RBH View
Security Management System
Client

User Guide

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www.rbh-access.com

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1. Quick Start

1.1 Installing application

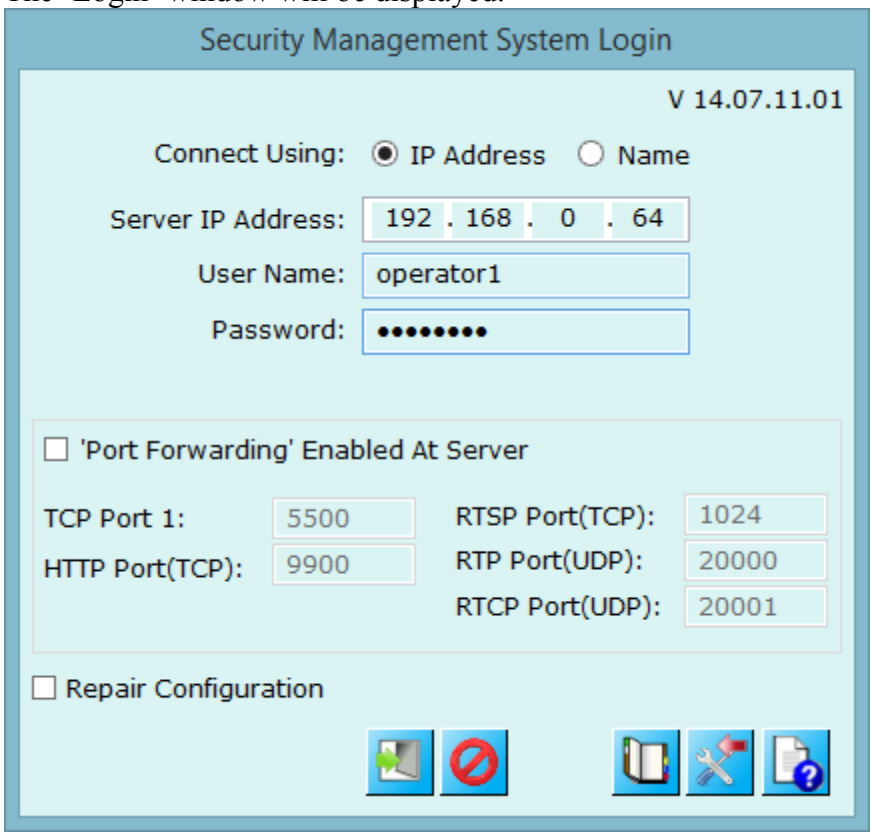
Execute the 'Security Management System Client' installable on the target client computer. Follow the wizard to complete the installation.

1.2 Launching application

Execute the 'Security Management System Client' application from the desktop shortcut or from the programs menu shortcut under 'Security Management System\Client Software'.

1.3 Login

The 'Login' window will be displayed.



Server IP Address – type IP address of used by server software. Please refer to the 'Security Management System Server – User Guide' document, 'Quick Start' section for details on how to locate the IP address of the server application.

User name – Name of the user with 'Operator' privileges, which is configured in the 'Security Management System server' software.
(Note - Only users with 'Operator' privileges can login from the Security management System Client application.)

Password – Password for the user name that is configured at server software.

Port forwarding enabled at server – In normal setup, this check-box is kept disabled. This option is required to be enabled only when server and client are in different sub-networks and port forwarding at the router is used to provide access to the server.
Enable this option if this client application is expected to connect to the server application through a router which has port forwarding configured for providing access to the server application. When enabled, please use the IP address and port numbers as provided by the system administrator who has configured the port forwarding. (For more information on port forwarding, please refer to the document 'Security Management System - Remote Client', which is available separately)

Click on '**Login**' button to connect to the server application. Application will open up if you have provided correct user name and password details.

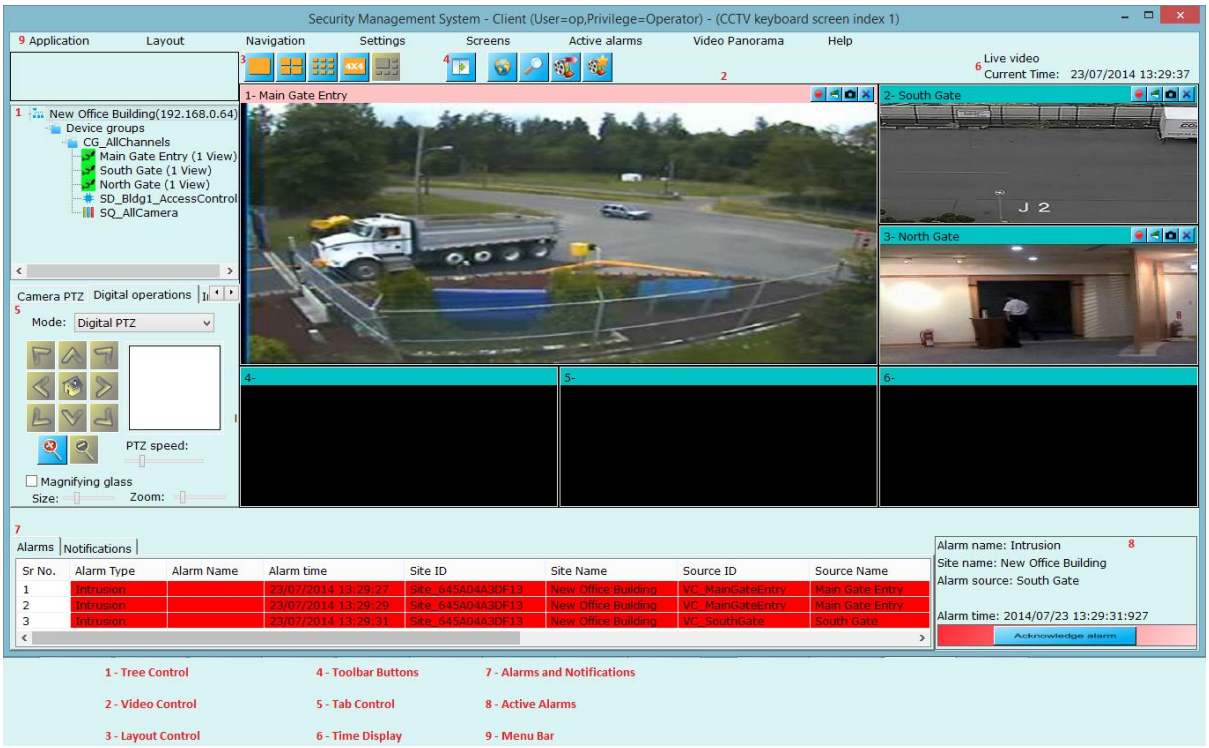
Use to login using saved connection settings. This pops up a dialog box which lists all the connections that are already saved by operators. You can select any settings from the available connection and can directly proceed to login.
(For information on how to save connections – please refer 'Menu bar' point from below pages).

Use button to import already exported application settings.

Clicking on button displays this file.

2. Main screen

After successful login, main screen is displayed. Figure below shows main screen window.



Details about each point are discussed from next page.

2.1 Tree control

Tree control displays a root node as ‘Site’ node. It shows site ID and below site id node, camera groups that are authorized for currently logged user are displayed. Camera group nodes have sub nodes to all the camera names that are present inside the camera group and camera sequences.

To view camera video or camera sequence video, user drags the camera name or camera sequence name and drop to the ‘Video control’ (refer 2.2 or refer point **2** from screenshot).

Alternatively you can also double click on camera name or camera sequence name from tree control to view the video into video control.

You can also right click on video container and click on ‘Assign video channel’ or ‘Assign video sequence’ to view videos.

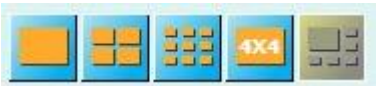
2.2 Video control

Video control displays videos from camera or sequence of cameras. It has number of items (same sized or different size depending upon layout used) – called as ‘video containers’.

You can right click on the video container for options related to video container or video displayed inside video container.

Selected video channel or sequence is highlighted with RED colored title bar and you can apply features available on ‘Tab control’ (point **3** from screenshot above) on this selected video or sequence.

2.3 Layout Control



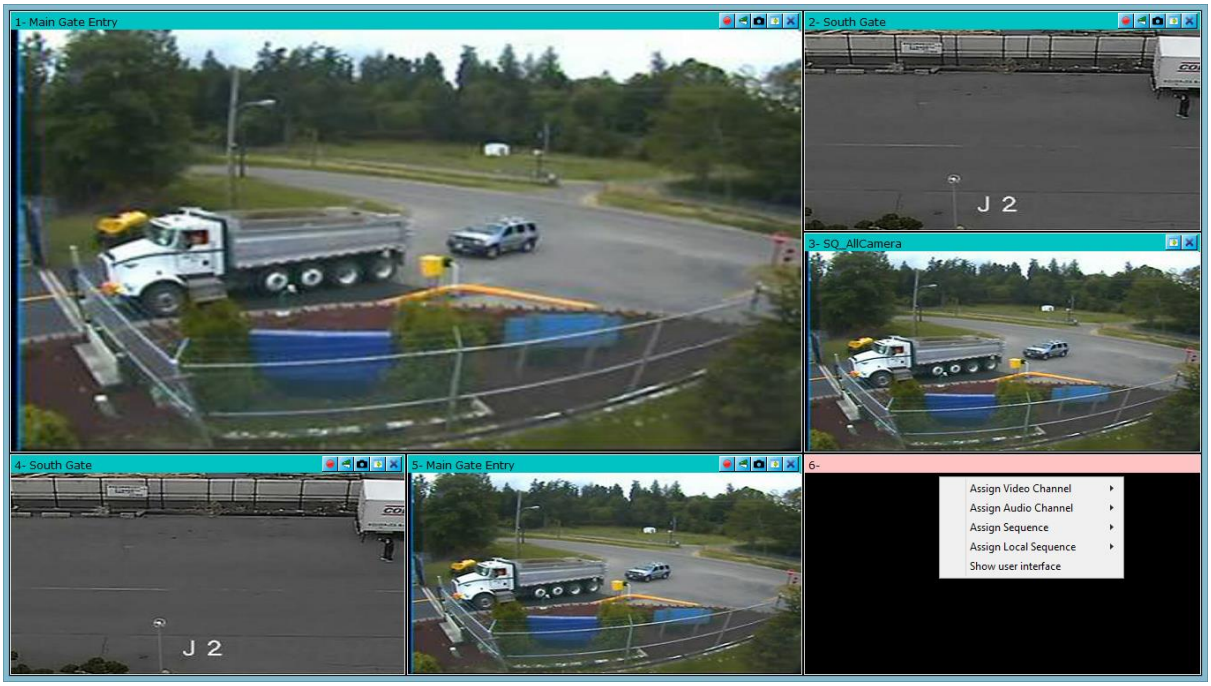
Using buttons available on layout toolbar, the ‘video control’ appearance can be changed. Figure above shows that video control currently is in 1+5 mode i.e.1 (first) video container is large sized and rest 5 are small-equal sized.

Other available modes are 1x1, 2x2, 3x3, 3x4, 4x4, 5x5, 5x6, 6x6, 7x7, 8x8, 1+7, 1+9, 1+11, 1+12, and 1+16. Please use menu bar (‘Layout menu’) for these options.
You can also mode to first page, last, previous page, next page within current used layout from ‘Layout menu’.

2.4 Toolbar Buttons

Hide user interface button

This button can be used to hide all configuration user interface controls from the screen to show only ‘Video control’ and the screen will look like



To show user interface controls, right click on any video container and click on ‘Show user interface’ menu.

Map Screen

Use button to open map screen.

Search Screen

Use button to open alarm search screen.

Export Video

Use button to open export video screen.

Search Video Bookmarks

Use button to open video bookmark search screen.

2.5 Instant replay button

When screen is displaying live videos, user can switch screen to 'Instant replay' mode by clicking on this button . All the videos will show replayed video. Time (in seconds) from how much history time the screen should start displaying replay video can be configured from 'User interface settings -> other settings.

Once screen is in 'Replay mode', you can use buttons from playback control toolbar to better navigate through replayed video.
(Playback control toolbar is discussed later)

Live view button –
(Not shown in screenshot as screenshot is of 'Live video' mode)
When screen is in 'Replay mode', this button will be displayed. Clicking on this button will take screen to live view mode to display live video feeds from all configured cameras.

This button is only available when main screen is used as playback screen. See settings 'User Interface Settings (Client)->Screen Settings'

2.5 Tab control

The tab control contains many features categorized into sub tabs. The features from the tab control will work on selected camera or camera/video sequence. The selected camera/sequence is displayed in faint RED colored title bar in the 'Video control'

2.5.1 Camera PTZ

This tab shows camera PTZ controls when camera PTZ is supported by the camera and server application has enabled camera PTZ feature.

2.5.2 Digital PTZ

This tab works in one of the 3 available modes (Digital PTZ mode, Digital Auto tracker mode, or Vibration removal mode)

Digital PTZ mode-
The selected video display can be controlled using digital PTZ controls.

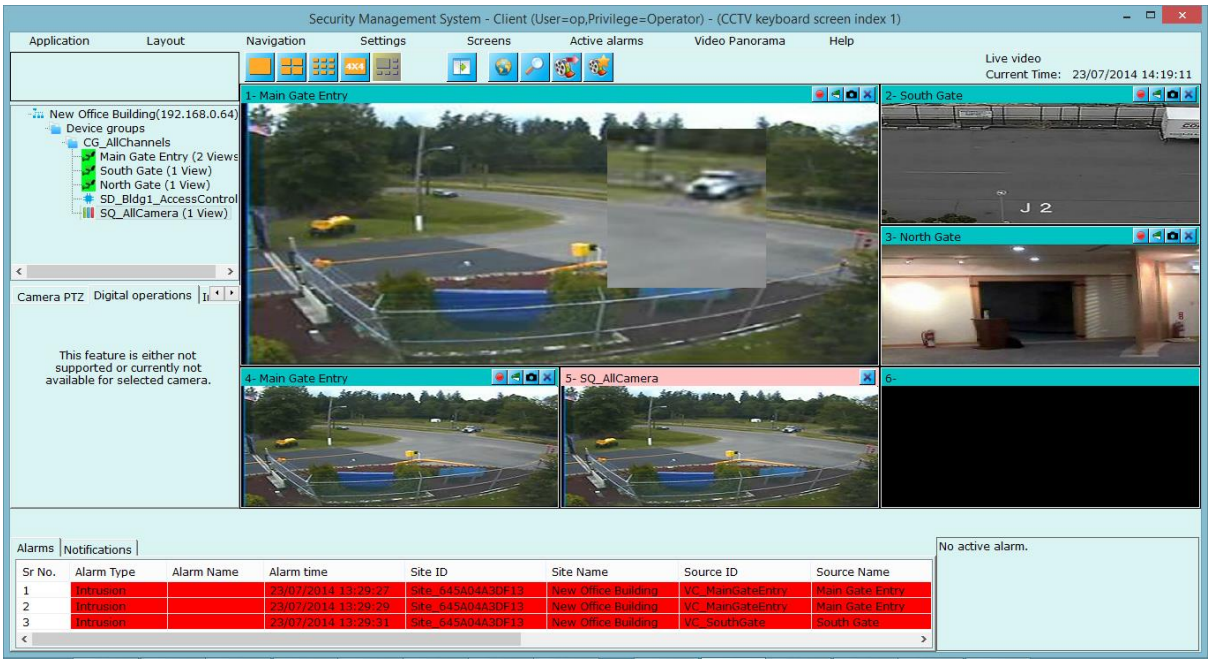
Use PTZ buttons from this tab to zoom, pan, and tilt the video. For different PTZ speeds, use 'PTZ speed' slider bar.

For PTZ using mouse move, drag and scroll, right click on video and use 'Display mode – Digital PTZ' menu.

PTZ area display indicator shows which part of video is being displayed on the screen.

Magnifying glass when enabled will magnify the area when mouse pointer is moved to the selected video display. Magnifying glass parameter (glass size and zoom) can be controlled using slider bars.

Screenshot below shows digital PTZ applied on 'video container 1' (1-Main Gate Entry), also applied magnifying glass is shown (see **2** in image). For comparison with normal video, see video from 'video container 5' (5- Main Gate Entry) which shows normal live video for same camera.


Security Management System - Client (User=op,Privilege=Operator) - (CCTV keyboard screen index 1)
Application
Layout
Navigation
Settings
Screens
Active alarms
Video Panorama
Help
Live video
Current Time: 23/07/2014 14:19:11
New Office Building(192.168.0.64)
Device groups
CG_AllChannels
Main Gate Entry (2 Views
South Gate (1 View)
North Gate (1 View)
SD_Bldg1_AccessControl
SQ_AllCamera (1 View)
Camera PTZ
Digital operations
This feature is either not supported or currently not available for selected camera.
1- Main Gate Entry
2- South Gate
3- North Gate
4- Main Gate Entry
5- SQ_AllCamera
6-
Alarms
Notifications
No active alarm.
Sr No. Alarm Type Alarm Name Alarm time Site ID Site Name Source ID Source Name
1 Intrusion 23/07/2014 13:29:27 Site_645A04A3DF13 New Office Building VC_MainGateEntry Main Gate Entry
2 Intrusion 23/07/2014 13:29:29 Site_645A04A3DF13 New Office Building VC_MainGateEntry Main Gate Entry
3 Intrusion 23/07/2014 13:29:31 Site_645A04A3DF13 New Office Building VC_SouthGate South Gate

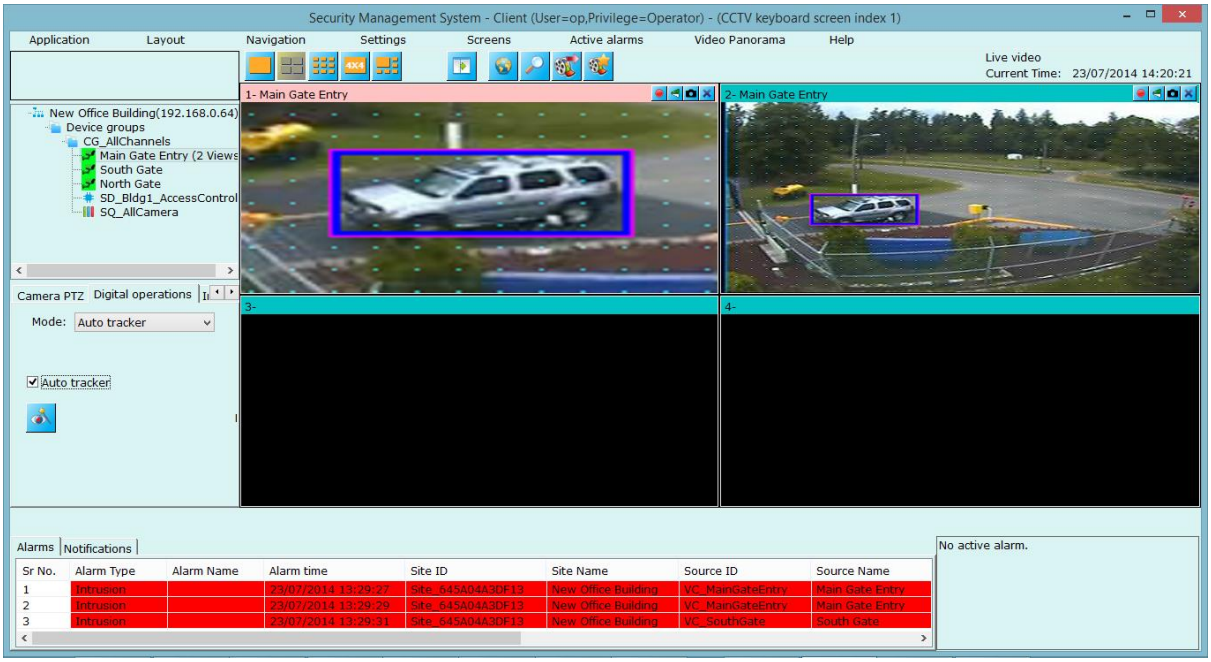
Digital auto tracker mode

From tab control, select operation mode to ‘Auto Tracker’. Enable auto-tracking with the checkbox present on the tab. This enables the digital auto tracking feature. The application detects the objects in the scene, selects the best object, tracks it and auto-tracks it such that the output display window is always focused on the target object.

This feature is specifically useful for mega-pixel cameras, where the operator would like to view the objects and track them automatically without needing any user interaction.

> Please note that, this feature is specific to a display window, hence it is possible to have 2 views of same camera – one with digital auto-tracking enabled and the other one as normal view of the camera.
> Enabling this feature has no effect on the recording or any other configurations done for the video channel, since it applies only to a specific display window and not the original video stream from the camera.

Figure below illustrates the auto tracking of a vehicle – where right hand side video display has auto-tracking enabled and left hand side display shows same video feed without any processing.



Use ‘Analytics settings’ button to change auto-tracking parameters.

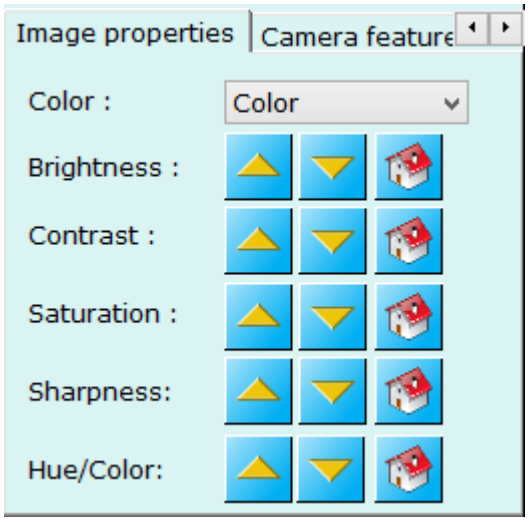
Vibration removal mode –

From tab control, select operation mode to ‘Vibration removal’. Enable vibration removal with the checkbox present on the tab. When enabled, vibrations in the video feed will be removed to have stable, vibration-free video view.

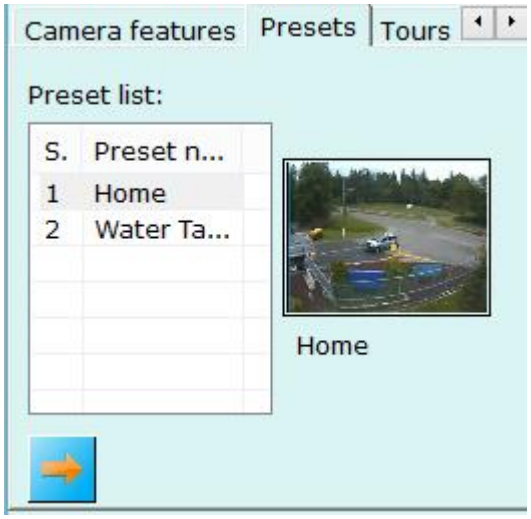
Please note that, this feature is specific to a display window, hence it is possible to have 2 views of same camera – one with vibration removal enabled and the other one as normal view of the camera.
Enabling this feature has no effect on the recording or any other configurations done for the video channel, since it applies only to a specific display window and not the original video stream from the camera.

2.6.3 Image properties

Image properties such as brightness, contrast, sharpness, color adjustments etc. for the selected camera can be controlled using this tab.
This feature is camera dependent.



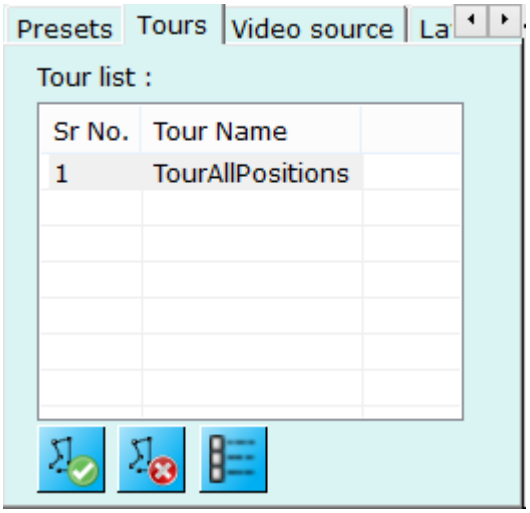
2.6.4 Presets



This tab lists configured presets for selected camera. Click on any preset name from the list to select it. Its snapshot image will be displayed at right hand side.

Click on button to go to selected preset. Command will be sent to the camera which will be moved to the selected preset position.

2.6.5 Tours



This tab lists all configured tours for selected camera.

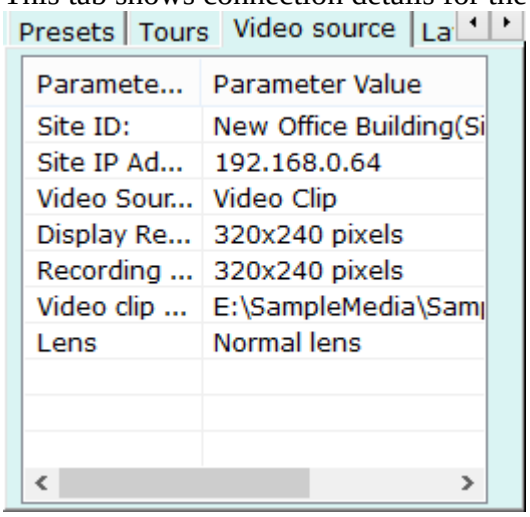
Select any tour from the list and click on button to start tour.

Click on to stop currently started tour.

Click on button to popup a dialog box which displays details about the selected tour. It lists all the presets used for the tour and their dwell time.

2.6.6 Video source

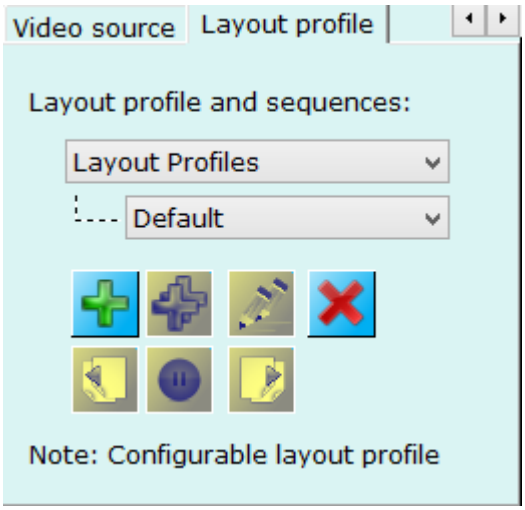
This tab shows connection details for the selected camera.



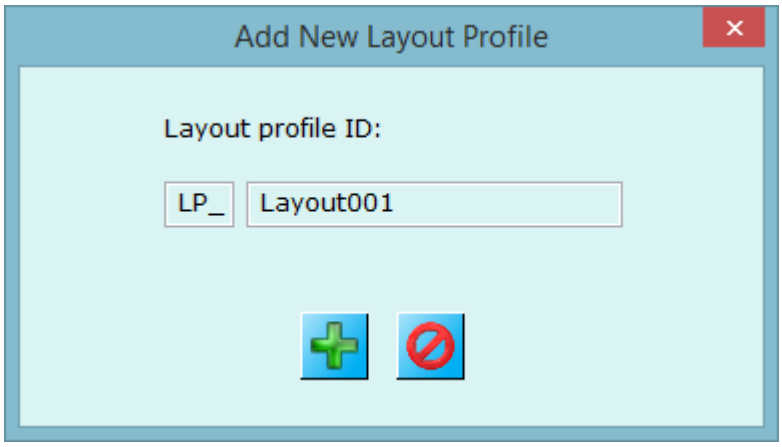
2.6.7 Layout profile and sequences

User can configure and save different layouts using this tab. By default application adds ‘LP_Default’ profile, which you can modify but cannot delete.

The combo box below displays configured layout sequences for opened screen. Changing combo box selection will switch layout to selected layout profile or sequence.



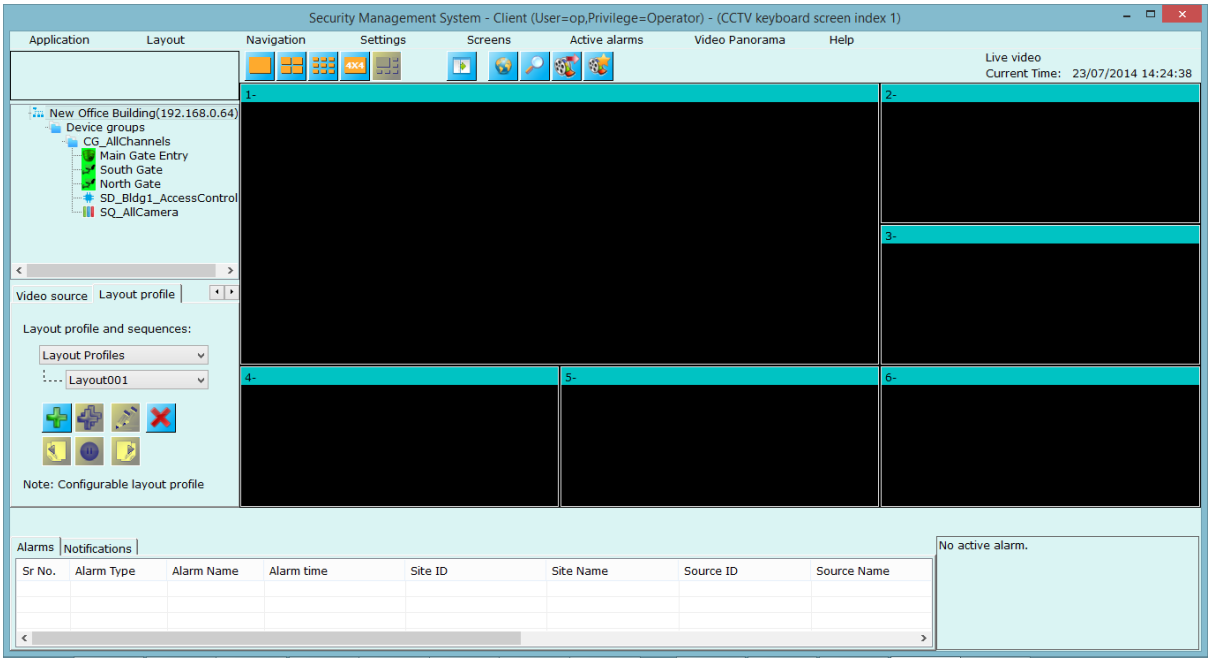
To add new layout profile, click on button. This pops up a dialog box.



Enter layout profile ID and click on ‘Add’ button to add new layout ‘LP_Layout001’ into the screen. The screen now will automatically switch to newly added layout (LP_Layout001 in this example). By default video control will be in 1+5 mode with no videos assigned to any video containers. (Please see screenshot below)

You can switch to any layout mode using ‘Layout toolbar’ buttons.
You can assign cameras or sequences to video containers, by right-clicking video container and following add menus or dragging cameras or sequences from tree control and dropping it on video containers.

Layout automatically gets saved.



(Screenshot – blank video containers when new layout (LP_Layout001) is added)

Use same steps to add more layout profiles.

Click on button to remove current layout. Screen will automatically switch to next layout from the list.

Layout sequences –

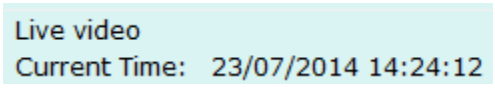
Layout sequences can be defined using button. Layout sequence consists of number of layouts with dwell time associated with each layout. Layout sequence displays each configured layout for configured dwell time (in seconds) and switch to next layout in the sequence. Layout sequence will keep switching until user switches screen to some other configured layout sequence.

User can pause layout sequence any time while it is being executed using button .

Once layout is paused, and buttons will get enabled so that user can use them to move to previous layout in a sequence or next layout in a sequence respectively.

Use , buttons to edit and close currently running layout respectively.

2.7 Time display

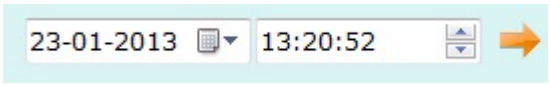


Screen displays current time continuously.

When application is in live view mode, then 'Live view' is displayed below the current time.

When application is in 'Instant replay' or 'Playback mode' then video time is displayed below the current time.

2.8 Video playback time configuration controls



Configure playback date and time using these controls and click on to start playback from the configured time. Please note that all videos will start playback from configured time and will always display videos synchronously.

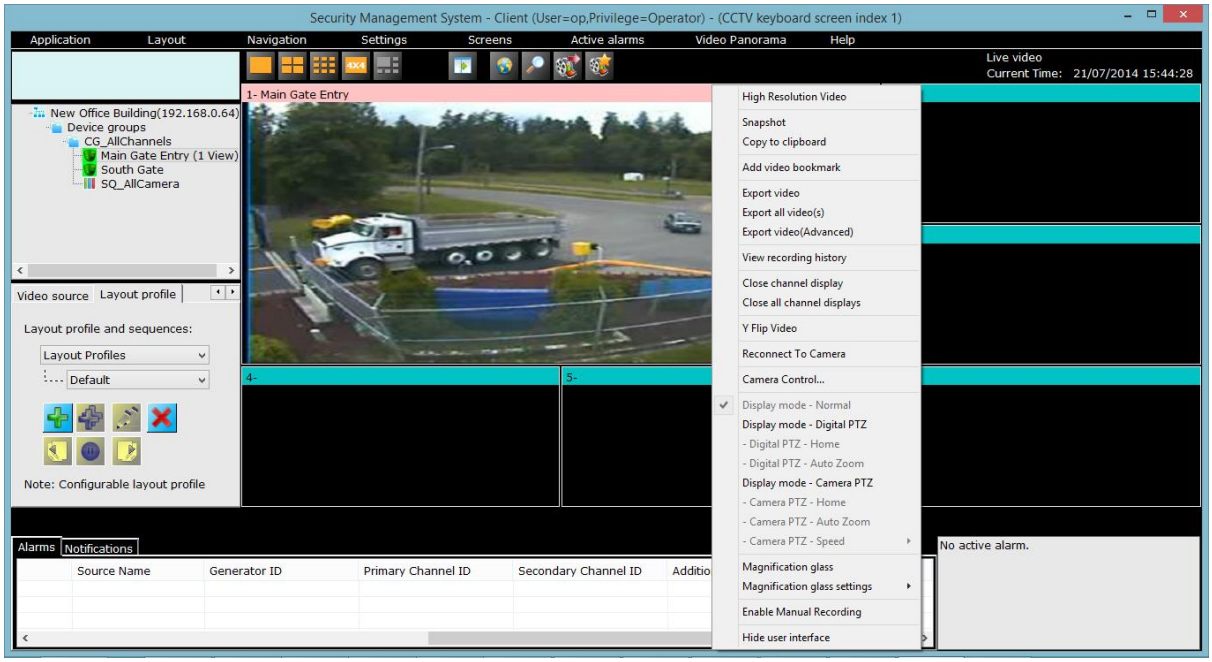
2.9 Video playback control toolbar

These are playback speed controls, from live mode you can start playing videos with 1/2X (half speed) or (quarter speed), or take the screen to reverse playing mode with 1X, 4X, 16X, or half, quarter X modes.

Frame by frame playback buttons will be enabled when playback is paused. These buttons will enable frame-by-frame playback in forward or reverse direction. Each time you click one of the button, screen will show next or previous frame. This gives finer control over playback. Please note – these button will work on single video (selected video) only and while doing the operation it will ask you for the confirmation for switching layout to 1X1 mode with selected video container.

2.10 Right click options (Live video)

When screen is in live view mode, right click on any video container which displays the video for quick option.



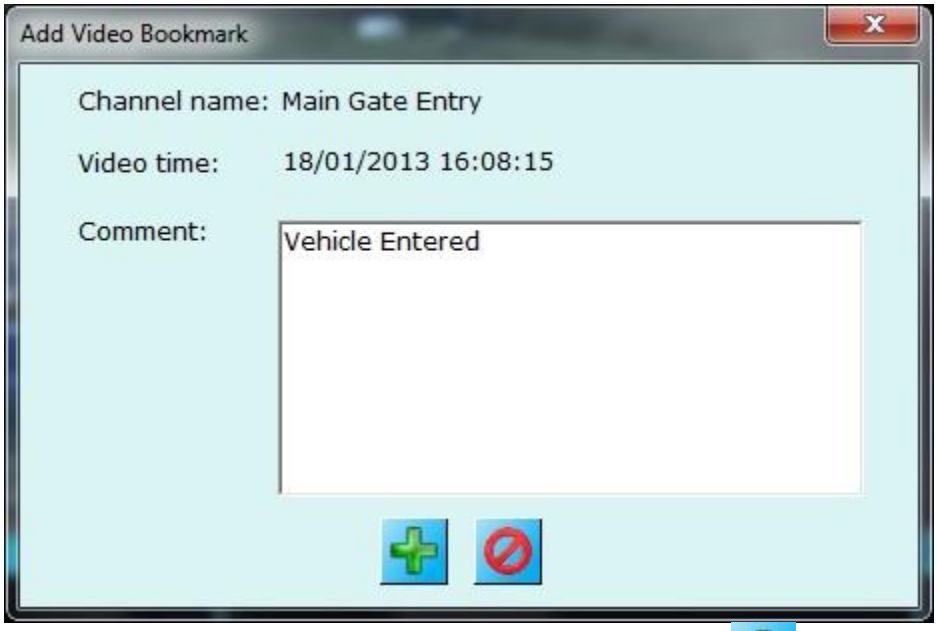
High Resolution Video–Double click on video to full screen video. This opens separate window with selected camera displayed into it. The size of full screen video window can be configured from 'User interface->Display settings' tab.

Snapshot – pops up a dialog to specify snapshot ask path **and** takes current snapshot of the video. There is an option to take snapshot for all the videos currently being viewed in this window.

Application displays a result dialog box which mentions success or failure for snapshot operation(s). If failed, it shows failed camera names and their reasons.

Copy clipboard- The video data will be copied to clipboard memory and can be directly pasted in other application like MS Paint.

Add video bookmark - pops up following dialog box.



It asks to add comment to the bookmark and clicking on button will save video bookmark with added comment and video time.

Later user can search bookmarked videos using 'Search video bookmark' screen for quicker access to specific important video time.

Export video – opens an export video dialog box starts exporting currently selected video channel using settings configured in 'Reports and Export-> Default video export settings' tab. User needs to stop video export manually as per their choice.

Export all video(s) – exports all video displays simultaneously using default video export settings. User needs to stop video export manually as per their choice.

Export video (Advanced) – Open export video screen and initializes parameters with currently selected video channel. User and change export parameters as per his need and start video export.

View Recording History – Open 'Video Search' Screen which can be used to analyze the recorded data history for selected video channel.

Close channel display – asks user confirmation about closing video display (if enabled from 'User interface settings -> Display settings' tab) and closes the display if asked to.

Close all channel displays – closes all displays in current screen

Y flip video – flips video display in y-direction. I.e. make video display up-side down

Reconnect to camera – disconnects the camera and reconnect it again immediately.

Home – this menu will be visible when 'Camera PTZ' display mode is used (discusses later). Clicking on this menu will move camera to home position. Home position is defined as preset.

Camera control – this menu is visible if camera PTZ is available from the camera and is enabled by the application from 'Video channel details' page. This pops up a separate window containing playback control. This is additional dialog just for better user controlling the system. You can use this window to control the camera.

Display modes

Display mode – Normal – it is a mode which disables all mouse operations to control video stream. **Mouse cursor will be normal mouse pointer.**

Display mode – Digital PTZ – when enabled, you can do digital PTZ operations using mouse on the selected video container**. Mouse cursor is changed to standard 'hand' cursor.** Mouse scroll can be used for zooming in and out of the video; mouse click-and-drag can be used for panning and titling the video display.

Display mode – Camera PTZ – when enabled, you can control camera PTZ operations using mouse on selected video camera. **Mouse cursor is changed to blue colored arrows.** Use mouse scroll for zooming in and out of the camera; use direction arrows (cursor changes as per current mouse position inside video container) for panning and tilting the camera.

Camera PTZ speed – used while doing camera PTZ using 'Display mode - Camera PTZ' mode.

Magnification glass – can be enabled from this menu (functionality described earlier), when enabled parameters can be configured using **'Magnification glass details'** menu.

Recording setting – pops up recording setting dialog where you can update recording plan if needed. Recording plan is already described in 'Quick setup' section.

Enable manual recording – when enabled, application will start recording videos overriding current recording setting for the selected video until you disable it using same menu.

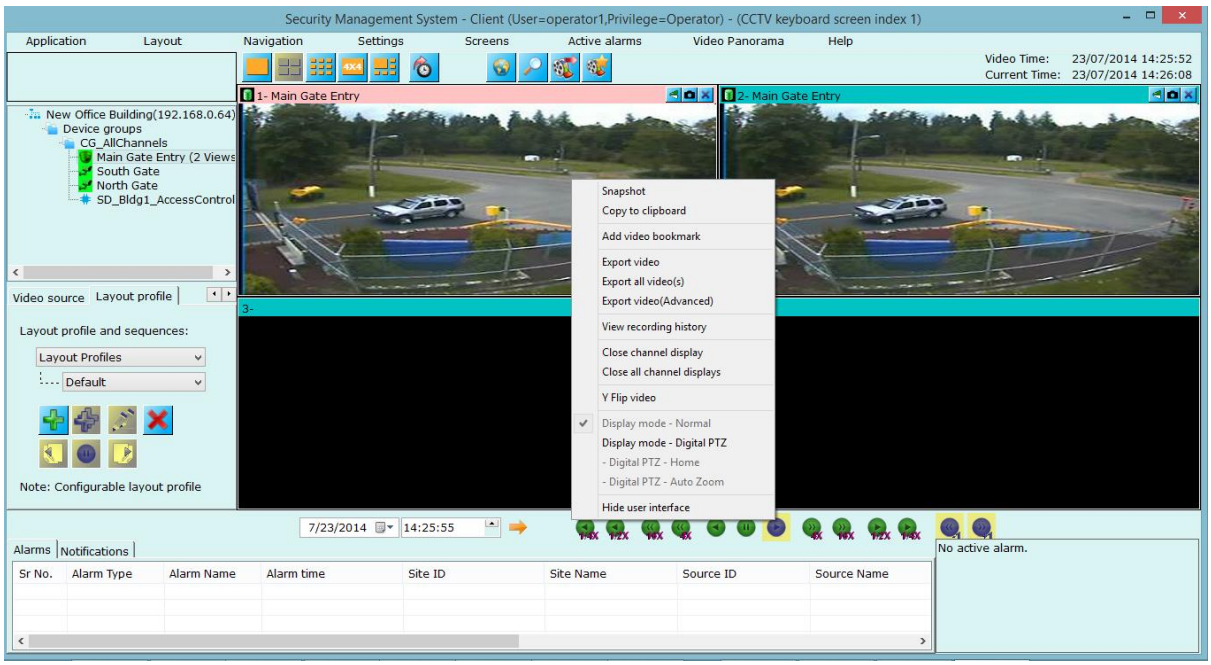
Analytics Settings – Pops up analytics settings dialog where you can update analytics settings for selected video channel.

Analytics Re-learn – Will reinitializes analytics settings for selected video channel.

Reset Object count – Will reset video analytics object count.

Hide User Interface - to hide all configuration user interface controls from the screen to show only 'Video control'.

2.11 Right click options (Playback video)



Right click on video container when screen is in playback mode to see playback quick menus.

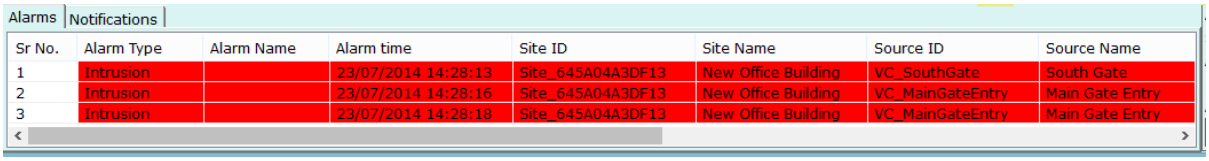
Snapshot – snapshots current or all videos being displayed as per users' inputs.
Copy to clipboard – will copy image to clipboard memory which can be pasted to any other application like MS-Paint.
Add video bookmark – *(please refer 'Right click options (Live video)'above)*
Y flip video – make video display upside down.
Export video – exports currently video from current 'Video time' until user stops it.
Export all video(s) – same as export but it exports all videos simultaneously.
Close display – Closes video display.
Display mode – Digital PTZ – when enabled, you can do digital PTZ operations using mouse on the selected video container. Mouse cursor is changed to standard 'hand' cursor. Mouse scroll can be used for zooming in and out of the video; mouse click-and-drag can be used for panning and titling the video display.

2.12 Alarms and Notification window

Alarms Window

This window lists alarms from all the video channels. Please note that alarms are generated at server software and server sends alarms to all the connected clients. Alarm includes information like alarm name, timestamp of the generated alarm, site name at which it has been generated, source ID of the alarm, and information if any.

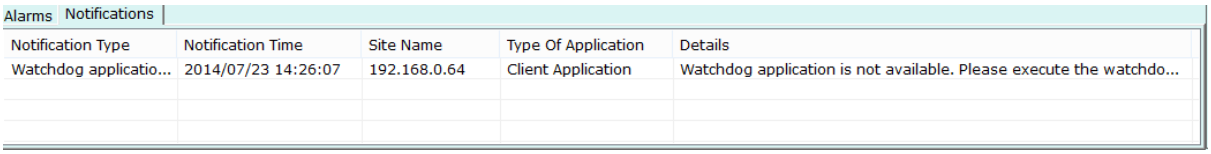
Right click on any alarm to view the selected alarm video in separate playback window from where you can also see all other video channels playback synchronized. Also you can export alarm video to standard WMV formats (high or standard quality) and native format.



Notification Window

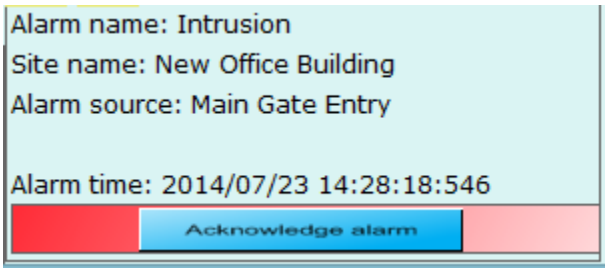
This window lists system notifications generated at server and client. Notification details includes notification type, notification time, site name, type of application (Server – notification generated at server Client – Notification generated at client) and details of notification.

Right click on any notification for options. These options includes ‘Remove system notification’ (for acknowledgeable notifications) and ‘Stop Sound’.

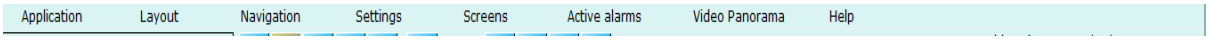


2.13 Alarm notification window

This window shows active alarm in the system, its name, source ID, timestamp and allows you to acknowledge the alarm.



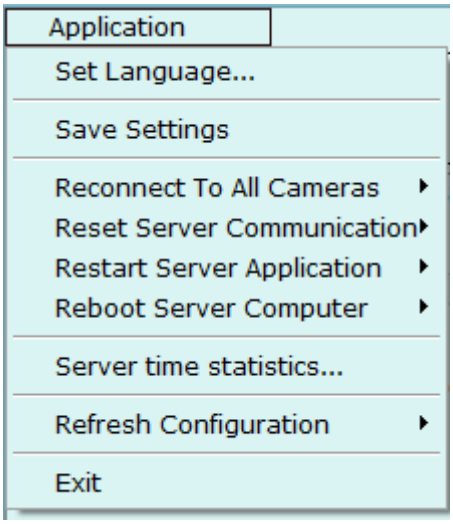
2.14 Menu bar



Application has following menus in menu bar.

2.14.1 Application menu

Figure below shows sub-menus



Set Language…: pops up a dialog where you can select language from available options. You need to restart the application to apply the selected language.

Save Settings – when clicked, saves current application settings so that application can use them in next session.

Reconnect to All Cameras - has popup menus for all connected sites. You can ask server application to reconnect to all cameras using this menu. This menu is expected to be used only in extreme situations**.** ***(This menu will not be available by default, you need to define new privilege at server and include 'Reset All Cameras' privilege at server)***

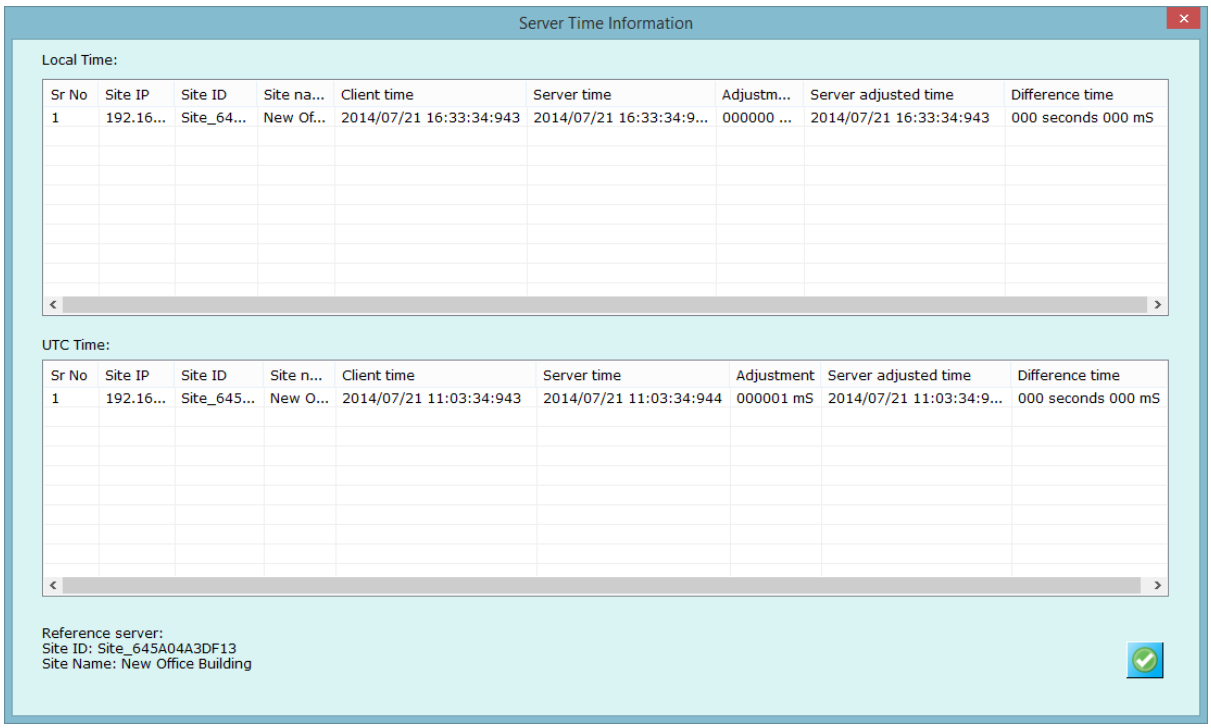
Reset Server Communication - has popup menus for all connected sites. You can reset the server network communication using this menu. This menu is expected to be used only in extreme situations. ***(This menu will not be available by default, you need to define new privilege at server and include 'Reset Communication' privilege at server)***

Restart Server Application – has popup menus for all connected sites. You can restart the server application using this menu. This menu is expected to be used only in extreme situations. ***(This menu will not be available by default, you need to define new privilege at server and include 'Reset Server Application' privilege at server)***

Reboot Server Computer - has popup menus for all connected sites. You can reboot the server computer using this menu. This menu is expected to be used only in extreme situations. ***(This menu will not be available by default, you need to define new privilege at server and include 'Reset Server Computer' privilege at server).***

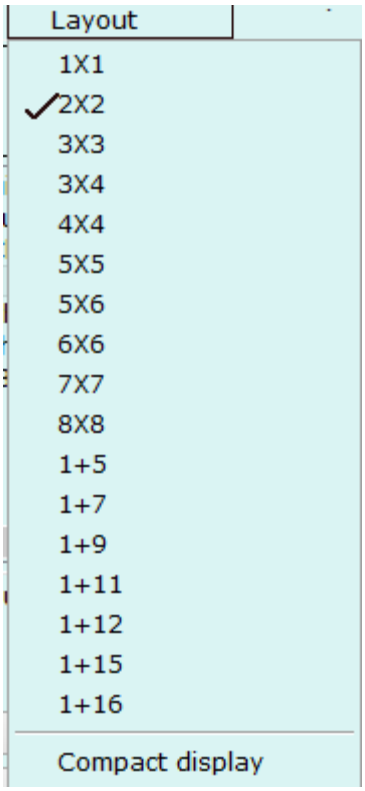
Server Time Statics

This menu time statics for all sites added in client. By clicking on this menu will popups new dialog which shows time information for al servers and its time adjustments with client both in terms of local time and UTC time.



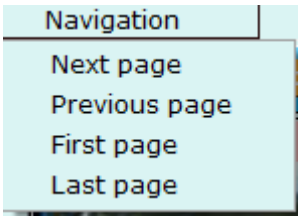
Refresh Configuration – has popup menu for all sites.You can refresh the server configuration by using this menu.

2.14.2 Layout menu



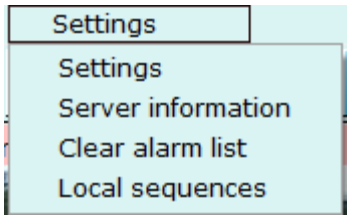
Using these sub-menus you can switch video control to display particular layout.

2.14.3 Navigation menu



Use these menus to switch video window pages. ‘Next page’, ‘Previous page’, ‘First page’, and ‘Last page’ are the available menus.

2.14.4 Settings menu

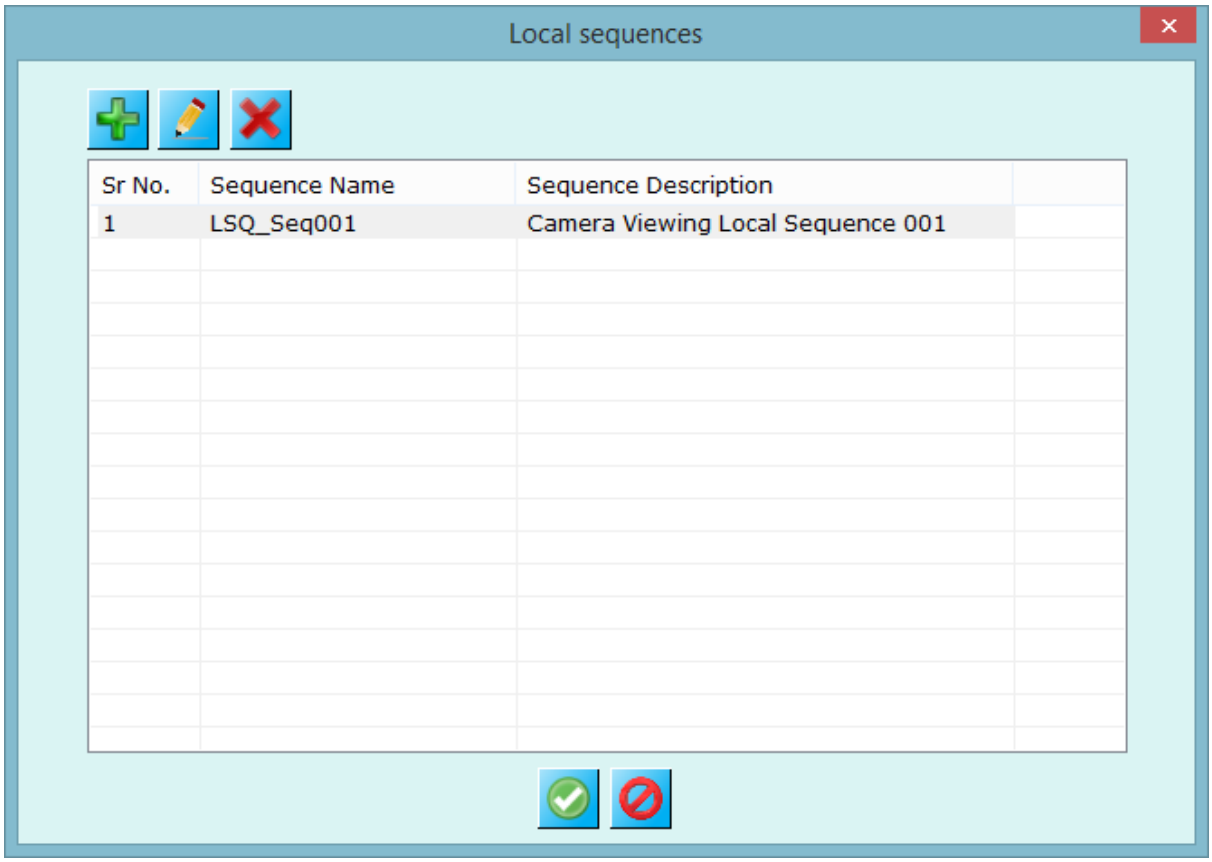


Settings menu – This menu pops up settings window, detailed in next section.

Server information – pops up dialog where user can view details of every site, these details includes site id, site name, site IP address, failover server IP address(If assigned).

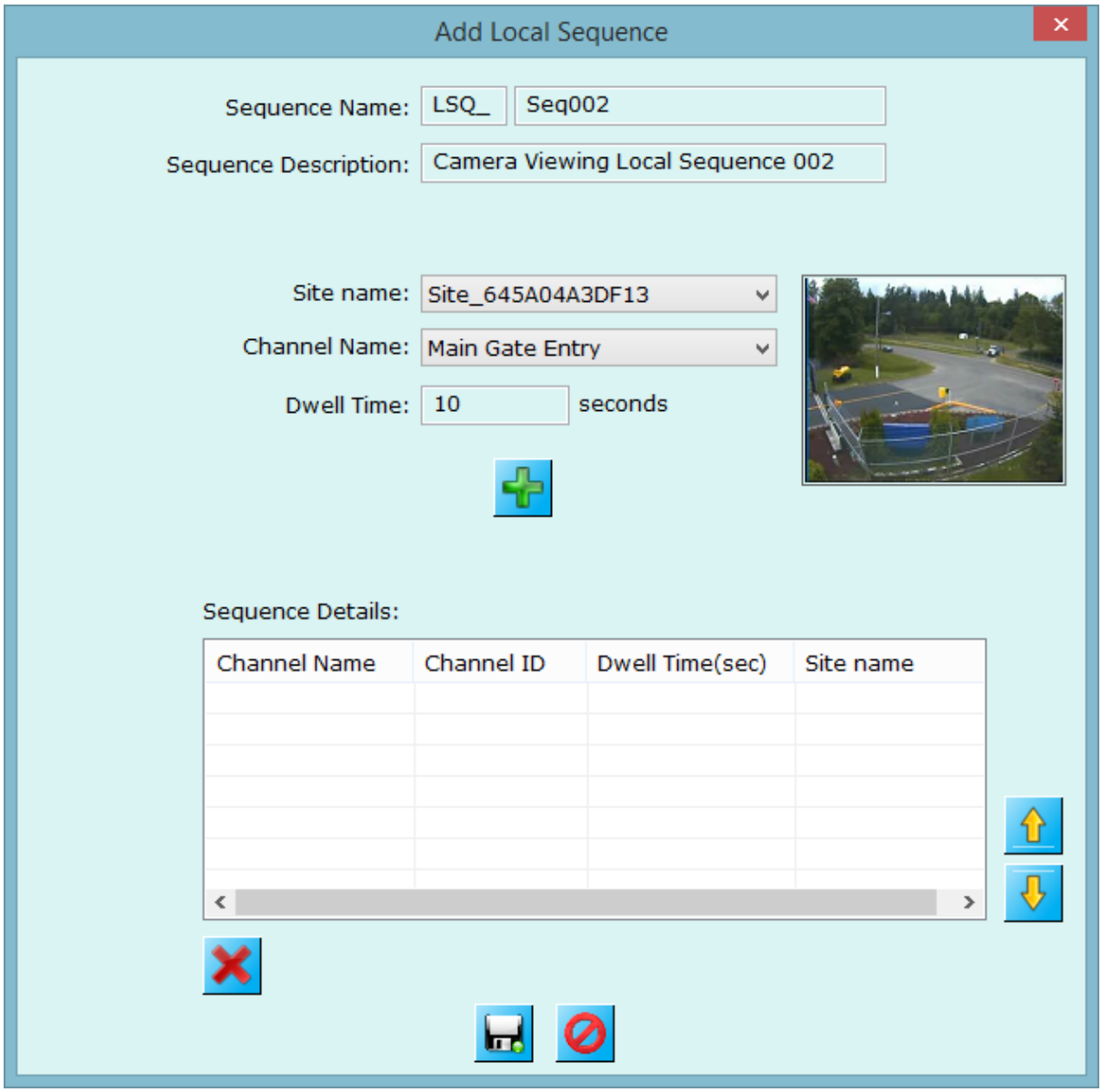
Clear alarm list – deletes all the alarms currently present in alarm window.

Local sequences – Client is able to define its local sequences using this menu. Clicking on this menu will popups dialog where you can local sequences for client.



Use ‘Add new sequnce’ button to add new sequnce, this will open new dialog as shown in image below, provide necessary details(sequnce name and description) and

select cameras which you want to include in sequence and click on ‘Save’ button to save settings.

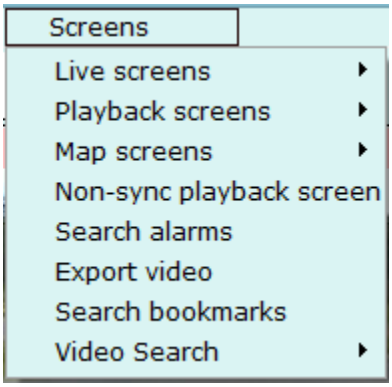


Use ‘Edit selected sequence’ to edit the details of selected sequnec.

Use ‘Remove selected sequnce’ to delete the selected sequnce.

The local sequnces will be shown in tree control under ‘Local sequnces’ item.

2.14.5 Screens menu



Live screens displays menu for all live screens. Click on any of them will open the screen. Please note - from live screens you can only view live video feeds from all available cameras.
To configure number of live screens, please use 'Settings->User interface settings (Client) ->Screen Settings' screen section.

Playback screens displays menu for all live screens. Click on any of them will open the screen. From playback screens, you can view live video feed as well as can see synchronized playback for all the configured video channels. For playing back, use playback controls or instant replay button.

To configure number of live screens, please use 'Settings->User interface settings (Client) -> Screen Settings' screen section.

Map screen opens map window.

Non-sync playback screen opens up playback screen where playback for each con be configured separately.

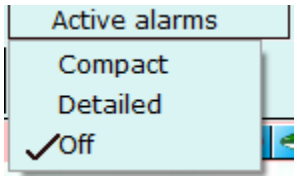
Search alarms opens alarm search window, discussed later.

Export video opens export video screen

Search bookmarks opens video bookmark search window.

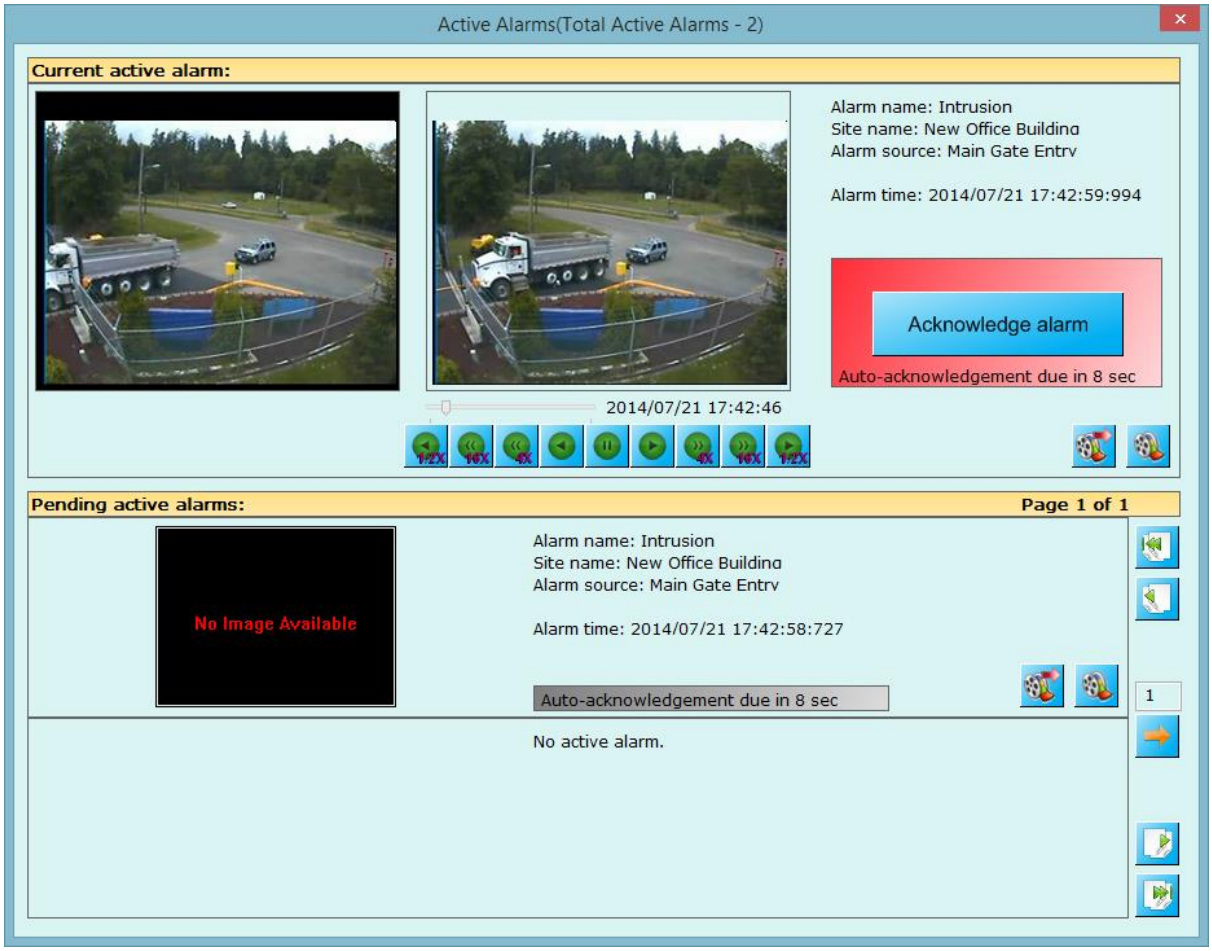
Video Search has popup menu for every site and opens up 'Video search' application where you can analyze recording history for every camera added at server.

2.14.6 Active alarms

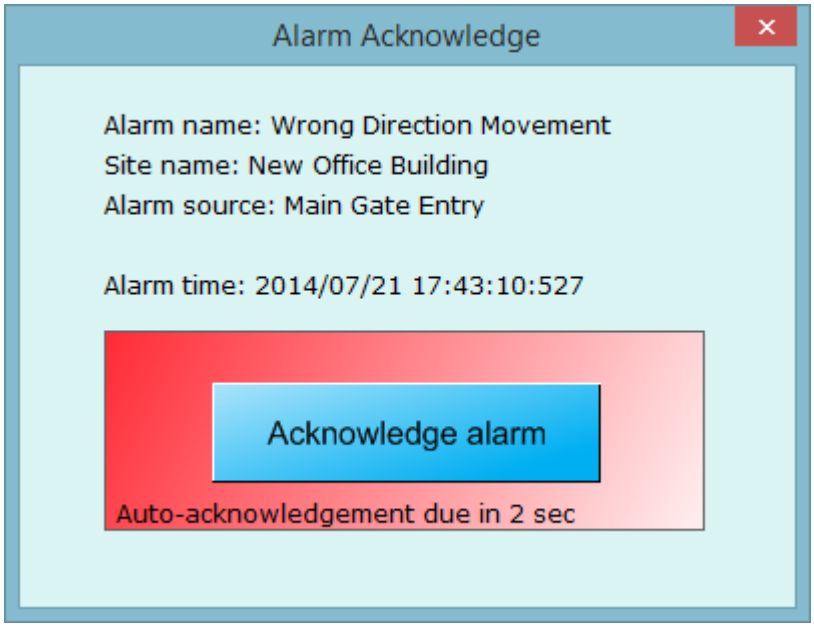


You can configure active alarms window using these sub menus. When ‘Window popup’ is ‘Off’ then application will not pop up active alarms window whenever there is an alarm.

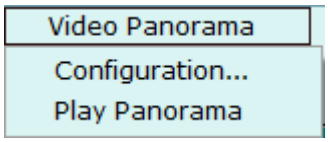
Click on ‘Detailed’ menu for configuring detailed alarm window to pop up whenever there is an alarm.



Select ‘Compact’ to open comapct alarm window whenever there is an alarm.



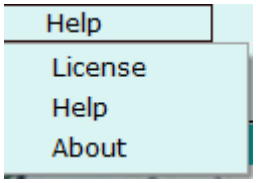
2.14.7 Video Panorama



Configuration…: opens video panorama configuration window. Details about how to configure video panorama are discussed in separate section.

Play Panorama: opens video panorama window where you can play, pause video panorama on configured video channels on live or playback video feeds.
Details about how to configure video panorama are discussed in separate section.

2.14.8 Help



License – shows software licensing information.
Help – opens this file.
About – shows information about the software and its manufacturer.

3. Settings Screens

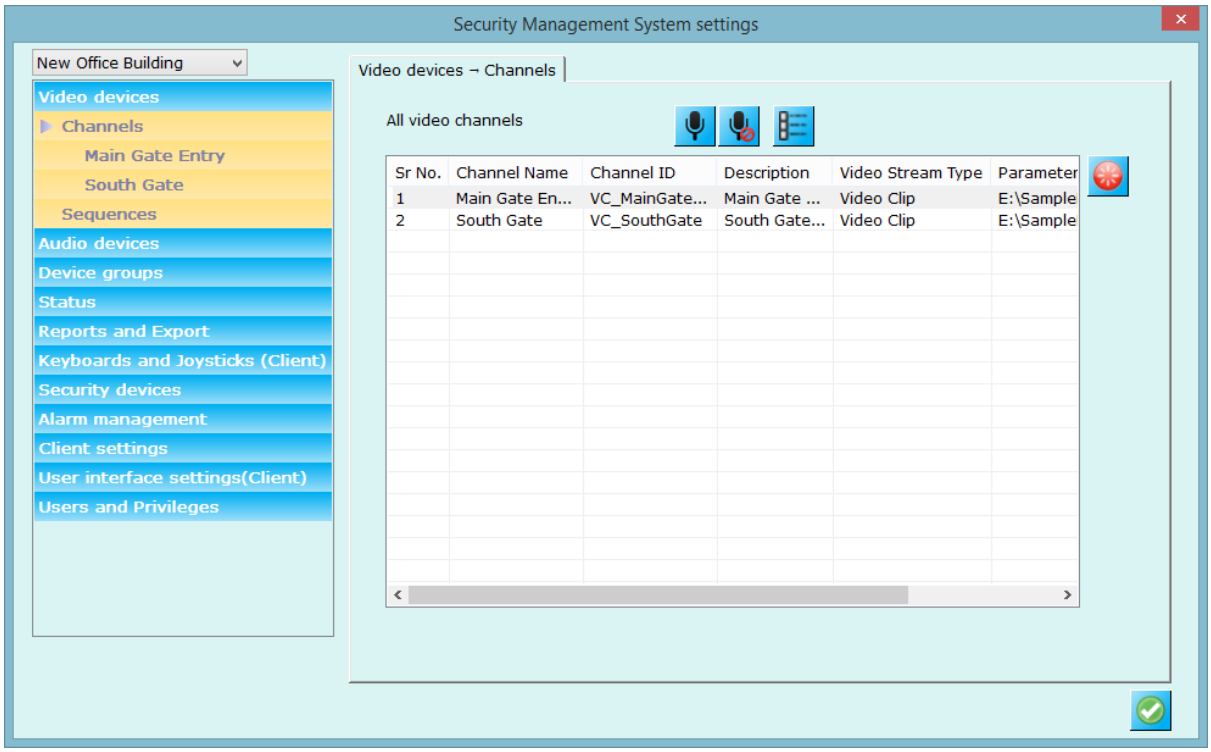
It has a navigation menu at the left hand side. The navigation menu has following links.

3.1 Video devices

This displays list of video channels and sequences configured in the server software and accessible to the logged user of the system.

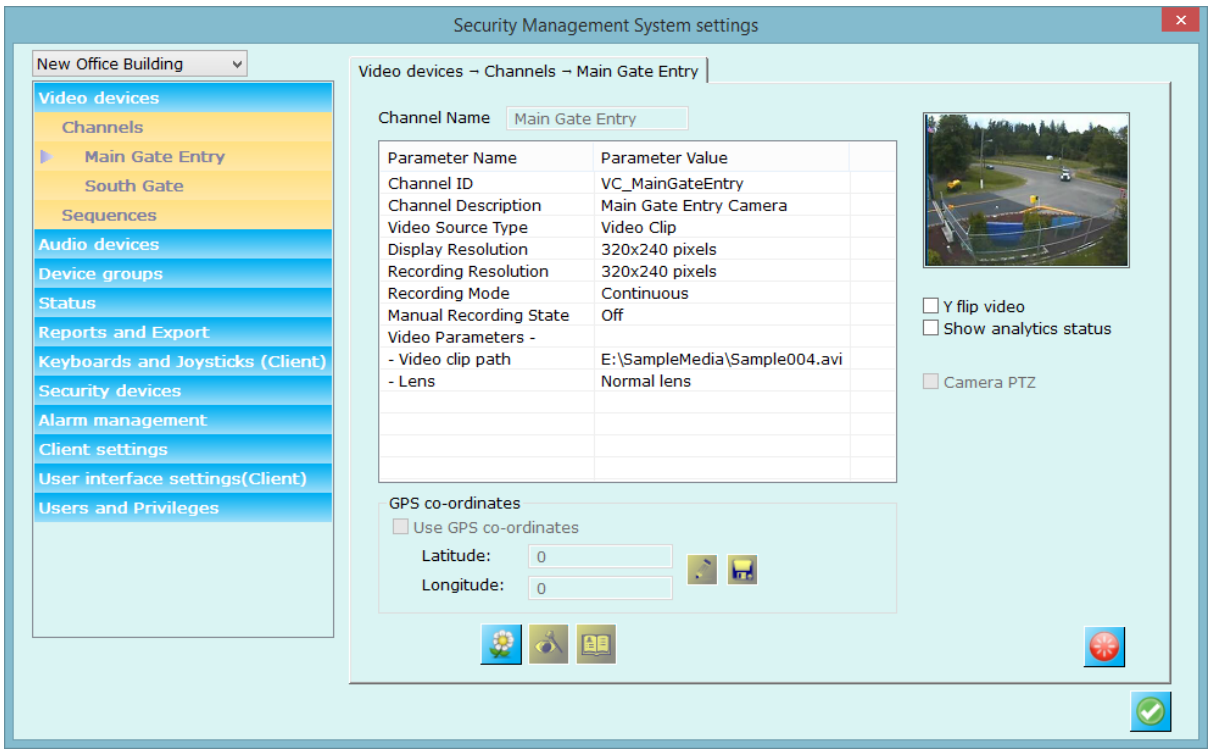
3.1.1 Channels

This link show list of all video channels configured at server software.



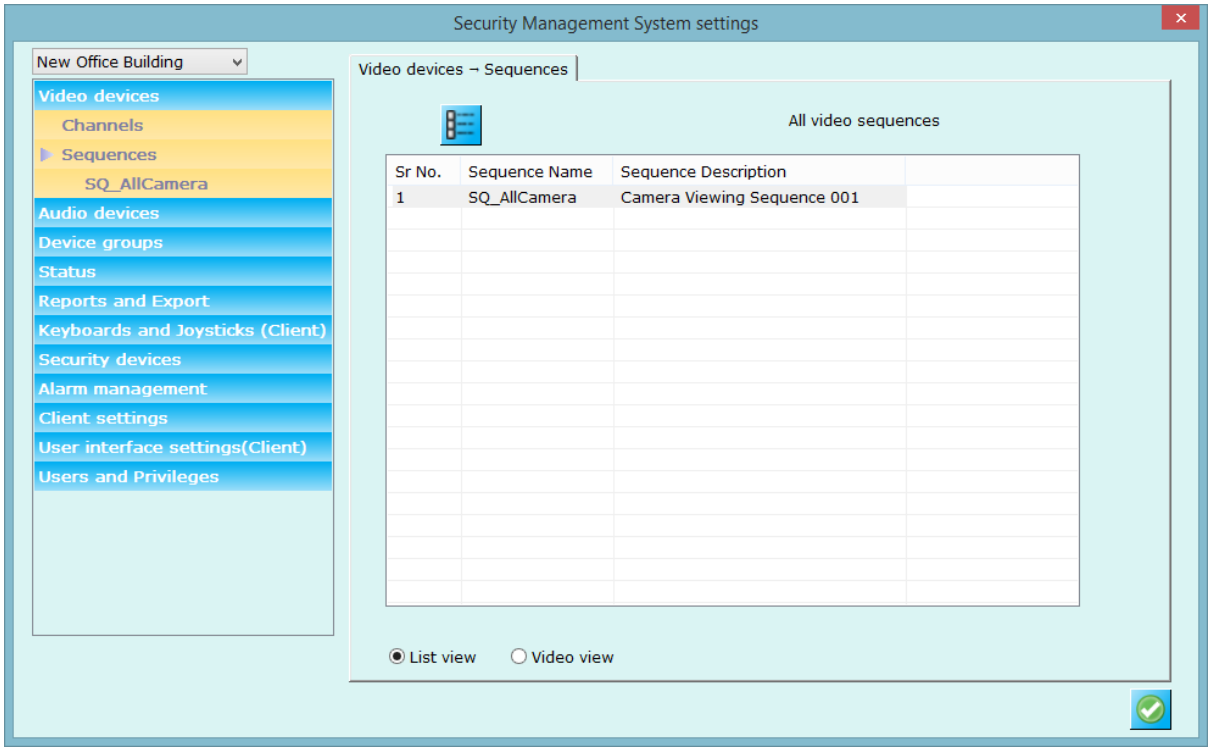
For every video channel configured, there is a sub-link available under the 'Video devices' link. This link displays the video channel details page for that specific video channel. The channel details page shows the configuration settings along with the video source information, resolutions and also the live video thumbnail view.

See details page for 'Video channel' below.



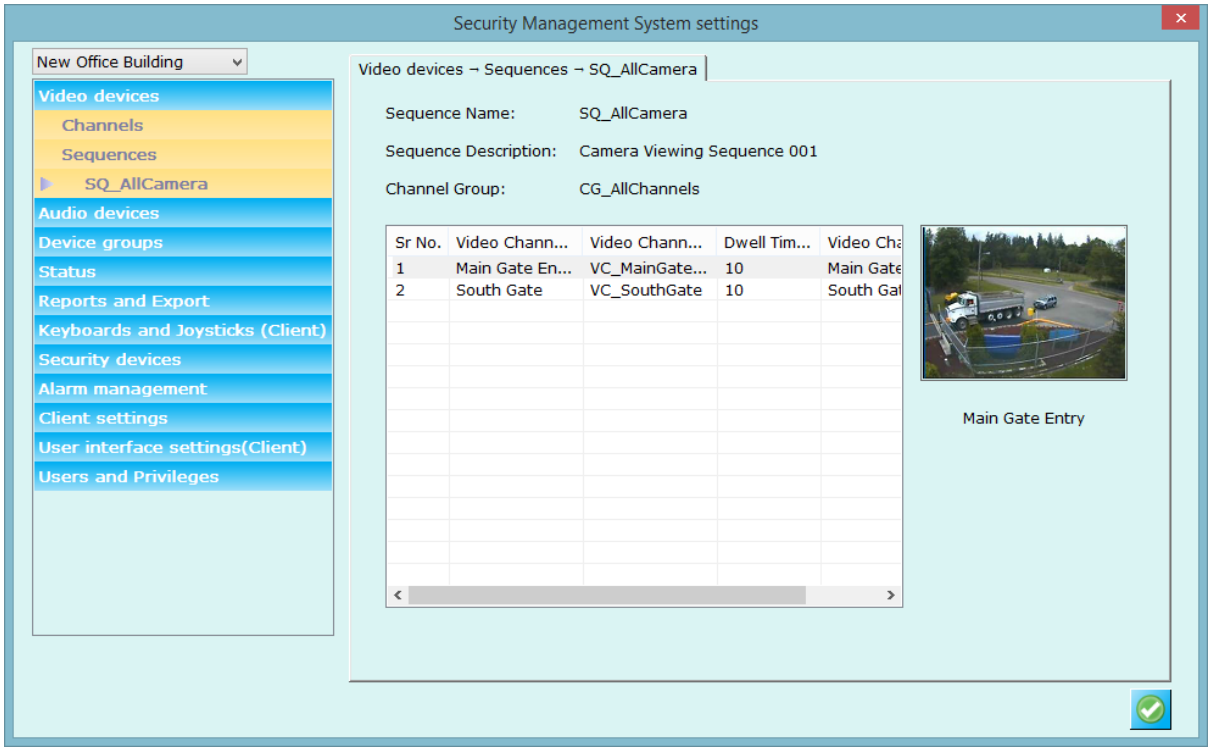
3.1.2 Sequences

This link displays list configured video sequences at server application.



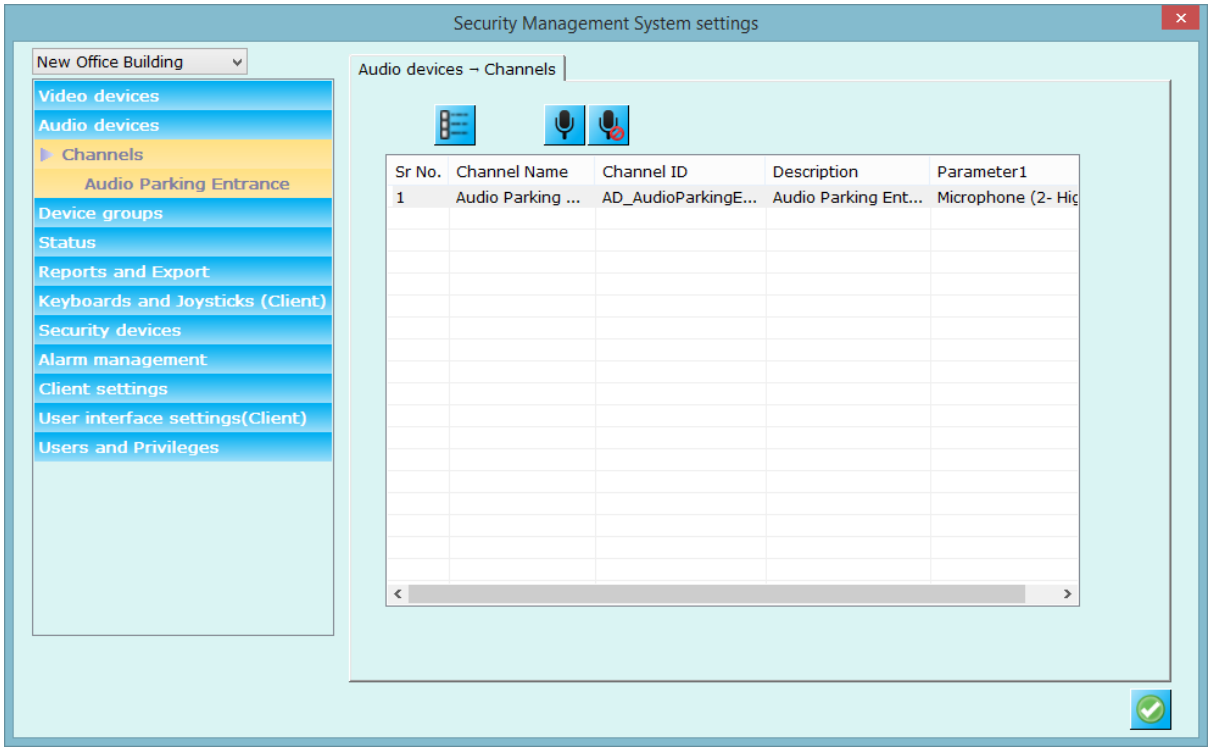
For every configured video sequence, there is sub link the tree control. Clicking on the sub link, application displays video sequence details.

See details page for ‘Video sequence’ in below.


Security Management System settings
New Office Building
Video devices
Channels
Sequences
SQ_AllCamera
Audio devices
Device groups
Status
Reports and Export
Keyboards and Joysticks (Client)
Security devices
Alarm management
Client settings
User interface settings(Client)
Users and Privileges
Video devices → Sequences → SQ_AllCamera
Sequence Name: SQ_AllCamera
Sequence Description: Camera Viewing Sequence 001
Channel Group: CG_AllChannels
Sr No. Video Chann... Video Chann... Dwell Tim... Video Cha
1 Main Gate En... VC_MainGate... 10 Main Gate
2 South Gate VC_SouthGate 10 South Gal
Main Gate Entry

3.1.3 Audio Devices

This link display list of audio devices configured at server.



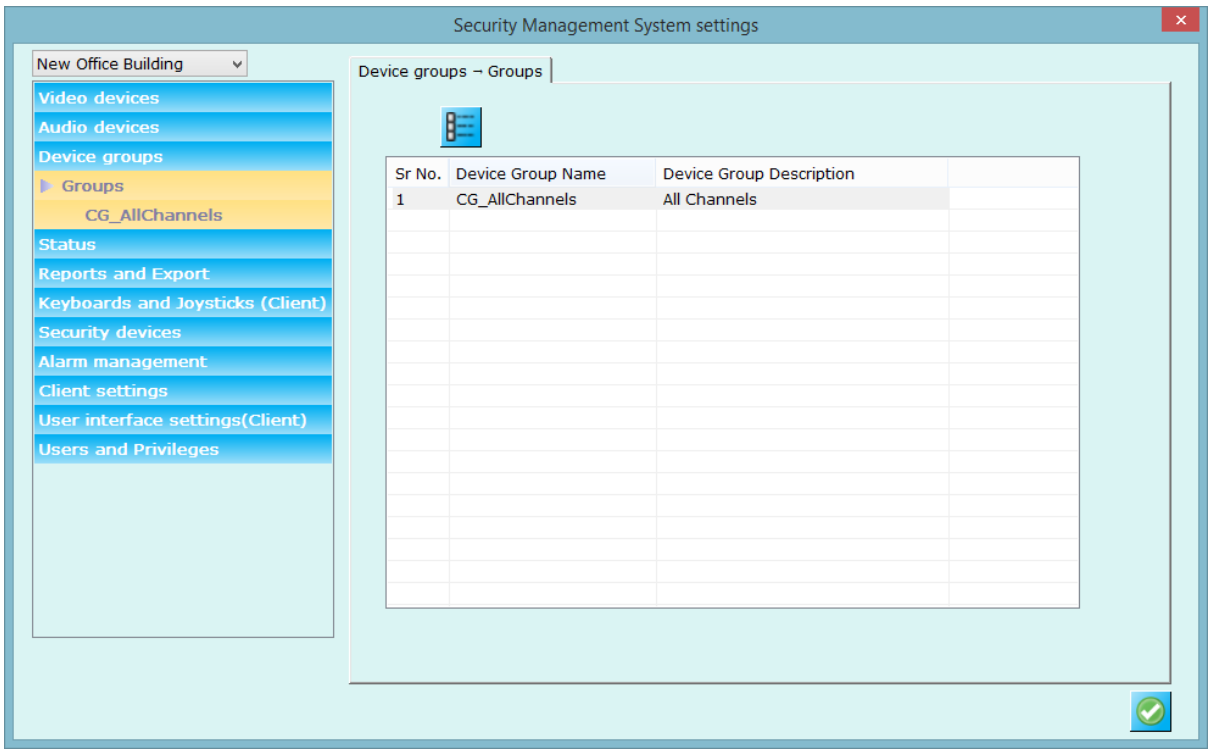
The 'View audio device details' button can be used to view the settings of the currently selected audio device.

Use button to play audio from all channels, audio will start only for those for which audio has been enabled during addition/editing video channel.

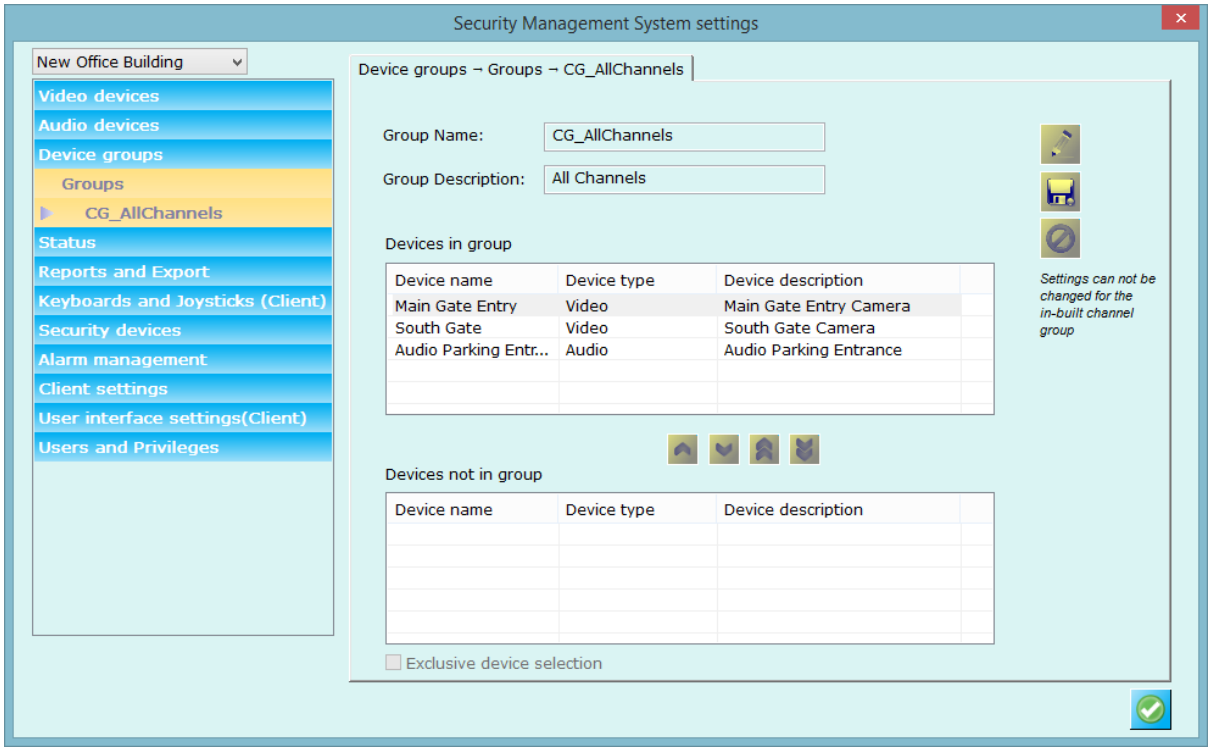
Use button to mute audio from all channels.

3.2 Device Groups

This link displays all the device groups that are accessible to the logged in user of the system.



This link has sub-link for each group in the system. Select any sub-link from these links to see details of the selected group. It displays device (video and audio) that are in the group.

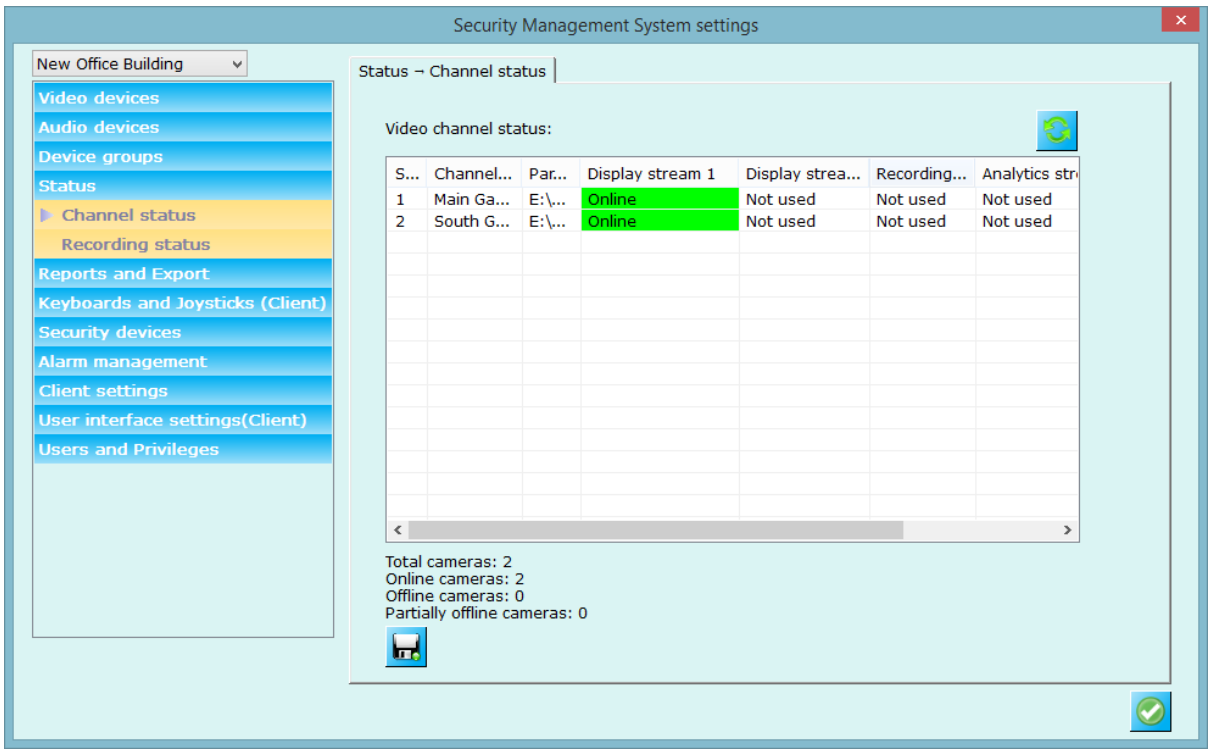

Security Management System settings
New Office Building
Video devices
Audio devices
Device groups
Groups
CG_AllChannels
Status
Reports and Export
Keyboards and Joysticks (Client)
Security devices
Alarm management
Client settings
User interface settings(Client)
Users and Privileges
Device groups – Groups – CG_AllChannels
Group Name:
CG_AllChannels
Group Description:
All Channels
Devices in group
Device name
Device type
Device description
Main Gate Entry
Video
Main Gate Entry Camera
South Gate
Video
South Gate Camera
Audio Parking Entr...
Audio
Audio Parking Entrance
Settings can not be changed for the in-built channel group
Devices not in group
Device name
Device type
Device description
Exclusive device selection

3.3 Status

The status link gives category wise quick status of the entire system. It has sub links.

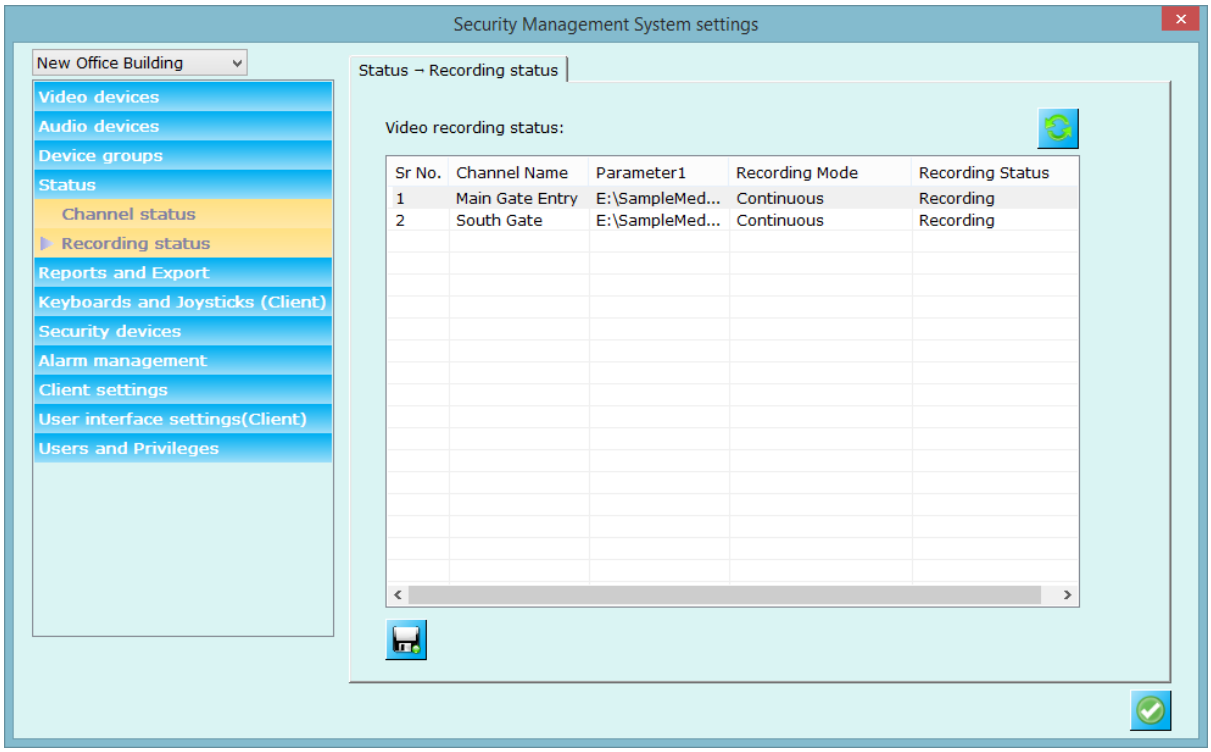
3.3.1 Channel status

Channel status link displays current status (online/offline) for all channels that are configured at server software.



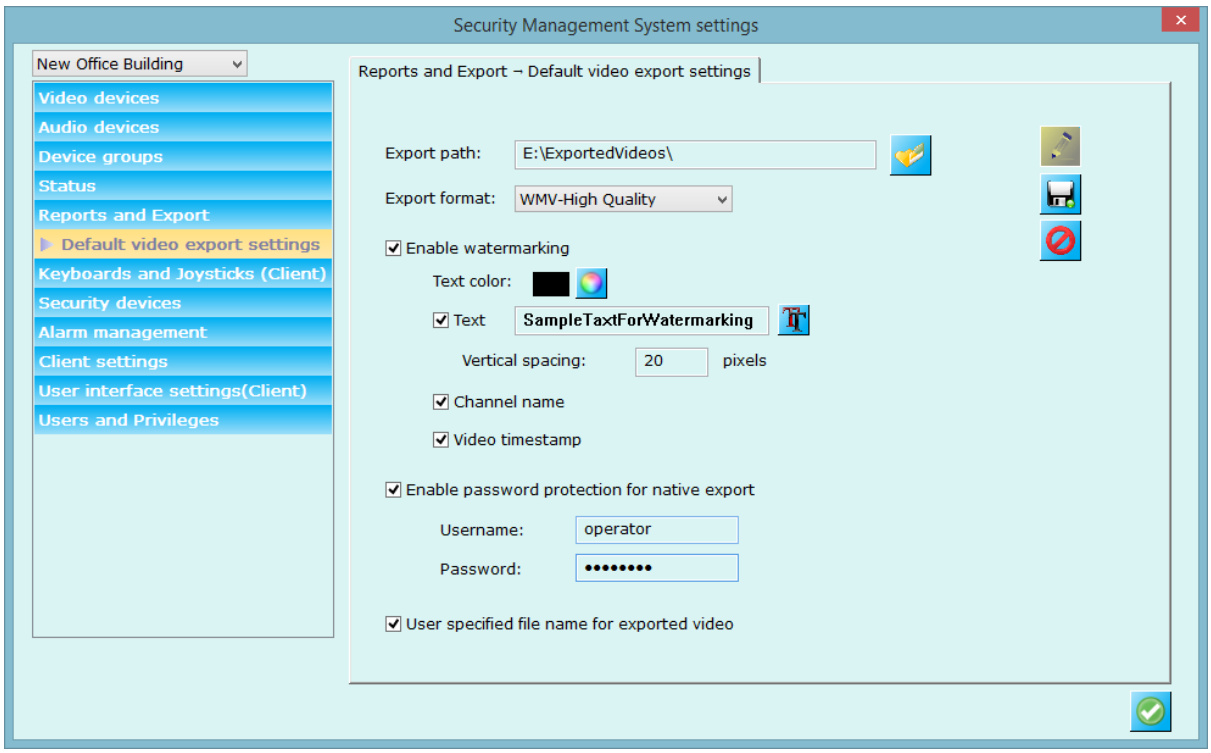
3.3.2 Recording status

Recording status link displays recording plan for each channel that is configured at server software. Please note that recording will happen at server side. This link tab only shows the settings that are configured at server software.



3.4 Reports and Export

3.4.1 Default video export settings



Configure default settings for exporting videos. These settings will be used when user exports videos from right click video options (single video export or multiple video exports).

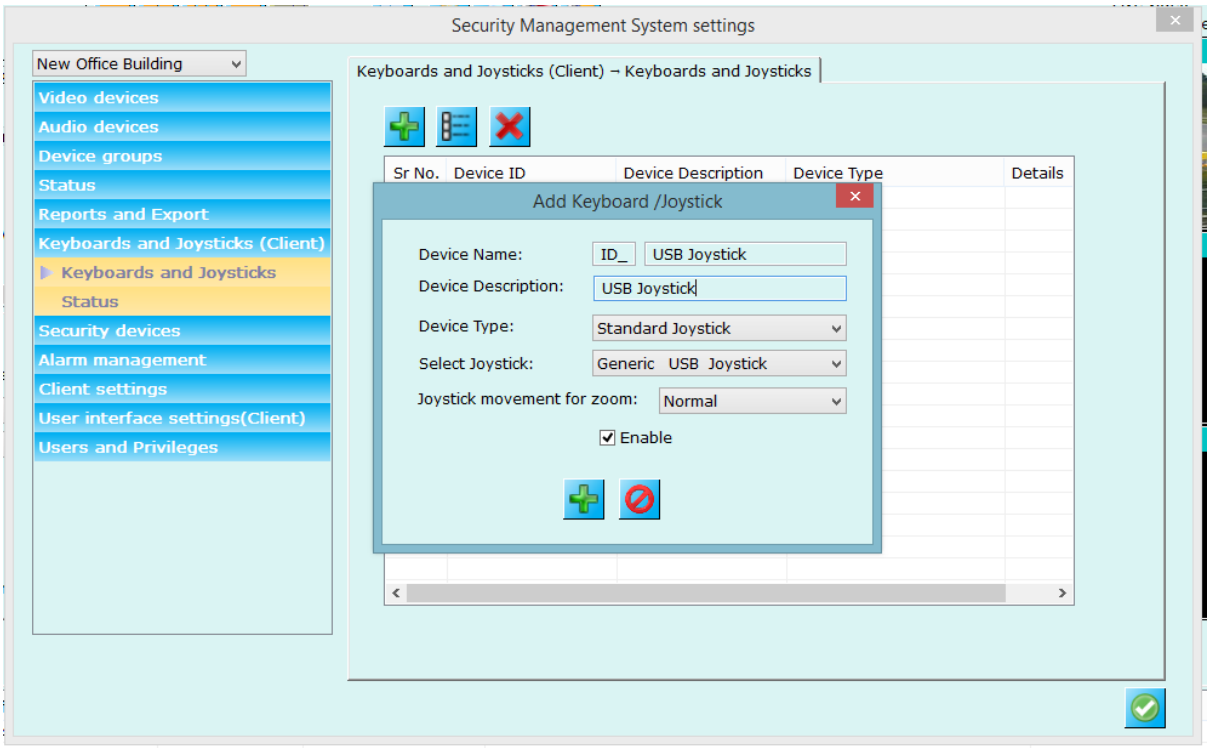
Configure export path, export format, watermarking option, watermarking color, text to be written on exported video, text font, channel name watermarking, and timestamp watermarking etc.

You can also enable password protection for exporting videos in native format.

You can also ‘User specified file name for exported video’ where you can provide name while exporting video instead of using default name created by application.

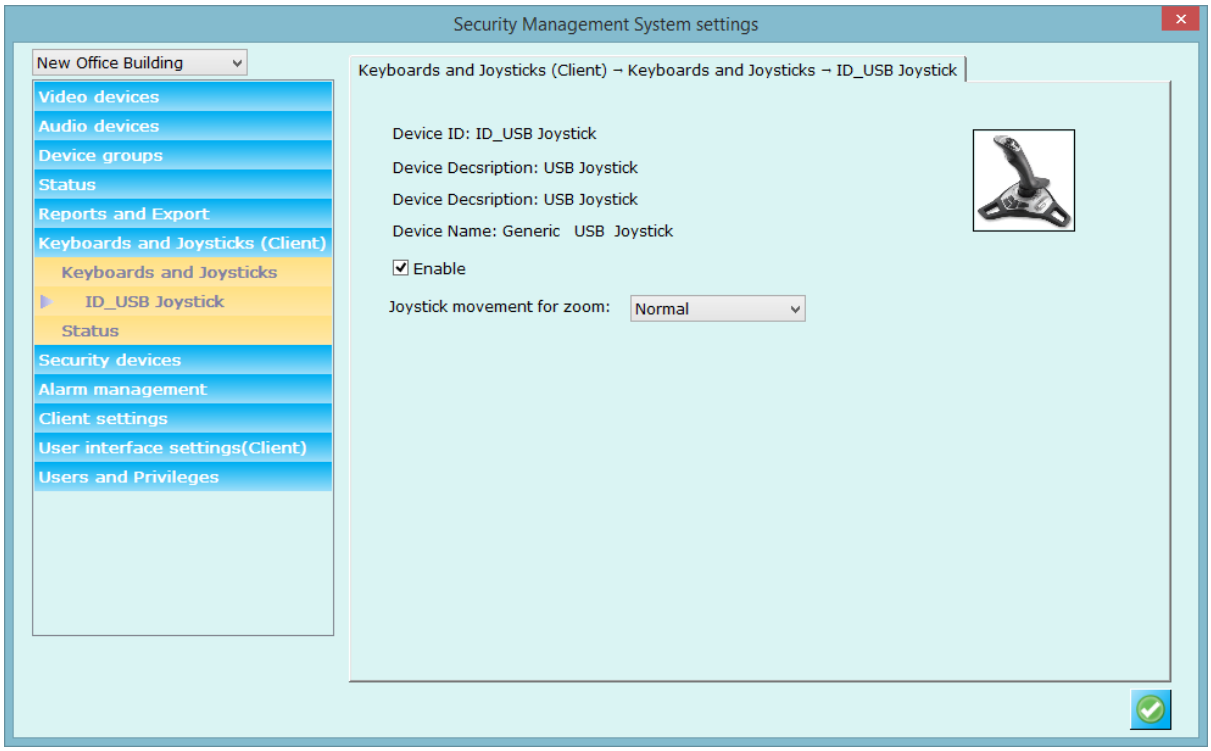
3.5 Keyboards and Joysticks (Client)

This page lets you add standard USB or IP based CCTV keyboards or joysticks to system



Click on ‘Add’ button , which will pop-up a dialog box where you can enter device name, device description (any string for identifying the device), select type from available options, and select joystick from listed options. Select joystick movement, click on ‘Enable’ to enabling joystick usage into the application.

3.5.1 Keyboard and Joystick details

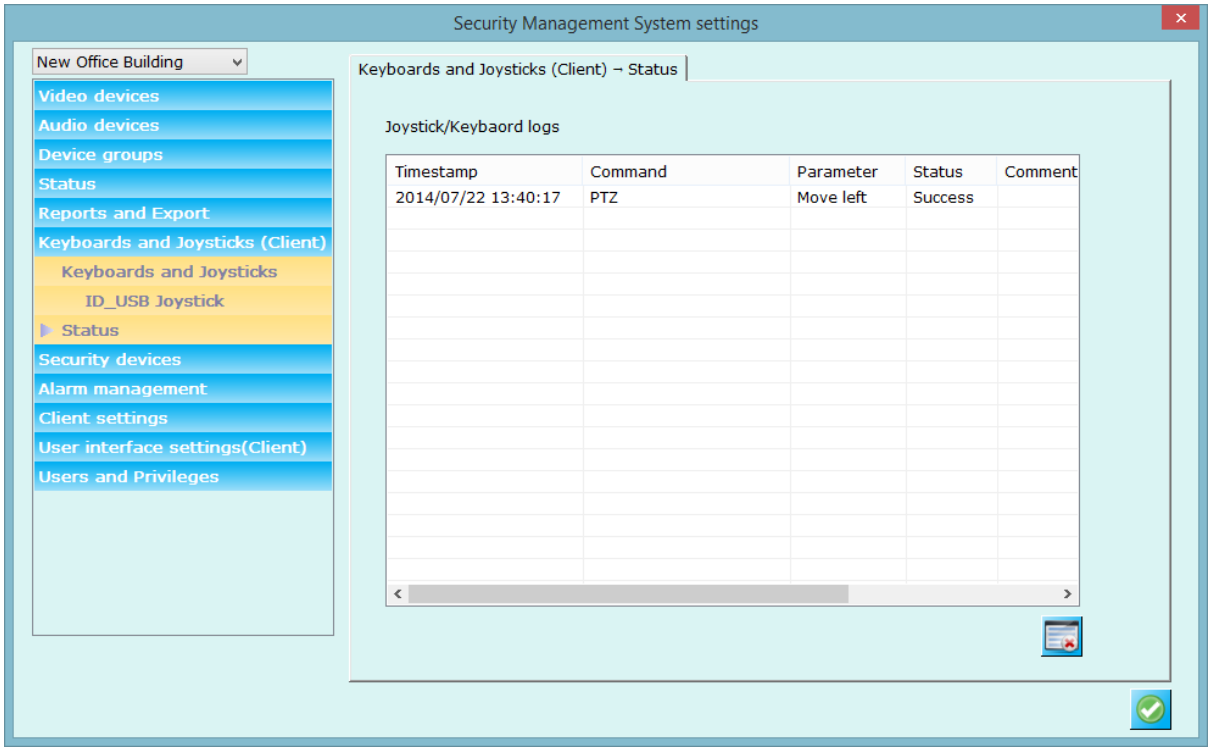


3.5.2 Keyboard and Joystick status

This page lists commands from all the CCTV keyboards and joysticks and shows their status report. CCTV Keyboards and joysticks can be used to select video screens (discussed later) and video channels from selected video screens, and also control selected video channel PTZ positions.

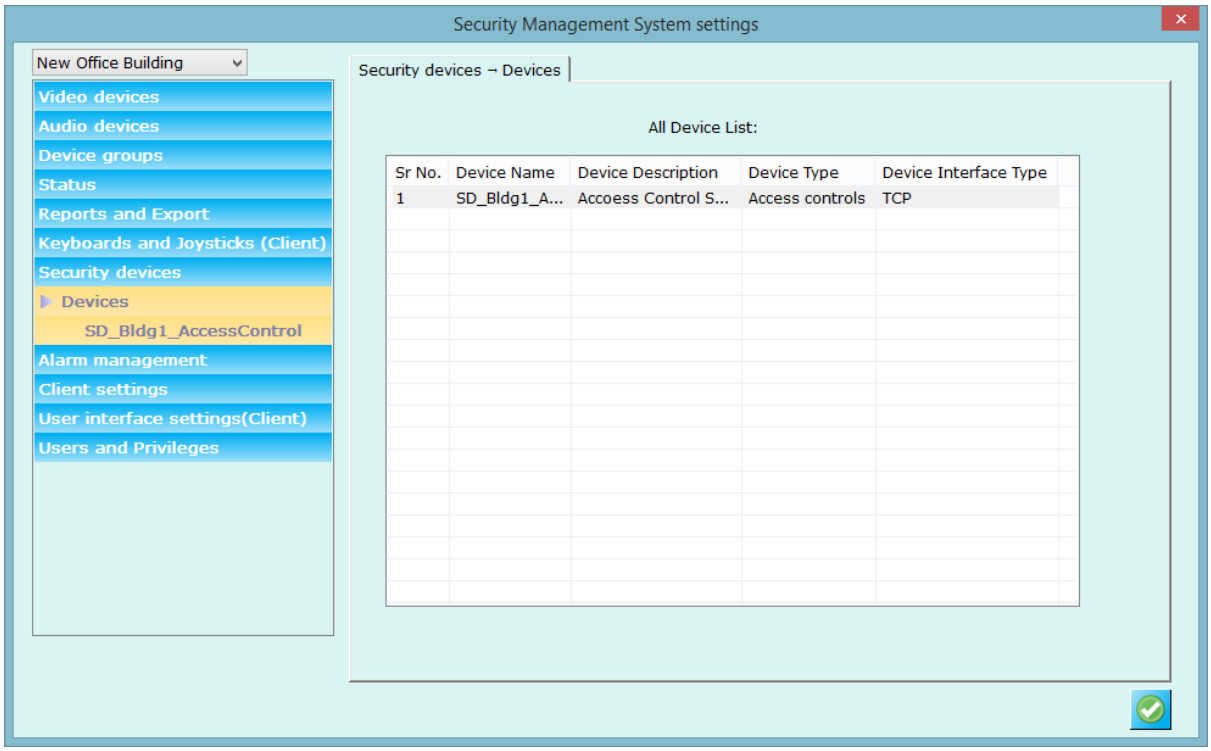
This status window is for logging purpose so that user can understand what commands are sent to the application and what their statuses are.

Click on 'Clear list' button to delete all the items from the status list.

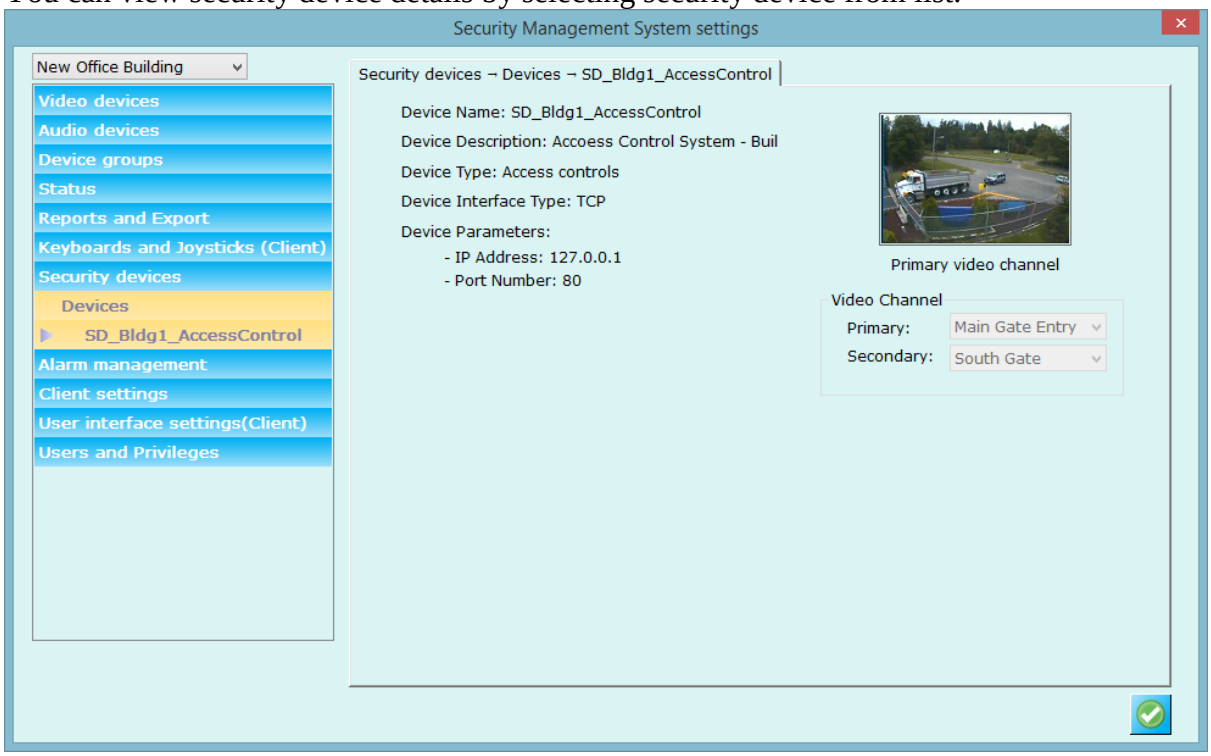


3.6 Security Devices

This link display list of security device configured at server.



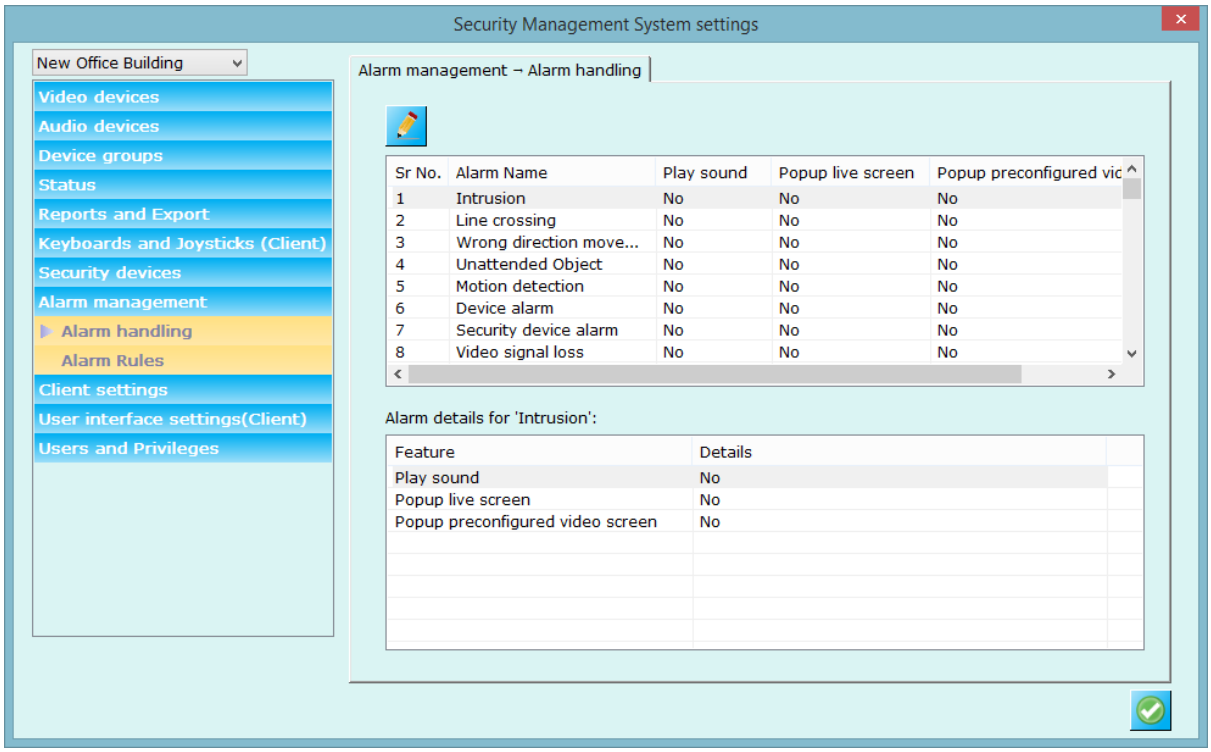
You can view security device details by selecting security device from list.



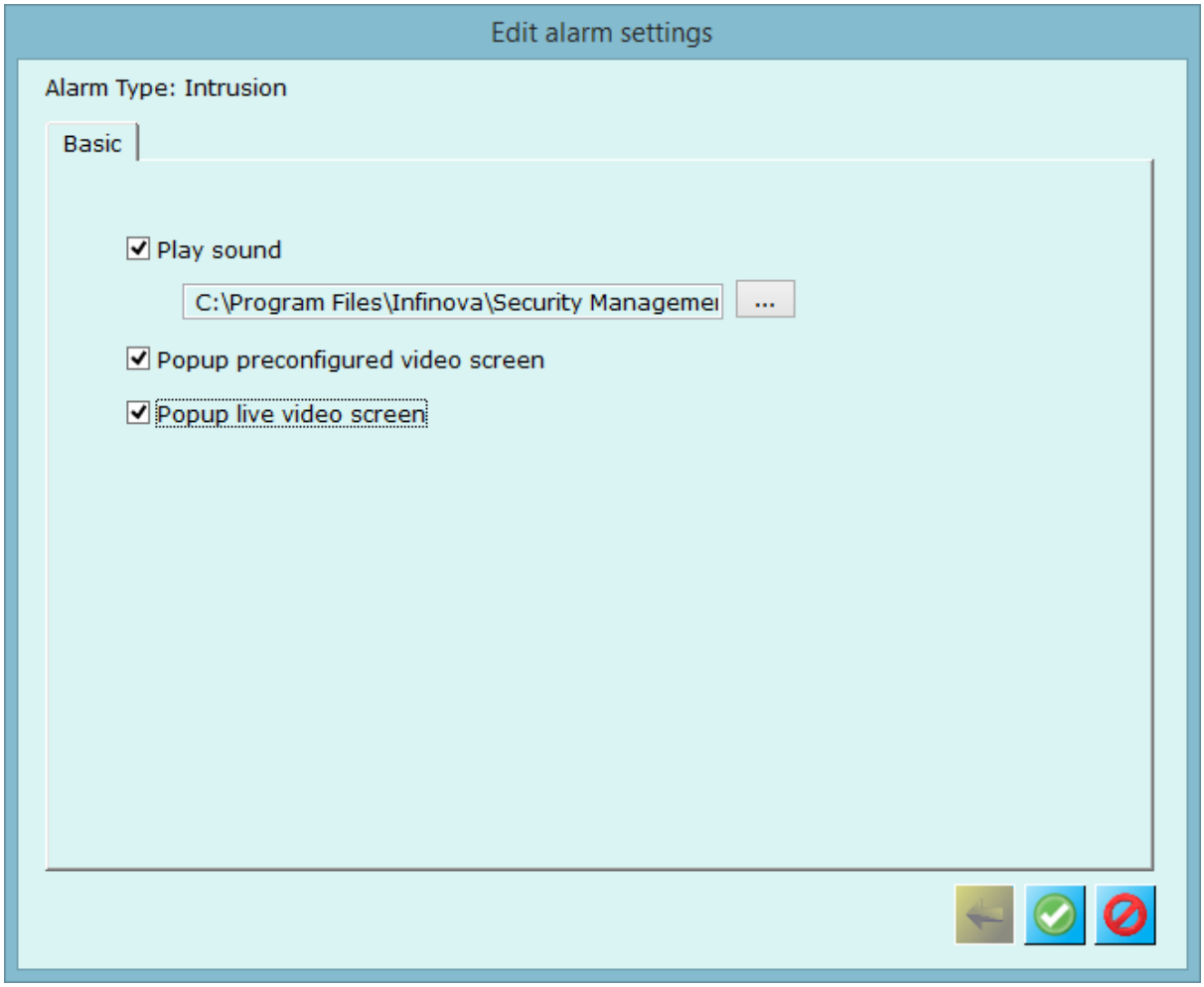
3.7 Alarm Management

3.7.1 Alarm handling

Alarm handling link displays alarm settings for each alarm type and allows you to configure settings.



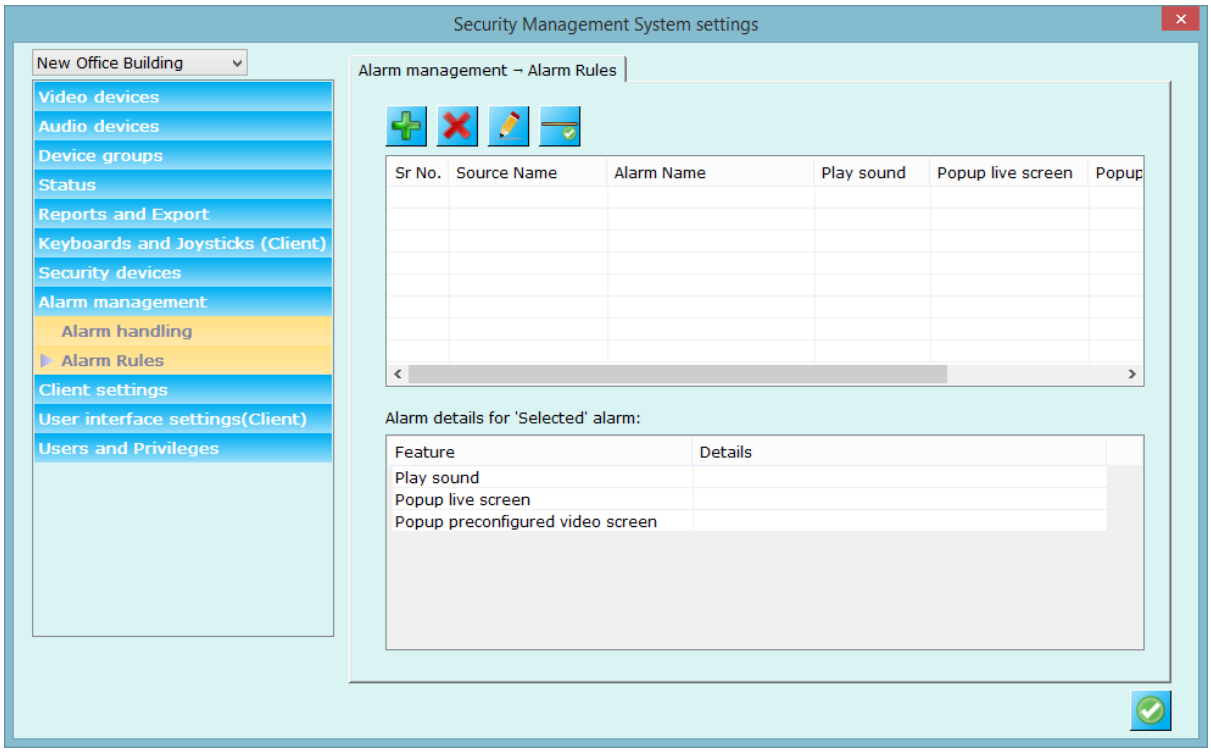
To edit the alarm settings, click on edit button present on upper left of the window. This will pop up a dialog box where you can configure alarm settings. (See screenshot below)



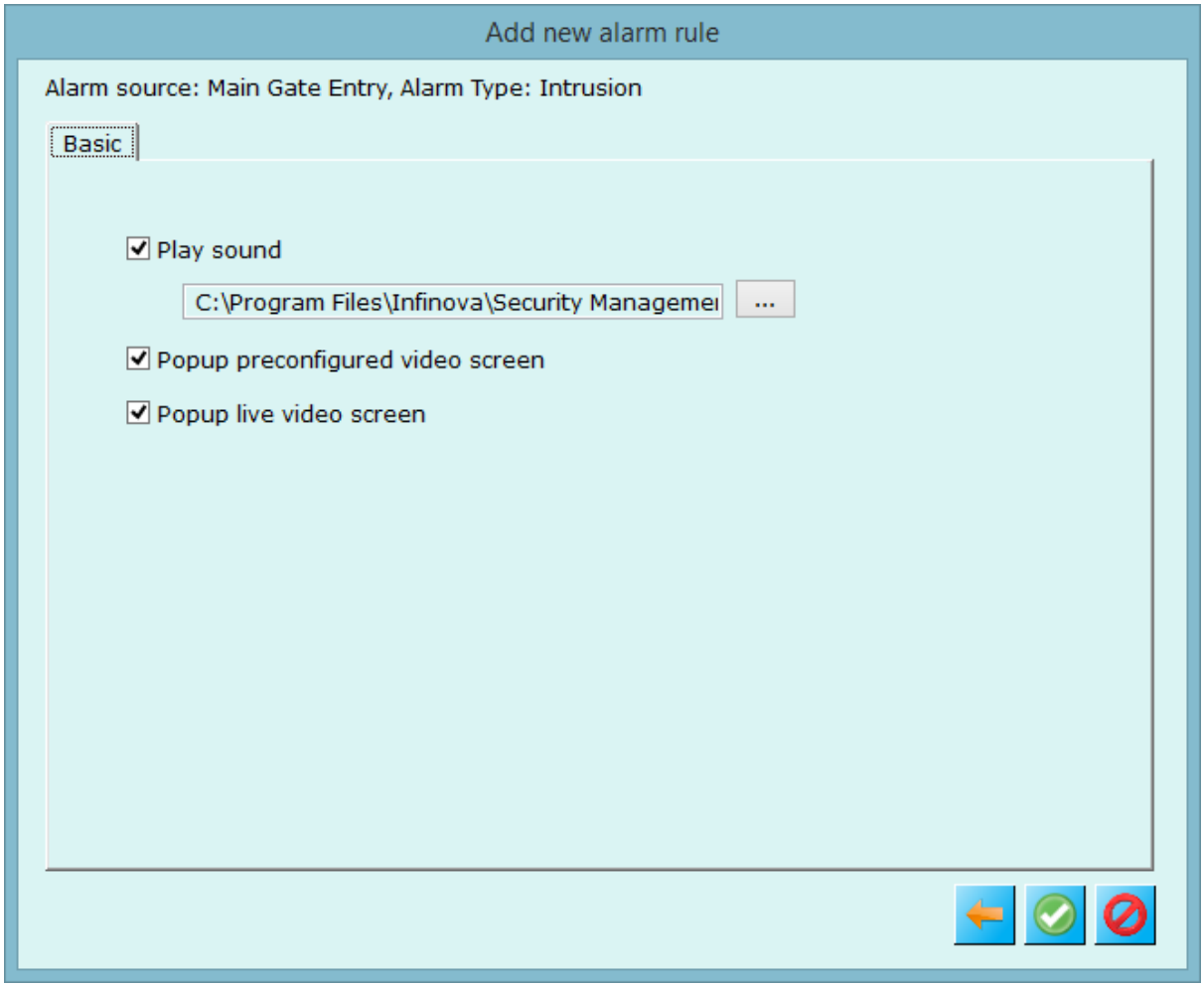
You can enable sound for alarm and select sound which you want to play whenever there is an alarm. Enable 'Play sound' check box and then browse and select sound file you want to play when the alarm is received by the client application.
You can enable popup of preconfigured video screen (separate screen where you can configure screen layout and video channels – for configuring please refer to 'User interface->Display settings' tab) and /or live screen (separate live screen displayed in 1x1 layout mode with current alarm video channel viewed, you can drag drop other video channels and change the layout as per your choice.)

3.7.2 Alarm Rules

This page allows you to add specific alarm rules. Alarm rule can be defined for specific alarm from specific alarm source.



Please click on ‘Add new alarm rule’ button to create new alarm rule and follow the wizard.
Please select ‘Alarm Source’ and ‘Alarm Type’ for which you want define alarm rule and click on ‘Next’ to proceed with settings.Next page will display alarm settings that you can define for this alarm rule.

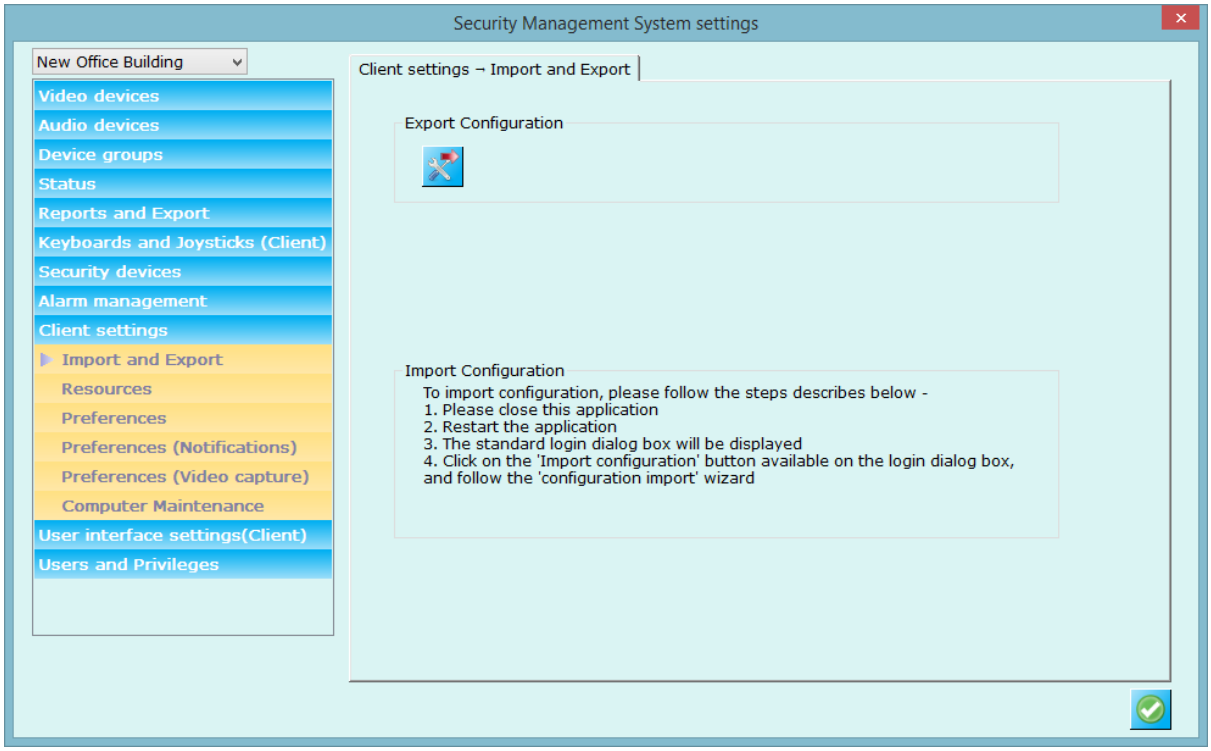


Click on ‘Finnish’ button to save the settings.

3.8 Client Settings

3.8.1 Import and Export

Application settings can be exported from this menu.



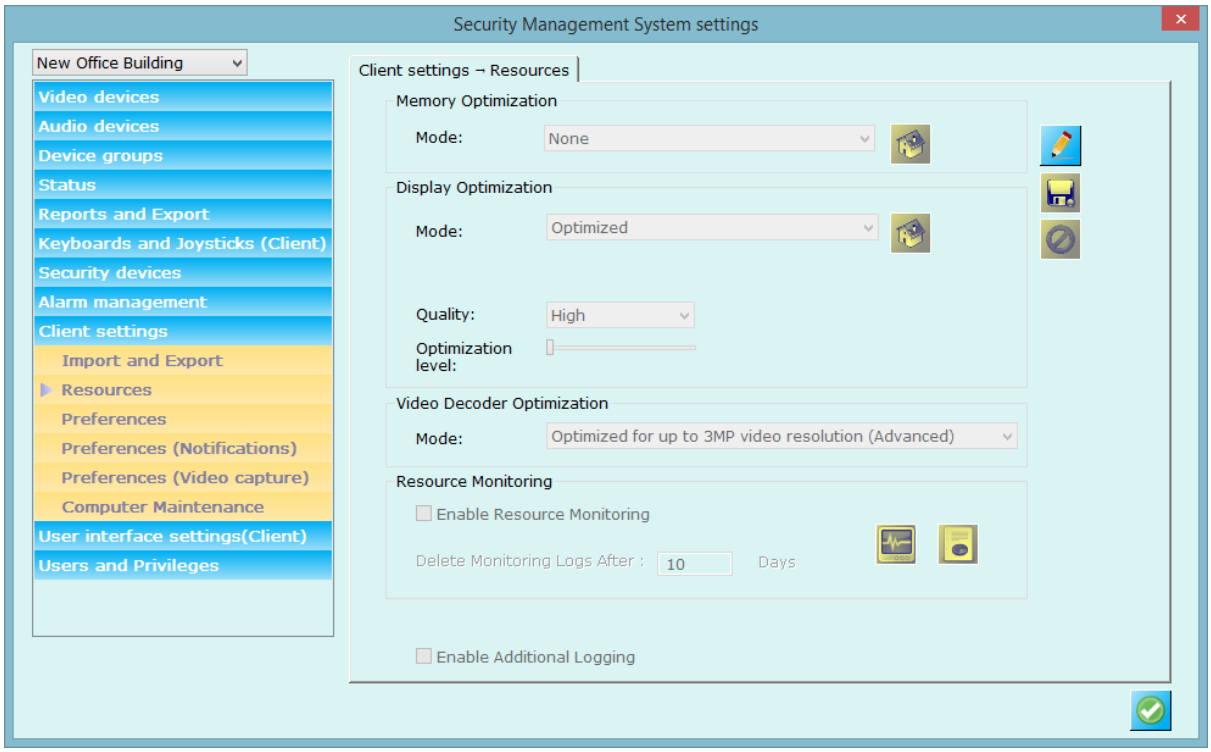
Use button to export current settings to a file. Application creates a single file which includes all the current settings for the software which later can be imported (if needed) using the steps mentioned in the ‘Import configuration’ button on login dialog.

3.8.2 Resources

This page allows configuration of memory optimization, display optimization, video decoder optimization options which will be used by the application and to enable resource monitoring.

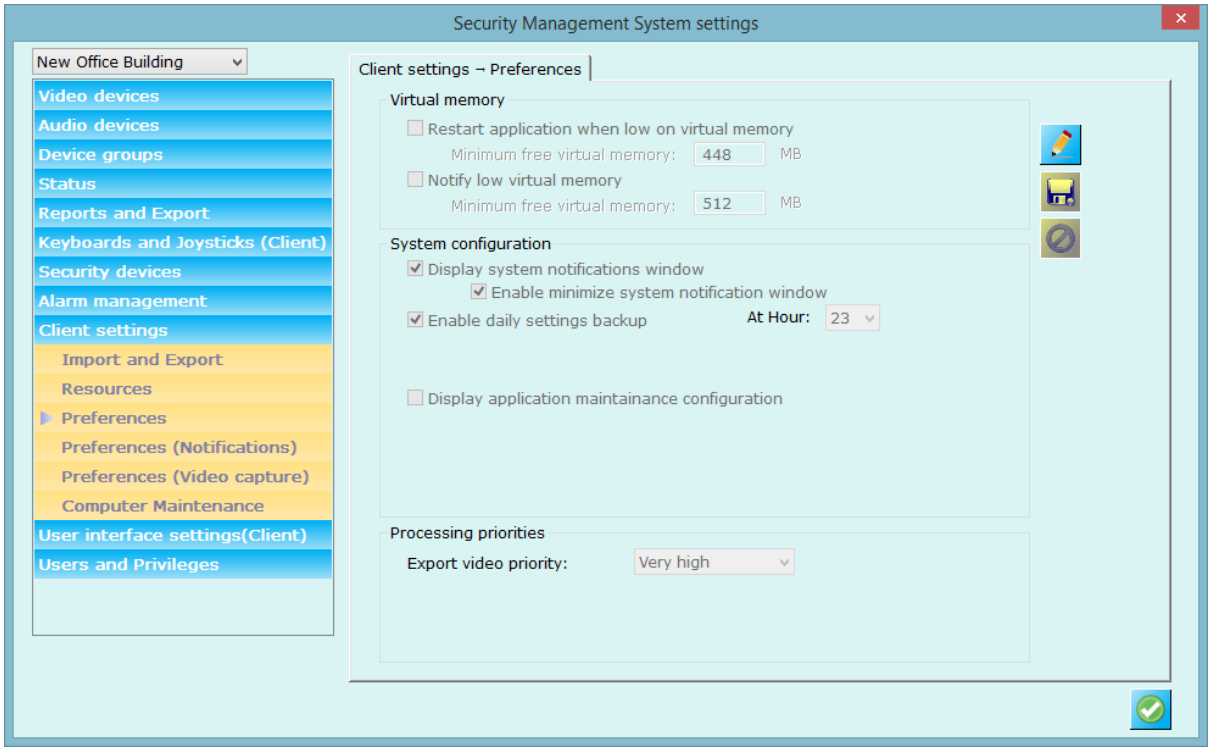
These are advanced settings and should be done by trained engineers. Memory optimization policy should be used based on the deployment environment.

It is advised not to change these settings if you are in doubt about the selection of one of the option.
'None' option is the default and is expected to work in most of the deployment situations.



3.8.3 Preferences

This page allows to define more system options.



Virtual Memory:

a. **Restart application when low on virtual memory –** when enabled the application's virtual memory is monitored and application is restarted when it reaches configured 'Minimum free virtual memory' limit.

b. **Notify low virtual memory:** when enable the application's virtual memory is monitored and application will generate notification when it reaches configured 'Minimum free virtual memory' limit.

System Configuration:

a. **Display system notification window:** When unchecked application will not display system notification window.
Enable minimize system notification window: When enable user can minimize the system notification window even if it is displaying notifications.

b. **Enable daily backup:** when enabled takes back up of server configurations every day at configured time. It is recommended to keep this setting enabled.

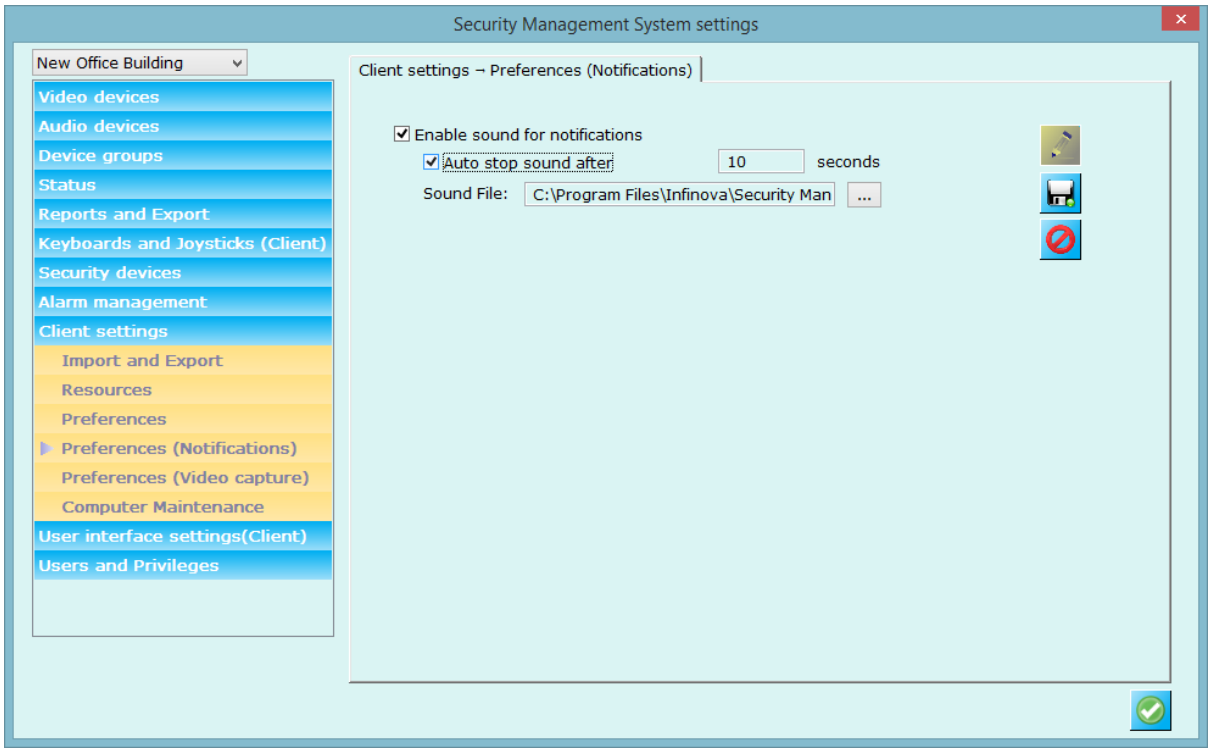
c. **Display application maintenance configuration:** When enable application will display configuration page for application maintenance under 'Server settings-> Application Maintenance'.

Processing Priorities:

These are advanced setting and is used while processing data exporting videos. These operations use network bandwidth, I/O resources etc. resources and affect computer performance and which in turn may affect the software performance for normal recording and playback operations, if any of the resources hit the utilization limit. The data processing priority can be lowered to free up more resources for the normal operations, in such cases. ***This is an advanced configuration and should be used only by trained engineers.***

3.8.4 Preferences (Notifications)

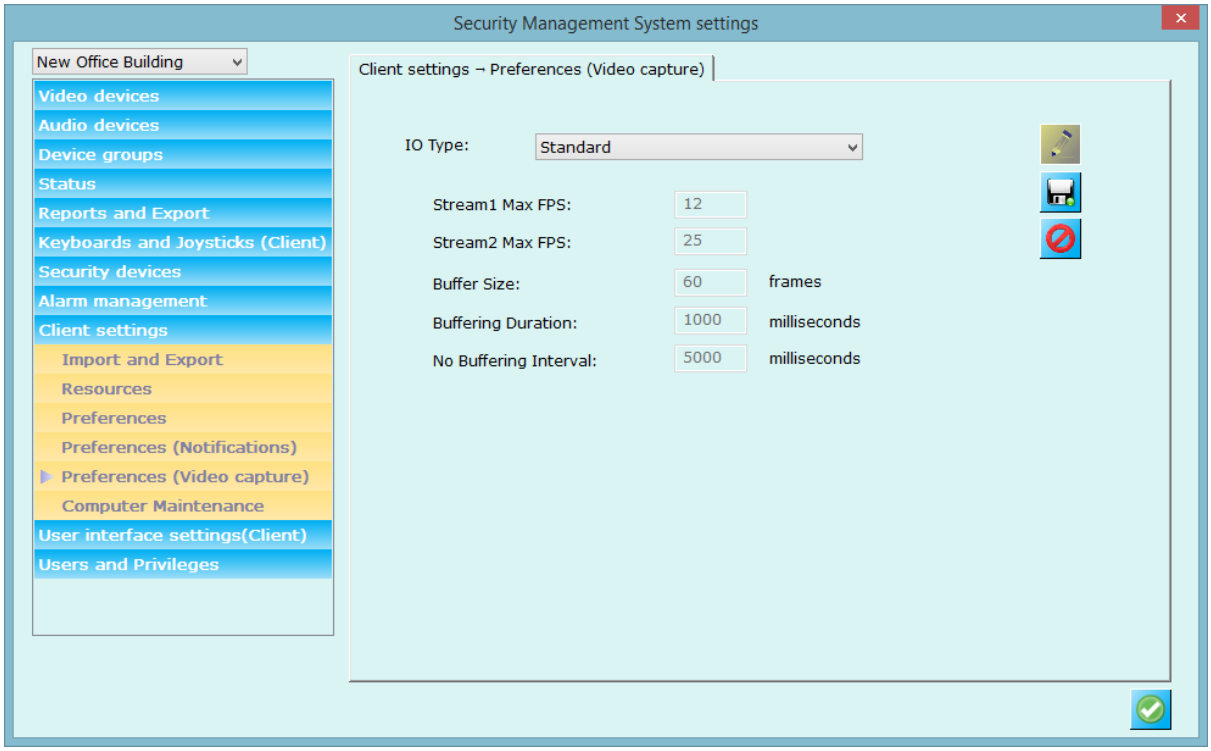
This page allows you to define settings for 'System Notifications' window.



Enable sound for notifications: When enabled application will start playing selected sound whenever there is new notification is generated in application.
Auto stop sound after: When enabled sound will stop playing automatically after configured seconds**.**

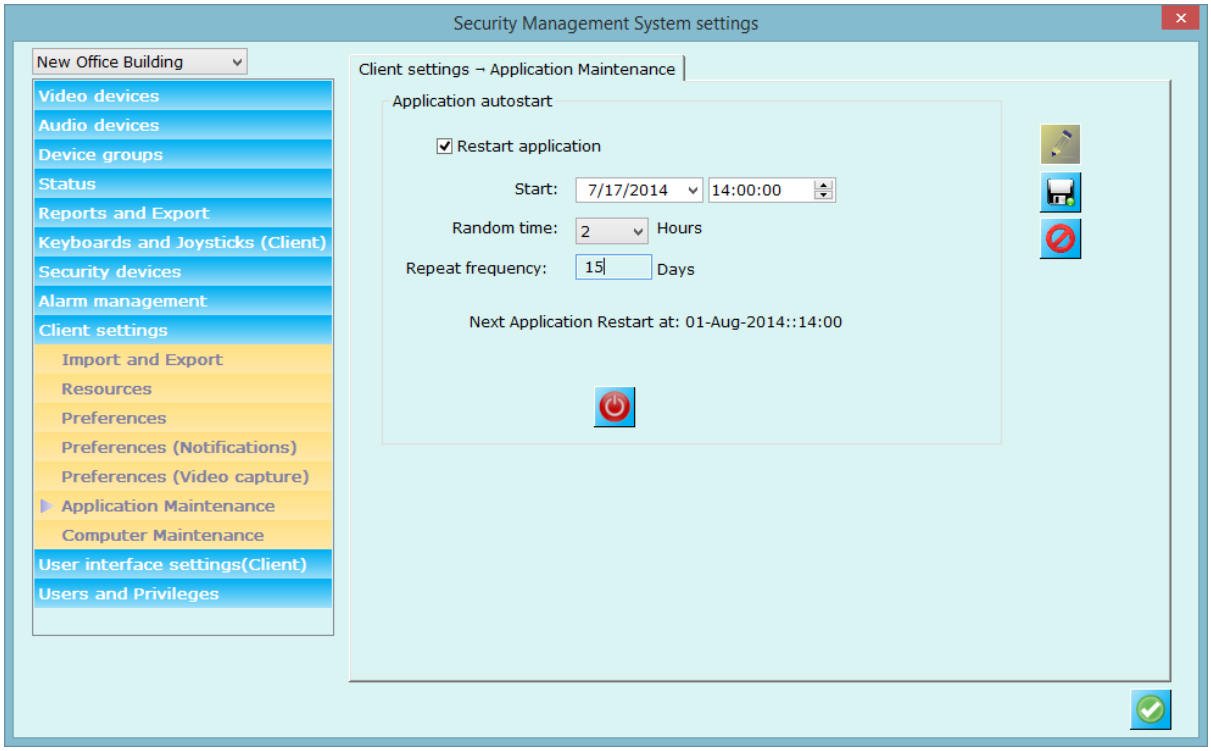
3.8.5 Preferences (Video Capture)

This link display confirmation option for video capture.
This is an advanced configuration and should be used only by trained engineers.



3.8.6 Application Maintenance

From this tab, you can configure application restart details.



Check ‘Restart application’ option,

Provide start data and time from which application restart should work

Configured random time in hours (explained below) and

Repeat frequency in days (say x) means every x days at configured time.

Application will display ‘Next application restart time’ below.

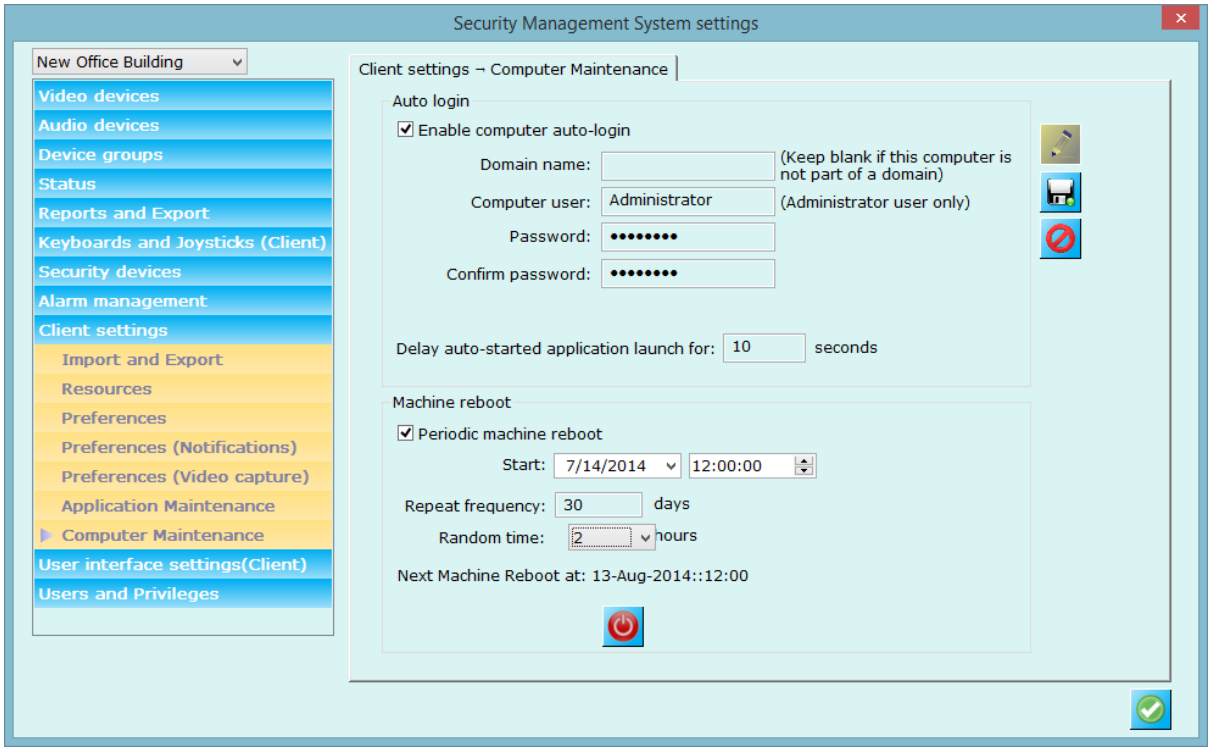
You can test application restart feature with button.

Random time:
For security reasons, application has added random time feature so that application will get restarted **any time after configured time** (14:00:00 as per above screenshot) **within configured random time.**

E.g. as per above screenshot, application will get on started on 01-Aug-2014 any time after 14:00:00 + 2 hours (random time). I.e. anytime from 14:00:00 to 16:00:00. **So application restart time is difficult to guess and system will be more secure.**

3.8.7 Computer Maintenance

From this tab, you can configure auto-logging into computer when computer starts. Please configure 'Computer user' and password details' – that will be used to auto-login into the computer when computer restarts.



Check 'Lock computer after autostart' – to lock it after logging into the system. After computer restart, application launch can be delayed by configured seconds.

Periodic machine reboot can be configured by enabling it. Please specify the start date, time repeat frequency and random time in hours.

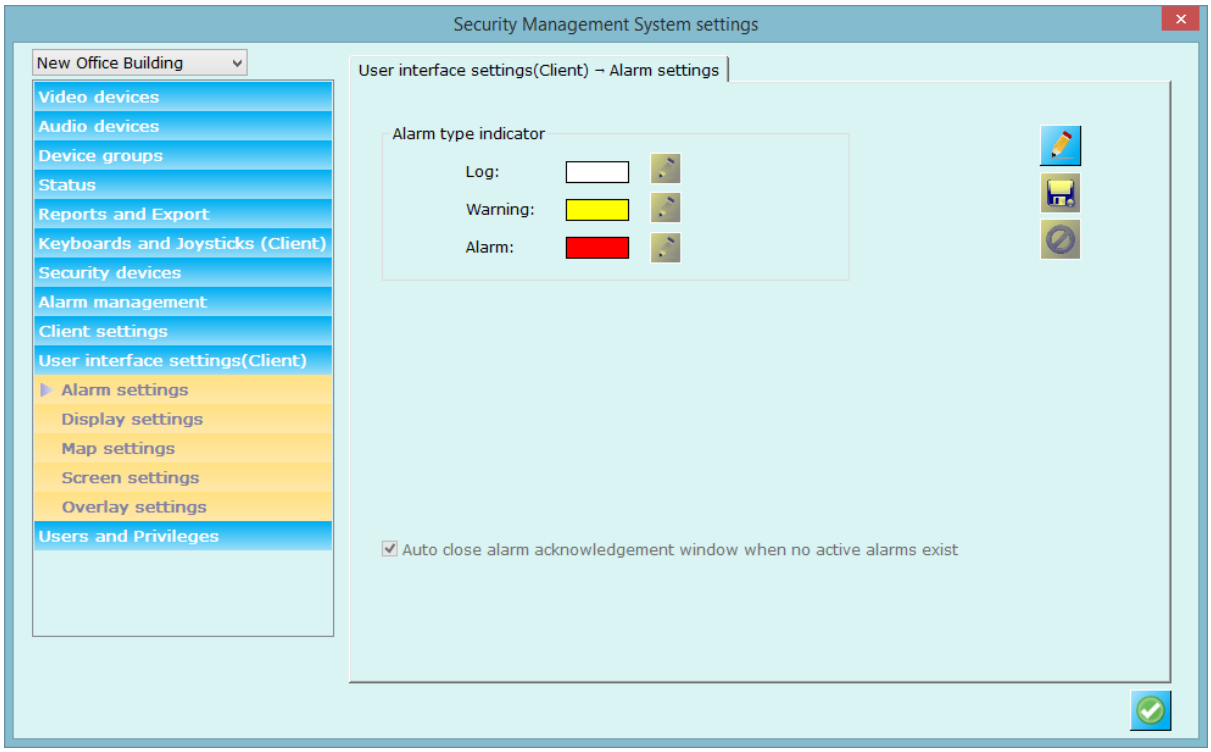
E.g. from above screenshot, periodic machine restart is enabled from 13-Aug-2014. Machine will get automatically any time after 12:00:00 within 2 hour (random time). Frequency of machine restart is set to 30 days so the operation will happen every 30 days.

Use button to test computer reboot any time.

3.9 User Interface Settings (Client)

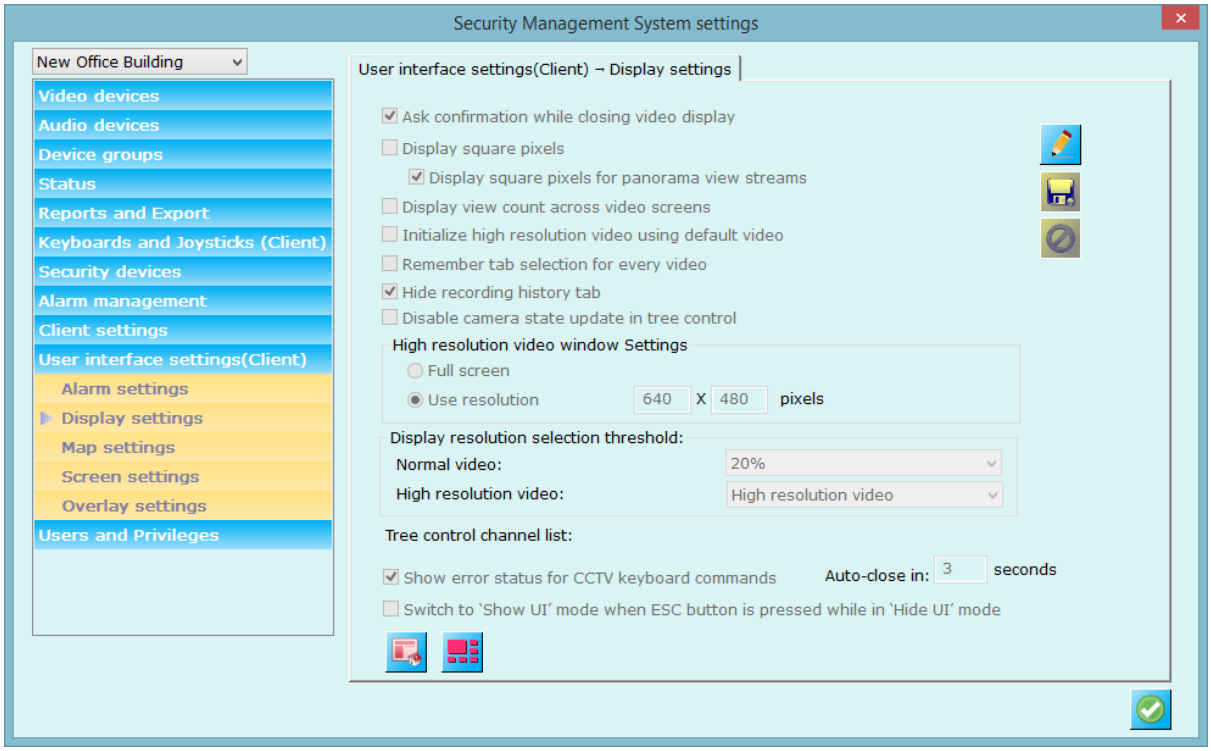
3.9.1 Alarm Settings

Configure alarm type indicator colors, above screen shows the defaults and currently used colors by the application.



3.9.2 Display Settings

Configure video or application display related parameters from this user interface.



Ask system optimization recommendation -
It is advised or recommended only to setup the system at server machine and not use this system for viewing live video screens, playing back history data etc. For these features, user can connect client application from separate machines and use it. Server is expected to record the video channels, run analytics and more expensive operations. This way server can run with full resources and can support many video channels.

When checked 'System optimization recommendation', server application will ask for closing all the auxiliary windows (live, playback, search etc. – discussed later) after some time. You can turn ON/Off this feature using check box.

Ask confirmation while closing display – when checked application will ask for confirmation while closing any video display. You can turn it off if do not need this popup**.**

Display square pixels – when unchecked application displays video such that complete display area is covered by the video. The original aspect ratio of the video (video width: video height) is ignored during the display, in this case. This may result in stretching of the video horizontally or vertically. If this option is checked, application always displays video maintaining its original aspect ratio. The application adds black color bands (horizontal or vertical) to fill up the difference between the aspect ratio of the video and the aspect ratio of the display area,

Display video count across video screens – when checked application displays total number of videos being displayed to all the video windows tree control information.

High resolution video window settings

You can configure high resolution window size or you can select 'Full screen' option so that high resolution window will occupy all screen area when it is being viewed.

High resolution window can be popped up/ displayed by double-clicking on any video or right clicking video and clicking 'Full screen' menu.

Display resolution selection threshold

When 2 separate display streams are selected for any channel, Security Management System chooses the best one to display video on any target video window. This helps in lowering the resource utilization considerably. E.g. displaying 1.3 megapixel (1280 X 1024 pixels) video in 320 X 240 pixels size display window is not useful, since it consumes resources for full 1.3 megapixel size but ultimately the output video is only 320 X 240 pixels. Hence displaying 320X 240 size video would always be beneficial, as the visible output video quality remains the same in both cases, but resources utilization is much lesser. Security management System uses this principle to select the best matching stream for display. 'Display resolution selection threshold' parameter is used during the decision making for using lower resolution stream or higher resolution stream.

You can define this settings for 'Normal video' and 'High Resolution' video separately.

Show error status for CCTV keyboard commands

When enabled application will display error message window when CCTV keyboard working encounters any problem. It will be auto closed after configured interval.

Switch to 'Show UI' mode when ESC button is pressed while in 'Hide UI' mode

When enabled, application will use ESC command to switch to 'Show UI' mode form 'Hide UI' mode for live and playback video screens.

Reset all window positions

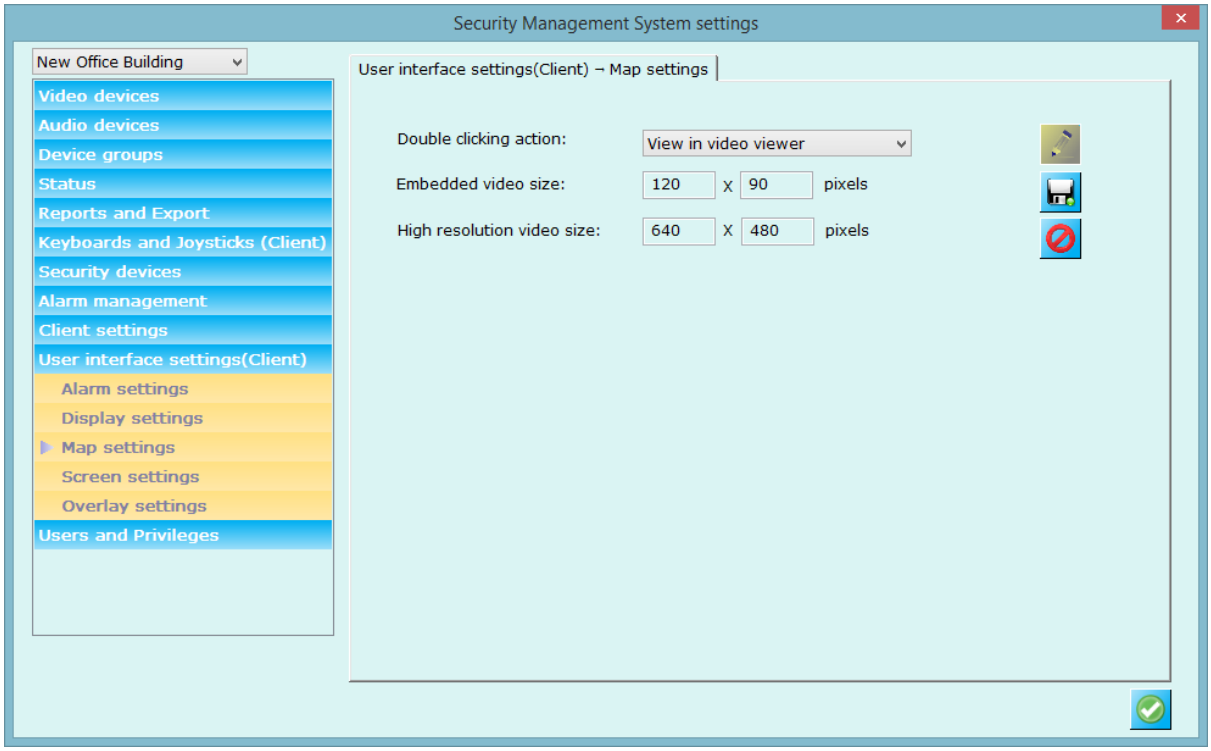
Use this button to reset all windows position.

Display preconfigured video screen

This button will popup video screen where you can configure window layout and videos. When the generated alarm is configured to popup pre-configured window, this window will be opened/popped up with the setting you do.

3.9.3 Map Settings

This page allows you to configure map settings.



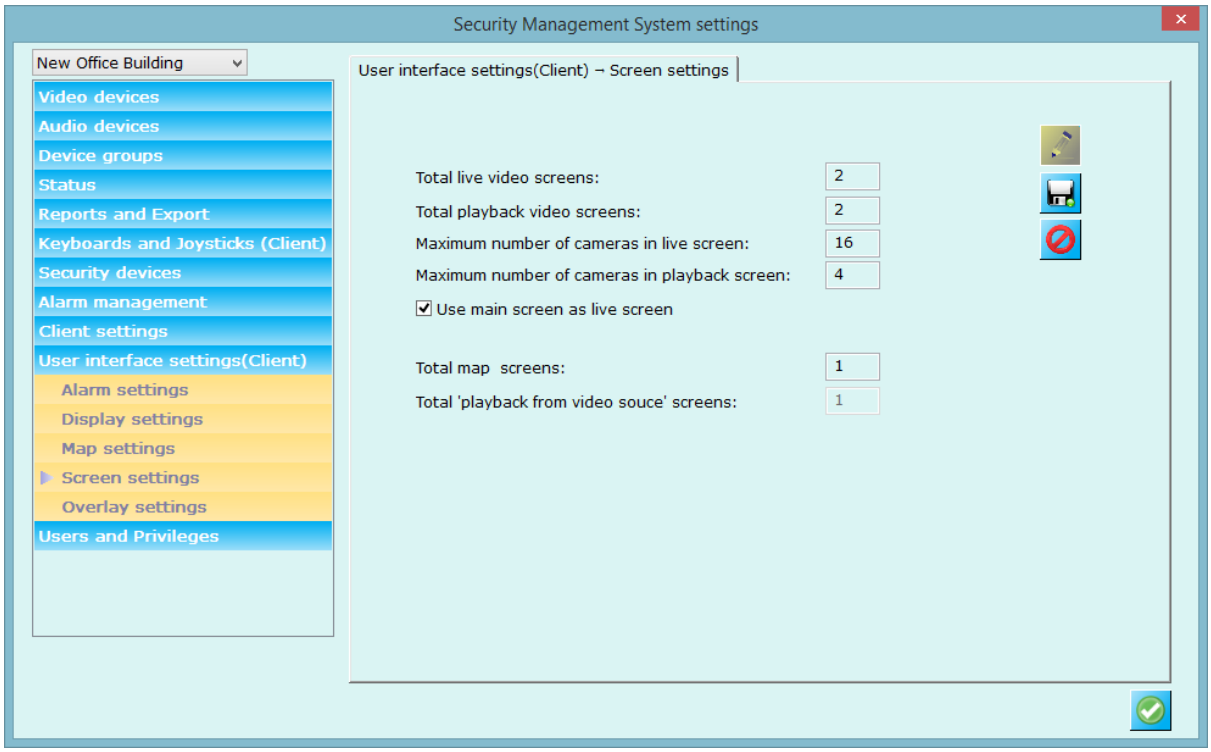
Double clicking action: This will define how video is displayed when user double clicks on any item in map window. Options includes View video embedded on map, view high resolution window or view in video viewer.

Embedded video size: This settings will be used to configure size of video embedded on map window. The size is defined in pixels.

High resolution video size: This settings will be used to configure the size of high resolution video window. The size is defined in pixels.

3.9.4 Screen Settings

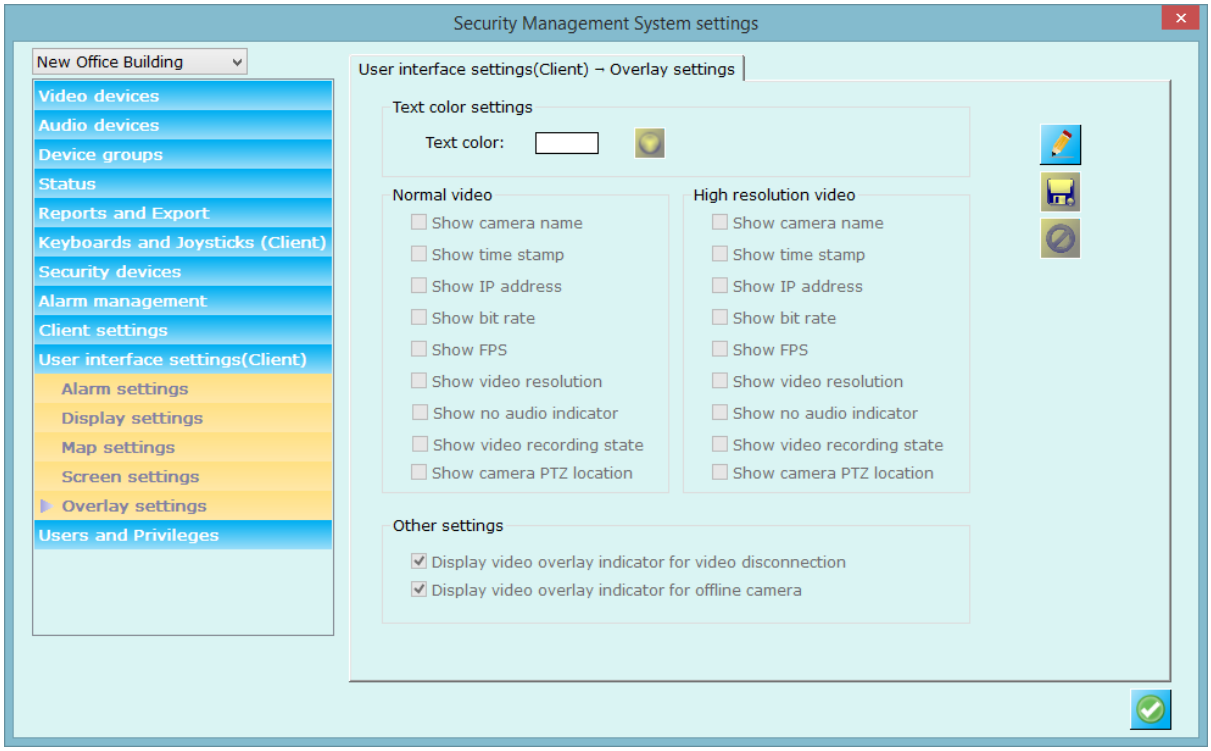
From this link you can configure various video screen options.



You can configure total number of live, playback, map and playback from video source screens you want to use in client.
You can also set main screen option to plyabck or live.
Maxi mum number of cemaras that can be viewed in single live and plyback screen can also be configured from this page.

3.9.5 Overlay Settings

You can configure overlay settings using this tab.



Text color – color used while displaying overlay texts.

Overlay – normal videos -

Show camera name, timestamp, IP address, bit rate, FPS (frame rate), video resolution, video recording state, audio play state, no audio indicator, and camera PTZ location can be enabled or disabled to overlay it on videos.

Overlay – high resolution videos -

Separate overlay settings can be configured for 'High resolution videos'

Motion detection overlay mode can be one of the

- 'No display' – no overlay will be done for motion area.
- 'Motion indicator only' – displays small rectangle at left bottom when there is motion in the scene.
- 'Motion grids only'- displays grid on the video where there is a motion.
- 'Full display' – displays both motion indicator and grids on video when there is motion in the scene

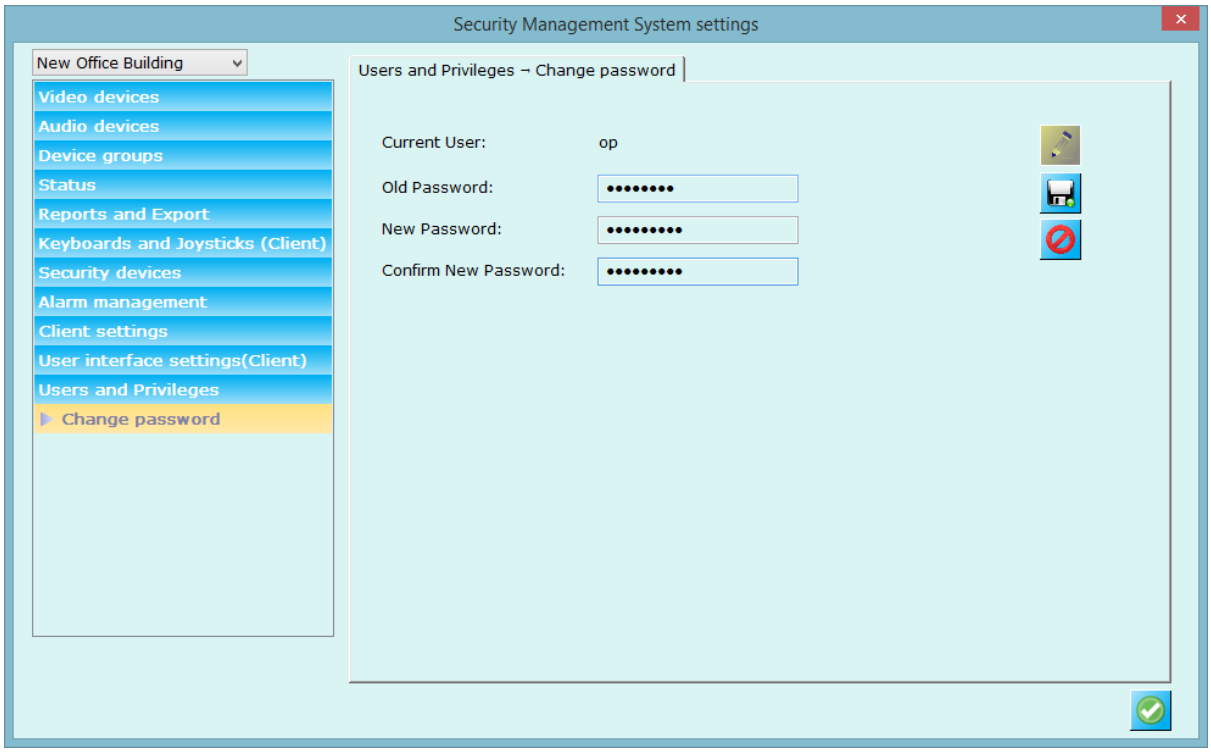
Other settings

- Display video overlay icon when there is video disconnection (displays cross mark)
- Display video overlay icon when there is server disconnection (displays cross mark in a circle).

3.6 User and Privileges

3.6.1 Change password

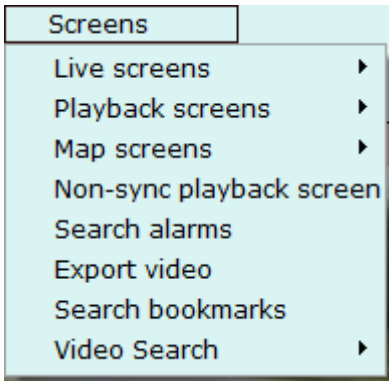
This tab allows you to change the password of currently logged in user.



4. Screens

The ‘Security Management System Client’ provides several viewing screens which can be viewed simultaneously. All the screens can be moved independently and hence can be viewed on different display devices / monitors connected to the computer.

The views/screens in ‘Security Management System Client’ can be accessed from **screens** menu present in menu bar.

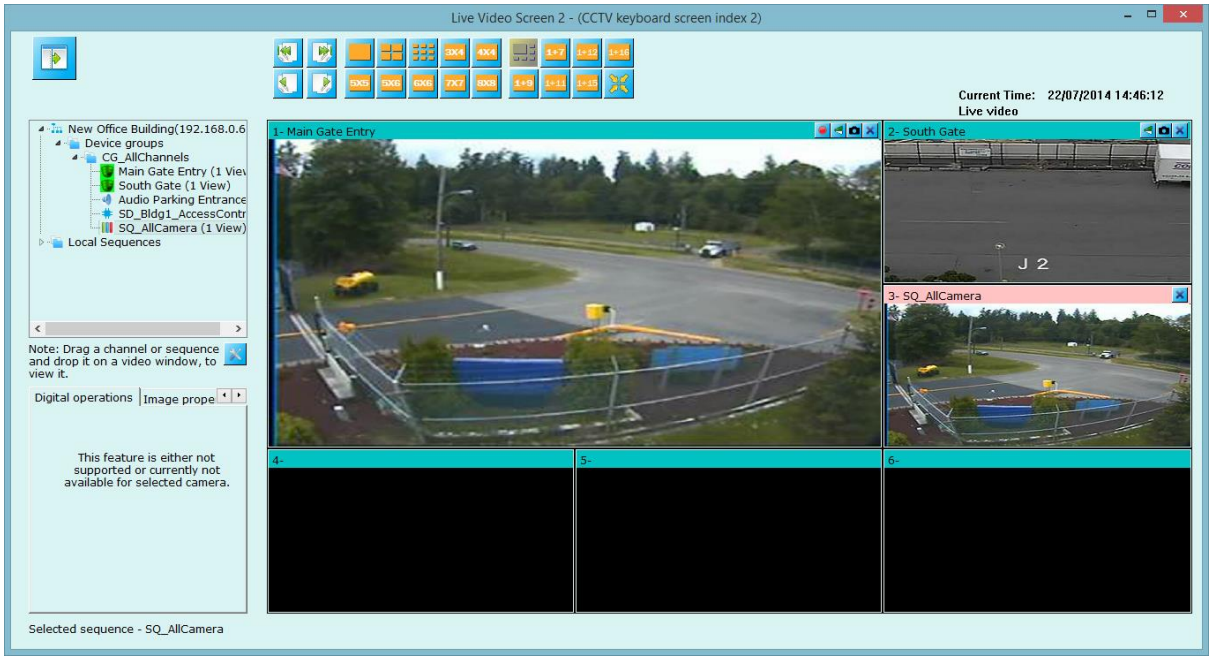


It has following screen menus

1. Live screens – pop up menu which has sub menus to launch live screens.
2. Playback screens – pop up menu which has sub menus to launch playback screens.
3. Map view – popup menu which has sub menus to launch map screens.
4. Non-sync playback screen-Menu to launch playback screen where each playback can be controlled separately.
5. Search alarms – launches screen to search alarms based on search criteria.
6. Export video– launches export video screen for exporting video in standard WMV (high/standard quality) or in native format with native format player support.
7. Search bookmark– launches screen to search video bookmarks.
8. Video Search-Popup menu for each site configured in client, using this screen you can analyze recording history from every camera(Except for ‘Recording at source’)

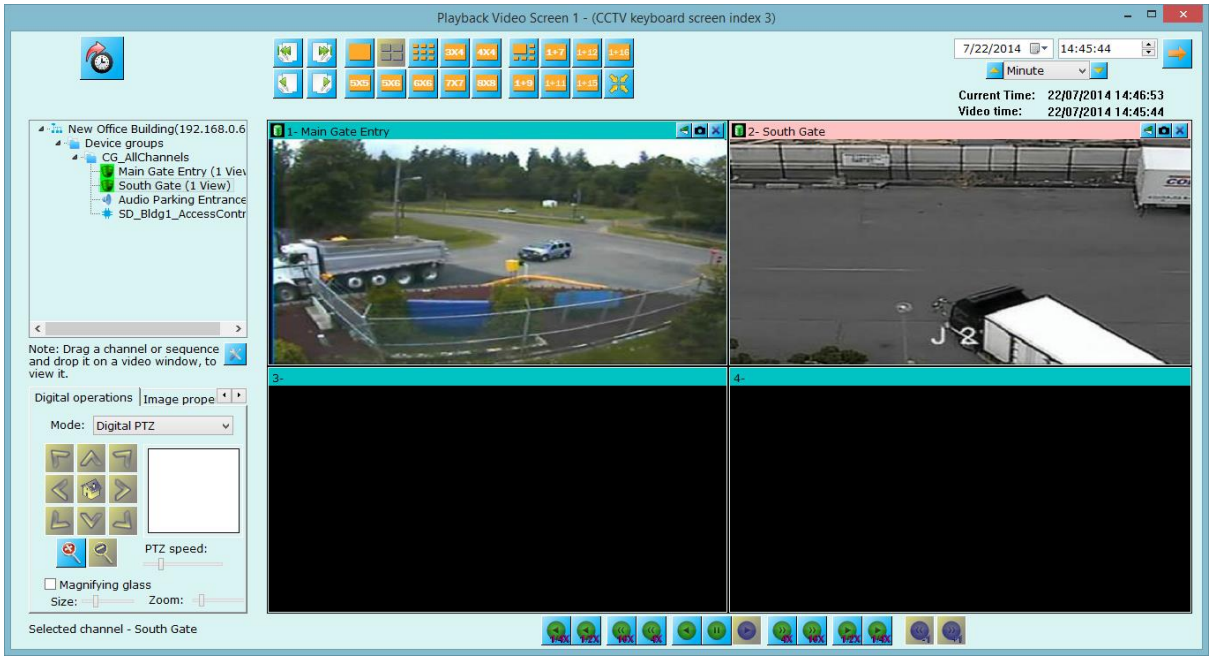
4.1 Live screen

Live screen displays live feed for all configured channels. Details on how to use user interface controls can be found in ‘Main screen’ discussion.



4.2 Playback screen

Playback screen can display live or playback feed for all configured channels. Details on how to use user interface controls can be found on ‘Main screen’ section.

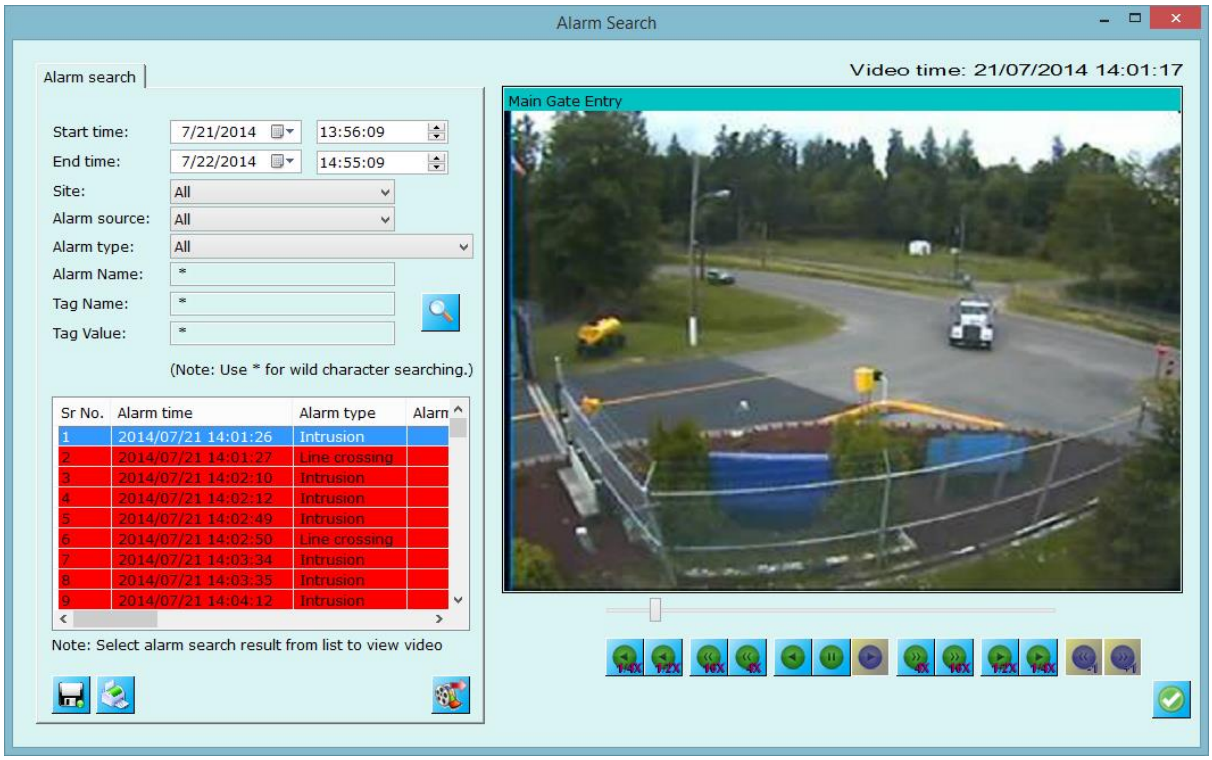


4.3 Search alarms

Search screen allows user to search the history alarms of the system. User can configure the time frame of the desired search, source of the alarm, type of the alarm, and alarm name (alarm name – can be a wide character string).

Click on button to search alarms meeting configured criteria.

Click on any alarm from the list and search window show corresponding video of the alarm at right portion of the window. You can control the speed of video stream display with the navigation buttons.



'Save search' saves the search results in standard format like XML or CSV or text file.

'Print' – prints the searched alarms list.

Use button present below in the list control to export all the alarms present inside the list.

'Export Video' button (below the alarm video – right hand side) will take you to the export tab (see image at below page) and can save the video which can be played back with the standard media players like Windows media player or VLC.

‘Playback View’ button will popup separate playback video screen to show alarm video. Here in this screen (separate playback view), user can also add other video channels to playback.

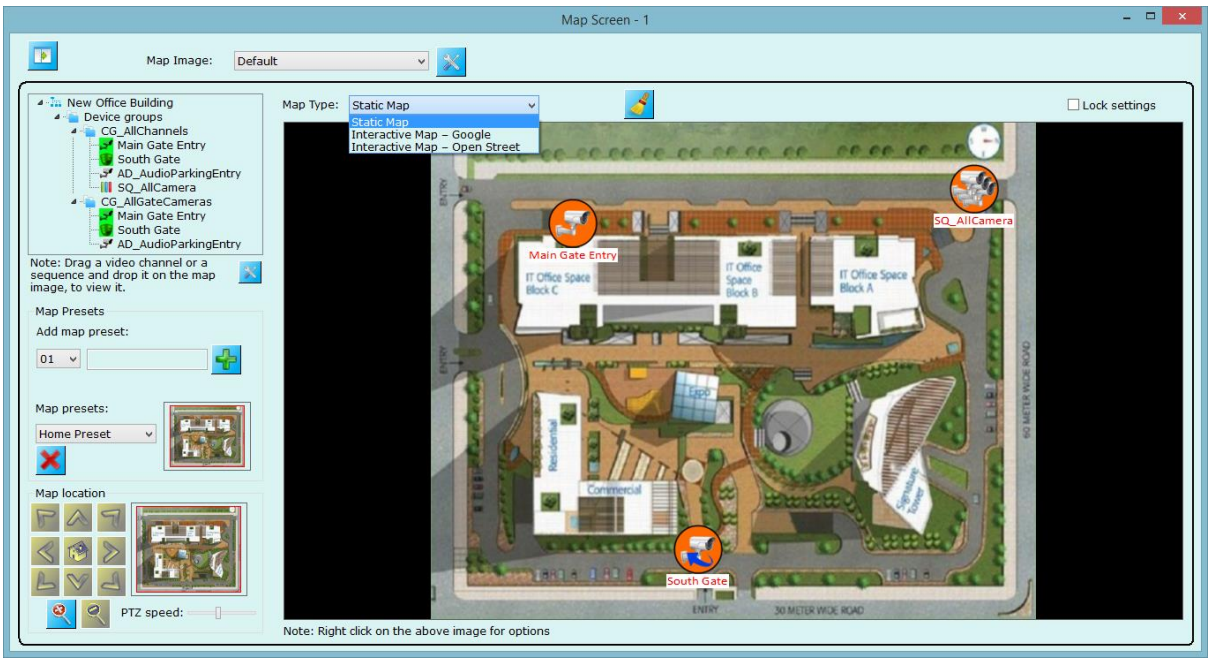
4.4 Map screen

3.4.1 Static map (2D image)

This mode works with static 2D images (.bmp or .jpg).

Operators can load new map image by right clicking onto map image and selecting **'Change map image'** menu. User can select bmp or .jpg image and application will change map image to the selected one.

Video channels and/or sequences listed at top left tree control can be **drag-dropped** to the desired location inside the map image.



There are **two states** of the devices on the map – **compact state** which shows the position of the video device or sequence. The default indicators are as,

Will indicate static video channel position on map.

Will indicate PTZ video channel position on map.

Will indicate sequence position on map.

Will indicate security device position on map.

Will indicate ‘Quick access link’ position on map.

Will indicate ‘Quick access link zone’ on map.

Enlarged state – where map can show the actual live video from the device. User can toggle between these state by using right click option and select desired display mode (Video or Icon).

User can move the placed video devices/ sequences/security devices anytime using mouse to adjust their position in the map image.

To view ‘High resolution video’ for any video channel double click on video channel in map.

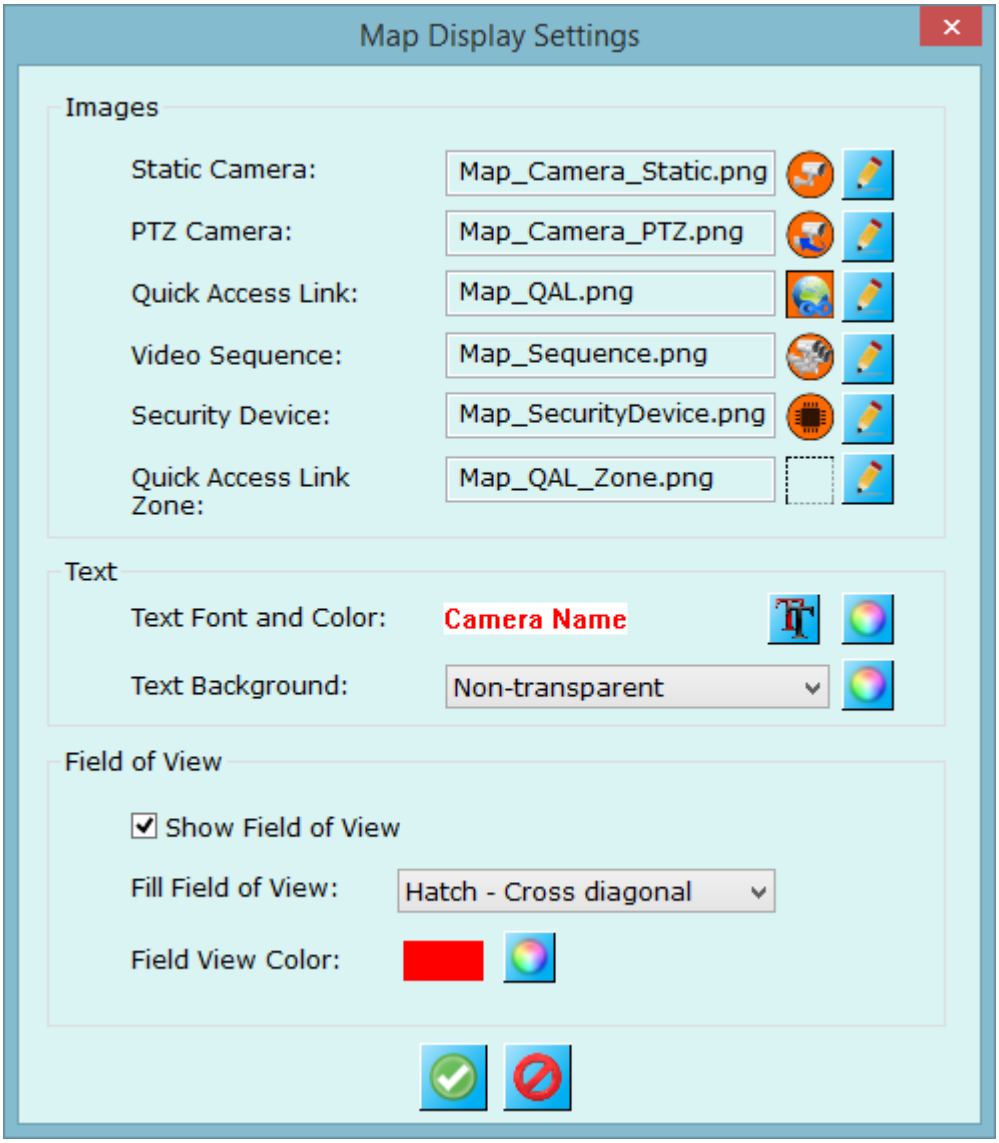
Right click on map you can see various option as follows,

Change map image – To change current map image with different map image.

Display Settings – This will popup dialog where you can configure various display settings for map screen. These settings includes selecting configuring icons for static camera, PTZ camera, Quick access link, Video Sequence, Security Device, Quick Access Link Zone.

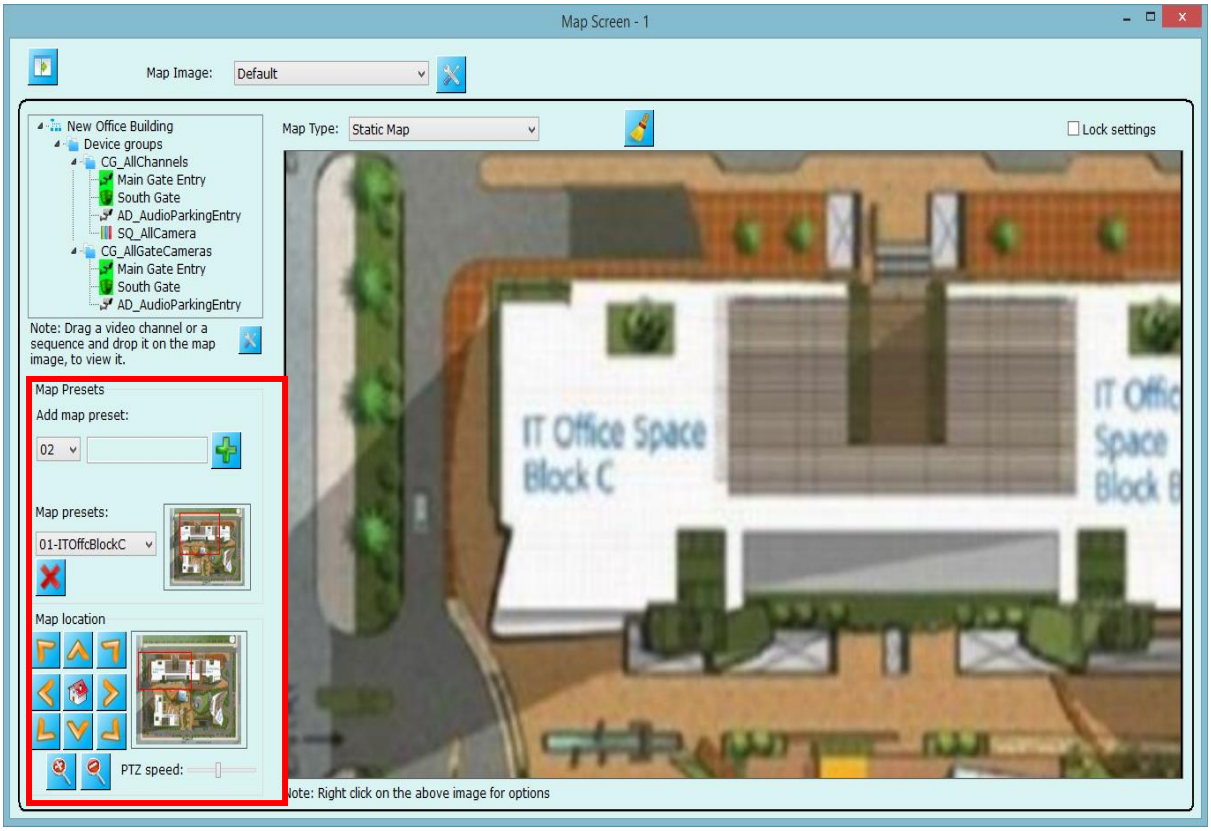
You can also configure the text font and background which displays the name of video device/sequence/quick access link on map. It is placed below the icon on map.

This dialog also allows you to configure ‘Field of View’ settings, these settings are described later in more detail.



Application can also show alarm alerts on map window – inside the display of video channel of the alarm video source. For this you need to configure “Show alert on Map” features for corresponding alarm from “Alarm management” (discussed earlier)

Map PTZ and presets



For better perspective, map window can also be panned, tilted, or zoomed with "Digital PTZ" tab available on left middle portion of the window.

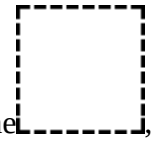
User can arrange map window screen with PTZ movements and can also save this at preset section. 10 presets are supported, which user can configure and set.

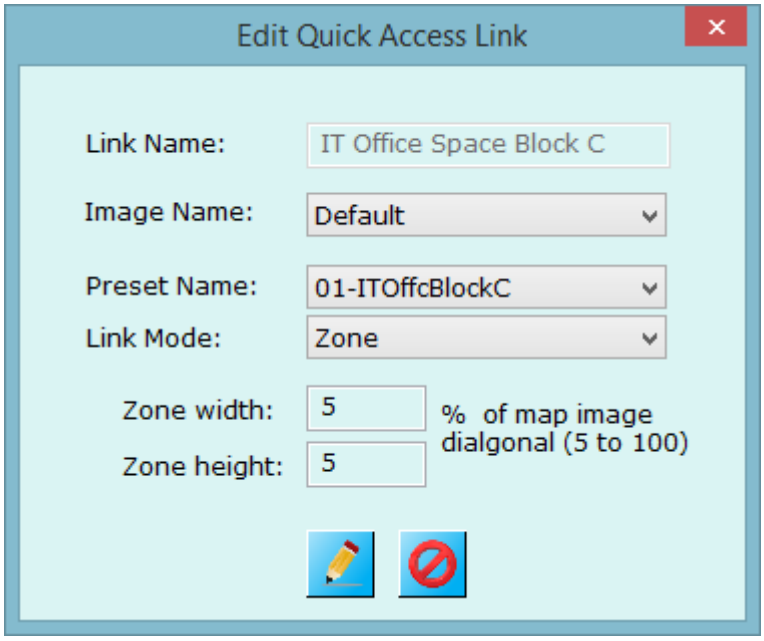
The list of user configured presets is shown at "Map preset list" section (bottom-left portion of the window). For directly switching to any preset, user needs to select desired preset from the list. Selected preset's snapshot is shown at right hand side of preset list.

Use button to delete selected preset from the list.

Quick Access Link

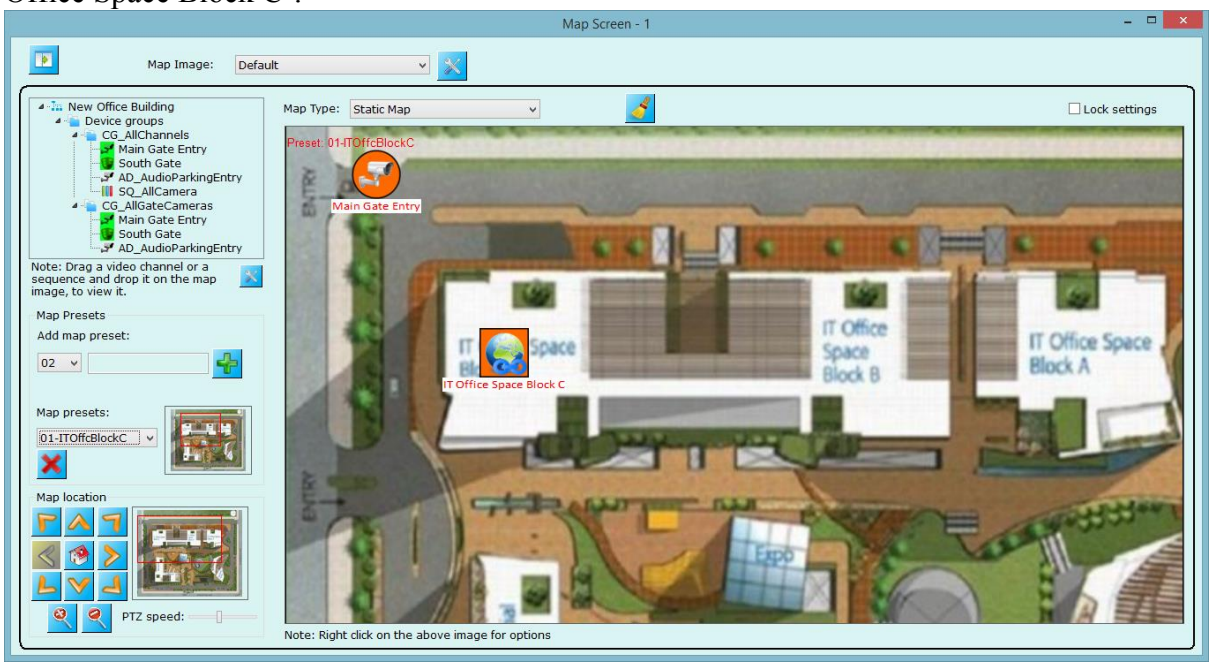
For better and fast access to map location's 'Quick access link' can also be defined on map.
To define 'Quick access link' right click on and select 'Set quick access link…' menu.
This will popup 'Add Quick Access Link' dialog. Provide link name, select map image on which you want to define quick access link, select preset name from list to which you want to set quick access link.

Quick access link can be displayed on map in two way icon and zone  , select link mode as per your configuration.



Following image displays quick access link 'IT Office Space Block C' on 'Default' map which accesses to preset '01-ITOffcBlockC' location in map.

To access ’01-ITOffcBlockC’ on map you need to double click quick access link ‘IT Office Space Block C’.



3.4.2 Interactive maps – Google

Change map type to ‘Interactive Map – Google’, application will access internet connection to connect to Google maps.

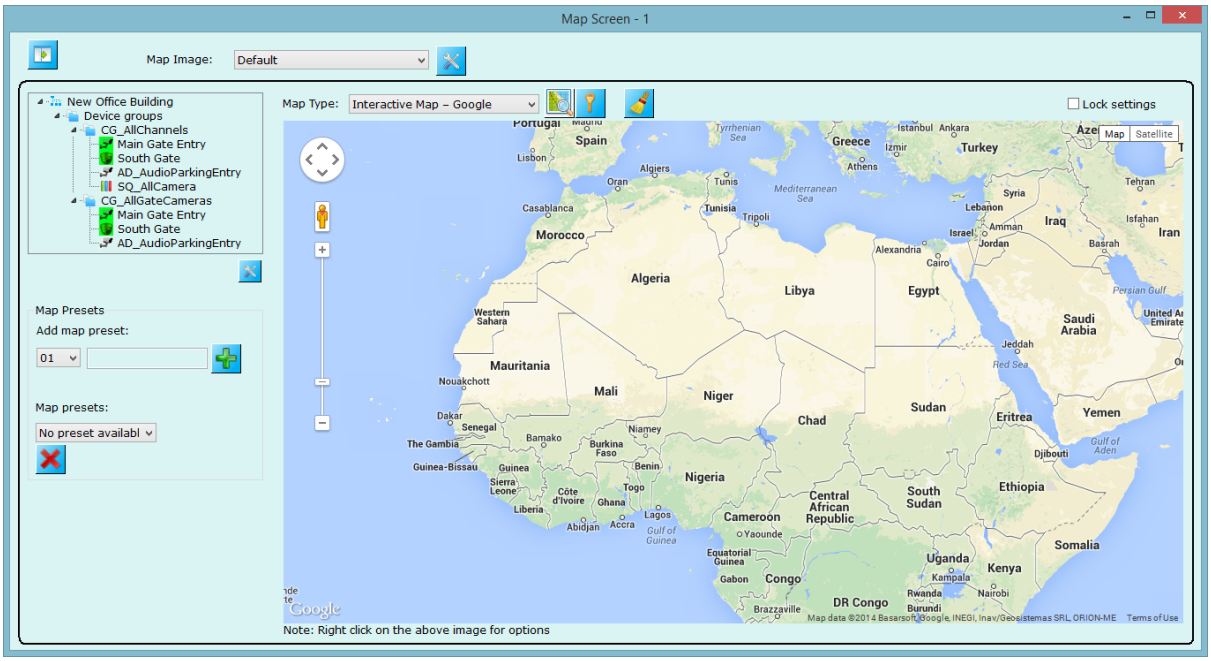
You can PTZ (pan, tilt or zoom) the map to go to required location.

For positioning cameras or sequences inside the map, please use right-click option on the required position and follow ‘Set video channel location’ or ‘Set video sequence location’ to place camera.

Separate 10 map presets can be configured for this type of maps.

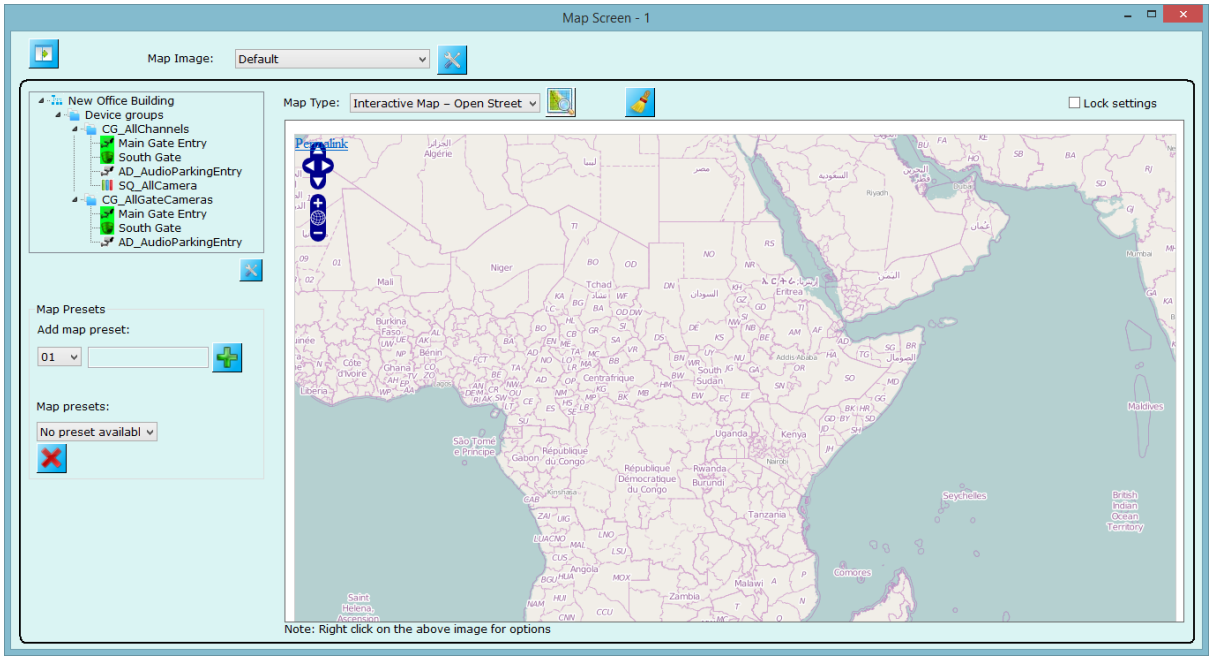
Select map preset from the ‘Map preset list’ and click to go to preset position.

For searching specific location, please click (Set map location button) to pop up a dialog box. Enter address or longitude and latitude details to go to required location.



3.4.3 Interactive maps – Open Street

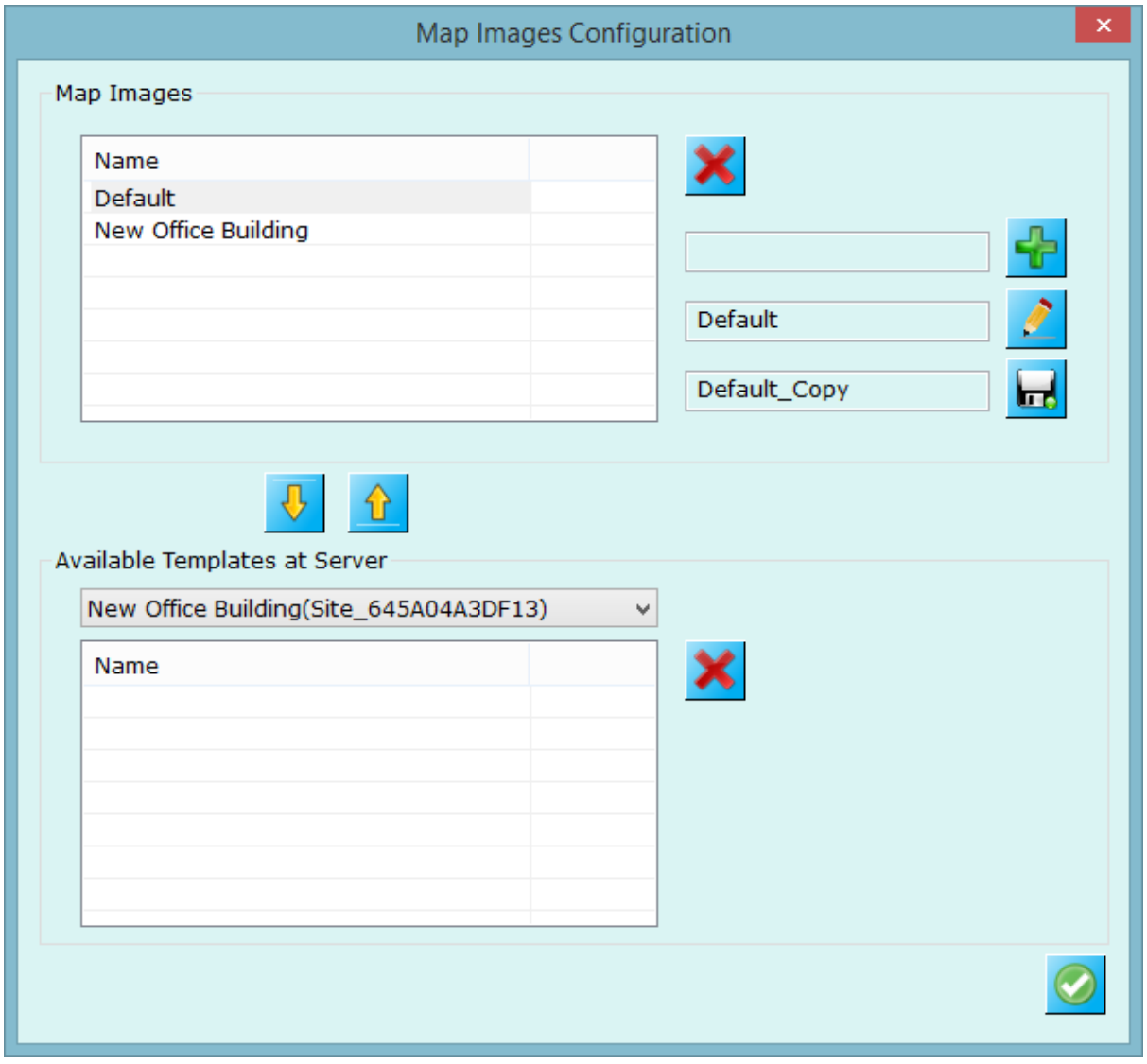
Change map type to ‘Interactive maps – Open Street’, the application will access internet connection to connect to ‘Open Street’ maps.



Usage of this type is same as ‘Interactive maps – Google’ as discussed above.

3.4.4 Map Configuration

Map screen allows to define multiple map configuration. To define new map configuration click on ’Map Image Configuration’ button. This will popup ‘Map Image Configuration’ dialog as shown in image below.



Use button add new configuration to map screen.

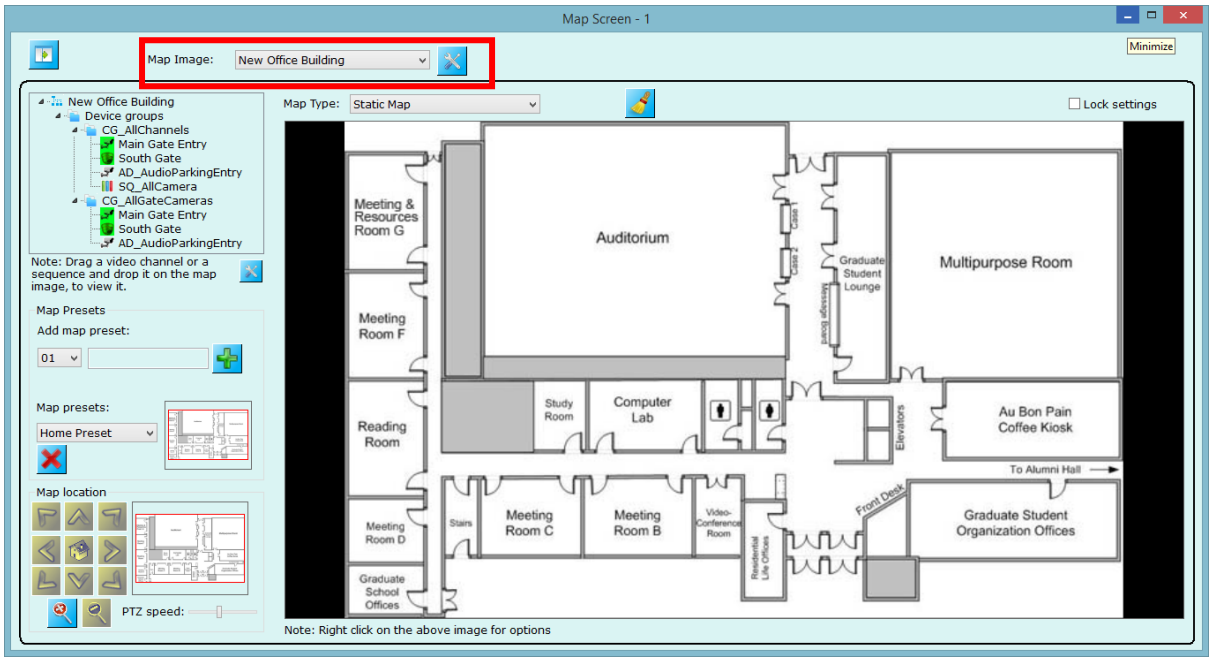
Use button to change name of currentky selected map configuration from list.

Use button to create of selected map configuration.

Use button to imprt template from server as map image.

Use button to upload map image as template to server, desired server can be selected list.

Following image displays ‘New Office Building’ configuration added to map screen. You can swicth between configurations isung list on top of the map screen.



Map templates can be created from map configuration which client can download and use them.

Map screen helps to understand overall current status of the entire area under surveillance in a single screen.

Application support different modes to map screen - static map, google map, and street map.

4.5 Export video

One or more cameras video exports can be initiated using this screen.

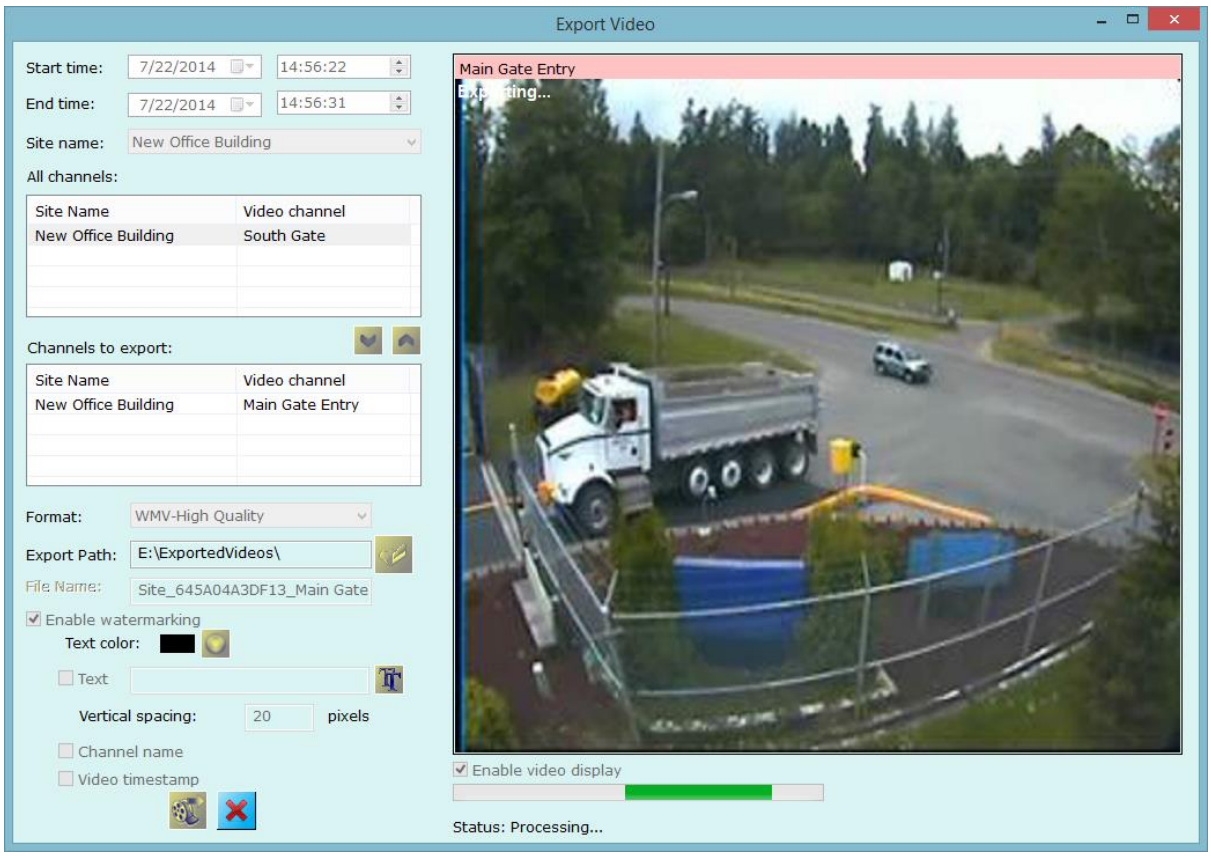
Configure start time and end time.

Channels can be selected from ‘All channels’ list and added to ‘Channels to export’ list using button. Channels from ‘Channels to export’ can be removed using button.

Select video export format – it can be one of WMV-High Quality, WMV- Standard quality, or native export.

Enable watermarking if needed. If enabled, configure color to be used for watermarking video, text to be used, channel name and timestamp watermarking on/off.

Click on button to start exporting selected channels.



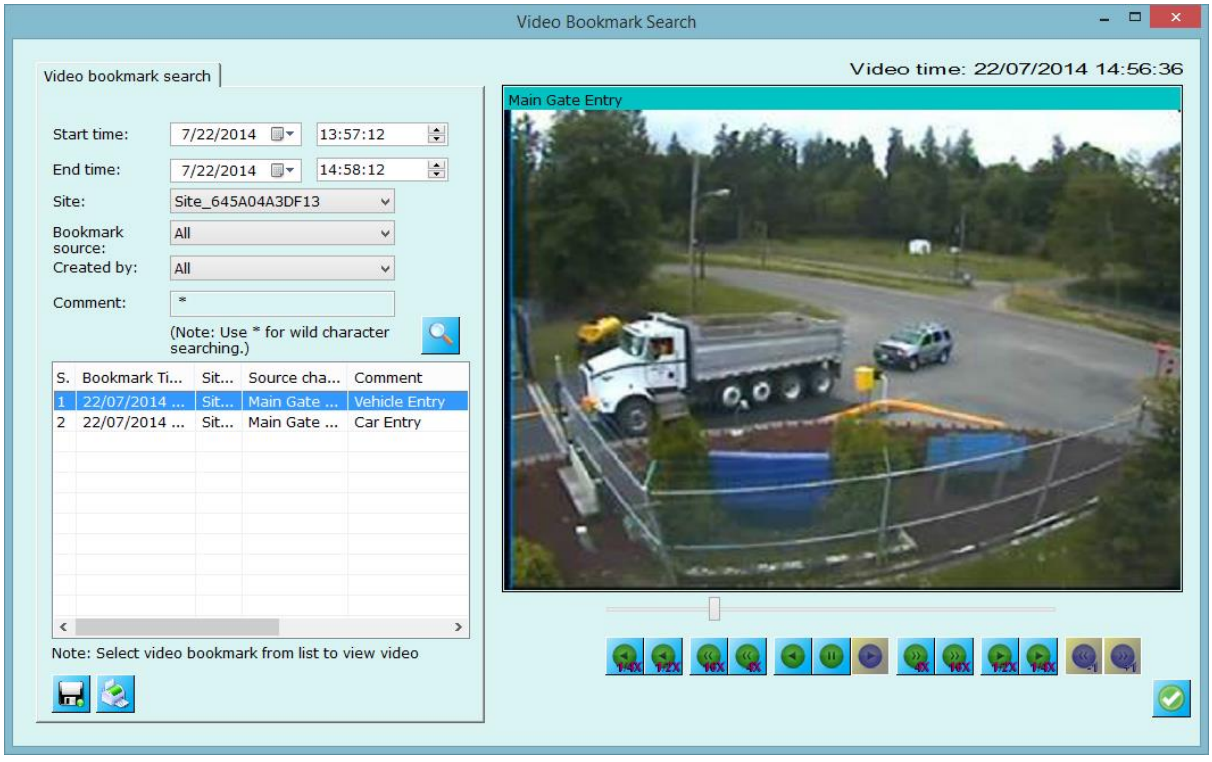
‘WMV-High Quality’ – saves video at high quality. Size of the output file is larger.
‘WMV-Standard Quality’ – saves video at standard quality. Size of the output file is smaller.

4.6 Search bookmarks

Video bookmarked added from video screens can be searched using this screen.
Enter start time and end time for the search.
Select site from the available options.
Select bookmark source (video camera name on which bookmark is created)
Select 'Created by' – user who created video bookmark
Add bookmark comment for which search is to be initiated. Wild card character search is supported so that you can use * to search.

Click on button to search bookmarks.

E.g. all bookmarks with comment starting from 'Vehicle' can be searching using 'Vehicle*' as comment. The application will show all bookmarks within configured start and end time and other parameters whose comment has 'Vehicle' as first word.
You can use * to search all the comments.



Click on any searched video bookmark from the list, corresponding video is played at right hand side control. You can do playback operation on this video. This video will be played in a loop until user pause it or select other video

Use buttons for exporting currently playing bookmark video or to open playback screen to play bookmark video.

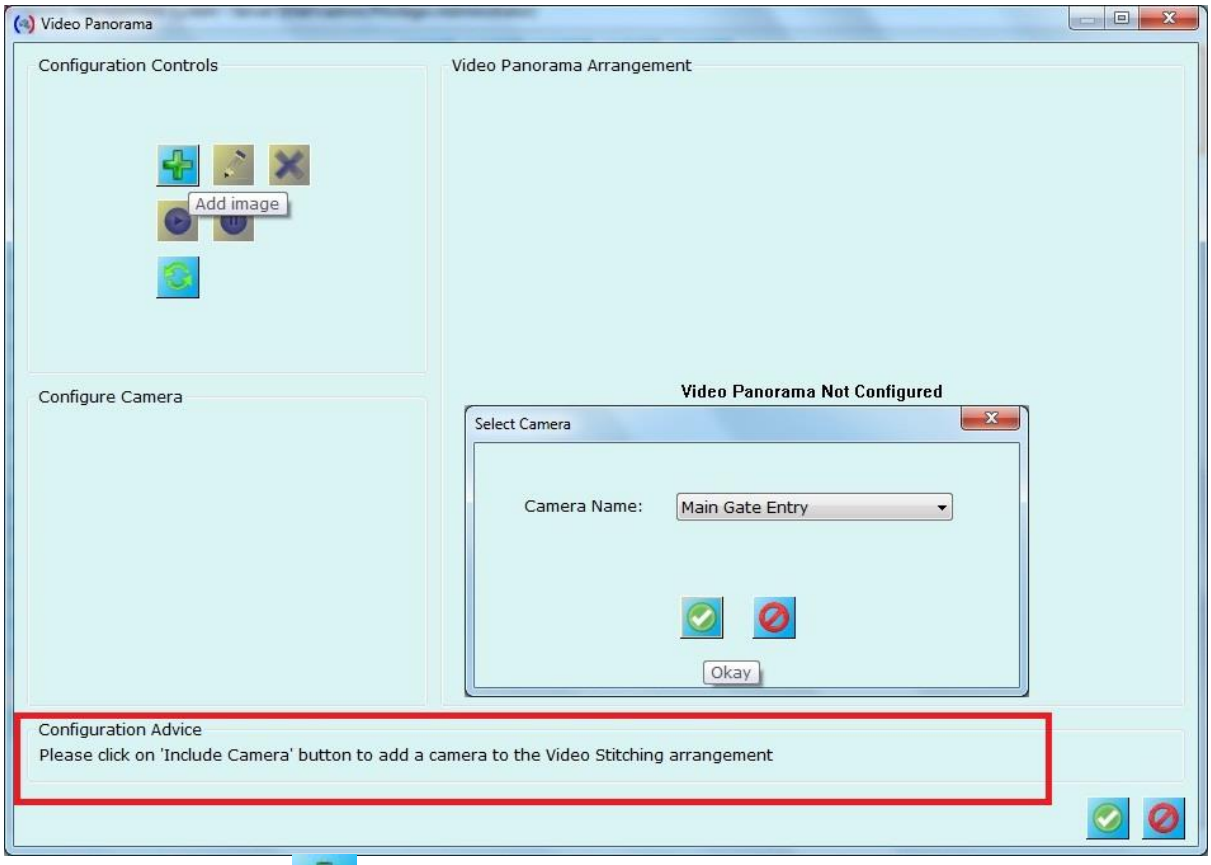
Use buttons to save the searched report to standard format like text, csv or xml and to print the report respectively.

5. Video panorama

This section discusses configuring video panorama and video panorama screen where you can play video panorama on live or playback feeds.

5.1 Video panorama configuration

Click ***Menu: Video Panorama-> Configuration…*** for configuring video panorama for video channels. This will pop up following dialog.



Click on ‘Add image’ button to popup camera selection dialog.

Select camera name and click on ‘Okay’ button.

This adds camera to video panorama.

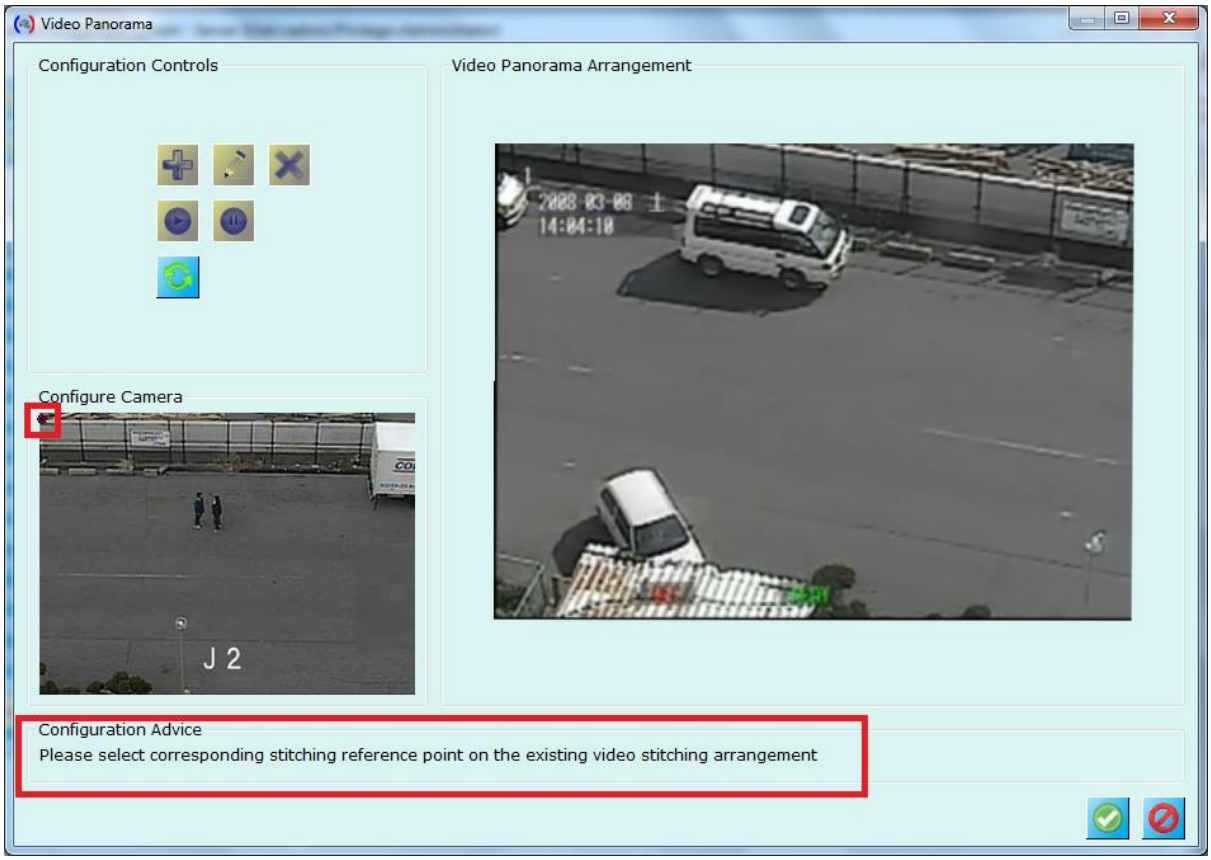
Again add one more camera using ‘Add image’ button to add second camera.

After adding two cameras, you need to select the common points from these cameras.

Please use ‘Configuration advice’ for the next step to do.

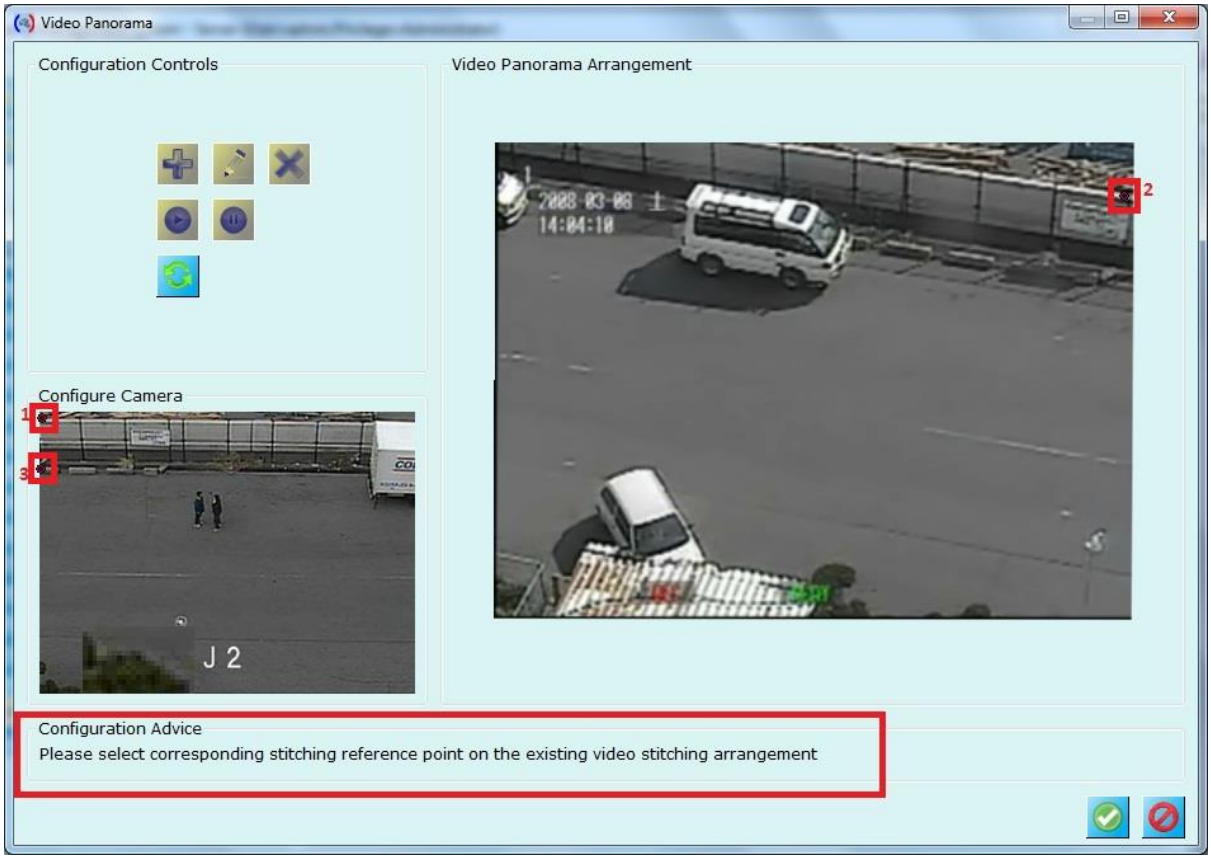
(Continued on next page…)

Following screenshot shows 2 cameras added to video panorama and first stitching point is selected to the ‘Configure Camera image and now dialog is waiting for stitching point selection. (See ‘Configuration advice’).



(Continued on next page…)

Following figure shows corresponding stitching reference point (for reference point **1**) is selected in 'Video Panorama Agreement' section (point marked **2** in the screenshot below). Then dialog asks to select second reference point in 'Configure camera' image (point **3** is selected in the screenshot below)



Now dialog is waiting for selection of corresponding stitching reference point on existing video stitching arrangement (mapping **3rd** point other image). Once you select this point (in **4th** point 'Video panorama arrangement'), the dialog will stich these two images as shown in figure below.

(Continued on next page…)

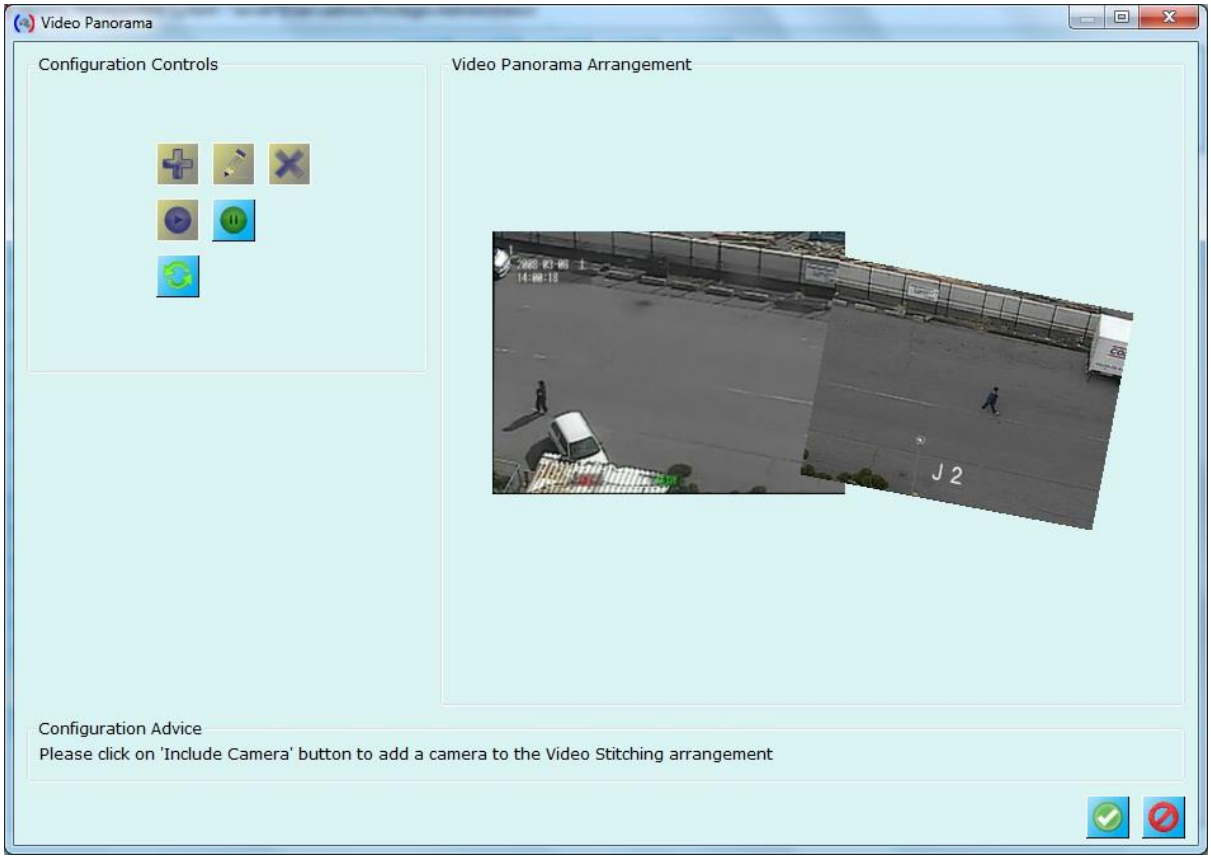


Figure shows video stitching is done with 2 cameras and video panorama is played using button.

To include more cameras, click on pause button and follow same process as described for two cameras stitching.

5.2 Video panorama screen

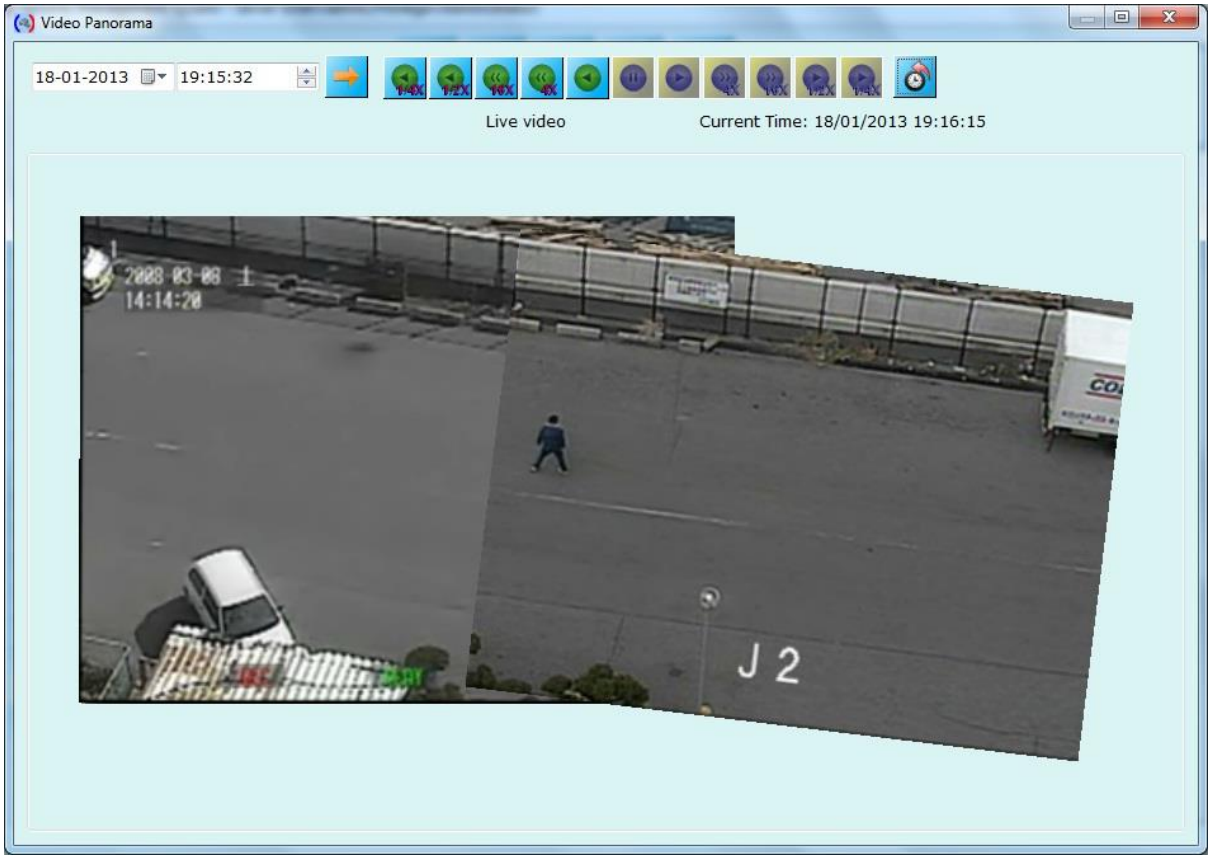
(Menu: Video Panorama->Play panorama Configuration)

Once you have configured adding cameras to video panorama configuration and stitching them (*as described above),* this screen should be used to play panorama on **live feeds as well as playback feeds.**

Use playback control navigation buttons to manage playback speeds. Start playback from specified time by configuring start time and clicking button.

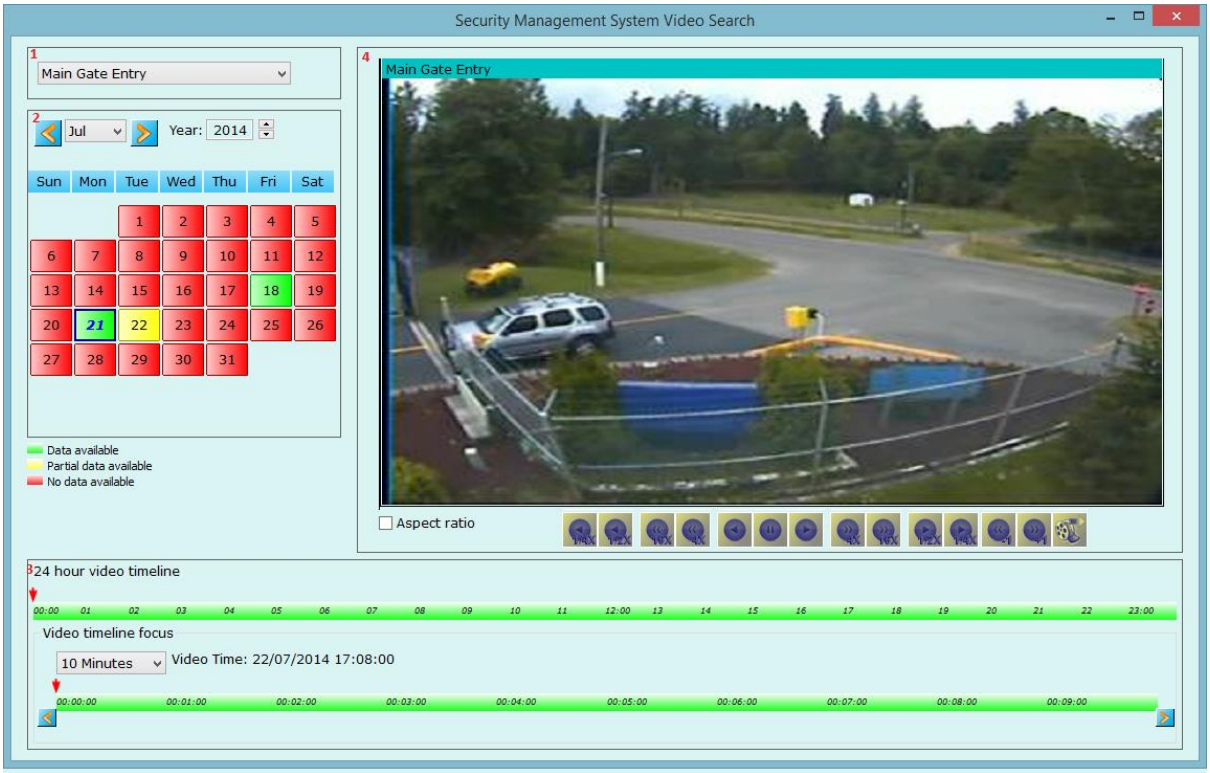
Use button to switch to instant replay mode so that screen will display video panorama for instant replayed videos.

Use button (*not shown in the screen as screen is playing live video)* for switching to live feed from playback feed.



6. Video Search Screen

‘Security Management System’ provides ability to analyze recorded data over the period of time for all video cameras configured in system also you can view playback for selected camera and export video data.



Camera Selection

You can select camera from dropdown list for which you want to analyze the recording history

Calendar View

Calendar view provides entire month recording history for selected channel and selected month.
Calendar view indicate recording history in following indicators,

Select on ‘Day’ in calendar to view details of selected day in 24 hour timeline.

Green status of day in calendar view indicates video recording is available for entire day.
Red status of day in calendar view indicates video recording is not available for entire day.

Use ‘Next Month’ and ‘Previous Month’ months to navigate to next and previous months.

24 Hour Timeline view

24 hour timeline view displays video recording data for selected day from calendar view.
‘Video timeline focus’ display minute details up to 10 and 30 minutes.

Click on timeline to view recorded data for selected time.

Video Playback View

You can view and export recorded data from playback view.