

## **Roger Access Control System 5 v 2**

Application note no. 007

Document version: Rev. C

# **CCTV systems integration**

Note: This document refers to RACS 5 v2.0.8 or higher

### ***Introduction***

The integration with CCTV systems offers enhanced monitoring functionalities and it can be applied not only in VISO software of RACS 5 access control system but also in VISO SMS system which is a security management platform. The integration concerns:

- DVR/NVR and cameras from HIK Vision, Dahua, Hanwha, BCS Line, BCS Point, ProvisionISR, IPOX, EVOS and Tiandy brands
- XProtect (Milestone) video monitoring system (VMS) based on Milestone Open Network Bridge (ONVIF)
- Bosch VMS video monitoring system
- PTZ cameras from HIK Vision, Dahua, BCS Line, BCS Point, ProvisionISR, IPOX
- ONVIF cameras including PTZ cameras
- RTSP cameras
- Roger device cameras (e.g. MD70)

In case of CCTV systems the integration is based on SDK version which is up-to-date when VISO software is released and it enables:

- Live video or images displaying on request or automatically when particular event(s) occur
- Recorded video or images displaying on request for particular events (DVR, NVR or VMS required)
- Video monitoring of users and doors in Attendance Zone CCTV Monitor
- Camera live view in various layouts

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Note: Alternative integration scenario with XProtect (Milestone) video monitoring system is explained in AN018 application note.

Note: The application of license plate recognition (LPR) cameras is explained in AN028 application note.

Note: CCTV application in case of Access Modes is explained in AN025 application note.

Note: Additional information on CCTV application in VISO SMS system is explained in AN055 application note.

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### ***CCTV system configuration***

Configure CCTV system in accordance with manufacturer's manuals. For the purpose of integration it is recommended to apply CCTV devices which enable multiple and concurrent logins for operator whose credentials are used in communication with such devices.

## Hik Vision

In case of problems with video displaying for HIK Vision devices it is recommended to download DSFilters components from HIK Vision webpage and install them.

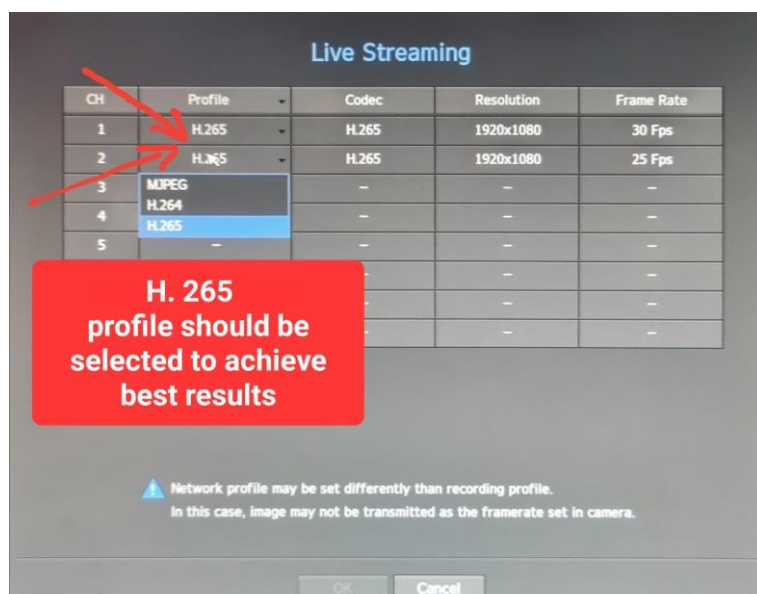
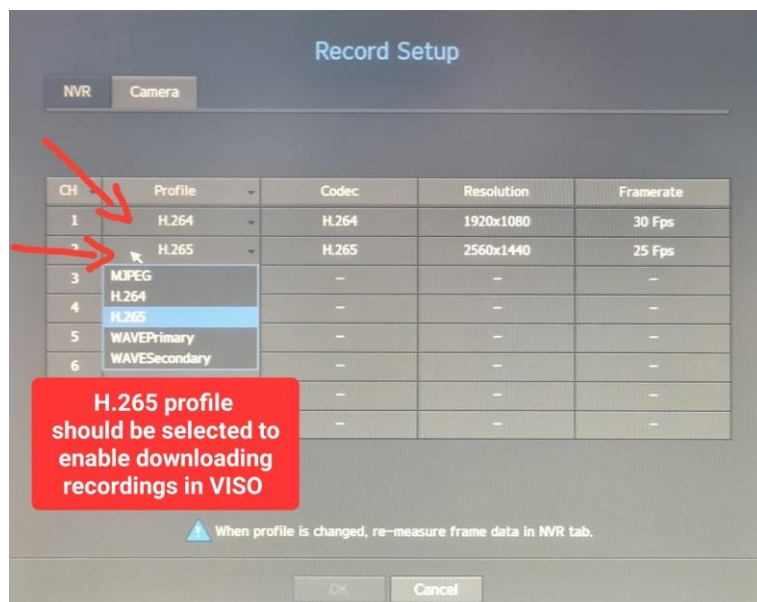
In case of Image links the value of I-frame interval parameter in IP camera cannot be too high. The optimal value is 25 when *Time Between Images* in VISO is 1s and frame rate in camera is 25fps.

## ProvisionISR

The encryption mode for API Server must be set to Base64.


## Hanwha

It is strongly recommended to set H.265 profile in *Setup->Network->Record Setup* and *Setup->Network->Live Streaming* as below. Additionally it is recommended to set camera resolution up to Full HD (1920x1080 px). Hanwha SDK may also require older legacy DirectX SDK libraries which are offered as Microsoft DirectX End-User Runtime (<https://www.microsoft.com/en-us/download/details.aspx?id=35>).



## Milestone Open Network Bridge (ONVIF)

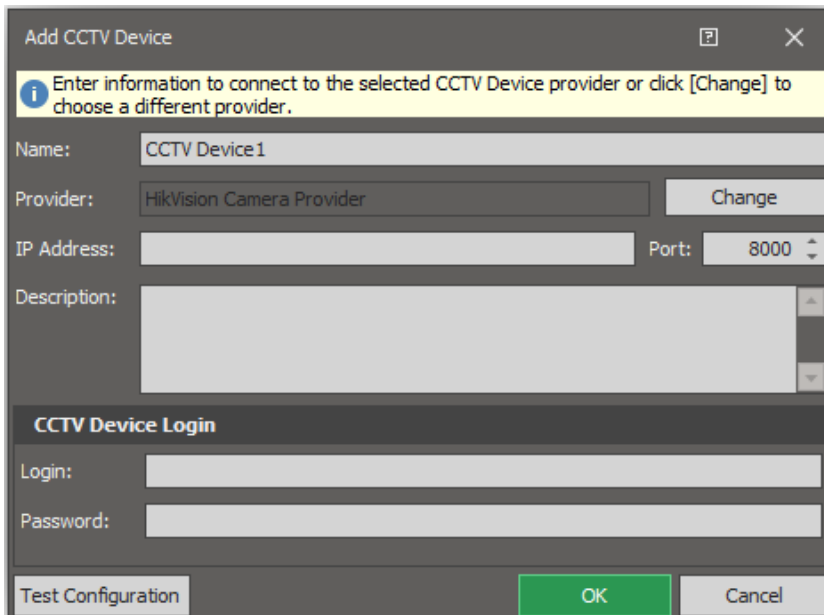
Previously developed integration based on Milestone native protocol was removed in VISO v2.0.8 and replaced by integration based on free of charge Milestone Open Network Bridge (MONP) interface. This interface can be used to extract video from XProtect VMS system using ONVIF protocol. The integration uses Profile S (online video streams from cameras) and Profile G (downloading recorded video materials). In order to define the integration:

- After configuration and starting of XProtect system, download Milestone Open Network Bridge from Milestone webpage and install according to manufacturer instructions.  
<https://doc.milestonesys.com/latest/en-US/portal/htm/chapter-page-onvif.htm>
- Define user in XProtect Management Client with a role for ONVIF cameras.
- Click the MONP icon  in Windows tray and add the user previously configured in XProtect software.
- When the connection with XProtect system is defined as explained in the next section, select *Milestone ONVIF Bridge Camera Provider*, enter IP address of computer with MONP service as well as enter login and password of previously created user in XProtect software.

## Connection with CCTV

In order to configure connection with CCTV:

- In the top menu of VISO software select *CCTV* and then *CCTV Devices*.
- In the opened window select *Add*.
- In the next window enter CCTV parameters such as provider, IP address, port, login and password. It is recommended to use administrator credentials.
- Click *Test Configuration* button in order to verify your settings. Close the window with *OK* button.



- Click *Initialize* in order to create channels for individual cameras. The list of channels is displayed in *Channels* tab. They can be renamed to facilitate their further management in VISO software.

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Note: PTZ camera may be incorrectly recognized as standard camera during initialization. In such case enable the option *PTZ Camera* in *Channels* tab for particular CCTV Device.

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- Add more CCTV devices/systems if needed. VISO software can operate with multiple supported CCTV devices/systems at the same time.

## ***Video clips and images***

It is possible to associate events from VISO software with video recorded by CCTV system and then to enable video clips and images displaying in VISO software. In practical applications it can be used for convenient and visual verification if recorded video confirms that according to registered event, certain access granting or other action at the door was actually performed by particular user and not another person. Adequate video clip or image is downloaded by VISO software on operator request based on so called Video Links and/or Image Links. Such links specify connection of such objects as Access Point, Access Door, input or zone of fire alarm system, input or zone of intrusion alarm system or RKD 32 key cabinet with CCTV device/system and its channel (camera) and also with event type. Downloaded video or images can be saved in database or locally on computer.

## **Link configuration**

In order to define Video Link for selected events:

- Select *CCTV* in the top menu of VISO software and then *Video Links* icon.
- Click *Add* button in *Video Links* window.
- In the newly opened window enter name of the link and select object i.e. previously created Access Point, Access Door or other object.
- In *CCTV Device* tab indicate which CCTV device/system and channel (camera) will be associated with previously selected object. In case of active connection with CCTV device/system a channel preview is displayed.
- Additionally, in *Other options* tab it is possible to define video clip time settings.
- Close the window with *OK* button.
- In the bottom select *Events* tab and then *Assign* button in order to select event types for the link e.g. *[629]: Access Granted*, *[630]: Access Denied*.

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Note: Event type which is selected for Video Link or Image link must be related to previously selected object type e.g. the source of *[629]: Access granted* event is Access Point while the source of *[601]: Door Access Granted* is Access Door.

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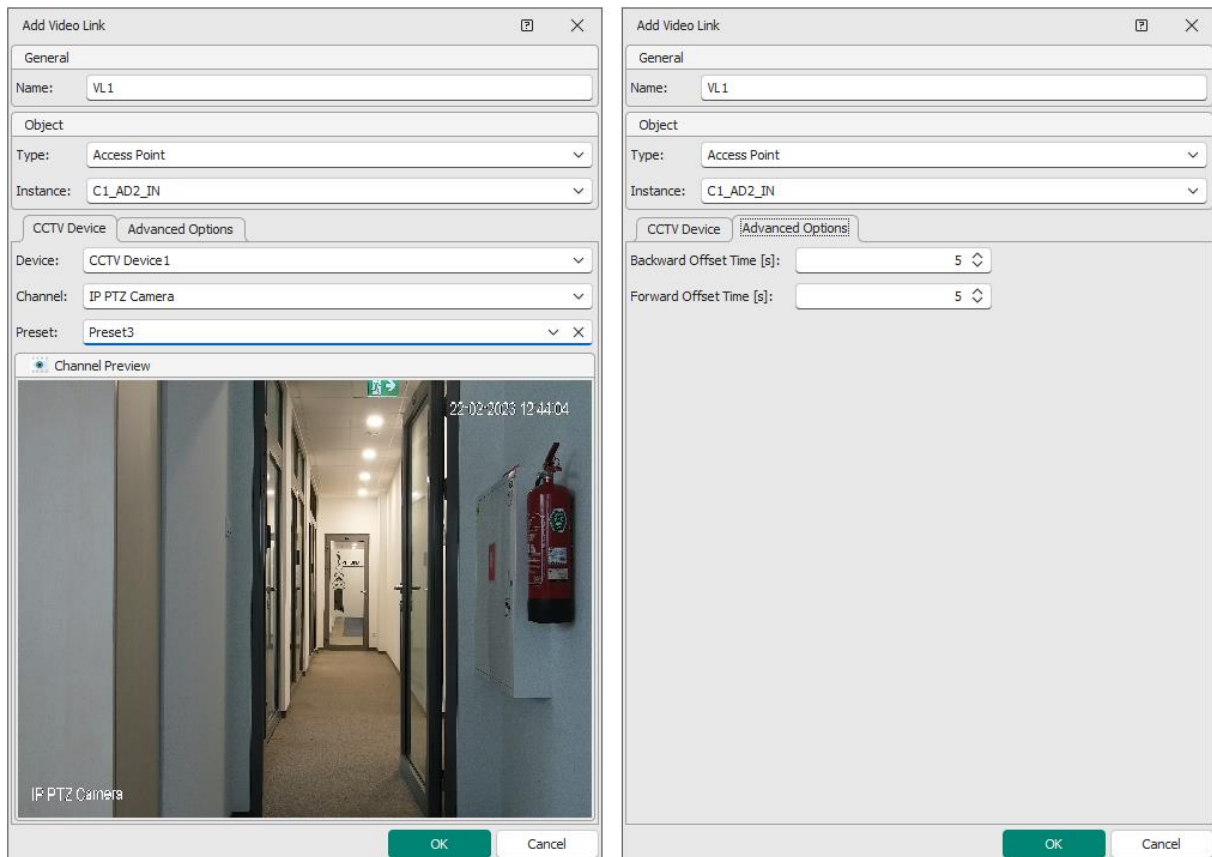


Image Link is defined similarly to Video Link by selection of *Image Links* after selection of *CCTV* in the top menu of VISO software. In case of Image Links it is possible to define number of taken images, time between images and backward offset time.

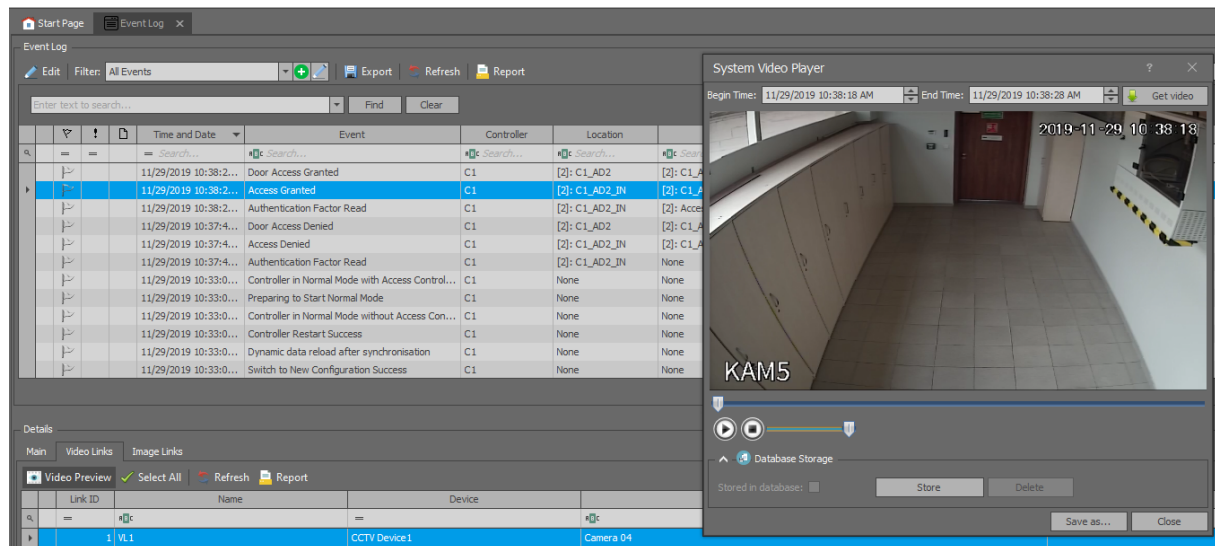
### Displaying and saving

After configuration of one or more links it is possible to download and display video clips and images on the level of Event Log, Events Monitor, Maps Monitor and Notification Monitor (VISO SMS).

In order to display and save video clip for an event in Event Log:

- In VISO top menu select the command *Event log* and then the icon *Event log*.
- In the newly opened window select predefined event filter or configure own filter and then close the window with *OK* button.
- Select event which was indicated in Video Link configuration e.g. [629] and [630], expand *Properties* in the bottom of the screen, select *Video link* tab and then *Show Video Preview* button.
- In the newly opened window, video clip associated with the event shall be played automatically.
- If the video is not synchronized properly with the event then *Begin time* and *End time* can be changed manually and video clip can be downloaded again with *Get video* button.
- The video clip can be saved with *Store* button in database for further replaying even if source video in recorder is not available anymore. The button *Save as...* can be used to save video clip file locally in .avi format.

Image displaying and saving is done in similar way by selection of *Image Links* tab in Event log or Events Monitor and then *Show Image Preview* button.



## Attendance Zone CCTV Monitor

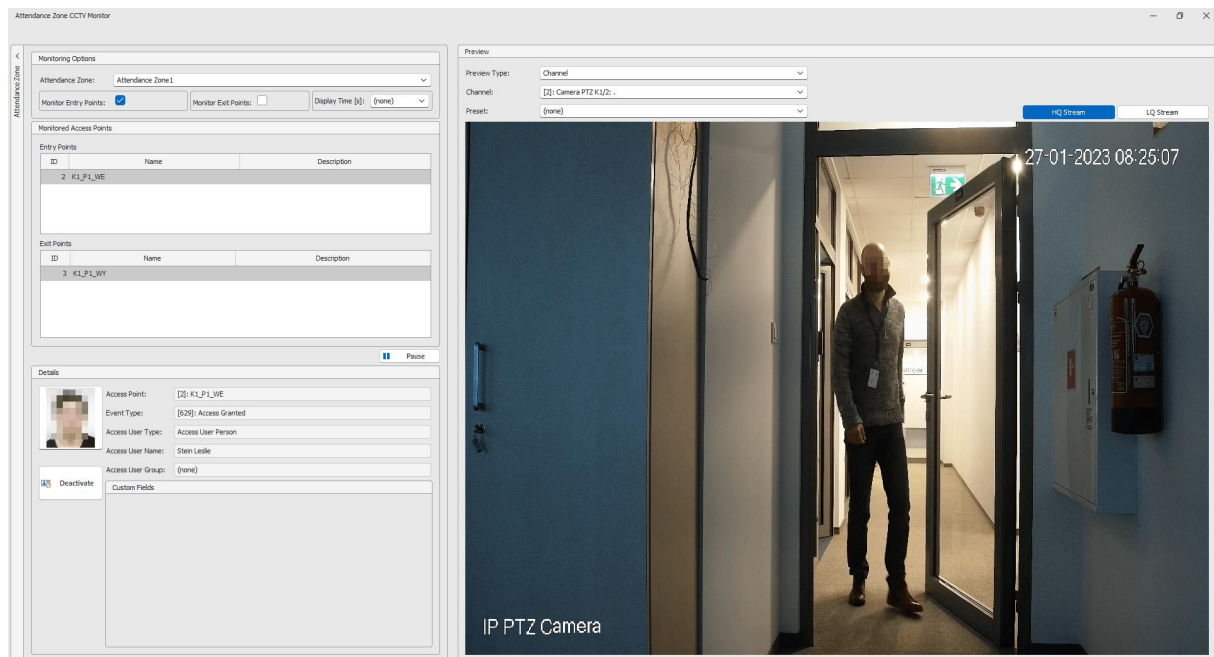
VISO software enables current monitoring of user who accesses Entry Points and/or Exit Points of selected Attendance Zone and displaying associated information in dedicated Attendance Zone CCTV Monitor. The monitor can show not only user names and photo, event location and source but also video from associated camera. In practical applications the monitor can be used by a guard for current and visual verification if persons entering premises use their own and not borrowed or stolen Auth. Factors by comparison of user's photo with camera view. VISO software enables to start multiple monitors at once in individual windows which can be shown on multiple screens. To start multiple monitors click the monitor icon multiple times and then drag and drop each tab beyond VISO main window.

In order to start Attendance Zone CCTV Monitor:

- Create Access Door with *Add Access Door Wizard* including all access Authorizations.
- Enrol users with *Add Person Online* wizard including names and photos as well as assigning Authentication Factor(s) and required access Authorizations.
- Configure connection with CCTV device according to previous sections of this document.
- Configure one or more Video Links according to previous sections. Links must be associated with Access Points and not Access Doors.
- Define Attendance Zone selecting the command *Time and Attendance* in VISO top menu and then *Attendance Zone* icon.
- In the opened window select *Add* button, name the zone and close the window with *OK* button.
- In the bottom select the tab *Entry Points* and use *Assign* button to indicate entry Access Point(s). Similarly define Exit Point(s) for the zone.
- In the top menu of VISO software select *Monitoring* command and then *Attendance Zone CCTV Monitor*.
- In the opened window select Attendance Zone and select Entry Points and/or Exit Points for monitoring.
- When Authentication Factor (e.g. card) is used by user at Access Point belonging to selected Attendance Zone and associated by Video Link with particular channel (camera) then not only user information including photo is displayed but also video from associated camera.
- Additionally it is possible to pause identification with *Pause* button so the next identification would not overwrite the current one and it is possible to quickly deactivate Authentication Factor (e.g. card) which was used at Access Point. Such deactivation does not require full synchronisation of controllers.

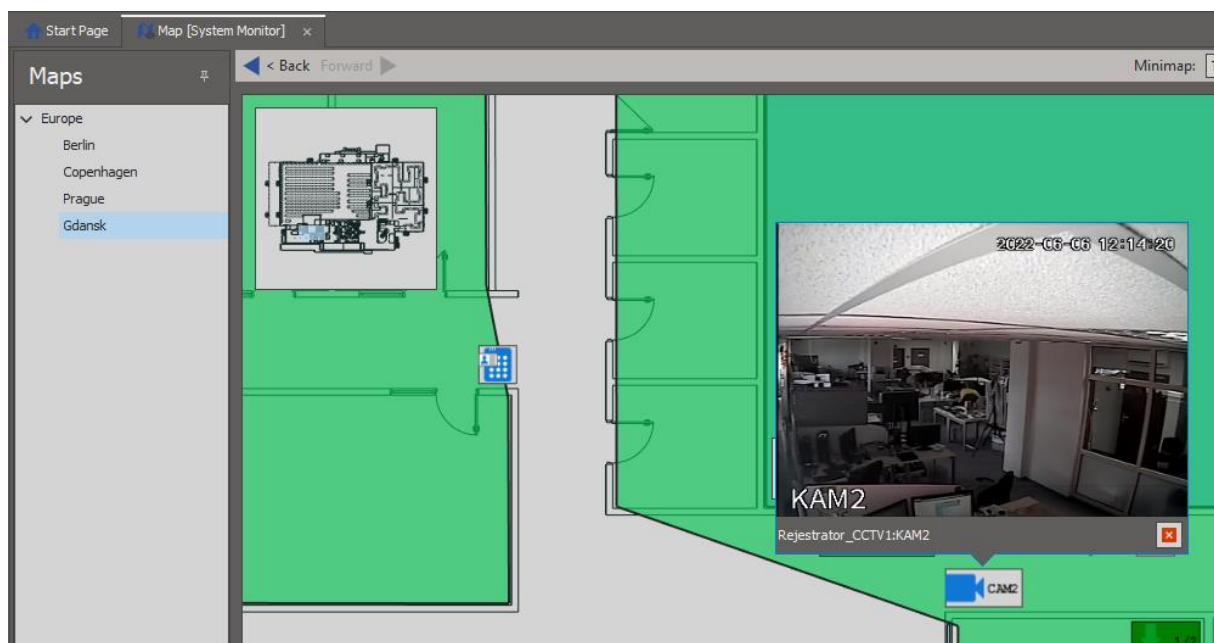


**Note:** In case of External or Delayed Authorisation Modes, the monitor additionally enables to grant or deny access. More information on this subject is given in AN025 application note.



## Video monitoring on Maps

According to AN055 application note, VISO software enables creating Maps with such objects as for example Access Doors, Access Points and also CCTV Devices. Map monitoring can be used to remotely control mentioned objects and read their states while in case of CCTV Devices to display video from cameras. In practical applications it can be used by system operator to visually check surroundings of certain Access Door prior to remote opening of such door or to verify visually if there are no users inside Alarm Zone prior to its remote arming.



The map can also be used to issue remote commands e.g. open a door. Contrary to *Preview* command for CCTV Device object, the *Remote command* for Access Point object on map can be

used only by operator with proper rights. Such rights are defined by assignment of operator to Access User Person with Authorization(s) for control of particular Access Door. Such association of Person and operator is done in the properties of Person in the tab *Remote Management* in the field *Operator*. The most simple method to grant all Authorizations to operator is to assign such operator to Person with Access Credential with enabled *Master exemption* option. More information on this subject is given in AN040 application note.


## Camera live view

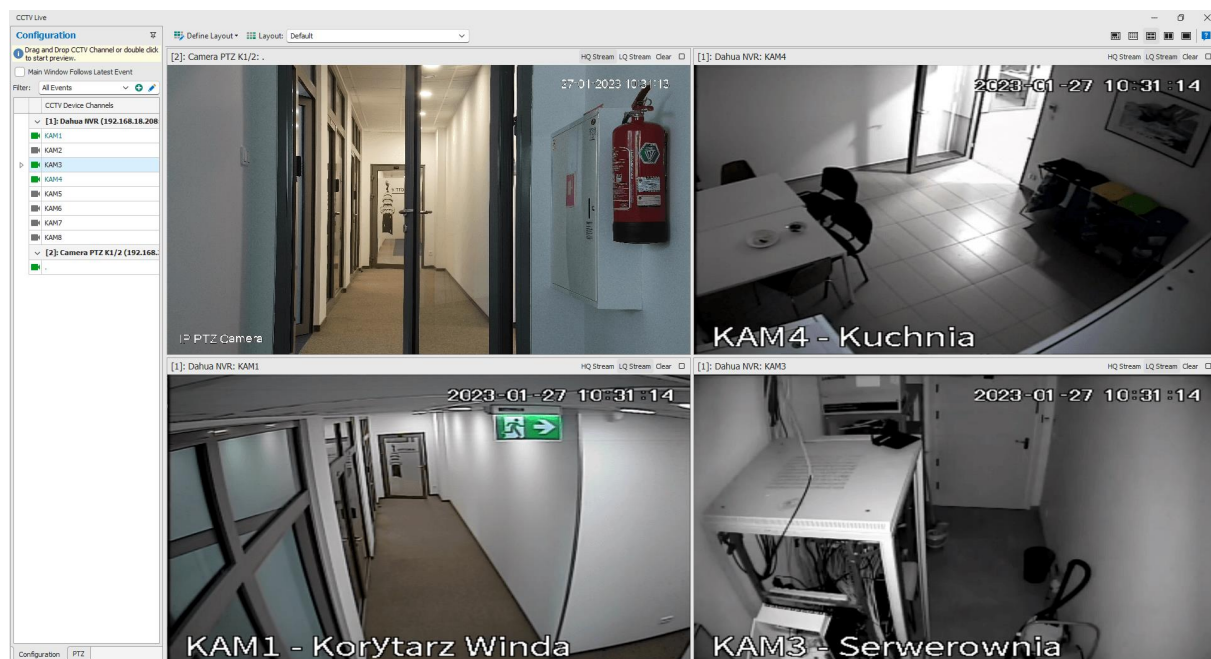
VISO software enables camera live view in dedicated window. In practical applications it can be used for visual monitoring of premises. The camera view can be static or dynamic. In static mode operator manually selects and arranges camera streams in dedicated window while in dynamic mode the system automatically selects camera stream for central window depending on events occurring in the system.

In order to configure camera live view in static mode:

- Configure connections with CCTV devices according to previous sections of this document.
- In the top menu of VISO software select *Monitoring* and then *CCTV Live View* icon.
- In the newly opened window drag and drop channels/cameras to the right in order to display video from them.

In order to configure camera live view in dynamic mode:

- Configure connections with CCTV devices according to previous sections of this document.
- Configure one or more Video Links according to previous sections. Links must be associated with Access Doors and not Access Points.
- In the top menu of VISO software select *Monitoring* and then *CCTV Live View* icon.
- In the newly opened window enable the option *Main Window Follows Latest Event*.
- Additionally predefined filter can be selected or new filter can be defined with  button in order to limit list of events affecting dynamic camera switching in the main window.
- When event related to Access Door indicated in Video link occurs then adequate camera view is switched and displayed in the central window.





VISO software enables starting multiple such monitor at once in individual windows which can be shown on multiple screens. To start multiple views click *CCTV Live view* icon multiple times and then drag and drop each tab beyond VISO main window.

**Contact:**  
**Roger sp. z o.o. sp.k.**  
**82-400 Sztum**  
**Gościszewo 59**  
**Tel.: +48 55 272 0132**  
**Fax: +48 55 272 0133**  
**Tech. support: +48 55 267 0126**  
**E-mail: [support@roger.pl](mailto:support@roger.pl)**  
**Web: [www.roger.pl](http://www.roger.pl)**