

Security Management System Configuring ‘Infinova V4117X IP CCTV Keyboard’ and ‘Infinova 2117 IP CCTV Keyboard (New Model)’

(A) Introduction

This document explains the configuration of following CCTV keyboard models for use in the Security Management System.

- (a) ‘Infinova V4117X IP CCTV Keyboard’
- (b) ‘Infinova V2117 IP CCTV Keyboard (New Model)’

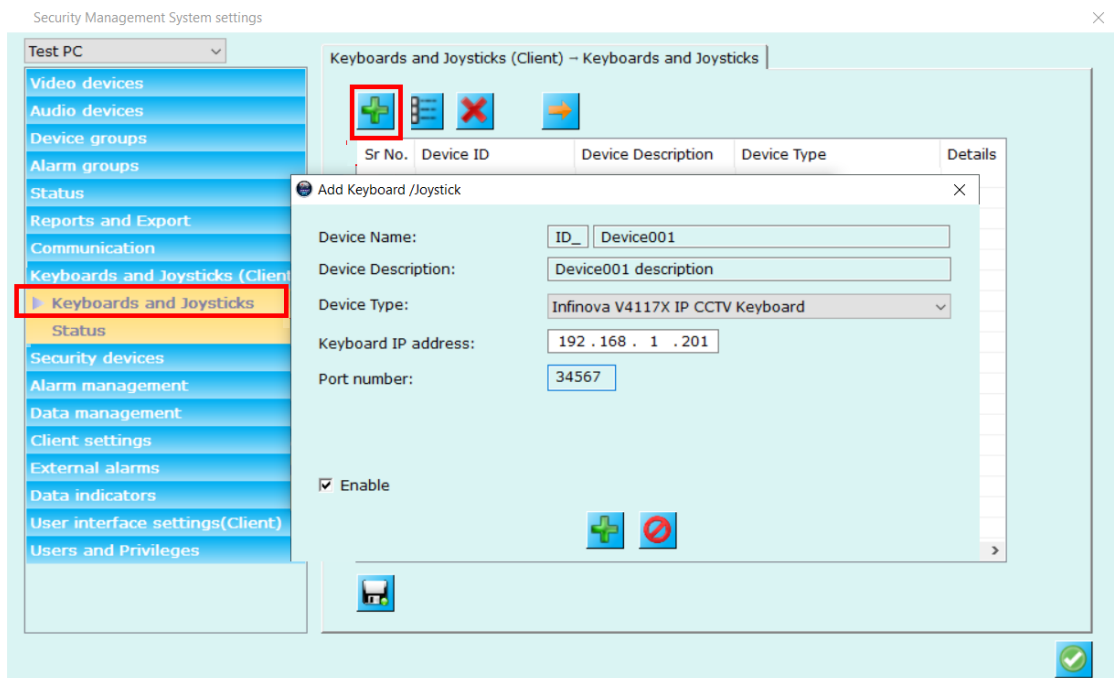
The CCTV Keyboard can be configured for the Security Management System server software or for the Security Management System client software.

Notes –

1. CCTV Keyboard can be configured with only one software instance at a time. Hence it can be either Security Management System server software or Security Management System client software.
2. During the deployments, no videos are expected to be opened in the server software, hence during the deployments, the CCTV Keyboard is expected to be configured for the Security Management System client software. Hence this document explains the steps for using CCTV Keyboard with Infinova 2217 VMS Client software
3. If CCTV Keyboard is expected to be used with multiple Security Management System client software instances (which would be installed on multiple client workstation computers), multiple CCTV Keyboard devices need to be included in the solution; one for each client workstation computer.

(B) Configuring 'Security Management System Client' software

1. Open and connect 'Security Management System Client' software to the 'Security Management System Server' software.
2. Click on the 'Settings->Settings' menu. This will pop up the 'Settings dialog box'.
3. Navigate to the 'Keyboards and Joysticks (Client) -> Keyboards and Joysticks' page from the left-hand side navigation menu.
4. Click on the add button. This will pop up the 'Add Keyboard / Joystick' dialog box.



5. On the 'Add Keyboard/Joystick' dialog box,

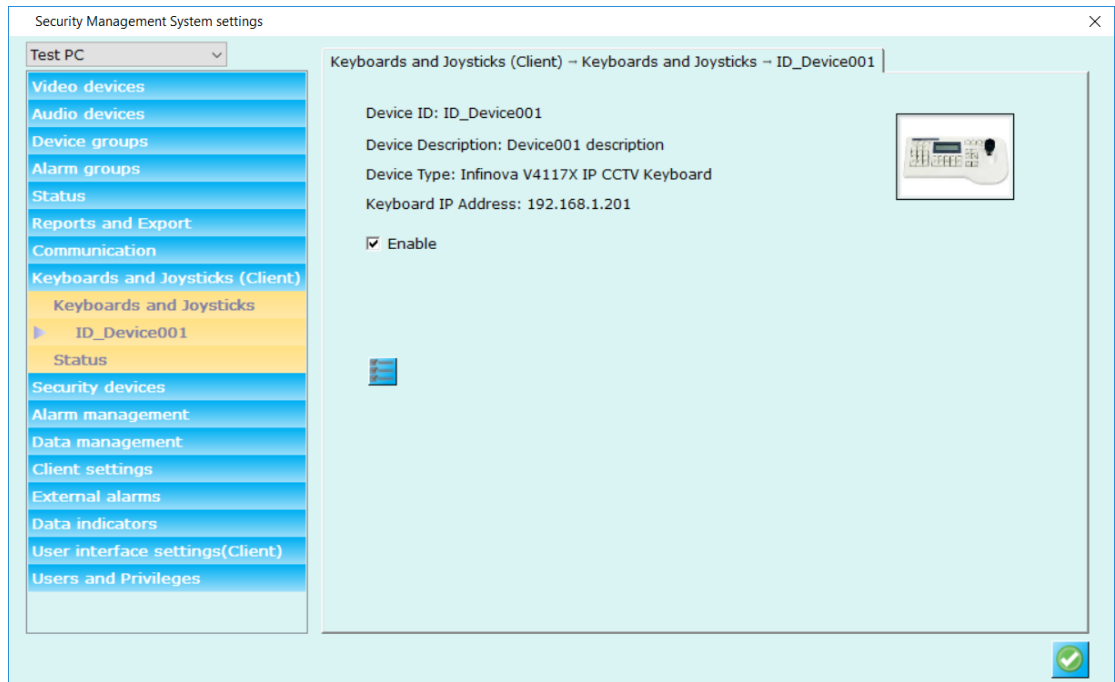
Please type the 'Device Name', next to the 'ID_' textbox; it can contain any characters or digits. Usually, it's a short ID string. The 'Device Name' should be unique for every new keyboard/Joystick added to the system. You can also keep it default, as the software generates unique names automatically for every new device added

Please enter short description.

Please select 'Device Type' as 'Infinova V4117X IP CCTV Keyboard' or 'Infinova 2217 IP CCTV Keyboard (New Model)' from the available options and enter IP address and port number of CCTV keyboard.

6. Click on add button to complete adding the keyboard into the system, and to close the 'Add Keyboard/Joystick' dialog box.

'Security Management System Client' software will show the link related to the newly added device in the left-side navigation menu.



7. The CCTV keyboard is now configured and can be used with the 'Security Management System Client' software.

(C) Using the Keyboard

1. CCTV keyboard control mode

CCTV Keyboard can be used in one of the following three control modes –

- (a) ‘Camera pan, tilt and zoom’ mode – in this mode, the joystick controls the pan, tilt and zoom for the selected camera. This is the default mode.
- (b) ‘Digital pan, tilt, and zoom’ mode – in this mode, the joystick controls the pan, tilt and zoom – digitally – for the selected camera.
- (c) ‘Screen/grid selection and invoke camera’ mode – in this mode, the joystick is used to select video screens and to select video grid panel. This mode also supports ‘invoking target camera’, which indicates starting video display of target camera in currently selected video grid panel.
- (d) ‘Playback mode’ – in this mode, the joystick is used to control playback speed and direction.

To change the ‘CCTV keyboard control mode’ to ‘Camera pan, tilt and zoom’; please press key number ‘1’ and then press button ‘PLAY’.

To change the ‘CCTV keyboard control mode’ to ‘Screen/grid selection and invoke camera’; please press key number ‘2’ and then press button ‘PLAY’.

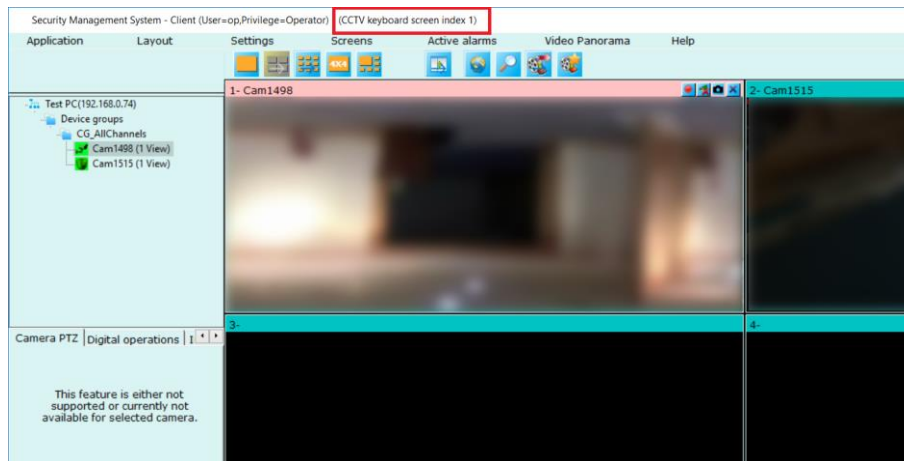
To change the ‘CCTV keyboard control mode’ to ‘Digital pan, tilt, and zoom’; please press key number ‘3’ and then press button ‘PLAY’.

To change the ‘CCTV keyboard control mode’ to ‘Playback mode’; please press key number ‘4’ and then press button ‘PLAY’.



2. Select video screen – Using CCTV keyboard buttons

Every video screen in ‘Security Management System Client’ software has unique CCTV index associated with it. This index is mentioned onto the title bar of the video screen.



To select video screen, type its index number using number keys and the press ‘MON’ key. The video screen will get selected. The selected video screen window will become active window on the display / monitor.

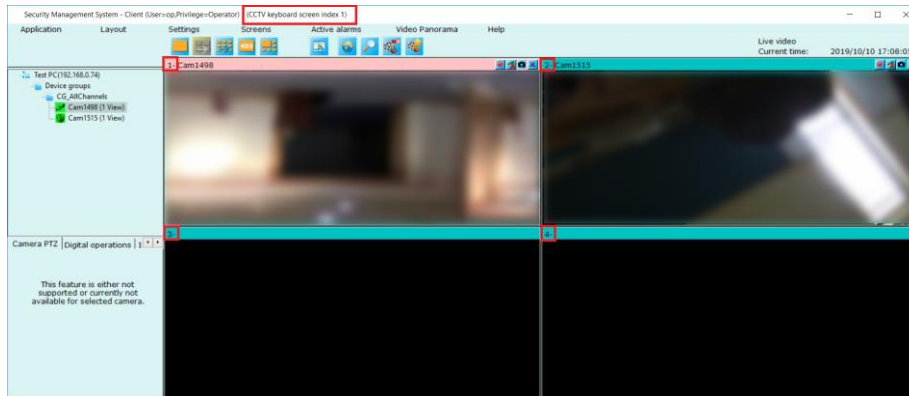
Please note that, to select any video screen, it has to be already opened by the user. This function does not open the requested video screen, instead it will pop up the error message which will be auto closed in sometime.

E.g., to select main screen in the client software, press number 1 in the keyboard and then press 'MON' key.



3. Select video grid panel / Select camera

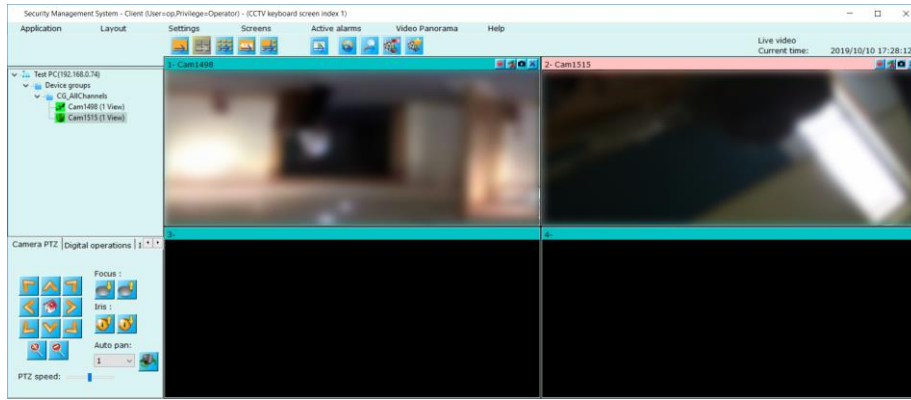
Each video window in the currently selected screen is numbered in the video screen. To select any camera, user needs to type the number and press ‘CAM’ button. Figure below shows four video windows with numbers written onto their title bar (see red color highlighted rectangles in below image).



E.g. Currently, video grid panel 1 (which displays camera ‘Cam1498’) is selected. Selected video grid panel title is RED colored.

To select video grid panel 2 (which displays camera named ‘Cam1515’), press number key 2 and then press CAM button.





4. Screen/grid selection – Using joystick

Note – this feature is available only when the ‘CCTV keyboard control mode’ is set to ‘Screen/grid selection and invoke camera’.

Please refer to the ‘CCTV keyboard control mode’ section from this document, for details about setting the ‘Screen/grid selection and invoke camera’.

Selecting next video screen –

Use joystick knob and rotate it in **clockwise direction** to select next video screen. Release the knob to stop changing the selection and to finalize the currently selected screen.

Selecting previous video screen –

Use joystick knob and rotate it in **counter-clockwise direction** to select previous video screen. Release the knob to stop changing the selection and to finalize the currently selected screen.

Selecting video grid panel –

Use joystick knob and move to right / left / up or down, to select video grid panel. Release the knob to stop changing the selection and to finalize the currently selected video grid panel.



5. Camera pan, tilt, and zoom control

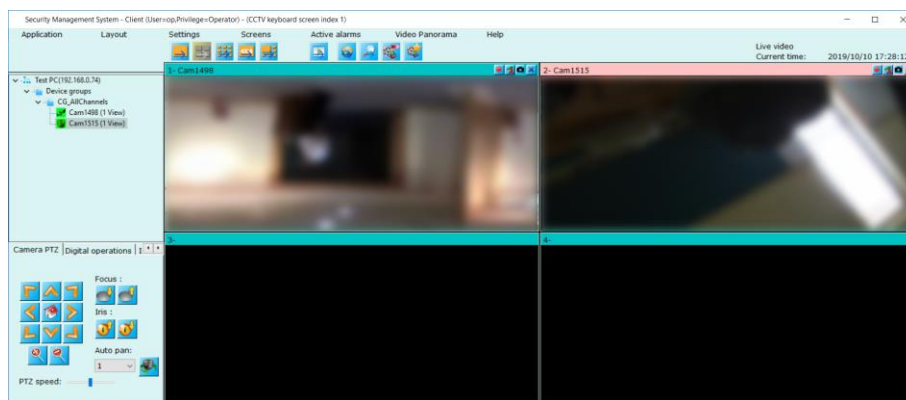
Note – this feature is available only when the ‘CCTV keyboard control mode’ is set to ‘Camera pan, tilt and zoom’.

Please refer to the ‘CCTV keyboard control mode’ section from this document, for details about setting the ‘CCTV keyboard control mode’.

Camera PTZ control will work on the currently selected camera from the currently selected video screen in the ‘Security Management System Client’ software.

The selected camera is shown in the light RED color.

E.g., Camera ‘Cam1515’ is the currently selected camera in the currently selected video screen.



Camera Pan –

Use joystick knob and move it to left or right direction to move or pan camera in left or right direction

Camera Tilt –

Use joystick knob and move it to up or down direction to move or tilt camera in up or down direction

Camera Pan-Tilt –

Use joystick knob and move it diagonally to left-up or left-down or right-up or right-down directions to move camera diagonally in the desired direction.

Zoom in-

Use joystick knob and rotate it in **clock wise** direction to zoom-in in the selected camera.

Zoom out –

Use joystick knob and rotate it in **counter clock wise** direction to zoom-out in the selected camera.



6. Digital pan, tilt, and zoom control

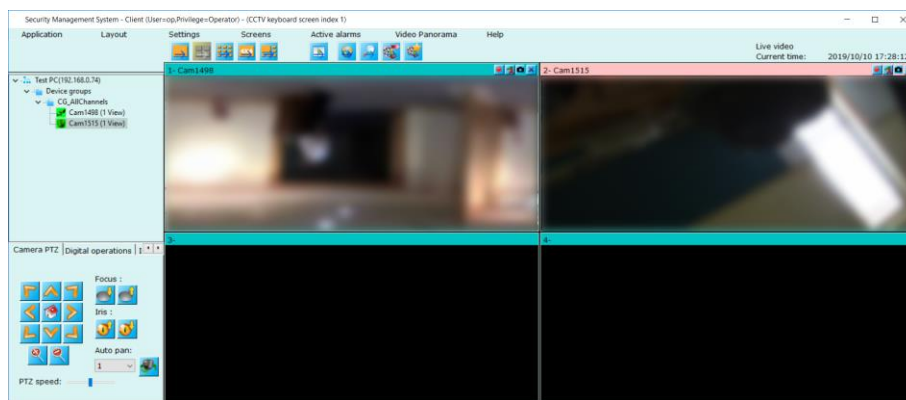
Note – this feature is available only when the ‘CCTV keyboard control mode’ is set to ‘Digital pan, tilt and zoom’.

Please refer to the ‘CCTV keyboard control mode’ section from this document, for details about setting the ‘CCTV keyboard control mode’.

Digital PTZ control will work on the currently selected camera from the currently selected video screen in the ‘Security Management System Client’ software.

The selected camera is shown in the light RED color.

E.g., Camera ‘Cam1515’ is the currently selected camera in the currently selected video screen.



This feature will control video display digitally. To start with, you should first use zoom in feature and then you can control zoomed in video further using pan, tilt and zoom operations.

Zoom in-

Use joystick knob and rotate it in **clock wise** direction to zoom-in video display for the selected camera.

Camera Pan –

Use joystick knob and move it to left or right direction to move or pan video display in left or right direction

Camera Tilt –

Use joystick knob and move it to up or down direction to move or tilt video display in up or down direction

Camera Pan-Tilt –

Use joystick knob and move it diagonally to left-up or left-down or right-up or right-down directions to move video display diagonally in the desired direction.

Zoom out –

Use joystick knob and rotate it in **counter clock wise** direction to zoom-out in the selected video display.



7. Invoke camera

Note – this feature is available only when the ‘CCTV keyboard control mode’ is set to ‘Screen/grid selection and invoke camera’.

Please refer to the ‘CCTV keyboard control mode’ section from this document, for details about setting the ‘Screen/grid selection and invoke camera’.

This feature uses the ‘camera number’ from the “Camera Number for ‘CCTV Keyboard - Invoke Camera’” configuration processed in ‘Security Management System Server’ software.

The “Camera Number for ‘CCTV Keyboard - Invoke Camera’” configuration involves assigning unique ‘camera number’ to each camera added to ‘Security Management System Server’ software.

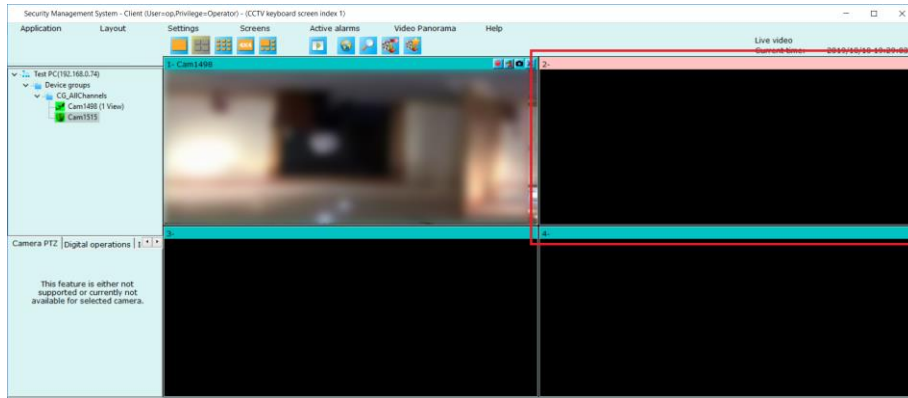
By default, ‘camera number’ is NOT assigned to any of the cameras added to ‘Security Management System Server’ software. This one-time configuration needs to be done for each camera added to ‘Security Management System Server’ software. The configuration is described in the “Camera Number for ‘CCTV Keyboard - Invoke Camera’” section of this document.

Note – before using this feature from CCTV Keyboard, please configure ‘camera number’ for target cameras / all cameras in the ‘Security Management System Server’ software.

‘Invoking target camera’ indicates starting video display of target camera in currently selected video grid panel.

Please select the video screen and the video grid panel in it.

E.g., Image below shows selected video grid panel which does not have any camera assigned to it, and hence is not displaying video

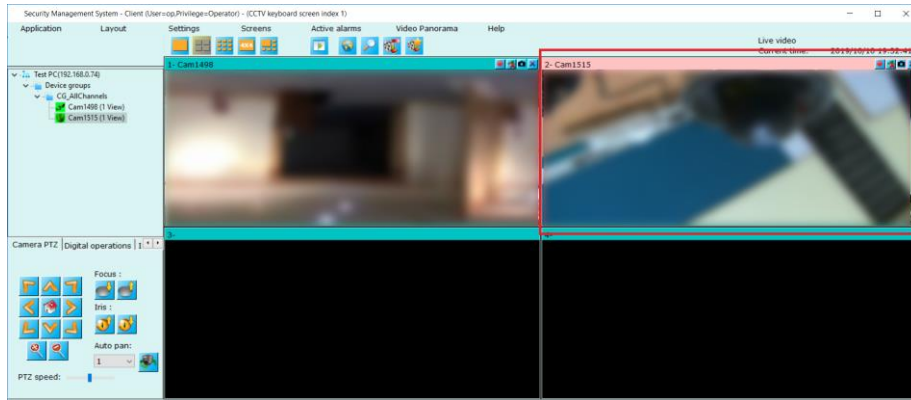


To invoke camera, type 'camera number' ("Camera Number for 'CCTV Keyboard - Invoke Camera'") for the target camera and press 'CAM button'.

If 'camera number' '2' is configured for 'Cam1515' in 'Security Management System Server' software, press '2' key on the keyboard and then press 'CAM' button.



The camera 'Cam1515' will be assigned to the selected video grid panel and video for 'Cam1515' will be displayed in the selected video grid panel



8. Clear input

Number key will be used to control various operations, if you want to clear incorrect values and start a fresh, you can press 'ESC' button. This will clear all the number input currently entered by the user and allow to start a fresh with inputting numbers



9. Camera FOCUS control

For the currently selected camera -

Press FOCUS+ button – to control focus near.

Press FOCUS- button – to control focus far.

Press number key 107 and then press 'PLAY' button to control focus auto



10. Camera IRIS control

For the currently selected camera -

Press IRIS+ button – to control open iris.

Press IRIS- button – to control close iris.

Press number key 106 and then press 'PLAY' button to control focus auto



11. Snapshot camera

For currently selected camera, press 'CAPTURE' button, to take snapshot and save to the snapshot directory.

Alternatively, press numbers 110 and then press 'PLAY' button to take snapshot of currently selected camera and save to the snapshot directory.



12. Snapshot all cameras

For all currently opened cameras in the selected screen, press number 115 and then PLAY.

13. Move to 'Home' preset

To move the currently selected camera to HOME preset, press number 122 and then PLAY.

14. IR On/Off/Auto

To control the IR function of the currently selected camera -

For IR ON – use key number combination of ‘101’ and press ‘PLAY’ button

For IR OFF – use key number combination of ‘101’ and press ‘STOP’ button

For IR AUTO – use key number combination of ‘102’ and press ‘PLAY’ button



15. Output1 On/Off

To control the 'Output relay 1' of the currently selected camera -

For Output1 ON - use key number combination of '103' and press 'PLAY' button

For Output1 OFF - use key number combination of '103' and press 'STOP' button



16. Wiper On/Off

To control the wiper function of the currently selected camera -

For Wiper ON - use key number combination of '104' and press 'PLAY' button

For Wiper OFF - use key number combination of '104' and press 'STOP' button



17. Wash-wipe Activate/Abort

To control the wash-wipe function of the currently selected camera -

For Wash-wipe Activate –

Use key number combination of '105' and press 'PLAY' button

For Wash-wipe Abort –

Use key number combination of '105' and press 'STOP' button



18. High resolution window Open/Close

To open high-resolution window associated with currently selected camera –

Use key combination of ‘201’ and press ‘PLAY’ button

To close high-resolution window-

Use key combination of ‘201’ and press ‘STOP’ button.



19. Move to preset

‘Security Management System’ software uses ‘Preset name’ while adding new preset for any camera. This is a text string.

CCTV Keyboard however uses ‘Preset index’ for ‘Move to preset’ function.

Hence to use ‘Move to preset’ feature from CCTV Keyboard, the ‘Preset names’ in the ‘Security Management System’ software should be configured, as per the pre-defined preset naming conventions for preset names.

Please refer to the ‘Security Management System - Preset Name and Preset Index’ section from this document for details about the pre-defined preset naming conventions for preset names.

Note – only the presets matching the pre-defined preset naming conventions for preset names, can be accessed from ‘CCTV Keyboard’, ‘Move to preset’ feature

To move the currently selected camera to target preset –

- (a) Please extract the ‘preset index’ number, from the ‘preset name’ of the target preset defined for the currently selected camera.
- (b) On the CCTV Keyboard, use the keyboard buttons to type the extracted ‘preset index’ number, and press the ‘PRESET’ button



20. Global home position

‘Global home position’ feature is targeted to all cameras accessible from the ‘Security Management System Client’ software. This means all cameras which are listed in the camera list tree in any video screen.

To move all the cameras to ‘Home’ preset, press key number combination of ‘123’ and the press ‘PLAY’ button.



21. Run Tour

To run first defined tour for selected camera, press key number combination of '108' and then press PLAY button.

To stop running tour, press key combination of '108' and then press STOP button.



22. Acknowledge alarm

Press key number combination “111” and press button ‘PLAY’ to acknowledge currently active alarm.



23. Acknowledge all alarms

Press key number combination “112” and press button ‘PLAY’ to acknowledge all active alarms in the system.



24. Image property – color

Press key number combination “113” and press button ‘PLAY’ to change the video image for selected camera to **color** image



25. Image property – black and white

Press key number combination “114” and press button ‘PLAY’ to change the video image for selected camera to **black and white** image



26. Layout change – 1x1

Press key number combination '202' and press key 'PLAY' to switch to 1x1 video grid layout mode for selecting video.



27. Layout change – Reset

Press key number combination '203' and press key 'PLAY' to reset video grid layout mode from 1x1 to previously selected video grid layout.



28. Playback control – start playback

To start playback for selected screen, press key number combination “301” and press button ‘PLAY’.

Playback from already configured timestamp in the user interface will be started.



29. Playback control – pause playback

To pause playback for selected screen, press key number combination “302” and press button ‘PLAY’



30. Playback control – start playback with time

Note – this feature is available only when the ‘CCTV keyboard control mode’ is set to ‘Playback mode’. To change the ‘CCTV keyboard control mode’ to ‘Playback mode’; please press key number ‘4’ and then press button ‘PLAY’.

To start playback for selected screen, you can define playback start time using CCTV keyboard using PLAY key. Playback timestamp should be given in YYYYMMDDHHmmSS format where -

YYYY – year

MM – month

DD – day

HH – hour

mm – minute

SS – seconds

After each field you should press PLAY button. Pressing PLAY button after seconds field will start playback if specified timestamp is valid timestamp.

E.g., If you want to start playback from 2023-01-13 12:23:02:55 seconds, following are the key combination you should use

2023<PLAY>01< PLAY >13< PLAY >12<PLAY>23< PLAY >02< PLAY >55< PLAY >

Please note:

1. If you need to correct current entry, press ‘ESC’ button – which will clear last entry.
2. Any invalid entry like invalid year, invalid month, invalid day, invalid hour etc. will be cleared automatically when you press ‘PLAY’ button. You will have to re-enter the invalid entry.

31. Playback control – speed and direction

Note – this feature is available only when the ‘CCTV keyboard control mode’ is set to ‘Playback mode’. To change the ‘CCTV keyboard control mode’ to ‘Playback mode’; please press key number ‘4’ and then press button ‘PLAY’.

Use joystick to control playback speed and directions as described below.

Only horizontal movements of joystick will be used to control speed and direction.

Use joystick knob and move it to **right** direction to control speed in **forward** direction. Speed can be set from quarter X, half X, 1X, 4X, 16X as per joystick movements. Greater the movement, larger the speed.

Use joystick knob and move it to **left** direction to control speed in **reverse** direction. Speed can be set from quarter X, half X, 1X, 4X, 16X as per joystick movements. Greater the movement, larger the speed.

Stop joystick movement and take it to zero position, playback will be **paused**.



32. Playback control – frame by frame

Note – this feature is available only when the ‘CCTV keyboard control mode’ is set to ‘Playback mode’. To change the ‘CCTV keyboard control mode’ to ‘Playback mode’; please press key number ‘4’ and then press button ‘PLAY’.

This command works only when video is in playback paused mode and video grid layout is 1X1.

Pause video playback using any control (user interface, CCTV keyboard command or CCTV joystick).

Select any video and change video grid layout to 1X1 mode and then you can control playback ‘frame by frame’ in forward or reverse direction using CCTV keyboard commands

Press IRIS + to display next frame.

Press IRIS - to display previous.

Use above keys to go to desired playback direction.



(F) Keyboard/Joystick – Status

Status of all the commands executed for the added keyboards and joysticks can be viewed using ‘Settings->Settings’ menu. Select ‘Keyboards and Joysticks (Client) -> Status’ tab.

The screenshot shows the 'Infinova(R) 2217 Security Management System settings' window. The left sidebar contains a navigation menu with the following items: Site_645A04ABAEF6, Video devices, Audio devices, Device groups, Status, Reports and Export, Keyboards and Joysticks (Client), Keyboards and Joysticks, ID_KBD000, Status (selected), Security devices, Alarm management, Client settings, User interface settings(Client), and Users and Privileges. The main content area is titled 'Keyboards and Joysticks (Client) - Status' and contains a table of logs.

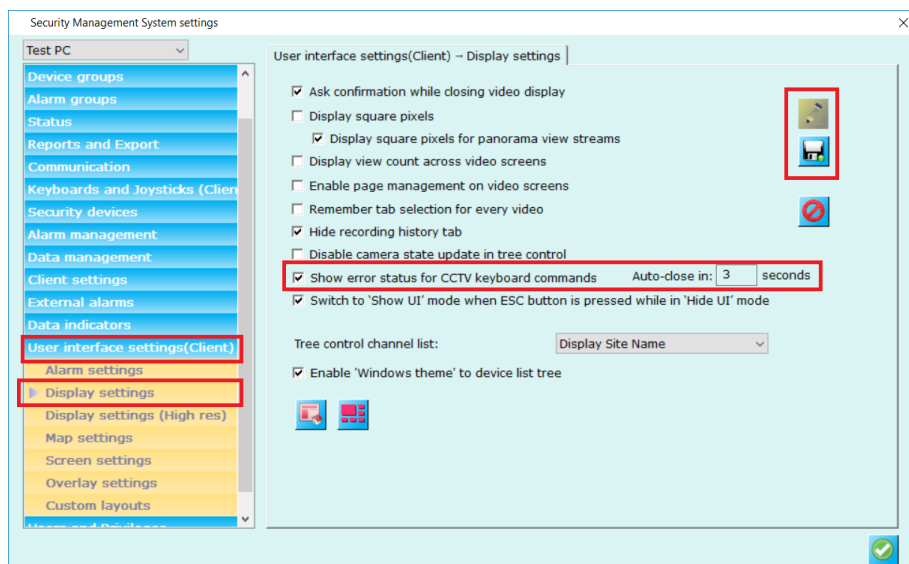
Timestamp	Command	Parameter	Status	Comment
2014/07/02 13:15:37	PTZ		Error	Invalid se
2014/07/02 13:15:37	PTZ		Error	Invalid se
2014/07/02 13:15:37	PTZ	Move left	Error	Invalid se
2014/07/02 13:16:06	Select live video screen	1	Success	
2014/07/02 13:16:11	Select camera	2	Success	
2014/07/02 13:16:13	Select camera	1	Success	
2014/07/02 13:16:14	PTZ	Move left	Success	
2014/07/02 13:17:32	Select live video screen	1	Success	
2014/07/02 13:28:23	PTZ	Move right	Success	
2014/07/02 15:09:14	PTZ	Move right	Error	Invalid se
2014/07/02 15:09:20	Select live video screen	1	Success	
2014/07/02 15:09:22	Select camera	1	Success	
2014/07/02 15:09:22	PTZ	Move right	Success	
2014/07/02 15:41:40	Select camera	2	Success	

(G) Keyboard/Joystick – Error Status Window

‘Security Management System Client’ software can display error status window when any error is observed from operations from CCTV keyboard.

This error status window can be ‘Enabled’ and duration for which error status should be displayed can be configured.

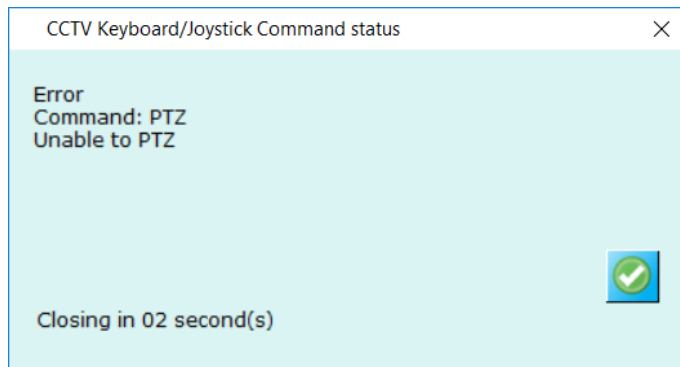
1. In the ‘Security Management System Client’ software, please click on the ‘Settings’ menu from main screen and click on the ‘Settings’ sub-menu.
2. This will open the ‘Settings’ dialog box.
3. Please navigate to ‘User interface settings (Client) -> Display settings’ page from the left hand side navigation panel.



4. Enable checkbox for ‘Show error status for CCTV keyboard commands’ and enter time duration (in seconds) for which the error status window should be displayed under ‘Auto-close in’.
5. Click on the ‘Save’ button to save the changes to the configuration.
6. Close the ‘Settings’ dialog box.

After this configuration, whenever error is observed in any operation from CCTV keyboard, ‘Security Management System Client’ software will display error status window.

For example, if user is trying to PTZ camera which does not support PTZ; the error status window will be displayed as follows -

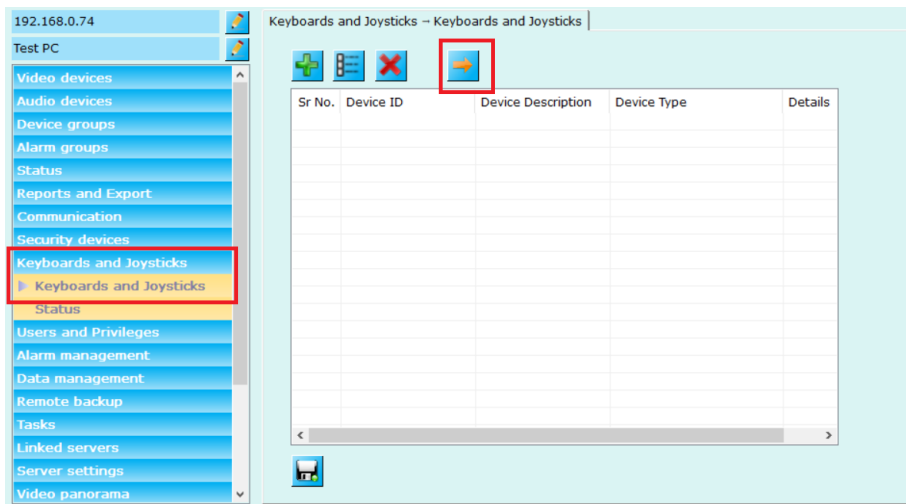


(H) Camera Number for 'CCTV Keyboard - Invoke Camera'

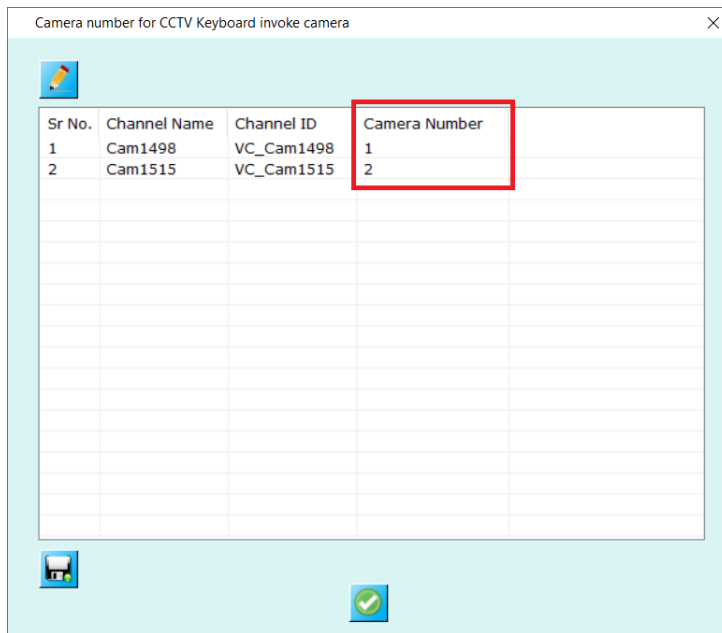
For using 'Invoke camera' feature from CCTV keyboard, unique 'Camera number' needs to be assigned to each camera. This can be configured from 'Security Management System Server' software.

This section describes the steps to configure 'Camera number' for 'CCTV keyboard – Invoke camera' feature.

1. In 'Security Management System' server software, navigate to the 'Keyboards and Joysticks -> Keyboards and Joysticks' page from the left side navigation panel
2. Click on the 'Camera number for CCTV Keyboard invoke camera...' button



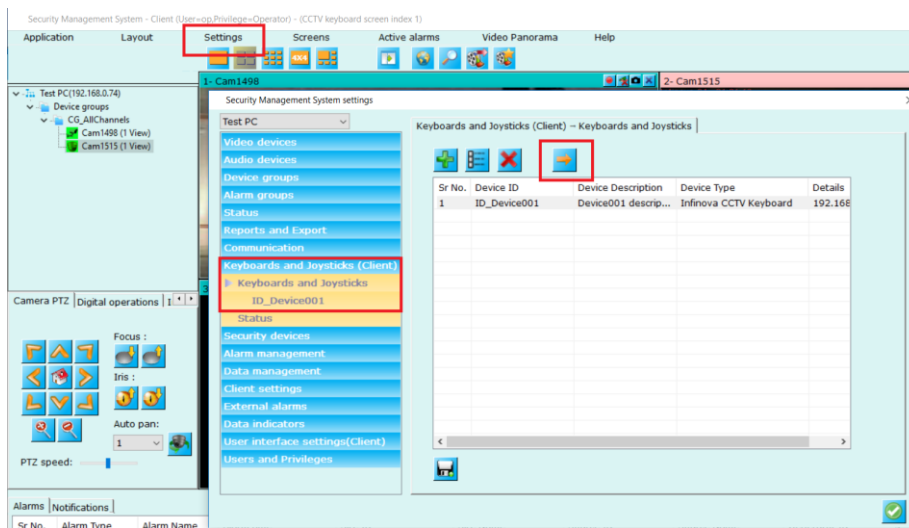
3. This will open 'Camera number for CCTV Keyboard invoke camera' dialog box.
4. Select a camera from the list and click on the 'Change camera number' button.



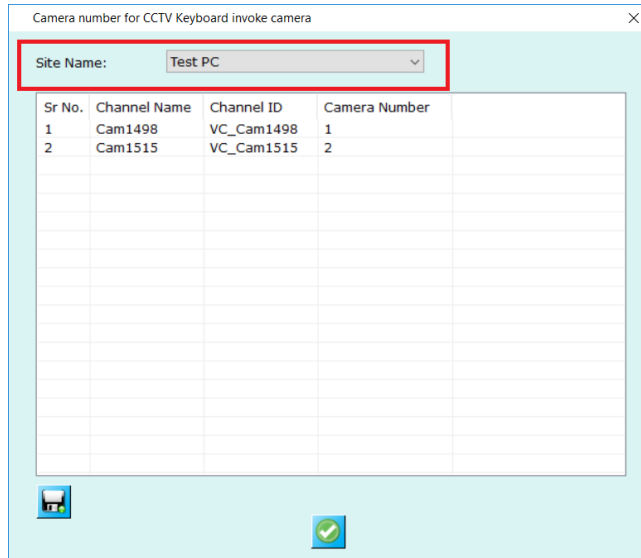
8. Click on the 'Ok' button to close the 'Camera number for CCTV Keyboard invoke camera' dialog box

The camera numbers configured in 'Security Management System Server' software will get reflected in the connected 'Security Management System Client' software too.

1. To view the camera numbers in the 'Security Management System Client' software, Click on the 'Settings->Settings' menu.
2. This will pop up the 'Settings' dialog box.
3. Navigate to the 'Keyboards and Joysticks (Client) -> Keyboards and Joysticks' page.



4. Click on the 'Camera number for CCTV keyboard invoke camera...' button.
5. This pop up the 'Camera number for CCTV keyboard invoke camera' dialog box.



6. Select 'Site Name' to view list of cameras and associated camera numbers, for the selected site

(I) Security Management System - Preset Name and Preset Index

To use 'Move to preset' feature from CCTV Keyboard, the 'preset names' for presets configured for the PTZ cameras should follow pre-defined preset naming convention.

Following is the preset naming convention

'P<XXX>-<Text>' – where <XXX> is any number and <Text> is any text

Example 1 – P1-Lobby is a valid preset name

Example 2 – P21-Parking is a valid preset name

Example 3 – P1921-Floor1 is a valid preset name

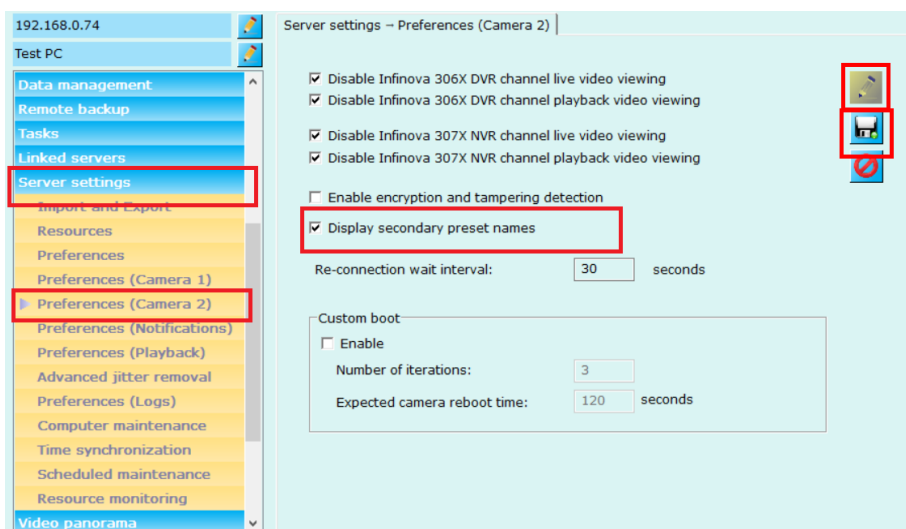
Note – there should be no 0 characters before the preset number, in the preset name text configured in Infinova 2217 VMS server software.

Example – 'P02-Basement' is incorrect preset name. It should be 'P2-Basement'

'Security Management System Server' software provides 'Preset secondary name' feature; which may be useful in easier management of preset names to follow the pre-defined preset naming convention

Following are the steps to configure 'Preset secondary names'

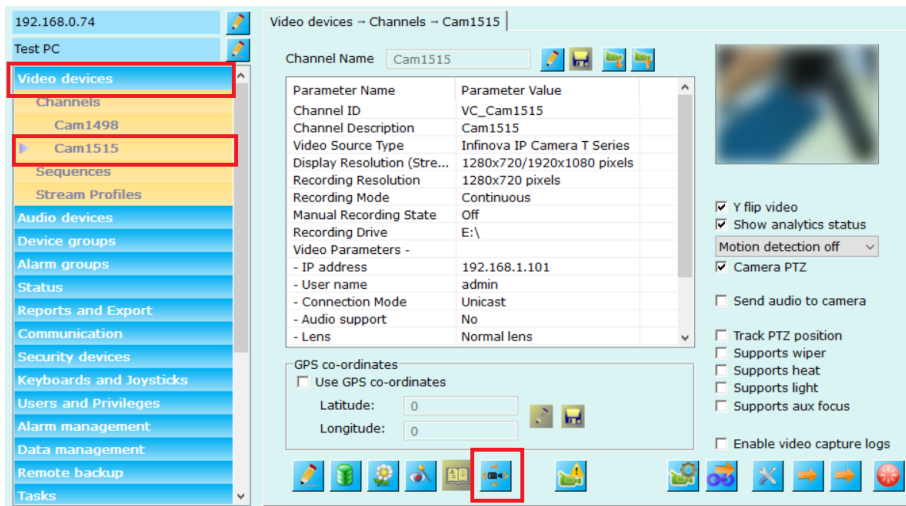
1. Preset 'Secondary name' feature is disabled by default. It needs to be enabled in the 'Security Management System Server' software. To enable it, please access 'Server settings->Preferences (Camera 2)' page from the left side navigation panel.



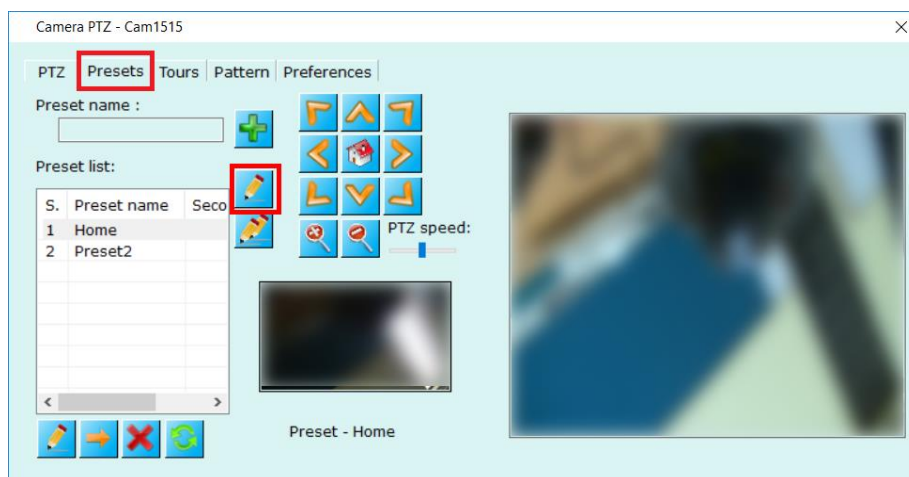
2. Click on the 'Edit' button to enable the GUI

Enable 'Display preset secondary names' check-box
Click on the 'Save' button to save the settings

3. Preset secondary names are configured for one camera at a time. Please navigate to the camera details page from the left side navigation panel 'Video devices -> Channels -> <Camera name>'. The <Camera name> is the camera name of the target camera.



4. Click on 'Camera PTZ...' button and select 'Preset' tab.



5. Select a preset from the list of presets and click on 'Change secondary name for selected preset...' to set secondary name.
6. This will pop up the 'Edit Secondary Name for Preset' dialog box

Edit Secondary Name for Preset



Preset Name: Home

Secondary Name: P1-Home

Note:
Secondary name format 'P<XXX>-<Text>' where
<XXX> is any number and <Text> is any text
There should be no 0 characters before the number.

Example:
Example 1: 'P1-Lobby' is a valid name
Example 2: 'P02-Parking' is a invalid name, it should be
'P2-Parking'

Secondary Name can be kept blank to reset it

7. Type the 'Secondary name'. The preset secondary name should follow the preset naming convention.
Click 'Okay' button to save the secondary name.
8. Please follow the same steps to set 'Preset secondary names' for other presets.
9. Alternatively, click on 'Change secondary names for all presets' button to automatically set secondary names for all available presets.