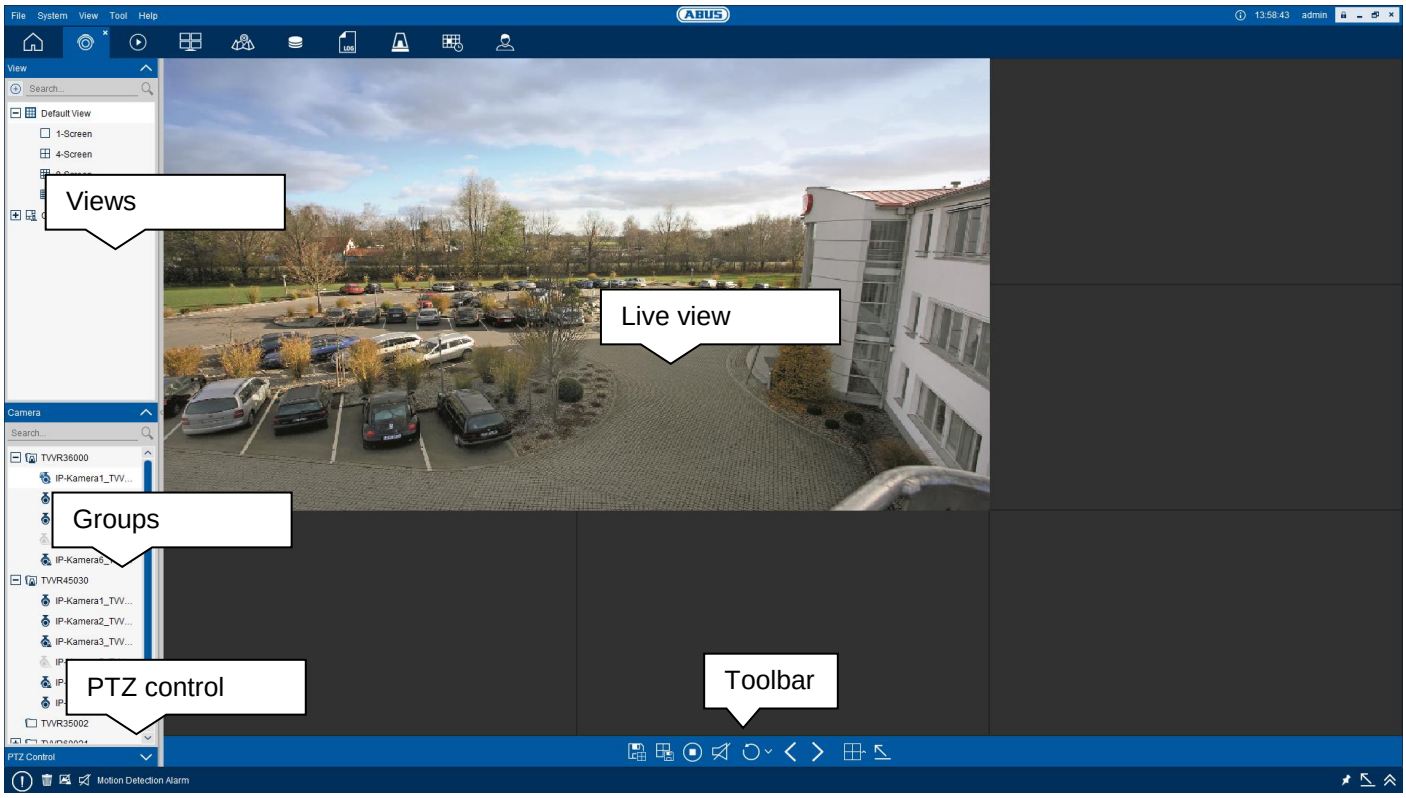


The following descriptions provide an overview of the basic system operation of the software. Use the start screen (see figure) as your starting point.

Parameter	Description	
Menu bar	The menu bar contains all software functions. This menu is always displayed regardless of the selected view. The functions are described in more detail in the following chapters.	
		Display of current resource usage status for the network, CPU and main memory. If the resource usage of a parameter exceeds 80%, operation becomes limited.
		Display of current time and currently active user.
		Lock function: lock/unlock the view. Minimise the window, exit full-screen display and close the application.
Quick launch toolbar	The main functions of the software are operated using this toolbar. All important functions for operation are displayed here. A detailed description can be found in the following sections. If a function is no longer needed, it can be hidden using the X icon next to each quick launch icon. All options (except the main menu) in this toolbar can also be moved to another position in the list by dragging and dropping them horizontally using the mouse, or opened in an individual window by dragging and dropping them down into the active content pane (for multi-monitor operation). An option that has been hidden can be displayed again by clicking the icon in question from the main view.	
		Hide option.
		Move option.

		Open option in a separate window.
		Access/show option.
Active content pane	The content in this pane changes based on the selected option. Depending on the selected function, there is generally also a context menu that can be accessed by right-clicking.	
Alarm manager	Like the menu bar, this area is available in every selected view. It provides current status and alarm messages. The following control options are available:	
		Manage alarm and status information. For further details, see 'Alarm management'.
		If this function is active, the status bar automatically appears when the mouse cursor hovers over it, and is hidden when the mouse cursor is not touching it.
		Opens the status bar in full-screen view. The status bar is shown in the menu bar as a separate option in this case. If this option is closed again, the status bar appears at the bottom edge of the screen.
		Expands and collapses the status bar.

Live image



General information on live image

The live image function provides the option of analysing live images from all connected cameras and recorders on the software via a network connection. This function provides the core of the software, in addition to remote playback.

At least one group must be created in the software in order to access video images.

Activating live image

The live image function can be accessed via the following menu options:

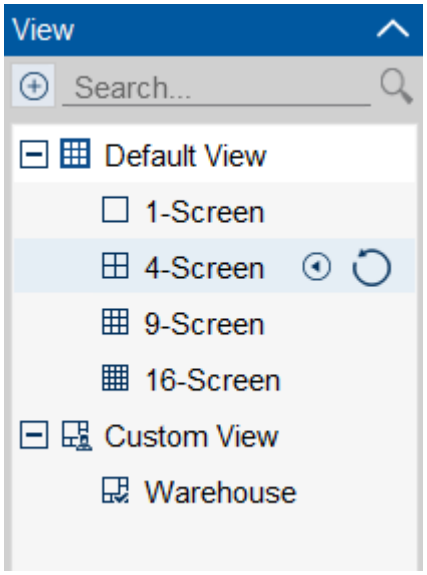
- Menu bar → View → Live View
- Quick launch toolbar → camera icon
- Main menu → camera icon

Live image function areas

The live view is divided into the following function areas:

Parameter	Description
Views	Manage predefined default views and custom views.
Groups	Access camera channels of individual groups and view the camera status.
PTZ control	Control PTZ cameras including presets and patrols.
Live view	View live images from the camera channels.
Toolbar	Additional options for controlling live image playback in the live view are provided here.

Selecting views

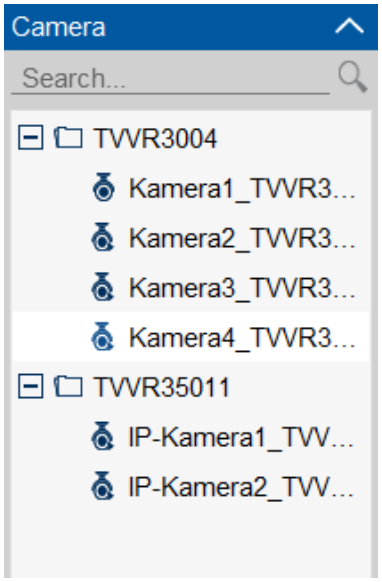


Predefined layout settings for the live view can be accessed by clicking them in the 'View' pane. A view consists of a layout (tiling of live views) combined with a preset or custom arrangement of camera channels.

Two categories are available:

Parameter	Description
Default View	Predefined views for 1–16 live-view channels. This function always uses all channels in the available groups, starting with the first entry in the group list.
Custom View	Selection of custom views.
	Starts the sequencer for a default view.
	Starts instant playback of the last 30 s–10 min of the currently selected view.
	Deletes the custom view.
	Modifies the view name for the currently selected list entry.
	Indicates that this list entry is currently active.
	Creates a new custom view.
	Full-text search for custom views. Search hits are highlighted.

Selecting groups



In the 'Camera' pane, individual camera channels or entire groups can be added to the live view by double-clicking them or dragging and dropping them.

Individual camera channels can be positioned directly in the live view according to the currently selected layout. Proceed as follows:

- Open a group ( )
- Select a channel ( )
- Double-click the camera icon (the image is displayed in the selected cell in the live view)
- Alternatively, drag and drop the camera icon to the desired cell in the live view

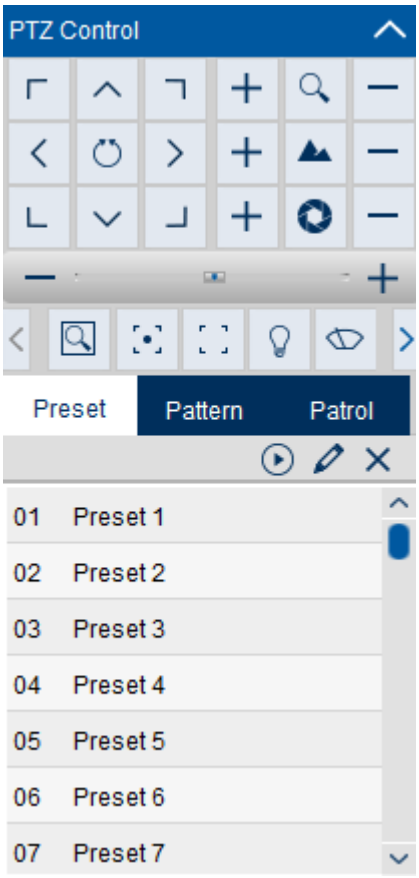
Entire groups can be displayed directly in the live view, if desired. The layout of the live view automatically adjusts to accommodate the number of channels in the group. Proceed as follows:

- Select a group ( )
- Double-click the group icon or drag and drop the group icon to the live view pane

The icon in front of the camera name indicates the current status of the channel:

Parameter	Description
	Channel is online
	Channel is recorded manually
	Channel is offline
	Channel is triggering an alarm
	Alarm within the group

PTZ control



PTZ/PT (Pan-Tilt-Zoom) cameras can be controlled in the 'PTZ Control' pane. Presets and patrols can also be programmed and accessed.

Note
Not all PTZ control functions are necessarily supported, depending on the camera model used.

Select the camera channel by selecting the cell in the live view (red frame) to activate PTZ control for this camera. The following functions are available:

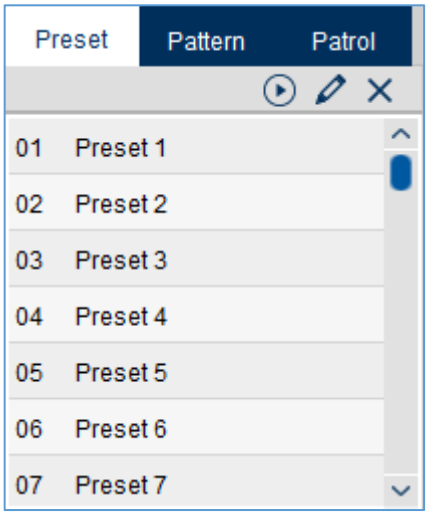
Parameter	Description
	Controls the camera in the desired direction
	Activates the horizontal scan (360° mode)
	Controls the zoom mode (+ zoom in / − zoom out)
	Controls the focus mode (+ focus / − focus)
	Controls the blinding mode (+ open / − close)
	Controls the pan/tilt speed (+ faster / − slower)
	Activates the 3D control mode (see description)
	Activates the external focus (depends on model)
	Activates lens calibration (depends on model)
	Activates the external lighting control (depends on model)
	Activates the wiper (depends on model)
	Activates manual object tracking (depends on model)
	Opens the OSD menu of the camera (depends on model)
Preset	Access/save preset position
Pattern	Access/create pattern
Patrol	Access/create patrol

3D control mode

3D mode combines pan-tilt-zoom control into a single mouse command, allowing for fast control and RE-positioning of a PTZ camera.

If this mode is active, the camera follows the position data selected in the live image with the mouse exactly, centring the camera's image section. If an area is selected with the mouse (by dragging the cursor from top left downwards and to the right), the camera also zooms into this selected frame to bring the section to full screen. Dragging the cursor in the opposite direction (from bottom right upwards and to the left) zooms out of the image again. The larger the area shown, the greater the zoom control. The zoom level can also be controlled using the scroll wheel of the mouse.

Preset control



A preset is a camera position containing data on the pan-tilt-zoom level. Presets can be programmed individually and accessed via the 'Preset' tab in the CMS software. The software manages up to 256 preset positions.

Note
Depending on the camera model, individual preset positions are already pre-assigned internal camera functions. Check your camera's manual before programming any presets.

Note
Preset positions are always saved in the camera. If a camera already has preset positions due to previous programming, these do not need to be reset.

To program or access a preset, select the desired entry in the preset list and choose between the following functions:

Parameter	Description
	Activate the currently selected preset position. Alternatively, the position can be activated by double-clicking the preset name.
	Assign (or overwrite) the current camera position to the selected preset and change the preset name.
	Delete the preset position.

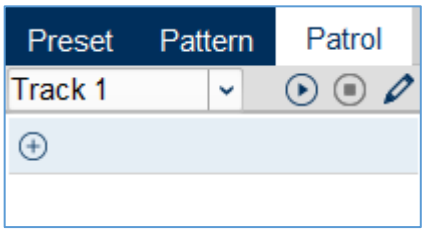
Pattern control

A pattern is a sequence of pan-tilt-zoom commands that can be recorded by the camera when the function is activated and played back by the user at the touch of a button.

If this function is active, all PTZ actions are recorded by the camera continuously until the function is de-activated. As the internal camera memory is limited, only a certain number of commands can be saved. The remaining memory space is displayed in the live image for this purpose.

Parameter	Description
1	Pattern selection. Up to four patterns can be saved per camera.
	Access a saved pattern. The pattern is implemented until a further PTZ command is executed on the camera.
	Stop the current pattern.
	Start/stop pattern recording.
	Delete the current pattern.
	Clear all patterns.

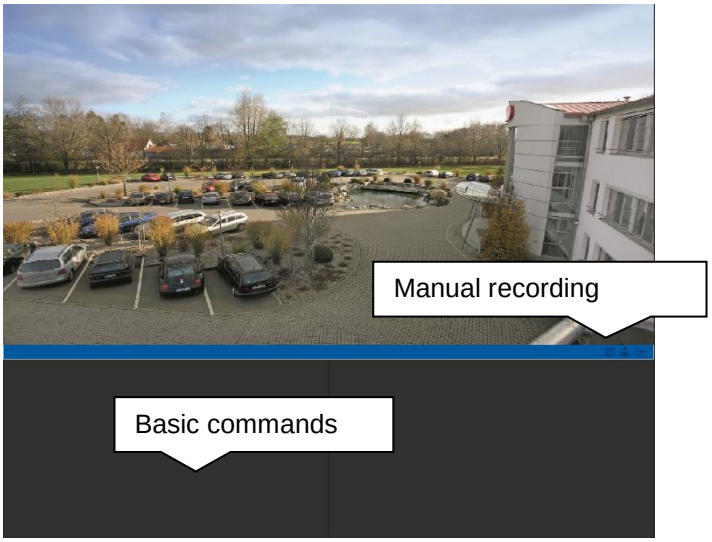
Patrol control



A patrol is a custom sequence of preset positions with individual pause times and speeds. At least two preset positions must be defined in advance for the function to work.

Parameter	Description
Path 1	Patrol selection. Up to eight patrols can be saved per camera.
	Access saved patrols. The patrol is run until a further PTZ command is executed on the camera.
	Stop the current patrol.
	First select a preset from the list. Changes preset settings for preset position, dwell time and speed.
	Remove a preset from the current selected patrol list.
	Add a preset to the current patrol list. Define the list position, dwell time and speed for this preset.

Operating live view



In the live view, the camera channels can be displayed based on the layout (tiling and camera placement). The software can display up to 64 channels per monitor.

Note

The more channels displayed in the live view, the greater the CPU resource usage on the PC system. Check the current resource usage with and reduce the number of displayed channels if usage exceeds 80%.

Note

The software automatically switches from Main Stream (high-resolution camera stream) to Sub-stream (low-resolution camera stream) for the display if there are more than four displayed cameras. This is only for the simpler display; the channels continue to be recorded in full resolution. This setting can be deactivated under the menu bar → Tool → System Configuration → Image → Auto-change Stream Type.

Basic commands

Parameter	Description
Select	Select a channel by clicking on the video image for the camera once (red frame). All actions (e.g. PTZ control or toolbar) apply only to this channel now.
Double-click	Double-click a channel to select it automatically and view it in full screen. Double-clicking again returns to the previous view (tile layout).
Move	Select a channel and drag and drop it to another channel in the live image to switch the positions.
Close	Press the X icon at the top right-hand corner of the channel to remove it from the live view.

Local export and playback

If the mouse cursor is hovered over a camera channel, the buttons for manual channel recording appear at the bottom edge. Recording takes place on the local hard drive of your PC.

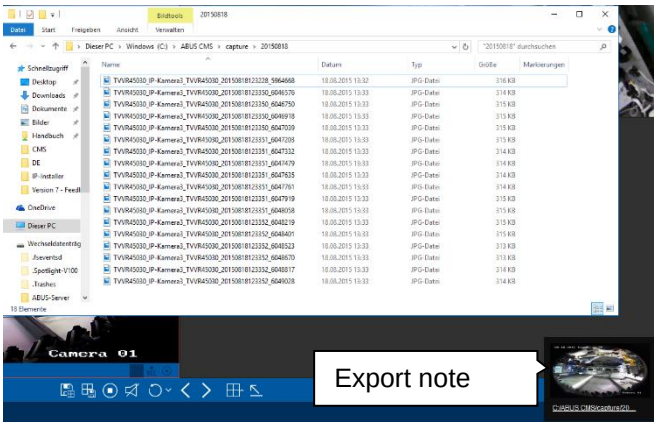
Note

The directories for data recording and export can be defined under the menu bar → Tool → System Configuration → File.

Parameter	Description
	Generates a capture (snapshot JPG) of the current camera image.
	Starts a manual video clip recording (MP4) of the current camera stream. Multiple channels can be recorded at one time. The R icon indicates that the channel in question is being recorded.
	Starts playback of the current channel from 30 s–10 min. A recording for the channel must be set up in advance for this function to work.

Accessing exported data

Locally exported data can be accessed at file level and also via the export manager.

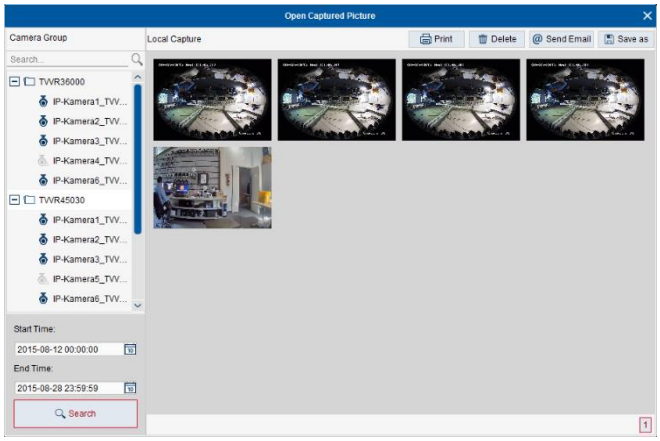


Clicking the export note (at the bottom right) opens the file folder on your hard drive. You can view, copy or delete data here.

Alternatively, you can open the export manager for snapshots or videos via the menu bar → File:

- Open Captured Picture (for snapshots)
- Open Video File (for video clips)

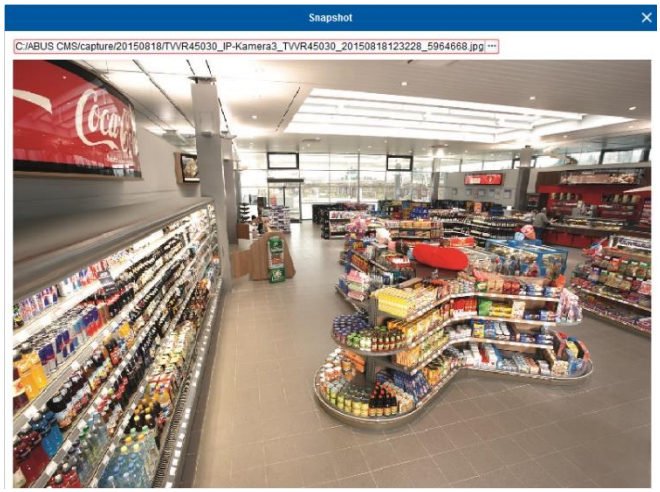
From here it is possible to search snapshots and videos on the hard drive using a filter (for groups and channels). The data can also be played back on an internal video player and processed (exported to another directory, emailed, printed out or deleted).



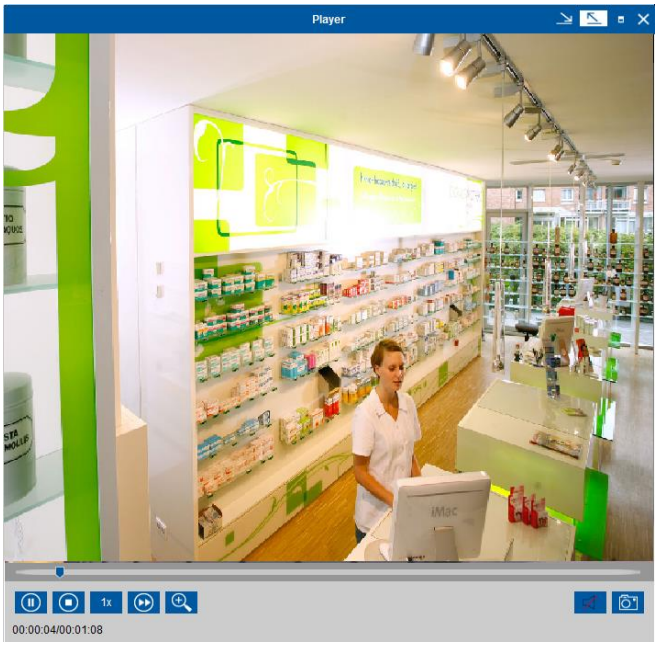
The following options are available here:

Parameter	Description
	Select a channel or an entire group. If a group is selected, data from all channels within the group is searched.
Date	Select the start and end data for the search.
Search	Start the search.
Preview	Open the file by double-clicking the preview.
	Deletes the file from the hard drive.
	Send snapshot to a printer.
	Send snapshot/video via email.
	Copy file to another directory.

Exported snapshot display

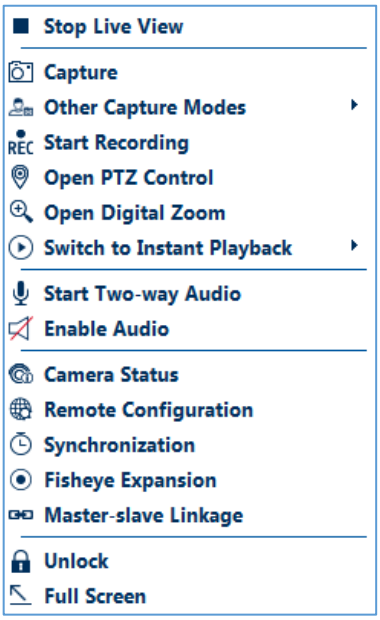


Exported clip display



Parameter	Description
	Start/stop playback.
	End playback.
1x	Set playback speed 1/8–8x.
	Single frame play.
	Enable digital zoom.
	Activate/deactivate audio playback.
	Create snapshot capture from current playback.
	Adjust the window size.
	Full screen/close

Live view context menu



Additional commands can be executed separately for each camera via the context menu in the live view. Right-click on the live image in question in the live view to access the menu.

Note

Some context menu functions may not be supported, depending on the camera model used.

Parameter	Description
Stop Live View	Removes the camera channel from the live view
Capture	Creates a snapshot from the current image
Other Capture Modes	Creates a print preview from the current image, and more
Start Recording	Starts manual video clip recording
Open/stop PTZ Control	Activates/stops PTZ control using the mouse
Open Digital Zoom	Activates the digital zoom function. Selecting an area with the mouse controls the zoom.
Switch to Instant Playback	Starts time-shift playback of the current channel from 30 s–10 min.
Start Two-way Audio	Starts two-way audio communication via the interfaces of an NVR/DVR.
Enable Audio	Starts audio playback (using the camera's microphone)
Camera Status	Displays the current channel status. The status is updated every 10 seconds.
Remote Configuration	Opens remote configuration for the device (camera/recorder)
Synchronization	Synchronises the time of the current channel with the PC
Fisheye Expansion	Opens the current channel in fisheye view
Master-Slave Linkage	Run Linkage
Unlock	Unlock Kamera
Full Screen	Switches to full-screen view

Time-shift playback

When the time-shift function (instant playback) is activated, the channel view switches from live image to playback. The starting point for playback is offset by 30 s–10 min in the past from the current system time according to the selection.

Note

This function is only available if the current channel is being recorded and recording data exists for the corresponding time period.

Parameter	Description
	Reverse Play
	Pause
	Stop
	Slow Forward
	Fast Forward
	Single Frame
	Maximise/minimise timeline
	Current playback time
	Close display of channel status, playback speed and playback mode.

Two-way audio control

Device activation and use of the two-way audio function via the CMS require the following:

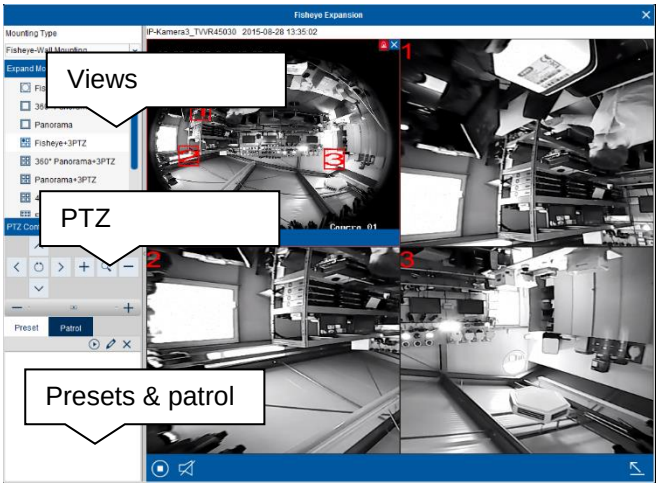
CMS operation	PC	Device
Speak	Connected microphone	Loudspeaker (audio-OUT IP camera or DVR/NVR)
Listen	Connected loudspeaker	Microphone (integrated microphone or audio-IN IP camera/DVR/NVR)

Access to analogue/HD-SDI/analogue HD recorder:
Use the cinch sockets on the device.

Access to NVR:
Use the RCA audio inputs/outputs on the cameras (depending on camera model).

Only one channel can be opened at any time for two-way audio communication. If another channel is activated via the context menu, the previous channel is closed.

Fisheye view

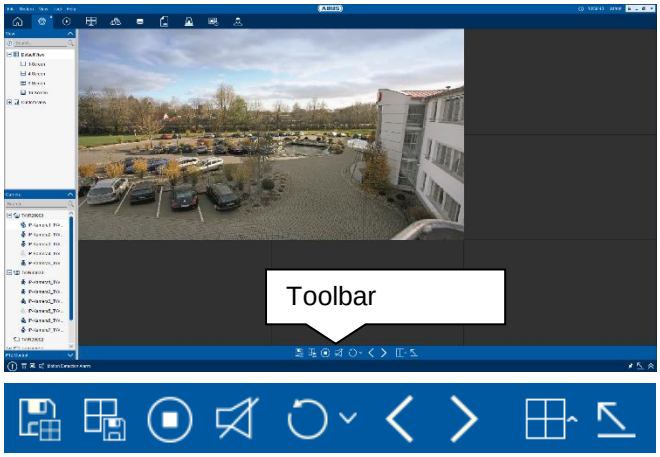


Note
The fisheye view is optimised for the following camera models: TVIP83900, TVIP86900, TVIP82900 and IPCS24500.

Use the fisheye view for optimal analysis of the different viewing angles and functions of these special cameras.

Note
Note the selected working mode when using hemispheric cameras. In 'Real-time Mode' not all streams are displayed at the same time.

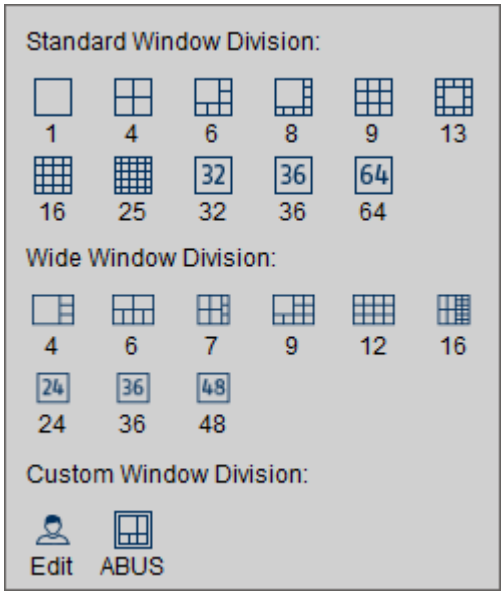
Operating the toolbar



The main task of the toolbar is to configure the sequencer, create and configure view windows and save view settings. In addition to the layout and number of possible camera channels, a view window also includes the arrangement of the channels on the grid. If the setting is saved, a separate view is created. While a view is active (camera channels are displayed), can be used to end the live image display for all channels and can be used to mute/unmute the audio playback.

Creating a view window

Open window management using the button and select the desired window division:



Note

Keep the system performance of your PC and network in mind during window distribution and subsequent channel placement in the live image.

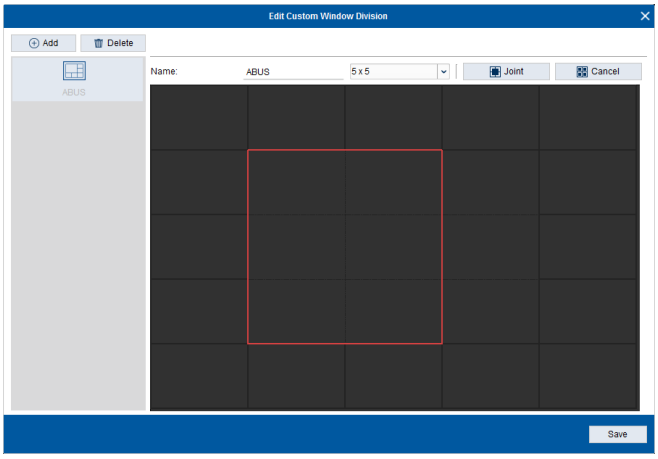
Sample stream display with standard window division:

Division	Used streams
	1 x Main Stream
	4 x Main Stream
	1 x Main Stream, 5 x Sub-stream
	1 x Main Stream, 7 x Sub-stream
	9 x Sub-stream
	1 x Main Stream, 12 x Sub-stream

Note

The software automatically switches from Main Stream (high-resolution camera stream) to Sub-stream (low-resolution camera stream) for the display if there are more than four displayed cameras. This is only for the simpler display; the channels continue to be recorded in full resolution. This setting can be deactivated under the menu bar → Tool → System Configuration → Image → Auto-change Stream Type.

The button can also be used to create and manage individual view windows.

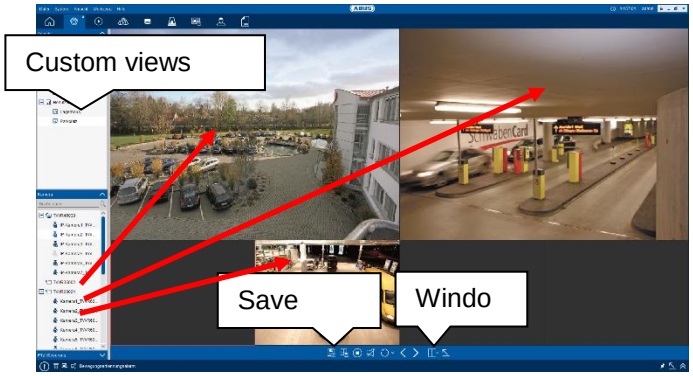


The following options are available:

Parameter	Description
Add	Creates a new view window.
Delete	Deletes the currently selected view window.
User Name	Define the name for the currently selected window.
3x3 / 4x4 / 5x5	Basic window division.
	Select multiple cells with the mouse and merge them.
	Unmerge grouped cells into individual cells again.

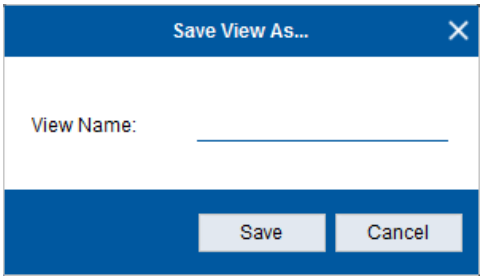
Once window distribution (tiling) is complete, the new view window appears under 'Custom Window Division' and can be used for the live view.

Saving custom views



Proceed as follows:

1. Open the view window menu ( )
2. Select a window division from
3. Assign camera channels to the free positions
4. Save the view

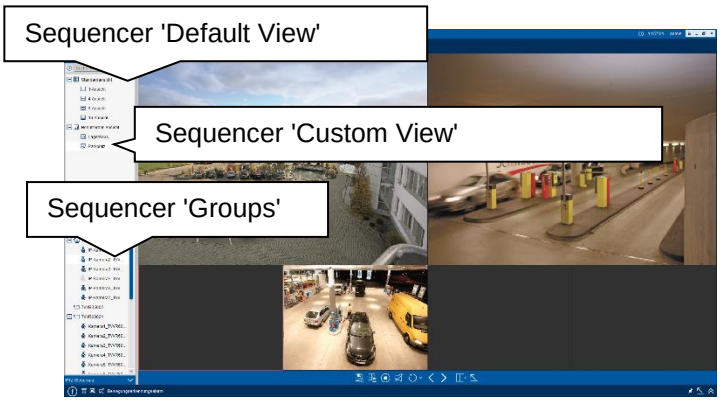


and assign a meaningful view name

5. The new view is then available under 'Custom View' and contains the window division (tiling) as well as the position of the camera channels.

As soon as the current view is changed (camera channels are moved or deleted, new channels are added or window distribution is changed), the changes can be saved under the existing view name using the button. Clicking the button allows the current view to be saved under a new name.

Controlling the sequencer

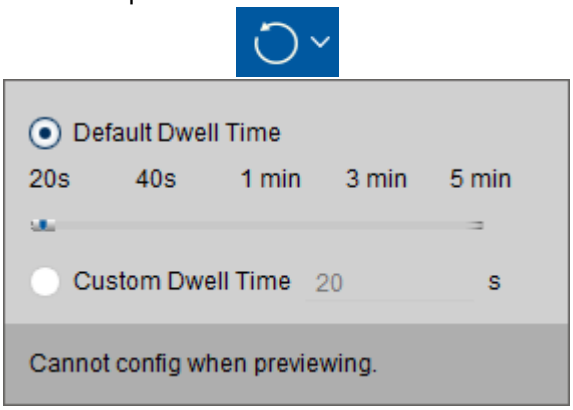


The sequencer is used to switch camera channels automatically in the live view. This function is especially useful if the monitor (or monitors) is only used for the display.

Using the live view, the sequencer can be switched on at different points. The behaviour of the sequencer varies depending on the point at which the sequencer starts.

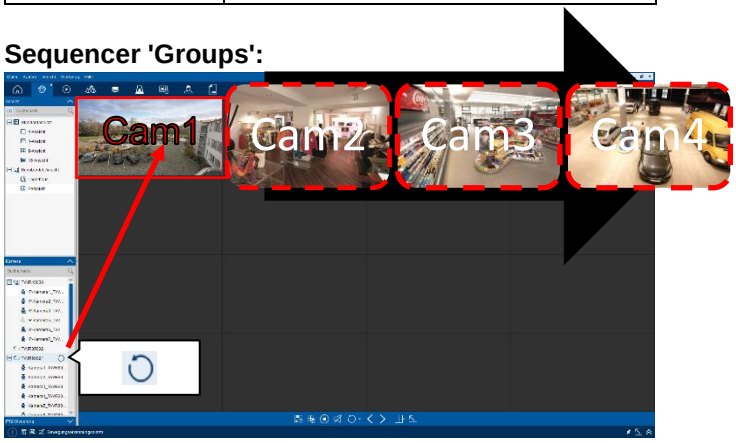
The sequencer either switches through all channels of a group, all channels of a custom view or all camera channels using a default view.

First start configuring the sequencer using the arrow key on the sequencer icon:



Parameter	Description
Default Dwell Time	Select a value between 20 seconds and 5 minutes. This represents the switching time between channels.
Custom Dwell Time	Set a custom value. The value must be at least 20 seconds.

Sequencer 'Groups':

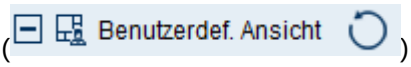


The sequencer switches through all camera channels in a group in sequence. Proceed as follows:

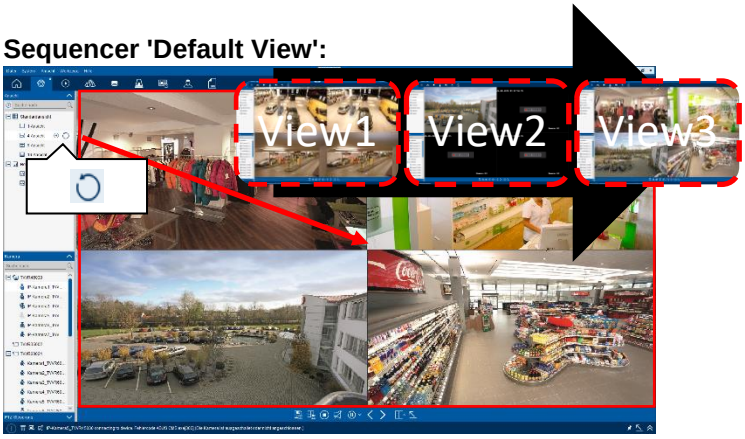
1. Select a view (e.g. Default View).
2. Select a channel in the view (red frame).
3. Hover the mouse cursor over a group node ( ) and press the sequencer icon.
4. The software then displays the camera channels of the selected group (step 3) in the previously selected cell (step 2) and switches through the channels until the sequencer is stopped manually ( ).
5. The individual sequences can be scrolled through manually during the sequence process using the buttons.

Sequencer 'Custom View':

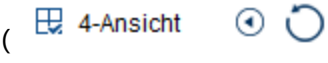
The sequencer switches through all views in complete sequence, starting with the first entry in the 'Custom View' list. Proceed as follows:

1. Hover the mouse cursor over the 'Custom View' node () and press the sequencer icon.
2. The software then displays all views in sequence until the sequencer is stopped manually ( ).
3. The individual sequences can be scrolled through manually during the sequence process using the buttons.

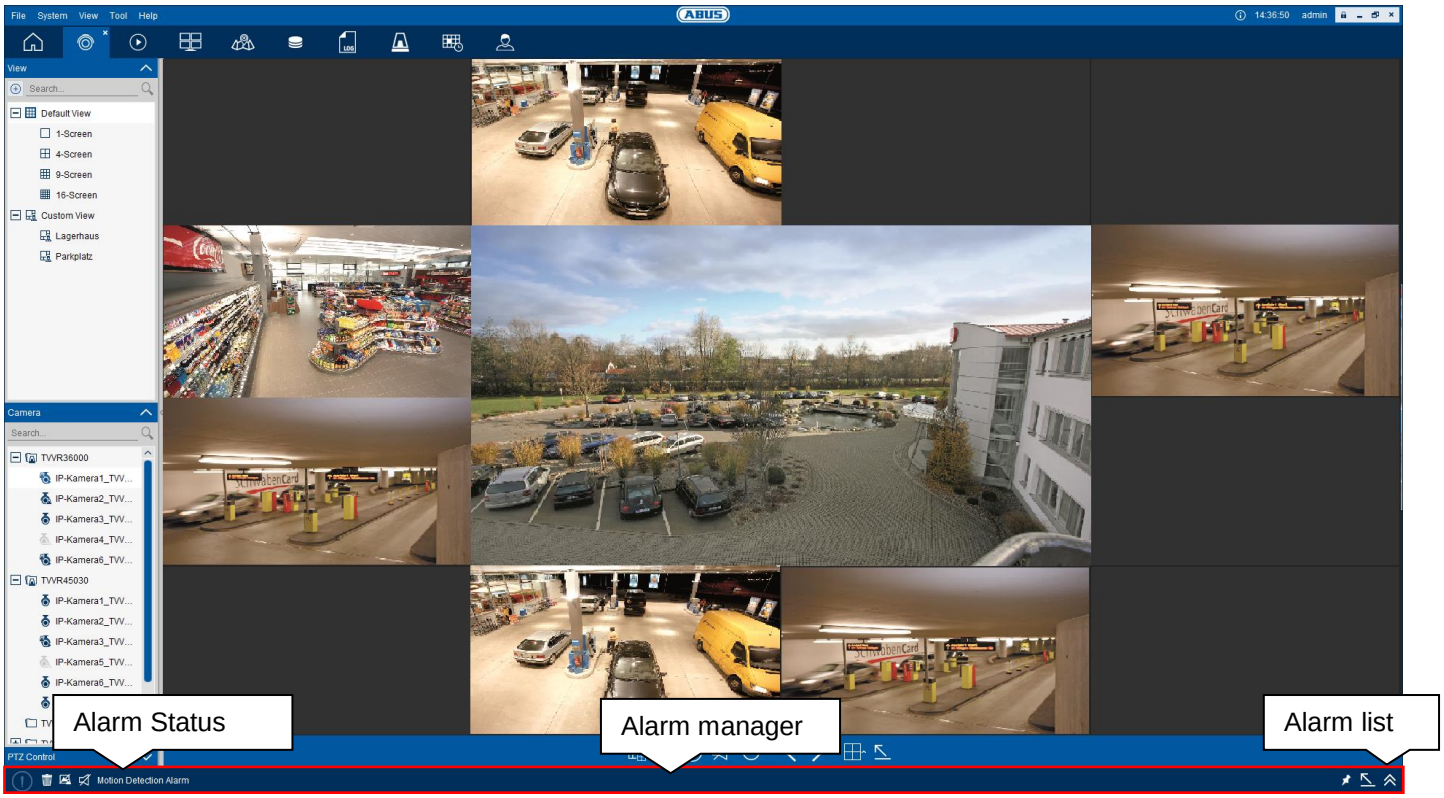
Sequencer 'Default View':



The sequencer switches through all camera channels contained in the overall group list in sequence, depending on the selected default view. (Example: in the 4-Screen view, the sequencer always switches through all cameras in blocks of four.) Proceed as follows:

1. Hover the mouse cursor over one of the four nodes under 'Default View' () and press the sequencer icon.
2. The software then displays all camera channels of the groups in sequence, starting with the first list entry, until the sequencer is stopped manually ( ).
3. The individual sequences can be scrolled through manually during the sequence process using the buttons.

Alarm manager



General information on the alarm manager

The alarm manager displays alarm and event messages for all connected devices in real time. The '**Notify CMS**' setting must be configured accordingly in the relevant cameras/recorders for this function.

Note

This configuration can either be defined on the device itself or within the CMS via 'Remote Configuration'.

Examples of alarm and event messages include: motion detection, device error or the triggering of an alarm input.

Operating the alarm manager

The alarm manager is always displayed in all views and menus in the software footer, in order to have constant access to any sudden event messages. To see the detailed display, the alarm list can be shown or hidden using the button.

The following basic functions are available:

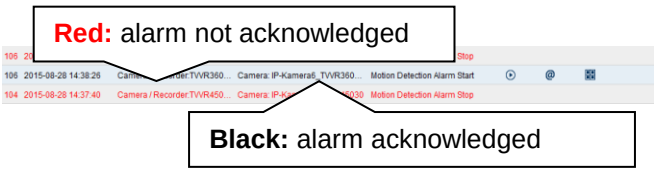
Parameter	Description
	The alarm LED signals active alarm and event messages by flashing.
	Deletes all alarm and event messages (depending on the selected filter in the list).
	Enables/disables the alarm pop-up. If the pop-up is enabled, each alarm and event message is displayed in a separate window.
	Enables/disables alarm sound notifications, which are played each time an event occurs. The audio file can be changed under the menu bar → Tool → System Configuration → Alarm Sound.

Analysing the alarm list

The alarm list shows all alarm and event messages in chronological order. Each line provides the following information:

Parameter	Description
Index	Consecutive event number. The counter is reset when the list is cleared.
Alarm Time	Time at which the event occurred.
Alarm source	Source of the event (recorder, camera).
Alarm Details	Camera name or channel name.
Alarm Content	Event type
	View live display of the affected channel in the alarm pop-up.
	Send the current live image directly via email.
	Display the current live image in the alarm window of a video wall.
Note	Free text field for notes
Alarm	Filter for displaying all alarms
Event	Filter for displaying all events (error messages)
Filters	Use the alarm filters to search for specific alarm types.

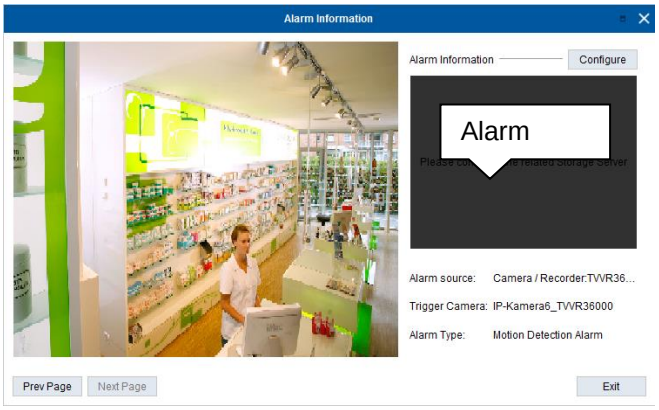
The alarm list has an acknowledgement function. A red list entry indicates that the alarm has not yet been acknowledged by the user. As soon as this entry is clicked once with the mouse, the text colour changes to black and the alarm/event is acknowledged.



Note

Each alarm has two statuses: 'Alarm Start' and 'Alarm Stop'. The alarm LED only goes out when all alarms have the status 'Stop'.

Analysing the alarm pop-up

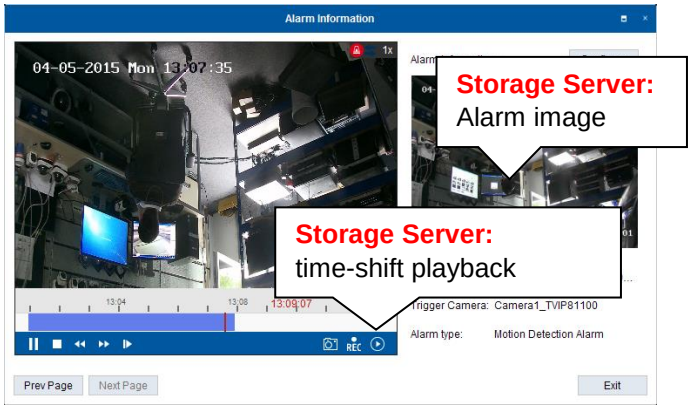


If the alarm pop-up is enabled, a window appears in the centre of the screen for each channel alarm, showing the live image of the currently triggered camera.

Hover the mouse cursor over the displayed live image to show additional control commands at the bottom edge of the image.

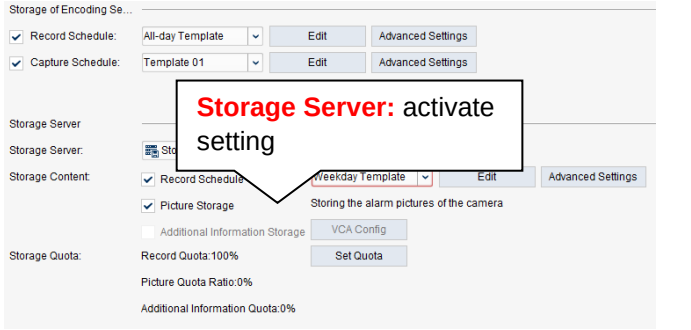
Parameter	Description
Configure	Opens the settings menu for the storage schedule. Here you can assign the storage server directly in order to use the advanced functions in the alarm pop-up.
Alarm image	Display of the alarm image. This function is only available in connection with the Storage Server.
	Create a local capture (JPG) of the current camera image.
REC	Create a local recording (MP4) of the current camera image.
	Instant playback of the last 30 s–10 min.
Next Page **Prev. Page**	Switch between alarm messages.

Storage Server for alarm pop-up



The alarm pop-up function can save and display an alarm image for the alarm event using the Storage Server, in addition to displaying playback data for the alarm event within the alarm pop-up.

Use the 'Config' button to switch to record schedule settings from the currently displayed channel within the alarm pop-up.



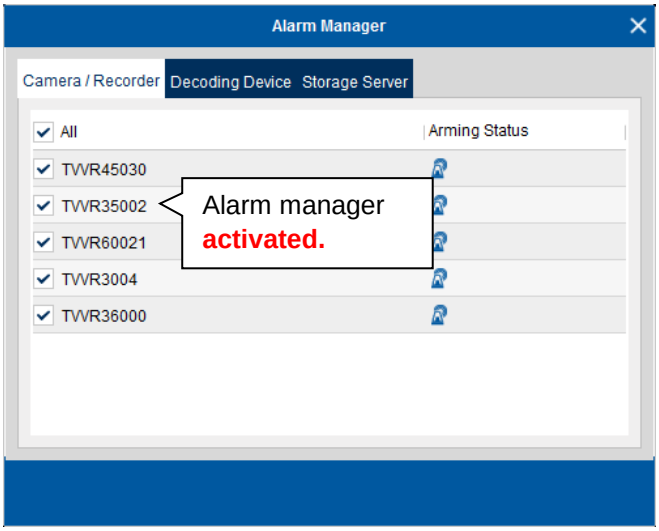
Note

Ensure you are familiar with the basics before using the Storage Server. More information is provided in chapter '***Storage Server***'. The additional functions described here are optional and not necessary for operating the CMS software.

The following settings are relevant here:

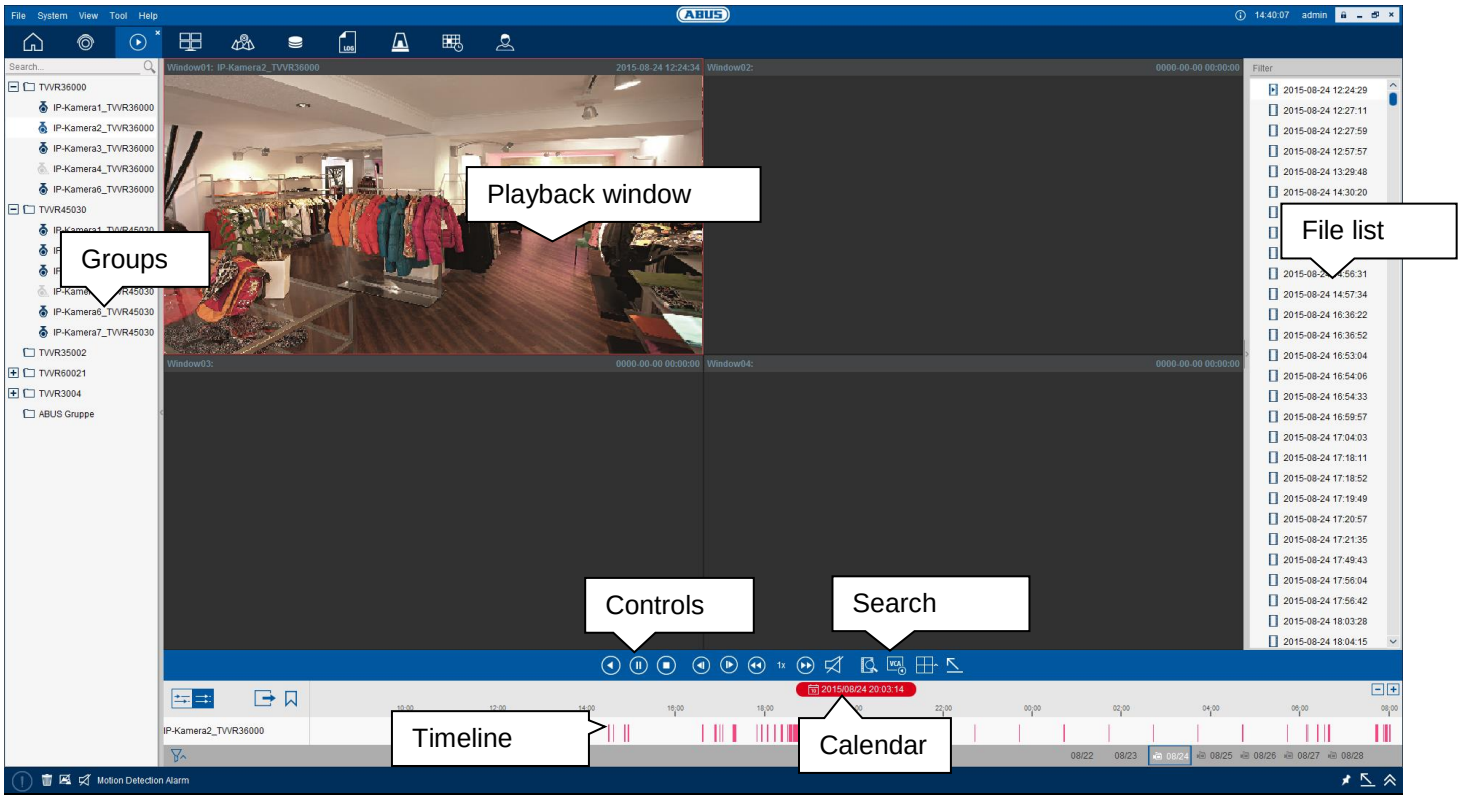
Parameter	Description
Storage Server	Assign a storage server from the selection list.
Record Schedule	Activate instant recording.
Picture Storage	Activate recording of alarm images.

Deactivating the alarm manager



The alarm manager can be activated and deactivated under the menu bar → Tool → Alarm Manager. Alarms for all devices at once or specific individual devices can be deactivated. If alarms for a device are deactivated, the alarm and event messages are discarded on the CMS ( ).

Remote playback



General information on remote playback

Remote playback allows recorded video data from recorders or cameras (SD card or Storage Server) to be played. A network connection between the CMS and device memory is established every time. For this reason, take note of the bandwidth of your available network connection.

Note

In contrast to the live view, the stream resolutions do not scale when the recorded data is played. The data is played in exactly the same quality as it was recorded. This may lead to performance limitations if multiple data files are being played (depending on the network and PC).

Activating remote playback

Remote playback can be accessed via the following menu options:

- Menu bar → View → Remote Playback
- Quick launch toolbar → play icon
- Main menu → play icon

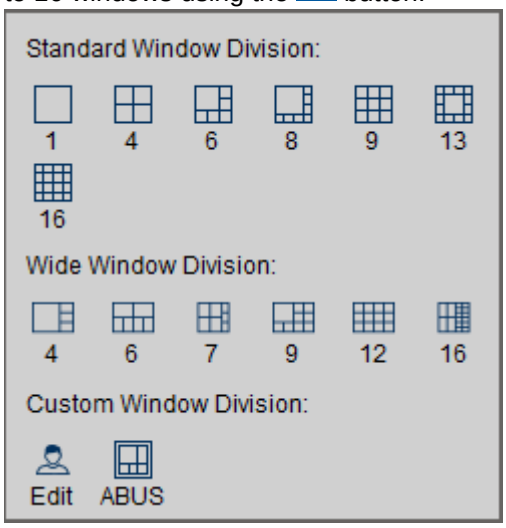
Remote playback function areas

Remote playback is divided into the following function areas:

Parameter	Description
Groups	Select an individual channel ( ) or an entire group ( ) and drag this into the viewing pane. The view adjusts automatically if the group contains more channels than the current window division setting displays.
Playback window	Display of played data
Timeline	Display of timeline with recorded data for the currently selected camera
Controls	Playback controls
Search criteria	Event and VCA playback
Calendar	Selection of playback date/time
File list	Recorded files

Simple remote playback

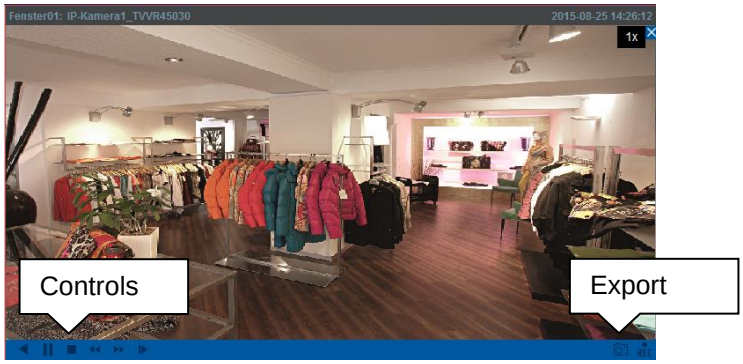
Drag a camera channel or group to a desired cell in the viewing pane. The viewing pane can be adjusted to up to 16 windows using the button.



Similarly to the live view, windows can also be adjusted individually using the 'Custom Window Division' function.

The CMS software then establishes a network connection to the playback device and remote playback starts immediately at the current system time.

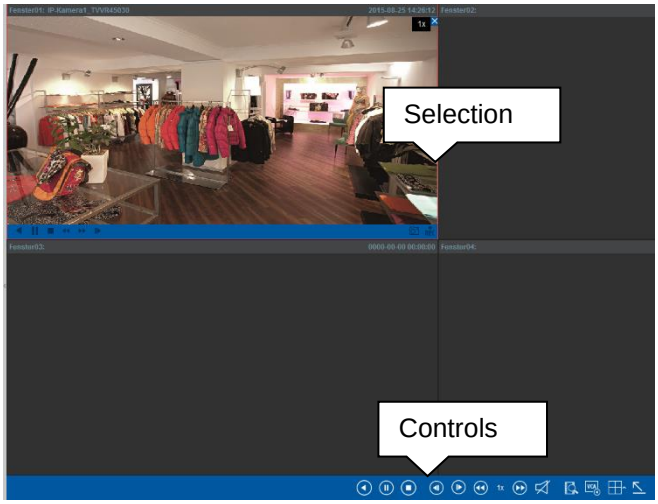
Hover the mouse cursor over the playback window to show additional control commands:



The following options are available in the playback window:

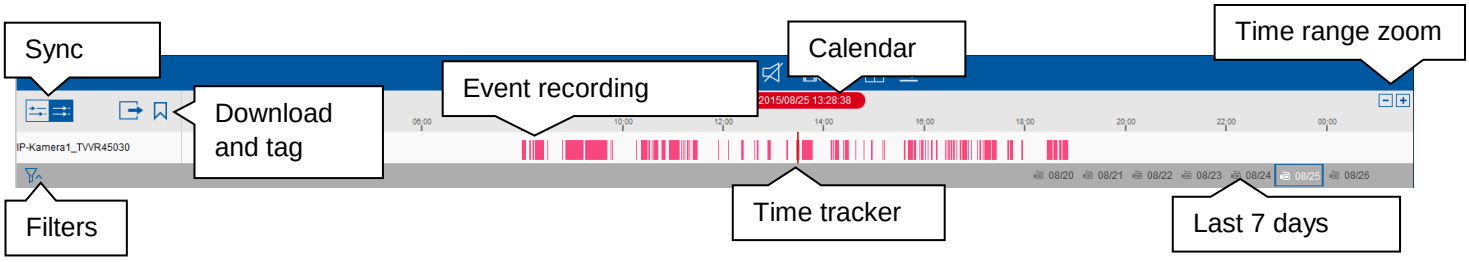
Parameter	Description
	Play forward or backward
	Pause
	Fast forward or slow forward
	End channel playback
	Play forward or backward in single frames. Only one of the two functions is available depending on the selected playback direction ( ).
	Create a local capture (JPG) of the current camera image.
REC	Create a local recording (MP4) of the current camera image.

Alternatively, playback can also be controlled using the controls at the bottom edge of the viewing pane:



The playback control functions are identical to those in the actual playback window and apply to the selected cell in question (red frame) in the viewing pane for remote playback.

Operating the timeline



Note

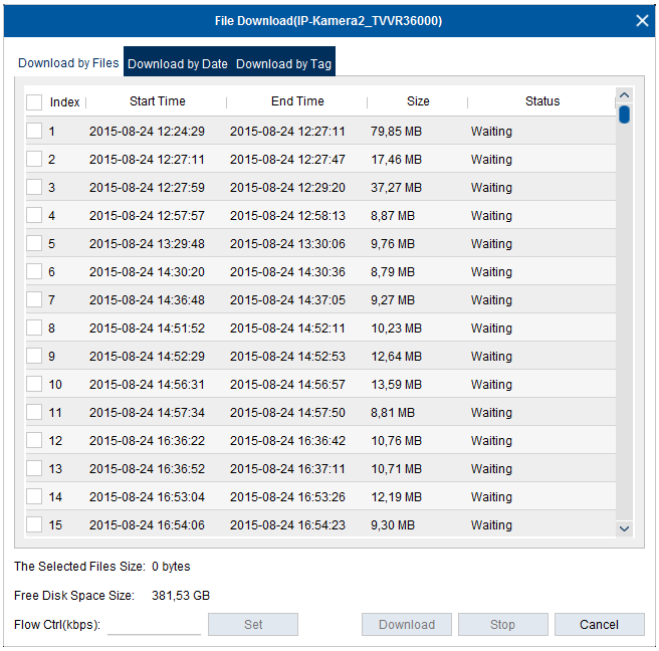
Synchronous playback may cause delays depending on the resource usage and network connection, as well as the number of camera channels and playback sources. Reduce the number of sources to achieve better performance in this mode.

The playback time for the currently selected camera (red time tracker) can easily be changed by clicking elsewhere in the timeline. Move the timeline horizontally by clicking and holding the mouse cursor down in the time display area, in order to move the timeline forwards and backwards. The mouse cursor changes into a hand ( ).

The following options are available:

Parameter	Description
	Asynchronous playback: each channel is played independently of each other.
	Synchronous playback: all active channels in the viewing pane play events occurring at the same time.
	Open the download manager for the currently selected channel.
	Tag a recording.
	Open the calendar and select a playback time.
	Increase or decrease the time range of the timeline.
	Filters for playback of different types of recordings.
	Quick access to recordings from the last seven days. A camera icon indicates whether recordings exist for a particular day.

The download manager allows recordings to be downloaded from the device memory directly to your PC.



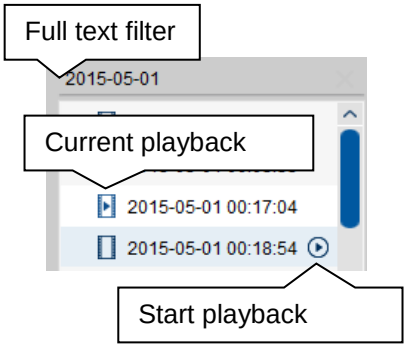
Select the desired files and start the process using the 'Download' button. The file is downloaded in the background; for this reason the window can be closed during this process.

Note

The file download process takes up network bandwidth. During the active download, the live image display or playback may experience performance limitations. Use the 'Limit' function during the download to restrict the bandwidth for the download.

Parameter	Description
Download by Files	File list from device memory.
Download by Date	Select an entire time range for the download.
Download by Tag	Download files by tag.

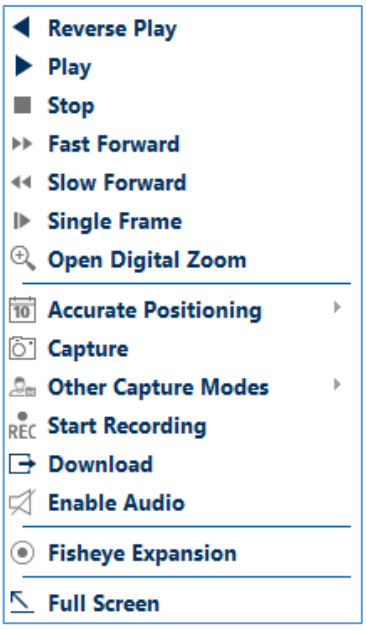
Operating the file list



The file list shows all recording files from the device memory. Depending on the currently selected playback time, the file currently being played is marked with .

Hover the mouse cursor over a file to play the file directly using . The file list can be filtered using the full text search function.

Playback context menu



Additional commands can be executed separately for each camera via the context menu in the playback view. Right-click on the camera image in question to access the menu.

Note

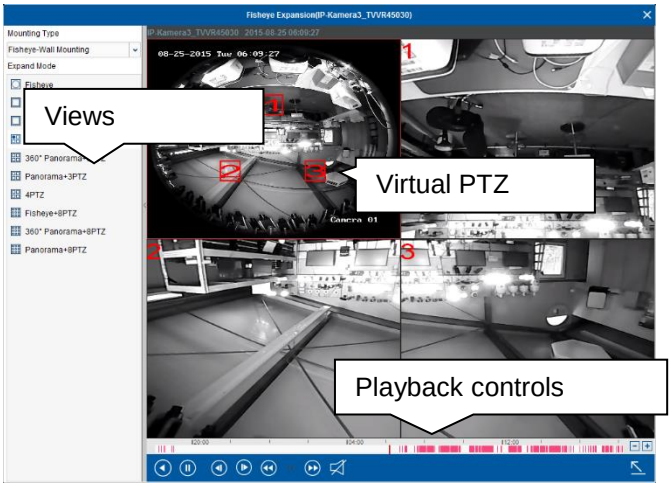
The fisheye view is optimised for the following camera models: TVIP83900, TVIP86900, TVIP82900.

Note

Some context menu functions may not be supported, depending on the camera model used.

Parameter	Description
Reverse Play	Reverse Play
Pause	Pauses playback
Stop	Stops playback for the current channel
Fast Forward	Increases the playback speed
Slow Forward	Decreases the playback speed
Single Frame	Single frame play
Open Digital Zoom	Activates the digital zoom function. Selecting an area with the mouse controls the zoom.
Accurate Positioning	Opens the calendar
Capture	Create a local capture (JPG) of the current camera image.
Other Capture Modes	Generate a snapshot and set up the print preview, and more
Start Recording	Create a local recording (MP4) of the current camera image.
Download	Open the download manager
Enable Audio	Starts playing audio (if recorded)
Fisheye Expansion	Fisheye playback view (software de-wobble)
Full Screen	Switches to full-screen view

Fisheye view



Use the fisheye view for optimal analysis of the different viewing angles and functions of these special cameras in playback mode.

The CMS software uses a software algorithm in this view to correct the image distortion of the 360° viewing angle of the hemispheric cameras.

Ensure that channel 1 is selected as the starting point for this playback mode, which shows the fisheye view.

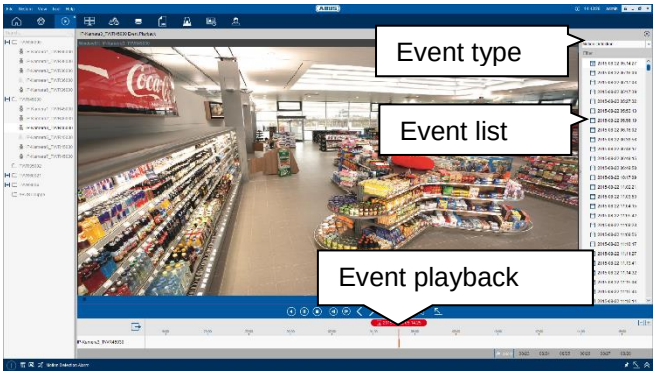
Select the right installation type for the camera. Depending on the selection, either the 360° panorama mode or dual 180° panorama mode is available.

The following basic views are available:

Parameter	Description
Fisheye	Fisheye view. The complete viewing angle of the camera is played 1:1.
Dual 180° Panorama	The 360° viewing angle is divided into two 180° views. The image distortion is corrected.
360° Panorama	The 360° viewing angle distortion is corrected.
Panorama	The 360° viewing angle distortion is corrected.
Fisheye+3/8 PTZ	Fisheye view + 3 or 8 distortion-corrected PTZ segments. The segments can be controlled as a virtual PTZ with the mouse.
360° Panorama+3/8PTZ	Distortion-corrected 360° view + 3 or 8 distortion-corrected PTZ segments. The segments can be controlled as a virtual PTZ with the mouse.
Dual 180° Panorama+3/8PTZ	Two 180° views + 3 or 8 distortion-corrected PTZ segments. The segments can be controlled as a virtual PTZ with the mouse.
4PTZ	Four distortion-corrected PTZ segments. The segments can be controlled as a virtual PTZ with the mouse.

Event playback

Drag a camera channel or group to a desired cell in the viewing pane and select the desired channel (red marking). Activate event playback for this channel by clicking on the icon.



The event playback filters the playback of the selected channel by all events. The following event types can be searched for:

Parameter	Description
Motion Detection	Event triggered by motion detection of the camera.
VCA Detection	Currently not supported.
Behavior Analysis	Currently not supported.

If you do not get any search results for the selected channel, it is likely that no event (e.g. motion) was set up (on the camera/recorder).

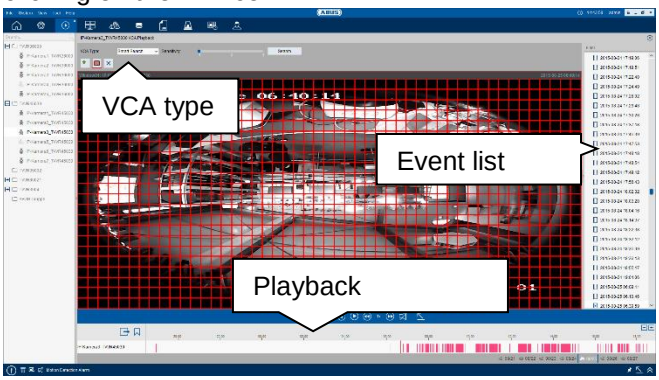
Note

Support for VCA depends on your recorder and the camera model used. Motion detection is supported by all cameras/recorders.

The event list shows all recorded data which matches the selected event type. Playback occurs in this mode based on the event.

SMART playback

Drag a camera channel or group to a desired cell in the viewing pane and select the desired channel (red marking). Activate VCA playback for this channel by clicking on the VCA icon.



VCA playback allows for subsequent analysis of recorded data on the recorder. The following options are available:

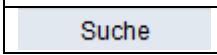
Parameter	Description
Smart Search	This function makes it possible to search for motion across all image content, regardless of the programmed recording type.
Tripwire Detection	This function makes it possible to search through the entire image content by virtual line, regardless of the programmed recording type.
Intrusion Detection	This function makes it possible to search through the entire image content by intrusion area, regardless of the programmed recording type.

The smart search is mainly useful when the video data is saved by continuous capture.

Note
Support for VCA depends on your recorder model.

Smart Search

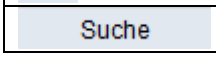
Smart search can be used to search for motion data across all recorded data, regardless of the recording type. Select the 'Smart Search' VCA type and define the following parameters for the search:

Parameter	Description
	Define the search area by drawing a screen with the mouse.
	Define the search area as the complete image area.
	Delete the search screen.
	Define the sensitivity (1 = low, 3 = high)
	Start the search.

Recording data found using the search criteria is displayed as red bars in the VCA playback bar.

Tripwire Detection

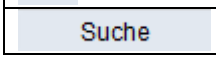
Tripwire detection can be used to analyse moving objects that cross a virtual line. Select the 'Tripwire Detection' VCA type and define the following parameters for the search:

Parameter	Description
	Define the search area by drawing a line with the mouse.
	Delete the line.
	Start the search.

Recording data found using the search criteria is displayed as red bars in the VCA playback bar.

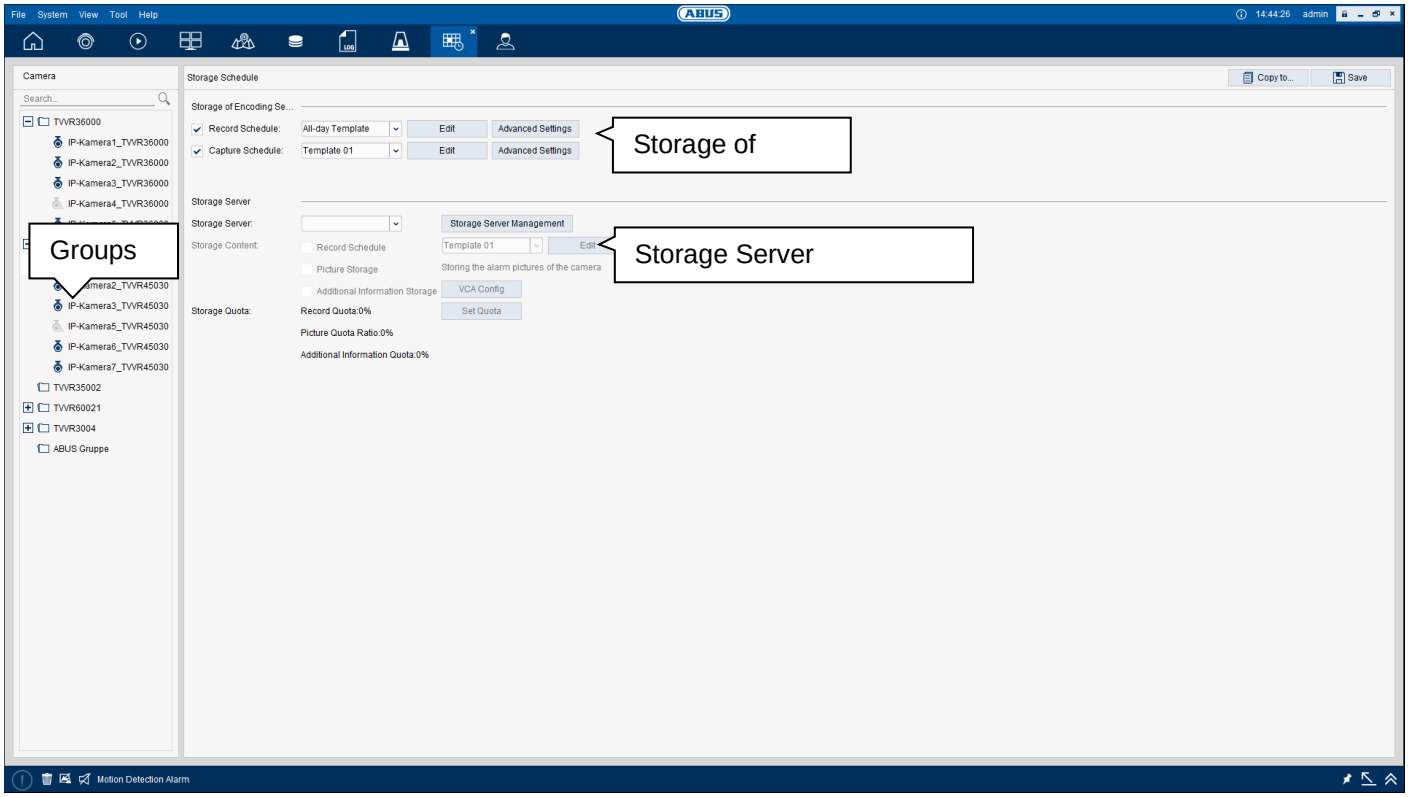
Intrusion Detection

Intrusion detection can be used to analyse objects that dwell in a screened area. Select the 'Intrusion Detection' VCA type and define the following parameters for the search:

Parameter	Description
	Define the search area by drawing an area consisting of four points with the mouse.
	Delete the area.
	Start the search.

Recording data found using the search criteria is displayed as red bars in the VCA playback bar.

Storage schedule



General information on the storage schedule

The Storage Schedule menu allows for recording schedules to be programmed for set-up devices, in order to save the video data in the available data memories.

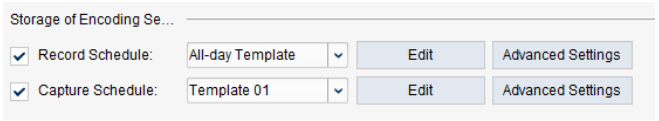
Record Schedule	Description
Storage of Encoding Server: Record Schedule	Manage schedules for continuous capture and event recording.
Storage of Encoding Server: Capture Schedule	Manage schedules for captures (snapshots).
Storage Server	Save data on the network drive using Storage Server.

Note

Schedule management in the recorders/cameras provides a much more detailed setting option than the CMS software. With complex schedules, refer to the internal device record schedules.

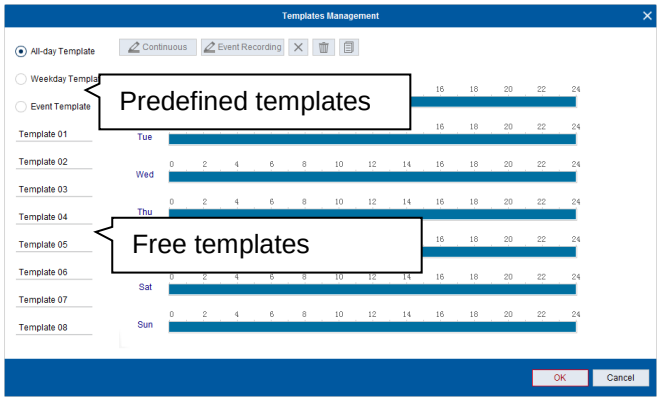
Managing local recording

Select a group for which scheduling requires adjustment from the Storage Schedule menu. Then select a channel from to define the record schedule setting:



Parameter	Description
☑	Activates/deactivates the schedule.
All-day Template	Selection of schedule template or custom schedule.
Edit	Edit the schedules.
Advanced Settings	Advanced settings for pre-alarm/post-alarm and stream settings.

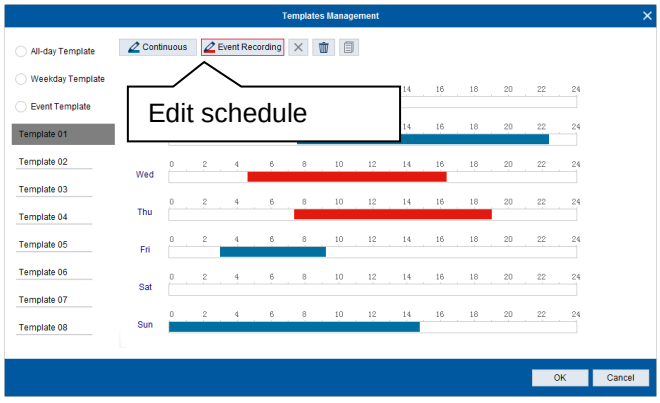
Managing schedules



The schedule templates can be adapted using the Edit button. There are fixed, predefined templates as well as freely programmable schedules available:

Parameter	Description
All-day Template	Continuous capture Monday–Sunday from 00:00–24:00
Weekday Template	Continuous capture Monday–Sunday from 08:00–20:00
Event Template	Motion or alarm recording Monday–Sunday from 00:00–24:00
Template 01–08	Freely programmable schedules.
Custom	Freely programmable schedule without using a template.

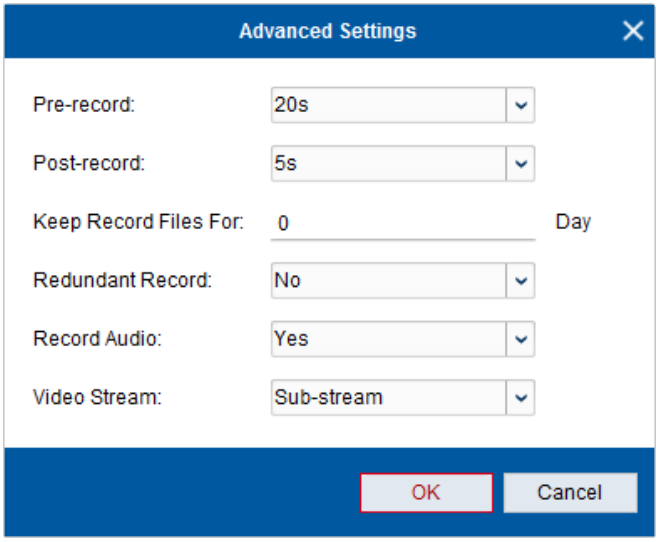
Editing schedules



Proceed as follows:

- Select a template (01–08)
- Select a recording type (continuous / event recording)
- Select the time range in the record schedule using the mouse
- Move a timeline using , copy a timeline with or delete it with .
- The entire schedule can be deleted using .

Advanced settings



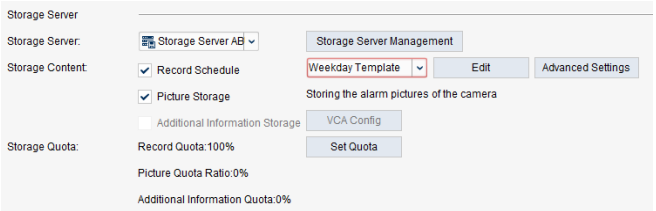
The following settings can be defined:

Parameter	Description
Pre-record	Buffer time for records that are also saved before an event occurs.
Post-record	Buffer time for records that are also saved after an event occurs.
Keep Record Files For	Time period for which the record is retained. Once this time (in days) has expired, the data is overwritten by the circular buffer.
Redundant Record	Activates additional data recording on redundant data carriers (see hard drive management on recorder).
Record Audio	Activates recording of audio data (if available).
Video Stream	Select the record stream.

Save all settings by pressing the button at the top of the screen.

Managing Storage Server recording

Select a group for which scheduling requires adjustment from the Storage Schedule menu. Then select a channel from to define the record schedule setting:



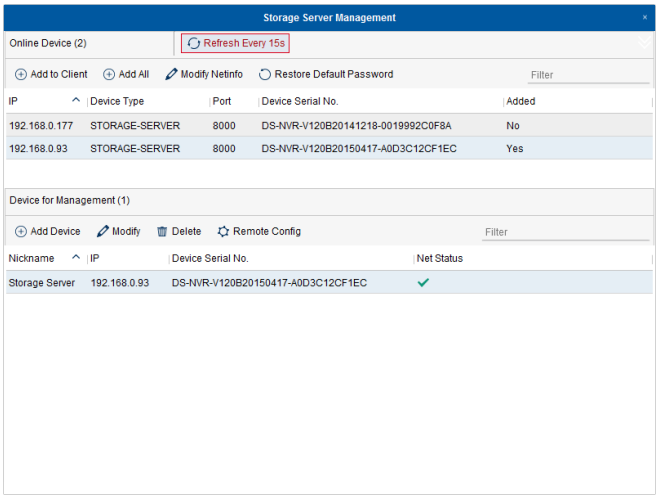
The procedure for defining schedule settings for the local server is the same and is not described here again.

Parameter	Description
Storage Server	Select a storage server for the recording.
Storage Server Management	Open Storage Server management.
Additional Information Storage	Option to save additional data. (depends on camera)
All-day Template	Selection of schedule template or custom schedule.
Edit	Edit the schedules.
Advanced Settings	Advanced settings for pre-alarm/post-alarm and stream settings.
Storage Quota	Display of quota settings for recordings, images and additional information.
Set Quota	Define the quota settings.

Note

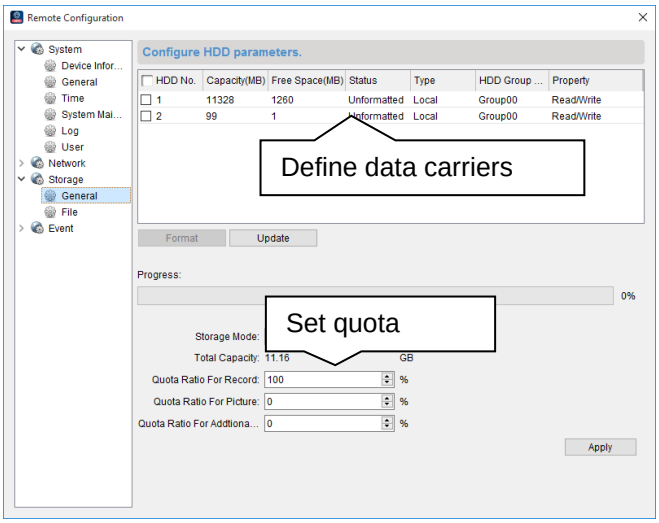
Read about the application and installation of the Storage Server in advance in '**Storage Server**'.

Setting up the Storage Server



All available storage servers are displayed under 'Online Device'. Add the desired storage server with 'Add to Client'. The storage server can also be added using the 'Device Management' main menu.

Open the 'Remote Configuration' to check the Storage Server management.



The storage server must have at least one active data carrier with 'status normal' to record data.

Select a data carrier and initialise it by pressing the 'Format' button.

Note

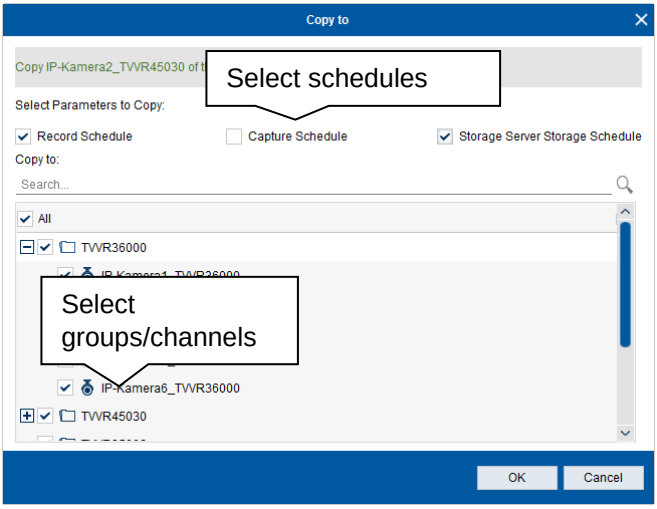
The 'Format' command does not actually perform formatting at file level. During the process a specific folder and file structure is created on the data carrier; the server attempts to reserve as much space as possible using blank files.

Note

Use empty partitions on your hard drive or use external data carriers as a storage medium for the Storage Server. Operating system drives (C:\) cannot be used as data carriers.

The quota settings can be adjusted in this menu. Define the percentage distribution of the data (recording, images, additional data) for use in the Storage Server.

Copying settings

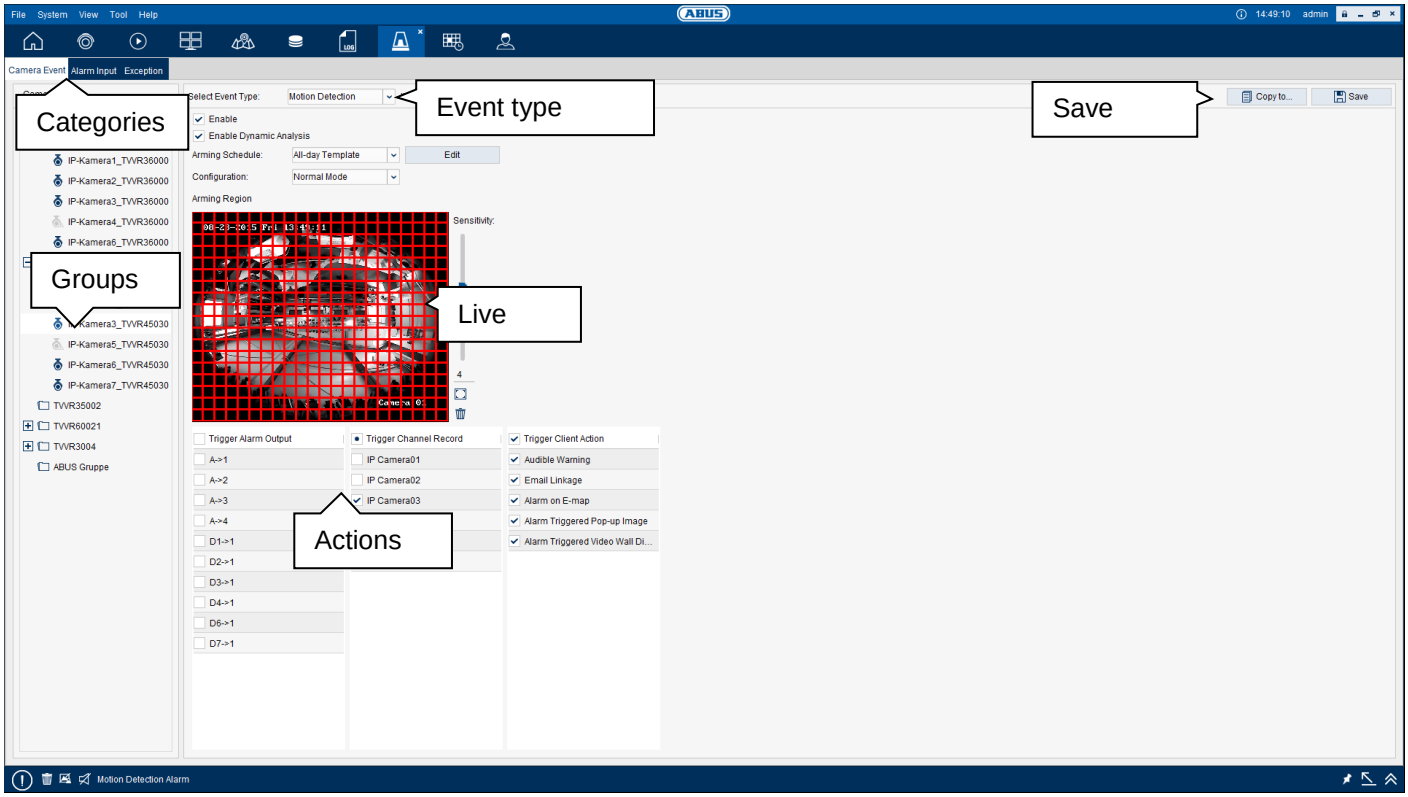


Once all settings have been defined for the current channel, the parameters can be copied over to other channels using the 'Copy to' ( ) function.

Select the schedules and specify the groups/channels to adopt the settings. Click 'OK' to transfer the settings.

Then save all settings by pressing the button at the top of the screen.

Event management



General information on event management

The 'Event Management' menu allows events, alarms and device exception errors to be managed. The CMS software can export the internal settings of the devices directly, making it possible to quickly and easily program the alarm behaviour. Rules and triggers can be defined, which, for example, start recording, send email when events occur or transmit pop-up messages to the CMS software.

Note

The selection of available events, alarm contacts and exception errors depends on the device and the firmware. Check the manual and technical data for your device.

The menu is divided into three categories. The following events can be managed:

Parameter	Description
Camera Event	Programming of camera's internal functions such as motion, tampering, signal loss, tripwire, etc.
Alarm Input	Programming for wired alarm inputs and control of relay outputs
Exception	Programming for system behaviour when exceptions are thrown.

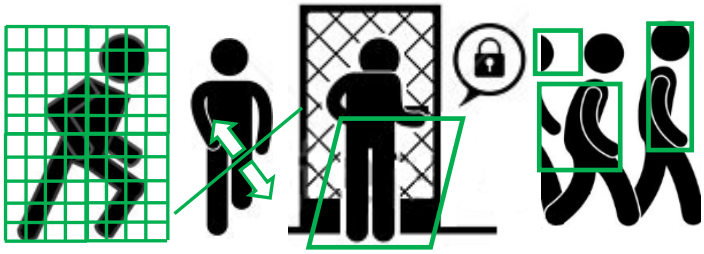
Camera events

A different number of events (**depending on device**) is available depending on the camera model. In these CMS instructions, the programming of motion detection is described as an example. Check the manual for the camera/recorder to find information on configuring additional event functions.

Parameter	Description
Motion Detection	Analyses the video image for pixel and brightness changes.
Video Tampering Detection	Detects when the camera lens has been covered.
Video Loss	Monitors the camera status and triggers an alarm if a signal is lost.
Audio Exception	Monitors the audio level at the connected microphone. If the sound level suddenly spikes or drops, an alarm is generated.
Defocus Detection	Monitors the sharpness of the camera image.
Face Detection	Analyses the camera image for human faces (eyes, nose, mouth). If a face is detected, the camera reports an event.
Tripwire Detection	Analyses the camera image for objects crossing virtual lines.
Intrusion Detection	Analyses the camera image for people or objects entering and lingering within an alarm zone.
Area Entry/ Exit Detection	Reports an alarm when someone enters or exits an alarm zone.
Object Removal Detection	Analyses the image content for the sudden disappearance of stationary objects.
Object Counting	Counts moving objects when crossing an alarm zone from different directions.
Scene Change Detection	Detects a camera manipulation by changing the viewing field.

Visual event rules

To set up camera events, green lines appear in the live image to help the analysis process as a visual rule. These lines are displayed differently depending on the function used:



Motion detection | **Tripwire detection** | **Intrusion detection** | **Object counting**

Depending on the function used, the display of the event rule can be activated or deactivated for the specific device directly in the camera web interface (or CMS remote configuration). The display can be completely deactivated within the software under the menu bar → Tool → System Configuration → Image:

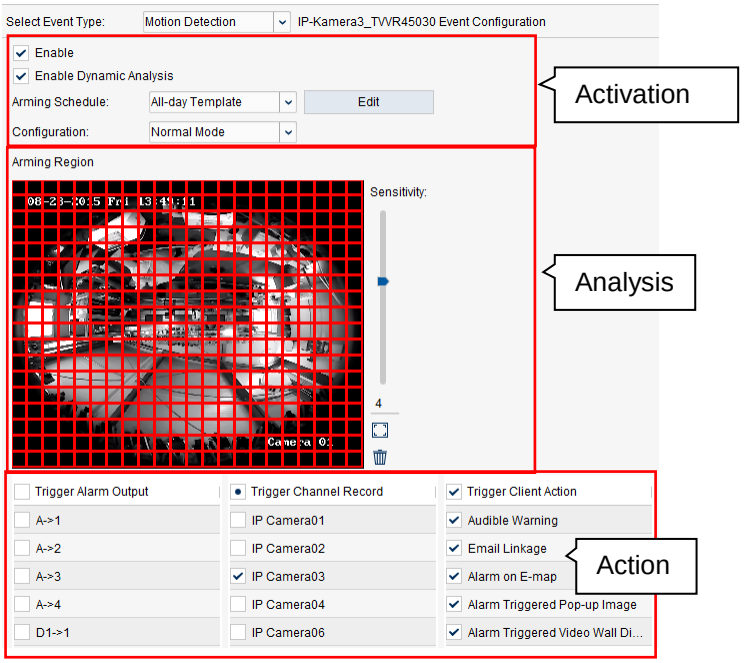
Parameter	Description
Enable Highlight	Activates/deactivates the motion detection display for all cameras.
VCA Rule	Activates/deactivates the VCA and smart rule display for all cameras.

Note

The analysis function (e.g. tripwire detection) is active even if the display is deactivated. Activate the display to set up and adjust the sensitivity. It is a good idea to deactivate the display again in later operation.

Configuring camera events

Select a group to be programmed for the events from the Camera Event menu. Then select a channel from to define the setting:



Event: Activation

Basic settings for activating the function are defined in the 'Activation' area:

Parameter	Description
Enable	Activates/deactivates the function.
Enable Dynamic Analysis	Activates/deactivates the event rule display in the live image.
Arming Schedule	Setting for scheduled activation of the function.
Configure	Selection between normal and expert mode for motion detection (depends on camera).

Event: Analysis

All settings regarding the image area are defined in the 'Analysis' area. For motion detection a screen for the motion analysis is set using the mouse:

Parameter	Description
Live image	Draw a screen directly in the live image using the mouse. The selected area is analysed by the camera.
Sensitivity	Sensitivity setting. The higher the value, the more frequently the camera event triggers.
	Defines the analysis area as the entire screen (full screen).
	Delete the analysis screen.

Note

Each event function has different parameters for configuration (e.g. Tripwire → Draw Line / Intrusion Detection → Draw Area, etc.) Check the user manual for your device for information on the exact configuration and explanation of the related parameters.

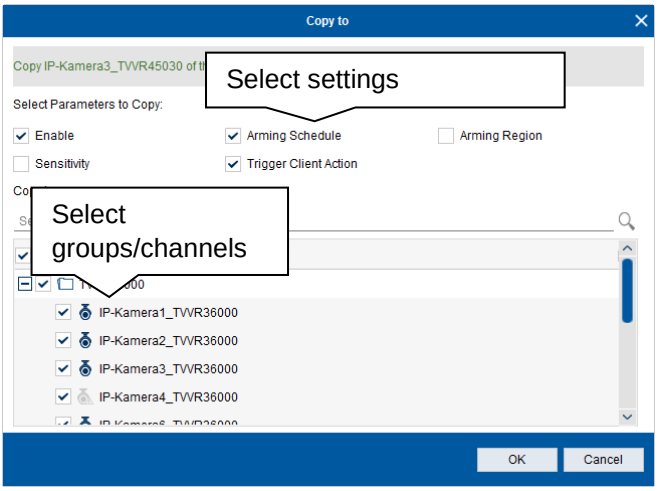
Event: Action

The commands executed when the camera event triggers are defined in the 'Action' area. The actions always apply to the currently selected camera in combination with the CMS software.

Parameter	Description
Trigger Alarm Output	Switches the selected relay output (if available on the device).
Trigger Channel Record	Activates recording.
Trigger Client Action	Activates the alarm message on the CMS.
Audible Warning	Activates an audio warning signal on the CMS.
Email Linkage	Activates the camera's email notification function.
Alarm on E-map	Activates the alarm display on the CMS e-map.
Alarm Triggered Video Wall Display	Activates the alarm window on the video wall.

Save all settings by pressing the button at the top of the screen.

Copying settings



Once all settings have been defined for the current channel, the parameters can be copied over to other channels using the 'Copy to' ( ) function.

Select the settings and specify the groups/channels to adopt the settings. Click 'OK' to transfer the settings.

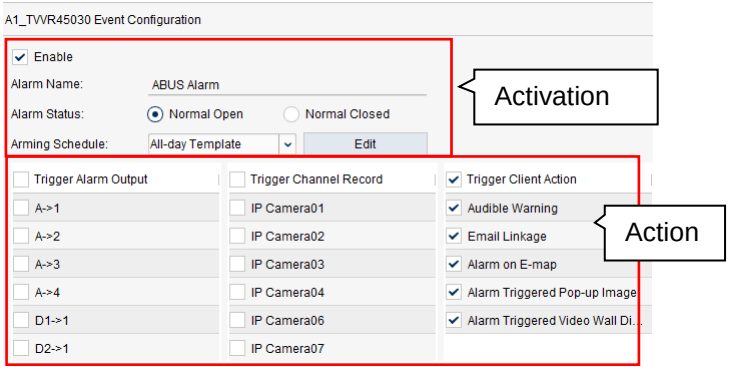
Note

Settings can only be copied for functions that are supported by all selected cameras.

Alarm input

The 'Alarm Input' menu can be used to program the I/O contacts of the camera/recorder.

Select a group to be programmed for the alarm inputs/outputs from the Alarm Input menu. Then select a channel from to define the setting:



Note

A different number of alarm inputs and outputs are available depending on the camera/recorder model. Check the manual and technical data for your device.
A->1: first analogue output (DVR/NVR)
D1->1: first digital output (camera)

Input: Activation

Basic settings for activating the function are defined in the 'Activation' area.

Parameter	Description
Enable	Activates/deactivates the selected alarm input.
Alarm Name	Custom name for the alarm input.
Alarm Status	Configuration of normal state for the input. Normal Open: open Normal Closed: closed
Arming Schedule	Setting for scheduled activation of the function.

Input: Action

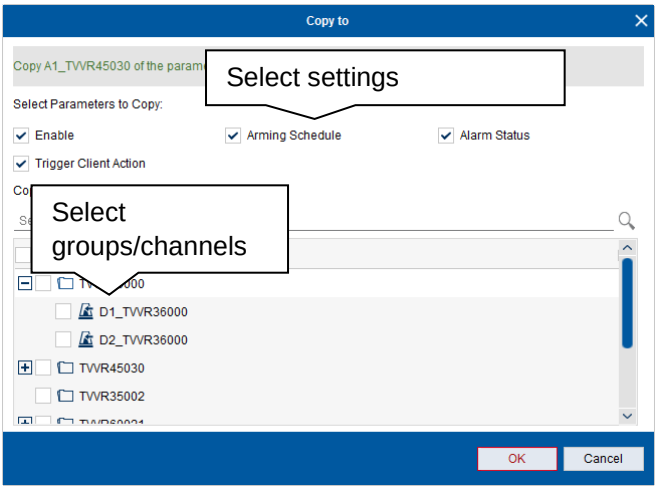
The commands executed when the alarm input triggers are defined in the 'Action' area. The actions always

apply to the currently selected input in combination with the CMS software:

Parameter	Description
Trigger Alarm Output	Switches the selected relay output.
Trigger Channel Record	Activates recording.
Trigger Client Action	Activates the alarm message on the CMS.
Audible Warning	Activates an audio warning signal on the CMS.
Email Linkage	Activates the camera's email notification function.
Alarm on E-map	Activates the alarm display on the CMS e-map.
Alarm Triggered Video Wall Display	Activates the alarm window on the video wall.

Save all settings by pressing the button at the top of the screen.

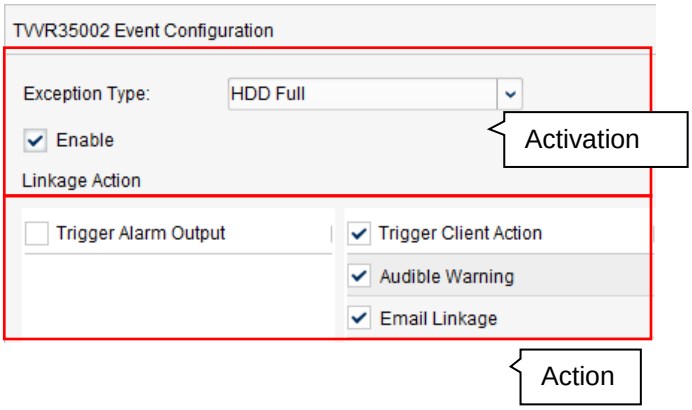
Copying settings



Once all settings have been defined for the current channel, the parameters can be copied over to other channels using the 'Copy to' ( ) function.

Exception

The 'Exception' menu can be used to program the device behaviour when exceptions are thrown.



Note

A different number of exception types are available depending on the camera/recorder model. Check the manual and technical data for your device.

Exception: Activation

Basic settings for activating the function are defined in the 'Activation' area. Each entry for 'Exception Type' must be activated individually.

Parameter	Description
Enable	Activates/deactivates exception monitoring.
Exception Type	Selection of parameters for exception monitoring. **HDD Full**: no space on the hard drive. **HDD Exception**: error on the data carrier. **Illegal Login**: incorrect entry (user name/password) when logging in. **Video Format Error**: camera signal does not match channel setting on the recorder. **Record|Capture Exception**: error during data recording **Encoding Resolution Error**: error when digitising video data

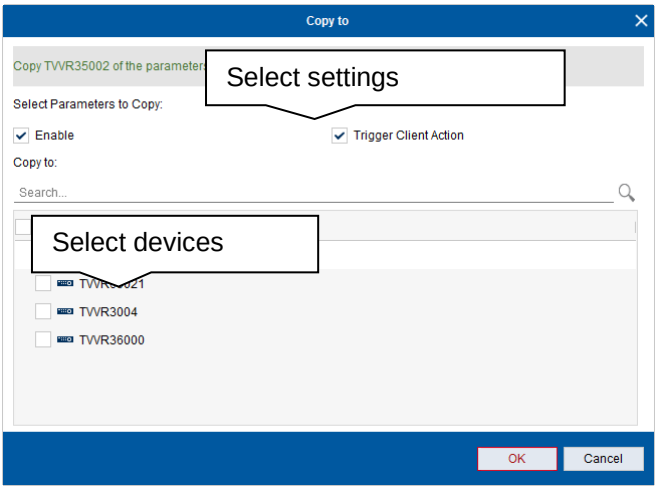
Exception: Action

The commands executed when an exception is thrown are defined in the 'Action' area. The actions always apply to the currently selected device in combination with the CMS software.

Parameter	Description
Trigger Alarm Output	Switches the selected relay output.
Trigger Client Action	Activates the alarm message on the CMS.
Audible Warning	Activates an audio warning signal on the CMS.
Email Linkage	Activates the camera's email notification function.

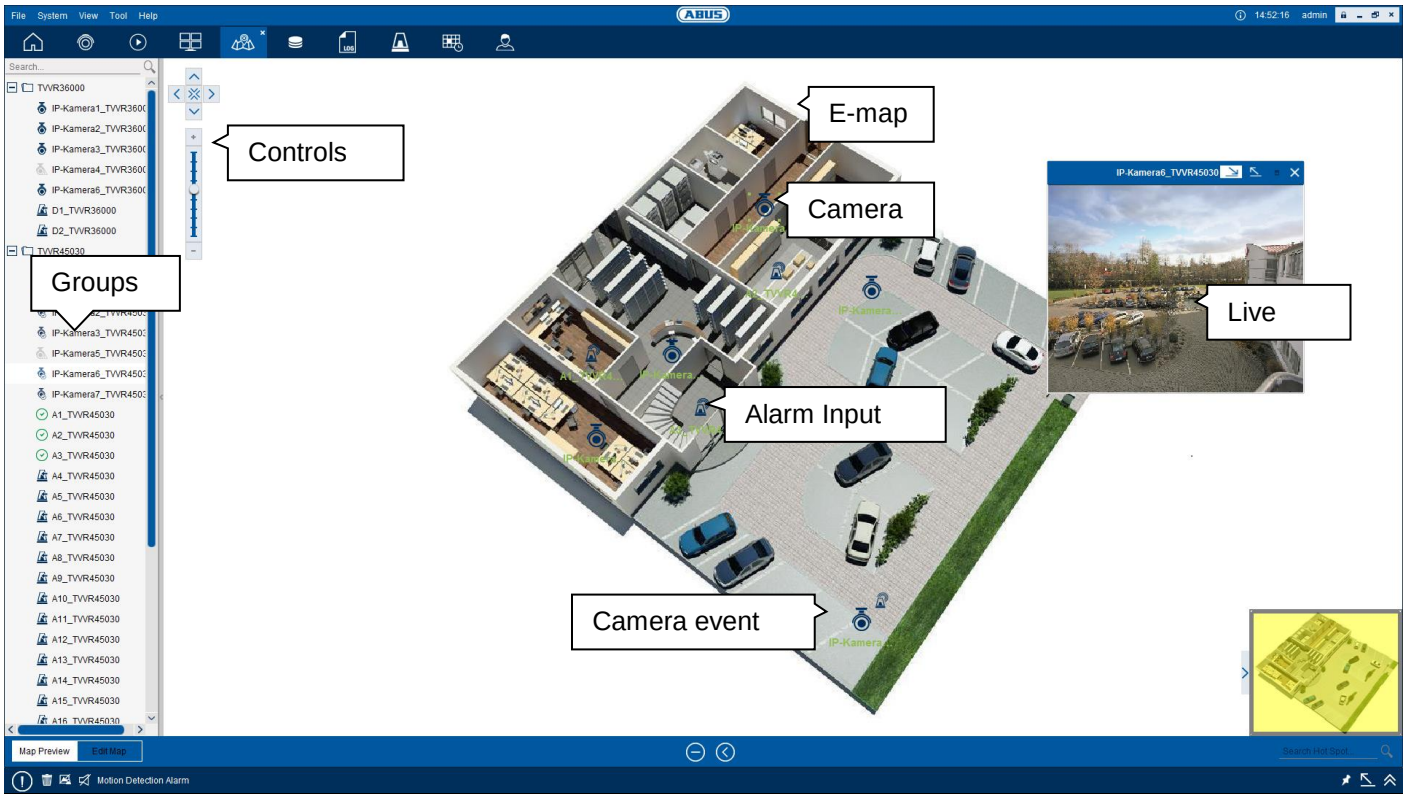
Save all settings by pressing the button at the top of the screen.

Copying settings



Once all settings have been defined for the device, the parameters can be copied over to other devices using the 'Copy to' ( ) function.

E-map



General information on the e-map

The e-map function enables a geographical overview using electronic maps (JPG, PNG, BMP) for cameras and alarm inputs. All cameras/alarm inputs for a device can be placed anywhere on the map and the current status can be checked using alarm displays.

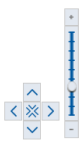
Cameras and alarm inputs are marked later as 'hot spots' and e-maps as 'hot regions'.

Note

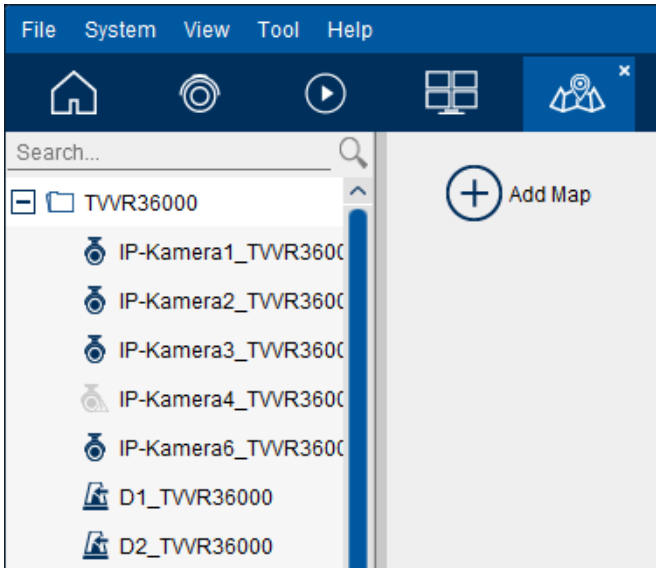
Only one e-map can be created per group.

Operating the e-map

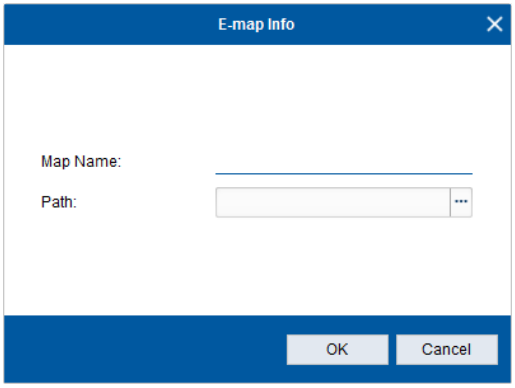
The status of all cameras/alarm inputs and maps is indicated with an alarm icon on the e-map. If an event occurs, the icon flashes to indicate where the event was triggered.

Parameter	Description
	Indicates the camera position on the e-map. Double-clicking shows the live image for the camera.
	Indicates an event at the camera. Clicking on the flashing icon shows the timestamp and event type.
	Indicates the position of a wired detector with the alarm input on the e-map.
	Indicates an event at the alarm input. Clicking on the flashing icon shows the timestamp and event type.
	Indicates a link to another e-map.
	Indicates that an event at a camera or alarm input exists on the linked e-map. Clicking on the flashing icon displays the triggering device.
	E-map view controls: **Scroll map (cross)** **Zoom in/out (slider)** Alternatively, use the mouse scroll wheel and right-click and hold and drag.

Creating an e-map



1. Select a group for which an e-map is desired.
2. Press the 'Add Map' button and select the map file.

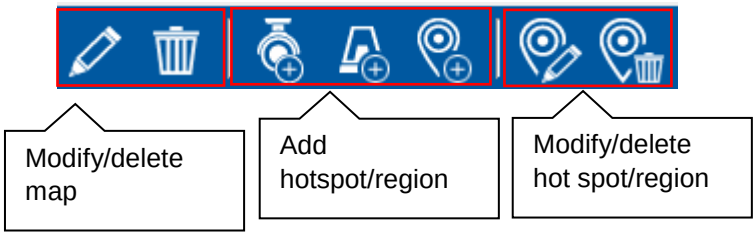


3. Assign a map name and press 'OK' to create the e-map.
4. The e-map is now created.

Ensure that the map is in edit mode if you wish to edit it. All settings are saved automatically when you switch to the preview mode.

Preview mode Edit mode (active)

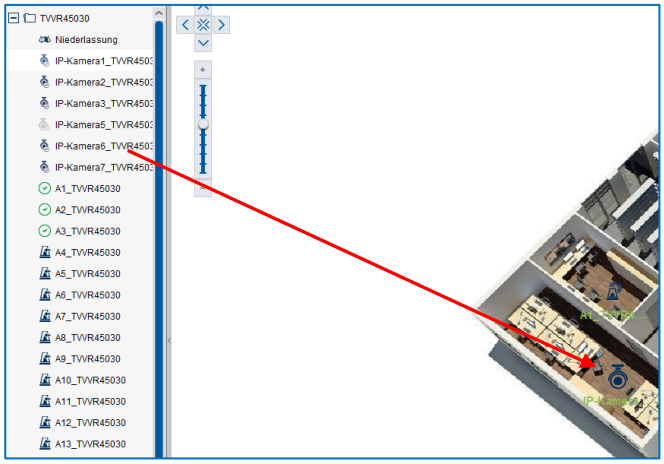
E-map toolbar



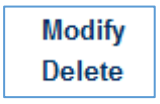
All settings for the e-map can be managed using the toolbar.

The settings for hot spots and hot regions can either be changed directly using the toolbar or modified by dragging and dropping them from the group list and opening the context menu on the icon in the e-map.

Editing an e-map

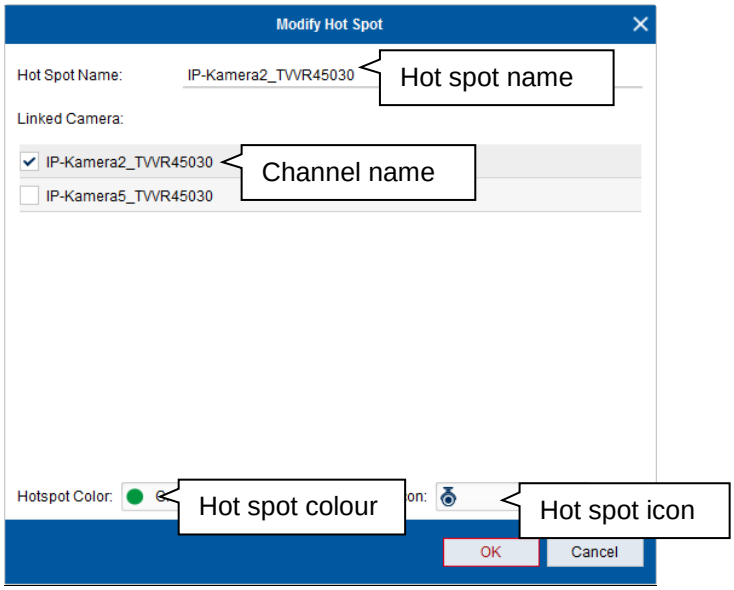


1. Ensure that the map is in edit mode.
2. Select a group for which an e-map already exists.
3. Drag and drop cameras and/or alarm inputs from the selected group onto the map and position them accordingly.
4. Right-click on the positioned cameras/alarm inputs to view additional options or delete this hot spot.



5. Alternatively, use the buttons in the toolbar to add hot spots from a table.
6. Link e-maps to each other by clicking in the toolbar.

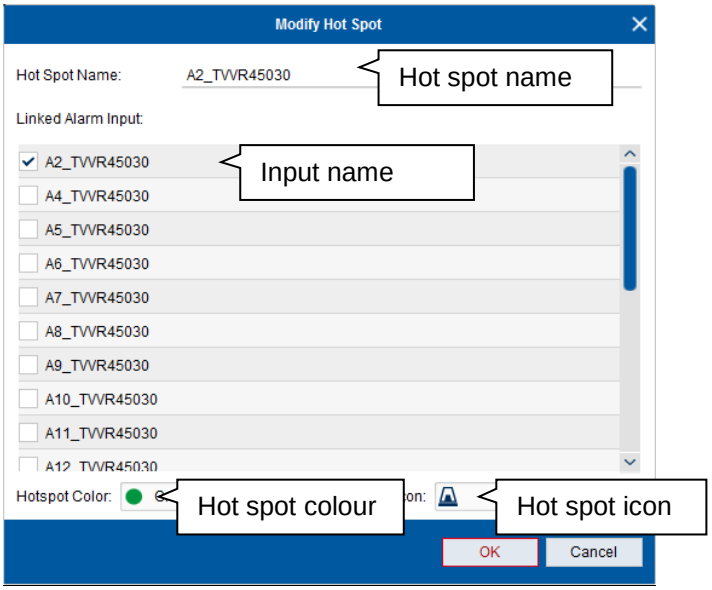
Hot spot settings for cameras



Camera hot spots can be adjusted retrospectively using the following options:

Parameter	Description
Hot spot name	Change the hot spot name. The channel name is adopted by default. An individual hot spot name can be defined for each channel to provide a better display on the e-map.
Linked Camera	Name of the camera channel on the device. This setting cannot be changed on the e-map.
Hot spot colour	Individual colour for displaying the hot spot name on the e-map.
Hot spot icon	Individual icon for displaying the hot spot on the e-map.

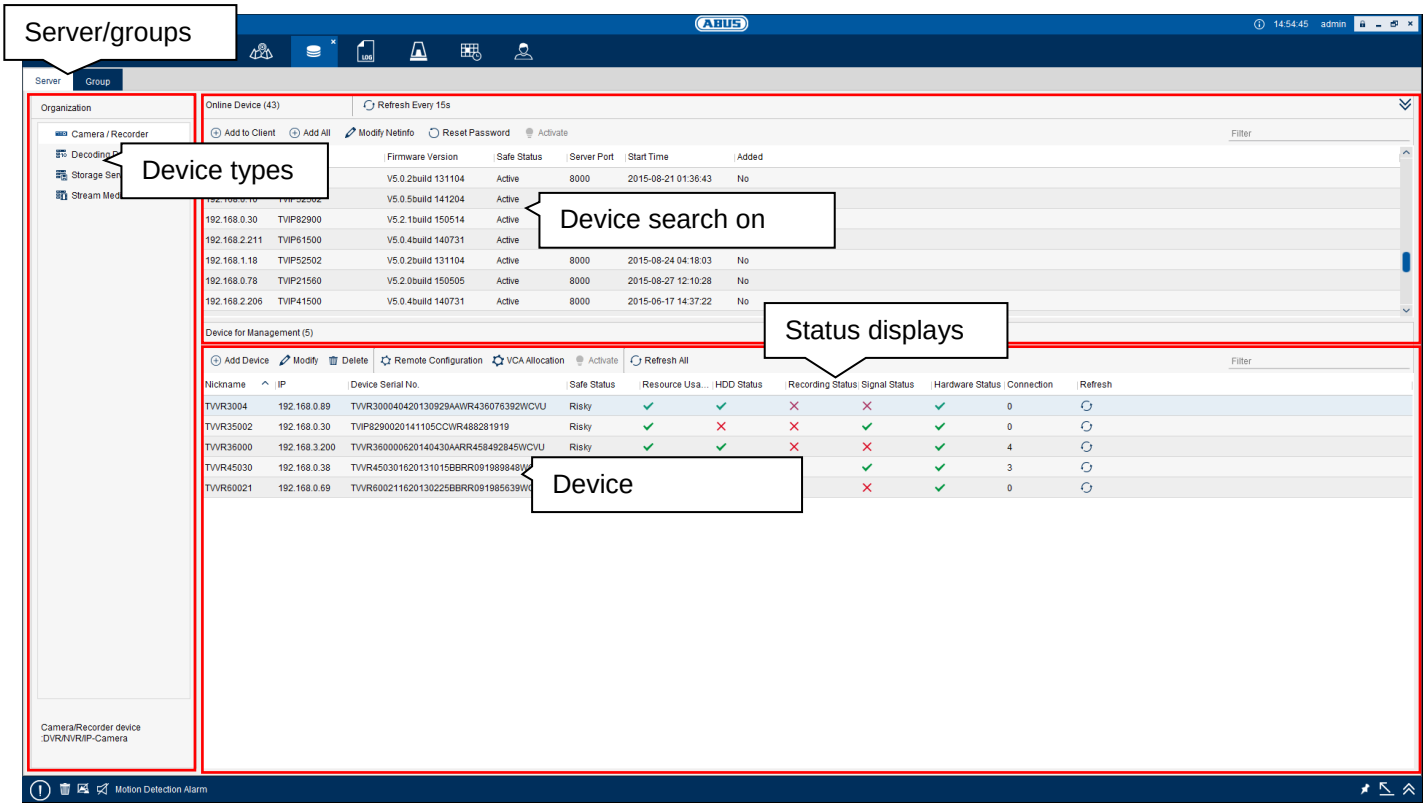
Hot spot settings for alarm inputs



Alarm input hot spots can be adjusted retrospectively using the following options:

Parameter	Description
Hot spot name	Change the hot spot name. The alarm input name is adopted by default. An individual hot spot name can be defined for each input to provide a better display on the e-map.
Linked Alarm Input	Name of the alarm input on the device. This setting cannot be changed on the e-map.
Hot spot colour	Individual colour for displaying the hot spot name on the e-map.
Hot spot icon	Individual icon for displaying the hot spot on the e-map.

Device for Management



General information on device management

Device management can be used to manage all devices (cameras, recorders, video wall, Storage Server, Media Server) in the CMS software. A permanent network connection between the CMS and devices is required for this. Ensure that all network configurations are complete before setting up the devices.

The device manager consists of two areas principally used for the operation of the software:

Server

In this area all devices on the network are added to and managed by the CMS. The integrated status display can be used to quickly check the most important data for each connected device:

- Network status
- Hard drive status
- Recording status
- Signal status
- Hardware status
- Number of remote connections

Parameter	Description
✓	All OK
✗	Error, fault or message exists. Hover the mouse cursor over the display to view error details.

Groups

Note

Check the error display carefully. It does not always indicate a serious problem. If, for example, only 10 cameras are connected to a 16-channel recorder, a message for channels 11–16 appears.

The CMS software manages all cameras in groups. Each camera **must** therefore be assigned to at least one group for operation in the software. Cameras can also be assigned to multiple different groups.

Use the 'Group' submenu once server setup is complete.

Managing devices

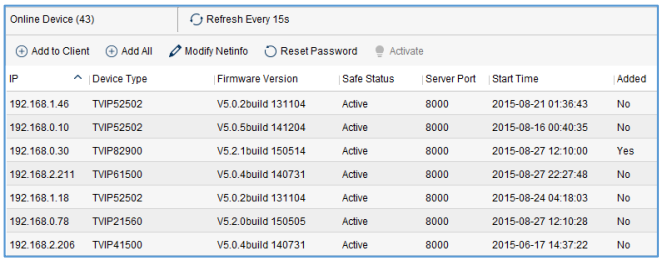
The following section describes how to add different types of devices. Check the compatibility of your devices in advance using the overview list provided at the beginning of these instructions. Not all ABUS CCTV devices are completely compatible with the CMS software.

Device type

The 'Device type' area is categorised by the function and use of all compatible devices. First select the area from which you wish to add devices:

Parameter	Description
Camera/ Recorder	Manage all cameras and recorders (DVR/NVR).
Decoding Device	Manage the hardware decoders for setting up a video wall.
Storage Server	Manage the Storage Server for PC-based recording.
Stream Media Server	Manage the Stream Media Server to optimise network capacity.
⊕	Not all device types are displayed by default. Use this button to add other device types.

Device search on LAN



The CMS software automatically performs a network scan every 15 seconds as long as the 'Server' menu is open. All of the devices found on the network are then listed in the 'Online Device' area.

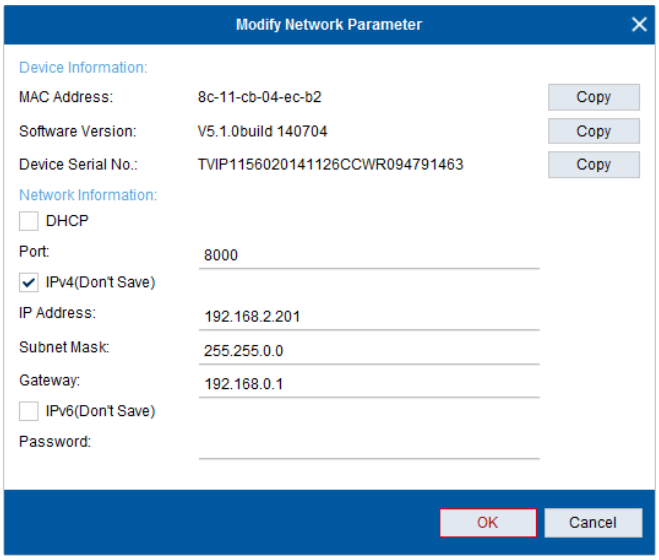
Note

The security code can only be generated by ABUS technical support. If you have forgotten the Administrator password, you can also reset the device via a hardware reset back to factory settings.

Note

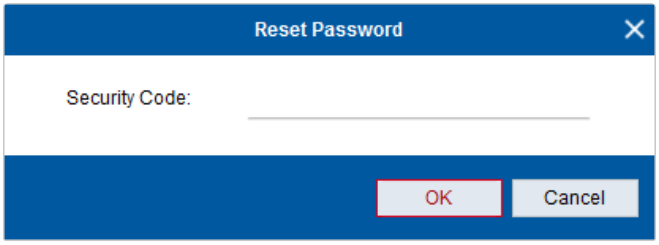
The network scan works across subnetworks within the LAN. For this reason even devices located on other subnetworks are shown. Devices can only be operated using the CMS software, however, if there is direct communication between the PC (CMS software) and the device (e.g. recorder). Change the network configuration so that both end points are located on the same subnetwork.

Use the button to change the network configuration (even across subnetworks):



The network configuration can only be carried out and transmitted after entering the password for the Administrator account.

The password for the Administrator account can optionally be reset using the button.



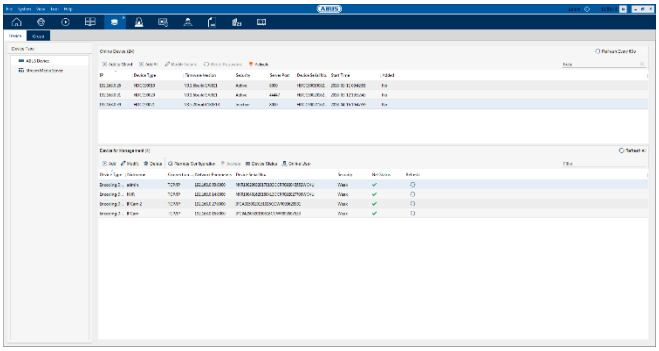
The search list also shows important basic information about the devices:

- Current IP address
- Device item number
- Installed firmware version
- Communication port
- Time of last system start

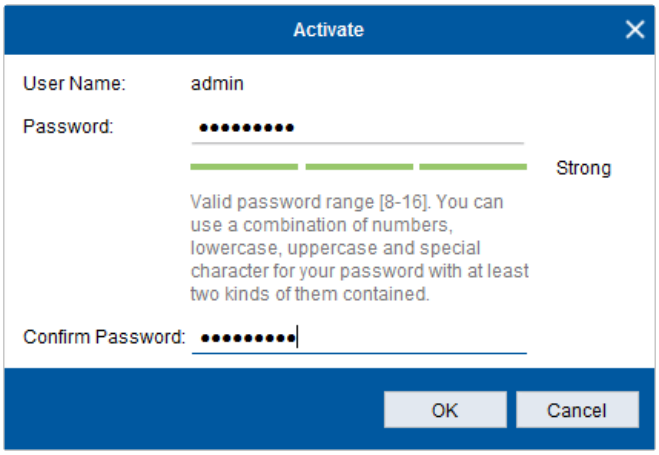
Note

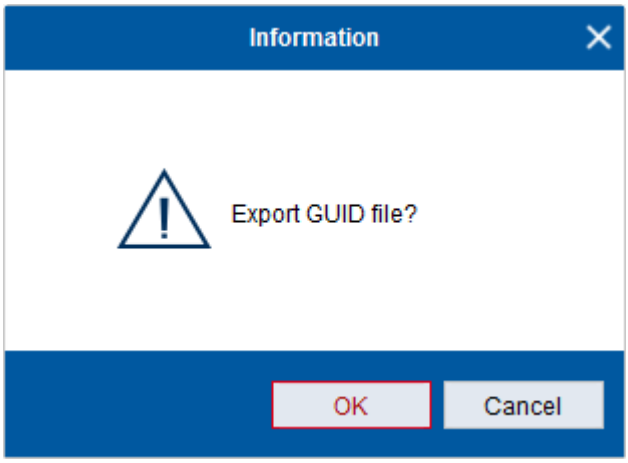
This information is especially useful for support tasks. Check whether the firmware version for your device is up-to-date (use the 'ABUS IP installer' tool or visit http://www.abus.com).

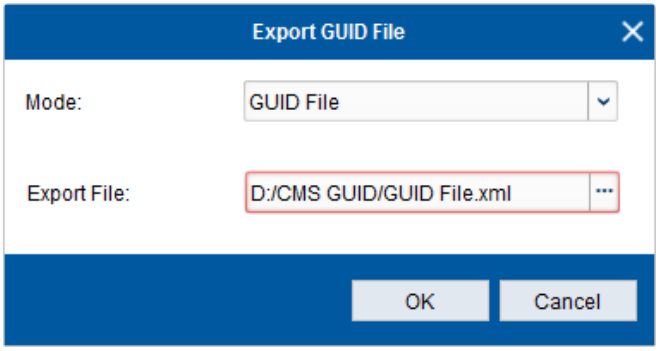
Activate



When running a new device you have to “activate” the device in the first step. Through this process you have to set up a device password and export the “GUID file” which you need to reset your password.



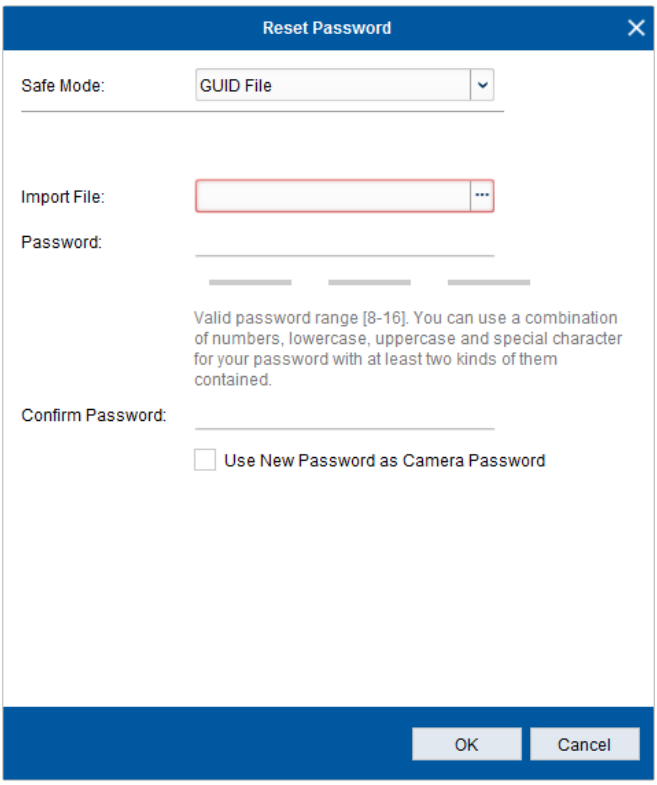




Reset Password

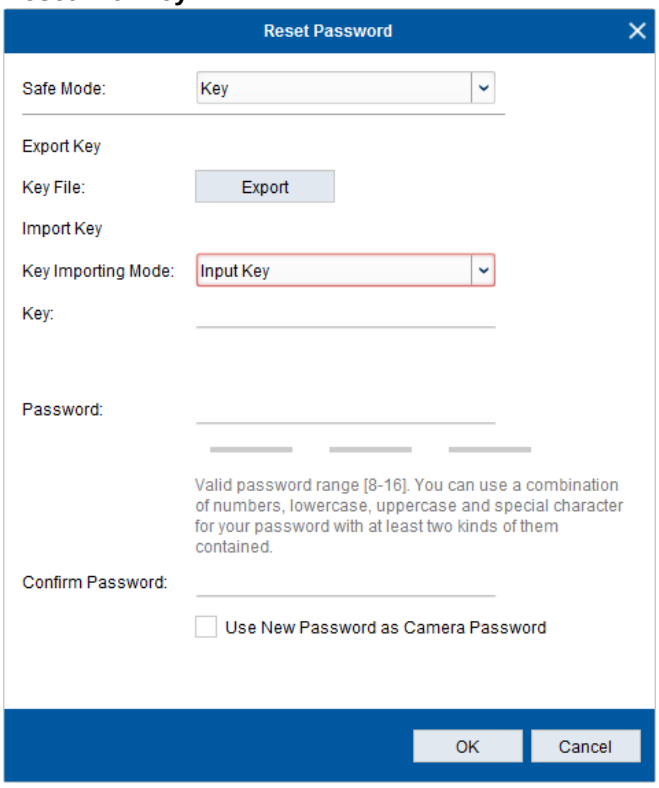
If you forgot your password there are two ways to reset your password.

Reset with GUID file



- Choose the mode: “Guid File”
- Import your GUID file with the “Import file” field
- Set a new password which matches the valid password range and confirm it
- Don’t forget to export your new GUID file

Reset with key



- Choose the mode: “Key”
- Export your “Key file” with the “Key file” field
- Please call the Technical Service and forward the Key file to your technical advisor
- Choose under “Key Importing Mode” the “Input Key” mode
- Your technical advisor will Tell you the Key which you have to typ into the “Key” field
- Set a new password which matches the valid password range and confirm it
- Don’t forget to export your new GUID file

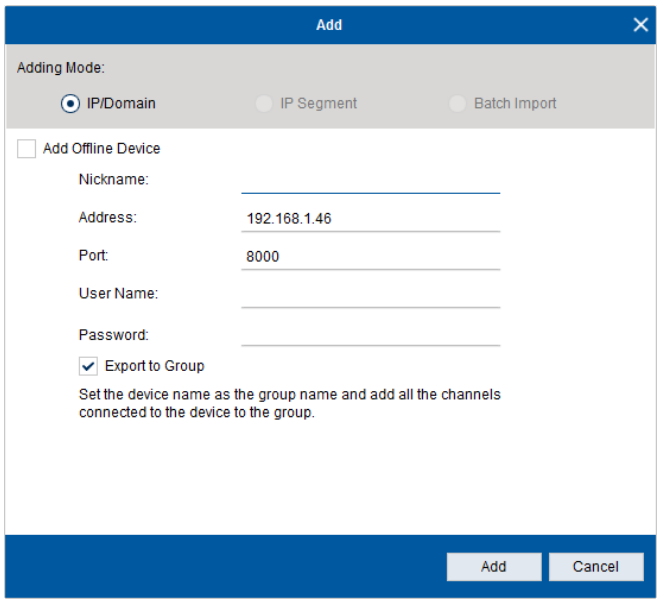
Add Device

There are several ways to add a device.

Devices on the local network

Use the following buttons from the 'Online Device' area:

Alternatively, you can drag and drop an entry from the 'Online Device' table to the 'Device for Management' table to add the device.



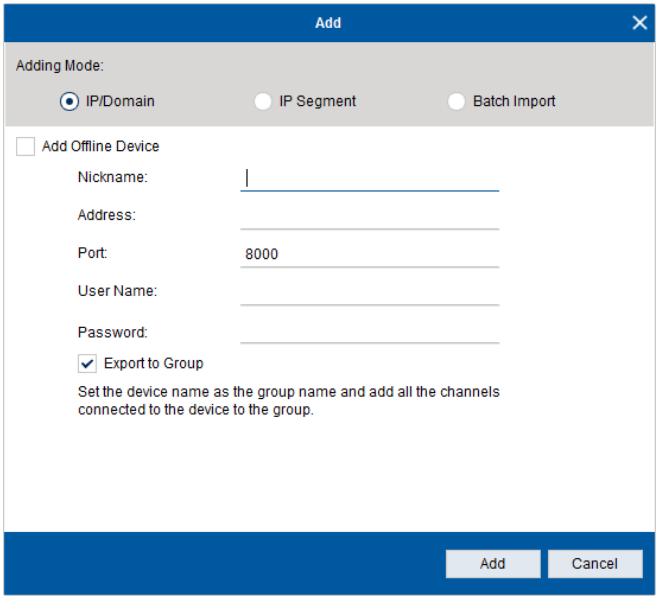
Enter the required parameters in the pop-up box.

Parameter	Description
Add Offline Device	Select the checkbox to add a device that cannot currently be accessed on the network. You must manually enter the number of channels and alarm inputs in this case.
Nickname	Assign a meaningful device name.
Address	Enter the IP address of the device.
Port	Connection port of the network device (usually 8000)
User Name	User name of the network device
Password	Password for the Administrator account
Export to Group	Enable this option to create a camera group at the same time as adding the device.
IP/Domain	Enter the IP address or host name for the remote device.
IP Segment	Use this option to add entire IP ranges at once. All devices must be located within a shared IP range and have identical port and password settings in this case.
Add to Client	Select an entry from the list and press this button to add the device.
Add All	Press this button to add all devices found.
Batch Import	Cameras and recorders can be imported via CSV file.

Ensure that the 'Export to Group' option is enabled in order to complete the setup as quickly and easily as possible.

Devices via internet connection

Use the 'Add Device' button from the 'Device for Management' area and select the 'IP/Domain' option.



Additional options for adding the device are available:

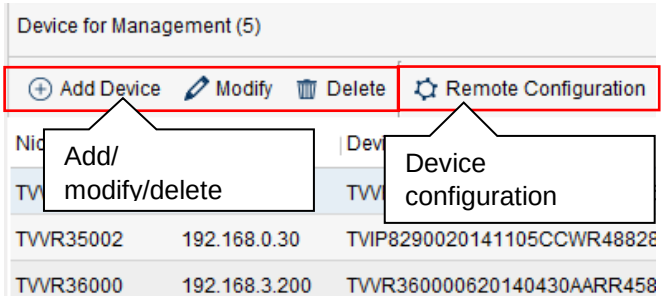
Parameter	Description
Resource Usage Status	✓: Network connection to device is OK

Note

Reduce the number of simultaneous network connections if you notice delays in the live image and playback. Alternatively, you can reduce the load by using the Stream Media Server.

Status	schedule. ✗: One or more channels do not have an active schedule.
Signal status	✓: All channels are transmitting an image signal. ✗: One or more channels are not connected.
Hardware status	✓: Device operating status is normal. ✗: Device is reporting one or more exceptions.
Connection	Number of active network connections.

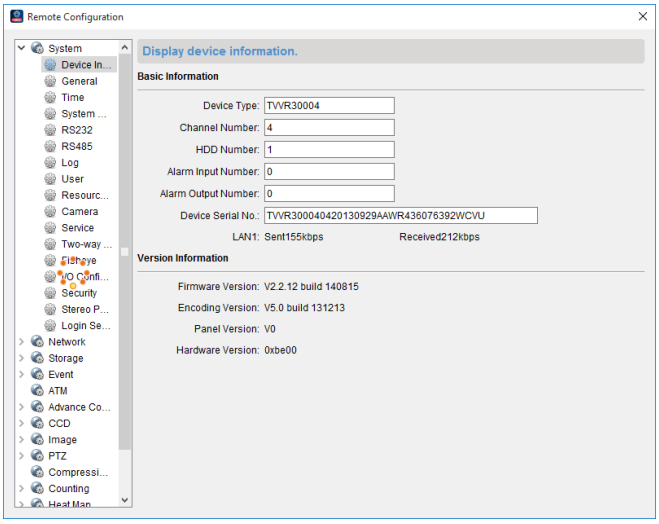
Editing devices



Added devices are managed and the current system status is displayed in the 'Device for Management' area.

Checking the system status

Configuring devices



Use the button to open the remote configuration for the selected device. All essential system parameters can be edited here.

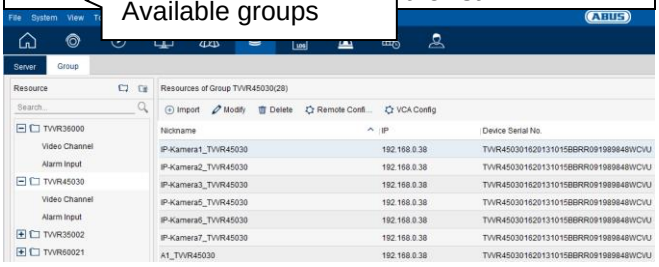
Note

The available options depend on your device. Explanations on the setting options can be found in the user manual for your device.

Check the compatibility list at the beginning of these instructions if not all of the setting options for your device are listed.

Managing groups

Parameter	Description
Add Device	Manually add a device.
Modify	Edit a selected device
Delete	Delete a selected device from the list.

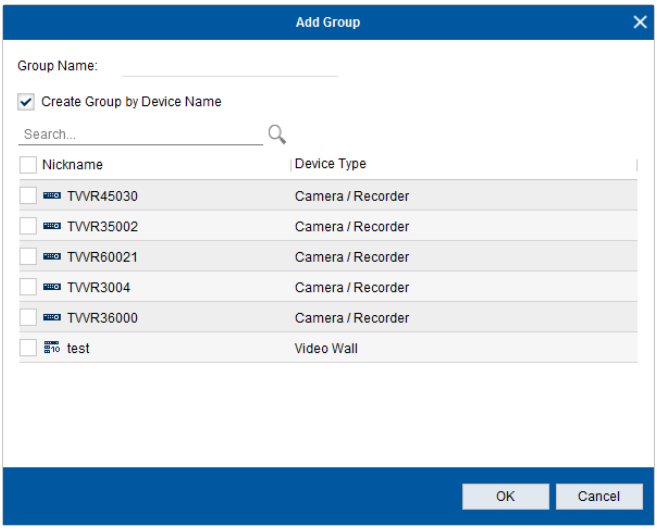


Group management takes place in this area. Existing groups can be edited and new groups can be created.

Camera

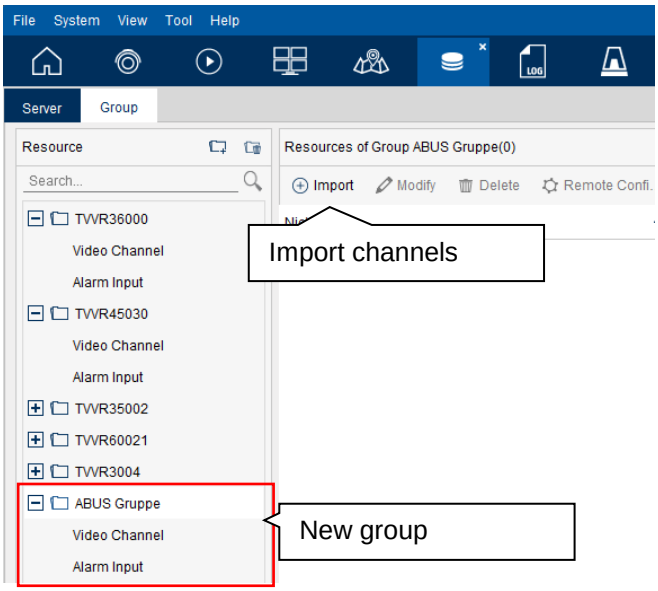
a group

Create a new group by pressing the button.



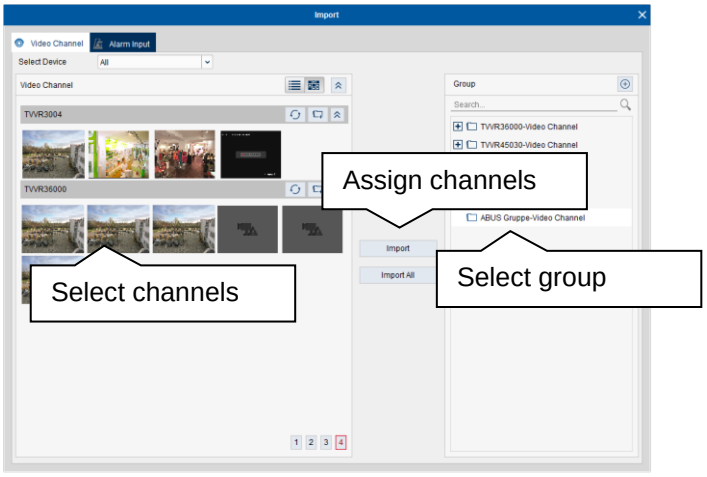
Assign a specific name for the group (**Group Name**) or create the group name based on the device name assigned during device setup (**Create Group by Device Name**).

Click 'OK' to create the group.



The new group appears in the group list. A group always consists of video channels and alarm inputs.

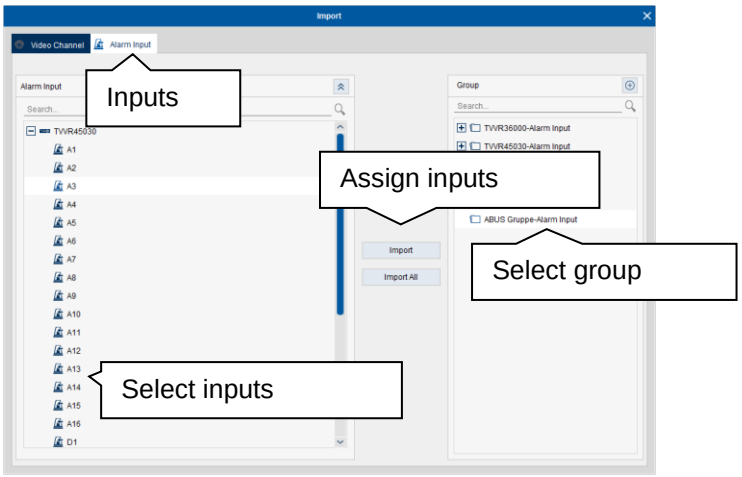
Press the button to assign channels and inputs from all available devices.



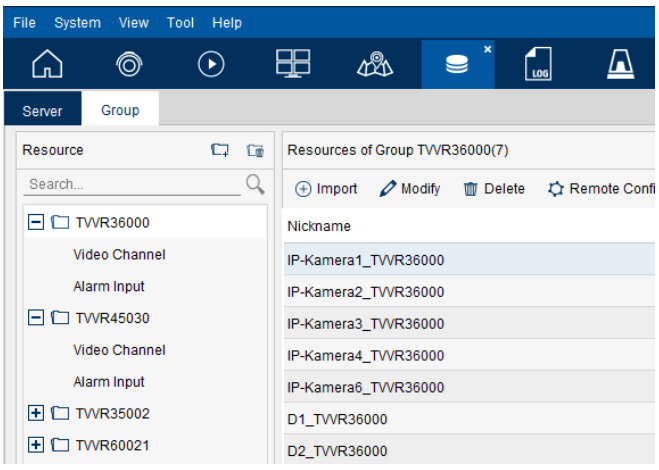
Proceed as follows:

1. Select the group to be edited.
2. Select one or more devices from the list and view all channels by clicking on .
3. Select a channel by clicking on it and press '**Import**' to assign it to the desired group.
4. Alternatively, you can use the 'Import All' button to assign all channels from all available devices to the selected group.

The procedure for assigning alarm inputs is identical:



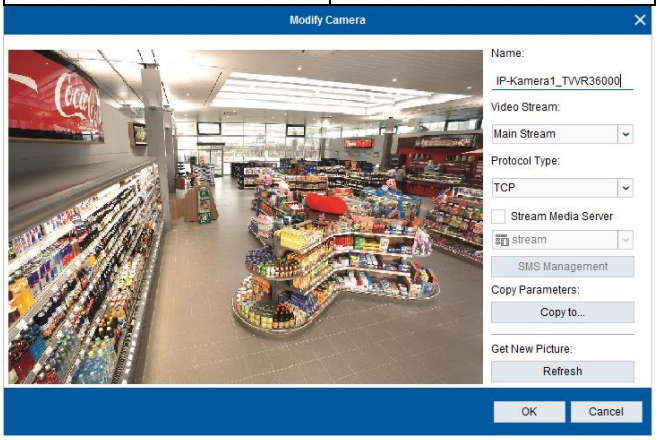
Edit group



Select a group from the list. The following options are available for editing video channels and alarm inputs:

Editing a channel

Parameter	Description
Import	Opens the import dialogue for assigning channels and inputs.
Modify	Opens the detailed configuration for channels and inputs.
Delete	Deletes the channel/input from the group.
Remote Configuration	Opens the remote configuration for the device.



Each channel can be individually edited in group management:

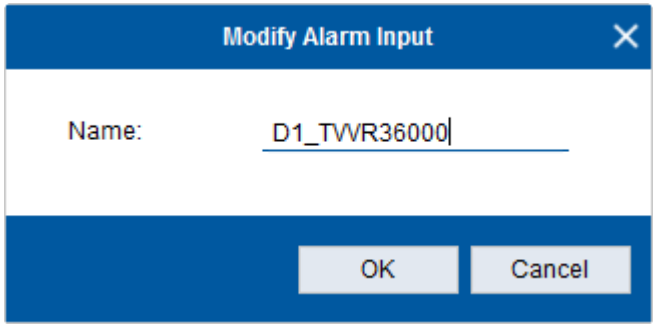
Parameter	Description
User Name	Assign a custom name

Note

The 'Video Stream' settings is only active if the 'Auto-change Stream Type' option is deactivated under the menu bar → Tool → System Configuration → Image.

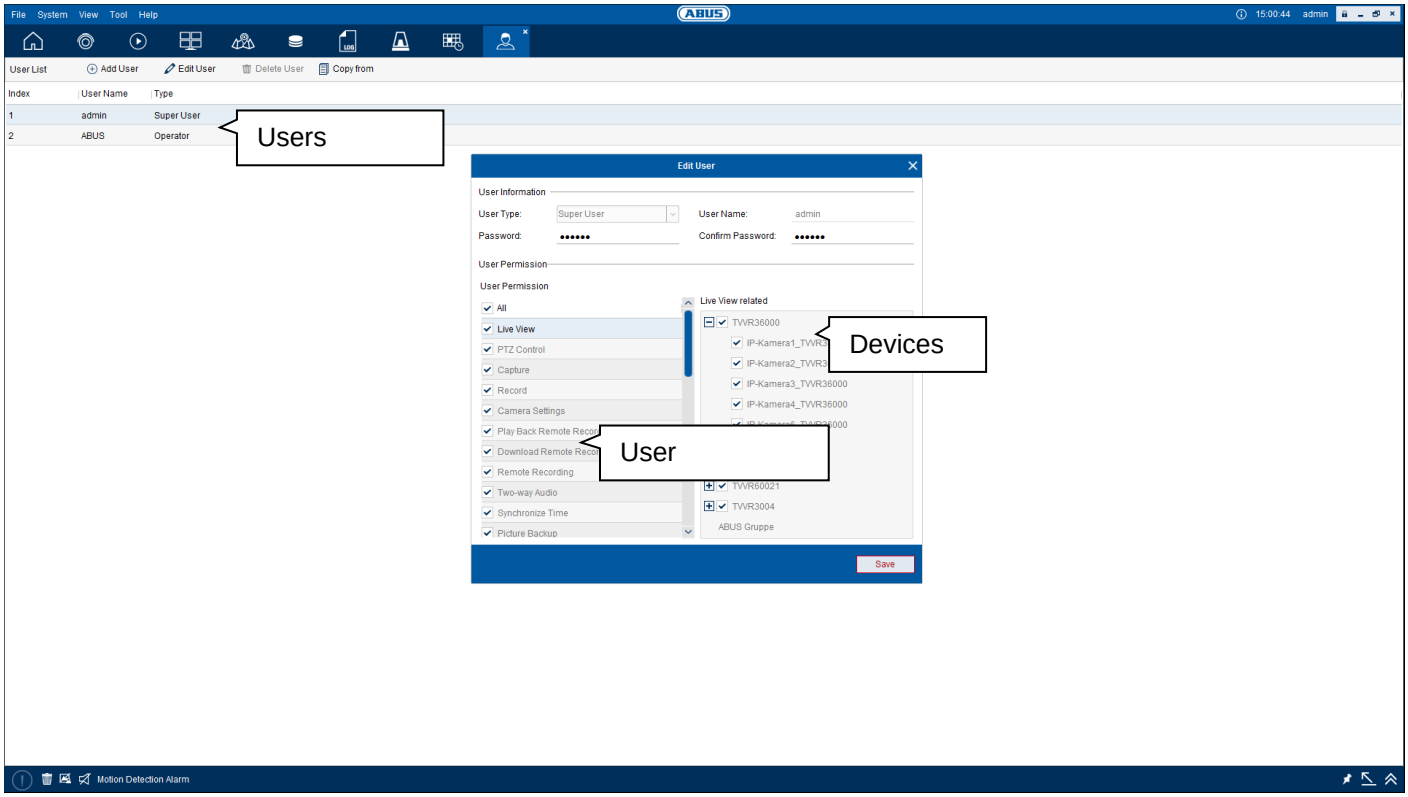
	Media Server (SMS) for the channel.
SMS Management	Open the Stream Media Server management.
Copy to...	Copy the settings to other channels.
Refresh	Refresh the preview image.

Editing an alarm input



Modify Alarm Input

Account management



General information on account management

The CMS software has integrated account management for managing user access permissions. There are three user roles available:

- Super User: default user with full access to the software (cannot be deleted)
- Administrator: full access to the software
- Operator: configurable access permissions for functions for operation (no configuration functions)

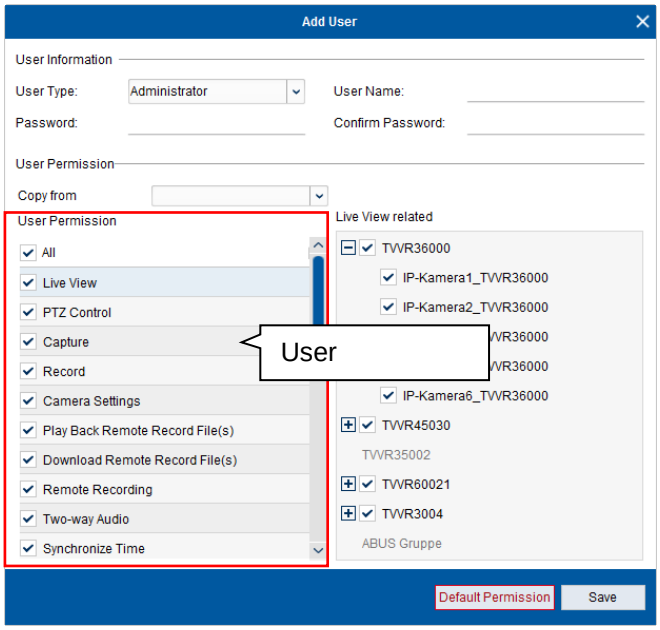
Individual user permissions (software functions) can be customised for each user and each device.

Note

Up to 50 users can be created and managed.

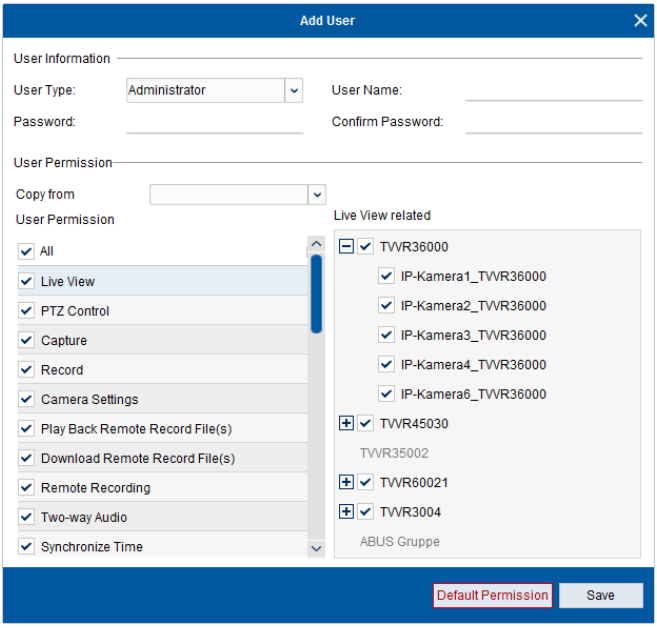
Creating a user

Add a new user by clicking on ⊕. The permissions can be defined individually in the 'Edit User' dialogue.



The individual functions are described in the following table.

Permission	Super User	Administrator	Operator	Description
Live View	✓	✓	✓	Access live images
PTZ control	✓	✓	✓	Access PTZ control
Capture	✓	✓	✓	Create snapshots
Record	✓	✓	✓	Start manual recording
Camera Settings	✓	✓	✓	Change the stream settings in group management
Play Back Remote Record File(s)	✓	✓	✓	Access records
Download Remote Record File(s)	✓	✓	✓	Access download manager
Remote Recording	✓	✓	✓	Access schedules
Two-way Audio	✓	✓	✓	Activate two-way audio
Synchronise Time	✓	✓	✓	PC time synchronisation
Picture Backup	✓	✓	✓	Export images via export manager
Backup Record File(s)	✓	✓	✓	Export videos via export manager
Parameter Settings	✓	✓	✓	Allow remote configuration
Broadcast	✓	✓	✓	Not used
Send Email	✓	✓	✓	Send images via email
Video Wall Operation	✓	✓	✓	Operate video wall
Batch Time Sync.	✓	✓	✓	Synchronise multiple devices with the current PC time at the same time
Camera/Recorder Management	✓	✓	X	Add cameras and recorders
Group Management	✓	✓	X	Create and edit groups
SMS Management	✓	✓	X	Set up Stream Media Server
Storage Server Management	✓	✓	X	Set up the Storage Server
Decoding Device Management	✓	✓	X	Set up decoders for the video wall
Exit	✓	✓	✓	Exit the application
Client Parameter Settings	✓	✓	X	Change the system configuration (CMS)
E-map Configuration	✓	✓	X	Create and edit an e-map
Video Wall Settings	✓	✓	X	Edit video wall settings
Import/Export Configuration File	✓	✓	X	Import/export CMS configuration data
Set Record/Capture Schedule	✓	✓	X	Change the record and capture settings
Account Management	✓	X	X	Change account management
Event Configuration	✓	✓	X	Edit event configuration
Custom Window Division	✓	✓	X	Change the layout (window division) for the live image and playback



Parameter	Description
User Type	Define the user role: Administrator or Operator (for details see the permissions table).
User Name	Enter a user name.
Password	Set a password.
Confirm new password	Enter the password again.
Copy from	Adopt permissions from existing users.
User permissions	Assign the corresponding permissions.
Settings	Select the groups/channels in connection with the permissions.

Note

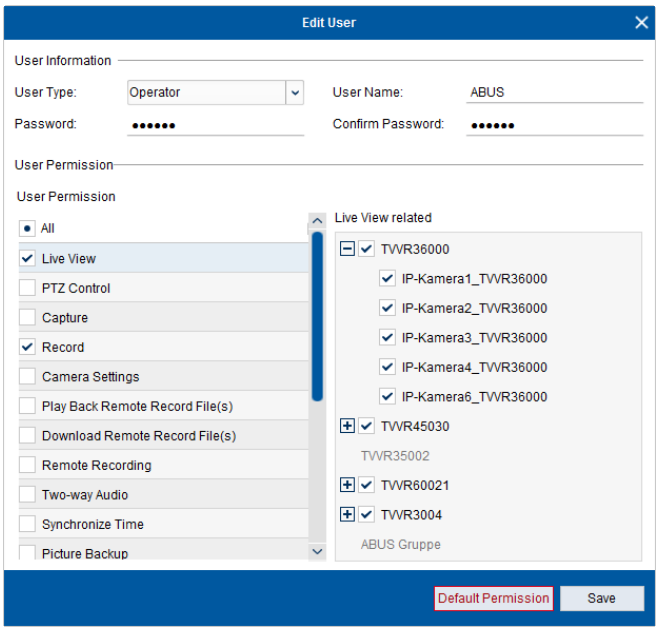
Passwords must not contain the following characters: **/ \ : * ? “ < > |**.

Note

Use secure passwords. We recommend a minimum length of 8 characters, consisting of uppercase and lowercase letters, numbers and special characters.

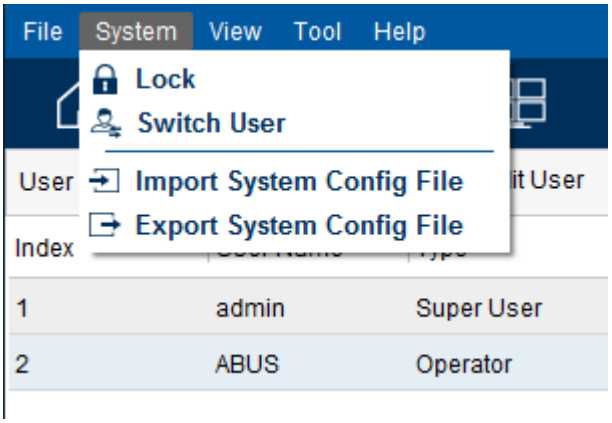
Editing a user

Open account management and double-click the entry to be edited. Alternatively, you can press the button to open the management or use to delete the user. Note that only administrators with the corresponding permission or the Super User can make changes to account management.



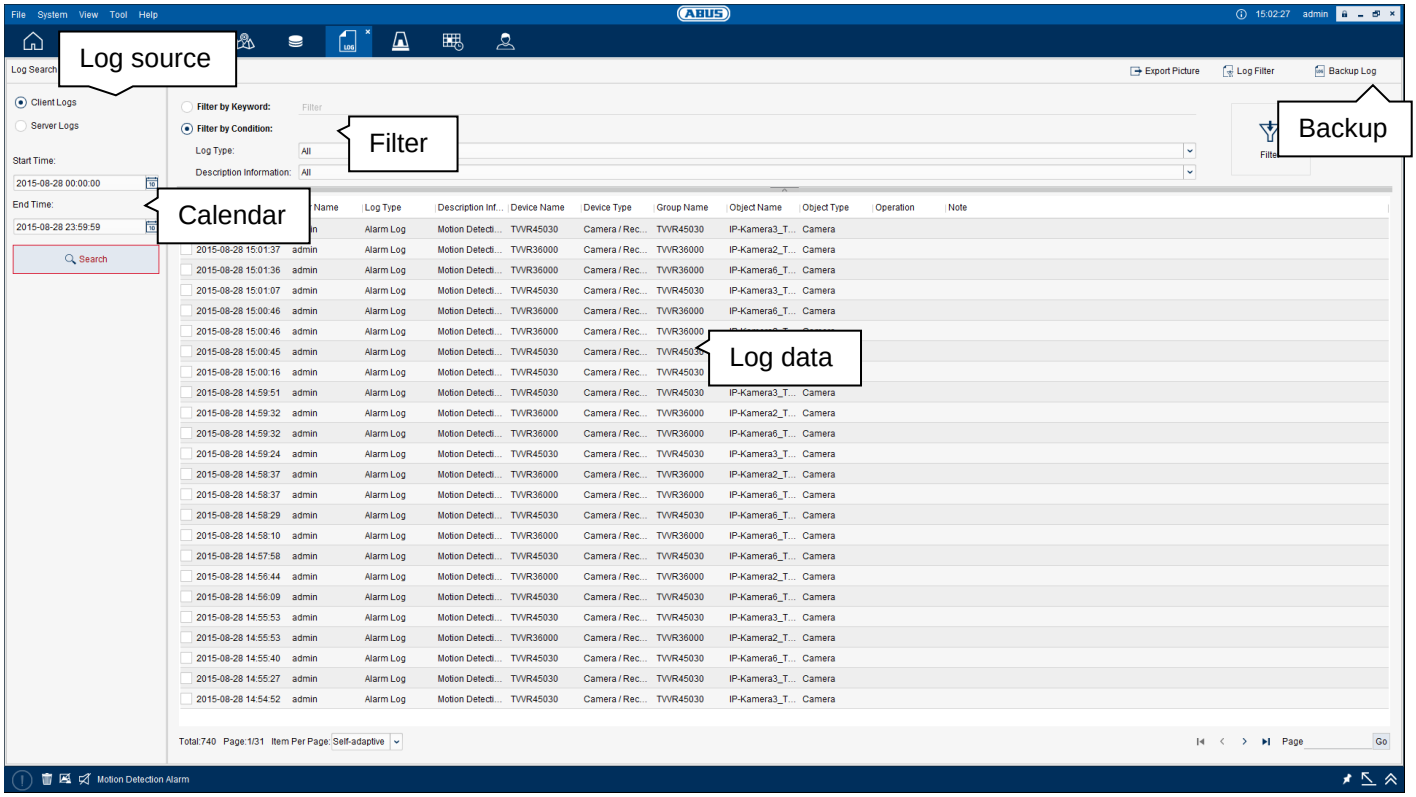
Change the data/permissions/groups and save the settings.

Switching users



Switch from the current user under the menu bar → System → Switch User.

Logbook manager



General information on the logbook manager

The CMS software offers a comprehensive logbook function for analysing the device and software processes as well as error messages and status information for connected cameras and recorders. The integrated calendar and filter function can be used to quickly search through and analyse logbook entries.

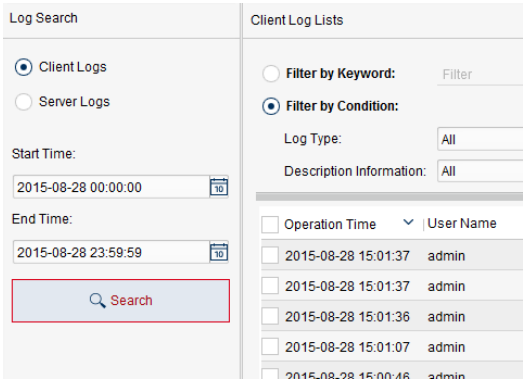
The software manages two separate logbooks:

- **Client Logs:** log files for the CMS software itself. Information about events (e.g. motion, tripwire) and processes from operating the software (e.g. user login, change to configuration, camera access) is logged here.
- **Server Logs:** log files for the connected devices. Information about the device status (e.g. exceptions, device configuration, alarm and record events) is displayed here.

Note

The client logs are saved locally on the hard drive of the PC with the CMS software installed. The server logs are polled directly from the memory of the programmed devices. If no memory is integrated in the device (e.g. SD card for IP cameras), no server log can be polled for the device.

Analysing client logs

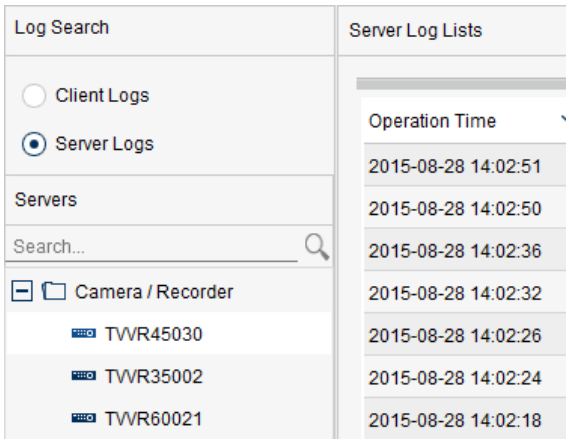


Proceed as follows:

1. Select 'Client Logs'.
2. Define the time range for the search.

3. Search the data by pressing the 'Search' button.
4. View the filter option by pressing the 'Log Filter' button.
5. Filter the search results by log type (filter by condition) or using a free text search (filter by keyword).
6. The 'More...' button can be used to adapt the filter options more if very large amounts of data need to be analysed.
7. Apply the filter by pressing the button.
8. Reset the filter with 'Clear Filter' if you wish to restart your search from scratch.

Analysing server logs



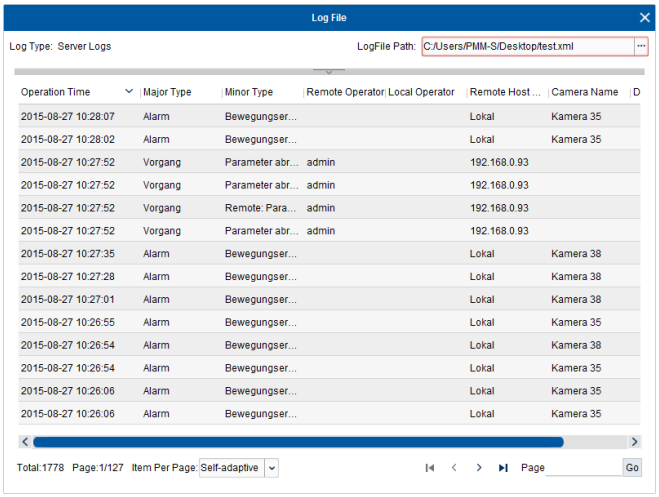
Proceed as follows:

1. Select 'Server Logs'.
2. Select the device to poll for log data.
3. Define the time range for the search.
4. Search the data by pressing the 'Search' button.
5. View the filter option by pressing the 'Log Filter' button.
6. Filter the search results by log type (filter by condition) or using a free text search (filter by keyword).
7. The 'More...' button can be used to adapt the filter options more if very large amounts of data need to be analysed.
8. Apply the filter by pressing the button.
9. Reset the filter with 'Clear Filter' if you wish to restart your search from scratch.

Logbook export

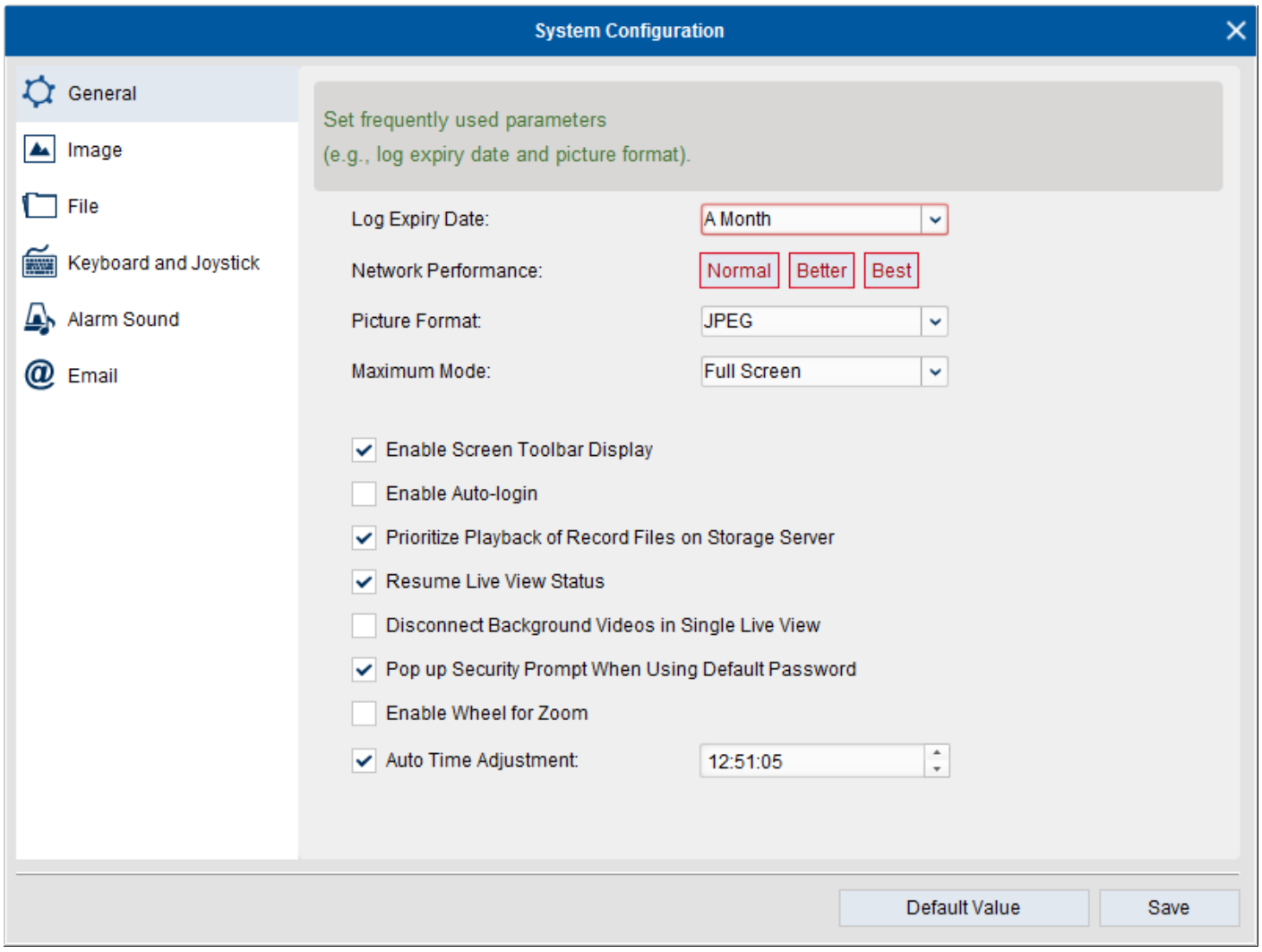
Once the log data has been found, it can be exported using the button.

Specify a save location on a Windows data carrier to start the export. The data is saved in XML format.



Exported logs can be imported under the menu bar →Export Manager Log File.

System configuration



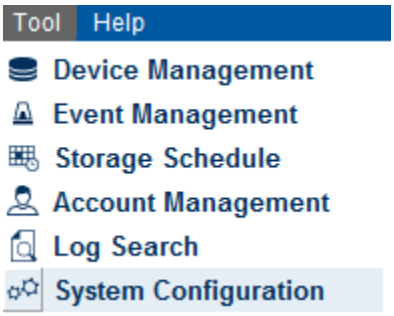
General information on system configuration

General settings for the CMS software can be configured in the system configuration from the following areas:

- General settings
- Image display
- Save path
- Keyboard shortcuts
- Alarm sounds
- Email

Note

Only make changes here if you are very familiar with the settings. The default settings are sufficient for normal operation.



Open the system configuration via the menu bar → Tool → System Configuration.

General settings

Parameter	Description
Log Expiry Date	Time period in which the client logs are overwritten.
Network Performance	Change the value to limit network performance.
Picture Format	File format for the capture export.
Maximum Mode	Maximum: Windows taskbar remains visible Full Screen: Windows taskbar is hidden.
Enable Screen Toolbar Display	Display the export and instant playback icons in the camera image.
Enable Auto-login	Activate/deactivate automatic login.
Prioritise Playback of Record Files on Storage Server	When this setting is activated, data from the Storage Server is played first when parallel data exists in the memory of the end device.
Resume Live View Status	The last active live view is automatically loaded when the software starts.
Disconnect Background Videos in Single Live View	When this setting is activated, streams in the background are stopped if a channel is opened in full screen by double-clicking it.
Pop up Security Prompt When Using Default Password	Message window appears when devices with default passwords are being taught in.
Enable Wheel for Zoom	When this setting is activated, the PTZ zoom can additionally be controlled using the mouse scroll wheel.
Auto Time Adjustment	When this setting is activated, all camera channels are automatically synchronised with the current PC time at the specific time.

Image settings

Parameter	Description
View Scale	Set the aspect ratio of the windows in the live and playback views.
Play Performance	Define the software behaviour (Output Delay/Self-adaptive).
Auto-change Stream Type	When this setting is deactivated, the individual stream settings are used for the live view. When this setting is activated, the sub-stream is always displayed for the live view when there are four or more cameras.
Enable highlight	Activate/deactivate the display of 'dynamic motion detection' in the live image (depends on camera).
VCA Rule	Display the VCA and smart rules (e.g. tripwire) in the live image.

File settings

Parameter	Description
Saving Path of Video File	Path of save location for video clips
Saving Path of Pictures	Path of save location for captures
Saving Path of Configuration File	Path of save location for configuration file

Keyboard and joystick settings

Assign shortcuts (program functions) to the PC keyboard and USB keyboard (TVAC26010) here.

Note

Further details on programming and using the USB keyboard can be found in '***USB keyboard***'.

Alarm sound settings

Parameter	Description
Motion Detection	WAV file for motion detection alarm
Video/Audio Exception	WAV file for video/audio exception
Alarm Input	WAV file for alarm input
Device Exception	WAV file for device exception
VCA Alarm	WAV file for VCA/smart alarm
Other Alarm	WAV file for other alarms

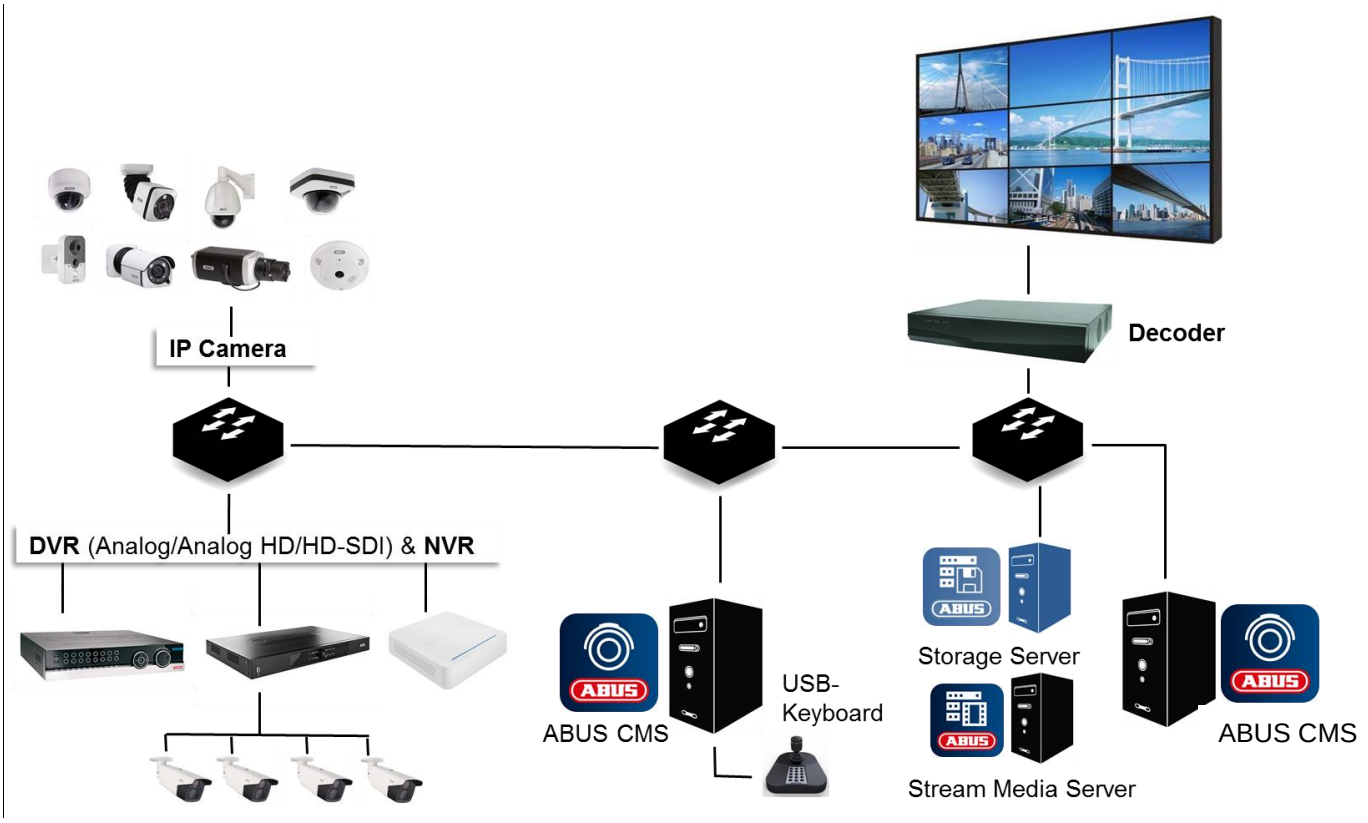
Note

The alarm sounds are emitted from the PC speaker if the audio function is activated in the alarm manager.

Email settings

Parameter	Description
Server Authentication	Activate this checkbox if the email server requires user authentication.
SMTP Server	Address of the SMTP server.
Port	Network port of the SMTP server.
User Name	User name
Password	Password
Sender Address	Email address of sender.
Receiver 1	Email address of recipient.
Receiver 2	Email address of recipient.
Receiver 3	Email address of recipient.
Enable SSL	Activates SSL encrypted transmission for email.
Send Test Email	Send a test email.

Storage Server



General information on the Storage Server

The Storage Server is an optional software module and is used to store video data from cameras on your PC as an alternative to embedded NVR recorders. The Storage Server simulates NVR software on your PC; as such cameras can be assigned and schedules can be set up to save video streams on Windows drives.

Note

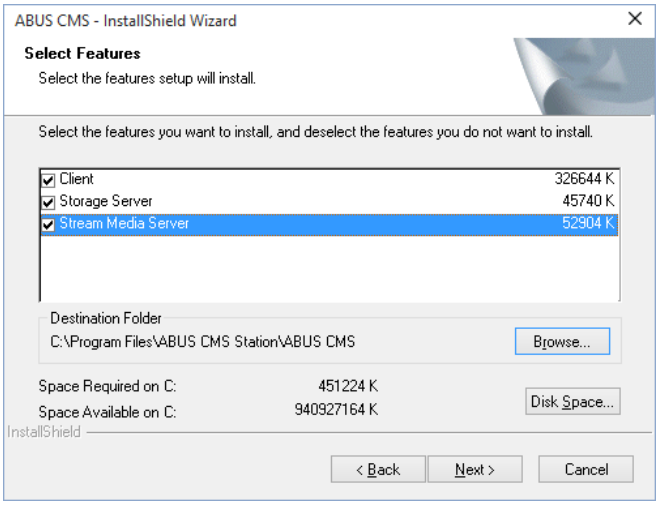
Up to 16 storage servers can be managed per CMS installation.

The Storage Server can be installed on multiple PC across the network. Computers do not need a CMS installation for this.

Note

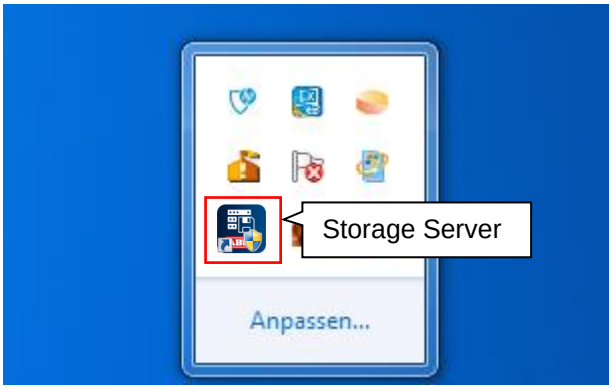
The recording options of the Storage Server are limited compared to those of an embedded NVR. No VCA and smart functions are supported. Ensure that 24/7 PC hardware is used for permanent use.

Installing the Storage Server



1. Run the setup file for the ABUS CMS software and select 'Storage Server' to install the Storage Server on the PC.
2. The setup process creates a desktop icon for the Storage Server:
3. Start the Storage Server.

The Storage Server is now active in the background. This is indicated by the application icon in the Windows system tray:



The context menu for the application icon can be used to set additional parameters if desired:

Parameter	Description
Exit	Exit the Storage Server.
Autorun	Define the autostart behaviour for the server.
HDD Quota Settings	Define the quota setting for distributing the video memory.
Language	Define the language setting.

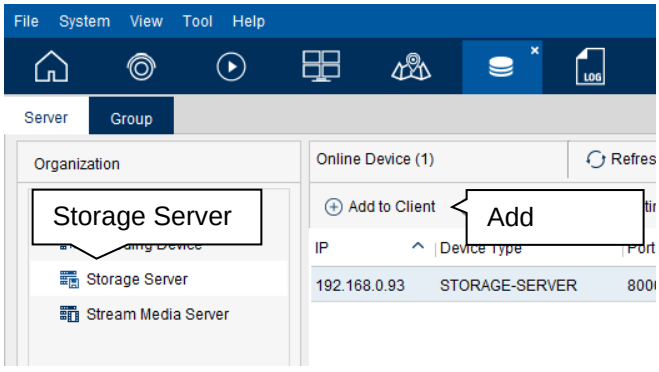
Additional settings for storage management are

Note

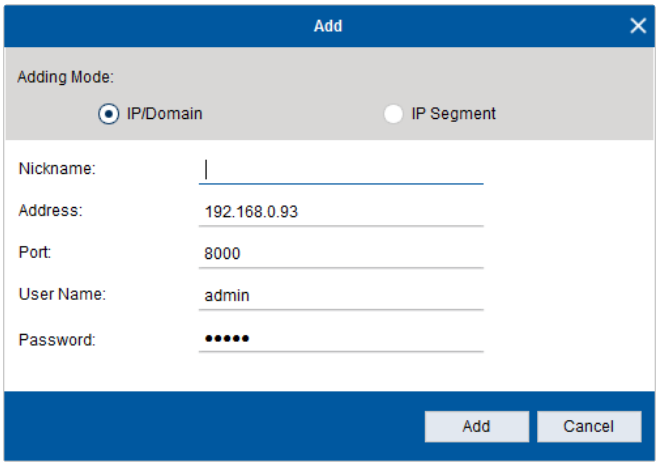
The IP address of the Storage Server matches the PC address.

configured within the CMS software.

Setting up the Storage Server



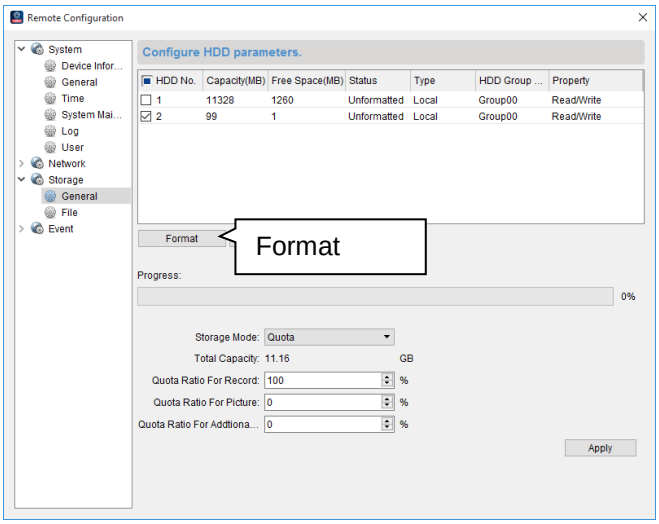
Add the Storage Server in the device manager of the CMS software.



Use the following settings:

Parameter	Description
Nickname	Freely configurable device name for the Storage Server.
Address	IP address of the Storage Server/PC.
Port	8000
User Name	admin
Password	12345

The settings for the port and user name can be changed retrospectively by running the remote configuration. Open the 'Remote Configuration' to configure the Storage Server management.



The storage server must have at least one active data carrier with 'status normal' to record data.

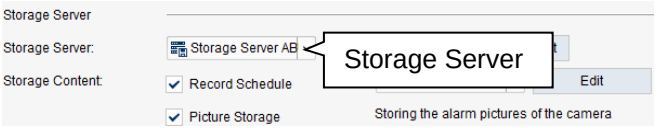
Select a data carrier and initialise it by pressing the 'Format' button.

Note

The 'Format' command does not actually perform formatting at file level. During the process a specific folder and file structure is created on the data carrier; the server attempts to reserve as much space as possible using blank files.

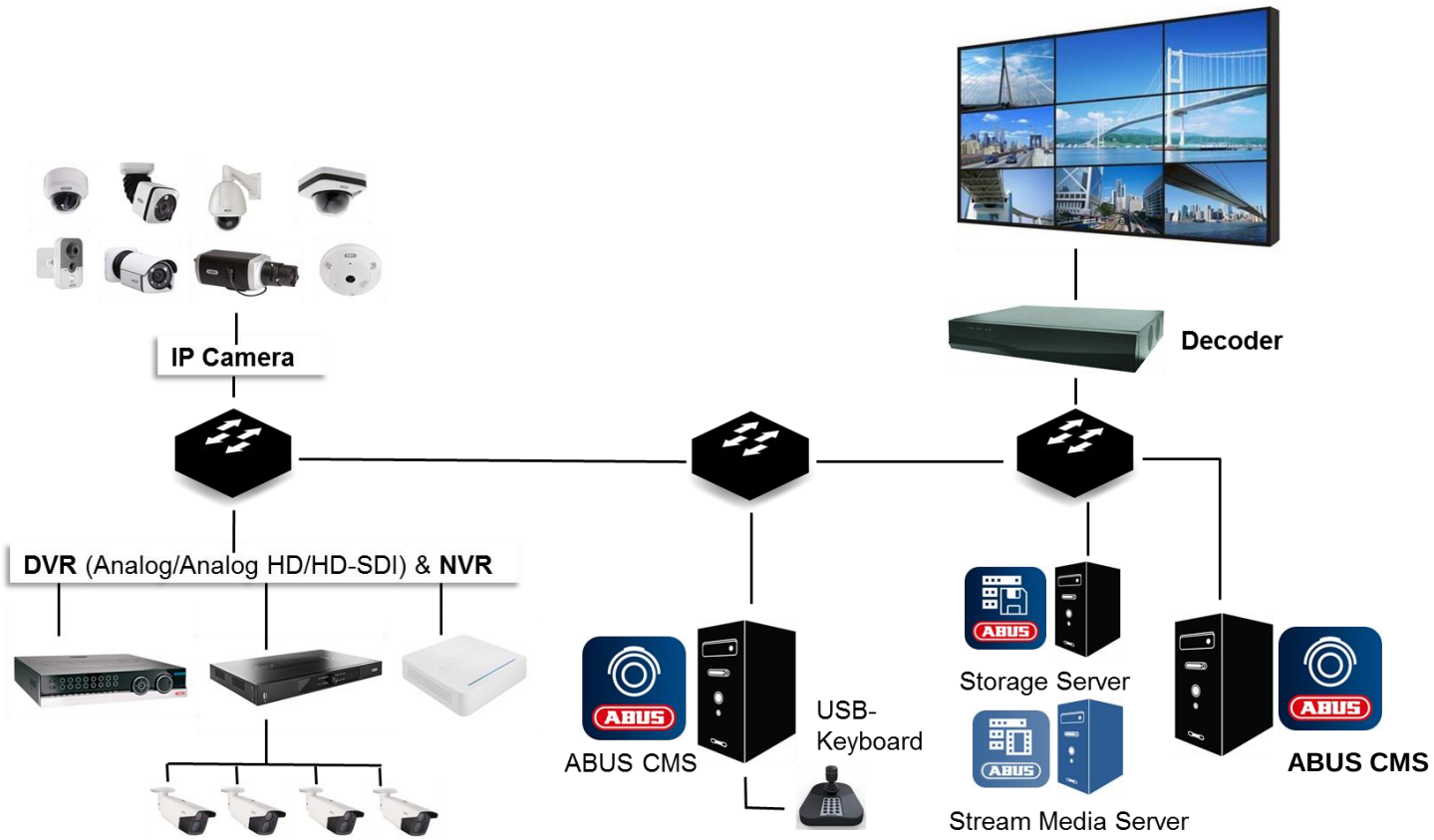
The quota settings can be adjusted in this menu. Define the percentage distribution of the data (recording, images, additional data) for use in the Storage Server.

Assigning the Storage Server



Open the 'Storage Schedule' main menu and activate the 'Storage Server' menu individually for the available devices. Add the Storage Server and configure the schedules accordingly.

Stream Media Server



General information on the Stream Media Server

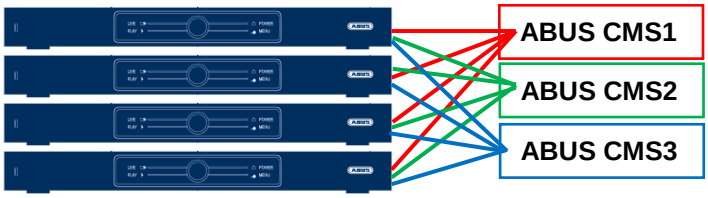
The Stream Media Server is an optional software module and is used to distribute the network load on your LAN when there is excessive access from various CMS installations.

Recorders and cameras have a technical limit in terms of the maximum number of simultaneous user logins and streaming bandwidth for network access (output bandwidth). Using the Stream Media Server directs all remote access of CMS clients via the Stream Media Server, which then establishes one central connection to the devices. The advantage of this approach is that video streaming is only directed via a central point, reducing the number of simultaneous access attempts on recorders and cameras.

Sample application with embedded analogue DVR:

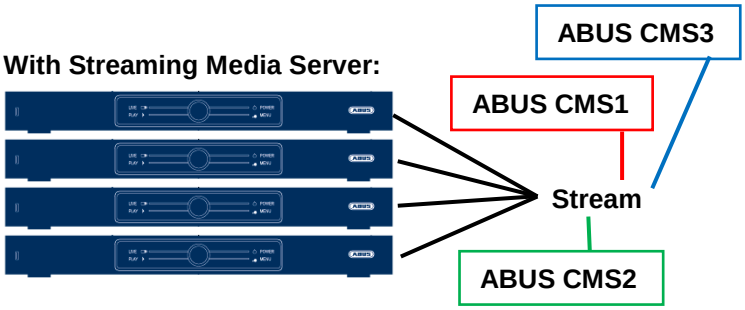
4 x TVVR41220	
Number of channels/DVR	16
Stream setting	2 Mbit/channel
Output bandwidth	60 Mbit
Network interface	100 Mbit

Without Stream Media Server:



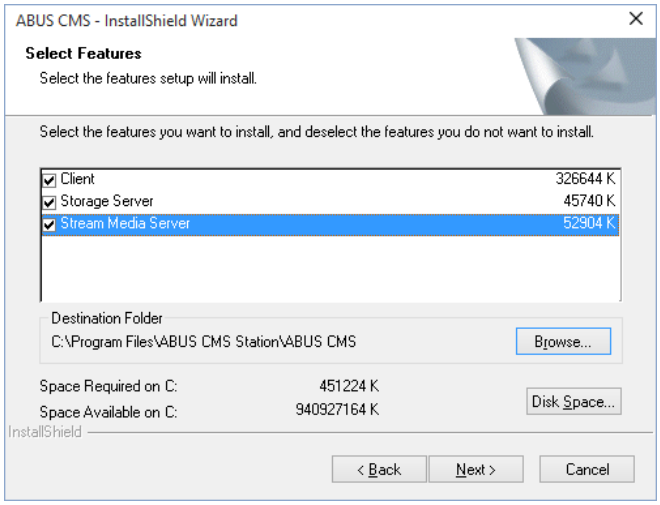
- All CMS clients are accessing all recorders
- Streaming per DVR: 16 channels x 4 = 128 Mbit/s
- Output bandwidth reaches full capacity at only two clients
- Theoretically there is maximum 2 client access, as DVR has a 100 Mbit network interface.

With Streaming Media Server:



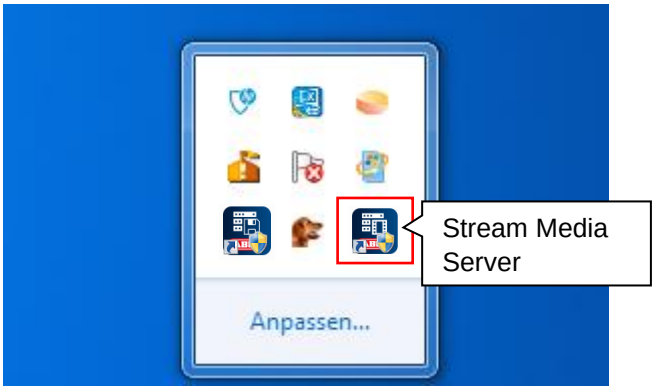
- Stream Media Server accesses recorders
- Streaming per DVR: 16 x 1 channel = 32 Mbit/s
- Output bandwidth and network interface capacity not exceeded

Installing the Stream Media Server



1. Run the setup file for the ABUS CMS software and select 'Stream Media Server' to install the server on the PC.
2. The setup process creates a desktop icon for the Stream Media Server:
3. Start the Stream Media Server.

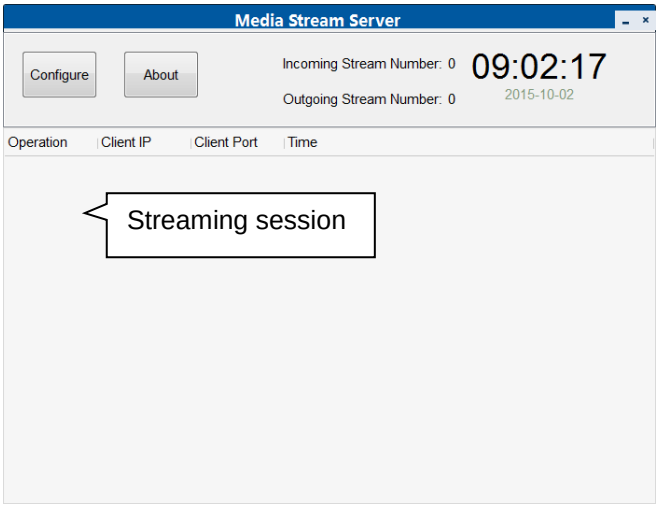
The Stream Media Server is now active in the background. This is indicated by the application icon in the Windows system tray:



The context menu for the application icon can be used to set additional parameters if desired:

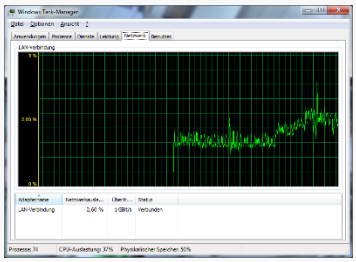
Parameter	Description
Display	View streaming access and other settings.
Language	Define the language setting.
About	View software version.
Exit	Exit the Stream Media Server.

Open the Stream Media Server display via the context menu in the Windows system tray using the 'Display' option.



The application shows the current sessions in the form of a logbook. You can track which IP clients are requesting streams at which time here.

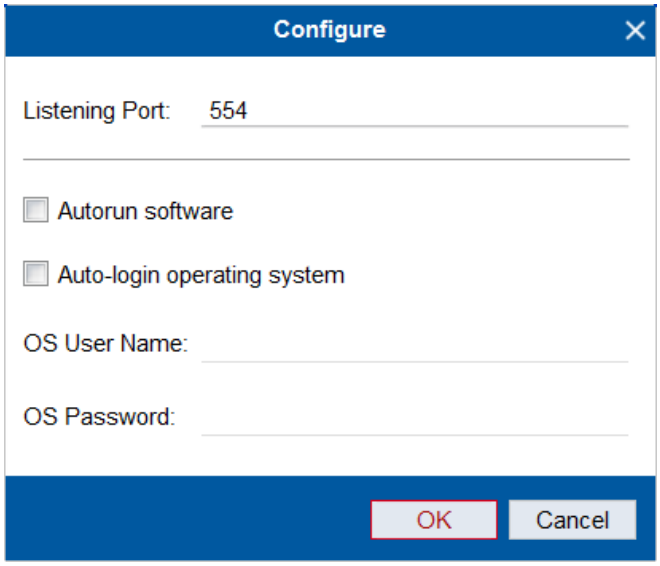
Note

Using the Stream Media Server directs all network traffic for video streaming via the PC  network card. The network load increases with the number of requested streams. Use a wired 1 Gbit network on the PC to prevent problems during operation.

The 'Configure' button can be used to define additional settings:

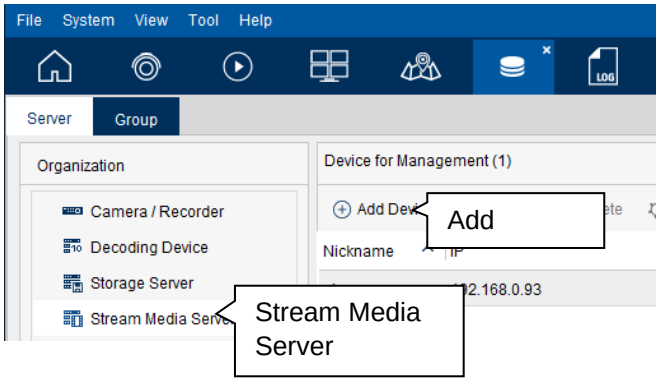
Note

The IP address of the Stream Media Server matches the PC address.

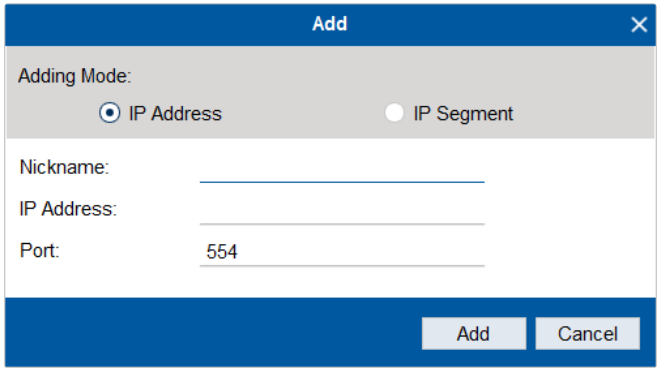


Parameter	Description
Listening Port	Streaming port setting (default is 554).
Autorun software	Automatically starts the SMS when the operating system is restarted.
Auto-login operating system	Automatically logs in on the operating system
OS User Name	User name (Windows)
OS Password	Password (Windows)

Setting up the Stream Media Server



Add the Stream Media Server in the device manager of the CMS software.



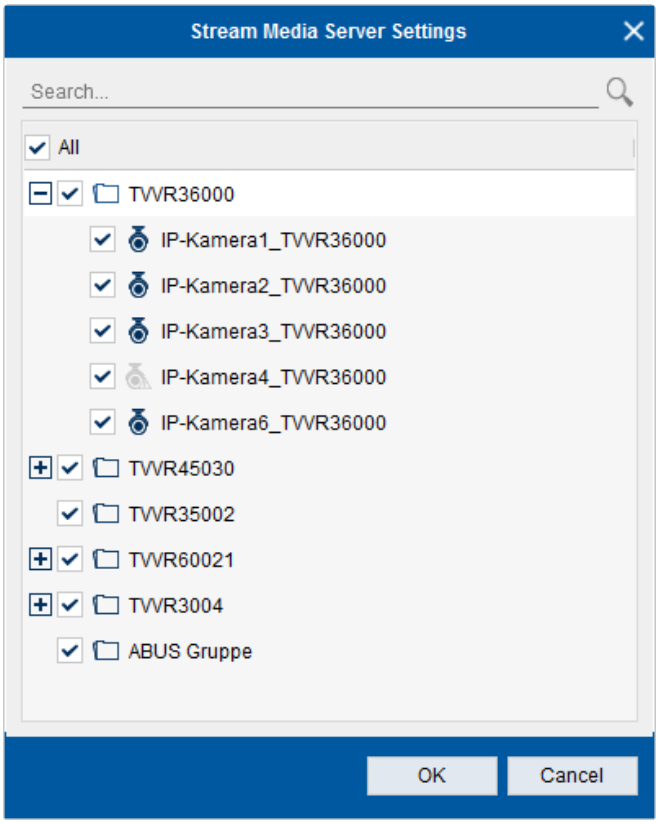
Use the following settings:

Parameter	Description
Nickname	Freely configurable device name for the Stream Media Server.
Address	IP address of the Stream Media Server/PC.
Port	554

The settings for the port can be changed retrospectively in the Windows system tray via the application icon.

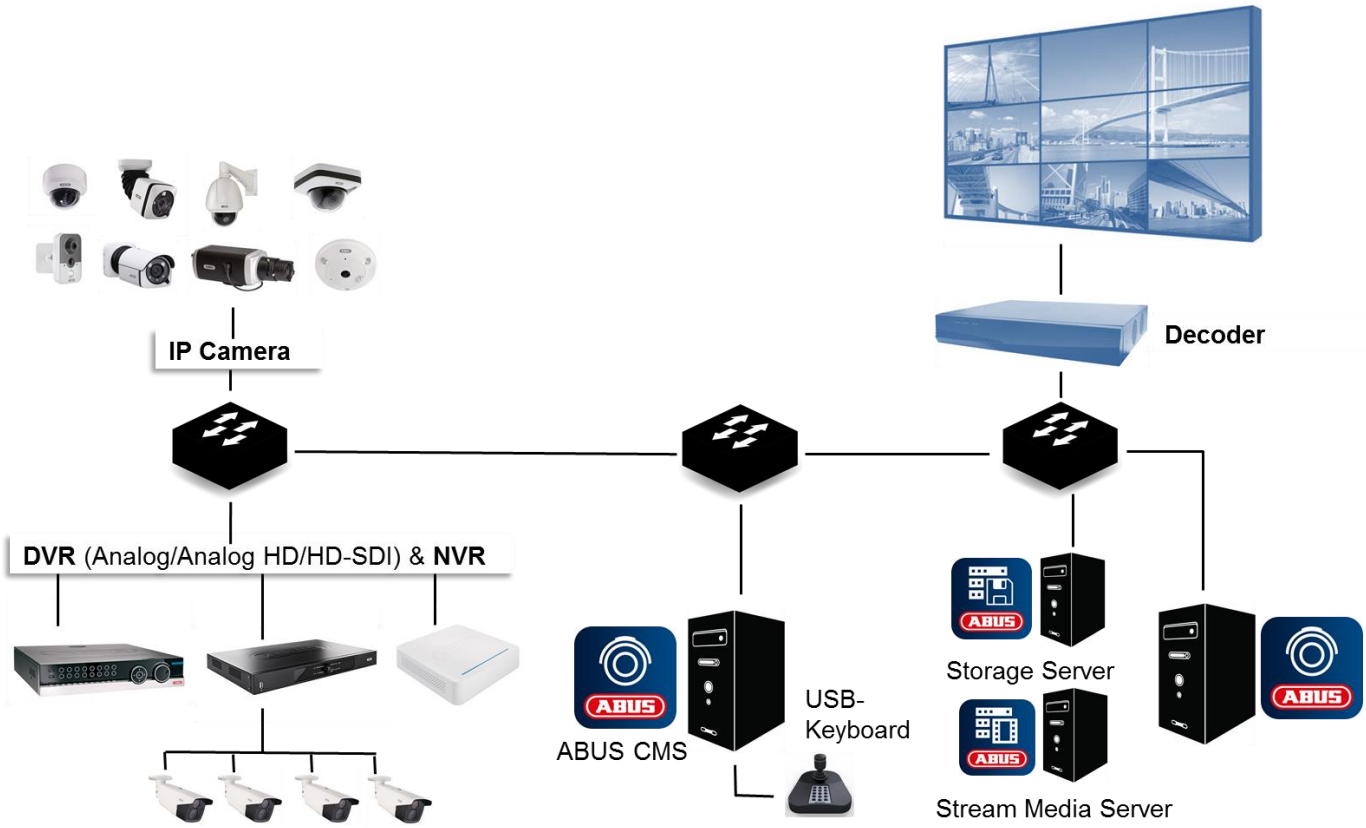
Assigning the Stream Media Server

Press the button in the device manager under 'Stream Media Server'.



Assign individual cameras or entire groups to the Stream Media Server by selecting the checkboxes and confirming with 'OK'. All streaming requests are then directed via the server.

Multi-screen decoder



General information on the multi-screen decoder

The multi-screen decoder is a network device that solely exists to receive video streams from cameras and recorders via the network, decode these streams and display them via the integrated DVI-I outputs. The decoder supports all established video formats from H.264, MPEG-4 to MJPEG.

Conventional PC monitors or LCD television screens can be connected to the DVI-I outputs (provide both analogue and digital image signals).

The decoder can be set up and programmed completely using the ABUS CMS software. Further descriptions can be found under '***Video wall***'.

Depending on the structure level of the decoder, various numbers of monitors can be connected and cameras displayed. The following table shows the performance data of the individual models.

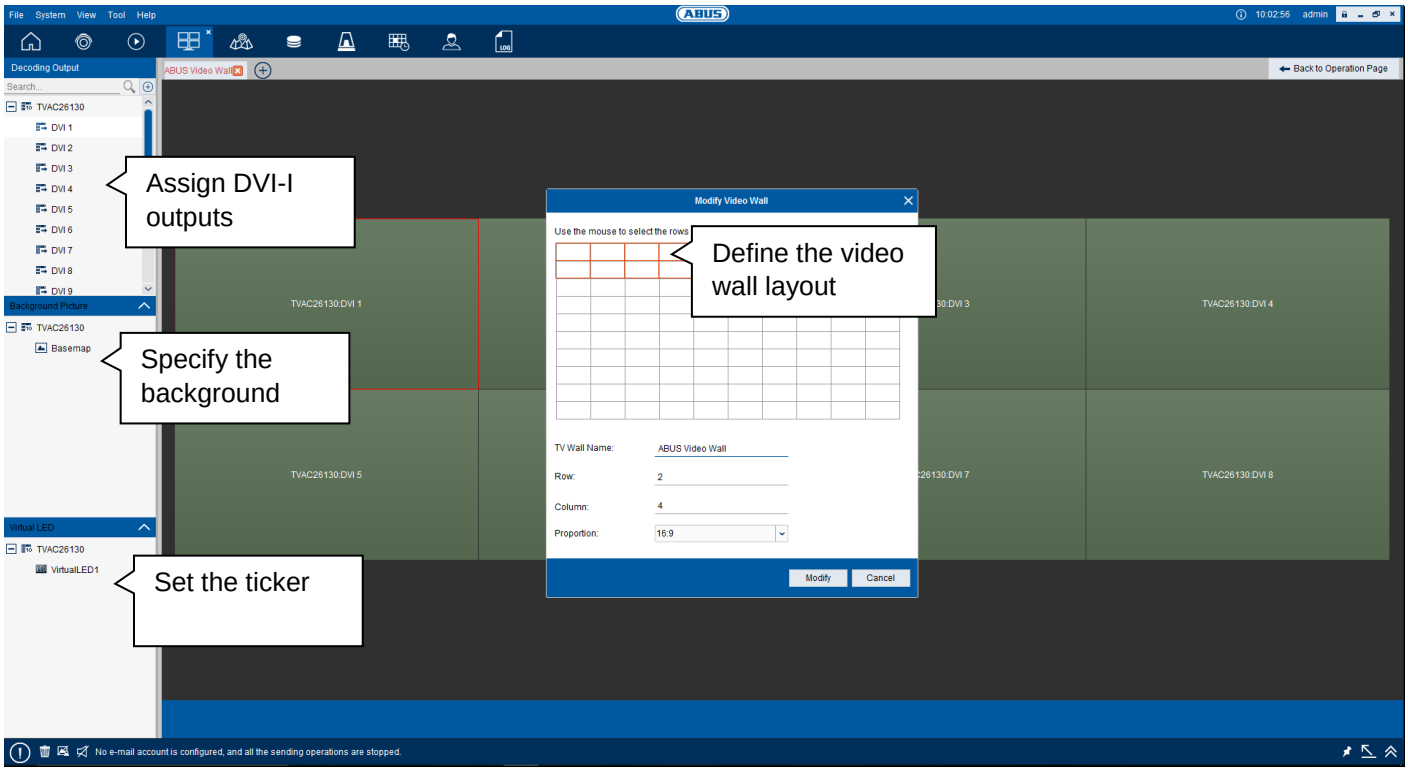
Multi-screen decoder performance data

	TVAC26100	TVAC26110	TVAC26120	TVAC26130
Monitor outputs	4	8	12	16
Number of channels	32	64	90	100
Max. decoder output	2Ch@8MP 4Ch@5MP 8Ch@1080P 16Ch@720P 32Ch@4CIF	4Ch@8MP 8Ch@5MP 16Ch@1080P 32Ch@720P 64Ch@4CIF	6Ch@8MP 12Ch@5MP 24Ch@1080P 48Ch@720P 90Ch@4CIF	8Ch@8MP 16Ch@5MP 32Ch@1080P 65Ch@720P 100Ch@4CIF

Compatibility

All video channels which can be directly received via the CMS and locally displayed on the PC are supported by the decoder. It does not matter whether the video data is provided by an analogue DVR, HD-SDI DVR, analogue HD DVR, hybrid NVR or NVR system. Selected cameras (see compatibility list), which can be connected directly in the CMS, can also be displayed on the decoder.

Video wall



General information on the video wall

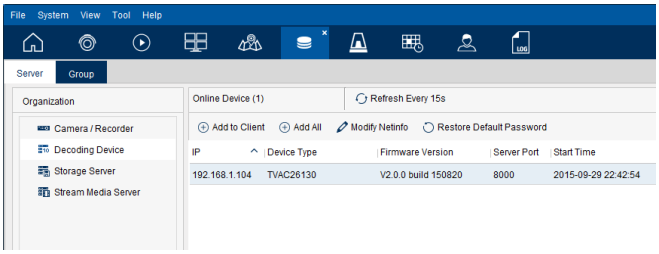
Multi-screen decoders can be managed and programmed using the 'Video Wall' function. Using simple drag and drop control, individual video channels in the software can be placed directly on the video wall, which then displays the video streams output by the decoder at the DVI-I outputs. Since the data exchange between the decoder and signal source (camera or recorder) only occurs via the network, this allows flexible use of monitors, especially in commercial and industrial applications.

The CMS software is only necessary for setup. After successful programming, the software does not have to be operated permanently since all video data is exchanged directly between the decoder and the signal source.

Note

The 'Video Wall' option is only available in the software if at least one decoder has been added to the device management. The ABUS CMS software supports the management of up to 64 decoders.

Adding a decoder

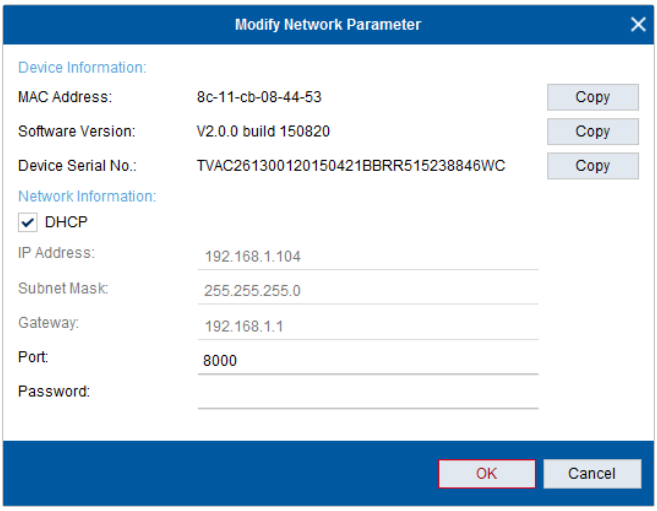


Switch to device management and select 'Decoding Device' under 'Server'.

Note

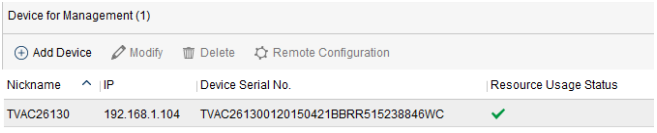
Ensure that your decoders are switched on and connected to the network.

The decoder is displayed in the 'Online Device' area if it has been found on the network. First ensure that the IP range of the decoder matches the network configuration of the PC on which the CMS software is running (the default setting for the decoder is 'DHCP enabled'; if no DHCP is used the device is given IP 192.168.0.100). If the IP address needs to be changed, do so immediately using the 'Modify Netinfo' button.



Parameter	Description
DHCP	Activate/deactivate the DHCP service for the network device
Address	Manual configuration of the IP address
Subnet Mask	Manual configuration of the subnet mask
Gateway	Manual configuration of the gateway (router address)
Port	Manual configuration of the data port (8000 is the default setting)
Password	To make the changes, you must enter the password for the Administrator account to confirm.

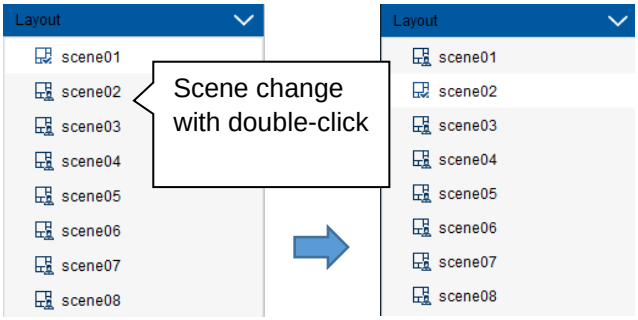
Add the decoder by pressing the 'Add to Client' button or by dragging and dropping the entry to the list below.



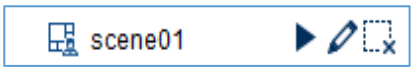
The green tick indicates that the decoder has been added successfully.

Selecting the video wall screen layout

Switch to the menu to start setting up the video wall. All settings for the decoder outputs, video channel layout, text displays and background pictures are combined into one scene. The CMS software can manage a total of up to 8 different scenes in the Layout menu.



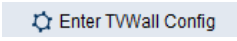
Scene1 is pre-selected as the default setting. All changes are always assigned to this scene subsequently. Double-click on another list entry to change the scene. This function can be used to quickly change the content on the video wall during running operation without having to adjust the configuration.

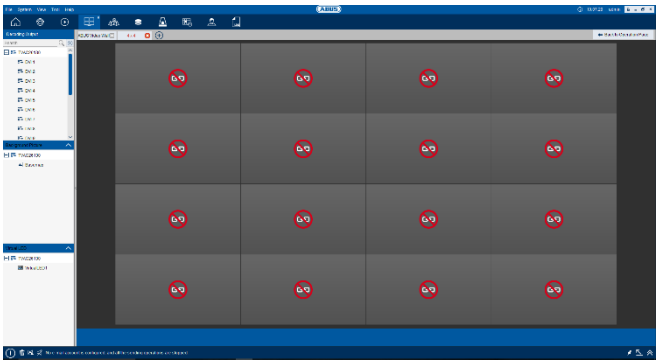


Parameter	Description
	Activates the selected scene (or double-click)
	Change the name of the scene
	Delete the content of the scene

First select the desired scene to continue with the setup.

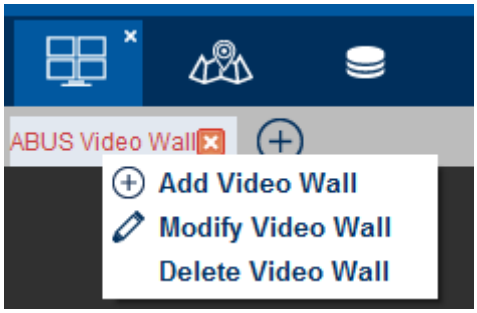
Video Wall Settings

Press the  button to define detailed settings for the video wall. The following areas are required for configuration:



Parameter	Description
Decoding Output	Display of available outputs on the decoder. Drag and drop outputs to assign them to the video wall view.
Video Wall	Create and manage the video wall views.
Background Picture	Upload and display custom background picture (JPG)
Virtual LED	Create and display custom text.

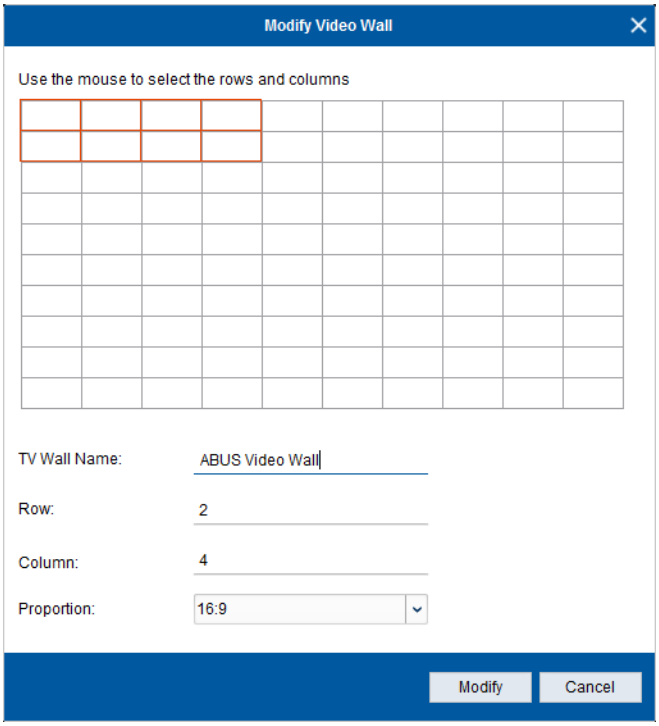
Define the video wall view



First define the video wall view by creating a new view (⊕) or changing an existing view via the context menu.

Note

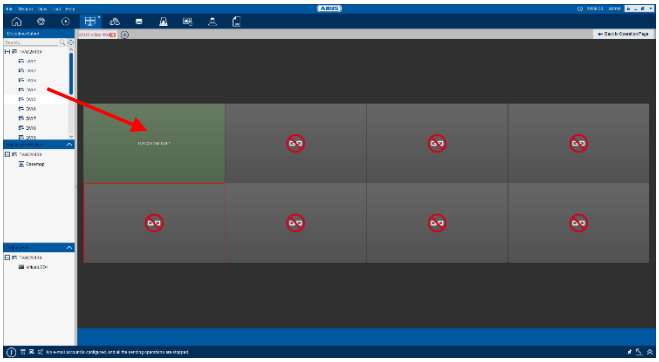
Up to four individual views can be defined per camera. Ensure that only one view can ever be active at a time. All scenes (1–8) apply only to the active view.



Use the mouse to select a grid frame in the displayed settings menu, in order to define the view for your video wall. Each cell here corresponds to a monitor output on the decoder = monitor/television. To make subsequent operation easier, the layout of the grid frame should match the physical arrangement of the monitors.

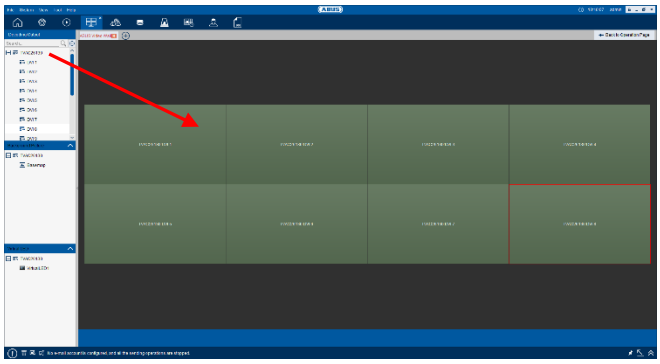
Parameter	Description
TV Wall Name	Define the name of the view
Row	Number of rows (= number of monitors vertically)
Column	Number of columns (= number of monitors horizontally)
Proportion	Define the expected aspect ratio of the video material: 4:3/16:9/full screen. In full screen, the decoder always tries to fill the screen with the image material (without borders).

Defining the decoding output



Drag and drop the decoder outputs one after the other on to the free spaces on the video wall view. They can be arranged in any order. However, only one output can be assigned to a view at any time.

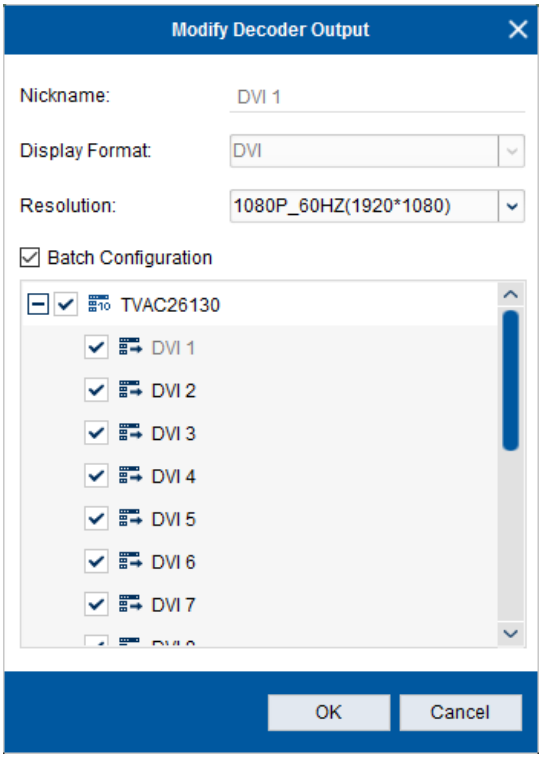
Alternatively, drag the decoder icon to the space to assign all outputs at once.



After successful assignment, the screen resolution must be set for each output. Right-click one of the outputs to begin.

Note

This step is absolutely necessary in order to activate the output. No value is set as a default, so at least one setting must be defined.

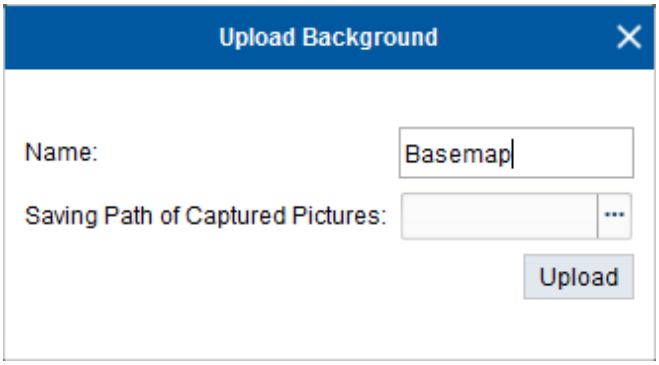


Parameter	Description
Nickname	Name of the output on the back of the decoder
Display Format	Output type used
Resolution	Screen resolution of the monitor/television
Batch Configuration	Copy the setting to other outputs.

Note

Use the 'Batch Configuration' function to copy the current setting to all monitor outputs on the decoder. This saves time and prevents incorrect settings that may occur during manual configuration.

Specify the background picture

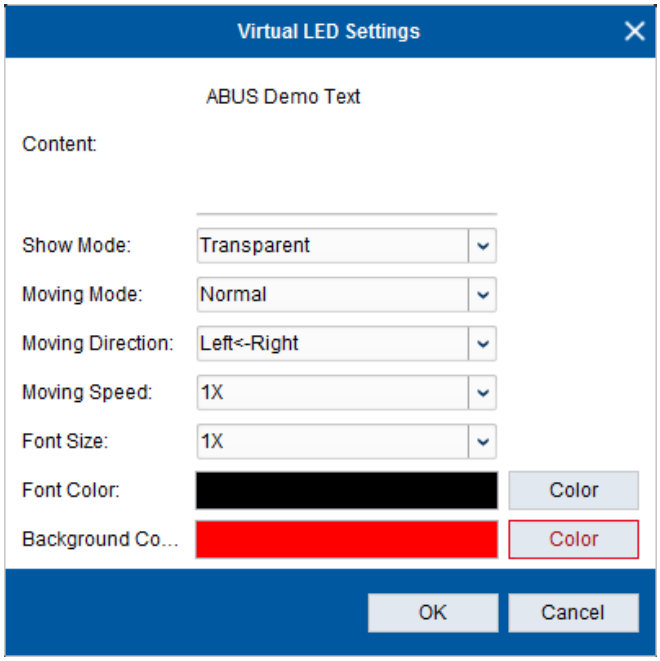


The 'Background Picture' function allows you to upload a JPG file to the decoder. The image can be assigned to a monitor output in the configuration; video channels can then be played over the image. This is useful if maps or safety information have to be displayed permanently via a monitor output.

Right-click the icon under 'Background Picture' to view the available options:

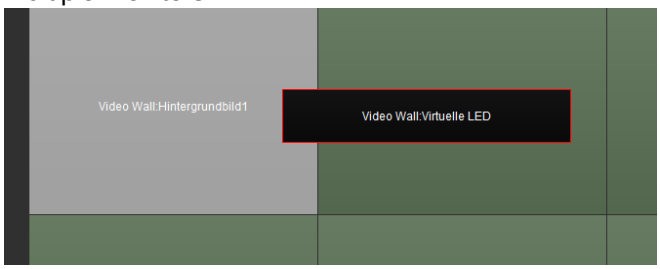
Parameter	Description
Configure	Select a JPG file on the PC and upload this to the decoder. The file must have an even aspect ratio. The following resolutions are supported: 256 x 256 to 3480 x 3480 pixels.
Show	Displays the background picture at the monitor output.
Hide	Hides the background picture.

Defining the virtual LED



The 'Virtual LED' function allows the display of custom ticker text on the video wall.

The ticker text can be positioned freely, even across multiple monitors.

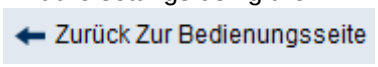


Right-click the LED icon under 'Virtual LED' to view the available options:

Parameter	Description
Table of contents	Enter the desired text here.
Show Mode	**Cover:** The background colour of the ticker text (see below) covers the video image. **Transparent:** The background colour of the ticket text is transparent.
Moving Mode	**Normal:** Normal text movement **Smooth:** Slow text movement **Static:** No text movement
Moving Direction	Indicates the direction in which the text runs.
Moving Speed	Select the speed.
Font Size	Select the font size.
Font Color	Select the font colour.
Background Color	Select the background colour.
Show	Displays the text at the monitor output.
Hide	Hides the text.

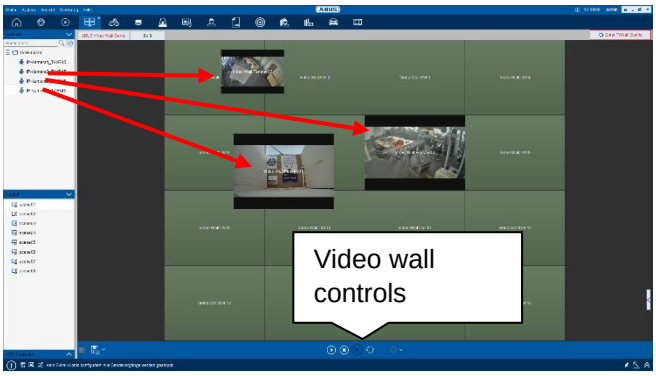
Once the settings are complete, drag and drop the ticker text on the video wall view.

Exit the settings using the



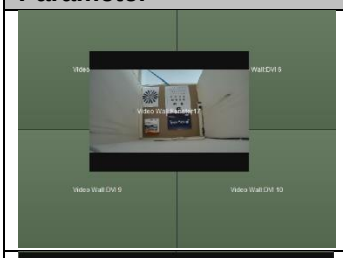
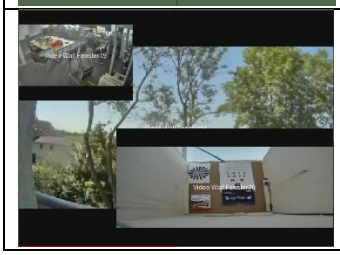
option.

Operating the video wall



Once all detailed settings have been defined, the video channels can be assigned. Drag and drop the available video channels from the 'Camera' section to the video wall view. The video streams are displayed immediately on the video wall. The following basic control commands are available:

Parameter	Description
	Decode all video channels assigned to the video wall (display).
	Stop all video channels assigned to the video wall (stop decoding).
	Close all windows.
	Refresh decoder (resend decoder commands).
	Define the sequencer setting. The sequencer is started in the 'Cameras' area by selecting the icon next to the group name. The view switches to the currently selected window (red frame).

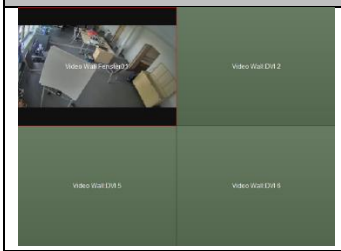
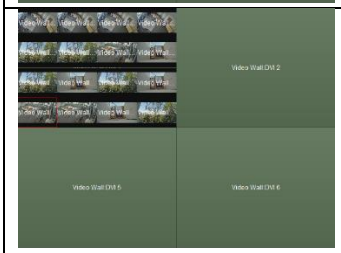
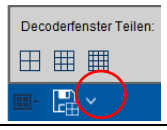
Parameter	Description
	Floating video channel display over 4 outputs.
	Full-screen display of video channel over 4 outputs, plus a floating window at the top left of the monitor and an overlapping window at the bottom right.

Display options

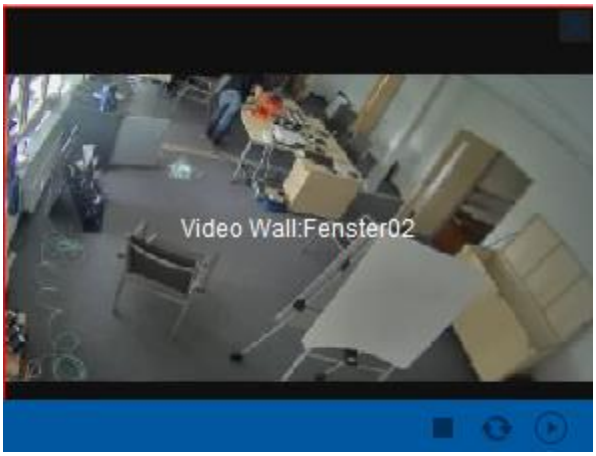
The following examples demonstrate several display options for the video channels on the video wall. Any combinations are possible thanks to the flexible layout.

Note

Decoder models TVAC26100/10/20/30 have the 'Roaming' feature (floating windows) and 'Jointing' feature (overlapping image across multiple monitors). These models allow for very flexible and versatile display of camera images on the video wall.

Parameter	Description
	Selected video channel is displayed in full screen at output DVI1.
	Even distribution of 16 channels at DVI1 using the 'Window Division' function. 

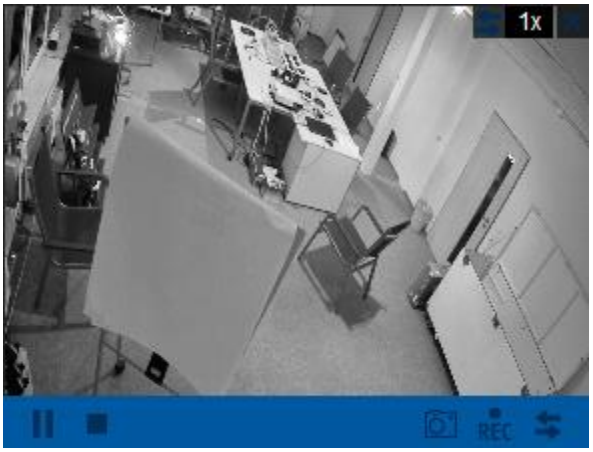
Live image control



The live image display can be controlled by selecting a window in the video wall view. In addition to the control options below the live image, additional options are available in the context menu:

Parameter	Description
■	Stop image output (decoding) for selected video channel.
○	Start/stop sequencer (group sequencer must be activated once in advance).
↻	Refresh the preview image.
▶	Start image output (decoding) for selected video channel.
	Display decoder status (stream type, resolution, current bit rate, etc.)
	Update and display logo
∧ ∨	Move current window one level up or down.
Lock/Unlock	Fix the current window in its selected position (can no longer be moved) or unlock.
Set Alarm Window	Alarm messages from linked video channels are displayed directly in the selected window via the alarm manager (e.g. video image of triggered motion detection on camera2).
	Switch to playback view for selected video channel.

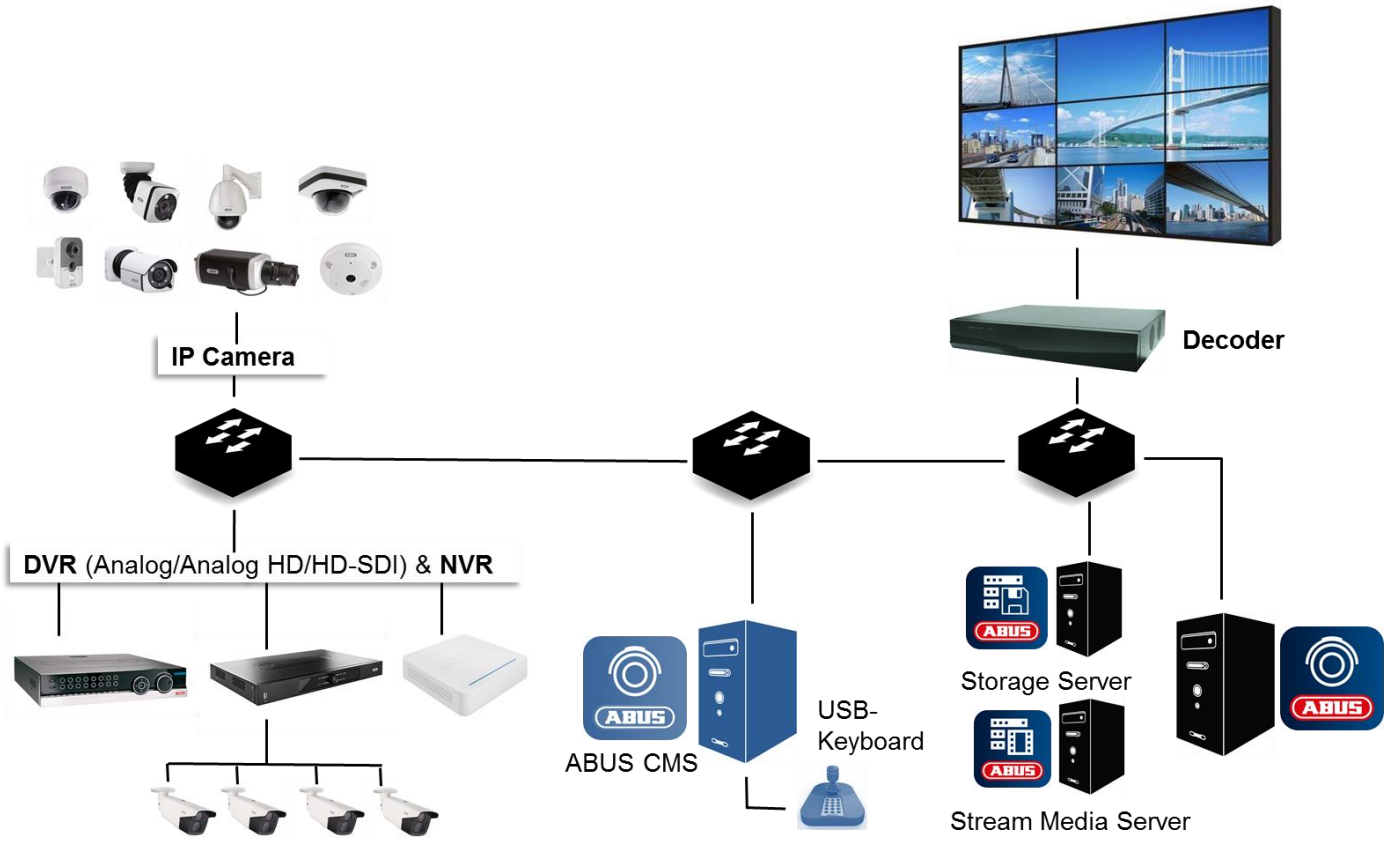
Playback controls



If playback mode is activated for a video channel on the video wall, the recording data (NVR/DVR/SD card) is played on the video wall. In addition to the timeline for controlling the playback time at the bottom edge of the screen, other commands can be used as well.

Parameter	Description
❚❚	Pauses playback.
■	Ends playback.
▶▶	Increases playback speed.
◀◀	Decreases playback speed.
	Creates a snapshot (capture) of the current scene.
REC	Creates a video clip of the current scene.
	Switch the view in the CMS to full screen for the selected channel.

USB keyboard



General information on the USB keyboard

The USB keyboard TVAC26010 is a simple addition to the ABUS CMS solution for controlling PTZ cameras in the live view mode of the CMS. The keyboard does not need any special drivers and can be set up easily via plug&play thanks to its USB interface.

USB keyboard operating modes

There are two operating modes available for the keyboard:

Parameter	Description
USB Joystick Mode (both status LEDs active)	Free configuration of all keys. Optimal for preset/patrol control.
USB Keyboard Mode (just one status LEDs active)	Fixed key assignment. Optimal for quick channel switching.

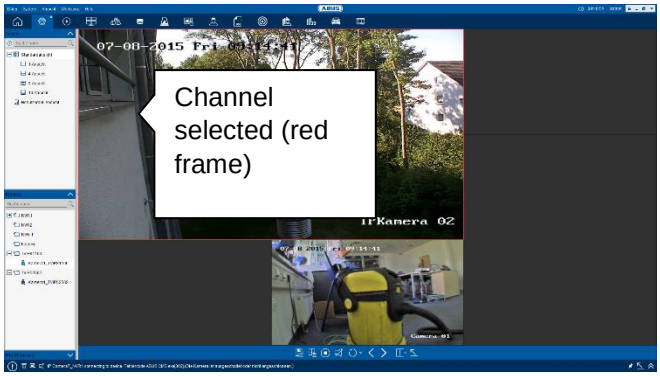
Setting the mode

Activate Joystick mode by holding down the key for 5 secon / y one status LED is active (Keyboard mode).

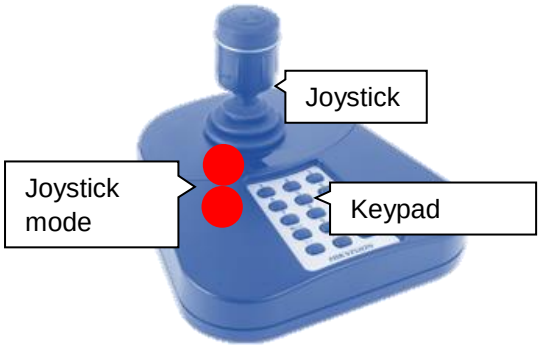
Note

The USB keyboard uses standard USB drivers/virtual COM drivers for Windows. If the device is not detected, run an online driver update via 'Windows Update'.

Key assignment in Joystick mode

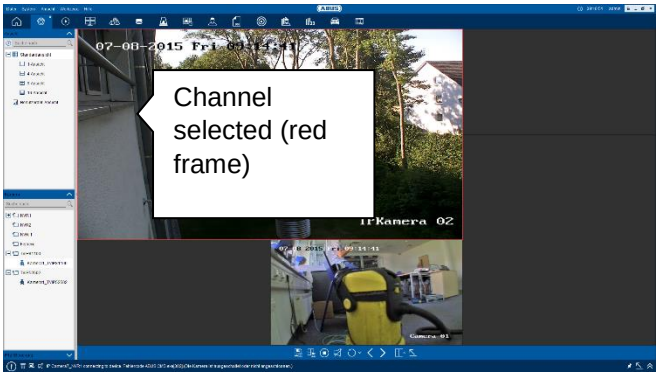


PTZ control via the keyboard is always active for the currently selected channel (red frame).

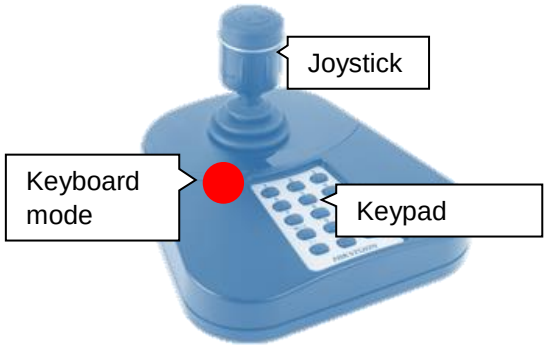


Joystick	Description
Left button	Shortcut 11 (default: create capture)
Right button	Shortcut 12 (default: change window)
	Up
	Down
	Left
	Right
	Zoom out (zoom-)
	Zoom in (zoom+)
Keypad	**Description**
Segment display	Selected shortcut
0–9	Shortcuts 0–9 (0 = shortcut 10) (default: call preset)
/	Hold down 5 s to switch to Keyboard mode
	Not available
F1	Not available
F2	Not available
F3	Not available

Key assignment in Keyboard mode

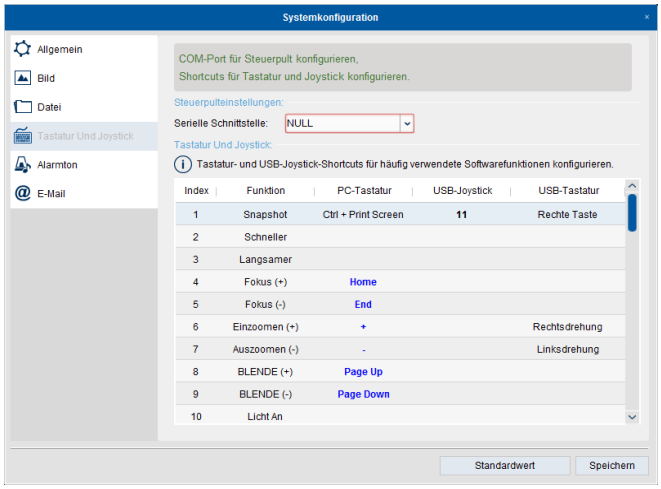


PTZ control via the keyboard is always active for the currently selected channel (red frame).



Joystick	Description
Left button	Create capture
Right button	Record video clip
	Up
	Down
	Left
	Right
	Zoom out (zoom-)
	Zoom in (zoom+)
Keypad	**Description**
Segment display	Selected window#
0–9	Select window#
/	This mode is not assigned. Hold down 5 s to switch to Keyboard mode
	Confirm window# selection
F1	Free shortcut (default: next)
F2	Free shortcut (default: last)
F3	Free shortcut (not assigned)

Setting shortcuts



Switch to the configuration page under the menu bar → Tool → System Configuration → Keyboard and Joystick. The keyboard shortcuts for the PC keyboard and for the TVAC26010 (USB keyboard) can be manually adjusted here. Adjust the configuration according to the column 'USB Joystick' (Joystick mode) or 'USB keyboard' (Keyboard mode).

Note

Note which mode the USB keyboard is running in. In Joystick mode shortcuts can be freely configured for keys 0–12. In Keyboard mode only keys F1, F2 and F3 are available.

Technical data

Subject to technical changes and correction without notice.

	ABUS CMS software	TVSW11001
	Supported operating systems	Windows 7, Windows 8, Windows 8.1, Windows 10, Windows Server 2012 (32/64-bit)
	Setup wizard	Yes
	Export/import functions	Local captures, local video clips, settings, download video data from device memory
	Resource usage status display	CPU, memory (RAM), network
	64-bit OS support	Yes (4 GB and higher)
	Channels per monitor	64
	Number of monitors	4
	Stream Media Server	Additional module for distributing network load on the LAN
	Local captures	JPG, BMP
	Local video clips	MP4
	PTZ functions	PTZ, preset, patrol, 3D, OSD setting, USB keyboard TVAC26010
	Number of channels for playback	16
	Playback type	Asynchronous, synchronous, smart playback
	Storage schedule	Freely configurable per camera
	Storage Server	Optional additional module for recording locally to the PC
	Users	50
	Configurable permissions	33
	Max. number of devices	245
	Max. number of channels	1024
	Remote configuration	Integrated access for remote configuration of all supported devices
	Status display	Password strength, network capacity (up/down), HDD status, recording status, signal status, hardware status, number of connections
	Client logs	Record of all local activities in the software
	Server logs	Analysis of log data from all programmed devices
	Alarm manager	Integrated alarm pop-up and alarm audio function
	Alarm configuration	Event management, manage alarm inputs, configure device exceptions
	TV wall support	Integrated in combination with TVAC26100 / TVAC26110 / TVAC26120, TVAC26130
	Number of decoders	64
	E-maps	256
	Supported file formats	BMP, PNG, JPG
	Devices that can be displayed	Cameras, alarm inputs, links to other e-maps

ABUS CMS software

TVSW11001

Manufacturer
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