

KEDACOM

VMS User Guide

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About This Document

Intended Audience

This document is intended for the personnel who:

- Work with the Client Unit (CU)
- Know video surveillance basics

Document Versions

Version 02 (2016-03)

This is a draft.

Compatibility

The following table provides the products and VMS software version to which this document applies.

Product	KDM2801H-G2
VMS Software Version	V2R2B3SP1

Version 01 (2015-06)

This is a draft.

Compatibility

The following table provides the products and VMS software version to which this document applies.

Product	KDM2801H-G2
VMS Software Version	V2R2B2SP2

1 System Summary

To deploy a complete video surveillance system, you need to get cameras, VMS, storage systems, and VMS clients ready.

Camera

Camera is mainly responsible for audio, video and warning information collection, encoding, decoding and storing. It can accept control commands from the network.

Surveillance devices include: encoders, decoders, IPC, NVR, audio equipment, alarm devices and so on.

VMS

VMS is the new generation products, with a variable software features, beautiful UI and good usability.

VMS is responsible for cameras' accessing and management, providing VMS management, storage management, user management, system management, and so on.

Managing disk function is a separate module to access, so it enhances the stability and reliability of the VMS.

Storage system

Storage system is mainly responsible for all the video files to store and manage.

VMS Client

VMS clients include PMC client, CU client and IPCSearch.

- PMC client: This is management software which provides a visual interface for VMS. It can operate with the camera accessing, parameter configuration and storage management, etc.
- CU client: This is an application software for VMS. It can operate video browsing, audio control, camera management, alarm management, snapshot management, disk management, video-wall control, e-map, user management, equipment management, and other functions.
- IPCSearch: It can search online VMS and cameras.



Note: This manual mainly describes the networking management of client operations and IPCSearch specific usage; details refer to the CU client user's manual.

2 Start

VMS is responsible for devices management, scheduling all the devices working together in the system providing VMS management, storage management, user management, and system management.

2.1 Login

1. Open the IE browser, enter in the IP address of VMS in the address bar. When you login for the first time, please follow the screen prompts to download and install the client.



Note:

If login VMS in NAT from the outside of NAT, configure the VMS in NAT first. Enter the mapping IP address and the mapping port of VMS port 80 in the address bar, such as <http://10.20.30.252:80>. For NAT configuration, please refer to the NAT configuration in VMS Configuration Guide.

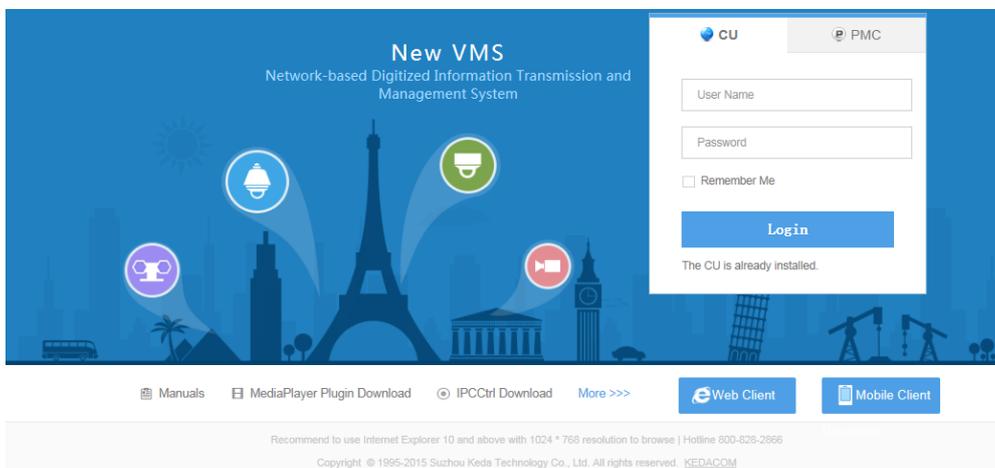
2. There are 2 methods to login VMS CU:

- Open IE browser and input VMS IP address in the address bar. In the popup CU window, enter user name and password.

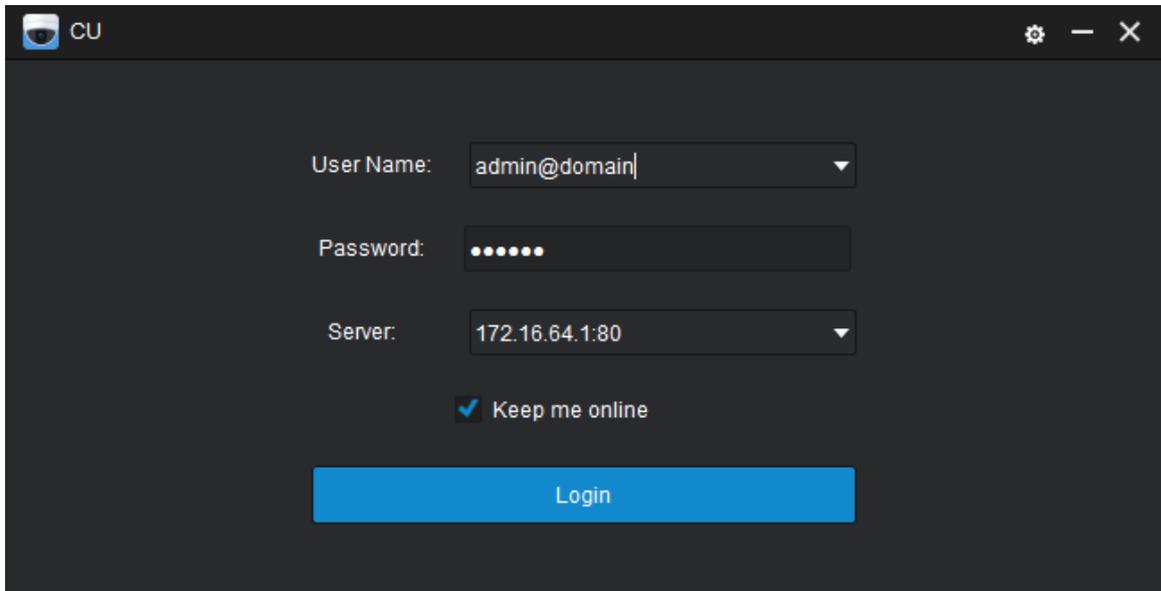


Note:

- 1) The default user name for VMS with software version V2R2B3 and below is `admin@domain` (domain means domain name, which is subject to actual situation), and the default password is 888888.
- 2) The default user name for VMS with software version V2R2B3SP1 and above is `admin` and the default password is 888888.



- Double click the shortcut icon  on desktop, and enter user name, password and VMS address.



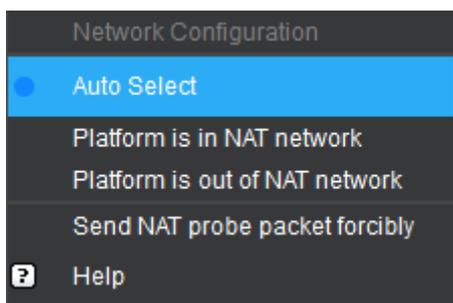
The screenshot shows a login window titled 'CU'. It has a dark background with white text. The 'User Name' field contains 'admin@domain'. The 'Password' field is masked with six dots. The 'Server' field contains '172.16.64.1:80'. There is a checked checkbox labeled 'Keep me online' and a blue 'Login' button at the bottom.

 **Note:**

- 1) For security's concern, please modify default user name and password after login;
- 2) Please modify password periodically;
- 3) To ensure operation safety, please install an antivirus program.

3. Click  and select network environment from Network Configuration:

- Auto Select: judge VMS network location automatically;
- Platform is in/out of NAT network: select VMS network location manually;
- Send NAT Probe Packet forcibly: please finish the setting according to "Help".



4. After network setting, click "Login" to log in VMS CU.

2.2 Log out/Exit

Log out: click "log out" on the right corner of the screen, you can return to the login interface.

Exit: click "exit" at the right corner to quit CU.

2.3 Main Screen

2.3.1 Screen Layout

CU client's main interface is shown in the following picture:



Explanation is shown in the following form:

Form Layout

Number	Explanation	Number	Explanation
--------	-------------	--------	-------------

①	Menu Bar	⑤	Device Search
②	Toolbar	⑥	Notice Bar
③	PTZ Control	⑦	Floating Menu
④	Device List	⑧	Live View Area

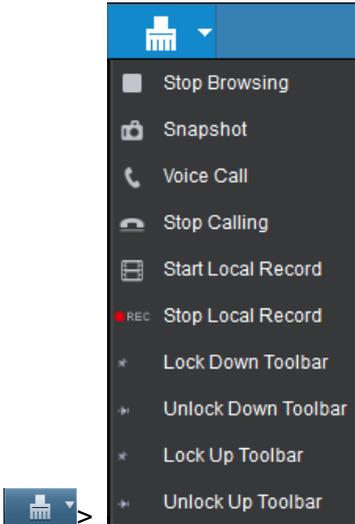


Note:

- 1) Click on Floating Menu to lock or unlock Floating Menu; click to hide Notice Bar and List;
- 2) Click [Lock] on Menu Bar to lock CU. After locking, user shall input password to operate.

2.3.2 Toolbar Icons

Icon	Explanation
	Desktop Scheme: save current scheme/desktop scheme configuration. Refer to Desktop Scheme for detailed operations.
	Picture Styles: support multiple styles display.
	Video Stitch Scheme: to configure video stitching.

	Refer to Video Stitching for detailed operations.
	Timing Task: refer to Timing Task for detailed operation.
	One-click to stop viewing.
	Single image full-screen
	Multiple images full-screen
	Batch processing: click the icon, select an operation from the drop-down list, select multiple view windows, and perform the selected operation by batch.

2.3.3 Device Icons

Explanation of the device icons in the device list area:

Form Device Icon

Icon	Explanation	Icon	Explanation
	PTZ IPC		Fixed IPC
	Video Source		Encoder
	NVR		Decoder
	SVR		VMS Recording
	Alarm		Front End Recording
\	\		Online Front End Failed to

			Enable VMS Recording
--	--	--	----------------------

2.3.4 Offline Device Counting

Click  to view offline device information. If lower-level VMS is online, display the offline device information; if lower-level VMS is offline, only display the offline information of the VMS, rather than its offline device information. Click  to refresh current offline status and view latest offline device and lower-level VMS.

3 Live View

3.1 View Operation

Click **Live** on the menu to enter live view interface.

Start Viewing

In the device list, select a video source that you want to browse, you can browse through either of the following methods.

- Double-click the video source (default is to playback in an idle window). If there is none available, the video cannot be played and there will be a notice in the notice bar.
- Left click and drag the mouse to a play window. Release the button when the image appears. If this window is not an idle one, the video source will occupy it.

Group Viewing

The steps for group viewing are as follows:

- Right click device group and select “**Grouped View**”, then all the videos in this group will display.
- Left click the device group and drag it to the display window, then all the videos in this group will display. If the window is idle, the video will occupy the window and the windows behind this one will move backward accordingly.



Note:

- 1) When the video source number is more than current window number, a page menu will display. Click the page



on the menu to change the live view window;

- 2) The video display modes include overspreading and self-adaptive. Select a live view window, and right click or click



on the floating menu to switch display mode.

Stop Viewing

Two methods:

- Select a live view window, click  on the floating menu bar or select "stop" on the right-click

menu to stop viewing.

- During multiple windows view, click  [Stop] on toolbar and select multiple windows with mouse to stop multiple live view windows. Right click to quit the operation.

- During multiple windows view, click  on the toolbar to close all the video windows and other view functions.

3.2 PTZ Control

PTZ control involves the functions of lens shift, zooming and etc. Only some models of camera support this function.

3.2.1 Basic Control

User can perform basic PTZ control over working camera through CU, as shown in the following picture:



Explanations of icons are as follows:

Form Basic Control

Number	Explanation	Number	Explanation
①	Direction adjustment	④	Volume adjustment
②	Moving increment	⑤	Zoom in or out
③	Preset positions	\	\

Direction adjustment

Click the direction icons to adjust the lens to the expected positions. Click  to return the camera to the original position.

Moving increment

Drag the slider of moving increment to adjust increment. The righter the slider is, the larger the increment is and the faster the speed is.

Preset positions

Preset the monitoring direction and field of view of the camera. Load to the preset position when necessary and the camera will rotate to the position instantly so that the managing people are able to view the monitoring area conveniently.

Click  to enter preset management interface.

Set preset position

Click the direction icons to adjust camera to the expected position. Click  and select a preset position from the popup “Preset”. Click “Save” to finish setting.

Load preset position

Click  and select a preset position from the “Preset” window. Click “Load” and the camera will rotate to the preset position instantly.

Rename preset position

Click  and click “Edit” in the “Preset” window. In the popup window of “Rename Preset Alias”, select a preset and input new alias. Click “OK” to finish renaming.

Volume Adjustment

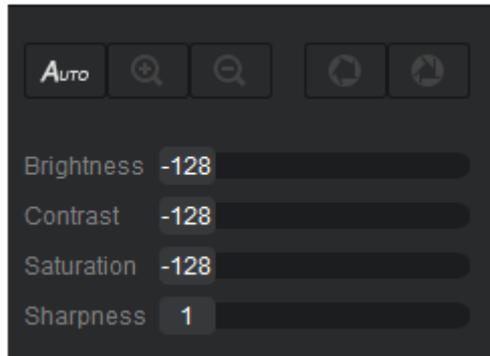
Click  to adjust the output volume on CU and the input volume of microphone. Details can be referred to in Volume Control.

Field of view

Click  or  to zoom in or out the field of view and adjust the image to suit the scene.

3.2.2 Image Adjustment

User can adjust main stream image at CU, as shown in the following picture:



Focus:

Adjust the focal length of the camera to make the image clearer.

Click  to achieve auto focus.

Click  to increase focal length.

Click  to decrease focal length.

Aperture:

Adjust light input of the lens to adjust brightness and darkness of the image.

Click  to enlarge aperture.

Click  to narrow aperture.

Brightness:

Adjust the brightness of current image, range from -128 to 127.

Contrast:

Adjust the contrast ratio of current image, range from -128 to 127.

Saturation:

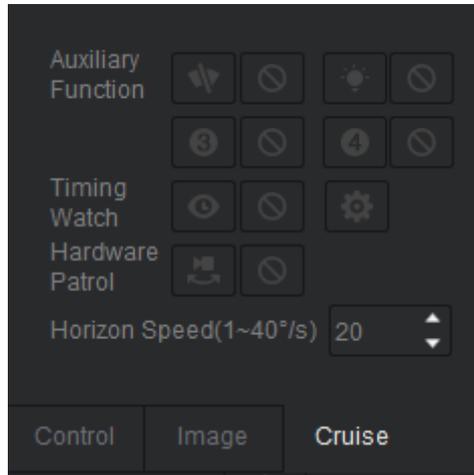
Adjust the saturation of current image, range from -128 to 127.

Sharpness:

Adjust the sharpness of current image, range from 1 to 255.

3.2.3 Cruise and Guard Tour

User can configure the following functions on camera:



Enable Wiper

Click  to enable wiper and clean the glass cover of camera. Click  to disable wiper.

Enable Light

When light is insufficient, click  to enable light and click  to disable light.

Auxiliary Function

This is reserved setting. When the front-end device supports a function, configure the function by VMS.

Timing Watch

After stopping PTZ control for a period of time, camera will load preset automatically or start preset patrol automatically.



Note:

Only some cameras support functions of Timing Watch and Hardware Patrol.

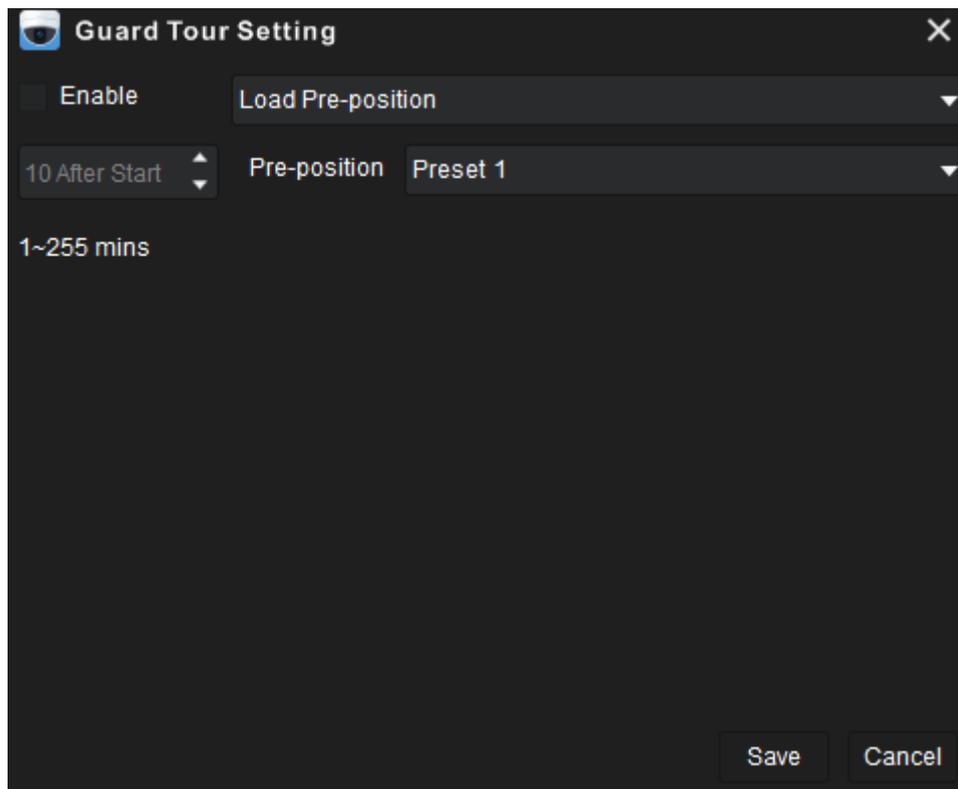
Load Preset Automatically

1. Click  in Timing Watch area;
2. In the popup window, check "Enable" and select "Load Preset". Input time and select preset.

3. Click “Save” to complete setting of Load Preset Automatically.

Auto Preset Patrol

1. Click  in Timing Watch area;
2. In the popup window, check “Enable” and select “Load Preset”. Input time and select preset, and double click to input camera stay time;
3. Click “Save”.



Note:

Click  /  in Timing Watch area to enable or disable preset patrol.

Hardware Patrol

Hardware patrol means camera rotates horizontally.

In Hardware Patrol area, set horizontal speed (1~40 degree/second) and click  to enable patrol.

Click  to disable pan patrol.

3.2.4 PTZ Control Occupation

PTZ Control Occupation capacity depends on the PTZ control level of user. High-level user can occupy the PTZ control authorization of low-level user's. If users with PTZ control authorization stop PTZ operation for 1 minute, his authorization will be released automatically.

When PTZ control authorization is occupied, both users will receive the notice.

There are 10 levels of PTZ control and Level-10 is the highest. Configuration of PTZ control levels for users can be referred to in Video Source Distribution.

3.3 Screen Style

Screen style can be set in the live view window, including single, multiple, single image full screen and multi-image full screen.

Click  on the toolbar, you can select screen style.

Single image full screen

Select a live view window and click  on the toolbar to make image displayed full screen. Press Esc on keyboard or right click menu and select "Quit Full Screen" to quit full screen.

Multi-image full screen

Click  on the toolbar to maintain current multi-image and display in full screen. Double click a window and this window will display in full screen. Double click again to return to multi-image full screen. Press Esc on keyboard or right click menu and select "Quit Full Screen" to quit full screen.

Fill live view window

During multi-image in full screen, double click a window and this window will display in full screen. Double click again to return to multi-image full screen.

3.4 Polling

Polling refers to the multiple videos loop in the same window.

3.4.1 Polling Setting

1. Select the live view window, click  on the floating menu bar or right-click menu, select "Polling

Setting";

2. In the device list, select one or more video sources you want, click "add";

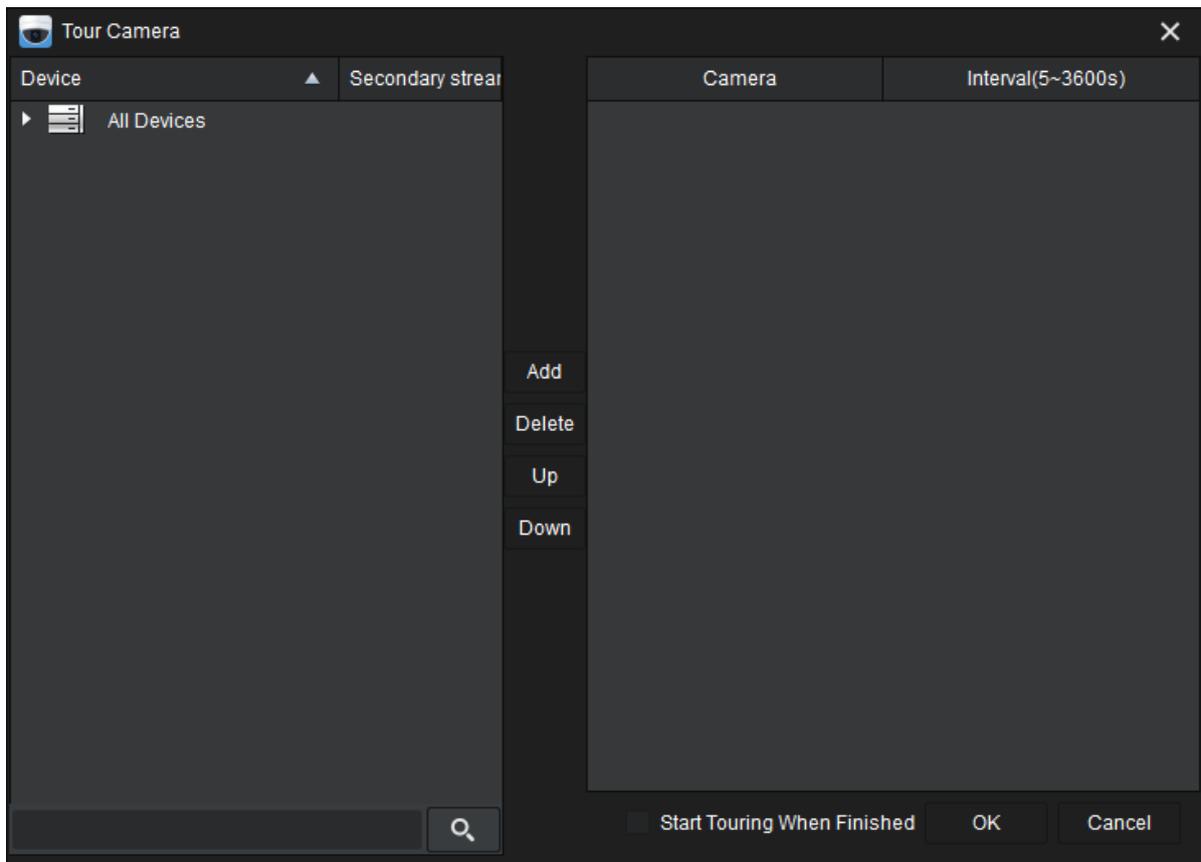
 **Note:** Click "Upward" or "Downward" to move the video source up or down. Click "Delete" to delete the video source.

3. Select one or more video sources and set the polling time.

4. Click "OK" to complete the setting.

 **Note:** After checking "Start polling when finishing", it will start polling automatically in the live view window. If

unchecking, user has to click  on the floating menu bar to start polling manually.



3.4.2 Polling

After finishing polling setting, user can operate on the floating menu bar or right click menu:

: Start polling manually.

: Pause polling.

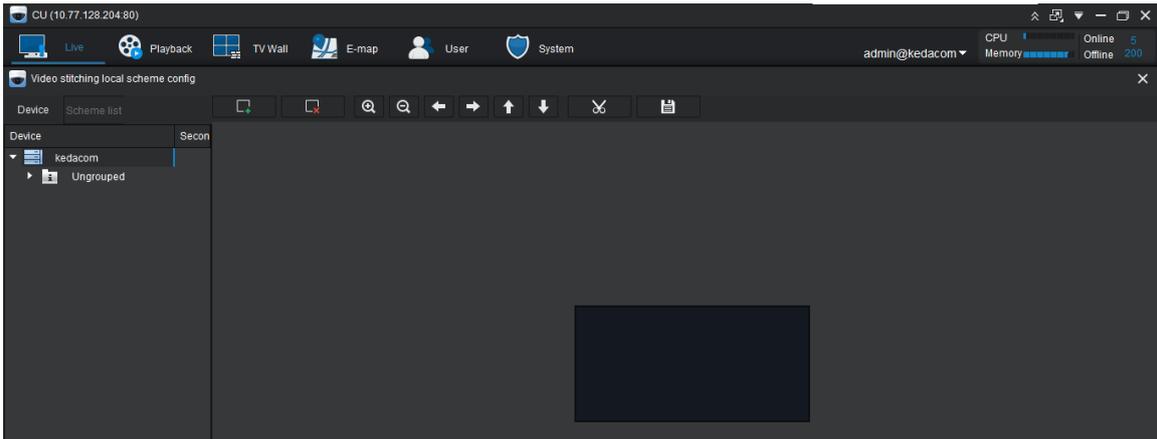
3.5 Video Stitching

Stitch multiple live view images and display them according to the stitch scheme.

3.5.1 Video Stitching Local Scheme

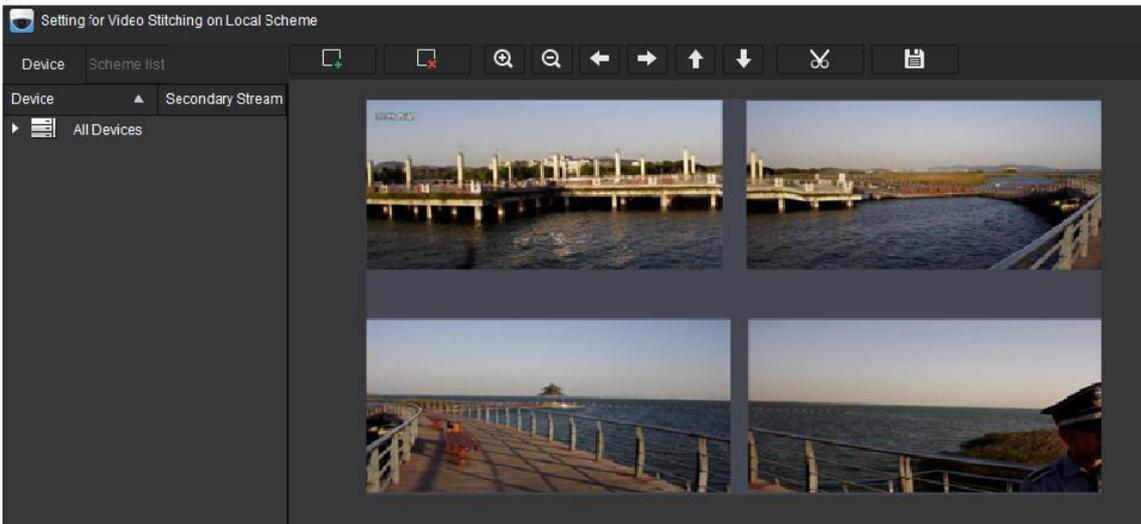
Click  Video Stitching> Video Stitching Local Scheme to enter the video stitching setting interface.

When defining video stitching and creating video stitching scheme, user should view video from local client.



Add live view window

Click  to add live view window. Select the required videos from the device list and drag them to the window.



Change window location

Select a window, and right click menu to choose “Bring layer to front>Bring layer to front/Move up by a layer” or “Place in bottom layer>Place in bottom layer/Move down by a layer”. Select one or more

windows and click  to move them leftward, rightward, upward and downward. Or drag them to any location with a mouse.

Stop live view

Right click menu and select "Stop" to stop the live view.

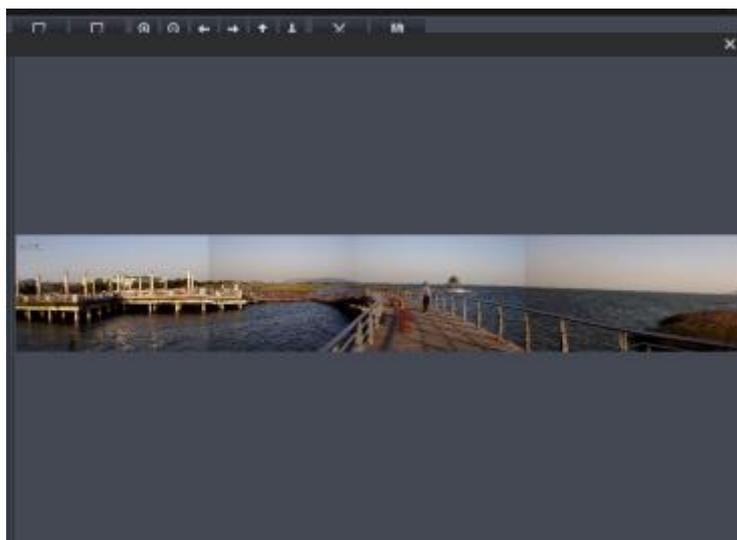
Delete window

Select a window, and click  to delete.

Adjust window size

Select one or more windows, and click  or place the mouse at the corners of the window. Left click and drag to zoom in or out.

Based on the above operations, video stitching is finished and the result is shown in the following picture:

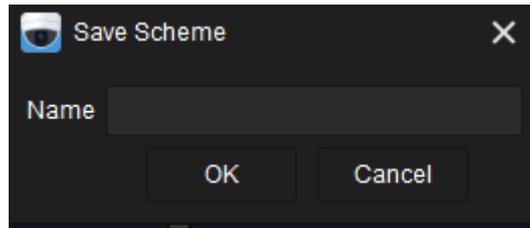


Clip live view area

Click  to clip live view area. After click "OK", user can only view the video within the clipping area.

Save scheme

Click  to save current display style. Input scheme name in the "Save scheme" interface. After clicking "OK", the scheme will display in the scheme list.



Select local scheme for video stitching

There are several methods as follows:

- In the interface of “Local scheme for video stitching”, click “Scheme List” and double click a scheme to view.

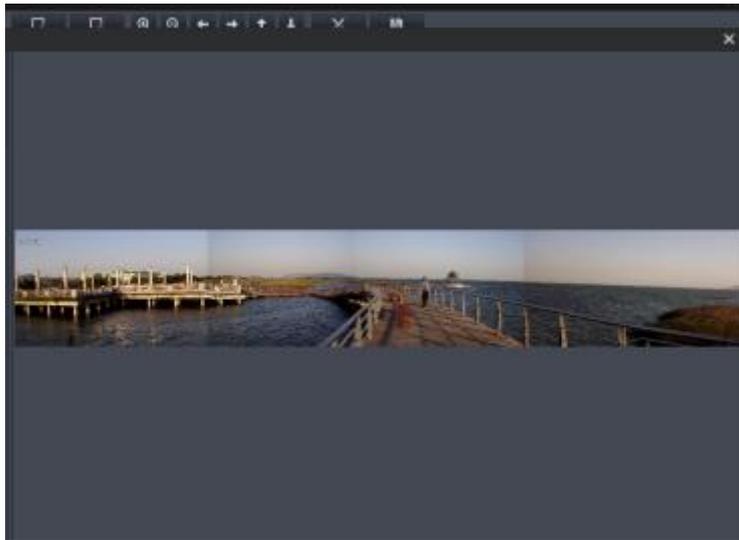
Device	Scheme list
local1	

- Click  and select a scheme from the drop-down list to view.

3.5.2 Video Stitching TV Wall Scheme

Most of the operations of Video Stitching TV Wall Scheme are the same as that of Local Scheme for Video Stitching, except the video clipping operation. Detailed operations are as follows:

1. Click  >” Video Stitching TV Wall Scheme”, and enter video stitching setting interface;
2. After adding windows to be clipped, click  to clip live view window and click “Preview” to browse clipping result. Click “OK” and user will see clipped video only.



i Notes:

- 1) The new scheme will be listed on the stitching scheme list in TV Wall interface.
- 2) The function supports multiple columns and multiple rows of videos, but videos cannot exceed stitching windows and can only be stitched as rectangle video frames.

View Video Stitching TV Wall Scheme

There are several methods:

- In the interface of Video Stitching TV Wall Scheme, click “Scheme List” and double click a scheme to view.
- Go to TV Wall interface. In the scheme list area, click “Stitch Scheme” and double click a scheme to view.

Device	Scheme list
	videowall

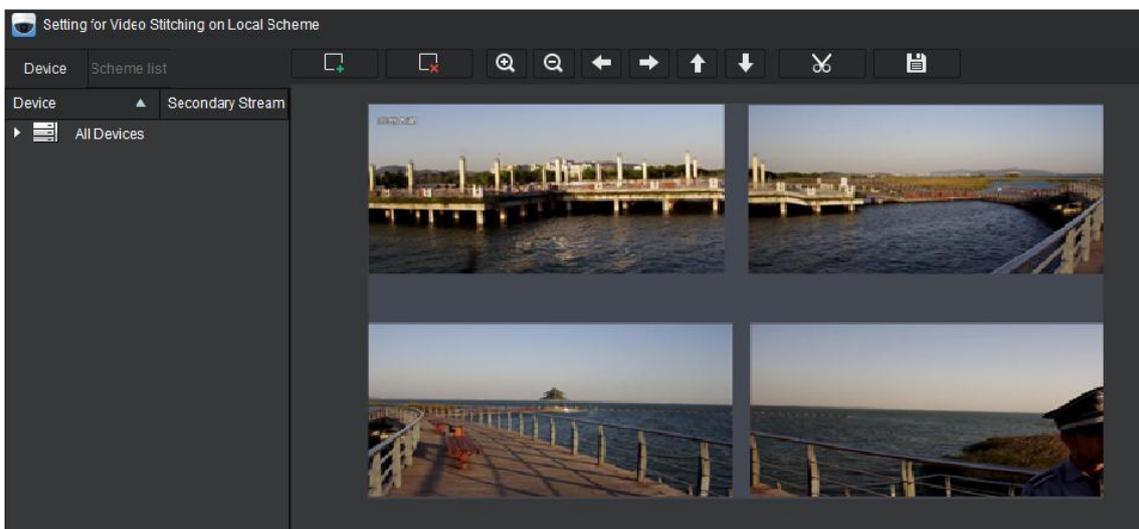
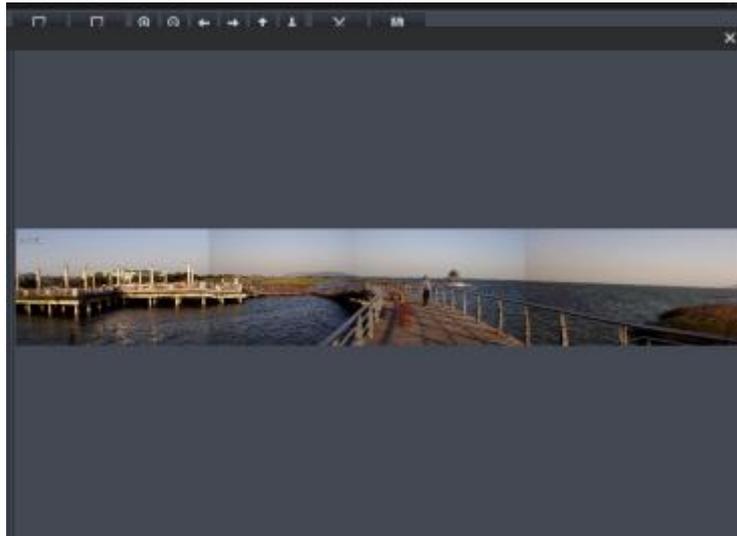
- Click  and select a scheme from the drop-down list to view.

3.5.3 Restore to Default Image

After setting TV Wall Scheme for Video Stitch, user can also restore to default image. Steps are as follows:

Select the front-end device that has been configured stitch scheme from the device list and right click to

select "Restore to default image"

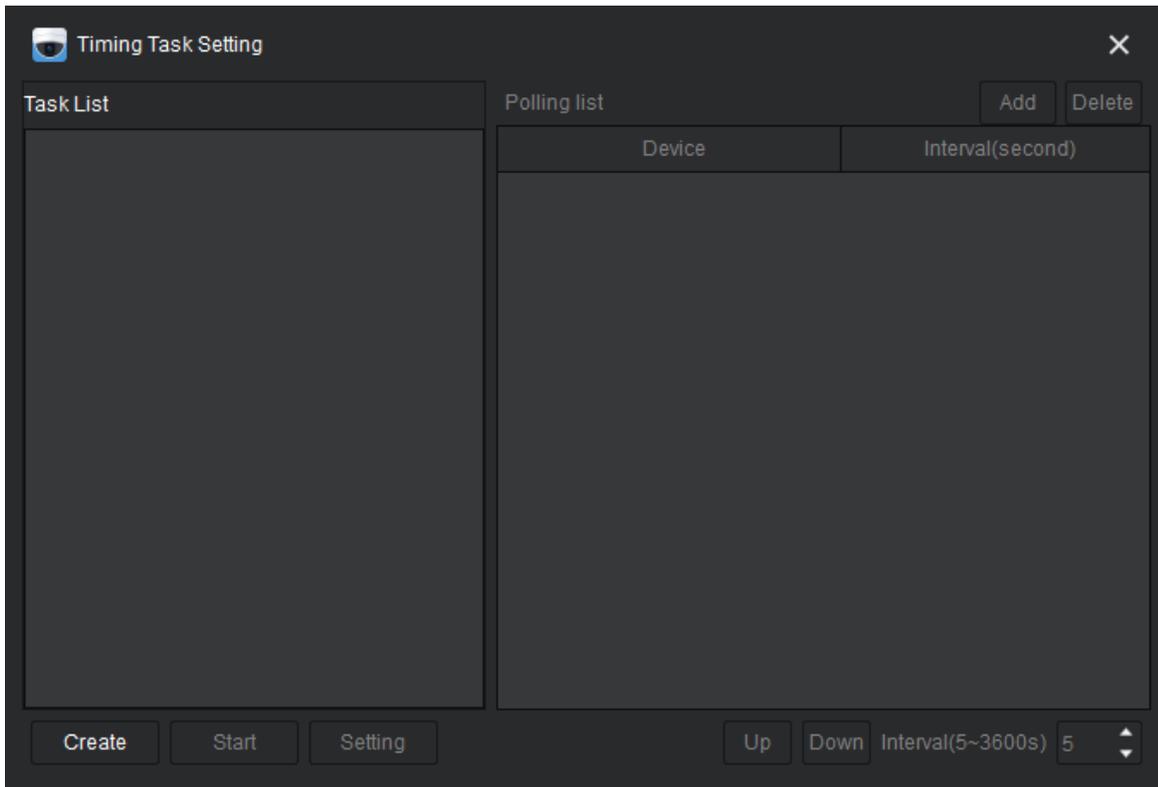


3.6 Timing Task

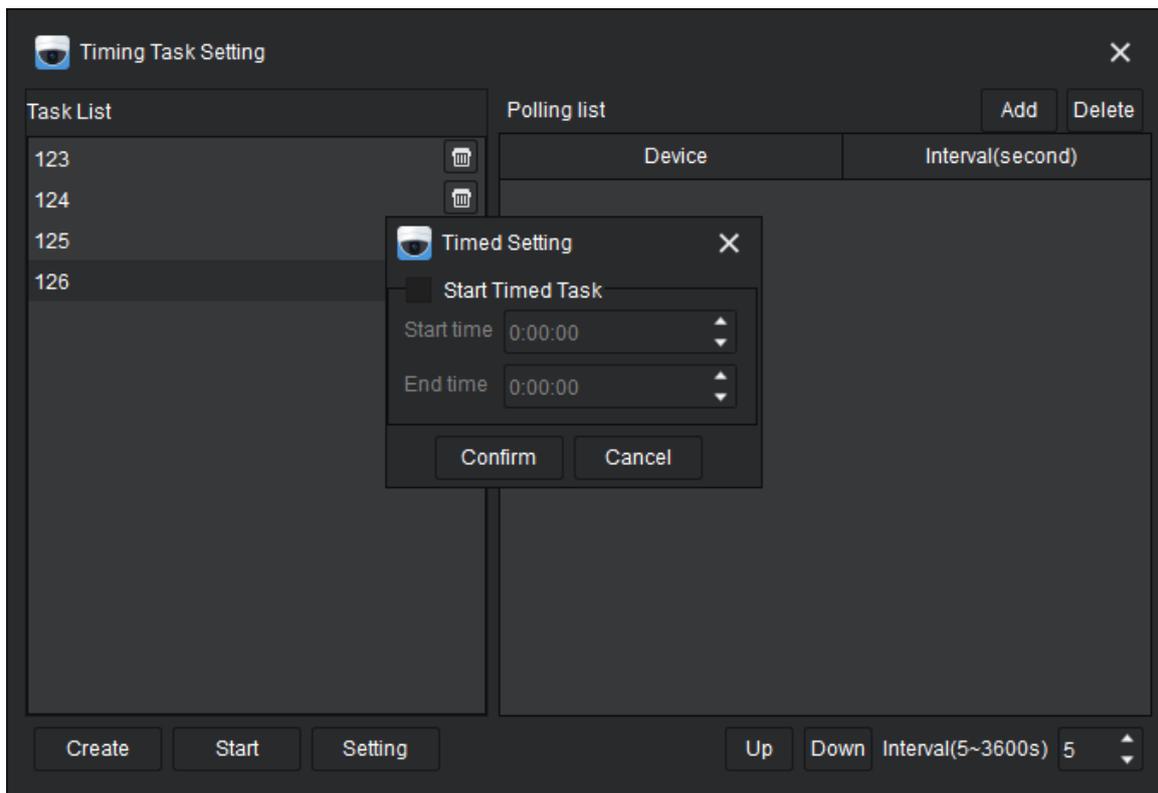
After setting timing task, user can load scheme periodically or in a certain period of time.

3.6.1 Timing Task Setting

1. Click  > Timing Task Setting;



2. Click "Create" and set task name; click "Setting" to set task time duration;



 **Note:** The new task duration cannot overlaps with other task durations.

3. Click “Add”, and select one or more front-end devices for polling from the popup device list;
4. Click “Add” to add front-end device to “Polling List”;
 - 4.1 Click “Delete” to delete the monitoring point.
5. In “Interval”, set polling interval of monitoring points;
6. Click “Up” and “Down” to modify polling sequence of monitoring points;
7. After setting, click “Start” to enable the timing task.

Under the following 2 conditions, Timing Task will remind user of the scheduled duration and select to enable or disable task:

- The CU login time is in the timing duration;
- 1 minute before the start of timing task.

3.6.2 Other Operations

- Stop Current Task

Click  > Stop Current Task to disable all timing tasks.

- Start Timed Task

Click  > Start Timed Task to enable polling task.

- Pause Current Task

Click  > Pause Current Task, and polling task will pause at this time.

- Resume Current Task

Click  > Resume Current Task, and polling task will restart from the pause time.

3.7 Multi-screen

User can copy interfaces of Live, Playback, E-map, TV Wall and User, and drag them to the corresponding windows.

Click  at toolbar and select “Copy Split”. Support operations as follows:

- 1) Select one or more windows from the live view interface, and drag them to TV Wall;
- 2) Select one or more windows from the live view interface, and drag them to e-map to generate a primitive;

3) Select one window from the live view interface, and drag it to the Recording interface to play the video. The start time of video playback is the default time of the Recording interface.

Click  > “Close All Split” to close all split-screens. Click  to close one split-screen.

3.8 Desktop Scheme

Desktop Scheme means that the current window layout, video sources for each window and polling status of each window are saved as a scheme. It can be loaded for surveillance instantly when necessary.

3.8.1 Scheme Management

User can create, load and delete scheme in Scheme Management interface.

Create Scheme

After setting current view window style, video sources for every window and polling status for every window, click  > Save Current Desktop Scheme. In the popup window of “Desktop Scheme”, input new scheme name and click “Save”. After saving the scheme, it will show on the scheme list.

Load Scheme

There are 2 methods to load scheme:

- Click  and select a scheme from the drop-down list to load and play this scheme.
- Click  > “Save Current Desktop Scheme”. In the popup window of “Desktop Scheme”, select a scheme from the scheme list and click “Load” to load and play this scheme.

Delete Scheme

Click  > “Desktop Scheme Setting”. In the popup window of “Desktop Scheme”, select a scheme from the scheme list and click “Delete”.



Note: “Previous” or “Next” in “Desktop Scheme” interface is to view the scheme being loaded before.

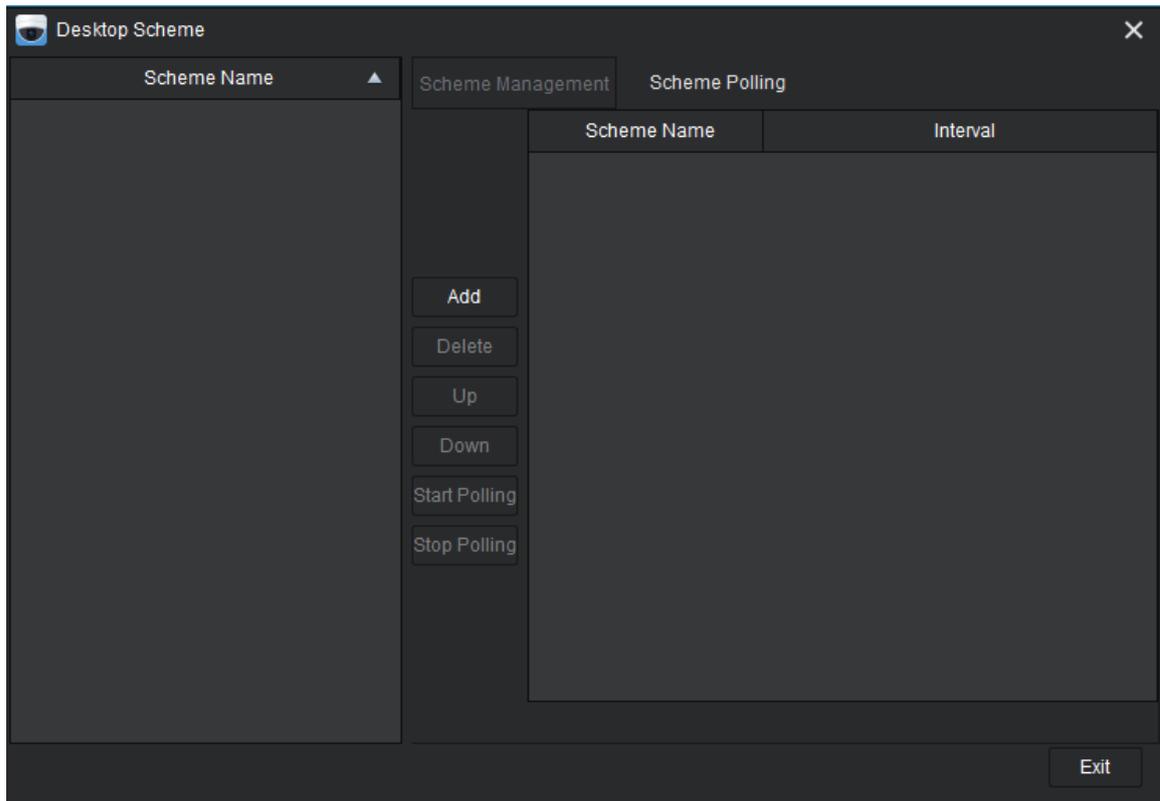
3.8.2 Scheme Polling

In Scheme Polling interface, set, enable or disable local scheme polling.

Configure Scheme Polling

1. Click  > Desktop Scheme Setting;

2. In the popup window of “Desktop Scheme”, click “Scheme Polling”, select multiple schemes from the scheme list, and click “Add”.



 Notes:

- 1) Press Shift or Ctrl to select multiple schemes.
- 2) Click “Delete”, “Up” or “Down” to delete, move up or move down the scheme.
3. Select one or more added schemes, set stay time for each scheme in Interval, and click “Start Polling” to start scheme polling.

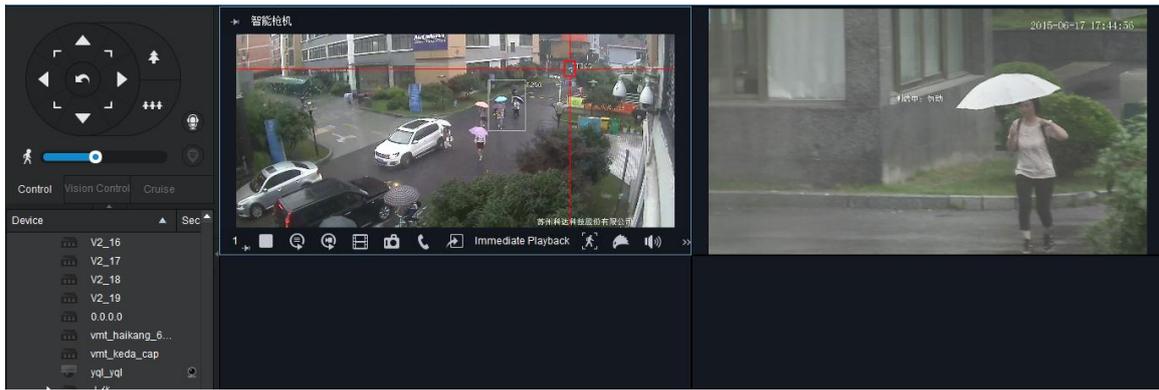
Stop Scheme Polling

In “Desktop Scheme” window, click “Stop Polling” at Scheme Polling part to stop scheme polling.

3.9 Intelligent Tracking System

When enabling intelligent tracking function during live view, user can lock the target in the image of gun-type camera by a mouse and the speed dome camera will track the target.

1. In the live view interface of gun-type camera, click “Intelligent Tracking” icon;
2. Use a mouse to lock target in the image of gun-type camera, and the speed dome camera will track the target and display the tracked target in the live view window of the speed dome camera.



When the locked tracking target disappears from the surveillance area of the gun-type camera, the system will lock and track other moving objects automatically. If there is no moving object, the system will pause at the position where the last target disappears.

If the intelligent tracking system sets preset positions, when the tracking target disappears, the system will return to the preset position and monitor. Steps for setting preset positions can be referred to in Chapter 3.2.1 Basic Controls.

3.10 Partial Zoom

Partial zoom includes two functions, center GPS and partial zooming:

- Center GPS: it means to make the selected point in the center of live view window.
- Partial Zooming: it means to zoom in or out the image partially.

3.10.1 Center GPS

1. Select live view window, click  on the floating menu bar or right click menu and select "Partial Zoom".
2. In the live view image, click a point with a mouse, and this point will be the window center.

3.10.2 Partial Zooming

Select a live view window, and click  on the floating menu bar or right click menu to select "Partial Zoom". User can operate partial zoom in or zoom out by the following method:

Zoom in: In the live view image, use the mouse to drag toward bottom right and make a rectangle area. Image in this rectangle will be zoomed in and centered in the window.

Zoom out: In the zoomed in image, use the mouse to drag toward top left and make a rectangle area. Image in this rectangle will be zoomed out and show in the live view window.

After operation of partial zooming, right click to exit.



Note: Partial zooming is only available for some front-end devices.

3.11 ePTZ

ePTZ means to zoom in the selected part of image in the live view window and this part of image can be dragged in the thumbnail.

Select a live view window and click  on the floating menu bar or right click menu and select “ePTZ”.

On this image, click and drag a rectangle area in “↘” or “↗” direction. The image in the rectangle will be zoomed in and display in the live view window.

Use a mouse to drag the red rectangle in the thumbnail at bottom right corner to view the zoomed in image of other area.

Slide the mouse wheel to zoom in or zoom out image.



Notes:

1) The red rectangle in the thumbnail means the location of the zoomed image in the whole picture.

2) When use ePTZ function, user can also operate PTZ lens control.

3.12 Stream Info

Select a live view window, click  on the floating menu bar or right click menu and select “Stream Info” to view the audio/video decoding info of this window.

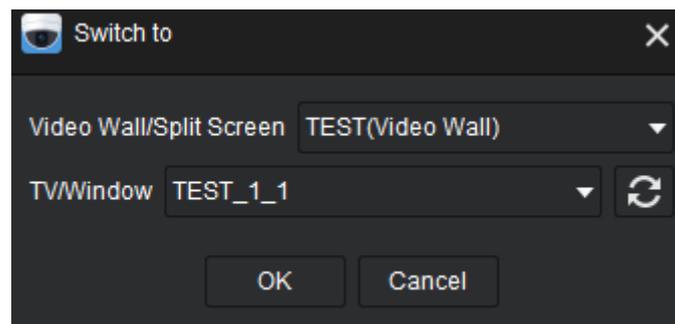


 **Note:** Support displaying stream info in multiple windows.

3.13 One-click to Display on TV Wall

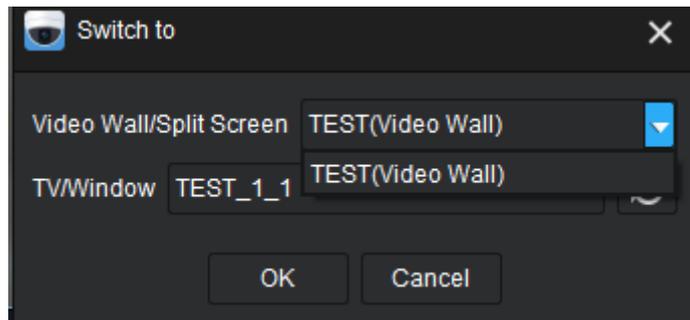
Select a live view window and click  on the floating menu bar. In the popup window, select the position for displaying on TV Wall.

- TV Wall/Split-screen: user can select to display image on configured TV Wall or split-screen;

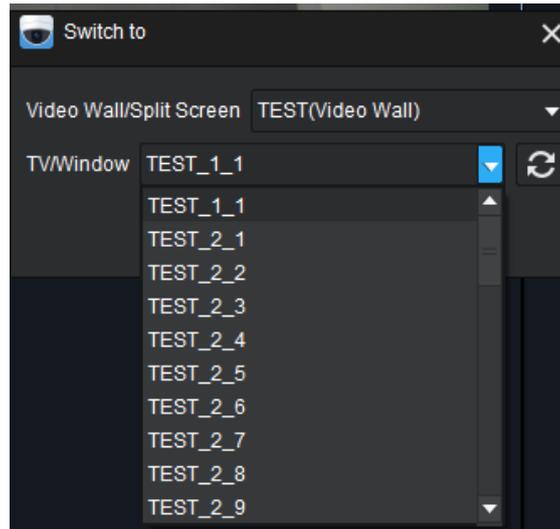


 **Note:** Before setting, user should set TV Wall in TV Wall interface. Steps can be referred to in Chapter 9.1 TV Wall Settings.

- TV/Window: select a certain TV Wall window.
 - Display on TV Wall: TV Wall window is shown as the following picture:



- Display on Split-screen: the window is shown below:



3.14 Immediate Playback

Select a live view window, and click  on the floating menu bar. In the popup “Immediate Playback” window, it will playback the video in the past 30s.

User can perform operations in the window of video pause, stop, start, volume adjustment, saving and etc.



4 Audio Control

Voice calls can be performed between CU and front-end devices.



Before video call, please install audio input and output devices in front-end devices and PC.

4.1 Voice Call

Single Call:

There are 2 methods:

- Select a camera from the front-end device list, right-click and select "Call". The CU will start calling this camera and when it is connected, they can talk.
- Select a live view window, click  on the floating menu bar or right click menu and select "Call". The CU will start calling this camera and when it is connected, they can talk.

Group Call:

There are 2 methods:

- In device list area, select a device group and right click menu to select "Group Call". Then it will call all the front-end devices in the group.
- During multi-image live view, click  on the toolbar, and select windows in the live view area to call multiple front-end devices. Right click to exit.

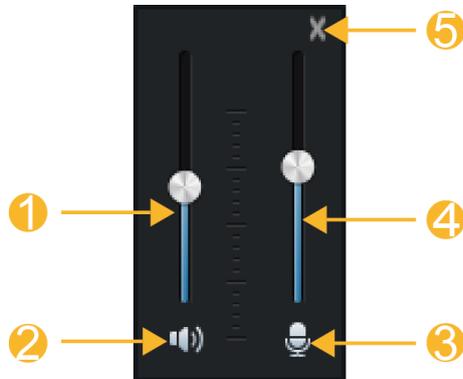
Stop Call:

There are 2 methods:

- Select device or device group that have enabled call, and right click menu to select "Stop Call".
- Select device or device group that have enabled call, and click  on the floating menu bar or right click menu to select "Stop Call".

4.2 Volume Adjustment

Click  on PTZ control interface to adjust the output volume of CU and the input volume of microphone. As shown in the following picture:



Explanations as follows:

Form Volume Control

Number	Explanation	Number	Explanation
①	Adjust CU output volume	④	Adjust input volume of microphone
②	Click to mute speaker	⑤	Close volume control window
③	Click to mute microphone, camera will not receive voice from CU		

5 Record Management

Click "Record Management" on the menu bar to perform operations of video search, play, download and setting.

According to the different locations of records, there are 3 kinds of record: Local Record, VMS Record and Front-end Record.

Differences are shown below:

Form Record Type

Record Type	Explanation
Local Record	Record is saved on the PC where CU is installed.
VMS Record	Record is saved at the storage server which the VMS is connected to.
Front-end Record	Record is saved in the front-end device. Note: The front-end device must have storage capacity.

Form Record Type

According to alarm conditions, there are alarm record and non-alarm record, differences shown below:

Record Type	Explanation
Alarm Record	Records triggered by alarm automatically. The red one means alarm record. Note: Alarm record should be set in chain alarm linkage. Steps can be referred in Chain Alarm Linkage.
Non-alarm Record	Records performed when there is no alarm. The blue one means non-alarm record. The dark blue one is VMS record and the light blue one is front-end record.

5.1 Record Management Interface

Record management interface is shown in the following picture:



Explanations are shown below:

Form Record Management

Number	Explanation	Number	Explanation
①	Device List	⑥	Record Type
②	Device Search	⑦	Variable Timeline
③	Record Domain	⑧	Record Button
④	Record Time	⑨	Record Live View
⑤	Fixed Timeline		

Notes:

- 1) Variable timeline can be adjusted by dragging the mouse.
- 2) Double click or right click the timeline to input time and skip to the start time of record.
- 3) Click "Filter" to show or hide record types.

5.2 Enable/Disable Record

Local Record:

Select a live view window, and click   on the floating menu bar or right-click “Enable/Disable Local Record” to enable/disable local record.

VMS Record:

Select the video source from the device list in live view interface, and right click menu and select “Enable/Disable VMS Record” to enable/disable VMS record.

Notes:

- 1) In cascading network, user can operate through upper VMS to enable VMS recording of the front-end device accessed to lower VMS. Under this condition, the VMS record of the front-end device is stored at the IPSAN of upper VMS.
- 2) When the icon  appears, the device cannot enable VMS recording. Move cursor to the icon of this device and the popup window will show the reason for VMS recording failure.

Front-end Record:

Select the video source from the device list in live view interface, and right click menu and select “Enable/Disable Front-end Record” to enable/disable front-end record.

Note: Only some models of front-end device support this function.

Enable/Disable Group Recording:

Select the video source group from the device list in live view interface, and right click menu and select “Enable/Disable VMS Record” to enable/disable group VMS record.

5.3 Record Search

Single VMS Record Search:

Click the front-end device from the device list and check “VMS Record/Front-end Record” in record type area to view all VMS records or front-end records in the Record Time area. Background colors on the dates are noted below:

Form Record Color

Color	Explanation
Blue	There are non-alarming records on this day, among which deep blue ones are on VMS while light blue ones are front-end ones
Colorless	There is no record on this day
Red	Alarm record

Cascading VMS Record Search:

Application scene: In cascading network, A is upper-level VMS and B is lower-level VMS. Login CU of A and search all the VMS records of front-end devices on both A and B.

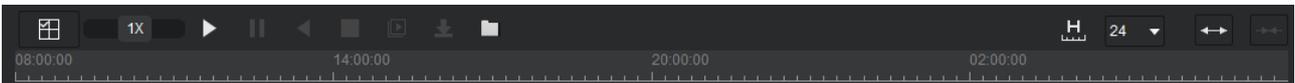
1. In the device list, click the front-end device whose record is to be searched.
2. In the record domain, select the VMS where the records are stored.

At this time, CU will display all the records of the front-end device on the VMS.

5.4 Record Playback

5.4.1 Playback Interface

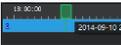
Video playback can be controlled by the following player interface:



Explanations of icons are shown below:

Form Playback Icons

Icon	Function	Explanation
	Single Channel	Control a single window's record. Note: Function available during multi-channel play only.
	Multiple Channels	Control multiple windows' records. Note: Function available during multi-channel play only.
	Play	Play record at normal speed.

	Pause	Pause record playback.
	Reverse	Reverse record playback.
	Stop	Stop record playback.
	Single-frame Play	Play record frame by frame. One click plays one frame. Click  to return to normal play.
	Record Download	Download records.
	Open Local Record	Open local records and play record in player. Details can be referred to in Chapter 5.4.4 Record Player.
	Record Duration	Duration on record timeline. Range is 1~24 hours.
	Scale Zoom In	Zoom in the scale on record timeline.
	Scale Zoom Out	Zoom out the scale on record timeline.
	Slow Play /Fast Play	Drag the slider to adjust record playback speed, slow, normal and fast. Slow playback includes 1/2 and 1/4 time of normal speed. Fast playback includes 2 and 4 times of normal speed. Note: When the front-end plays video, only support 1/2 time slow play and 2 times fast play.
	Timeline	User can drag the green cursor on the progress bar to the expected point of time.
	Manual Synchronization	When there is time deviation during synchronous playback, click the icon to synchronize playback manually. Note: Function available during synchronous playback.

5.4.2 Multi-channel Playback

Multi-channel playback refers to the video playback of one or more front-end devices during a random period of time.

1. In Record Management interface, click  on the toolbar.
2. Screen style should be set in live view window.
3. Select a front-end device from the device list.
4. Select record time in Record Time area, including year, month, day, hour, minute and second.
5. Click .

Repeat step 3, 4 and 5 to play record of multiple front-end devices during multiple periods.

5.4.3 Synchronous Playback

Synchronous playback means playing videos of different front-end devices during the same period of time.

In Record Management interface, click  on the toolbar and enter the interface of synchronous playback. Detailed steps can be referred to in Chapter 5.4.2 Multi-channel Playback.



Note:

The difference between [synchronous playback](#) and [multi-channel playback](#) is that [synchronous playback](#) can only play the records of different front-end devices during the same period of time while [multi-record playback](#) has no limitations.

5.4.4 Record Displaying on TV Wall

This function is to display the current playback record on a specified window of TV Wall. The output device will display this record.

1. Click “**Playback**” and select a device from the list.



Note: If the TV Wall cannot display the video normally, please load TV Wall scheme and the selected channel must include encoder.

2. Select record type: Platform or Camera.
3. Select record from “Domain”. Colored dates on the calendar mean there are records on those days. Double click to view records.
4. Right click on the playback video and select **Video Displaying on TV Wall**.
5. On the popup window, select **TV Wall** channel and **TV/window** (decoder).
6. Click “**OK**” to display video on TV Wall (synchronous with local operation, video playback speed needs to be supported by decoder).

 **Note:**

- 1) After the video is displayed on TV Wall, operation of video playback is the same as that of local playback.
- 2) Video playback speed needs to be supported by decoder.

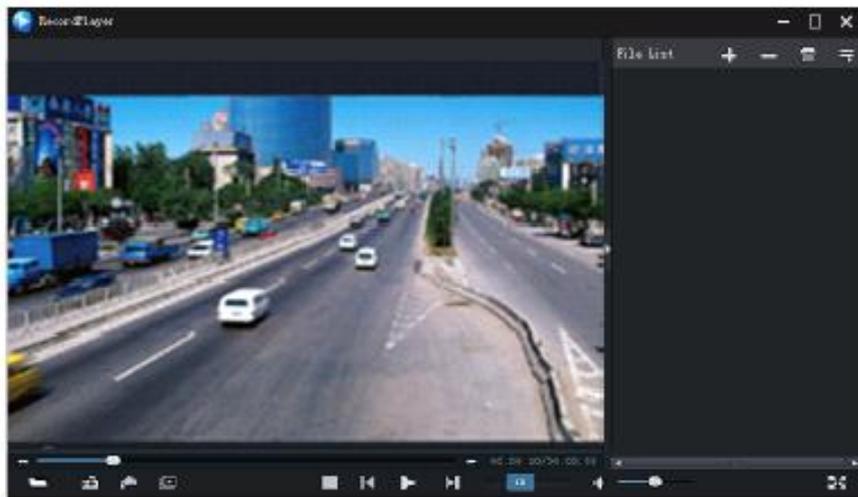
7. Right click on the playback video and select **Video Off TV Wall** to cancel Video Displaying on TV Wall.

 **Note:** If user wants to set alarm linkage displaying on TV Wall, suggest selecting different windows for displaying videos.

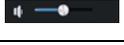
5.4.5 Record Player

Methods to enter record player:

- In “Playback” interface, click  and select desired record. Double click to enter “Record Player”.
- After CU is installed, it will generate "Record Player" shortcut  automatically. Double click the icon to enter “Record Player”.



Icon	Function	Explanation
	Play	Play record at normal speed.

	Pause	Pause record playback.
	Stop	Stop record playback.
	Single-frame Play	Play record frame by frame. One click plays one frame. Click  to return to normal play.
	Open Local Record	Open local records and play record in player. Details can be referred to in Record Player.
	Slow Play /Fast Play	Drag the slider to adjust record playback speed, slow, normal and fast. Slow playback includes 1/2, 1/4 and 1/8 time of normal speed. Fast playback includes 2, 4, 8 and 16 times of normal speed.
	Snapshot	Click this icon to capture current image and save locally.
	ePTZ	Click this icon and select a part of the image to zoom in. Also, user can drag the image to expected position.
	Volume	Drag the slider to adjust volume.
	Add File	Click this icon to add local record file to the playback list.
	Remove File	Click this icon to remove file from the playback list.
	Clear List	Click this icon to clear files in the playback list.
	Sequential Playback	Click this icon to switch among Sequential Playback, Single Playback and Loop Playback.
	Full Screen	Click this icon and video image will display in full screen.



Note: The player's functions may differ according to different third party record files, such as single-frame play, ePTZ, slow/fast play and etc.

5.5 Stop Playing Record

Under single image style, user can stop playing record by the following methods:

- Click  on the floating menu bar.
- Click  in the playing window.
- Right-click menu and select “Stop”.

Under multi-channel playback style, user can stop playing record by the following methods:

- Click  on the toolbar and use mouse to select multiple windows to stop records of multiple windows. Right click to exit.
- During synchronous playback, click  on the playing interface to stop all playing windows.
- During multi-channel playback, click  >  on the playing interface to stop all playing windows.

5.6 Record Download

1. Select a playing window and click  to download the video;
2. User can follow the methods below to select duration to download records:
 - In the popup window of “Drag to select duration for downloading records”, input the start and end time of record.
 - Drag the rectangle box on the timeline to select duration for downloading records.
3. Click “OK” to download.

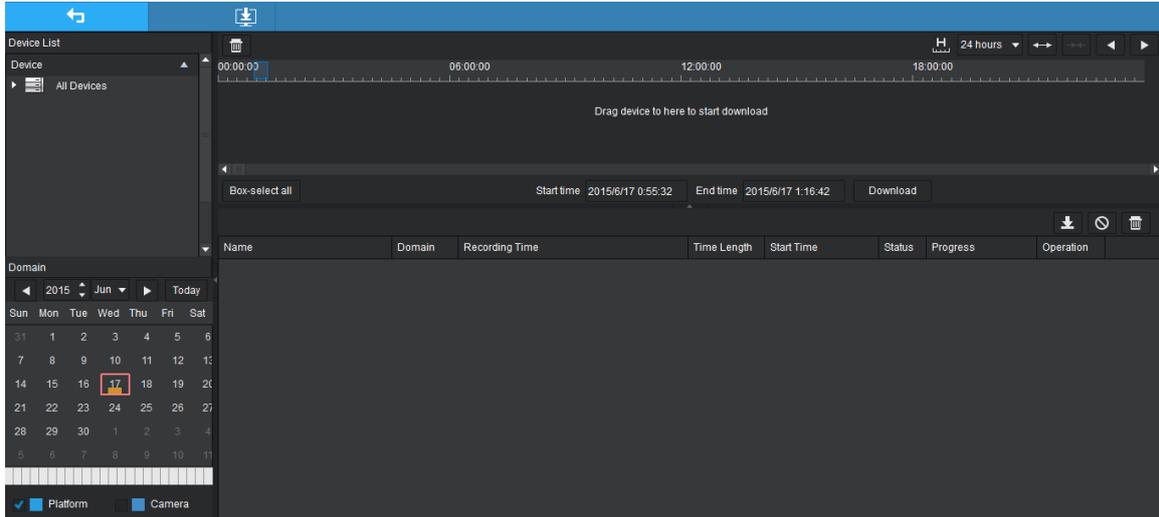


Note: Check “OK” in the window of “Drag to select duration for downloading records”, and it will skip to download management interface.

5.7 Download Management

Click  on the toolbar to enter Download Management interface. User can view record name, record domain, record duration, task add time, status and download progress.

Click  to open the video's directory; click  on the toolbar to return.



1. Choose the record duration for downloading: drag mouse to select or manually input record duration. Select one time duration only at each time. Or click "Select All" to download all the records;
2. Click  /  to start or stop the download of one or all records. Click  to delete the download task. Icon functions are shown below:

Number	Explanation	Number	Explanation
1	Clear all selected records	6	Next duration
2	Durations: 1, 2, 4, 8, 12, 24 and 48 hours	7	Drag to select all: click this icon to download all records
3	Zoom in scale: zoom in timeline	8	Start downloading
4	Zoom out scale: zoom out timeline	9	Start/Stop/Delete all download tasks
5	Previous duration	10	Enable/Disable download task
\	\	11	Start/End Time: manually input duration

			of record download
--	--	--	--------------------

5.8 Record Binding

This function is to bind multiple downloaded records as one. Operation steps are as follows:

1. Check the downloaded records and click "**Bind**".
Click "**Add**" to add files from local. Select a record and click "**Delete**" to delete this video.
2. Select a record and click "**Up/Down**" to change its location.
3. Click "**Browse**" to set record binding save path. If not set, the file will be saved at the default path. Name the file in "**File Name**".
4. After finish all settings, click "**Bind**".

5.9 Record Setting

5.9.1 VMS Record Setting

Click "System" >  > "VMS Record Setting" and enter the setting interface. User can set both the main and secondary streams. Detailed settings are shown below:

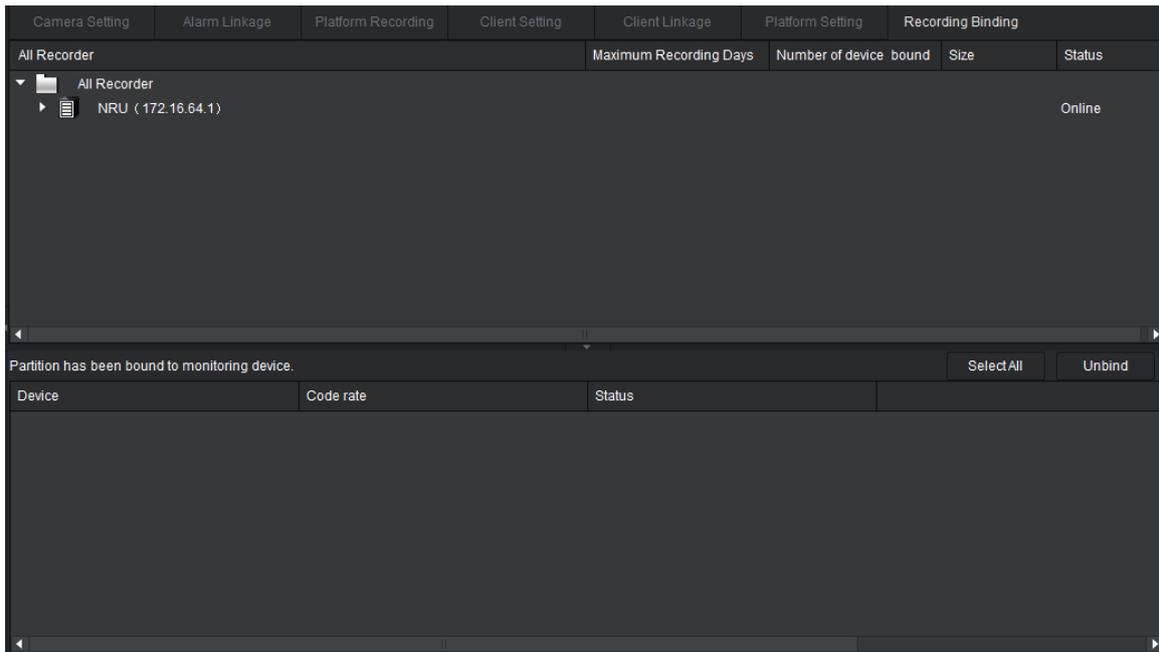
Form VMS Record Setting

Item	Explanation
Recording Mode	Common Recording: record both images and voices; Video Only: record images only; Key Frame Only: record key frames only.
Recording Time After Alarm Clearing	Record video in a period of time after alarm is cleared. Recordable time range is 0~3600 seconds. Default is 60 seconds.
VMS Periodic Recording	Check this item and enable VMS Periodic Recording. The VMS will record automatically in the set duration. Daily: record every day. Weekly: select a day from Monday to Sunday and drag on the timeline with a mouse to set different automatic recording durations for each day.

Copy Setting	Copy the VMS Record Setting of current device to other devices.
--------------	---

5.9.2 Record Binding Setting

Click "System">



 **Note:** One video source can be bound to one disk partition only, while one disk partition can be bound with multiple video sources.

Record binding:

1. Select one or multiple (press "shift" to select) video sources from the device list to bind record.
2. Bind record to disk partition, 2 methods for reference:
 - In the list of "All Recorders", select the disk partition where record file is saved, and right click the to-be-bound device and select "Bind to Partition";
 - Go to the device tree and drag the to-be-bound devices to a partition to bind them in batch.

 **Note:** Disk partition that has been bound with a video source cannot be bound with any VMS record of other video sources.

Record unbinding

In the list of “Bound Monitoring Points”, check those video sources to be unbound and click “Unbind”; or right click the video source in the “Device List” and click “Unbind”. Then all the VMS video records of this video source will be saved at other unbound disk partition automatically.

5.9.3 Local Setting

Click "System">

6 Front-end Management

6.1 Front-end Setting

Click "System">

6.1.1 Video Source Parameter

Select the front-end device from the device list and click "Video Source Setting" to modify parameters.

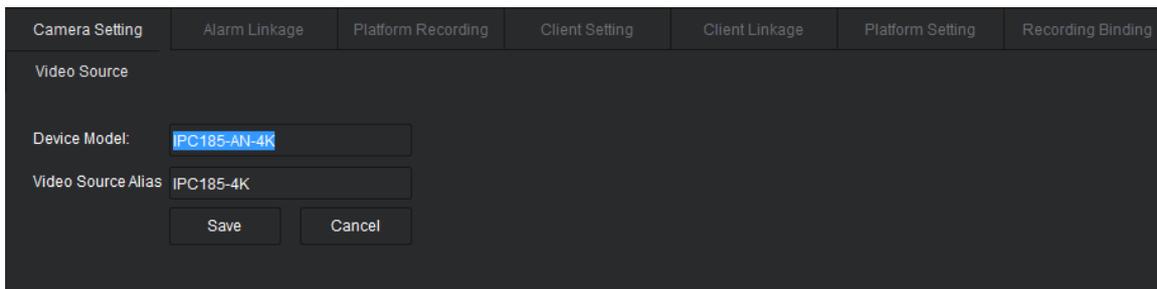
Device Model: fill in device model;

Video Source Alias: Customize the name of the video source name;

Camera Protocol: If access to KEDACOM IP cameras, no need to modify by default. If access to encoder, NVR and SVR, need to modify parameters if necessary.

Video Source Address: If access to KEDACOM IP cameras, no need to modify by default. If access to encoder, modify parameters if necessary.

Video Source Longitude and Latitude: Set the longitude and latitude of the video source.



Camera Setting	Alarm Linkage	Platform Recording	Client Setting	Client Linkage	Platform Setting	Recording Binding
Video Source						
Device Model: <input type="text" value="IPC185-AN-4K"/>						
Video Source Alias: <input type="text" value="IPC185-4K"/>						
<input type="button" value="Save"/> <input type="button" value="Cancel"/>						



Note: Different devices may have different interfaces. Interface is subject to actual model.

6.1.2 Parameter Setting

In the device list, select the front-end to be modified, and click "Main Stream" or "Secondary Stream" to configure.

Parameter explanations are shown below:

Form Parameter Setting

Item	Explanation
Encoding Format	Select video encoding standard
Resolution	Select image resolution
Image Quality	Select image quality, including speed priority and quality priority. Note: Only encoder's image quality can be modified.
Encoding Frame Rate	Set video encoding frame rate, range is 1~30 frame/second.
Encoding Bit Rate	Set image compression bit rate, range is 64~8192kbps.
Key Frame Interval	Set encoding key frame interval, range is 1~2500 frames.
Brightness	Set image brightness, and click "Reset" to restore to previous value.
Contrast	Set image contrast, and click "Reset" to restore to previous value.
Saturation	Set image saturation, and click "Reset" to restore to previous value.
Sharpness	Set image sharpness, and click "Reset" to restore to previous value.

6.2 Privacy Mask

Privacy mask is to display the user-defined area as black screen or in other way (subject to the way the front-end applies) to protect sensitive info.

Add Mask Area

1. Click "System">- 2. Select device from the list and click "Privacy Mask";
- 3. Drag an area with a mouse in the live view window, and click "Save".

Delete Mask Area

Select the mask area to be deleted, then click "x" at the top right corner and click "Save" to delete the area.

Click "Clear" to remove all the masking areas set on the device.

6.3 Motion Detection

Detect user-defined area and check the moving features in the video. Once the moving target exceeds defined sensitivity, alarm will be triggered.

1. Set Motion Detection Area: edit motion detection area in the live view window directly or select the whole window as the motion detection area;
2. Set detection sensitivity;
3. Click "Save".

6.4 Serial Port Setting

Serial Port Setting: obtain/configure serial port parameters, each including serial port number, serial port type and baud rate.



Notes:

- 1) Configurable Baud Rate values include: 110, 1200, 2400, 4800, 9600, 19200, 38400, 43000, 56000, 57600 and 115200;
- 2) It is obtainable only when the serial port parameter is reported. It is null when there is no report;
- 3) This parameter is configurable only for IP cameras and encoders.

Camera Setting	Alarm Linkage	Platform Recording	Client Setting	Client Linkage	Platform Setting	Recording Binding
Video Source	Motion Detection	Image Masking	Main Stream	Secondary Stream	Serial Port Parameter1	
Serial No.: <input type="text" value="COM1"/>						
Serial type: <input type="text" value="RS485"/>						
Baud rate: <input type="text" value="9600"/>						
Save		Cancel				

6.5 Advanced Setting

User can skip to the control interface of front-end devices through CU directly so as to control and configure front-end devices directly.

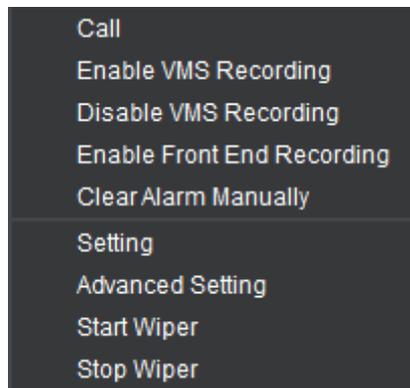
Common Front-end Device

1. Run IE browser and input VMS IP address in the address bar;
2. In the popup interface for login, click IPCCtrl installation packet to download and install IPCCtrl client;



Note: IPCCtrl client operation details can be referred to in the User Manual for front-end devices.

3. Login CU, select a front-end device from the list in the live view window, and right click menu to select “Advanced Setting”;



4. In the popup IPCCtrl login interface, input front-end address, user name and password, and click “Login”.

User Login

Please enter user name and password.

IP Address: 172.16.66.67

User Name: admin

Password: *****

Save User Name and Password

Login

After login, user can set parameters and control this front-end device.

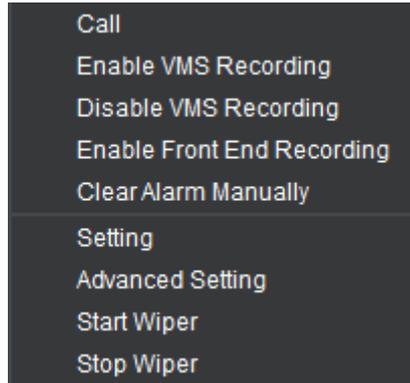


Notes:

- 1) Front-end device address is 127.0.0.1. Default user name and password are both admin.
- 2) Detailed operations and settings after login can be referred to in the user manual for front-end device.

IPC V7

1. Login CU, select a front-end device from the list in the live view window, and right click menu to select “Advanced Setting”;



2. In the popup login interface, input user name and password, both of which are kedavsipweb, and click “Login”.

Wireless Front-end Device

1. Run IE browser and input VMS IP address in the address bar;
2. In the popup login interface, click “Download Advanced Setting Program for Wireless Front-end Device” to download and install the client;
3. Login CU, select a front-end device from the list in the live view window, and right click menu to

select "Advanced Setting";

4. Enter the network console of wireless front-end device. Click "Network Configuration", modify port number as 5520 and click "OK". Input user name and password (both are "admin" for admin account and both "user" for operator account), and login the network console.

7 Alarm Management

VMS CU supports four alarm types, motion detection alarm, parallel port alarm, video source loss alarm and disk full alarm.

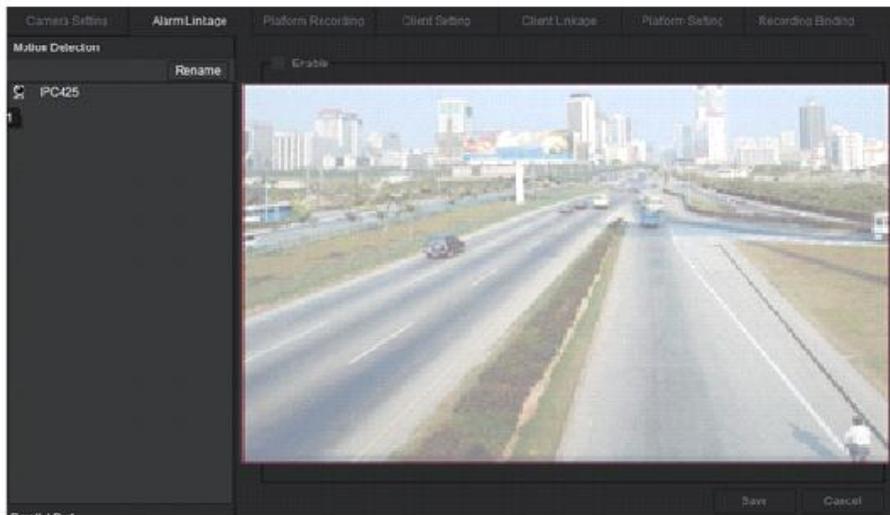
7.1 Motion Detection

Motion detection means the alarm is triggered when the moving target in the image exceeds defined sensitivity.

1. Click "System" >  > "Front-end Setting";
2. Select the device from the device list, and click "Motion Detection";
3. Edit the alarm area in the live view window and set the sensitivity. Click "Save".



Note: After setting motion detection, set alarm area in "System" >  > Alarm Linkage. Otherwise, when alarm is triggered, CU will not give alarm prompt. Details can be referred to in Alarm Linkage.



7.2 Parallel Port Alarm

Parallel port alarm means the alarm input channels connect with multiple alarm detection devices (such as smoke detector, infrared, etc.) to monitor fire and temperature at site.

Click "System" >  > "Alarm Linkage" on the menu. Select a front-end device from the device list,

select different alarm input channels and set parallel port alarm. Detailed operations can be referred to in Alarm Linkage.

7.3 Intelligent Alarm

After VMS is connected with intelligent alarm system, when the intelligent alarm system triggers alarm, it will send alarm message to VMS. If the VMS sets linkage to the system, it will generate alarm linkage. Detailed steps to set alarm linkage can be referred to in Alarm Linkage.

7.4 Other Alarms

Video source loss alarm: When the video source is lost, the system will trigger alarm. At this point, the alarm icon will be displayed in the device list and prompts in the notice bar.

Disk full alarm: If the disk is full and the preset solution for it is to stop recording, the system will trigger alarm. At this point, the alarm icon is displayed in the device list and prompts in the notice bar.

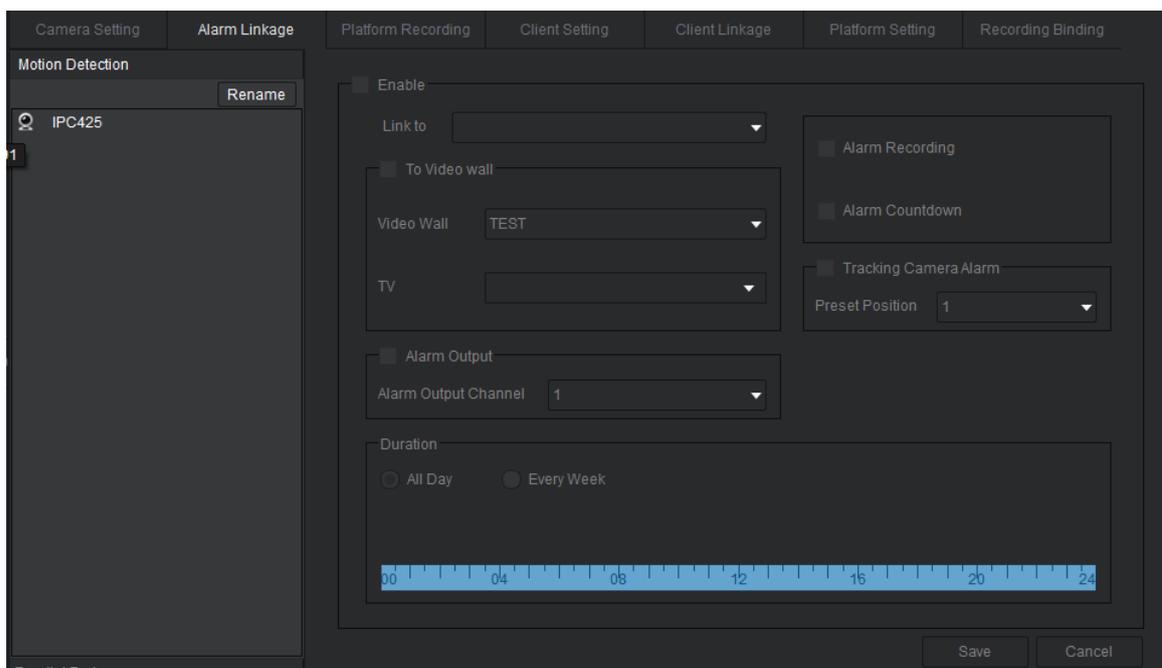


Note: Disk full alarm is available when the front-end device supports front-end recording and alarm functions.

7.5 Alarm Linkage

Motion detection alarm, parallel port alarm and intelligent alarm support alarm linkage setting. Alarm linkage includes CU linkage, VMS linkage and front-end device linkage.

1. Click "System" >  > "Alarm Linkage" and enter the alarm linkage settings interface.



2. Select front-end device from the device list to set alarm linkage. In motion detection alarm area or input channel alarm area, select video source or input channel and set parameters according to actual needs.



Note: Motion detection alarm setting, input channel alarm setting and intelligent alarm setting correspond with motion detection alarm, parallel port alarm and intelligent alarm.

Parameter explanations are shown below:

Form Alarm Linkage Parameter

Item	Explanation
Alarm Setting	Check it to set alarm linkage
Related Encoding Channel	Select the channel to be linked to when alarm linkage triggers
Send Stream to TV Wall	Check it, and select TV Wall and a TV on the wall. When alarm triggers, system will send alarm image to the TV Wall. <i>Note: Before enabling this function, please set TV Wall first.</i>
Alarm Recording	Check it, and VMS will record automatically when alarm triggers.
Alarm Time	Check it, and system will display alarm duration when alarm triggers.
Camera Tracking Alarm	Check it and select camera preset position. When alarm triggers, camera will turn to the selected preset position automatically. <i>Note: Before enabling this function, please set preset position first.</i>
Alarm Output	Check it and select alarm output channel.
Alarm Setting Duration	Set alarm linkage duration. When alarm triggers within the duration, system will perform alarm linkage.

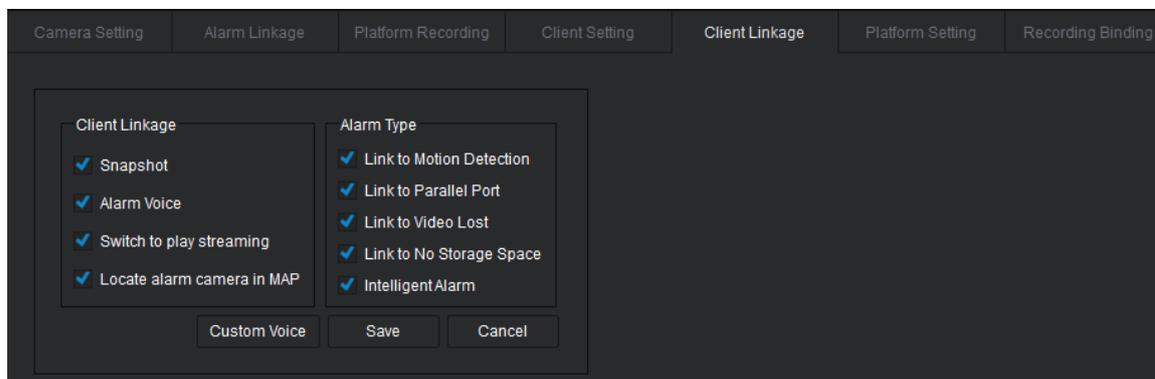
3. Click "Save".



Note: Click "Copy" to copy the alarm linkage settings for this device to other devices.

7.6 Client Linkage

1. Make sure the front-end device has finished alarm linkage settings. Click “System”>



2. Check the alarm type requiring Client Linkage, including motion detection alarm linkage, parallel port alarm linkage, video source loss alarm linkage, disk full alarm linkage and intelligent alarm linkage.
3. Check Client Linkage Strategy. Parameter explanations are shown below:

Form Client Linkage Strategy

Item	Explanation
Alarm Triggered Auto Snapshot	If the front-end device has finished alarm setting and is being browsed by CU, when there is alarm at front-end, CU will capture alarm image locally.
Alarm Triggered Auto Play Alarm Sound	When alarm triggers, PC will prompt according to “Custom Alarm Sound”.
Auto Switch to Alarm Image	When alarm triggers, alarm image will be displayed in a window on the live view interface automatically, and the window will keep on flickering to prompt alarm.
Alarm Triggered E-map Auto Select Front-end Device	When alarm triggers, e-map interface will pop up and select alarm primitive automatically. The primitive is identified with flickering green box.

4. Click "Custom Alarm Sound" and set the alarm sounds for motion detection alarm, parallel port

alarm, video source loss alarm and disk full alarm respectively;

5. Click "Save" to complete Client Linkage settings.

7.7 Manual Alarm-clear

Manual alarm-clear means when alarm triggers, cancel all Client Linkages at CU manually, including Alarm Triggered Auto Snapshot, Alarm Triggered Auto Play Alarm Sound, Auto Switch to Alarm Image and Alarm Triggered E-map Auto Select Front-end Device.

In live view window, select alarming device from the device list and right click menu to select "Manual Alarm-clear".

8 Image Snapshot

8.1 Manual Snapshot

There are 2 methods for manual snapshot:

- Select a live view window, and click  on the floating menu bar or right click menu to select "Snapshot".
- In multi-image live view window, click  > "Snapshot" to capture multiple pictures.
Right-click to exit.

8.2 Record Snapshot

In the record management interface, select a video playback window, click  on the floating menu bar or right-click "snapshot" to snapshot.

8.3 Alarm Triggered Auto Snapshot

VMS CU supports auto snapshot when alarm is triggered.

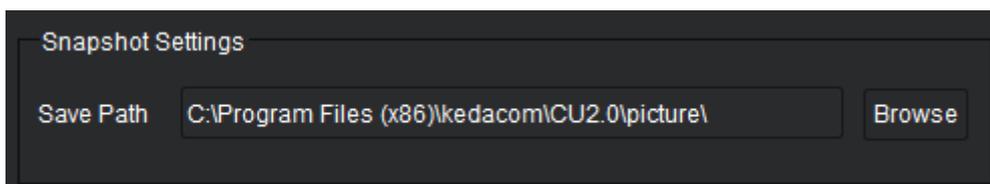
Click "System" >  > "Client Linkage" on the menu bar, and check "Alarm Triggered Auto Snapshot".



Note: The function of alarm triggered auto snapshot is available when the front-end device has finished alarm setting. Alarm setting steps can be referred to in Chapter 7.5 Alarm Linkage.

8.4 Snapshot Settings

Click "System">  > "Local settings" to set the save path for local snapshot.



9 TV Wall



Click  on the menu bar to enter the interface. User can perform operations of TV Wall Settings, TV Wall View, TV Wall Scheme, Video Polling and etc.

9.1 TV Wall Settings

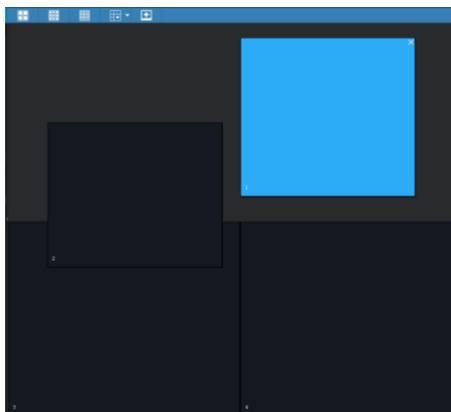
Create TV Wall:

1. Click "TV Wall">  on the menu bar.
2. Set TV Wall style. There are 2 methods:

■ **Fixed style:** Click  for 4 windows,  for 9 windows,  for 16 windows and  for more (maximum 64 windows).

■ **Custom window style:** Choose a window and adjust its size by dragging the mouse. Click "x" to close the window. Click  on the menu bar to add a new one.

■ **Custom window position:** Left click the mouse and drag any window to change its position. Click window style icon again to restore the style.



3. Click  and in the popup window, input the name of the TV Wall.
4. Select the unbound decoders from the list and drag them to the video windows. All bounding settings for video windows and decoders have been finished.

At this point, TV Wall has been created and will display in the video all setting list.

 **Note:**

- 1) One decoder can only bind one video window. If user wants to bind a bound decoder with another window, delete this decoder from the bound window first.
- 2) Click  to unbind decoder and the video window.

Delete TV Wall:

Click  on the toolbar. In TV Wall Settings, select one or more TV Walls to be deleted. Click  to delete TV Wall.

9.2TV Wall View

Start

1. Click "TV Wall"> on the menu bar.
2. Select a TV Wall from the list and double-click.
3. Select the video source from the device list and drag it to any window. And this window will play the monitoring image of this video source.

 **Note:** The window of TV Wall must bind with decoder; otherwise, the live view will be unavailable.

Stop

Select a live view window and click "x" at the top right corner to stop viewing.

Decoder Styles

When the bound decoders support multi-channel decoding, user can change TV Wall style, such as single image, 4-image, 9-image and 16-image.

Select the window that has bound with multiple decoders, and click , ,  and  to change decoding styles.

 **Note:** When decoder style changes, the image resolution will be adjusted according to the image number.

Stitch Scheme

Click “Stitch Scheme” and select stitch scheme from the scheme list.

Device	Scheme list
videowall	1

 **Note:** This function is available only when the front-end device supports.

9.3 TV Wall Scheme

TV Wall scheme is to save TV Wall style, TV Wall and decoder binding, video sources of each window and video polling of each window as a scheme. The scheme can be loaded for viewing instantly when necessary.

9.3.1 TV Wall Scheme Settings

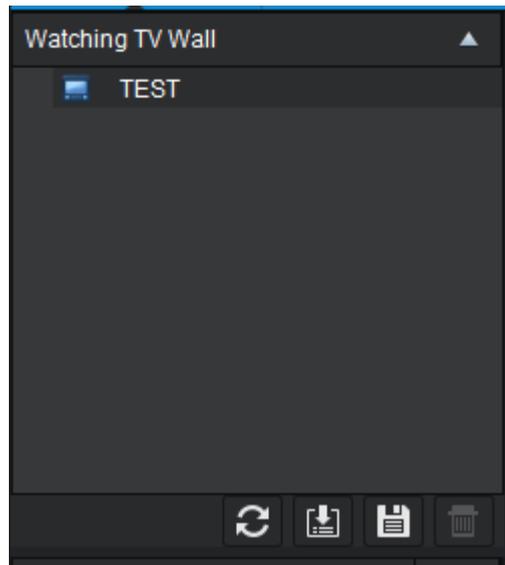
Create TV Wall Scheme

After creating TV Wall, setting video polling and video sources for each window, click  to input scheme name in the pop-up box. Click “OK” to complete. The new scheme will show in the TV Wall list.

Watch TV Wall Scheme

There are 2 methods:

- Select a scheme from the TV Wall list and click .
- Double-click the scheme to be viewed in the list.



Delete TV Wall Scheme

Select the TV Wall scheme from the list and click  to delete the scheme.

9.3.2 Scheme Polling Setting

1. Double click a TV Wall from the TV Wall list and click  on the toolbar.
2. In the pop-up window of "Scheme Polling Setting", select one or more scheme for polling and click "Add" to add it to the list on the right.

 **Note:** Click "Upward", "Downward" or "Delete" to move the scheme upward and downward or delete it.

3. Select one or more added schemes, and configure stay time for each scheme.
4. Check "Start Polling after Completion" and click "OK". Then, the TV Wall will start scheme polling automatically.

Pause/Stop Scheme Polling

Click  /  on the toolbar to pause or stop scheme polling.

9.4TV Wall Allocation

The created TV Wall can be Allocated to different users. Detailed operation steps can be referred to in Allocate TV Wall.

9.5 Video Polling

TV Wall supports Video Polling. Video polling can be configured through the floating menu bar or right-click menu. After setting, user can perform operations of pausing polling, recovering polling, stopping polling, starting group polling and stopping group polling. Details can be referred to in Video Polling.



Note: When decoder supports multi-channel decoding, functions of starting group polling and stopping group polling are available.

10 E-Map

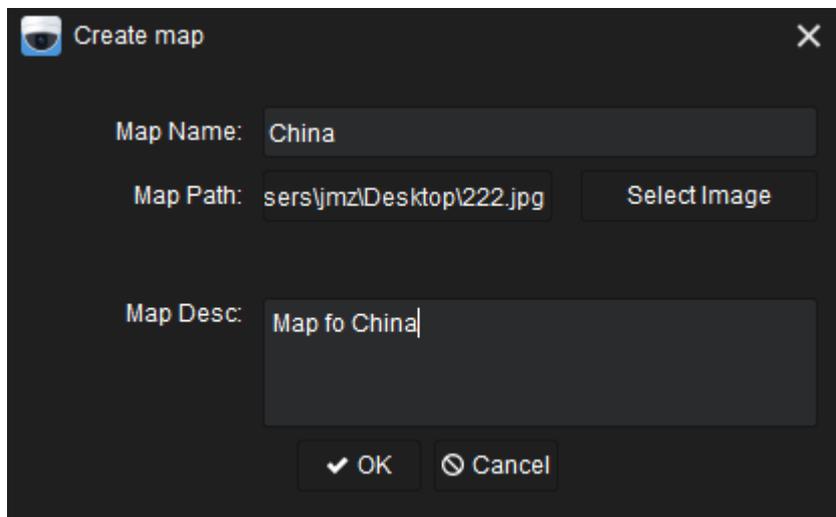
According to the geographic positions of video sources, they can appear on the e-map where it is actually installed so that user can manage each point conveniently.

Click “E-Map” on the menu and perform operations on e-map and entities. E-map includes JPEG and Google. Chapter 10.1 to 10.3 will take JPEG e-map as an example to introduce functions and operations of e-map.

10.1 Create Map

1. Click 
2. In the pop-up window of “Create Map”, input map name and description, and choose path of the map.
3. Click "OK" to add. At this point, the map will show on the map list.

 **Note:** 3 formats of map are supported: jpg. bmp. and png.



10.2 Map Settings

10.2.1 Basic Operations

After adding map, the following operations can be performed.

1 2 3 4 5 6 7 8 9



Explanations are as follows:

Form Basic Operations

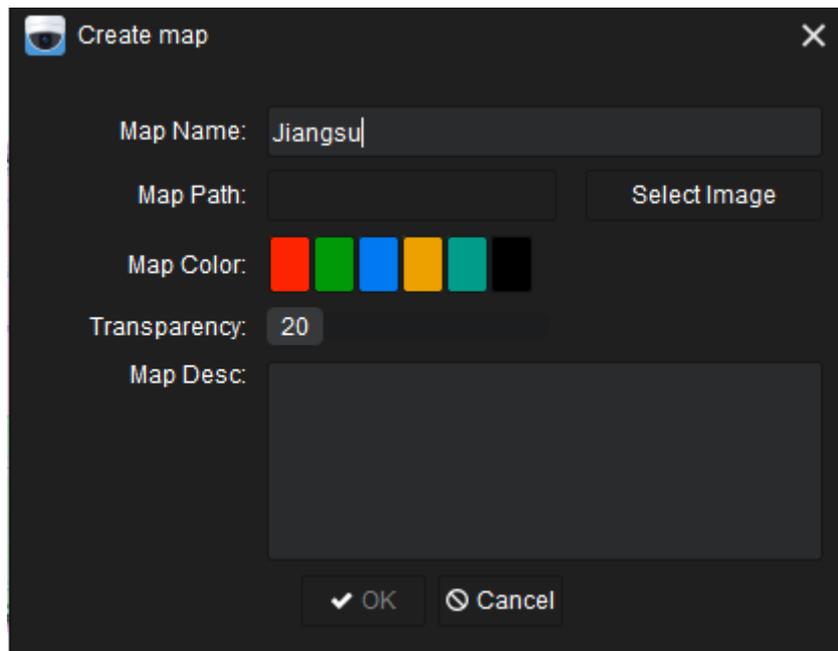
Number	Explanation	Number	Explanation
1	Select primitive	5	Show or hide primitive name
2	Show full map	6	View map info
3	Full screen	7	Lock or unlock primitive
4	Change or hide eagle eye	8	Create sub-map
\	\	9	Hide all play windows

10.2.2 Sub-map

Create Sub-map:

1. Click  on the toolbar.
2. Left-click to draw a closed polygon area, and right-click to complete sub-map drawing.
3. In the pop-up window, input map name and description, and select save path, map color and transparency.
4. Click "OK" to complete.

 **Note:** Double-click on the main map to switch to sub-map.



View/Edit Sub-map:

Click sub-map on the main map, and click  to view or edit.

Delete Sub-map:

There are 2 methods:

- Click sub-map on the main map, and click  on the floating bar to delete sub-map.
- Select the sub-map from the map list, and click  to delete.

10.3 Primitive Operation

10.3.1 Add Primitive

1. Select the front-end device from the device list, and drag it to a proper position on the map.
2. Click "Yes" on the pop-up dialog box of "Unlock Map".
3. In the pop-up window of "New", input primitive name and description, and select primitive picture.
4. Click "OK" to complete primitive adding.

 **Note:**

1. A primitive can be added to one e-map only. An e-map can add 300 different entities at most.

2. When the map is unlocked, system will skip Step 2.

10.3.2 Live View

There are 2 methods:

- Select primitive on the map for live viewing, and click   to view its main or secondary stream.
- Double-click the primitive icon to view its video.

10.3.3 Call Front-end Device

User can call front-end device in e-map, including single call and group call.

Single Call: Select the front-end device from the map and click .

Group Call: Select all primitive devices on the map; in the pop-up primitive list, check devices to be called and click "Call".

Stop Call:

Select one or more primitive devices from the map. In the pop-up primitive list, check devices to be stopped calling, and click  to stop calling.

10.3.4 Lock/Unlock Primitive

E-map supports function of locking primitive. A locked primitive cannot be moved randomly unless it is unlocked.

Click   to lock or unlock primitive.

10.3.5 Primitive GPS

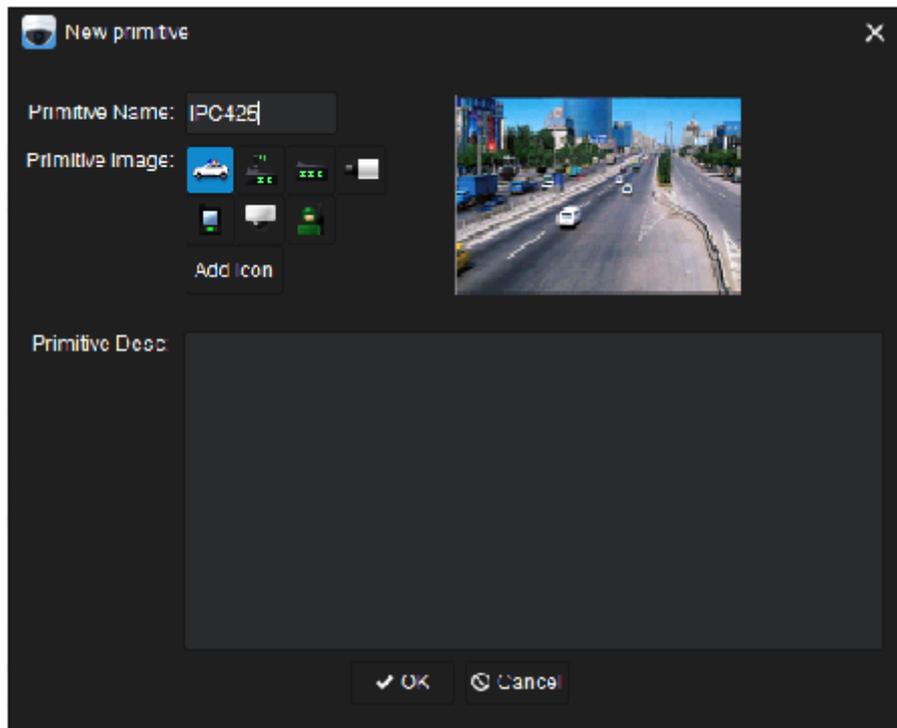
Select the front-end device that has become a primitive from the device list; double-click it and its position in the e-map will appear and be highlighted in a green dynamic circle.

When GPS a primitive, if the primitive does not show on current e-map, system will switch to the e-map where it is.

E-Map supports reverse GPS: Select a primitive on the e-map, and the device list will show the corresponding device to this primitive.

10.3.6 View Primitive

Select the primitive to be viewed on the map, and click  to view the information of it, including primitive name, device name, device type, device model, working status and primitive description.



10.3.7 Edit Primitive

1. Select a primitive from the map, and click .
2. In the pop-up window of "View Primitive", click "Edit".
3. Input new primitive name and description, and select new primitive picture.
4. Click "OK" to complete.

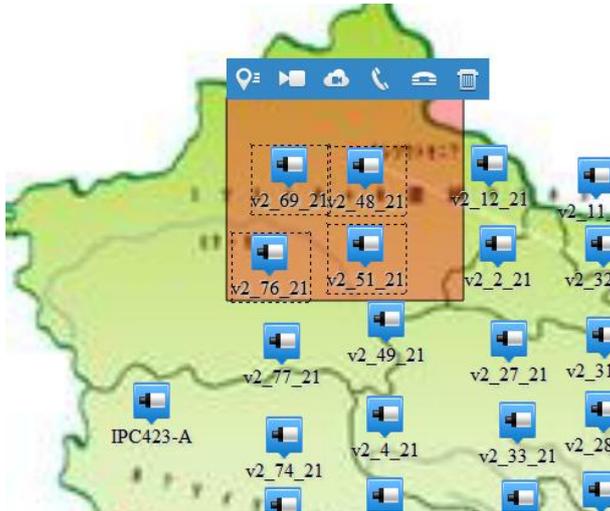
 **Note:** Primitive picture can be defined. Make a picture of 32*32 pixels and click  to add.

10.3.8 Delete Primitive

Select a primitive from the map and click  to delete.

10.3.9 Primitive Selection

Click  to select multiple entities. User can perform operations in batch, such as "View Primitive List, Live View, View Secondary Stream, Call, Stop Call and Delete Primitive".



Note: Under multi-screen mode, user can select one or more entities from CU and drag them to live view interface, recording interface and TV Wall interface. Only support 9-channel e-map live view. Detailed operations can be referred to in Chapter 3.6 Multi-screen.

10.4 Google Map

By backstage configuration, user can get Google map. Related operations can be referred to in *VMS Configuration Guide*.

Click "Google Map" page to enter Google map interface.



Select primitive: click this icon to select multiple entities and operate in batch.



Full screen: click this icon and Google map will display in full screen.



Change eagle eye: click it to show or hide eagle eye, and change the position of eagle eye.



Show primitive name: to show or hide primitive name.



View map info: click it to enter "Edit" interface and configure parameters.



Lock primitive: click it and user will be unable to operate on primitive.



Hide all tracks: to show or hide the moving tracks of primitive.



Hide all play windows: click it and all playing windows will be hidden.

10.4.1 Edit Map

Click  on the menu bar to enter "Edit Map" interface, and complete the parameters.

Map name: custom map name

Map source: user can download map from slave VMS server or Google map server. If download from slave VMS server, user has to configure parameters at backstage. Details can be referred to in *VMS Configuration Guide*.

Zoom level: support multiple zoom levels (Level -2~12). Default is to show full China map with 12 levels.

Center point latitude/longitude: input the longitude and latitude of a point, and make it as the center to zoom in/out Google map.

10.4.2 Create Map Label

Click  to enter the interface of "Create Map Label", and set information of "Map Name, Zoom Level, Center Point Latitude/Longitude and Map Description".

10.4.3 New Primitive

The same as the way of JPEG map adding primitive, detailed operations can be referred to in Chapter 10.3.1 Add Primitive. In the interface of "New", configure "Primitive Name, Longitude/Latitude, GPS Information Storage (after checking, user can store primitive GPS in Google map), Real-time Track (after checking, user can draw primitive moving track), Primitive Picture and Primitive Description".

10.4.4 Primitive Operation

Left-click primitive and a floating bar will appear, as shown below. Icons from left to right mean: Live View, View Primitive, Enable Track Drawing (click this icon and moving tracks of primitive will show on map), Track Playback and Delete Primitive.



Live View

Click  to view live video of this primitive.

View Primitive

Click  to enter the interface of "Primitive Info", and view primitive information.

Edit Primitive

Click View Primitive>Edit Primitive, and modify parameters in "Edit Primitive" interface.

Enable Track Drawing

There are 2 methods:

- Click  and the moving tracks of primitive will show on the map.
- Enter the interface of “Edit Primitive”, and check “Real-time Track”.

Delete Primitive

Click  to delete this primitive.



Note: For other operations of Google map, please refer to that of JPEG map.

Track Playback

1. Click  or right-click front-end device on the list and select “Track Playback” to set playback duration.
2. Click “Start Track Playback” and the e-map will show the historical tracks within the duration.

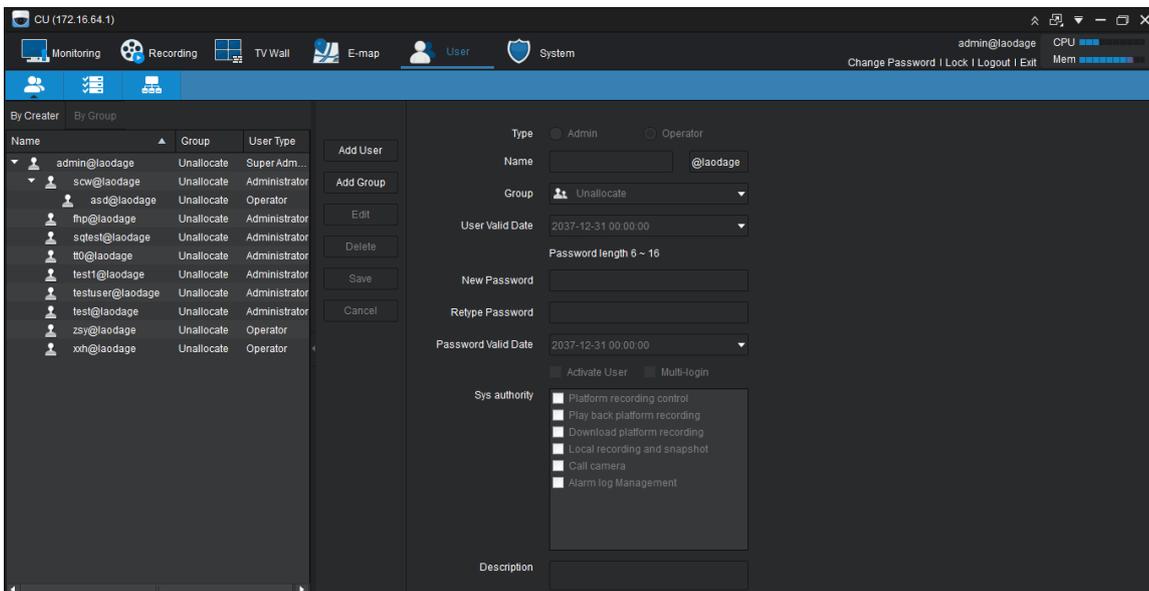
11 User Management

VMS CU supports 3 types of users: super administrator, administrator and operator. Differences are shown below:

Form User Type

Type	Explanation
Super Administrator	Support configurations and management of all devices accessed to VMS. There is only one super administrator for each level of VMS. It is created by default, and only supports password changing.
Administrator	Created by super administrator or administrator. Support creating new user, managing self and lower-level users. Only able to use authorized devices.
Operator	Created by super administrator or administrator. Only able to use authorized devices.

Click "User" , and enter user management interface, as shown below:



11.1 User Group

Create New Group:

1. Click "Create New Group", select user group type, and input group name and description.

2. In system authorization area, check the authorizations for the user. Details are shown below:

Form Authorizations for User Group

Item	Explanation
VMS Recording	Check it and the user group will be authorized to perform VMS recording.
VMS Record Playback	Check it and the user group will be authorized to perform VMS record playback.
VMS Record Download	Check it and the user group will be authorized to perform VMS record download.
Local Recording and Snapshot	Check it and the user group will be authorized to perform local recording and snapshot.
Call Front-end Device	Check it and the user group will be authorized to call front-end device. Note: this function is available only when the front-end device supports.
Alarm Logs Management	Check it and the user group will be authorized to manage alarm logs.

3. Click "Save" to complete creating user group.

At this point, the new user group appears on the left list.

Edit User Group

Select the user group to be modified, and click “Edit” to modify user group name, system authorization and description.

Delete User Group:

Select the user group to be deleted, and click "Delete". After deletion, the group members will be Allocated to the ungrouped list automatically.

 **Note:** Ungrouped users cannot be modified or deleted.

11.2 User

Create New User:

1. Click “New” and select user type and user group. Input user name, user validity, password,

password validity and description. Check “Enable Account”.

Note: Only when check “Allow multiple users” can multiple users login this account simultaneously. Otherwise, only one user is able to login at a time.

2. Check the authorizations for the user. Detailed authorization introduction can be referred to in “Create New Group”.

Note: When the new user belongs to a group other than the ungrouped users, the authorizations of this user are the same as that of the user group it is in.

3. Click “Save” to complete.

At this point, the new user will appear on the left user group list.

The screenshot shows a dark-themed 'Add user' form. On the left is a sidebar with buttons: Add User, Add Group, Edit, Delete, Save, and Cancel. The main form area contains the following fields and options:

- Type: Radio buttons for Admin (selected) and Operator.
- Name: Text input field with a suffix '@laodage'.
- Group: Dropdown menu showing 'Unallocate'.
- User Valid Date: Date and time selector showing '2037-12-31 00:00:00'.
- Password length: Text label '6 ~ 16'.
- New Password: Password input field.
- Retype Password: Password input field.
- Password Valid Date: Date and time selector showing '2037-12-31 00:00:00'.
- Activate User: Checked checkbox.
- Multi-login: Unchecked checkbox.
- Sys authority: A list of permissions, all with checked checkboxes:
 - Platform recording control
 - Play back platform recording
 - Download platform recording
 - Local recording and snapshot
 - Call camera
 - Alarm log Management
- Description: Text input field.

Edit User:

Select the user to be modified, and click “Edit” to modify user type, user name, user group, user validity, password, password validity, system authorization and description.

Delete User:

Select the user to be deleted, and click "Delete".

11.3 Allocate Device Authorization

11.3.1 Allocate Video Source

It means to allocate front-end devices to user or user group, and set device authorizations so that user will be able to use the front-end devices.

Allocate Devices

1. Click “User”>.
2. Select “User/User Group” and enter the interface of “Allocate Device”. In the “Unallocated Devices” area, select one or more video sources.
3. Click “Allocate” and video sources are allocated. At this point, video sources will show in the area of “Allocated Devices”.



Note: When the user belongs to a group other than the ungrouped users, the authorizations of this user are the same as that of the user group it is in.

Modify Device Authorization

Select “User/User Group”, and select video sources from “Allocated Devices” to modify authorizations. In “Device Authorization” area, set device authorization and click “Modify Authorization” to modify.

Detailed device authorizations are explained below”

Form Device Authorization

Item	Explanation
PTZ Control Level	Set PTZ control level. Totally there are 10 levels, and Level 10 is the highest. Detailed operation can be referred to in Chapter 3.2.4 PTZ Control Occupation.
Front-end Record	Check it and the user will be able to playback front-end record.

Playback	
Front-end Record Download	Check it and the user will be able to download front-end record.
Front-end Setting	Check it and the user will be able to set parameters of front-end device.
Front-end Alarm Setting	Check it and the user will be able to enable or disable alarm for front-end device.
Front-end Recording Enabling	Check it and the user will be able to enable front-end recording.
Front-end Voice Enabling	Check it and the user will be able to enable front-end voice and hear the voice in the record or live view video.

Cancel Allocation

Select “User/User Group”, and select the video sources to cancel Allocation from “Allocated Devices”. Click “Cancel Allocation” to cancel Allocation.

11.3.2 Allocate TV Wall

It means to a

Allocate TV Wall to corresponding user or user group so that the user or members of the user group are able to use the TV Wall.



Note: Before Allocating TV Wall, configure TV Wall first. Otherwise, it cannot be allocated. Detailed settings can be referred to in TV Wall Settings.

1. Click “User”>.
2. Select “User/User Group” and enter the interface of “Allocate TV Wall”. In the “All TV Walls” area, select one or more TV Walls.
3. Click “Allocate” and TV Walls are allocated. At this point, TV Walls will show in the area of “Allocated TV Walls”.

11.4 View Pictures Through WeChat

User can view pictures through WeChat after make some settings on PMC and CU.



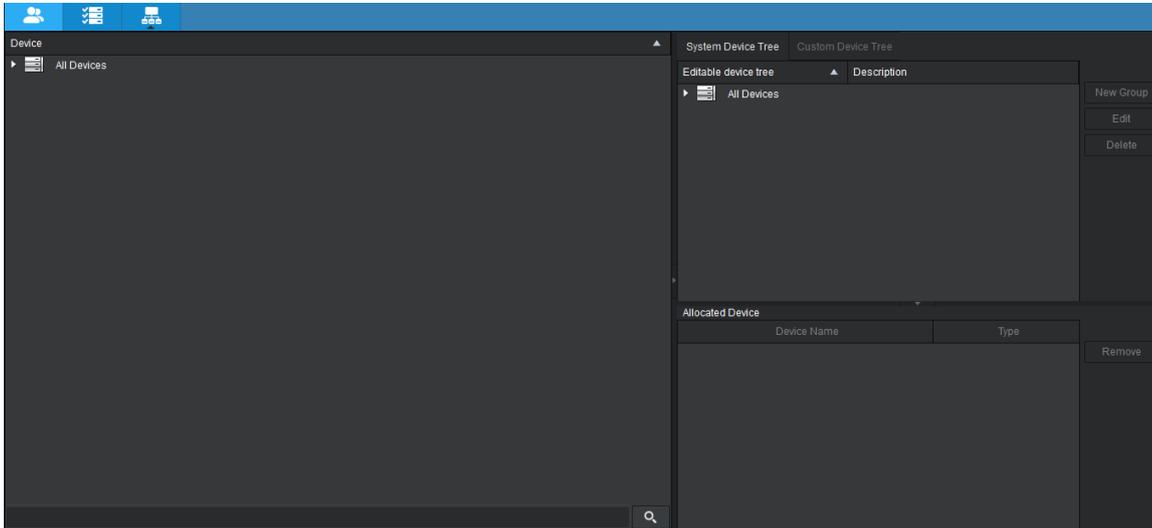
Note: This version doesn't support live view now.

Detailed steps:

1. Enter PMC client and enable MSS and CAPS in Module;
2. Go to MSS to set mapping allocation. Details can be referred to in the Appendix of ***VMS Configuration Guide***;
3. Click “User”> to enter setting interface;
4. Input WeChat title and click “**Save**”;
5. Select a device from the device list and click “**Release**”;
6. Set picture update time and click “**Save**”.
7. After setting CU, enter WeChat client and make relative settings.
8. After completion, WeChat user can subscribe the public account and visit the released pictures.

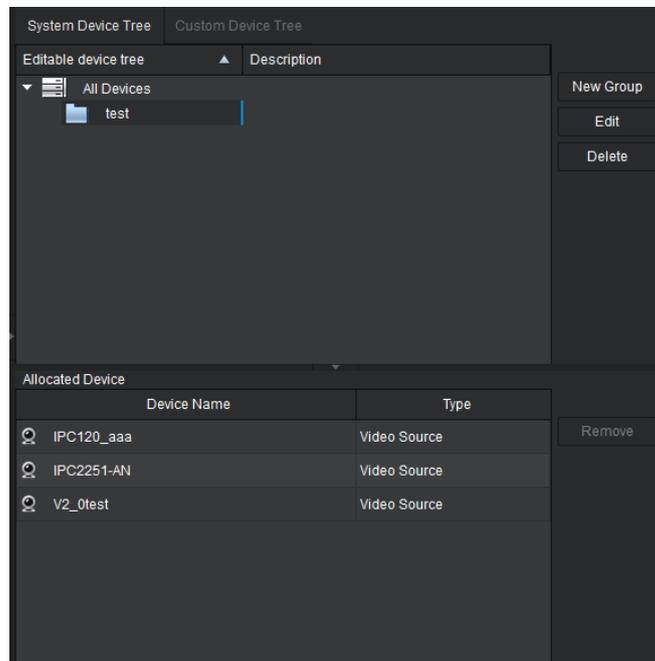
12 Device Tree Management

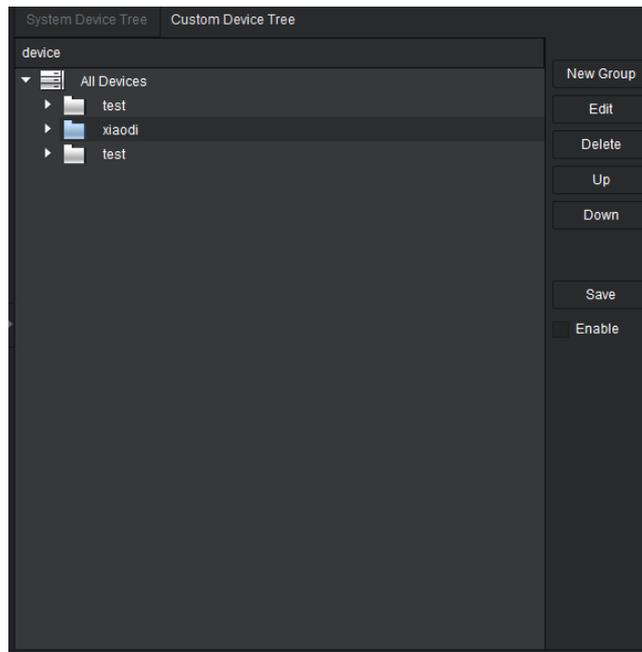
Click “User”>  on the menu bar and enter the interface, as shown below:



 **Note:** CU has only one default ungrouped group.

Device tree list includes “System Device Tree” and “Custom Device Tree”, as shown below:





Note:

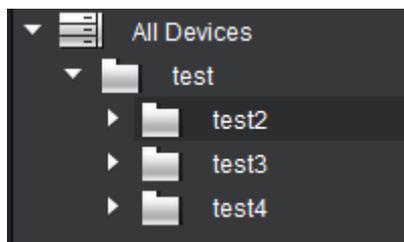
- 1) Create custom device group, and user can move device or device group in custom device tree by “Upward” and “Downward”. And after enabling custom device group, CU monitoring points list will show according to the sequence of device tree creation.
- 2) When enabling “System Device Tree” or “Custom Device Tree”, re-enter device management and the edit window of this device tree will show on the right preferentially.
- 3) Not support operator to custom group.

12.1 Create New Device Group

Select the group in the device list.

Click "New" to input the device group name to complete.

VMS supports multiple level groups, and device groups under the same device group cannot have the same name.



12.2 Edit New Device Group

Select a device group in the tree. Click "Edit" to modify the name of the device group.

12.3 Device Group

CU supports device group. User can Allocate every front-end device to different device groups to facilitate user management.

Add Device:

Select one or more video sources, left-click mouse and drag them to the device group. At this point, the video sources will show in the list.



Note:

- 1) One video source only belongs to one device group.
- 2) In GB VMS cascading, support re-group the front-end device from lower-level VMS in current level VMS.
Operation: drag the devices of lower-level VMS with mouse to the device group of current level VMS.

Delete Device:

In editable device tree area, select a device group and select devices in the group. Click "Delete" to remove it from the group. The deleted device will go to the ungrouped group automatically.

12.4 Delete Device Group

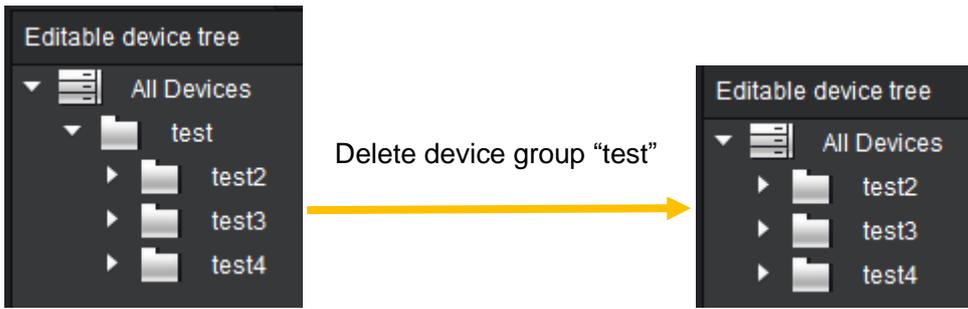
In editable device tree area, select a device tree and click "Delete" to delete the device group.

After deleting device group, all the devices and device groups in this device group will re-group according to the following 2 methods:

- When the device group in the same level of ungrouped group

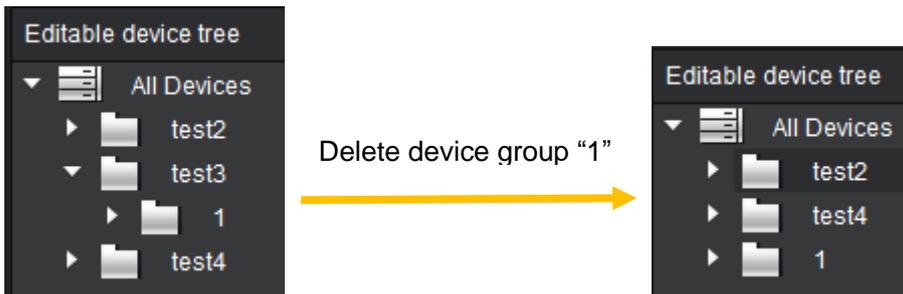
Device: go to ungrouped group

Lower-level device group: lower-level device group will be upgraded for one level, i.e. the same level as that of ungrouped group.



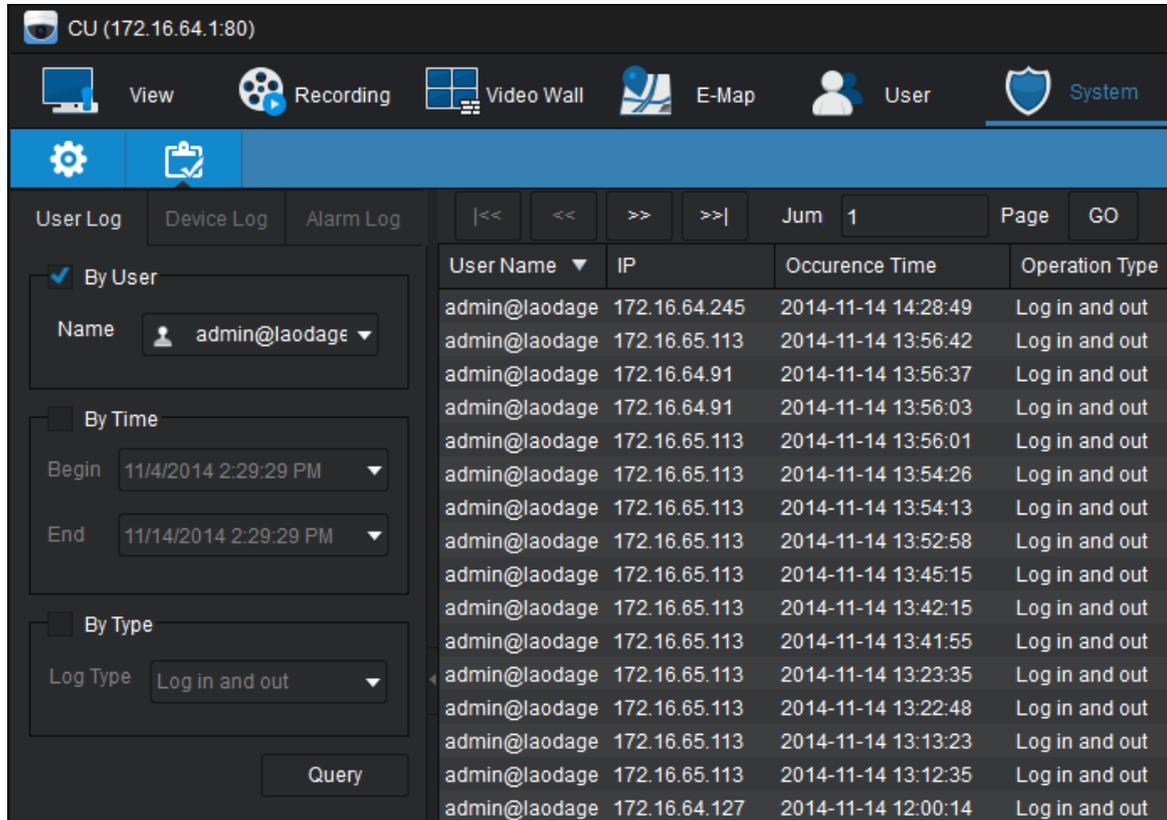
- When device group is lower than ungrouped group

Device and device group will be upgraded to the upper-level group.



13 Log

Click System >  and enter log interface. Logs include user logs, device logs and alarm logs, as shown below:



The screenshot shows a web interface for a camera system. At the top, there's a navigation bar with icons for View, Recording, Video Wall, E-Map, User, and System. Below this is a sub-menu with User Log, Device Log, and Alarm Log. The 'User Log' section is active, showing a search filter for 'admin@laodage' and a 'Query' button. The main area displays a table of log entries.

User Name	IP	Occurence Time	Operation Type
admin@laodage	172.16.64.245	2014-11-14 14:28:49	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:56:42	Log in and out
admin@laodage	172.16.64.91	2014-11-14 13:56:37	Log in and out
admin@laodage	172.16.64.91	2014-11-14 13:56:03	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:56:01	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:54:26	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:54:13	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:52:58	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:45:15	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:42:15	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:41:55	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:23:35	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:22:48	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:13:23	Log in and out
admin@laodage	172.16.65.113	2014-11-14 13:12:35	Log in and out
admin@laodage	172.16.64.127	2014-11-14 12:00:14	Log in and out

13.1 User Log

Click "Query" to view all users' logs.

User logs can be queried by user name, time, or log type.

User log types include: log in and out, PTZ control, record download, record stop, record playback and others.

User Log Device Log Alarm Log

By User

Name

By Time

Begin

End

By Type

Log Type

Query

13.2 Device Log

Device logs can be queried by device name, time, or log type.

Device log types include: register, log in, log out, VMS record abnormal and others.

Operation steps:

1. Click the **Device Log** tab.
2. Select the **By Device** check box.
3. Click **Select Device** and select the device from the device list.

Alternatively, enter the device name in the text field as shown in the following picture and click





4. Click **Query**.

The following is an example of search results.

13.3 Alarm Log

Select "Log Domain" and click "Query" to view all alarm logs of current level VMS.

Alarm logs can be queried by device name, log domain, time, or alarm alias.

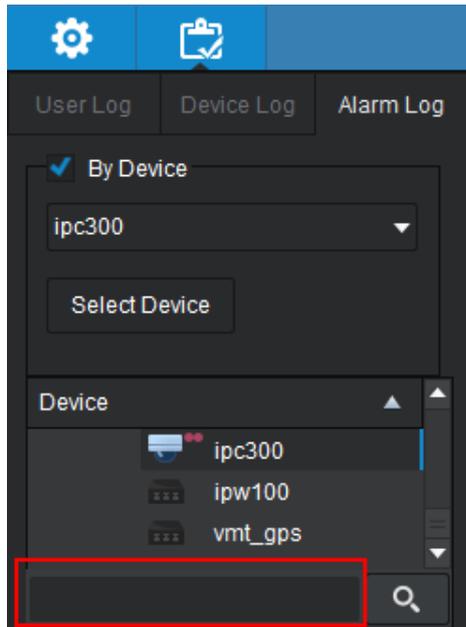
 **Note:** "Log Domain" shows current level VMS and all lower-level VMS.

To query alarm logs of a device:

1. Click the **Alarm Log** tab.
2. Select the **By Device** check box.
3. Click **Select Device** and select the device from the device list.

Alternatively, enter the device name in the text field as shown in the following picture and click





14 System

This chapter mainly introduces system management.

14.1 Local Settings

Click **System**>  > **Local Settings**.

14.1.1 Basic Settings

Parameters explanation as follows:

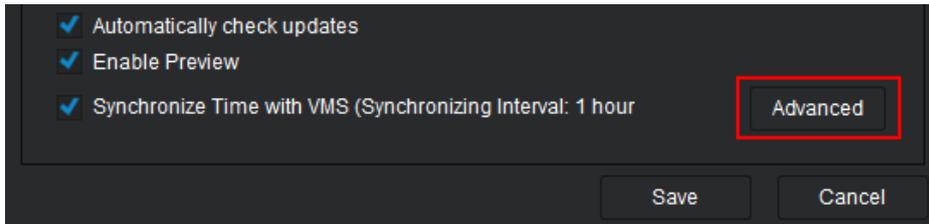
Form Basic Settings

Item	Explanation
Snapshot	Set save path for local snapshot.
Local record and playback	Set save path for local recording, able to enable max channels of local recording and recording format at the same time.
Idle	Set auto screen lock time. If no operation is performed during the time, CU will enter status of locked (i.e. unlocking dialogue box appears). When user use CU again, enter password to unlock.
Auto check and update	Check it and CU will check automatically if the version is the latest.
Enable live view	Check it and when mouse stops at a device on the tree, live view of this device will show.
NTP	Synchronize CU time and server time. Automatic synchronization interval is 1 hour.
Enable immediate playback	This item is enabled by default. If uncheck it, when re-login CU, CU will prompt to check it.

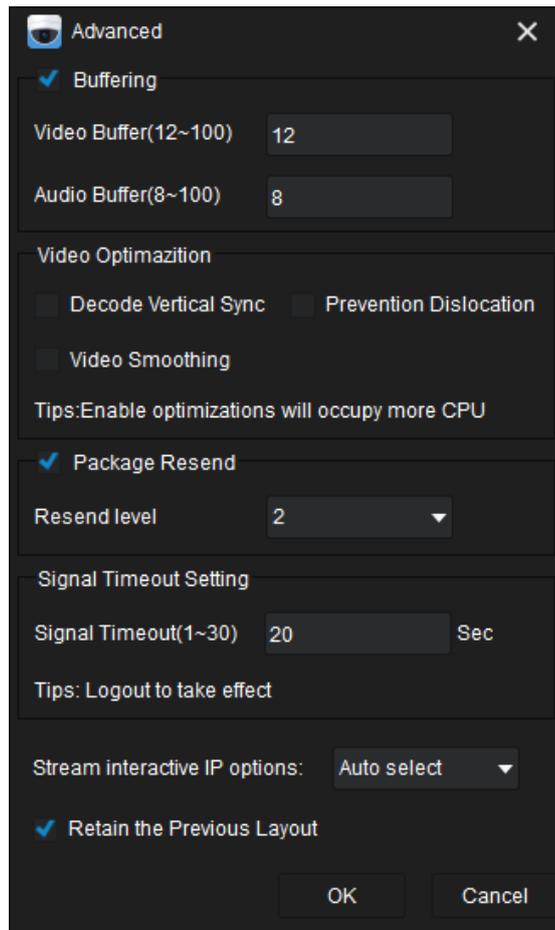
14.1.2 Advanced Settings

To configure advanced settings:

1. On the **Local Settings** tab page, click **Advanced**, as shown in the following picture.



2. Configure parameters displayed, as shown in the following picture.



The following form explains parameters displayed:

Form Advanced Settings

Item	Explanation
Buffering	When this option is selected, input and output video or audio data will be temporarily stored in the data buffer of your PC while being

Item	Explanation
	<p>transferred. This ensures smooth viewing but prolongs the delay.</p> <p>When this option is not selected, the delay is shortened but user experience is compromised.</p>
Decode Vertical Sync	<p>Loss of vertical synchronization usually produces an image rolling up or down the screen. When this option is selected, vertical synchronization is enabled.</p> <p>Note that selecting this option will increase the CPU usage of your PC.</p>
Prevention Dislocation	<p>When you are viewing the video displayed on a view window, right-clicking the window may cause image distortion. When this option is selected, image distortion can be prevented.</p> <p>Note that selecting this option will increase the CPU usage of your PC.</p>
Video Smoothing	<p>Whether to enable the anti-aliasing technique.</p> <p>When you are viewing video from multiple cameras, aliasing may occur. In such a case, you are advised to select this option.</p> <p>Note that selecting this option will increase the CPU usage of your PC.</p>
Packet Resend	<p>Whether to enable the retransmission upon packet loss technique.</p> <p>A high retransmission level ensures smooth viewing but prolongs the delay.</p> <p>You are not advised to select this option when the network condition is very poor.</p> <p>If you select this option when the network condition is very poor, a number of system resources will be occupied. Additionally, when the VMS is waiting for retransmitted packets, images displayed on the View tab page may be frozen or no image is displayed on this tab page.</p>
Signal Timeout	<p>Period during which the VMS is expected to respond to messages</p>

Item	Explanation
	<p>sent from the CU.</p> <p>When the VMS does not respond to messages sent from the CU within the period specified by this parameter, the CU regards these messages as not being transmitted to the VMS.</p> <p>The default value for this parameter is 20.</p>
Stream interactive IP options	<p>With this option, you can determine which IP address of your PC can be used to communicate with the VMS.</p> <p>The default value for this parameter is Auto select.</p> <p>Note that the default value will apply when the VMS fails to reach your PC using the selected IP address.</p>
Retain the Previous Layout	<p>When this option is selected, the screen layout you selected during your last login will apply upon your next login.</p>

14.2 VMS Configuration

Click **System>Platform Setting** in menu bar to configure User Log, Device Log, Alarm Log, When no space for recording and Video Source Name Sync.

Form VMS Configuration

Option	Explanation
User Log	Check it and system will save user logs. Meanwhile, user can set maximum days for user log and maximum item for user log.
Device Log	Check it and system will save device logs. Meanwhile, user can set maximum days for device log and maximum item for device log.
Alarm Log	User can set maximum days for alarm log and maximum item for alarm log.
When no space for recording	Select a strategy for record coverage when the disk is full. Options include Overwrite all recording, Stop recording while no more space and Overwrite non-alarm recording.
Video Source	When front-end device is networked, user can choose if synchronize front-end to platform. If checked, platform will receive front-end source name. If unchecked, user

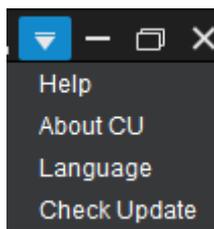
Name Sync	can define front-end source name, which is neither sent back to the front-end nor be overwritten by front-end.
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14.3 Update

There are 2 methods to upgrade versions through CU:

Auto upgrade: click System> >Local Settings, check “Auto check and update”.

Manual upgrade: upgrade manually according to the following picture.



15 Abbreviations and Acronyms

ANR	automatic network replenishment
BOOTP	Bootstrap Protocol
CU	Client Unit
DDNS	Dynamic Domain Name System
DHCP	Dynamic Host Configuration Protocol
ePTZ	electronic PTZ
NAT	network address translation
NVR	Network Video Recorder
ONVIF	Open Network Video Interface Forum
OSD	on-screen display
PC	personal computer
PMC	Platform Management Client
RAID	redundant array of independent disks
RTSP	Real Time Streaming Protocol
UPnP	Universal Plug and Play
UUID	Universally Unique Identifier
VMS	Video Management System
WDR	wide dynamic range