Viewtron NVMS Software User Manual

Network Video Management Software for Viewtron

DVRs, NVRs, and IP Cameras
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1 Introduction

1.1 Introduction

1.1.1 Summary

Viewtron NVMS (Video Management System) is used to access and control Viewtron IP cameras, NVRs (network video recorders), and DVRs (digital video recorders). With the powerful capability of video surveillance management, real-time preview, record storage, record playback, record download, alarm linkage, decoding on TV Wall and keyboard control are supported. Due to its small, exquisite, flexible and diverse deployments, Viewtron NVMS can meet various demands of small-sized projects and can be widely used in the video surveillance of industrial park, education, banking, chain stores, buildings and transportation.

1.1.2 Software Architecture
1.2 System Components

1.2.1 System

1.2.2 Front-end Access
- Front-end devices include IPC, DVR and NVR.
- You need to connect monitor devices such as IPC, DVR and NVR to internet through hubs or routers accessed by Cat5 or Cat5e cables (less than 100 meters) or optical fiber.
- Run monitor client through local PC to configure the local video monitor, monitor devices and so on.

1.2.3 Background Monitor
- Background monitors include TV Wall Client, Configuration Management Center and Monitor Client.
- You can set up the real-time image of display devices, these display devices including TV-Wall (decoding images to show on the TV-Wall through video decoder), digital display screen and so on.
- Run monitor client through local PC to view, playback and remotely configure and manage the real-time video of front-end monitor devices.
1.2.4 Control Center

- In the control center, Viewtron NVMS realizes various services, such as, video transmission, recording, decoding on TV wall, etc.
- In the control center, add IP-SAN storage array to realize centralized storage.
- In the control center, connect servers and IP-SAN storage array to internet through switches.
- Please set up IP addresses in accordance with the actual situation.

Note: If servers are installed in the same PC, these servers shall have the same IP address.

1.3 Version

<table>
<thead>
<tr>
<th>Version</th>
<th>Max signal access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewtron NVMS</td>
<td>256-ch video signals</td>
</tr>
</tbody>
</table>

2 Configuration Requirement

2.1 Software and Hardware Configuration Requirement

2.1.1 S&H Config Requirement for Control Center

<table>
<thead>
<tr>
<th>No.</th>
<th>NVMS components</th>
<th>Recommendation for hardware configuration</th>
<th>Recommendation for software configuration</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monitor Client</td>
<td>Inter(R) Core(TM) i5 7500 3.0GHz or above /4GB DDR3/NV GT430 or AMD HD6570 or above, 512MB GDDR5or above/500GB SATA/1000M NICs</td>
<td>Windows 7 SP1 32bit/64bit Professional/Ultimate Windows 8 32bit/64bit Professional Windows 10 32bit/64bit Professional</td>
<td>As needed</td>
</tr>
</tbody>
</table>

The recommended 64-bit hardware configurations are as follows.

<table>
<thead>
<tr>
<th>No.</th>
<th>NVMS components</th>
<th>Recommendation for hardware configuration</th>
<th>Recommendation for software configuration</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monitor Client-64bit</td>
<td>Inter(R) Core(TM) i5 7500 3.0GHz or above /16GB DDR3/Intel HD Graphics 530 2GB or above/ NVIDIA GeForce GTX 1060 6GB or above , ( multi-screen : 2GB GDDR5memory ) /500GB SATA/Gigabit NIC</td>
<td>Windows 7 SP1 64bit Professional/Ultimate Windows 8 64bit Professional Windows 10 64bit Professional</td>
<td>As needed</td>
</tr>
</tbody>
</table>

2.2 Requirement for Firewall

In order to ensure the network security, it is necessary for the system to set up firewall. All monitor ports shall be opened in the installed servers. The open ports are as follows:
<table>
<thead>
<tr>
<th>Server</th>
<th>Port Type</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentication Server</td>
<td>Internal Port</td>
<td>6003</td>
</tr>
<tr>
<td>Configuration Server</td>
<td>Internal Port</td>
<td>7002</td>
</tr>
<tr>
<td>Media Transfer Server</td>
<td>Internal Port</td>
<td>6006</td>
</tr>
<tr>
<td></td>
<td>Auto Report Port</td>
<td>2009</td>
</tr>
<tr>
<td>Storage Server (windows version/IP-SAN)</td>
<td>Internal Port</td>
<td>6009</td>
</tr>
<tr>
<td>Alarm Server</td>
<td>Internal Port</td>
<td>6033</td>
</tr>
<tr>
<td>TV Wall Server</td>
<td>Internal Port</td>
<td>6036</td>
</tr>
</tbody>
</table>

**Note:** The above-mentioned ports are the default internal ports of servers. If all these ports are modified, these open ports shall be modified accordingly in the firewall configuration.

### 2.3 Confirm Installation Environment

<table>
<thead>
<tr>
<th>Item</th>
<th>Checkup Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware</td>
<td>Check whether the hardware meets the standard required. (including CPU, memory, HDD, etc.)</td>
</tr>
<tr>
<td>Software</td>
<td>Check whether the software meets the standard required. (including the type and version of the operation system, NVMS version, etc.)</td>
</tr>
<tr>
<td>Front-end device</td>
<td>Check whether the device access is normal.</td>
</tr>
<tr>
<td>Firewall setup</td>
<td>Check whether those open ports of firewall meet the standard required.</td>
</tr>
<tr>
<td>Network</td>
<td>Check whether the networks of front-end devices and center equipments are normal.</td>
</tr>
<tr>
<td>TCP/IP config</td>
<td>Check whether the settings of IP address, subnet mask, gateway and DNS correct.</td>
</tr>
</tbody>
</table>
3 Install and Uninstall the Software

3.1 Install the software

1) Double click “NVMS server.exe”. Select the UI language as needed.

2) A tip will pop up to suggest you to close the antivirus software.

3) Click [Browse] to select the installation location and then click [Next].
3.2 Uninstall Software

If the new version needs to be installed or there is no need to use this software, this software can be uninstalled. It is strongly recommended to back up the configuration data before installing the new version of NVMS.

The uninstallation steps of the Server are similar to the uninstallation of the client.

4) Click [Next].

5) Check “Launch Software” as needed and then click [Finish]".
Click “Start” \(\rightarrow\) All Programs \(\rightarrow\) NVMS Server \(\rightarrow\) Uninstall to pop up the following wizard. Click “Yes” to confirm.

Then click “Finish” button to completely uninstall Authentication Server.
4 Login

4.1 Run Servers

Before logging onto the client, please ensure all servers are working normally. Having been installed successfully for the first time, the server tray will minimize on the taskbar of the computer. Double click the server tray icon to pop up the server tray interface. You can also right click the server tray icon and select “Display main interface to pop up the server tray interface as shown below.

![Server Tray Interface](image)

The working status and port can be checked from the server tray. All servers can be stopped and restarted. Additionally, all server ports can be modified as needed. Click the corresponding port number to modify it and the modified port can be saved automatically after you move your mouse to another place. Please set up according to the actual network.

4.2 Login

Double click the shortcut icon of “Monitor Client” to run the software as shown below.

![Login Interface](image)
① Enter username and password (the default username is admin; the default password is 123456). Check “Remember Password” or “Auto Login” as needed.
② Click [Login].

If you forget the password, please click “Reset password”. Then a small window will appear. You can reset the password by answering the pre-defined questions.

If this is the first time for you to log in, please enter the User Account Setting interface to set the encryption as needed.

After you log in, a record partition setting box will pop up. Please select the desired record storage location. Then click [OK] to save the settings.

### 4.3 Main Menu Interface Introduction
There are five parts in the main menu interface. The descriptions of each part are as shown below.

**Menu Bar**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Menu Bar</td>
<td>4</td>
<td>Status Bar</td>
</tr>
<tr>
<td>2</td>
<td>Tab Bar</td>
<td>5</td>
<td>Alarm Information Bar</td>
</tr>
<tr>
<td>3</td>
<td>Functional Areas</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tab Bar**

<table>
<thead>
<tr>
<th>Menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td>“Live View”, “Edit live view”</td>
</tr>
<tr>
<td>Help</td>
<td>Including “User Manual”, “Register license” and “About NVMS”</td>
</tr>
</tbody>
</table>

**Functional area**

<table>
<thead>
<tr>
<th>Menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live View</td>
<td>To view live images and to record, snapshot and talk, etc.</td>
</tr>
<tr>
<td>Record Playback</td>
<td>To remotely play the local records or back up records.</td>
</tr>
<tr>
<td>E-Map</td>
<td>To manage and display maps, hot spots, etc.</td>
</tr>
<tr>
<td>TV Wall Management</td>
<td>To set TV wall and decoding videos on TV Walls</td>
</tr>
<tr>
<td>Resource Management</td>
<td>To add, modify or delete areas, devices or servers.</td>
</tr>
<tr>
<td>Face Surveillance</td>
<td>To recognize, compare or search face.</td>
</tr>
<tr>
<td>Line Crossing Counting</td>
<td>To monitor and analyze people/vehicle flow in real time</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Account and Permission</td>
<td>To add, modify or delete user account and set permissions for these accounts.</td>
</tr>
<tr>
<td>Alarm Center</td>
<td>To set alarm linkage and schedule; To search alarm logs.</td>
</tr>
<tr>
<td>Operation and Maintenance Management</td>
<td>To search, export and maintain logs.</td>
</tr>
<tr>
<td>Local Configuration</td>
<td>To set record path, snapshot path, system startup and maintenance, overload and alarm view.</td>
</tr>
<tr>
<td>Functional Selection</td>
<td>To select common functions displayed on the home page.</td>
</tr>
</tbody>
</table>

Other buttons:

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Click it to hide the interface.</td>
</tr>
<tr>
<td></td>
<td>Click it to zoom in or out the interface.</td>
</tr>
<tr>
<td></td>
<td>Click to exit the software.</td>
</tr>
<tr>
<td></td>
<td>Click it to add the live view page.</td>
</tr>
<tr>
<td></td>
<td>When the tab pages exceed the applicable numbers, this icon will display. Click it to view the hidden tabs.</td>
</tr>
</tbody>
</table>

Functional Selection

In the main menu interface, click “Functional selection” to go to the following interface as shown below.

![Functional Selection Interface]

Please select the home page layout as needed.
5 Device Management

5.1 Add Encoding Device

In the main menu interface, click “Add, Edit or Delete Device” to go to the following interface as shown below.

Click [Add] as shown below.

5.1.1 Quickly Add

Click [Refresh] to quickly search devices in the same local network as shown below. Check the device and allocate the transfer server, storage server, area for it. After that, click [OK].

Click “Default password” to set the default username and password of the devices from different manufacturers, such as Hikvision, Dahua, PMS, etc. The default username of the standard device is “admin” and the default password of the standard device is “123456”.

Note: * The default media transfer server and storage server can be selected when adding devices. Users can also create new media transfer server and storage server in advance (see Add Media Transfer Server and Add Storage Server).

* Area must be set up before adding devices. Click [Add Area] to create an area (See Area Setting).

5.1.2 Manually Add
Enter IP address/IP range/domain name, username and password and choose protocol type.

Click [Test] to test whether the device is connected successfully or not.

Select transfer server, storage server and area and then click [OK].

Devices can be added in batch by adding IP range.

If “URL” is selected, you shall add the device via RTSP protocol. Enter the URL, username and password of the device and then click [Test] to test whether the device is connected successfully or not.

How to get URL?

Here we take the IPC of our company for example. Log in to the web client of the IPC and then go to “Config” \ “Network” \ “RTSP” interface to configure RTSP.

The default RTSP port is 554 and the URL format is “rtsp://IP or domain name:port/profile1”. For example: rtsp://192.168.1.1:554/profile1. Profile1 stands for main stream; profile2 stands for sub stream; profile3 stands for the third stream.

The URL of the device of other companies, please get the URL from its web client or the third-party tools (like ODM).

5.1.3 Initiatively Report

Select the “Initiatively Report” Tab to see the following interface.
Enter the device ID set in the DVR/NVR or IP camera and choose the protocol.

- If the DVR/NVR is needed to add, please go to Network > Platform Access interface of the DVR/NVR. Check “Enable”, enter the IP address and port (default 2009) of the NVMS and then set the device number of the DVR/NVR.
- If the IP camera is needed to add, please go to Network Configuration > Server Configuration of the IP camera. Check “Do you want IPcamera to connect Server”, enter the IP address and port (default 2009) of the NVMS and then set the device number of the IP camera.

Select the transfer server, storage server, area and then click [OK].

5.2 Modify or Delete Device

After devices are added successfully, they will be listed as below.

The device channel number, alarm status, online status and record status can be viewed from the above table.

Click \[ \] to modify the IP address, port and so on.

Click \[ \] to delete the added device. Check the devices and click [Delete] to delete devices in bulk.

5.3 Device Upgrade

In the “Add, Edit or Delete Device” interface, check the devices you want to upgrade and then click [Batch Upgrade for IPC] to upgrade the firmware of IPC.

Note: When multiple IPCs are upgraded simultaneously, the selected IPCs must be the same series.
5.4 Device Setting

Go to Home ➔ Device Setting interface as shown below. In this interface, the parameters of the device can be set up. Different devices have different menus. Please configure the device according to the corresponding user manual.

5.5 Area Setting

Go to Home ➔ Area Setting interface as shown below.

Click [Add] to go to Area adding interface. Enter area name to create parent area. Then click [OK] to save the settings. To create sub area, click [Add], choose the parent area, enter the area name and click [OK].

Click  to modify area; click  to delete area.

5.6 Channel Group Setting

Go to Home ➔ Channel Group Setting interface as shown below.
① Click [Add].
② Enter channel group name, channel group and dwell time.
③ Select the parent channel group.
④ Add channels to the channel group. Check the desired channels and click $\rightarrow$ to add channels; choose the selected channel and click $\leftarrow$ to remove those channels; Click $\rightarrow$ to add all channels; click $\leftarrow$ to remove all selected channels. You can also enter the key words to search the channels and then select them.
⑤ Click [Ok] to save the settings.

Select the added channel group and click $\rightarrow$ to modify the channel; click $\leftarrow$ to delete the channel.

5.7 Add Media Transfer Server

Media transfer server is in charge of the video signal reception of the front-end devices (like IPC) and transfers the signal to the client to view or to the storage server to record. The command of viewing the video of the front-end devices sent by the client or storage server is transferred by the media transfer server to the front-end devices.

Go to Home → Add, Edit or Delete Device → Media Transfer Server.

Click [Add] to go to media transfer server addition interface. Users can quickly add or manually add media transfer servers.

Select the “Quickly Add” tab and click [Refresh] to quickly search servers in the same local network. Check the desired servers and click [OK] to save the settings.

Select the “Manually Add” tab to go to the media transfer server adding interface. Enter the server name, IP address and port and click [OK] to save the settings.
Click the checkbox to modify the media transfer server; click the trash icon to delete the media transfer server.

### 5.8 Add Storage Server

Storage server is in charge of the storage of record information, including the information of schedule record, record based on motion alarm, sensor alarm, smart detection alarm (like object removal detection, line crossing detection, etc.), responding to the search and playback of all storage data. It also supports self-defined storage path settings and IP-SAN access.

Go to **Home ➔ Add, Edit or Delete Device**.

Click [Add] to go to storage server adding interface. Users can quickly add or manually add storage servers. Select the “Quickly Add” tab and click [Refresh] to quickly search servers in the same local network. Check the desired servers and click [OK] to save the settings.
Select the “Manually Add” tab to go to the storage server adding interface. Enter the server name, IP address and port and click [OK] to save the settings.

After the storage server is added, click to set record partition. In the record partition setting interface, select the disk and click [OK] to save the settings. Click to modify the storage server; click to delete the storage server.

**Note:** When the remaining space is less than 14GB, the system will prompt you for the insufficient space.
6 Live View

6.1 Live View

Go to Home ➔ Live View interface as shown below.

The descriptions of the live view buttons are as follows.

<table>
<thead>
<tr>
<th>NO.</th>
<th>Description</th>
<th>NO.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Screen display mode</td>
<td>6</td>
<td>Show the smart event detection area</td>
</tr>
<tr>
<td>2</td>
<td>Full screen</td>
<td>7</td>
<td>Close all preview</td>
</tr>
<tr>
<td>3</td>
<td>Enable/disable OSD</td>
<td>8</td>
<td>Save the current view mode</td>
</tr>
<tr>
<td>4</td>
<td>Enable/disable broadcast</td>
<td>9</td>
<td>Choose the camera stream</td>
</tr>
<tr>
<td>5</td>
<td>Manual alarm output</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Channel stream: main stream, sub stream, third stream and self-adaptive stream can be optional. When the third stream is selected, the system will automatically switch to sub stream if the channel/camera doesn’t support the third stream.

Toolbar on the display window:

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close image</td>
<td>Fit to window</td>
<td>3D zoom in</td>
<td>Zoom in</td>
</tr>
<tr>
<td>Start/stop recording</td>
<td>Zoom out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable/disable audio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snapshot</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Right-click button function:

<table>
<thead>
<tr>
<th>Menu</th>
<th>Description</th>
<th>Menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close Channel</td>
<td>Close image</td>
<td>Snapshot</td>
<td>Capture images</td>
</tr>
<tr>
<td>Start Record</td>
<td>Start/stop recording</td>
<td>Start Talkback</td>
<td>Enable/disable talkback</td>
</tr>
<tr>
<td>Instant Playback</td>
<td>Click it to play back immediately</td>
<td>Channel Info.</td>
<td>Display channel name, IP address and the current stream</td>
</tr>
<tr>
<td>Audio ON</td>
<td>Enable/disable audio</td>
<td>Stream</td>
<td>Choose video stream</td>
</tr>
<tr>
<td>PTZ Control</td>
<td>Click it to show PTZ control panel</td>
<td>Full Screen</td>
<td>Display image in full screen</td>
</tr>
</tbody>
</table>

4:3/16:9/Original Size/Full Screen: screen display proportion; please select it as needed.

### 6.1.1 View Mode Setting

Users can select the common display mode and self-define the display mode through the buttons on the toolbar.

To customize the display mode:

1. **Click** on the toolbar.

   ![Customize Screen Mode](image)

   - Enter screen display name and select the display row and column. Hold the left mouse button and drag on the screen and then click [Merge] to merge the screens.
   - **Click** [Save] to save the settings.
   - **Click** [Create] to create a new display screen mode. **Click** [Save All] to save all customized screen display modes.

### 6.1.2 Monitoring Point View

- **Start View**
  
  To start live view, please drag cameras from the list to the right display window or select a window and then double click the camera. The image can be dragged to any window at random.
Stop View

① Place the cursor on the live view window to display the menu toolbar and then click 🗑️ to stop viewing.
② Right click on the live view window and then select “Close Channel” to stop viewing.
③ Click 🗑️ on the toolbar of the live view interface to stop all live view.

6.1.3 Channel Group View

- Start Channel Group View
After the channel group is set successfully (See Channel Group Setting), go to live view interface as shown below.
You can start the channel group view as follows.

1. Choose the screen display mode according to the channel number of the channel group. Select a window and then double click the channel group name or dragging the channel group to a window to play all channels in the group.

2. In the current screen display mode, select a window and then click beside the channel group name to play all channels of the channel group in this window in sequence.

- **Stop Channel Group View**
  ① Place the cursor on the auto-switch window and then click to stop viewing.
  ② Right click the auto-switch window and then click “Close Channel” to stop viewing.
  ③ Click on the toolbar of the live view interface to stop all live view.

### 6.1.4 Plan View

In the live view interface, select “View” on the left menu bar.

- **Add View Plan**:
  ① Right click “Live View 1” and then select “Create View” or click to add a new view plan. Clicking “Create View” to prompt an adding view window. Enter the view name and click [OK] to set view plan.
  ② Select screen display mode and then drag monitoring points or channel group to each window.
  ③ Click “View” on the left menu and then right click the newly added view name. Select “Save View” on the pop-up menu to save the view plan or click on the live view interface to save the view plan.

- **Modify or Delete View Plan**
  Select the added view and then right click to prompt a pop-up window. Select “Modify View” or “Delete View” to modify or delete the view plan.

### 6.2 View Control

- **Multi-screen Display**
  In the live view interface, the screen display mode can be selected as shown below.
In the live view interface, click button on the toolbar or right click on the mouse to select “Full Screen” to display the window in full screen mode. Right click on the mouse to select “Exit Full Screen” on the full screen interface to exit full screen.

- **Single Channel Display**
  Double click a window to view in single channel mode. Double click the window again to recover the window.

- **Audio Broadcast**
  Click to bring audio broadcast box as shown below.
  The left device list shows the devices that support audio broadcast. Check the device and click [Add] to add the desired broadcast device. Click [Start Broadcast] and then all added device will start broadcast. Select the added device and click [Delete] to delete the device.

- **Stream Setting**
  Right click on the live view window to choose video stream. Or select self-adaptive stream or other stream on the toolbar to set the stream for all channels.
  To set streams
  Go to Home ➔ Device Setting. Select the device and click “Stream Setting” tab to set streams.

- **Audio Control**
  Right click on the live view window and then choose “Audio On” or click on the toolbar of the window to enable audio.
  **Note:** Only one audio can be enabled at the same time. If the audio of one channel is enabled, the former audio will be disabled automatically.

- **Zoom In or Out**
  In the live view interface, click on the live view window to zoom in the window and then drag the image to view the whole image; click to zoom out the image; click to restore the image size.

### 6.3 Snapshot

#### 6.3.1 Snapshot

Select a window in which the video is playing and then click on the toolbar of this window or right click on the window and then select “Snapshot”. The image number and storage path will be displayed.
Note: Only when the video is playing in the window, will the snapshot succeed.

6.3.2 Snapshot Setting

Go to Home → Local Configuration → Record and Snap Setting interface. In this interface, snapshot path and number can be set up.

6.4 Multi-Screen View

In the live view interface, multi-screen view can be realized by holding a tab and dragging it to other monitors (graphics card should support multi-screen output at the same time).

Click on the float window and select “Return to Main Window” to embed this tab in the main interface.
6.5 Talkback

In a live view window, click 💬 on the toolbar of this window or select “Start Talkback” on the pop-up menu by right clicking to enable talkback.

**Note:** Since the software only allows enabling one device’s talk at the same time, the system will stop talking with the current device if a new talk is enabled.

6.6 PTZ Control

Click 📺 or right click to select “PTZ Control” to enter PTZ control interface. The directions of PTZ, zoom, focus, Iris, preset, track and cruise can be controlled through PTZ control panel.

6.7 Audio Broadcast

Click 🎤 to pop up an “Audio Broadcast” interface as shown below.
Check the left device and then click “Add” to add the device you want to broadcast.
Check the added camera on the right and then click “Start Broadcast”.
Click to delete the added device.
Choose multiple devices and then click “Remove” to delete them at a time.
7 Record & Playback

7.1 Record Configuration

This software supports many recording types, such as manual recording, schedule recording, motion alarm recording, smart alarm recording, etc.

7.1.1 Manual Recording

In the live view interface, select a channel and then click or right click to select “Start record” to start recording. Click this button again to stop recording.

Note: If a channel is recording, the recording will stop when the viewing window is closed.

7.1.2 Schedule Recording

Go to Home à “Record Setting”.

To set schedule recording, select the channel, stream type and schedule. Then Click [Apply] to save the settings.

- To set schedule:
  ① Click the “Schedule Setting” tab to go to the following interface.

  ![Schedule Setting Interface]

  ② Click [Add].
  ③ Enter the schedule name.
  ④ Set the schedule. Click and then move the cursor to select the time; click and then move the cursor to delete the selected time. Click “Input Manually” to manually enter the time. Click “All” or “Reverse” to quickly select time. Click “Clear All” to clear all schedule.
7.1.3 Alarm Linkage Recording

① Go to Home → Device Setting interface. Select the desired device to enable and set schedules.
② Go to Home → Alarm Center → Alarm Linkage as shown below. Select alarm type, enable record, set linkage channel and set schedules.
③ Click [Apply] to save the settings.

7.2 Record Playback

In the main menu interface, click “Record Playback” to go to record playback interface. Record files saved on the HDD/SD card of the devices and storage server can be played.

There are two types of record playback: synchronous playback and asynchronous playback.
### Area Description

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Playback area</td>
<td>3</td>
<td>Record timetable area</td>
</tr>
<tr>
<td>2</td>
<td>Toolbar</td>
<td>4</td>
<td>Time and event search area; resource area</td>
</tr>
</tbody>
</table>

#### Toolbar on Playback Window

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>🎬</td>
<td>Stop viewing</td>
<td>🕹️</td>
<td>Zoom in</td>
</tr>
<tr>
<td>🔊</td>
<td>Audio on/off</td>
<td>🕹️</td>
<td>Zoom out</td>
</tr>
<tr>
<td>📸</td>
<td>Snapshot</td>
<td>🕹️</td>
<td>Fit to window</td>
</tr>
</tbody>
</table>

#### Button Descriptions of Area 2:

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>📱</td>
<td>Screen display mode button. 1/4/9/16 screen mode is optional.</td>
</tr>
<tr>
<td>🛡️</td>
<td>Full screen</td>
</tr>
<tr>
<td>🛡️</td>
<td>Enable or disable OSD</td>
</tr>
<tr>
<td>✖️</td>
<td>Close all window viewing</td>
</tr>
<tr>
<td>💻</td>
<td>Get record from network devices</td>
</tr>
<tr>
<td>💻</td>
<td>Get record from storage servers</td>
</tr>
<tr>
<td>🔄</td>
<td>Rewind</td>
</tr>
<tr>
<td>🔄</td>
<td>Low speed playback</td>
</tr>
<tr>
<td>🛡️</td>
<td>Stop</td>
</tr>
</tbody>
</table>
Play/Pause

Next frame. In the playback mode, click the pause button and then click this button to play frame by frame.

Click it to select playback speed.

Forward 30s or backward 30s

Backup start time

Backup end time

Start backup

Synchronous playback or asynchronous playback

Right-click button menu

<table>
<thead>
<tr>
<th>Menu</th>
<th>Description</th>
<th>Menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close</td>
<td>Close viewing</td>
<td>Zoom out</td>
<td>Zoom out the current image</td>
</tr>
<tr>
<td>Audio On/Off</td>
<td>Audio on/off</td>
<td>Full Screen</td>
<td>Click to enter full screen mode</td>
</tr>
<tr>
<td>Snapshot</td>
<td>Snapshot</td>
<td>Sub stream</td>
<td>Switch to sub stream playing</td>
</tr>
<tr>
<td>Zoom In</td>
<td>Zoom in the current image</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add tag</td>
<td></td>
<td>Event list</td>
<td></td>
</tr>
<tr>
<td>Backup</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Set record date, record type (for some devices, “Main Stream” can be selected to play the record, or the record will be played by sub stream if unselected) and the record playback source in the playback interface. Drag the camera on the right side to playback window for playing or double click a desired channel to play or click [Search] to search the record files and then click to play.

Playback record type includes manual recording, motion detection recording, schedule recording, sensor recording, object removal recording, video exception recording, intrusion recording and line crossing recording and so on.

In the timetable, different color bars stand for different record types. For instance, yellow bar stands for motion recording data; blue bar stands for schedule recording data; red bar stands for sensor record data, etc.

The time scale can be zoomed in by clicking and the time scale can be zoomed out by clicking . The time scale can be restored to 24 hours by clicking . When the time scale is zoomed in, drag the timeline to see the time spots.

7.2.1 Instant Playback

Instant Playback

In the live view interface, right click on a playing channel to select “Instant Playback” and then set the playback time to play the record instantly (the record of the channel in the past five minutes will be searched and played from that time when the record exists).
7.2.2 Synchronous Playback

Synchronous Playback: in a certain time, all channels play back its record at the same time together; if one channel has no record data at this time, this channel will wait.

Click on the toolbar in the playback interface to go to the synchronous playback interface. Please play the record according to the ways introduced as above. The record bar in synchronous mode is as below.

In synchronous mode, one camera can only have one playing window. All cameras’ record information can be viewed at the same time. When playing record file in synchronous mode or asynchronous mode, clicking or will be useless unless all the playback windows are closed.

7.2.3 Asynchronous Playback

Asynchronous Playback: when playing some channels’ record at the same time, each channel is independent from the others and each channel’s playback time is different.

Click to go to the asynchronous playback interface as shown below. Please play the record according to the ways introduced as the above. The record bar in asynchronous mode is as below.

7.2.4 Playback by Time Slice

1. Go to Home→By Time Slice interface.
2. Select channel (or monitoring point), set the start time and the end time, select the record source and then click [Search].
③ Click ⏪ to play the record.

Click ⚡ button on the top right corner to play in full screen mode.
Double click the image to switch to slice search mode by day. In the above interface, click ⏪ to switch to slice search mode by hour.
Double click an image to switch to slice search mode by 5 minutes. Click  to return to slice search mode by day;

In the above interface, click  to return to slice search mode by hour.

**Backup:** In the Search by Time Slice interface, select a time slice and then click “Backup” to back up the record file during this period quickly.

### 7.2.5 Playback by Event

① Go to Home ➔ By Event interface.
② Select the desired monitoring point, set the record source, the start time and the end time and then check events.

③ Click [Search]. The searched record data will be listed. Click  to play the record; click  to back up the record data.

### 7.2.6 Playback by Tag

① Go to Home ➔ Record Playback interface.
② Select a channel and put the cursor on the right center. Then a tag icon ( ) will appear. Click this icon to add tag.
③ Go to Home ➔ By Tag interface. Select the start time and click [Refresh] to search the added tags.
④ Click  in the playback column to play the record.
7.3 Backup

In the main menu interface, click “Backup” to go to the backup interface. The setting steps are as follows:

① Select the desired monitoring point.
② Select date and click “More” to select the start and the end time and event type.
③ Click to get records from device or storage server.
④ Set the start time and the end time of backup. Then click [Backup].
⑤ The backup progress will be seen during backing up the record. Click to pause; click to stop backing up the record; click to clear the backup list.

“Backup on device”: This function is applied to the added NVR devices. Search the record from the HDD of the NVR in this interface and then insert a USB storage device into the USB port of the NVR and then click this button. Then the recorded files will be backed up to the USB storage device remotely.

7.4 Search Picture

In this interface, pictures stored on the SD card or storage server can be searched and viewed.
① Select the device.
② Set the start time and the end time.
③ Choose events.
④ Select search from network device or storage server.
⑤ Click [Search]
8  Alarm Management

8.1  Alarm Server Configuration

Alarm server is in charge of receiving and recording alarm information of connected devices and then sending the alarm information to the relevant user terminal system or devices in accordance with prior alarm settings. There is a default alarm server.

Go to Home ➔ Add, Edit or Delete Device ➔ Alarm Server interface to view the online status of the alarm server. If it is not online, please check its network connection.

Click ✍️ to modify the added alarm server; click 🗑️ to delete the added alarm server.

8.2  Alarm Configuration

① Go to Home ➔ Device Setting interface.

Select the desired device to enable alarms (refer to the user manual of the corresponding device for the detailed settings).

② Go to Home ➔ Alarm Center ➔ Alarm Linkage interface.

Select area, alarm type and then enable alarm linkages.

All ON: enable all alarm linkages of the current alarm type and area (schedule excluded).
All OFF: disable all alarm linkages of the current alarm type and area (schedule excluded).
Select  beside the device name and select “ON” to enable all alarm linkages of the device (schedule excluded).

Select  beside the title (like record) to enable record linkage of all devices (schedule excluded).

The alarm linkage settings of PTZ control, record, alarm view, snapshot, alarm output and TV Wall are the same with each other. Here take record linkage for example to introduce the setting steps.

① Check the selectable channel and click  to select the channel; check the selected channel and click  to remove this channel; click  to select all channels; click  to remove all selected channel.

After the channels are selected, check “On” and then click “OK” to save the settings.

③ Set alarm schedule. Select the schedule of the desired device. 7*24 or 5*24 is the default schedule. Other schedules need to be set in advance. Click the “Schedule Setting” tab to set (See Schedule Recording  To set schedule for details).

**Manual Alarm Out:**

Click “Manual Alarm Out” tab to go to the following interface.

Select the camera and then click [Trigger Alarm Out] to manually trigger the alarm out of the camera; click [Close Alarm Out] to manually turn off the alarm out of the camera.

### 8.3 Alarm View

Having set the alarm preview linkage, the alarm view window will prompt when an alarm is triggered.
Click on the bottom right corner to expand the alarm list as shown above. Hover the mouse over the top of the alarm list and then a bidirectional arrow will appear. Drag the alarm list up or down to zoom in or out the alarm list.

Click or to play the record or captured images; click to delete alarm information.

8.4 SOP Settings
Click the “SOP Setting” tab in the alarm center interface to go to the following interface as shown below.
1. Click “+” to add a SOP name. A maximum of 10 SOP can be added.
2. Click “Create” to create a SOP action. Each SOP can create 5 SOP actions.
3. Click to extend the alarm list.
4. Click to handle the alarm. Select the SOP action and then click “Save Process”. After that, choose disposition and enter remark as needed.
   
   The disposition includes: False alarm, true alarm, customer test, technical event, service test.
After the alarm is processed, the alarm handling status and disposition will be shown as below.

If you create more than one SOP, you can designate the SOP for the added encoding devices. Go to Home à Resource Management à Add, Edit or Delete Device à Encoding Device interface. Then click [Select SOP] to select the SOP and encoding devices.

Select the SOP. Then check the desired device and click to select it. Finally, click [OK] to save the settings. After that, you can choose the corresponding SOP action when you handle the alarm of the camera.

8.5 Alarm Log

Alarm logs can be searched and exported by going to Home à Alarm Center à Alarm Log interface.
Click [play button] to play the record; click [snapshot search button] to open the snapshot search window as shown below.
9  E-Map

The e-map service is used to store the e-map information of the system. The client landing anywhere can share the same e-map.

9.1  E-Map Settings

9.1.1  Create E-Map

Go to Home→E-Map Setting interface. Click [Create Map] to create a map.

![Create E-Map interface](image)

Enter E-map name, select parent e-map and map type. Then click [OK] to save the settings.

9.1.2  Add Hotspot

The hotspots include monitoring points and sensors. Drag a hotspot to the corresponding area on the map as shown below.

![Add Hotspot](image)

Click [Modify Map] to change map name and parent map.
Select [Delete Map] to delete the added map.

9.1.3  E-Map Monitoring

Go to Home→E-Map Monitoring interface. Select a window on the right and then double click the monitoring point to view the real-time image.
Alarm view: if you select “Yes”, the monitoring video will automatically pop up on the right window when an alarm is triggered.
10  TV Wall

10.1 Add TV Wall Server

Go to Home ➔ Add, Edit or Delete Device ➔ TV Wall Server interface as shown below.

An adding TV Wall window will be prompted by clicking [Add]. Click [Refresh] to quickly add the TV wall server in the same local network, or add the TV wall server by manually entering server name, IP address and port.

Click to modify the added server; click to delete the added server.

10.2 Add Decoder

Decoder is used to decode the video signal transmitted by the transfer server. The decoding output is a standard video signal. The decoder is necessary for decoding videos on the TV wall.

Go to Home ➔ Add, Edit or Delete Device ➔ Decoder interface.

The setting steps of adding decoders are the same as adding encoding device setup (see Add Encoding Device for details).

10.2.1 Create and Connect Decoder

The decoder which needs to be connected to the platform must be the master decoder and in platform mode. Login the web client of the decoder as shown below.

Go to Basic Settings ➔ System Settings to check the user permission and running mode of the decoder and make sure its user permission is master and its running mode is platform. Then apply the settings and restart the decoder.
After that, go to Home→TV Wall Management→TV Wall System Setting→Decoder Bind Configuration. Then click to bind decoder and TV wall (See Decoder Bind for details).

10.3 TV Wall Management

Go to Home→TV Wall Management→TV Wall Setting.

10.3.1 TV Wall Settings

◆ Create TV Wall

Go to Home→TV Wall Management→Edit TV Wall. Select a TV wall server and then click to create a TV wall.

◆ Initializing

① Double click the created TV wall to prompt a TV wall window.
② Click “Initialize” to create TV wall layout
Merging/Splitting

Merging: drag on the screen and then release. The “Merge” button will be shown. Click it to merger these small windows.

Splitting: select the merged window and click “Split” to restore the window to the previous status.

The online decoder displayed in the decoder output list is the binding decoder of this TV wall. Drag the outputs to windows on the right in sequence and then click “Save” to save the settings.
To modify TV wall:
Click \[\text{□}\] beside the TV wall name, enter the new name and then click [OK].

To delete TV wall:
Click \[\text{■}\] behind the TV wall name.

- Decoder Bind
  Go to Home \(\rightarrow\) TV Wall Management \(\rightarrow\) TV Wall System Setting interface as shown below. In this interface, decoder bind can be set up.

  Decoder bind configuration: modify the binding state between decoder and TV wall.
Click ✅ to change bound TV Wall.

Return to the decoder management interface as shown above. The online status of the decoder indicates that the decoder is successfully bound with TV wall. Go to TV Wall Setting interface as shown below. Drag the outputs of the decoder to the window on the right and save them to complete output bind.
10.3.2 TV Wall View

◆ Create Plan

Go to Home ➔ TV Wall Management ➔ TV Wall View ➔ TV Wall Plan.

Click beside the TV wall name to create the TV wall plan name.

◆ Configure Plan

Double click the plan name to show the plan.

Drag the monitoring points to the corresponding window respectively to decode image.
 Toolbar Menu

1. **Screen mode**: 1/4/9/16/25/36 screen mode is optional.
2. **Open Window**: Click [Enable PIP] and then drag on a window to open a small window on it. Click [Disable PIP] to stop opening window. The small window can be dragged to anywhere on the big window.
3. **Click [Hide ID]** to hide the window number; click [Display ID] to display the window number.
4. **Click [Save]** to save the current plan.
5. **Click [Save as]** to save it as another plan.
   Double click a window to play the video.
1. Screen mode: 1/4/9/16/25/36 screen mode is optional.
2. Zoom in/out: if the current screen mode is multi-screen display mode, click “Zoom In” to zoom in the current image. Click “Zoom Out” menu again to restore to the previous status.
3. Save as Alarm Window: click it to save the current window as an alarm window. The alarm linkage image will be displayed in this window. Go to Home ➔ Alarm Center ➔ Alarm Linkage (or Home ➔ Alarm System ➔ Alarm Linkage) interface. Select TV wall linkage item to set alarm linkage.
4. Set as Playback Window: when decoding images, click this menu to play the records of the current channel (the record source
is the current record source).

5. PTZ Control: click this menu to prompt a PTZ control panel of the current decoding window. Direction control, zooming and focusing, Iris control, speed, preset, track and cruise calling can be operated through this control panel.

6. Stop Decoding: click it to stop decoding the current image.

7. View Decoder: view the information of the decoder.

8. Clear TV Wall: click it to clear the decoding configuration of the current output.

◆ Screen Merging or Splitting

Drag the mouse to select multi-window and then click [Merge] to merge these windows.

Select the merged window and click [Split] to restore the window to its previous status.

◆ Auto-Switch Group

1. Create Auto-Switch Group

③ Click Auto-Switch Group under the screen and then click to create auto-switch group.
② Select “Auto-Switch Window” to select the window group.

③ Click “Monitoring Point” to select the auto-switch channel group.

④ Enter auto-switch name and dwell time.

2. Execute auto-switch
Click [ ] to execute auto-switch. The specified channel images will be played in the specified windows in sequence.
Click [ ] to stop playing the current auto-switch.

3. Modify or delete auto-switch

Right click the auto-switch name and then select Modify or Delete to modify or delete the auto-switch.

Note: If there are overlapped auto-switch window in a plan, the auto-switch groups will not be executed at the same time.

Auto-switch plan

1. Create auto-switch plan

Click [ ] behind the TV wall plan name to set the auto-switch. Click “Join in” to select the plan. Then set dwell time and click [OK].

2. Start/stop auto-switch

Click [ ] behind the TV wall name to start auto-switch plan. Click the Stop button to stop the auto-switch.

3. Modify auto-switch plan

Click [ ] again to modify the auto-switch plan.

Note: If the current auto-switch plan needs to modify, please stop it first.

10.3.3 Decoder Input

Go to Home ➔ TV Wall Management ➔ Decoding on TV Wall ➔ Decoder Input. Drag an input to a window to execute decoding.
10.3.4 Playback

- Playback on TV Wall

Click “Preview” on the left panel. Then this button becomes “Playback”. Click   and   to get records from device or storage server and then click “OK” to search records, or drag the cameras (or channels) to a window to search and play the records.

Of course, the specified time and event types can be set to search the specified records.

- Playing control

During playback, the record can be controlled by the above buttons.

- Right-click menu
1. Screen mode: 1\4\9\16\25\36 screen mode is optional
2. Zoom in
3. Save as an alarm window
4. Save as preview window: the current channel or the historical channel is optional.
5. Playback stream type: main stream or sub stream is selectable.
6. Stop decoding
7. View decoder information
8. Clear TV wall
The following picture is an example of TV Wall.

10.3.5 Task Setting of TV Wall

Go to Home→TV Wall Management→Task Setting. Click behind the TV wall name. Select plan name, enter task name, set run time and enable plan task.

Click to start the task. Click the Stop button to stop this task.
Modify or delete task

Double click the TV wall name and then the tasks will be displayed on the right window.

Click or to modify or delete the task.

Click behind the TV wall name and then click [OK] to confirm the deletion.

10.3.6 TV Wall System Configuration

Go to Home→TV Wall Management→TV Wall System Setting interface as shown below. In this interface, the channel number can be set up.

Channel number configuration: set the channel number and make the channel convenient to be controlled by the network keyboard controller.

Users can export these channel number in this interface.
<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Channel Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>default area</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>default area</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>A3H-ZMP-20-210</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A3H-ZMP-20-107</td>
<td></td>
</tr>
</tbody>
</table>

Minimum Conflict-Free Channel Number: 2
11 Account and Permission

11.1 Create Account

Go to Home ➔ Account and Permission.

There is a default super admin user (the username is admin; the password is 123456). The super admin user cannot be deleted. If it is the first time for you to log in, please select the super admin user and then click “Edit encryption” to select the questions and set the answers. It is very important to reset the password if you forget your password.

Click [Add] to prompt an adding user window as shown below.

Enter user name and password. Then select permission group (it must be set in advance). Binding MAC address or remark can be filled in as needed. After that, click [OK] to save.

Click to modify the added user; click to delete the added user.

11.2 User Permission Settings

Go to Home ➔ Account and Permission ➔ User Permission Group Setting.
① Click [Add] to create permission group.

![Add Permission Group]

② Enter permission group name.
③ Select system permission, operation permission, area permission and TV wall permission as needed.

Click [ ] to modify the permission group; click [ ] to delete the permission group.
12 Operation and Maintenance Management

12.1 Check and Export Log

Go to Home ➔ Operation and Maintenance Management. Click the “Check and Export Log” tab as shown below. All types of logs can be searched and exported here.

Select the log type, set the start time and the end time and then click [Search] to search logs. After the logs are searched, click [Export] to export these logs.

12.2 Backup and Restore Configuration

Go to Home ➔ Operation and Maintenance Management. Click “Backup and Restore Configuration” to go to the following interface.

You can import the former system configuration files to the new version. Click [Backup System Configuration] in the last version to backup the system configuration files. Then click [Restore System Configuration] in the new version to restore the system configuration.

12.3 Viewing Online Status

Go to Home ➔ Operation and Maintenance Management ➔ Online Status interface. You can view the online status of encoding device, decoders and storage servers and the record status of the storage server and encoding devices.
12.4 Viewing Status Log

Go to Home ➔ Operation and Maintenance Management ➔ Status Log interface.

In this interface, record status, online or offline status of servers and monitor client can be viewed. Set the start time and the end time and then click [Search] to search status logs.
13 Local Configuration

13.1 Record and Snapshot Setting

Go to Home → Local Configuration.

In this interface, the storage path of recording files, backup files and snapshots, backup file format, snapshot number and max file size for manual recording and record backup can be set up here.

13.2 Local Settings

Go to Home → Local Configuration → Local Setting.

Auto Startup: if enabled, the system will automatically start when the computer starts.
Auto Login: if enabled, the system will automatically log in when running this software next time.
Auto Startup: if enabled, the system will automatically start when the computer starts.
Show tips when the node is offline: if enabled, the system will pop up tips when there is node offline.
Trigger audio when the node is offline: if enabled, the system will trigger audio when there is node offline.
Full name display for DVR/NVR’s channels: if enabled, the DVR/NVR’s channel name listed in the resource tree will show the DVR/NVR name and the channel name. If disabled, only the channel name is shown.
Verify the password before exiting the program: if enabled, you shall enter the password before exiting the program.
In this interface, you also can select the resource tree sorting rules, video configuration rules, language and upload various alarm audio files. You can click [Synchronize platform time] to synchronize the time of all devices and the platform.
13.3 Overload Settings
This system supports CPU and memory overload protection. When the system overloads, the monitor client will restrict the new live view and playback operation and the overload tip will prompt. Go to Home → Local Configuration → Overload Setting. Select the overload upper limit and then click [Apply] to save the settings.

![Resource Overload Related Attributes](image)

13.4 Alarm View Settings
Go to Home → Local Configuration → Alarm View Setting.

![Alarm View Setting](image)

In this interface, users can enable “Automatic Pop-up Alarm Page” or “Full Screen Display when Popping up”, set “automatically/manually close alarm page” and select the number of screens (1/4/6/19 optional).

13.5 OSD Position Configuration
Click Home → Local Configuration → OSD Position Config to go to the following interface.

![OSD Position Config](image)

Drag the slider to the position you want to show the OSD and then click “Apply” to save the settings.

13.6 System Configuration
Click Home → Local Configuration → System Config to go to the following interface.
In this interface, you can enable “Alarm preview using third stream” or “Do not display the alarm without schedule”. Enable and set the same alarm reporting interval and its linked alarm type. Choose “Synchronize devices” and “Synchronize Time Zone” and then click [Synchronize Platform Time] to synchronize the device times with the time of the platform.

### 13.7 Audio Uploading

Go to Home ➔ Local Configuration ➔ Audio Uploading. Click [Add] to bring the following box.

Click [Browse] to choose the audio file and then enter the audio name. Click [OK] to save this audio. After the audio is uploaded successfully, you can listen to it.
14 Intelligent Management

Before using intelligent functions, please confirm the intelligent analysis server has been already created and it is online. Go to Home → Resource Management → Intelligent Analysis Server. There is a default intelligent analysis server. Please make sure the server is online.

14.1 Face Surveillance

If it is the first use of face surveillance function, please configure it in the following order.

- Create a library → Add targets → Configure face capture type → Configure face match type → View face capture & face match → Search faces

14.1.1 Object Library

Create and edit object library by going to Home → Object Library.

- Create Object Library

Right click the intelligent analysis server to select “Add” to add an object library.
Object Library Name: please enter the object library name as needed.

Protocol Type: face recognition IPC, face recognition NVR and FR Terminal (Face Recognition Access Control Terminal) are optional. If face recognition IPC/NVR/terminal is selected, please select the corresponding device and click to add the device. Then this library and its targets will be added to the face database of the added device, but the face database and its targets cannot be added to this library.

A menu box will display by right clicking the library name as shown below.

Select “Modify” to modify the library name. Check “Synchronous” and then you can add or delete devices. If adding a device, all targets in this library will be copied to this device. If deleting the added device, all targets of this library will be cleared from this device.

Click “Copy to” to copy the current library (A) and its targets to another library (B) and create library (B). If “Copy to” face recognition NVR/IPC/terminal is selected, the current library (A) and its targets will be added to the face database of the above-mentioned device.

Click “Delete” to delete the current library.

Forcedly Delete: This function is used to delete the library linking the face recognition NVR/IPC/terminal. When the FR NVR/IPC/terminal is offline or disconnected with the intelligent server, you shall select “Forcedly Delete” to delete the relevant library.

* Add Targets

Then click this object library and click [Add Target] to create a target.

Adding multiple targets:
Import from folder:
Folder & Subfolders: After clicking [Import from Folder] and choosing “Folder & Subfolders”, choose a folder including multiple subfolders and then all pictures in the folder and its subfolders will be imported.

Current Folder: After clicking [Import from Folder] and choosing “Current Folder”, choose a folder including multiple subfolders and pictures. Then pictures in the folder will be imported, but pictures in the subfolders will not be imported.

Modify or delete targets:
Click ☑ to modify the information of the target. Click ✖ to delete the target.
Click [Custom] to customize the target information.

Click ⬅️ to view the list of the target.

14.1.2 Task Management
Go to Home ➔ Face Surveillance ➔ Configuration ➔ Task.
① Select the schedule and face capture type.
There are two face capture types—face capture by IPC, face match by IPC.
Face capture by IPC: if the IPC is a face detection IPC, please select it. It is selected by default.
Face match by IPC: if the IPC is a face recognition IPC, please select it.

② Set face match type.
Face Match by IPC: select the IPC, click and then double click the library that links the face database of IPC. Make sure this IPC supports face match function.

Schedule and face match configuration of NVR:
You can log in the web client of the NVR and then configure the schedule of face match, select the face group and set the similarity to realize the auto report of the face match result as shown below.

The alarm type: Matched or Unmatched can be optional.
If “Matched” is enabled, a) when the captured face picture is successfully matched, this result will be pushed to the alarm service and the match pictures will be shown in the Real-time View interface of Face Surveillance module; b) when the captured face picture is unsuccessfully matched, this failure result will be pushed to the alarm service and the picture will be shown in the Real-time View interface of Face Surveillance module too.

If “Unmatched” is enabled, a) when the captured face picture is successfully matched, this result will not be pushed to the alarm service; b) when the captured face picture is unsuccessfully matched, this failure result will be pushed to the alarm service and the picture will be shown in the Real-time View interface of Face Surveillance module.

Note: If the schedule is not set, the match result will not be pushed.

14.1.3 Real-Time View
If the IPC supports face detection, you will view the face capture picture.
The screen display mode: 1/4/9/16 can be selected.

Put the cursor on the captured picture and then click + to add the capture picture to the library. Select the library on the left and then fill out the information of this target. Click [OK] to add.

Put the cursor on the captured picture and then click to quickly search images by this picture.
Put the cursor on the captured picture and then click 

\[ \text{\} to quickly download the captured picture.} \n
The right panel of the real-time view interface is face match result area. 

Click it to view the matched details.

Click \[ \text{\} to clear all face match result.

Click \[ \text{\} to hide the unmatched result.

14.1.4 Search

\begin{enumerate}
\item Go to Face Recognition \rightarrow Search interface.
\item Select the IPC and picture source.
\item Select the captured match pictures from intelligent server or face recognition NVR.
\item Set the start and end time and then click [Search] to search the face pictures.
\end{enumerate}
Put the cursor on the captured picture and then some shortcut buttons will be displayed.

![Captured Picture]

Click + to add the capture picture to the library. Select the library on the left and then fill out the information of this target. Click [OK] to add.

Put the cursor on the captured picture and then click to quickly search images by this picture.

Put the cursor on the captured picture and then click to quickly download the captured picture.

### 14.1.5 Search Image by Image

1. Set the schedule and make sure all channels can be recorded normally.

2. Select a picture and picture source.
3. Set the start time and the end time.
4. Set the maximum count and similarity.
5. Click [Search].

Click to play the record in a small window.
E-Map Track View:
① Create an E-map. You can create or delete an E-map in this interface. The hot spot can be added to the E-map too.

② Search the track
Click [Play Track Line] to play track line.
Click [Playback by Tracks] to play back records as shown below.
14.1.6 Configuration

1. Set the schedule.

   ![Set the schedule](image)

2. Face Detection Algorithm Setting
   Set the similarity of face match by default and FTP as needed.
   If FTP is configured, the captured face pictures will be automatically uploaded to FTP server

   ![Face Detection Algorithm Setting](image)

3. Pop-up Window Setting

   ![Pop-up Window Setting](image)
In this interface, you can choose whether to pop up the window when the camera detects a stranger or the person of blacklist or white list. Additionally, you can choose the duration time of VIP Box(s).

14.1.7 Face Recognition Terminal Access and Configuration

The setting steps are as follows:

1. Log in the Face Recognition Access Control Terminal (FR Terminal): If this is the first use of FR Terminal, please configure its IP address first. Click the menu icon in the bottom right corner of FR Terminal to pop up a login box. Enter the password and click [OK].

2. Modify the IP address of the FR terminal. Click Settings → Ethernet Setting → Ethernet → Ethernet IP Mode → Static to modify IP address.

3. Create API in the web client of FR Terminal to get username and password. 
   Note: Only Google Chrome can be used to log in the FR Terminal. Please enter http://ip:8081 in the address bar of Chrome. The default user name is admin and the default password is admin too. Go to the API interface to create the ClientID and ClientSecret as shown below. Self-define the ClientId and ClientSecret.
4. Platform access:

**Note:** The FR terminal only can be controlled by one platform. Please do not connect one FR terminal to multiple management platforms.

Start the monitor client and then go to the “Add, Edit or Delete Device” interface. Choose “Encoding Device” and then click [Add]. Click the “Manually Add” tab to add a FR terminal. The protocol shall be “FR Terminal”.

![Central Management System](image)

![Add Encoding Device](image)
The username must be the same with the ClientId of the FR Terminal.
The password must be the same with the ClientSecret of the FR Terminal.
Please get the ClientId and ClientSecret from the web client of the FR Terminal (See Step 3 for details).

5. Link the FR terminal to a library
(1) Add a library and create a blacklist or white list.
Go to Face Surveillance→ Object Library Management interface. Right click the intelligent server name and then click “Add” to add a library.
Protocol Type: please select FR Terminal.
Enter the library name and select the FR terminal. Then check blacklist or white list.

(2) Add targets
Select the library linked to the FR terminal and then click [Add Target] to add targets as shown below.
(3) Go to the web client of the FR Terminal to view whether the target pictures are added successfully.

(4) **Face Access Permission Setting**

Please enter the following interface and then click [Add User] to bind the user and face access control terminal. Drag your mouse to select the user on the left panel and then select the face access control terminal. Click [ ] to select it. Then click [OK] to save the settings.

After that, the user will be listed in the table. Click [ ] to change the face access control terminal. Click [ ] to delete this user.

(5) **Configure the schedule and library.**

Click Face Surveillance ➔ Configuration ➔ Task to go to the Task interface as shown below. Select the FR terminal in the monitoring point list and then click [ ] to select the object library and alarm type. Then set the schedule and face capture source.
The alarm type: matched or unmatched can be optional. If “Matched” is enabled, a) when the captured face picture is successfully matched, this result will be pushed to the alarm service and then the match pictures will be shown in the Real-time View interface of Face Surveillance module; b) when the captured face picture is unsuccessfully matched, this failure result will be pushed to the alarm service and the picture will be shown in the Real-time View interface of Face Surveillance module too.

If “Unmatched” is enabled, a) when the captured face picture is successfully matched, this result will not be pushed to the alarm service; b) when the captured face picture is unsuccessfully matched, this failure result will be pushed to the alarm service and the picture will be shown in the Real-time View interface of Face Surveillance module.

If the schedule is not set, the match result will not be pushed.

(6) View the face match alarm information
After you configure the above items, you can view the alarm information in the Real-time View interface of Face Surveillance module. You can also go to the web client of FR terminal to view the alarm information.

14.2 Line Crossing Counting

14.2.1 Task Management
Go to Home → Line Crossing Counting → Task Management. Click the camera with the line crossing counting (or target counting) function and then select the schedule. After that, click [Apply] to save the settings.

14.2.2 Real-time Statistics
Go to Home → Line Crossing Counting → Real-time Statistics. Double click the camera with the target counting function to view the live image. The camera will automatically count the number of people/motor vehicle/non-motor vehicle crossing the predefined line and the system will automatically analyze the daily and monthly flow trends.
Before view the statistics, please go to Home → Resource Management → Device Setting → Line Crossing Counting interface to set the alert line, entrance/exit, detection target, etc.
Please select the type as needed to view the flow trend.

14.2.3 Summary Statistics

Go to Home ➔ Line Crossing Counting ➔ Summary Statistics.

Before setting summary statistics, please set E-Map by going to Home ➔ E-Map ➔ E-Map Setting first. Drag the camera with the line crossing counting function to the specified area. Then return to the summary statistics interface. The results of summary statistics of the specified multi-channel can be viewed.

14.2.4 Historical Statistics

Go to Home ➔ Line Crossing Counting ➔ Summary Statistics. In this interface, the statistic results in a long period of time can be searched which can be shown in histogram or curve chart. Additionally, the statistics of different targets can be viewed here.
Historical Flow Statistics

Daily Report - Single-channel Single-period

- Device Name: ptz
- Period 1: 2020-06-09 00:00:00 - 2020-06-10 00:00:00

Graph showing the number of vehicles from 0 to 30 vehicles per hour, with the peak at 12 hours.
15 Troubleshooting

1. **How to modify the password by yourself?**
   Login monitor client and then go to the Account and Permission interface. Select the account and click to modify the password.

![Modify User window](image)

2. **Unable to work normally after starting server.**
   1) Please check whether the port is occupied and view the run status of the service as shown below
3. The device information cannot be seen or the device is offline after the user logins to the monitor client.
   1) Please check whether this user account is an administrator account. If this account is an operator account, please check whether it has the authority to view the device information.
   2) Please check whether the media transfer server of the device has been started.

4. The alarm information cannot be received after the user logins to the monitor client.
   1) Please check whether the schedule of sensor alarm, motion detection alarm and so on are set in the NVMS system.
   2) As for remote login device in the monitor client, please check whether alarms and alarm schedules of the remote login device have enabled.

5. The record cannot playback after the user logins to the monitor client.
   1) Please check whether the storage server is online. If it is online, please check whether this account logged on has playback permission.
   2) Please check whether the record source selected has record data. If you want to get record data from a storage server, please check whether to set the record schedule of the storage server or not.
   3) Check whether there are record data in the playback channel and whether the record source and the start time and the end time of the playback is set up correctly.
   4) Please check the record schedules of the storage server are set correctly.

6. The configuration of devices cannot be modified remotely after the user logins to the monitor client.
   1) When the device configuration is required by the monitor client and prompt “Someone is configuring. Please try later”, please open the IE browser to login to the device remotely and then go to “Online user” interface to see if there are any other users logging in.
   2) Please go to the live to see whether the device is being set up.
   3) If the problem still exists, please contact your device manufacturer.

7. The preview image on the client cannot display fluently.
   1) Please check whether the CPU occupancy rate of the client platform is 100% or there still has usable memory. This situation will not emerge when the CPU occupancy rate is less than 75% and there still has usable memory.
   2) Please check whether the network environment is supported, including whether the uplink bandwidth of the device and stream match and whether the downlink bandwidth of the media transfer server and the streams of all channels of devices match.
   3) Please check whether the media transfer server is overload operation.

8. After starting the authentication server and media transfer server, the storage server still cannot save.
   1) Please check whether channels of devices are added to the storage server.
Notes

1. Please use super administrator or standard user (permission control is set to “Never Notify”) to log in operation system, install and use servers and client software.
2. The resolution of the surveillance client’s monitor shall be more than 1280*960.
3. If you want to delete the files of a server, please stop the server first.