






**OMC**

**VisualAI**

**User Manual**

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Symbol Definition	
	<b>WARNING:</b> Indicates information that a potentially hazardous situation which, if not avoided, could result in serious injury or death.
	<b>RISK OF ELECTRICAL SHOCK:</b> Indicates information that Potential shock hazard where HAZARDOUS LIVE voltages greater than 30V RMS, 42.4V peak, or 60V DC may be accessible.
	<b>ESD HAZARD:</b> Indicates information that Danger of an electro-static discharge to which device may be sensitive. Observe precautions for handling electrostatic sensitive devices
	<b>ATTENTION:</b> Identifies information that requires special consideration.
	<b>TIP:</b> Identifies advice or hints for the user.

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# VisualAI

## Section 1 Overview

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In order to improve the efficiency of production information supervision of factory, more and more field applications require monitoring software to not only monitor production data, but also provide functions such as visual monitoring of important device and safety monitoring of the plant environment. The monitoring should be full coverage without dead zone, and strengthen the linkage between video surveillance and DCS surveillance.

### 1.1 Composition and Main Functions

VisualAI mainly includes the following software:

- The video configuration editing software is used to configure video service, including camera configuration, NVR configuration, video configuration, linkage, inspection, intelligent recognition and other configuration.
- The video monitoring software provides background services, including video management and control, inspection control, accident recalls, exception events handling. Using this component, you can finish the normal tasks, such as standard pan-tilt control, snapshot and video recording, and view the operation recodes, such as image recognition list, historical information list and other operation records.

Meanwhile, VisualAI also provides interface software to achieve the interaction with High-performanceHMI component.

### 1.2 Supported Camera

Technically, VisualAI supports all video cameras and hard disk recorders of Dahua and Hikvision. Meanwhile, on the premise that both the camera and the hard disk recorder support the onvif protocol, cameras of other manufacturers can be connected to VisualAI through the hard disk recorder.

If there is any inapplicable camera or hard disk recorder, please consult the customer service of the corresponding brand.

### 1.3 Typical Networking

The network structure diagram of OMC system is shown in the Figure 1-1. The configuration editing software and the monitoring software of VisualAI component should be deployed in the different station.

- The video configuration editing software: It's deployed at the IES (Intelligent Engineer Station), used with High-performanceHMI component together.

- The video monitoring software: It's deployed at the IOS (Intelligent Operation Station). The video monitoring software will start up along with real-time monitoring software of High-performanceHMI component and you can find the floating icon to open the its interface at the top of the HMI interface. For details, please refer to "Video Monitoring".

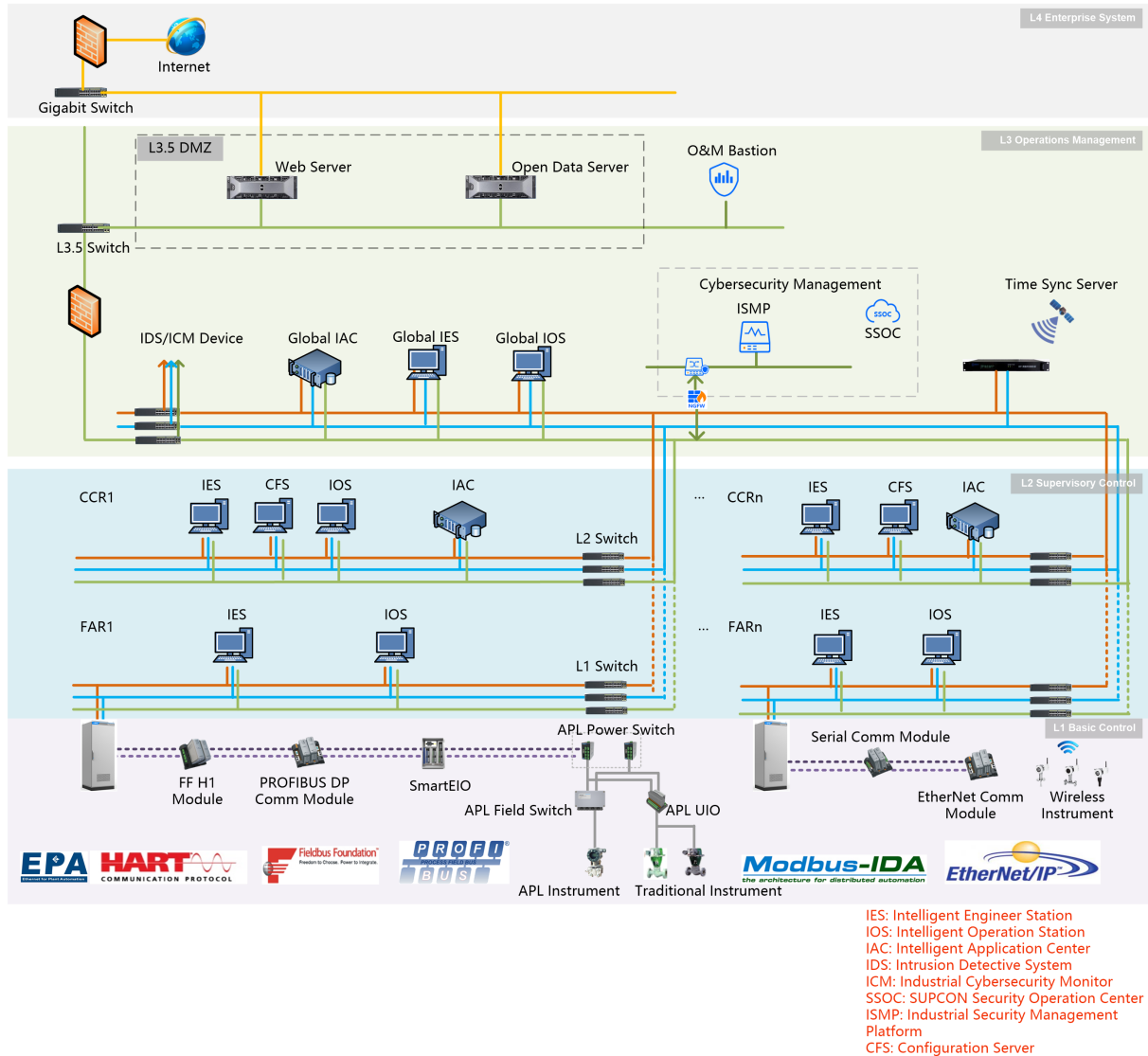
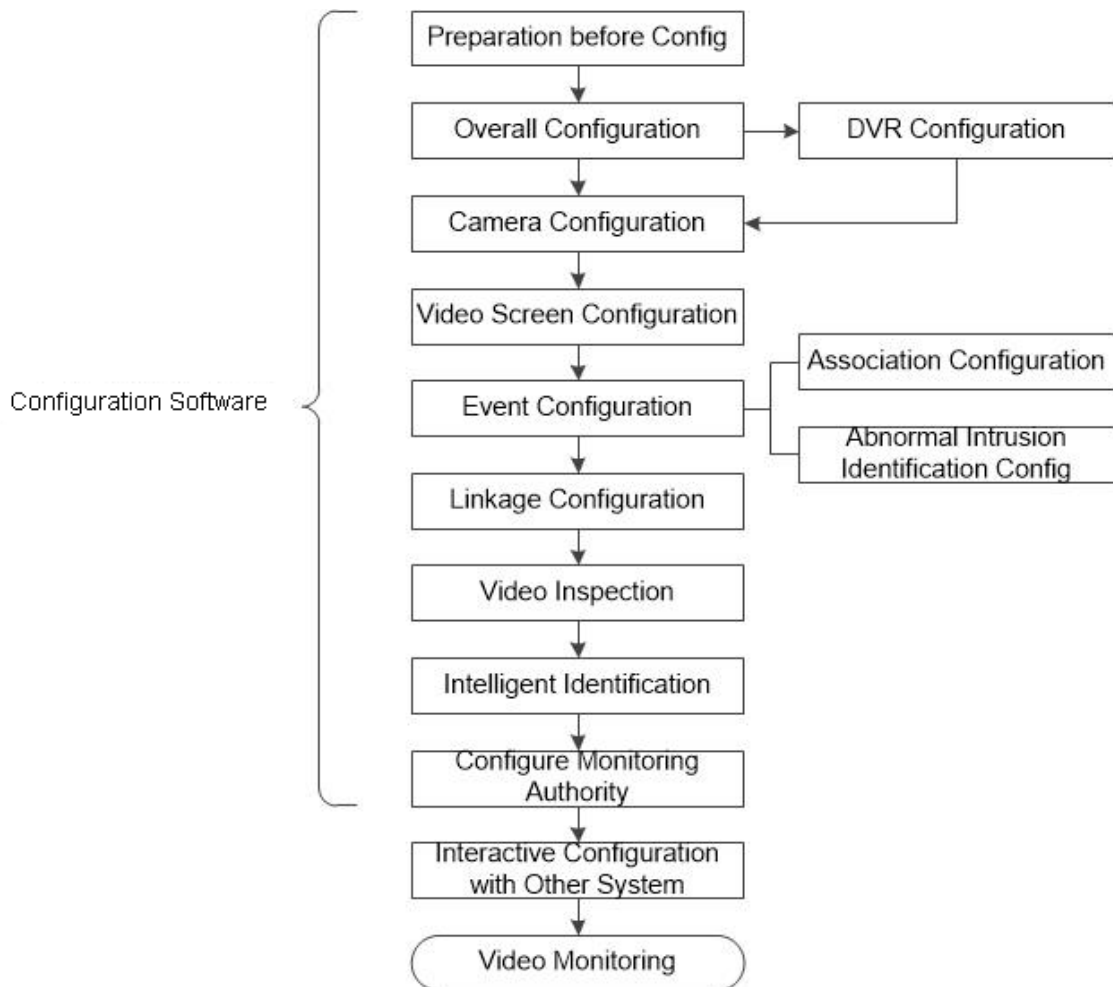


Figure 1-1 System networking

## 1.4 Configuration Process

When using VisualAI for configuration, interaction with other systems, and video monitoring, you need to follow the flowchart below.



**Figure 1-2 Flowchart of VisualAI**

## **Section 2 Preparation before Configuration**

---

Before video configuration, monitoring configuration, and monitoring, the video surveillance device should be connected to the DCS system. When the video surveillance device is connected to the DCS system, it needs to meet the following requirements:

- **Hardware preparation**  
Each operation station in the interactive system is connected to the video surveillance device through a network card.
- **Software preparation**  
Install VisualAI and its integrated component, such as High-performanceHMI.



## Section 3 Video Configuration

Video configuration is mainly achieved through VisualAI video configuration software. In VisualAI video configuration software, video surveillance device in the field can be configured; the layout and display content of the monitoring screen can be configured, and the associated content of the video can be configured.

### 3.1 Open Video Configuration Software

1. Finish the configuration of network structure in High-performanceHMI component.
2. Open the HMI configuration software VFHMICfg of High-performanceHMI, double-click the VisualAI node in the configuration tree to open the component as shown below. For the description of menu commands, please refer to “Appendix: Menu Bar / Toolbar List”. For the function introduction of each node of the configuration tree, please refer to the description of each chapter.

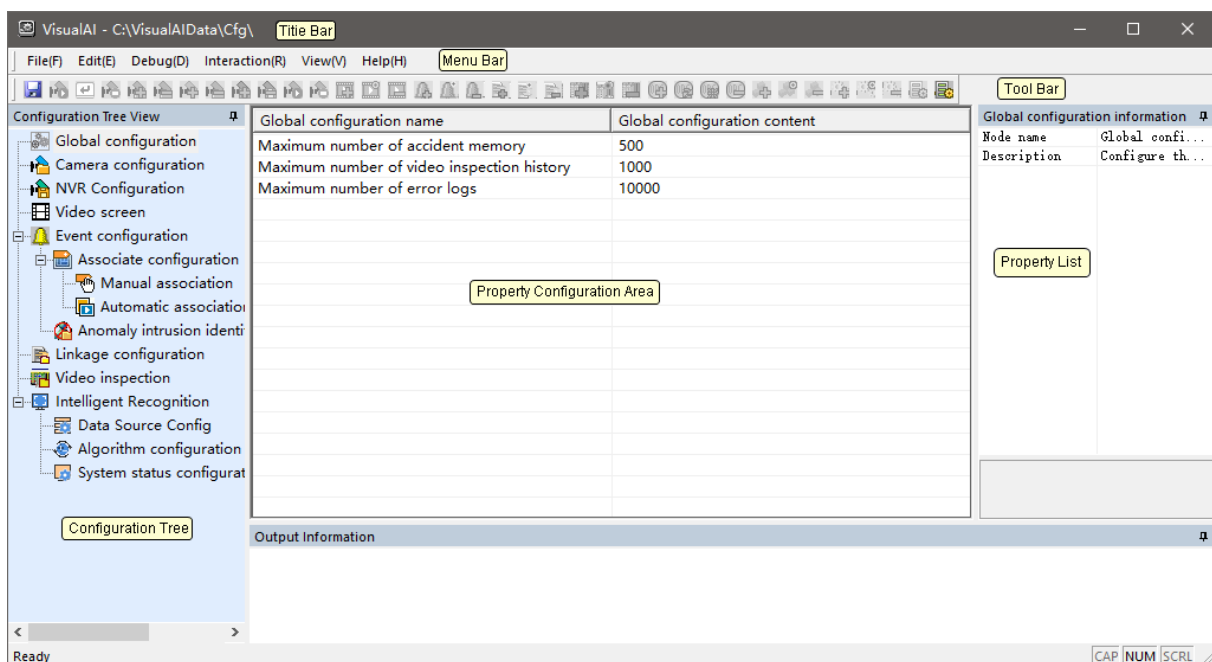


Figure 3-1 Initial Interface of VisualAI configuration software

### 3.2 Global Configuration

Global configuration interface is used to configure basic parameters of video applications, as shown in Figure 3-1. Double-click the cell to change the values of each parameter item, and configure the basic parameters according to the following instructions.

**Table 3-1 Instruction for Parameters of Global Configuration**

Configuration Item	Configuration Content
Maximum Number of Accident Memory	The number of videos downloaded and saved in accident recalls can be set from 1 to 1000. If the number of downloaded videos exceeds the limit, the system will no longer save the newly downloaded videos and add error records to the log.
Maximum Number of Inspection History	The number of inspection history records that can be viewed in the history list can be set from 1 to 1000.
Maximum Number of Error Logs	The number of error log history records that can be viewed in the history list can be set from 1 to 10000.

### 3.3 Camera Configuration

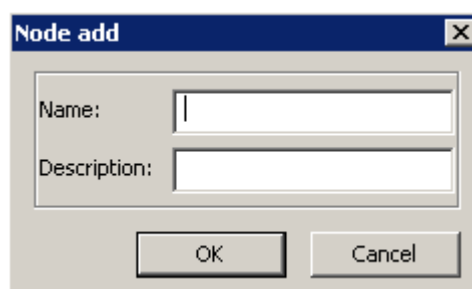
The camera supports hierarchical management. The node in the hierarchical management is the upper node of the device. The node can be configured as a multi-layer structure. The configuration of the node and the device needs to be configured according to the actual deployment in the field.

By configuring the cameras, you can add nodes to the cameras deployed in the field according to the location, and then add cameras under the nodes to complete the camera configuration step by step.

#### 3.3.1 Add Node

The node is the superior node of the live camera, and the node is added through the following steps.

- 1) Right-click after selecting "Camera Configuration" in the "Configuration Tree", then select "Add Node" in the right-click menu, and the "Node Add" dialog box will pop up as shown below.



**Figure 3-2 "Node Add" Dialog Box**

- 2) Enter the node information in "Name" and "Description" respectively, and click "OK" to complete the node configuration.

If you need to add a node under the node, select the other created node under "Camera Configuration", and select "Add Node" in the right-click menu to add a new node.

#### 3.3.2 Add Device

The device is a video surveillance device that actually exists in the field, and the device is added

through the following steps.

- 1) Select the node that needs to add device in the “Configuration Tree”, then select “Add Device” from the right-click menu, and “Add Device” dialog box will pop up as shown below.

**Figure 3-3 “Add Device” Dialog Box**

- 2) Configure properties of the device according to the following table.

Configuration Item	Instruction
Name	Used to configure the name of the camera.
Description	Used to configure the description of the camera.
Manufacturer	Used to configure the manufacturer of the camera. Currently supported manufacturers include HIKIVISION and Dahua.
IP	Used to configure the IP address of the camera. VisualAI needs to identify the camera by the IP address.
Port	Different device manufacturers support different read and write ports: <ul style="list-style-type: none"> <li>● If “Manufacturer” is set to Hikvision, then “Port” needs to be set to 8000.</li> <li>● If “Manufacturer” is set to Dahua, then “Port” needs to be set to 37777.</li> <li>● When other vendors access the system using the Onvif protocol via Dahua Hard Drive Recorder, the "port" needs to be set to 80.</li> </ul>
User Name	Used to configure users who can read and write to the camera. The default is “admin”. Please configure according to the actual situation of the camera.
Password	Used to configure the password required when reading and writing the camera. The default is “Supcon1304”. Please configure according to the actual situation of the camera.

Configuration Item	Instruction
Prefer GPU Decoding	<ul style="list-style-type: none"> <li>● If it is selected, GPU decoding is prior to use in real-time preview and playback of the camera.</li> <li>● If it is not selected, CPU decoding is prior to use.</li> </ul> <p>It is recommended to check when there are multiple videos to be played simultaneously.</p> <p>Note: Before selecting, please make sure that the computer has GPU decoding function, and ensure that the memory space is more than 1G. (The recommended model is T5820 or T7820.)</p>
Associate NVR	<p>Used to configure the source of the video. It is recommended to select when there are more than 4 clients that browse a camera screen.</p> <ul style="list-style-type: none"> <li>● If it is selected, the data comes from NVR. Click the “Select” button to specify the associated NVR node. Before selecting, please configure the NVR node, seeing “NVR Configuration”.</li> <li>● If it is not selected, the data comes from the camera, and the downloaded video or playback video when the accident recalls is triggered comes from the SD memory card of the camera. The manufacturer, port, user name and password of the camera need to be configured.</li> </ul>
Copy and Add	<p>Add multiple cameras with the same attributes in batches, and the last digit of added IP addresses of the camera increases in order.</p> <p>Fill in the quantity after selecting the checkbox. For example, add the camera whose IP address is 172.21.1.129 and set the “Copy and Add 3”, as shown in Figure 3-3. After clicking “OK” button, there are 4 cameras with the same attributes on the left directory, including Camera3, Camera31, Camera32 and Camera33, and the IP addresses are 172.21.1.129, 172.21.1.130, 172.21.1.131, 172.21.1.132 respectively.</p>

3) Click “OK” to complete the creation of the device.

### 3.3.3 Move Nodes / Devices by Dragging

VisualAI supports moving configured nodes or devices in the configuration tree to the specified position by dragging to simplify the configuration operation.

The specific steps are as follows:

- 1) Select a node / device in the configuration tree and click.
- 2) Drag the mouse to move the selected node / device to the target position.



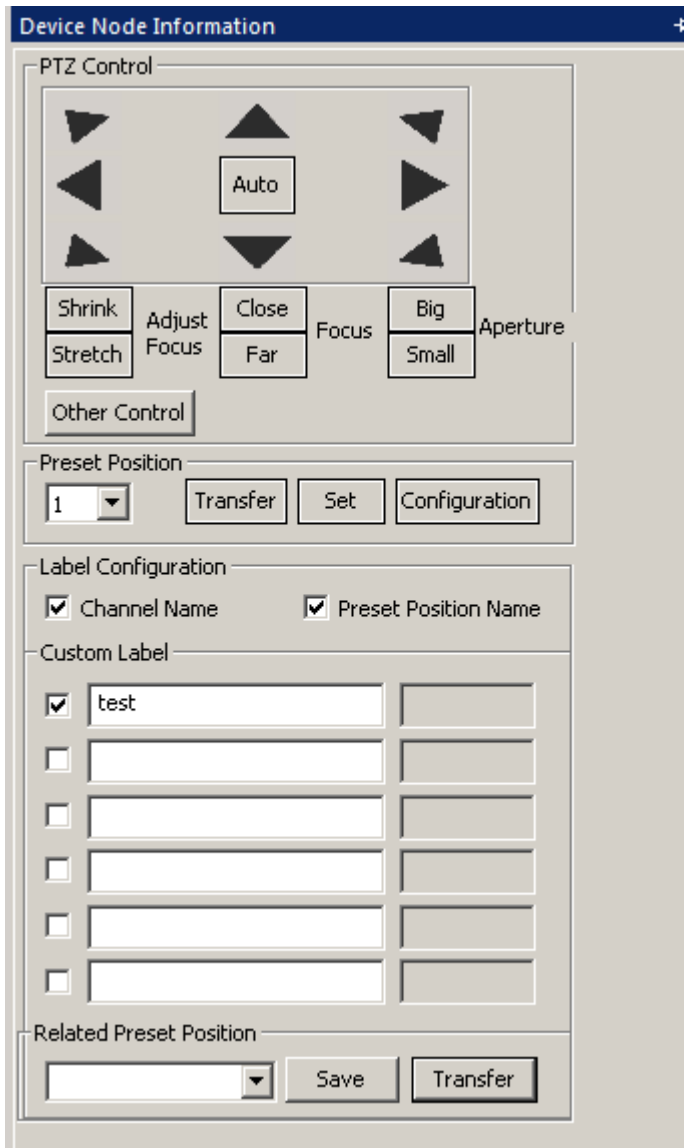
#### Tip:

**When a node is dragged, the device of the node will also move to the target position while dragged**

### 3.3.4 Configure the Preset Position of the Camera

After the device is added, “Property List” of VisualAI configuration software will display the

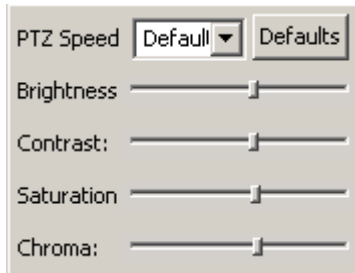
detailed configuration information of the camera as shown in the figure below. The configuration information includes PTZ information, brightness, saturation, preset position, etc. The preset of the camera can be used to record the camera's PTZ information, and the preset position can be associated with the picture to simplify the control of the camera.



**Figure 3-4 Configuration Interface of Camera Detailed Information**

The preset of the camera can be configured by following steps.

- 1) Configure the “PTZ Control” property of the camera in the “PTZ Configuration” combo box. Adjust the camera's direction, focal length, and aperture. Click “Other Control” and configure the camera's brightness, saturation, speed, and other information in the window shown below.

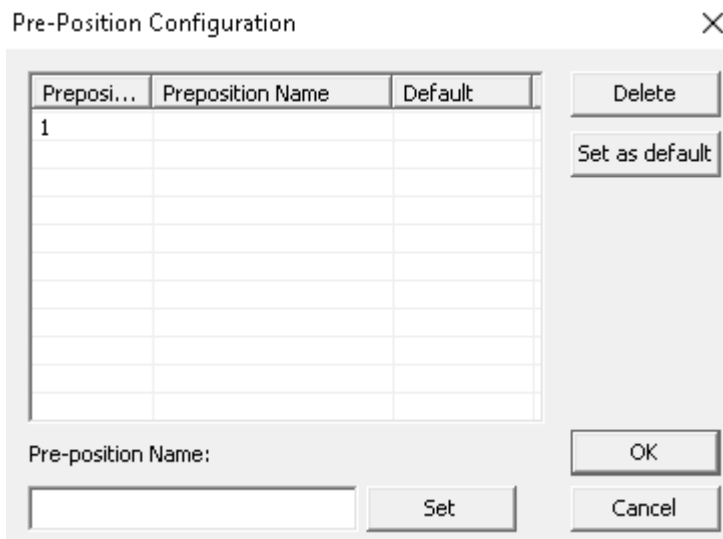


- 2) Configure the preset of the camera in the “Preset Position” combo box.

After configuring the camera's PTZ properties, select the preset number in the “Preset Position” combo box and click “Set”, and select the preset to save the current PTZ properties.

After selecting the “Preset Position” from the drop-down list, click “Transfer” to display the camera effect corresponding to the preset position in the “Video Preview Area”.

Click “Configuration” and “Pre-Position Configuration” dialog box shown below will pop up. The preset of the camera can be managed through the dialog box.



After selecting a preset position in the preposition list shown in the figure above, click “Set As Default” to configure the selected preset position as default. When viewing the camera content, if no preset position is specified, it will be positioned according to the configured default preset position.

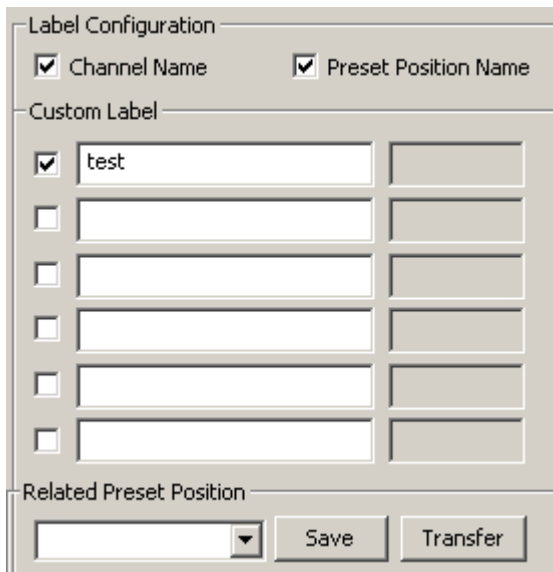


**Tip:**

The video can specify the camera preset position. When the preset position is not specified and the camera doesn't set the default preset position, the corresponding camera will pop up without positioning and steering.

### 3.3.5 Configure the Label Information of the Camera

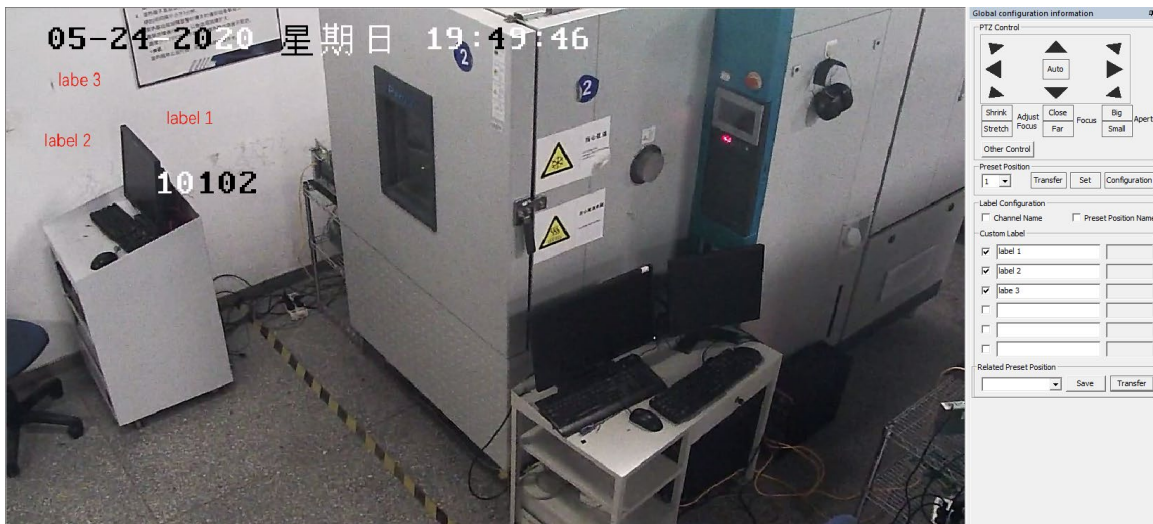
The label is used to describe the position of the camera and the device on the screen, and is used for monitoring prompts and reminders. In the “Label Configuration” combo box shown in the figure below, user can configure the camera label.



**Figure 3-5 “Label Configuration” Combo Box**

- Select the contents to be displayed in the video in the checkboxes of “Channel Name” and “Preset Position Name”.
- Configure other custom information to be displayed in the “Custom Label”.
- Specify the preset in the “Related Preset Position”. This configuration item is used in conjunction with the selection of the label to specify the label related to the preset position.

As shown in the figure below, the selected label will be displayed as a red font in the “Video Preview Area”. You can adjust the position of the label by dragging the red label with the mouse.



**Figure 3-6 Example for “Label Configuration”**

After the configuration is completed, click “Save” to complete the camera’s preset, label and associated configuration. In addition, click “Transfer”, and it can be displayed according to the current label and related preset position in the “Video Preview Area”.

Click “Save” to complete the configuration of the preset position.

**Attention:**

Different manufacturers and different models of devices support different labels:

- Dahua's camera and NVR only support displaying "Channel Name", "Preset Position Name" or a custom label.
- Hikvision's camera and NVR support more than one custom labels. But if there are too many labels, the configured position may be inconsistent with actual position.
- If the set number of labels exceeds the number supported by the camera or the NVR, clicking "Transfer" will be failed.

### 3.4 NVR Configuration

Normally, VisualAI obtains video images directly from the camera. At the same time, VisualAI also supports operating the camera with NVR. It can solve the slowness when there are more than 4 to 5 clients viewing a same camera screen.

Use the following steps to configure NVR.

- 1) Right-click on "NVR Configuration" in the "Configuration Tree" and select "Add Device" from the right-click menu, then the "Add Device" dialog box shown below will pop up.

**Figure 3-7 "Add Device" Dialog Box**

- 2) Configure the properties of the device according to the following table.

Configuration Item	Instruction
Name	Used to configure the name of NVR
Description	Used to configure the description information of NVR.
Manufacturer	Used to configure the manufacturer of NVR. Currently supported manufacturers include HIKVISION and Dahua.



Configuration Item	Instruction
IP	Used to configure the IP address of NVR. VisualAI needs to identify NVR by the IP address.
Port	Used to configure the port of NVR. Please configure it according to the actual conditions.
User Name	Used to configure user name for NVR login. Please configure it according to the actual conditions.
Password	Used to configure password for NVR login. Please configure it according to the actual conditions.

3) Click “OK” to complete the creation of the device.

Double-click the online NVR node, as “NVR Configuration” shown below, which shows all the cameras associated with NVR ; if the prompt of “Query Failed” pops up, it indicates NVR is offline. Double-click the camera node, or right-click the node and select the “modify” command, to modify the name of camera.



Figure 3-8 Node Tree of “NVR Configuration”

Attention: The number of video channels where a single hard disk recorder can play simultaneously should follow the following formula (n is the total number of cameras) :

$$NVR \text{ Bandwidth} \geq \sum_{i=1}^n (\text{Camera}_i \times \text{Current Code Bandwidth of Camera})$$

## 3.5 Video Screen Configuration

After configuring the nodes and devices, user can configure the monitored video screen, including the layout of the video screen and the content displayed video, etc.

The video screen supports layer management. The node in the layer management is the upper node of the video screen and can be configured as a multi-layer structure. The node and the video screen should be configured according to the actual deployment in the field.

By configuring the video screen, you can add grouping nodes to the video screen by category, and then add video screen under the nodes to complete the configuration of video screen step by step.

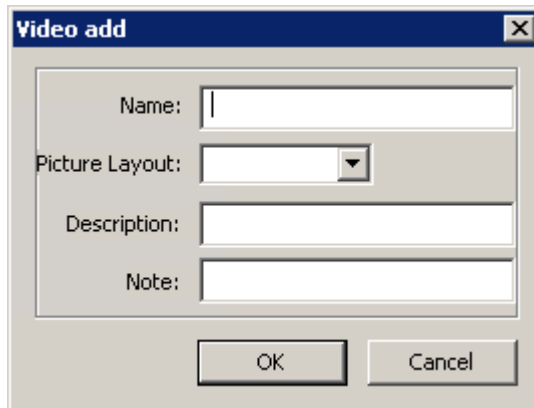
### 3.5.1 Create Video Group

Select “Video Screen” in the “Configuration Tree” and right-click, then select “Add Node” from the right-click menu, and a “Node add” dialog box will pop up. Enter the user name and description to add a video grouping node. For details, please refer to “Add Node”.

### 3.5.2 Create Video

Complete the creation of the video screen through following steps.

- 1) Select “Video screen” or screen grouping node in the “Configuration Tree”, and select “Add Video” in the right-click menu to prompt the “Video add” dialog shown below.



**Figure 3-9 “Video add” Dialog Box**

- 2) Configure the basic properties of the video according to the following table.

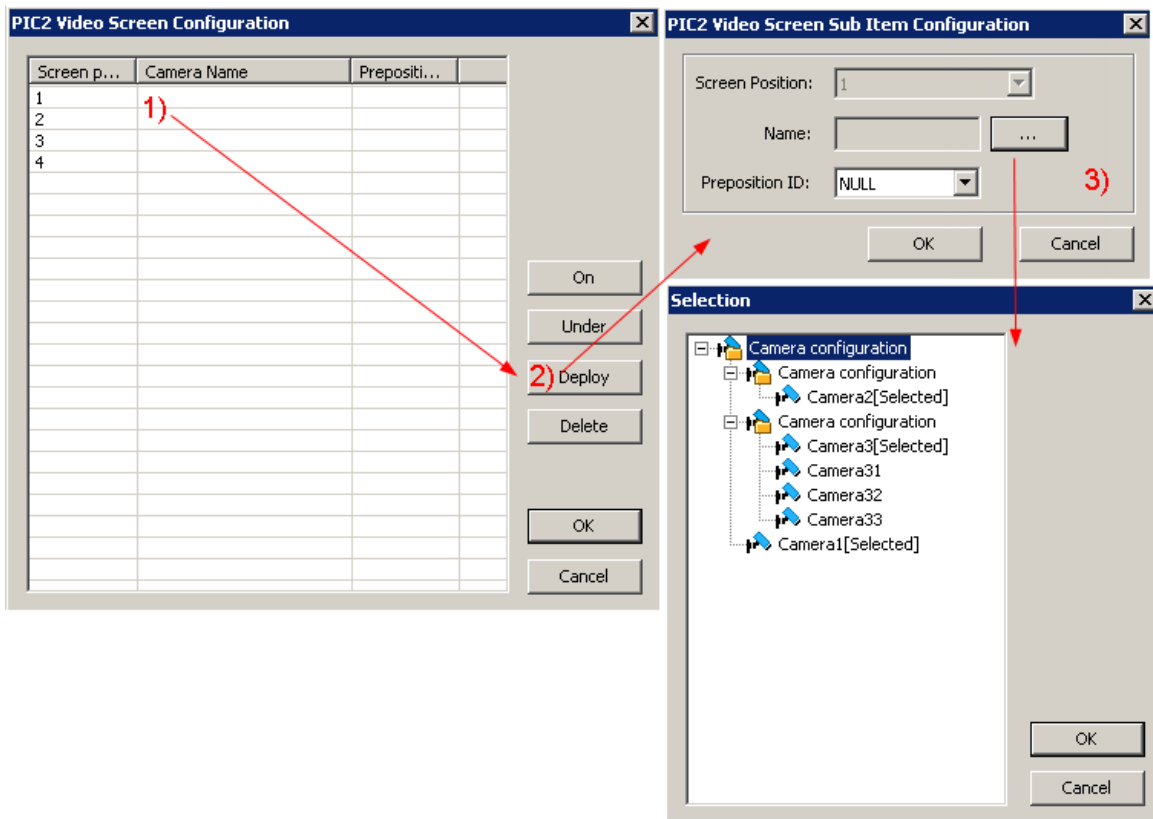
Configuration Item	Instruction
Name	Used to configure the name of the video.
Picture Layout	Used to configure the layout of the picture, which can be selected from the drop-down list. Supported picture layout include 1*1, 1*2, 4*4, etc. Taking 2*2 for example, the picture displays 2 cameras video above and 2 cameras video below.
Description	Used to configure the description of the video.
Remark	Used to configure other instructions of the video.

- 3) Click “OK”, the new video will be displayed under the “Video screen” node.

### 3.5.3 Configure the Sub Item of the Video Screen

After creating a new video screen, user can configure the sub item of the video screen. When configuring the sub item, the source and preset of the displaying camera in the sub item will be specified.

Select new video in the “Configuration Tree”, and select “Configure Video” in the right-click menu to prompt the dialog box of video screen configuration shown below.



**Figure 3-10 Steps of Video Screen Configuration**


- 1) In the dialog box of video screen configuration, double-click the serial number of the video to be configured.

The screen numbers are arranged from left to right and from top to bottom. If the picture layout is configured as 2\*2, the corresponding video number is such as

1	2
3	4

When the picture layout is configured as 1\*1, there is only one picture, and its serial number is 1.

- 2) Double-click the serial number of the video to be configured to prompt the dialog box of sub item configuration, as shown in step 2) in the figure above. In the dialog box of video screen configuration, the position of the video can be adjusted by the “On” and “Under” buttons.

- 3) Click  to prompt the dialog box of “Camera Selection”.

In the “Camera Configuration” tree, select the camera to be displayed on this sub item and click “OK”.

Return to the dialog box of sub item configuration, and select the configured preset position of the selected camera in the “Preposition ID” list.

After the configuration is completed, the sub item will display the video content of the preset position specified by the selected camera.

- 4) Repeat step 2) and step 3) to configure all the sub items of the video screen.
- 5) Click “OK” to save the configuration of the screen.

## 3.6 Event Configuration

### 3.6.1 Associate Configuration

Through the association configuration, user can configure the specified screen that is associated with the specified operation. Associating configuration refers to the configuration when VisualAI is associated with the DCS system, including manual association and automatic association.

- Manual association means that after manually performing a operation in DCS system, open the monitoring content of VisualAI's configured video screen or a camera. For example, the screen button in the flowchart is used to initiate a screen.
- Automatic association means that when a certain tag number in the DCS system alarms, the monitoring content of VisualAI's configured video screen or camera. For example, the alarm of a certain tag number will trigger a certain video screen.



**Tip:**

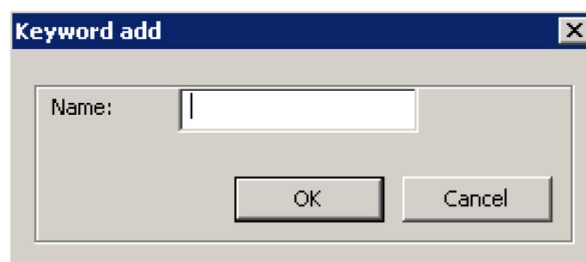
**When VisualAI interacts with other systems, association configuration is required. When VisualAI uses its own monitoring software, no association configuration is required.**

### Manual Association Configuration

Manual association configuration is used to configure the keywords of manual association. when VisualAI interacts with other systems, the configured keywords will be called by other systems to realize the pop-up of the associated screen.

Manual association can be configured through the following steps:

- 1) Select "Event configuration > Associate configuration > Manual association" in the "Configuration Tree", and select "Add Event" in its right-click menu to pop up the dialog shown in the figure below.



**Figure 3-11 Dialog Box of "Keyword Add"**

- 2) Enter the name of the association in "Name", supporting English, number and other characters.  
When interacting with other systems, the keyword will be used as a VisualAI interface identifier in other system configurations.
- 3) After selecting the associated screen or camera in the "Select Camera" dialog box, click "OK" to complete the association configuration.

**Attention:**

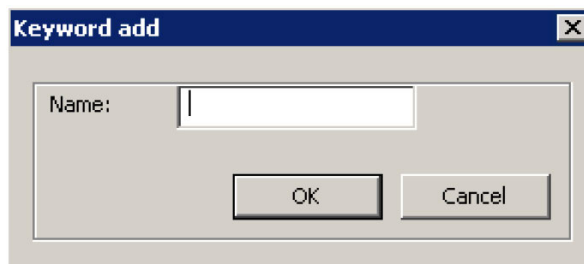
After manual association is configured, other configurations in the system with which it interacts is required, so as to complete the overall configuration of the manual association.

### Automatic Association Configuration

Automatic association configuration is used to configure keywords of automatic association. When VisualAI interacts with other systems, the configured keyword will automatically prompt the associated screen according to the specified configuration.

Automatic association can be configured by following steps:

- 1) Select “Event configuration > Associate configuration > Automatic association” in the “Configuration Tree”, and select “Add Event” in its right-click menu, then the dialog box shown below will pop up.



**Figure 3-12 “Keyword add” Dialog Box**

- 2) Enter the name of the association in “Name”.  
The supported format of “Name” is: alarm.  
For example, if “AI0001[HH]” or AI0001 tag number alarms with high limit, specified VisualAI interface will pop up and position automatically.  
If “AI0001” or AI0001 tag number alarms, specified VisualAI interface will pop up and position automatically.
- 3) After selecting the associated screen or camera in the “Camera Selection” dialog box, click “OK” to complete the configuration of automatic association.

**Attention:**

After the automatic association is configured, other configuration is in the component with which it interacts is not required. High-performanceHMI component will automatically determine the screen that needs to be prompted according to the automatic association keyword configured in VisualAI.

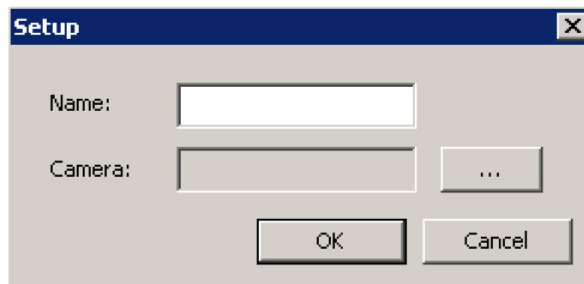
### 3.6.2 Anomaly Intrusion Identification Configuration

Through the anomaly intrusion identification configuration, user can specify the association between the screen and the anomaly intrusion event. Anomaly intrusion event refers to some


restricted areas. When the restricted area is abnormally intruded or the area needs to motion detection, the system will generate an alarm message according to the configured keywords and the corresponding camera screen will pop up.

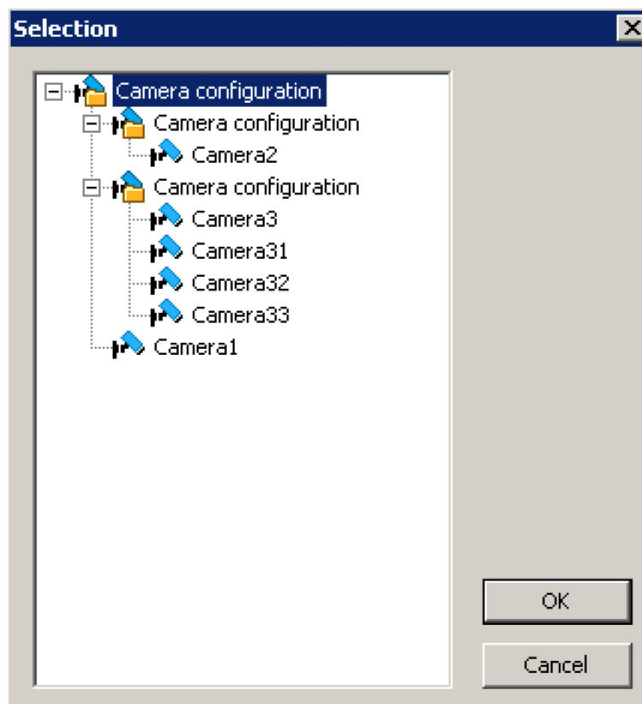
Anomaly intrusion identification can be configured by following steps:

- 1) Select “Event configuration > Anomaly intrusion identification configuration” in “Configuration Tree”, and select “Add Event” in its right-click menu to prompt the dialog box shown below.



**Figure 3-13 “Add Event” Dialog Box**

- 2) Enter the name of the event in “Name”, supporting English, number and other characters. The name can be use as the remark of Vidoe window in other settings.
- 3) Click the button  on the right of “Camera” and select the camera to be prompted in the “Camera Selection” dialog box as shown in the figure below.



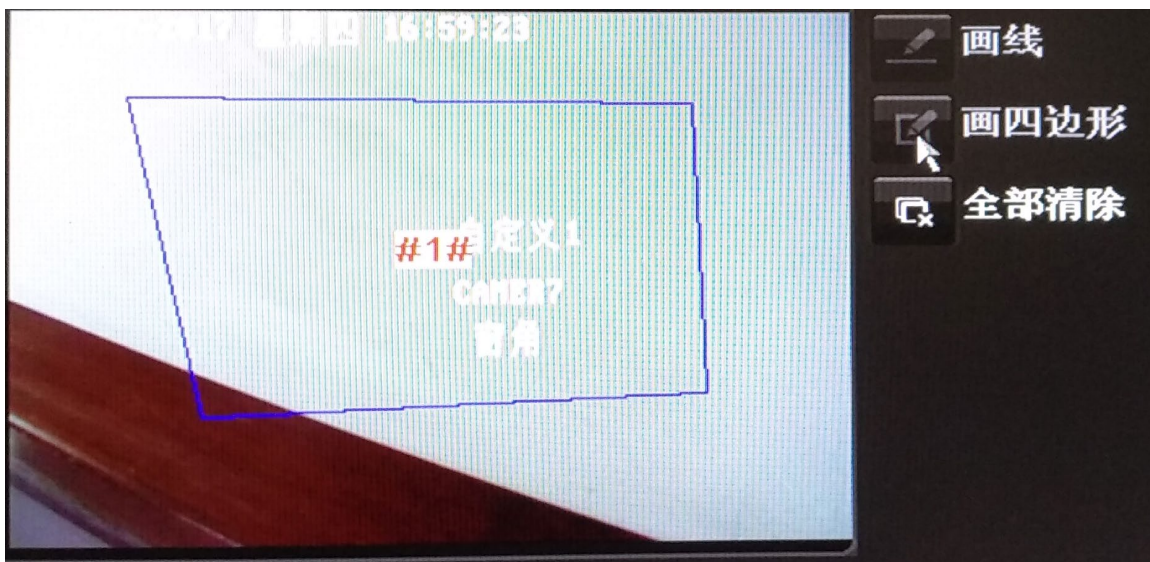
**Figure 3-14 “Camera Selection” Dialog Box**

- 4) After selecting the camera in the “Camera Selection” dialog box, click “OK” to complete the configuration of association.

**Attention:**

After the anomaly intrusion identification is configured, other configurations in the system with which it interacts is required, so as to complete the overall configuration association configuration. For related configuration of other systems, please refer to “Interaction with High-performanceHMI”.

After the setting of anomaly intrusion identification in the video configuration software is completed, it is required to configure NVR. In the configuration software of NVR, select “Channel Management > Intelligent Detection” from the configuration directory to enter the “Intelligent Detection”. Then select the corresponding camera to switch to the setting page of “Area Invasion”. Check “Enable” at the bottom of interface and select “Draw Quad” to draw the detection area of anomaly intrusion in the preview camera interface. As shown in the figure below, within the blue frame is the detection area.



**Figure 3-15 Draw Detection Area**

In the configuration page of the camera, the configuration of both “Area Intrusion” or “Motion Detection” will trigger anomaly intrusion event. Please refer to the user manuals of the corresponding cameras and NVR for detailed operation instructions.

**Tips:**

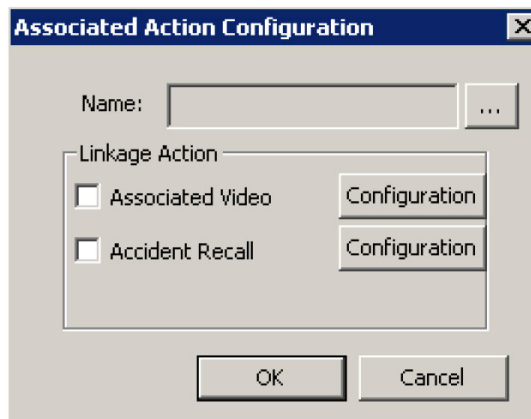
- If the selected camera does not support the selection of the detection area, the configuration related to anomaly intrusion cannot be performed.
- If the selected camera can be configured for anomaly intrusion, please log in to the configuration page of the camera through the webpage and select “Upload Center” after configuring “Motion Detection” or “Area Intrusion”.

### 3.7 Linkage Configuration


Through the linkage configuration, user can specify the correlation between the screen and the abnormal working conditions of the system. Abnormal working conditions of system refer to events such as DCS triggering an alarm and anomaly intrusion in the monitoring area, which are configured in the event configuration.

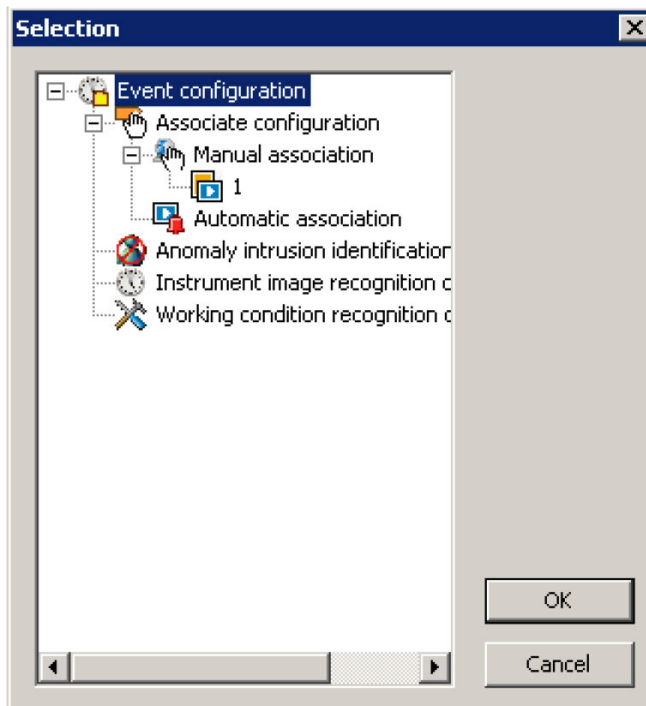
Linkage configuration can be set by following steps:

- 1) Select “Linkage configuration” in the “Configuration Tree” and select “Action Add” in its right-click menu to prompt the dialog box shown below.



**Figure 3-16 “Action Add” Dialog Box**

- 2) Click the button  on the right of “Name”, and select the event configuration to be associated in the “Select Event Configuration” dialog box as shown in the figure below.



**Figure 3-17 “Event Configuration Selection” Dialog Box**

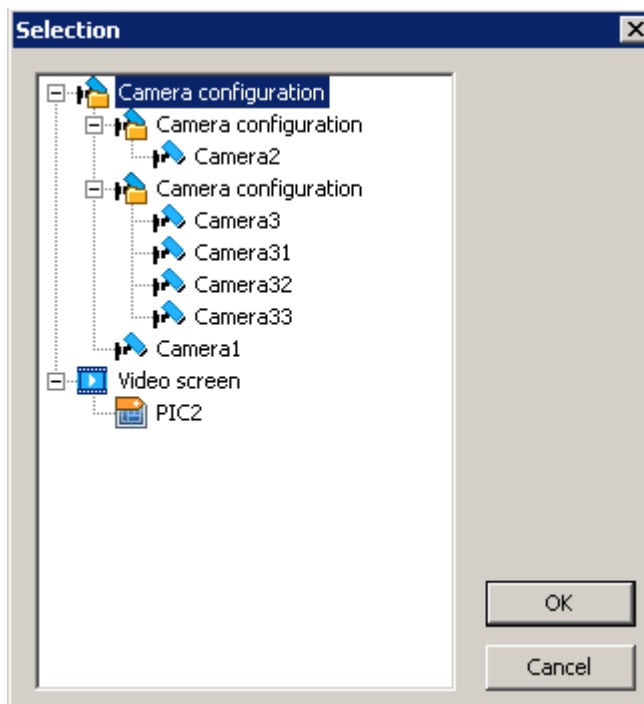
- 3) After selecting the event configuration in the “Select Event Configuration” dialog box, click



“OK” to complete the configuration of association.

- 4) Return to the dialog box as shown in Figure 3-17 to complete the configuration of linkage action.
- Associated video: Configure the associated video screen for the selected event. When the event configuration is triggered, the system will prompt the corresponding camera screen according to the configured event keywords.

Select checkbox in front of “Associated video”, and click the button **Configuration** to prompt “Video Screen Selection” dialog box as shown in Figure 3-18. Select the pop-up camera or video screen required by association, and then click The “OK” button to save the settings.



**Figure 3-18 “Camera Selection” Dialog Box**

- Accident recalls: set accident recalls for selected event configuration. When an error occurs, the system will add accident recall records on the “Historical Information List” interface during the monitoring period according to the configured event keywords, so that the user can view the situation in the field before and after the error.

Select the check box in front of “Accident Recall” and click the button **Configuration** to prompt the “Accident Recall Configuration” dialog box, as shown in the following figure.

**Figure 3-19 “Accident Recall Configuration” Dialog Box**

- Camera: Click the button **Set** on the right of camera and select the camera that is required to pop up by accident recalls in “Camera Selection” dialog box as shown in Figure 3-14.



**Attention:**

**When user is configuring the associated accident recall, two linkage configurations are not allowed to be configured as the same camera screen.**

- Preset position: Select the camera's preset corresponding to the event from the drop-down menu.
- Accident recollection time configuration: configure the accident recollection time in “Recollection Time Before Accident” and “Recollection Time After Accident”. As shown in the figure above, the default time is 60 seconds, and the setting range is 30 to 600 seconds.
- Keep time: the keep time of accident recall with the unit of day. If the set keep time is exceeded, the system will automatically delete the recorded video screen.
- Download play: select the method of video playback. If user selects “Download Play”, the videos related to accident recalls will be downloaded for playback. The number of downloadable videos is set in “Global configuration”, and the maximum number is 1000 ; if user doesn't select, it means online video is used for playback, and each event will open a separate playback screen. The system allows to open up to 5 cameras playback screen simultaneously.

5) After configuring accident recalls, click "OK" to save the changes and close the dialog box.

**Tip:**

After setting accident recalls in the video configuration software, the following configuration is also required for the NVR. For detailed operation instructions, please refer to the instruction manual for NVR.

1. In the configuration software of NVR, select "Recording Configuration > Plan Configuration > Recording Plan" from the configuration directory to enter the "Recording Plan" page. Then select the corresponding camera, check "Enable Recording Plan", and select the time to record.
2. On the web configuration end of NVR, select "Configuration > System > System Settings", and check "Sync with Computer Time" under "Manual Timing".

### 3.8 Video Inspection

Through the video inspection, you can specify the inspection route and the inspection point screen information contained in the route. Up to 10 inspection routes can be added in the configuration.

Video inspection can be set by following steps:

- 1) Select "Video inspection" in the "Configuration Tree", and select "Add Patrol" in its right-click menu to prompt a dialog box as shown below.

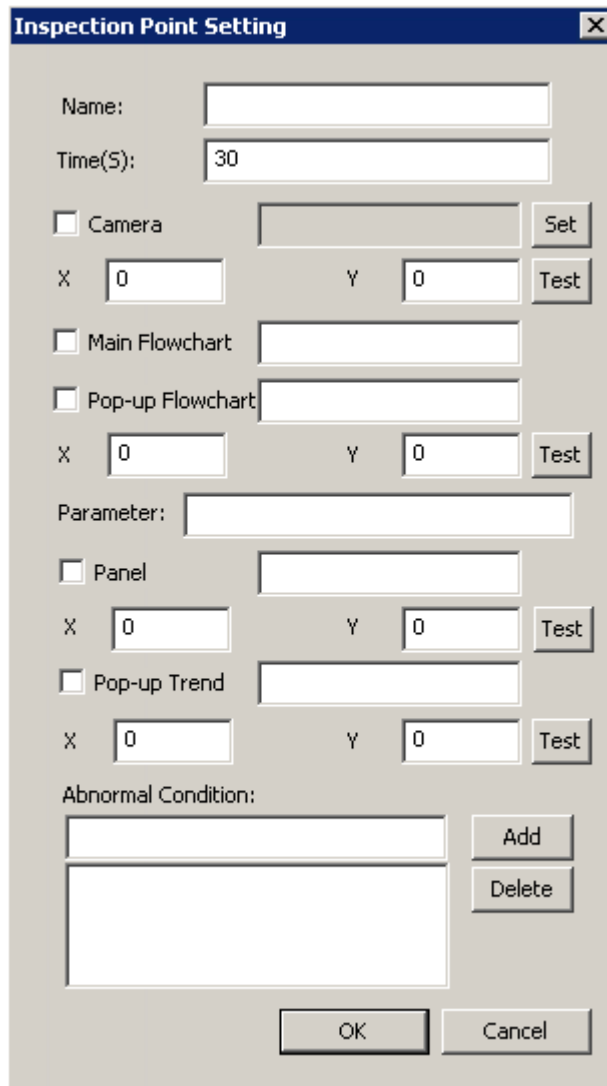
The dialog box titled "Inspection Route Settings" contains the following fields and controls:

- Name:** A text input field.
- Description:** A text input field.
- Inspection Point Definition:** A large empty rectangular area for defining inspection points.
- Buttons:** A vertical stack of buttons on the right side: ADD, DELETE, EDIT, MOVE UP, and MOVE DOWN.
- End Action:** A dropdown menu currently showing "Direct end".
- Jump Route:** A dropdown menu.
- OK and Cancel:** Buttons at the bottom of the dialog.

**Figure 3-20 Inspection Route Settings**

- 2) Set the name and description of the inspection route. The name should not exceed 64 characters and the description should not exceed 127 characters.
- 3) Set inspection point. Multiple inspection points can be added to one inspection route.

Click the “Add” button on the right to prompt the “Inspection Point Setting” dialog box as shown in the figure below.




The dialog box titled "Inspection Point Setting" contains the following fields and controls:

- Name:** A text input field.
- Time(S):** A text input field with the value "30".
- Camera:** A checkbox. To its right is a text input field and a "Set" button.
- X:** A text input field with the value "0".
- Y:** A text input field with the value "0".
- Test:** A button.
- Main Flowchart:** A checkbox. To its right is a text input field.
- Pop-up Flowchart:** A checkbox. To its right is a text input field.
- X:** A text input field with the value "0".
- Y:** A text input field with the value "0".
- Test:** A button.
- Parameter:** A text input field.
- Panel:** A checkbox. To its right is a text input field.
- X:** A text input field with the value "0".
- Y:** A text input field with the value "0".
- Test:** A button.
- Pop-up Trend:** A checkbox. To its right is a text input field.
- X:** A text input field with the value "0".
- Y:** A text input field with the value "0".
- Test:** A button.
- Abnormal Condition:** A label above a large text area.
- Add:** A button.
- Delete:** A button.
- OK:** A button.
- Cancel:** A button.

**Figure 3-21 “Inspection Point Setting” Dialog Box**

- **Name:** the name of inspection point.
- **Time:** the inspection time of a single inspection point with the unit of second. The default is 30 seconds, and the setting range is 30 to 600 seconds.
- **Camera:** used to associate with the video screen corresponding to the inspection point. Check the check box in front of “Camera”, click button **Set** on the right, and select camera or video screen that is required to be associated in the “Select Camera” dialog box as shown in Figure 3-18, and click “OK” to save the settings.
- **“Main Flowchart” and “Pop-up Flowchart”** are used to configure the flowchart screen corresponding to the inspection point. After checking the check box, fill in the name of the flowchart.  
For example, if the name of the “Main Flowchart” is MaintPic.pic, select the check box in front of the “Main Flowchart” and fill in “MaintPic.pic” in the text box. When video inspection passes the inspection point, the specified main flowchart MaintPic.pic will pop

up. If the flowchart to be associated is in a flowchart group, it is recommended to fill in the name of the flowchart with the name of the group. For example, the name of “Pop-up Flowchart” to be associated is Pic1.pic, and the flowchart is under the group POPPIC, the name of flowchart here should be filled in “/POPPIC/Pic1.pic”.

- “Panel” and “Pop-up Trend” are used to configure the tag number information corresponding to the inspection point. After checking the check box, fill in the corresponding tag name. For example, if the tag name is “AI0001”, when the video inspection passes the inspection point, the panel or pop-up trend window corresponding to the tag AI0001 will pop up.
- Abnormal condition: used to configure the abnormal condition of the inspection point, which can be configured as a tag name or tag alarm. Fill in the text box and click the “Add” button.  
For example, when “AI0001” or AI0001 tag number alarms, specified VisualAI screen will pop up and automatically position.  
For example, The “AI0001[HH]” or AI0001 alarms with high limit, specified VisualAI screen will pop up and automatically position.  
Existed abnormal conditions can be deleted. Select the abnormal conditions in the list below and click the “Delete” button.
- The X and Y coordinates are used to set the position of the window when the video screen pops up. Click the button  after entering the coordinate value. At this time, the position of the mouse is the position of the upper left corner of the video window.

After finishing the configuration, click “OK” to save the settings and close the interface.

4) Return to the dialog box as shown in Figure 3-20 to configure the end action and jump route.

- End action: configure the action after the current inspection route ends during the monitoring period.
  - Direct end: after the inspection of current route is completed, the monitoring software will directly end the inspection task, and will not conduct inspection of other routes.
  - Auto jump: after the inspection of current route is completed, the monitoring software continues the inspection task of another inspection route according to the configuration.
- Jump route: after the inspection task of current route is completed, just fill in the name of the inspection route for the route to be inspected.

5) After completing the configuration, click the “OK” button to save the settings and close the interface.

## Section 4 Configure Monitoring Authority

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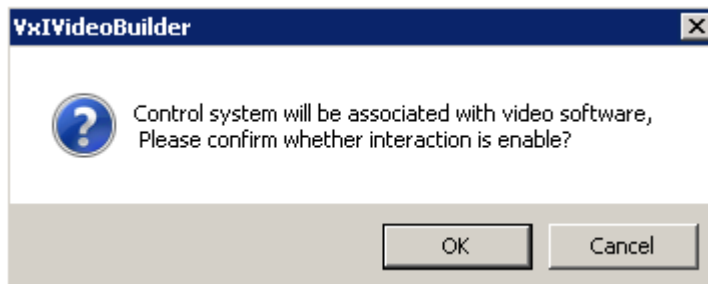
VisualAI supports interaction with other systems. When it is interacting, user needs to enable the interactive function first, and then configure the interactive authority according to the user or operation station.

### 4.1 Enable Interaction

Only after the interactive function is enabled, VisualAI can interact with other systems. After the interactive function is disabled, VisualAI will not interact with other systems.

Enable the interactive function of VisualAI by following steps:

- 1) Select “Interaction > Open Interaction” in the menu bar and the prompt box shown below will pop up.



**Figure 4-1 Enabling Interaction Prompt Box**

- 2) In the prompt box for enabling interactive confirmation shown in the figure above, click “OK” to enable the interaction.



---

**Tip:**

After the interaction is enabled, the “Cancel Interaction” menu will be displayed under the “Interaction” menu in the menu bar. If it is required to cancel the interaction between VisualAI and other systems, user can cancel the interaction through the menu “Interaction > Cancel Interaction”.

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### 4.2 Configure Operation Station

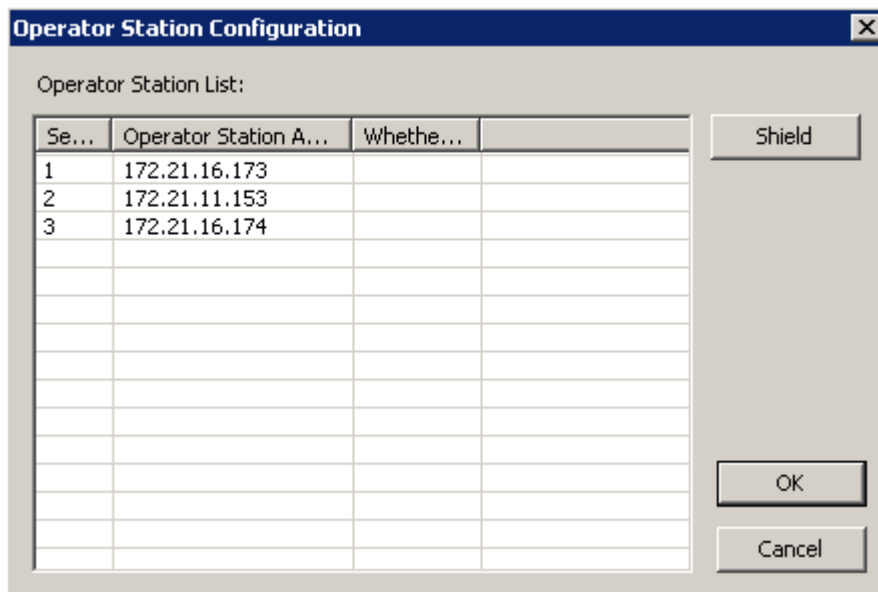
When VisualAI interacts with other systems, user can shield the interactive authority of the specified operating station.

**Attention:**

User can only shield operation when VisualAI configuration software is started from the interactive High-performanceHMI component. The following takes the High-performance component as an example to explain the configuration method of enabling the VisualAI configuration software in the interactive system and shielding the operation station.

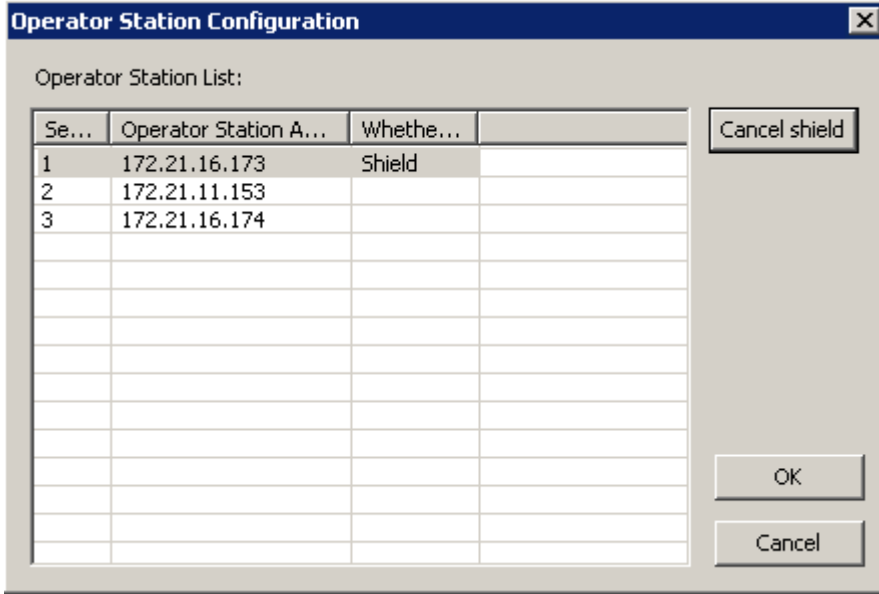
Shield the function of opening video screen of operation by following steps:

- 1) Select “Interaction > Configure the operator station” in the menu bar to prompt “Configure Operator Station” dialog box shown below.



**Figure 4-2 “Configure the operator station” Dialog Box**

- 2) In the “Configure the operator station” dialog box, all the operation stations that support interaction are listed. Select the operation station that needs to be shielded in the “Operation Station List” and click the “Shield” button, then the interactive function with VisualAI of the selected operation station will be shielded.



**Figure 4-3 “Configure Operation Station” dialog box (after shielding specified operation station)**

As shown in the figure above, the “172.30.0.129” operation station is shielded from the interactive function. If it is required to restart the interactive function of the operation station, select the operating station and click the “Cancel Shielding” button to cancel the shielding.

- 3) Click “OK” to complete the configuration of operation station.

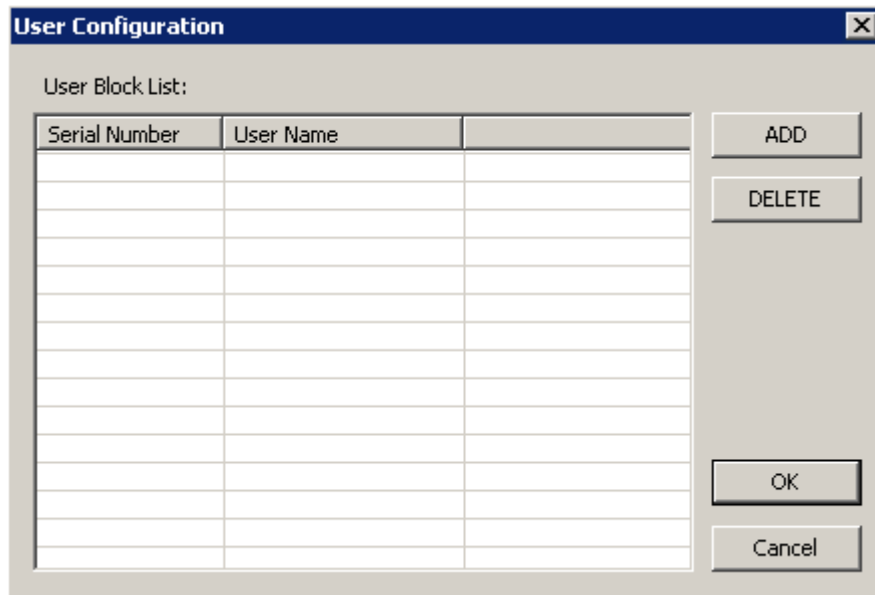
### 4.3 Configure User Authorities

When VisualAI interacts with other systems, user can shield the viewing authority of the VisualAI video screen of specified monitoring user in the interactive system. After the shielded user logs in the monitoring software, the VisualAI video screen cannot be opened. By default, all monitoring users in the interactive system have the right to view VisualAI video screen.

User authorities can be configured by following steps:

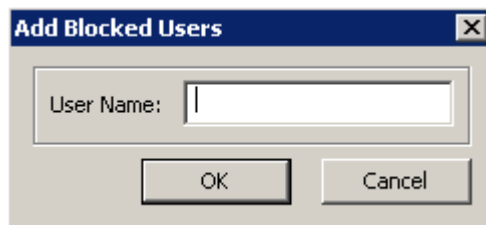
- 1) In the menu bar of VisualAI configuration software, select “Interaction > User Configuration” to prompt the “User Configuration” dialog box shown below.





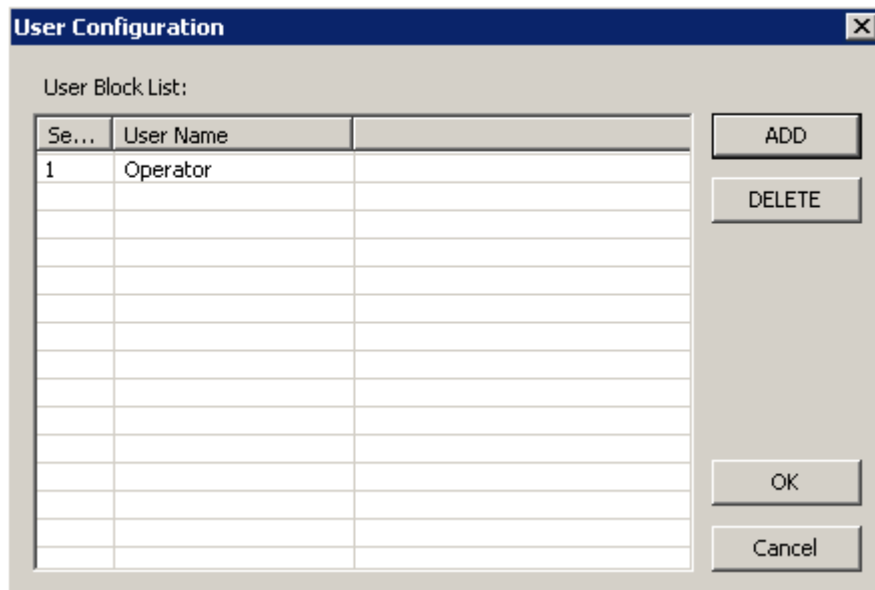
**Figure 4-4 “User Configuration” Dialog Box**

- 2) Click “Add” to prompt the “Add Shielded User” dialog box, as shown in the figure below.



**Figure 4-5 “Add Shielded User” Dialog Box**

- 3) Enter the monitoring user name of the interactive system in “User Name” and click “OK”. The entered user will be added to the “User Shield List”, as shown in the “Operator” below. If it is required to cancel the shielding, select the user and click “Delete”.



**Figure 4-6 “User Configuration” Dialog Box (After Adding Shielded User)**

- 4) Click “OK” to complete the configuration of shielding user.



---

**Attention:**

**VisualAI's dongles will check the authorities of users during the monitoring period. Only when the users are not in the shield list and have the dongles authorization, can they conduct video monitoring. Otherwise, video monitoring cannot be performed.**

---

## **4.4 Configure Dongle**

Video monitoring has a separate dongle authorization: (the authorization is only for the computer with the dongle)

- With the dongle authorization, you can view the video screen.
- Without the dongle authorization, you can have 2-hour trial time. After 2 hours, the video screen will be closed.

## Section 5 Interaction with High-performanceHMI

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The High-performanceHMI supports the interaction of the VisualAI component. After the interaction, the content of the video monitoring can be directly introduced into the High-performanceHMI monitoring interface, and the video monitoring content can also be newly configured.

After installing the VisualAI component in the device where the High-performanceHMI component is installed, a “video monitoring” node will be added to the High-performanceHMI monitoring configuration software. High-performanceHMI video monitoring configuration can be achieved by “Video Monitoring” node.

High-performanceHMI supports the following ways to interact with VisualAI:

- Add video controls to the flowchart and set their related cameras.
- Set the motion of the object to the flowchart to open the specified video screen.
- Set the event to automatically open the video screen and locate it during scheduling.
- In the real-time monitoring software, the video screen can be automatically opened by configured keyword in VisualAI according to the alarm association.
- In the real-time monitoring software, the video screen can be directly opened through VisualAI monitoring menu.
- In the real-time monitoring software, the video can be inspected according to the inspection routes configured in VisualAI.
- In the real-time monitoring software, the video screen can be automatically opened according to the anomaly intrusion identification configured in VisualAI.



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**Tip:**

**When VisualAI interacts with High-performanceHMI component, configuration and monitoring methods in the High-performanceHMI are required. For the configuration methods that support interaction, please refer to *VisualAI Interaction with High-performanceHMI*.**

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## Section 6 Video Monitoring

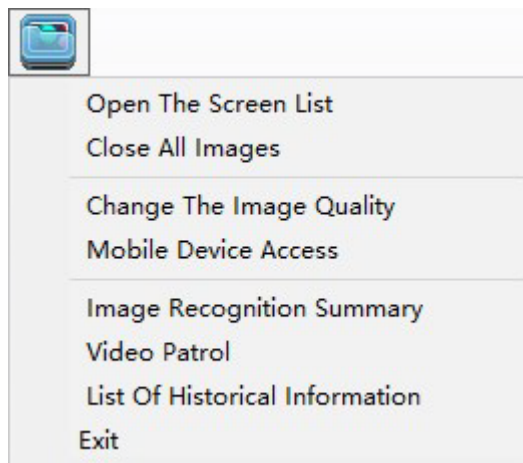
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This section only introduces the operation method of using VisualAI video monitoring software VisualAIServer to video monitoring.

### 6.1 Open Video Monitoring Software

VisualAI video monitoring software can be used by following steps:

1. Open the real-time monitoring software of High-performanceHMI component and a floating icon  will be added to the screen.
2. Right-click the floating icon to display its right-click menu, as shown in the following figure.



*Figure 6-1 Menu of Video Surveillance*

### 6.2 Enable Surveillance

This section mainly introduces how to open the video surveillance window and how to manage the opened window.



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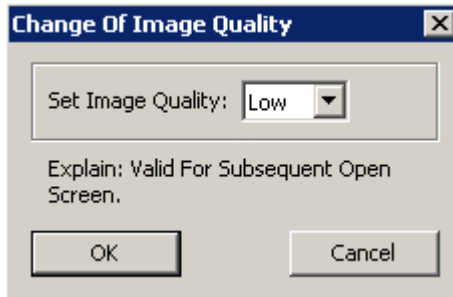
#### Tips:

- When VisualAI is used alone, it is required to manually exit and restart the Video Surveillance after the video configuration is changed.
  - After the video configuration is changed, the menu item “Load Archive” will appear in the right-click menu. After clicking, the server will update the archive and a prompt will pop up after success.
- 

#### 6.2.1 Change the Image Quality

After opening the video monitoring software, right-click the floating icon and select “Change The

Image Quality” from the right-click menu to prompt the “Change Of Image Quality” dialog box shown below.



**Figure 6-2 “Change Of Image Quality” Dialog Box**

In the drop-down list of “Change Of Image Quality”, user can change the image quality of the displayed screen, including high (high definition) and low (low definition). After making changes, click “OK” to save.

The changed configuration needs to be displayed in the subsequently opened video screen, and the currently opened screen is not affected by the latest configuration.



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**Tip:**

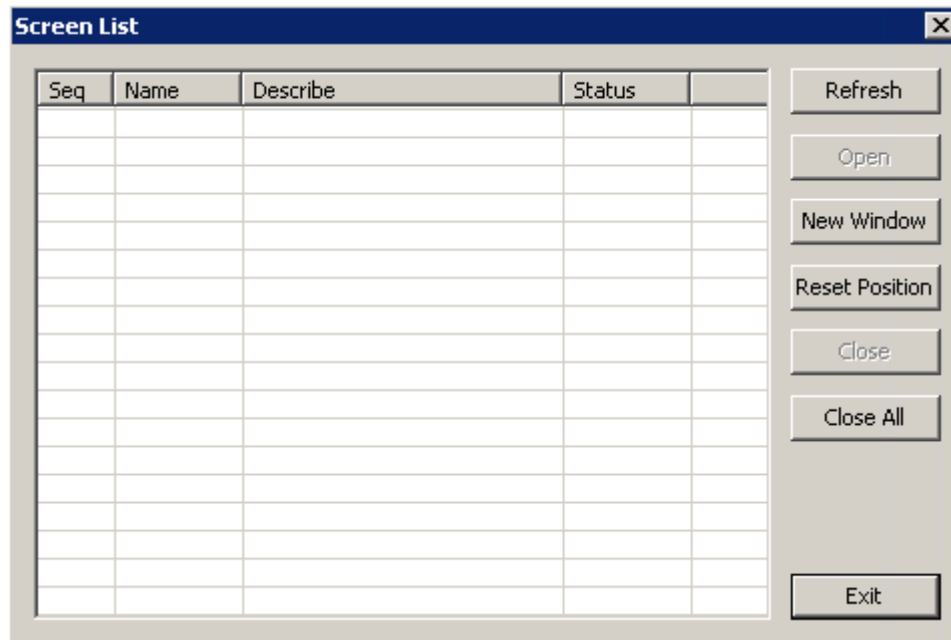
**Decreasing the quality can effectively reduce the CPU load of the system.**

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### 6.2.2 Open Video Screen Window

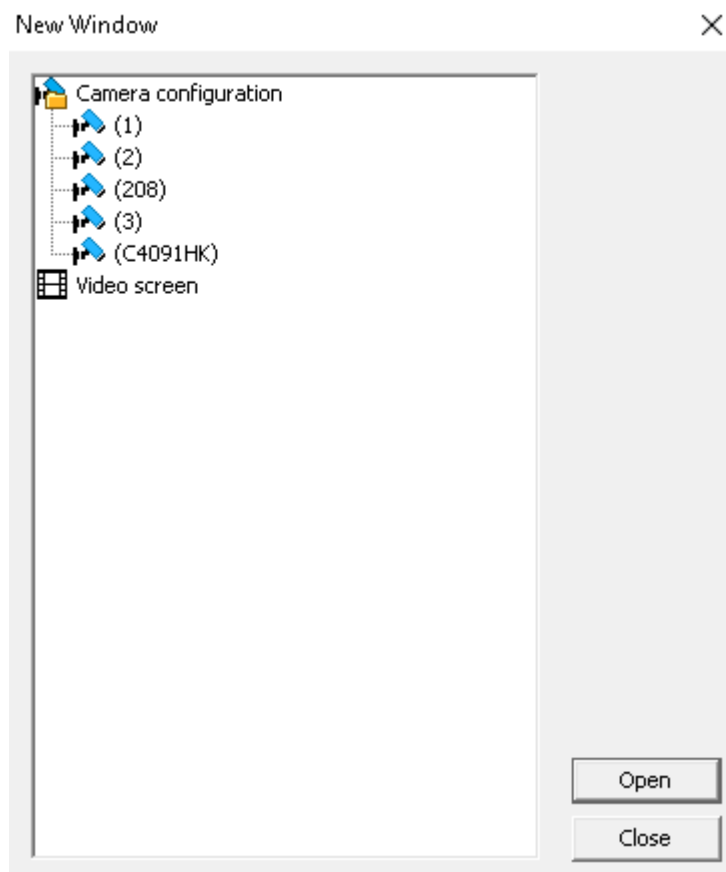
After opening the video monitoring software, user can open the monitoring window by following steps:

1. Select “Open The Screen List” in the right-click menu to prompt the “Screen List” dialog box shown below.



**Figure 6-3 “Screen List” Dialog Box**

2. Click “New Window” to prompt “Open New Window” as shown below.

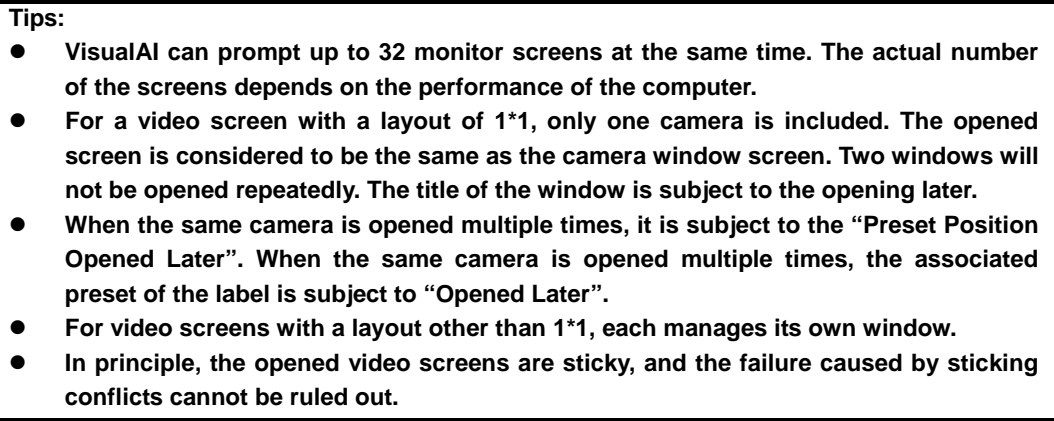


**Figure 6-4 “New Window” Dialog Box**

Select the camera or the configured video screen in the box:

- Select the camera to be viewed, and it will be displayed the monitoring content of the camera's current position.

- When the computer CPU usage exceeds 60%, the prompt message pops up. If the computer has GPU decoding function, the mode will be automatically converted to GPU decoding. When running simultaneously with other interactive systems, the CPU usage rate should not be too high.



In the “Screen List” dialog box shown below, the monitoring window that has been opened and just closed will be displayed. Through this dialog box, user can manage the opened and just closed monitoring windows.



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arranged from bottom to top in the order of closing.

For closed windows, user can double-click the corresponding window in the window list or the button “Open” to reopen to view.

For the opened window, user can double-click the corresponding window in the window list to re-stick to view.

The functions of the other buttons are as follows:

- “Refresh”: Refresh will display the current status and sort of the latest screens.
- “Open”: Open the closed window.
- “New Window”: Open a new video screen window.
- “Reset Position”: Clear the saved position of a screen and display it in the center. The next time user opens the screen, it will be displayed according to the default position and size.



---

**Attentions:**

- After setting "position reset", you need to select "save the position of the window" in the right-click menu of the video screen for the setting to take effect.
  - “Reset Position” is also effective for the minimized window.
  - “Reset Position” does not take effect for the position where the keyword is saved. Although it is temporarily centered, it will still be displayed according to the position and size of the keyword when it is reopened next time. For details, please refer to “Manage Video Screen” in the next chapter.
- 


- “Close”: Close the opened window.
- “Close all”: Close all opened windows.

## 6.3 Adjust Monitoring Screen with VisualAI Monitoring Component

View is a software used to manage the screen in the VisualAI component. Through this software, user can control the behavior of the camera and manage the video screen.

### 6.3.1 Open VisualAI Monitoring Component

VisualAI monitoring software can be opened by following steps:

- 1) Right-click the floating icon  of the VisualAI and select “Open The Screen List” in its right-click menu to prompt the “Screen List” dialog box.
- 2) Click “New Window” in “Screen List” dialog box to prompt the “Open New Window” dialog box.
- 3) Select the video screen or camera to be viewed in the “Open New Window” dialog box, and double-click to prompt the video monitoring screen as shown below.



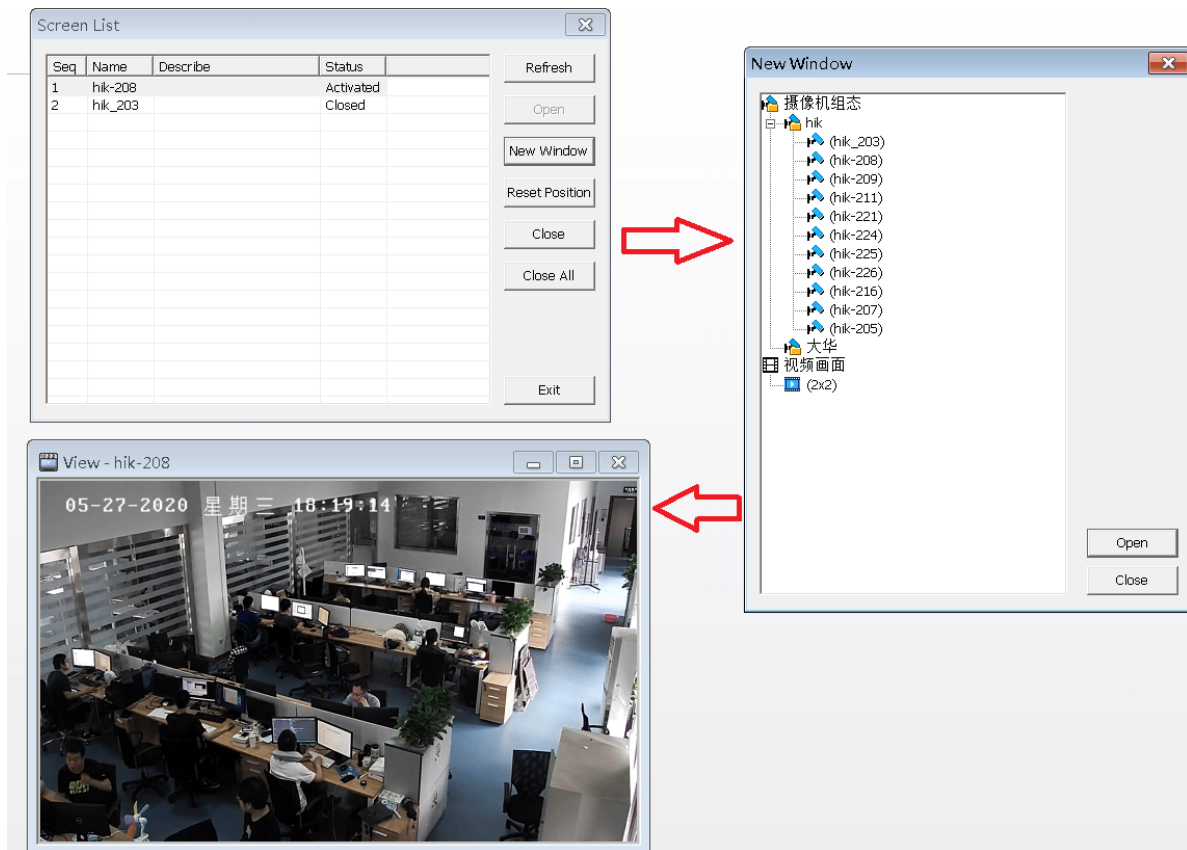


Figure 6-6 Example for Video Monitoring Screen

### 6.3.2 Manage Video Screen

In VisualAI monitoring software, user can manage the video screen through the right-click menu, as shown below.



**Figure 6-7 Right-Click Menu of Video Screen**

- Click “Full Screen”, and the current video screen will be displayed in full screen.
- Click “Split screen”, and the current monitoring screen displayed in full screen will be restored to the original screen layout for display.
- Click “Console”, and the camera PTZ menu related to the video screen will pop up. For detailed control of camera, please refer to “Camera Control”.
- Click “Save the position of the window” to keep the window's position of the current video screen. After closing and opening the video screen again, the video screen will be displayed according to the position of saved window.

“Save the position of the window” is distinguished according to keywords, screen names or camera names. For example, the keyword “Key1” is associated with the camera “Camera1”, and the position of saved window when opening the screen in Key1 mode can be different from when opening the screen in Camere1. After saved and reopened, it will be displayed in its position.

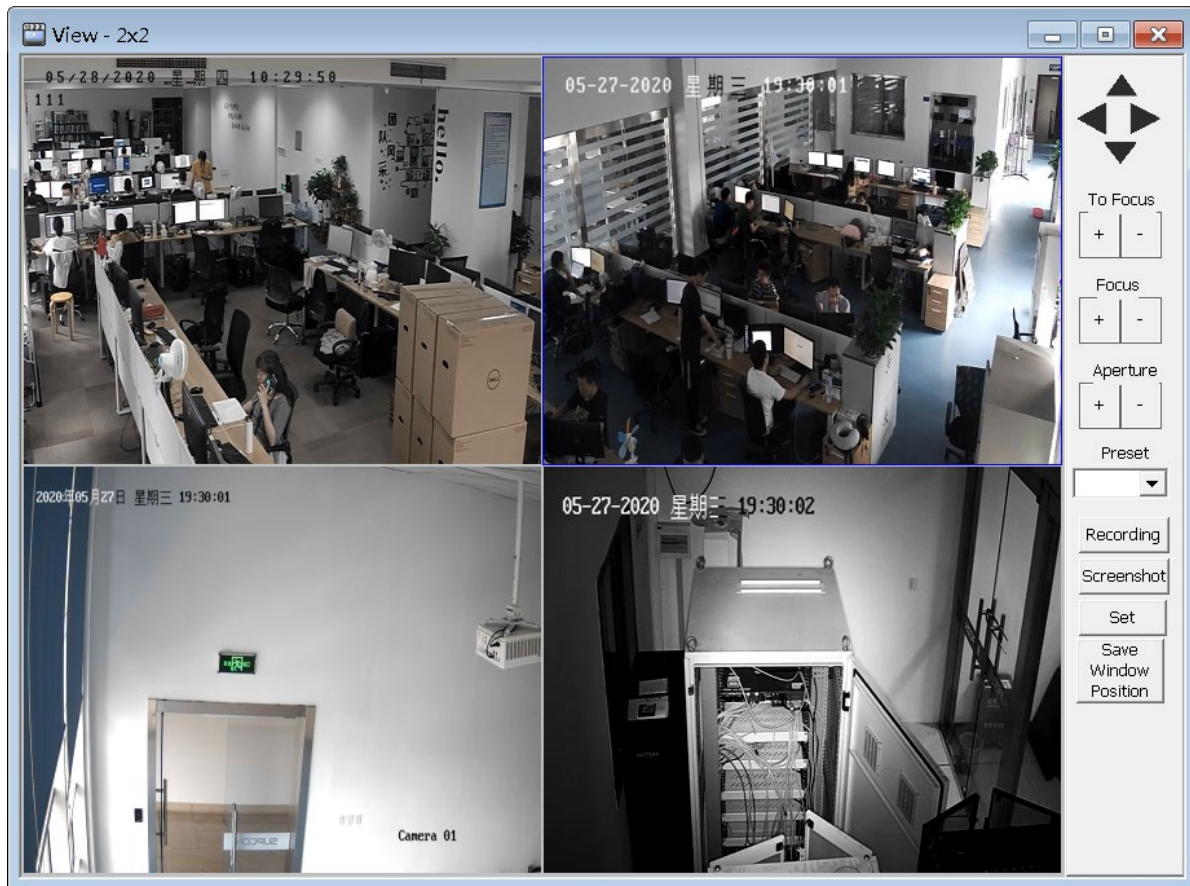


**Tip:**

**When the video screen is split screens, each monitoring screen is displayed according to the set image quality.**

### 6.3.3 Camera Control

When user chooses to display the video screen through console, the video screen as shown below will be displayed. At this time, you can control the focal length, aperture, preset point of the camera and record or capture video.



**Figure 6-8 Display Video Screen through Console**

As shown in the above figure, the camera in the video screen can be controlled through the console as follows:

- **PTZ control**  
The direction of the camera can be adjusted through the left, right, up, down, focus +-, focalization +-, and aperture + -buttons.
- **Preset position transfer**  
After the configured preset in the drop-down menu of "Preset" is selected, the video screen will be displayed according to the configured preset.
- **Recording and capturing**  
Click "Record" or "Capture" to record or capture the current camera content. The number of record or capture is related to computer hard disk space and other conditions. It can be configured according to the actual situation. The configuration file is "C:\OMC\VisualAI\VxI\Video.ini", and the configuration content is:
  - "Minimal free disk space", 20G by default, range: 5G ~ 100G. If the space is less than the range, recording will stopped and cannot be newly started.
  - "Maximum time for video recording", 60 minutes by default, range: 1 minute to 49 days. When the time is up, the recording will stop.
  - The path of the recording archive is "configuration path\Run\recfile". The default is "D:\VisualAIData\Run\recfile".

- The path of the capture archive is “configuration path\Run\capturefile”. The default is “D:\VisualAIData\Run\capturefile”.



**Tip:**

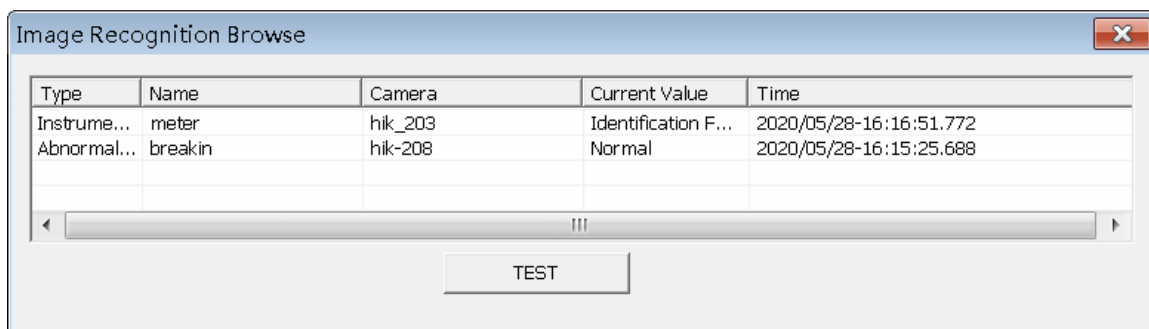
When the display screen is a multi-screen screen, operations such as PTZ control, preset calling, recording, and capturing are all performed on the camera associated with the currently selected screen. As shown in the figure above, the camera currently operating on the console is a video acquisition camera with a blue border on the upper right.

## 6.4 List of Image Recognition

The “List of Image Recognition” interface is used to display the results of all current image recognition, mainly including real-time records of anomaly intrusion events.



Right-click the floating icon of the VisualAI monitoring software, and select “List of Image Recognition” in its right-click menu. The “List of Image Recognition” interface will pop up, as shown in the following figure.



**Figure 6-9 “List of Image Recognition” Interface**



**Tip:**

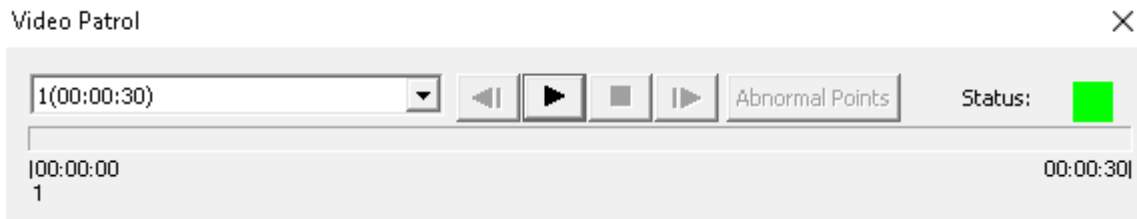
The “List of Image Recognition” only displays the real-time records of events. For the associated video screen, please view it in screen list. For specific operations, please refer to Open Video Screen Window.

## 6.5 Video Patrol


The “Video Patrol” panel is used to inspect the site conditions.





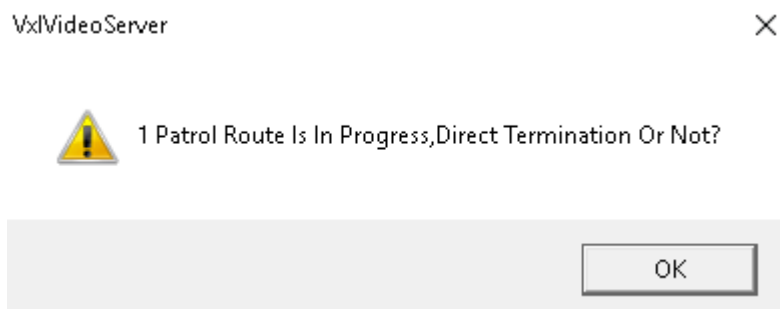
Right-click the floating icon of the VisualAI monitoring software, and select “Video Patrol” in its right-click menu to prompt “Video Patrol” panel as shown in the following figure.




**Figure 6-10 “Video Patrol” Panel**

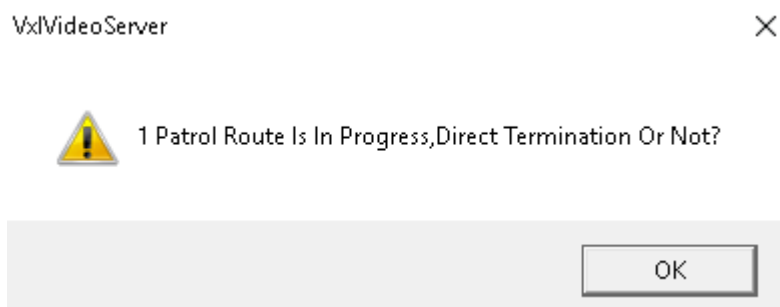
Select the route to be inspected through the drop-down box, and click the button  to start the inspection task. The progress bar at the bottom shows the inspection progress of the current inspection route. Other buttons are described below.

- : Start/Pause button, used to start, pause or continue the inspection work of current line.
- : End button, used to end the current inspection work. After clicked, a confirmation reminder will pop up, as shown in the figure below.



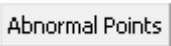
**Figure 6-11 Confirmation Reminder 1**

- : Jump to last/next inspection point. If the current ongoing inspection work is the last point in the route, the confirmation reminder will pop up according to the configuration of the video as shown in Figure 6-11 (Configured as “Direct End”) or Figure 6-12 (Configured as “Auto Jump”). Please select according to the actual situation.



**Figure 6-12 Confirmation Reminder 2**

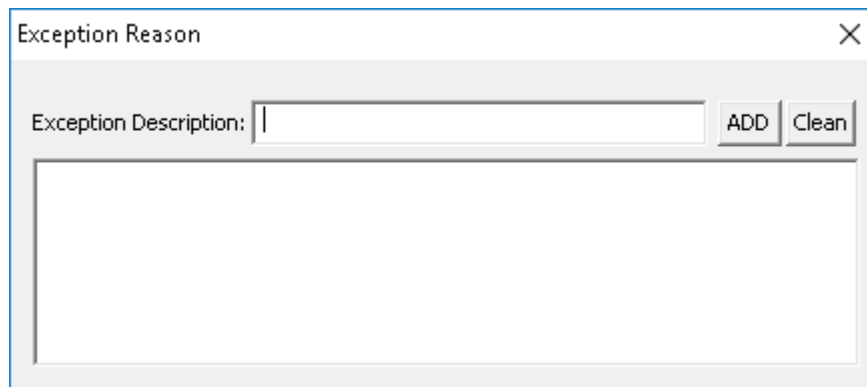
- **Abnormal points:** When the monitoring personnel finds abnormal, they can manually add abnormal points.

Click the button  and fill in the exception description in the pop-up “Exception Reason” as shown in Figure 6-13 and click the “Add” button. The added

description will be displayed in the list below.

Multiple abnormal points' description can be added to one inspection route. After adding the description of the abnormal point, the result of this inspection is marked as abnormal, and the status icon on the right is displayed in red.

If it is required to delete the existing description, select the description in the list and click the “Clean” button. If all exception descriptions are deleted, the status icon of the inspection route will turn green, indicating that the status of the inspection route is normal.



**Figure 6-13 Add Exception Description**

- **Status:** The initial status is green, indicating that the current inspection route is normal. When an exception is found during the inspection, or an abnormal points description is added manually, the status indicator will turn red, indicating that the status of the inspection route is abnormal.

During the inspection task, according to the configuration of 3.8Video Inspection, the system will prompt the main flowchart of the current inspection point, pop-up flowchart, panel window, pop-up trend window and other screens.

The results and abnormal information of the inspection will be recorded on the “Video Patrol” page of the “List of Historical Information”.



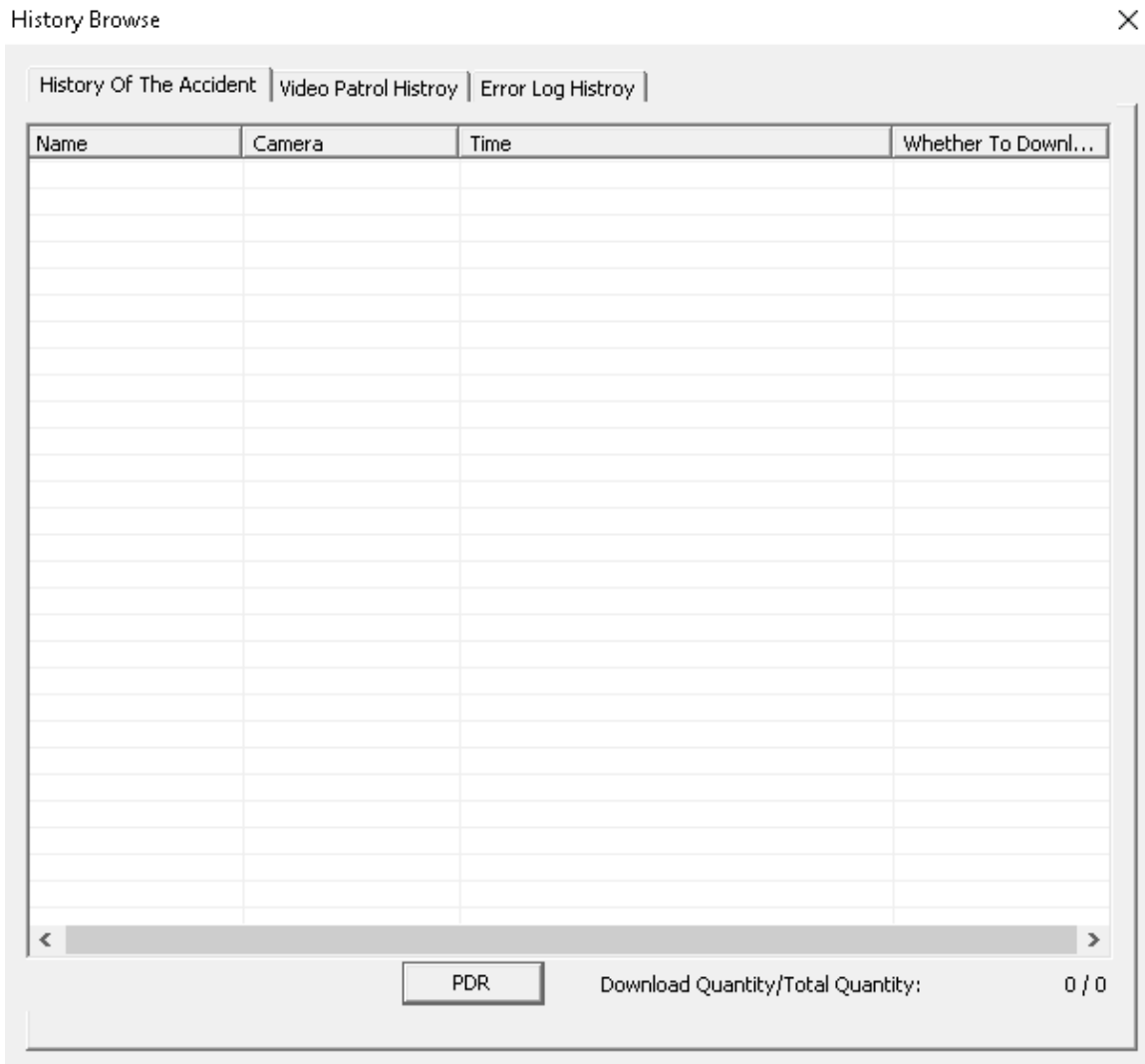
**Attention:**

**The flow chart, panel, trend window and other screens that prompt during the video inspection will not be automatically closed when entering the next inspection point. Please manually close unnecessary windows.**

## 6.6 List of Historical Information



Right-click VisualAI suspension icon and select the “List of Historical Information” in its right-click menu to prompt “History Browse” interface, as shown in Figure 6-14.



**Figure 6-14 “History Browse” Interface (History of the Accident Tab)**

- History of the accident: historical of the accident, such as DCS triggered alarm, anomaly intrusion in the monitoring area and other abnormal events. The recorded information includes the name of the event, the associated camera, the occurrence time of the event, and whether the event-related video is downloaded.

Select a historical record of the accident and click the “Review” button at the bottom of the page to open the corresponding video screen for viewing. For the configuration of the accident recall video screen, please refer to “Linkage Configuration”. For the setting of the maximum saved number, please refer to “Global Configuration”.



**Tip:**

For camera screens that do not check “Download and Play” in “Accident Recall Configuration”, the system can open up to 5 playback screens at the same time.

**Attention:**

By default, the early records will not be deleted automatically after the accident recall history reaches the maximum saved number. The configuration parameters can be modified through the following steps:

1. Find the configuration file BuilderConfig.xml under the installation path “C:\OMC\VisualAI\Setting\” and open it with Notepad.
2. Find the <ServerRunConfig> field and change the value of AutoDeleteVideoRecord value from the default 0 to 1.
3. Save and close the configuration file and restart the Video server. When the history record reaches the maximum number, the server will automatically delete the oldest record and create a new record.

- Video patrol history: the historical record of video inspection, as shown in the figure below, including patrol name, time, and status. If an abnormal status occurs or the monitoring personnel manually adds a description of the abnormal points, specific error information will be recorded in the “Description” column.

History Of The Accident   Video Patrol Histroy   Error Log Histroy			
Name	Time	Status	Describe
1	2020/05/26-02:05:11.120	Normal	
1	2020/05/26-02:04:44.048	Normal	
1	2020/05/26-02:04:28.200	Normal	
1	2020/04/17-15:21:59.438	Normal	

**Figure 6-15 “List of History Information “ Interface (Video Patrol History Tab)**

- Error log history: record the error operation information that occurs when the software is running, such as the failure to download the accident recall video and start the air inspection route. The recorded information includes the name, time, and specific instruction of the error operation, as shown in the following figure.

History Of The Accident   Video Patrol Histroy   Error Log Histroy		
Name	Time	Describe

**Figure 6-16 “List of History Information” Interface (Error Log History Tab)**

**Tip:**

The number of historical records is limited in the global configuration of the video configuration. For details, please refer to Global Configuration.



## Section 7 Common Errors and Other Information

### 7.1 Common Errors

The reason why the video cannot be opened may be:

- No dongle authorization.
- Shield the current operation station in VisualAI.
- Shield the current login user in VisualAI.
- The total number of video screens in the current system has exceeded 32.
- The CPU usage of the current computer is too high.

### 7.2 Description of Output Information

In the process of using VisualAI configuration software, the operation-related output information will be displayed in the output bar. The following table lists the possible output information and the reasons for the output information.

**Table 7-1 VisualAI Output Information List**

Prompt Message	Reason
PTZ Operation In Eight Directions Failed, Error Information: XXX	An error prompt of failure when camera PTZ is operating.
Preset Point Operation Failed, Error Information: XXX	An error prompt of failure when camera preset point is operating.
Video Color Setting Failed, Error Information: XXX	An error prompt of failure when the brightness of camera is being adjusted.
Configuration File Saved Failed	A prompt of failure when the file is saved.
Configuration File Saved Successfully	A prompt of success when the file is saved.
Configuration file XXX failed to load!	A fail prompt when the file is loaded.
Device Tree Population Failed	"Failed to fill video screen tree"
Correlation Tree Filling Failed	A prompt of failed to fill each tree node when video configuration interface is presenting.
Device XXX[XXX] Login Failed, Error Information XXX	An error prompt of failed to log in when the camera is previewing.
Device XXX[XXX] Logout Failed, Error Information XXX	An error prompt of failure when the camera stops previewing and logs out.
Device XXX[XXX] Realplay Failed, Error Information XXX	An error prompt of failure when camera starts preview playback.
"Device XXX[XXX] Stop Realplay Failed, Error Information XXX"	An error prompt when the camera stops Realplay.
"Device XXX[XXX] Registration Self-Painting Failed, Error Information: XXX"	An error prompt of failed to paint the label red frame when the camera starts preview playcheck.
"XXX Camera not retrieved from screen XXX"	An error prompt of inexistence of the camera in the screen when the video screen is previewed or the keyword is directly previewed

Prompt Message	Reason
"Camera not retrieved in device tree XXX"	An error prompt of camera not found in the archive when the keyword is directly associated to the camera

## 7.3 Instruction for Prompt Message

When VisualAI configuration software is used, prompt message will pop up. The following table lists possible pop-up prompt messages and the reasons for the prompt messages.

**Table 7-2 VisualAI Prompt Message List**

Prompt Message	Reason
Please choose a reasonable node!	When adding keywords and associating video frames or cameras, the correct node is not selected. When adding a video screen and selecting the sub camera, the correct node is not selected.
XXX [Selected], whether to continue?	When adding a video frame and selecting the sub-camera, the selected camera is selected.
Device node rename!	When adding a camera node or modifying the properties of a camera node, there is the device name in other camera nodes, warning.
Device name will not be empty!	When adding a camera or modifying the attributes of the camera, the device name is empty, warning. In the configuration dialog box of the video screen sub-item, the device name is empty, warning.
Port cannot be empty!	When adding a camera or modifying properties of the camera, the port is empty, warning.
User name cannot be empty!	When adding a camera or modifying properties of the camera, the user name is empty, warning.
Password cannot be empty!	When adding a camera or modifying properties of the camera, the password is empty, warning.
Device rename!	When adding a camera or modifying properties of the camera, there is the name in other cameras or video screens, warning.
Duplicate device address!	When adding a camera or modifying properties of the camera, there is the address in other cameras, warning.
The first character at the beginning of the name is illegal!	When adding a camera (video screen) or modifying properties of the camera (video screen), the name is illegal, warning.
The above file names are invalid. File name cannot include the following characters: \n \V.*?"'<> !@#\$\$%%^&=,.';[]+-~()	When adding a camera (video screen) or modifying properties of the camera (video screen), the name is illegal, warning.
Name contains invalid characters or reserved file name, please rename!	When adding a camera (video screen) or modifying properties of the camera (video screen), the name is illegal, warning.
Screen XXX is associated with device xxx[xxx], whether to continue?	When modifying properties of the camera, there is a video screen associated with this device. Prompt whether to continue to change.
Device xxx OSD overlay characters saved successfully!	Prompt of successfully saving the label characters.
Keyword cannot be empty!	When adding keywords or modifying keywords, the name is empty, warning.


















Prompt Message	Reason
Keyword rename	When adding keywords or modifying keywords, the name is the same as other keywords, warning.
Please select an deletion item!	In the preset position configuration dialog box of the camera, when deleting, delete the object is not selected, warning.
Delete preset XXX?	In the preset position configuration dialog box of the camera, when deleting, the prompt should be confirmed.
Device XXX[XXX] preset point information changed, whether to save?	In the preset position configuration dialog box of the camera, the modification is made but canceled, and the prompt should be confirmed.
Please Confirm Whether To Delete?	In the configuration dialog box of shielding user, the prompt is confirmed after the shielded user is deleted.
Screen name cannot be empty!	In the dialog box of adding or modifying video screen, the screen name is empty, warning.
Keyword XXX is associated with screen XXX, whether to continue?	In the dialog box of adding or modifying video screen, there is a keyword associated with this video screen to prompt whether to continue to change.
Screen and device rename!	In the dialog box of adding or modifying video screen, video screen has the same name, warning.
The current screen layout position overflows. Changing the layout will delete the device whose screen position overflows. Continue?	In the dialog box of adding or modifying video screen, some devices exceed the set screen range after the screen layout is changed, and it prompts whether to delete them.
Preset ID input error!	In the configuration dialog box of video screen sub-item, when the preset position is not selected, a warning is given.
Whether to delete the current camera configuration?	In the video screen configuration dialog box, confirm the prompt when deleting the sub-screen device.
Device Add Failed	Failed to add camera, warning.
Device: XXX[XXX] Add Succeed	Succeed to add camera, prompt.
Picture added successfully!	Succeed to add video screen, prompt
Please close the preview of all devices on the screen first!	It is required to close the screen preview before configuring video screen, warning.
Delete Device XXX[XXX]?	When deleting a camera, the prompt should be confirmed.
Delete Device Node XXX?	When deleting a device node, the prompt should be confirmed.
Delete Screen XXX?	When deleting a video screen, the prompt should be confirmed.
Delete KeyWord XXX?	When deleting the keyword of association configuration, the prompt should be confirmed.
Device XXX[XXX] is playing, prohibit deletion!	The camera is being previewed when deleted, warning.
Device XXX[XXX] is video recoding, prohibit deletion!	The camera is recording when deleted, warning.
Picture XXX associated with device XXX[XXX], prohibit deletion!	The camera is associated with video screen when deleted, warning.
Device node XXX Failed to delete!	Failed to delete the camera node, warning.
Keyword XXX is associated with picture XXX, prohibit deletion!	The video screen is associated with a keyword when deleted, warning.
Source node: XXX Target node: XXX Whether to copy the source node and its children to the target node?	During the camera configuration, the prompt should be confirmed when the node is copied by the mouse.
Configuration File Saved Failed	Failed prompt when the file is saved.

Prompt Message	Reason
Configuration File Saved Successfully	Success prompt when the file is saved.
Configuration content changed, whether to save configuration content?	When the program is directly closed without saved, the prompt should be confirmed.
After cancellation, the control system will no longer be associated with the video software, please confirm whether to cancel the interaction?	After the interactive menu is canceled, the prompt should be confirmed.
Control system will be associated with video software, Please confirm whether interaction is enable?	After the interactive menu is enabled, the prompt should be confirmed.

## Section 8 Appendix: Menu Bar / Toolbar List

The toolbar lists some functions of the menu bar in a shortcut form of icons to facilitate user operations. The commands in the toolbar correspond to the icons in the menu bar, and will not be described in detail.

**Table 8-1 Menu Bar / Toolbar List**

Main Menu	Submenu	Icon	Function Introduction and Whether is Enabled
File (F)	SAVE (S) Ctrl+S		Save the whole configuration information.
	Setup	-	Change the language of software interface. After setting, restart VisualAI configuration software to take effect.
	Exit (X)	-	Exit the program.
Edit (E)	Add camera node		Add camera group nodes under the selected node. It is enabled when "Camera Configuration" or camera group node is selected, otherwise it is disabled.
	Del camera node		Delete selected camera group node. It is enabled when camera group node is selected, otherwise it is disabled.
	Add camera device		Add camera device under the selected node. It is enabled when "Camera Configuration" or camera group node is selected, otherwise it is disabled.
	Del camera device		Delete the selected camera device. It is enabled when the camera device is selected, otherwise it is disabled.
	Add disk camera		Add camera device under the selected node. It is enabled after "disk camera configuration" or camera group node is selected. Otherwise, it is disabled.
	Del disk camera		Delete the selected camera device. It is enabled after "disk camera device" is selected. Otherwise, it is disabled.
	Add video screen nodes		Add video screen group nodes under the selected node. It is enabled when the "Video Screen" or video screen group node is selected, otherwise it is disabled.
	Video node delete		Delete selected video group node. It is enabled when the video group node is selected, otherwise it is disabled.
	Add video screen		Add video screen under the selected node. It is enabled when "Video Screen" or video screen group node is selected, otherwise it is disabled.
	Config video screen		Edit selected video configuration, used to configure the camera and the preset position associated with the screen. It is enabled when the video screen is selected, otherwise it is disabled.
	Del video screen		Delete selected video screen. It is enabled when the video screen is selected, otherwise it is disabled.
	Add abnormal events		Add the keywords of the abnormal events under the selected node. It is enabled when "Manual Association" or "Automatic Association" is selected, otherwise it is disabled.
	Edit abnormal events		Modify the selected keyword. It is enabled when the keyword node is selected, otherwise it is disabled.
	Del abnormal events		Delete the selected keyword. It is enabled when the keyword node is selected, otherwise it is disabled.
	Add linkage action		Add linkage action configuration. It is enabled when the "Linkage Action Configuration" is selected, otherwise it is disabled.
	Edit linkage action		Edit linkage action configuration. It is enabled when the linkage action node is selected, otherwise it is disabled.

Main Menu	Submenu	Icon	Function Introduction and Whether is Enabled
	Del linkage action		Delete linkage action configuration. It is enabled when the linkage action node is selected, otherwise it is disabled.
	Add inspection route		Add inspection route. It is enabled when "Linkage Action Configuration" is selected, otherwise it is disabled.
	Edit inspection route		Edit inspection route. It is enabled when the linkage action node is selected, otherwise it is disabled.
	Del inspection route		Delete inspection route. It is enabled when the linkage action node is selected, otherwise it is disabled.
	Add OPC		Add OPC data source. It is enabled after the "data source configuration" under the "intelligent reorganization" is selected. Otherwise, it is disabled.
	Update OPC		Update the tags of OPC data source. It is enabled after the OPC data source is selected. Otherwise, it is disabled.
	Delete OPC		Delete OPC data source. It is enabled after the OPC data source is enabled. Otherwise, it is disabled.
	Add algorithm		Add algorithm. It is enabled after "algorithm configuration" is selected. Otherwise, it is disabled.
	Edit algorithm		Edit algorithm. It is enabled after algorithm node is selected. Otherwise, it is disabled.
	Del algorithm		Delete algorithm. It is enabled after algorithm node is selected. Otherwise, it is disabled.
	Add system status		Add system status. It is enabled after "system status configuration" is selected. Otherwise, it is disabled.
	Edit system status		Edit system status. It is enabled after "system status configuration" is selected. Otherwise, it is disabled.
	Del system status		Delete system status. It is enabled after "system status configuration" is selected. Otherwise, it is disabled.
	Property		Edit the parameters of the selected item. It is enabled when the camera group node, camera device, video group node or video screen is selected, otherwise it is disable.
Debug (D)	Preview		Preview the configuration effect of the selected item. It is enabled when the camera device, video screen or linkage is selected, otherwise it is disable.
	Locate		Turn the camera to the configuration preset position. It is enabled when previewing, otherwise it is disable.
	Stop preview		Stop previewing. It is enabled when the camera device, video screen or linkage is selected, otherwise it is disable.
Interacti on (R)	Configure the operator station	-	Shield the interactive authority of the specified operation station. It is enabled when VisualAI configuration software is started in the interactive High-performanceHMI component, otherwise it is disable.
	User configuration	-	Shield the authority of specified monitoring user to view the VisualAI video screen. It is enabled when VisualAI configuration software is started in the interactive High-performanceHMI component, otherwise it is disable.
	Open / Cancel Interaction	-	Enable or disable the interaction with system software. Always enabled.
View (V)	Status bar (S)	-	Display / Hide status bar. Always enabled.
Help (H)	About VisualAI (A)		Display the program information, version number and copyright. Always enabled.

## Section 9 Revision

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**Table 9-1 List of Version Upgrade Changes**

Data Version	Applicable Product Model	Instruction for Changes
V1.0 (20230308)	OMC VisualAI V2.10.00.06	First edition.
V1.1 (20230828)	OMC VisualAI V2.10.00.09	Erratum and update the network structure diagram