Guard Tools 3.0

User Manual

User Manual: V1.04

Contents

1 Introduction 1

2 Project Management 2

2.1 Add Project 2

2.2 Switch Project 2

2.3 Manage Projects 3

3 Device Management 3

3.1 Add Device 3

3.1.1 Save Device from Default Project 4

3.1.2 Auto Search 4

3.1.3 Add Device Manually 5

3.2 Basic Operations 6

3.2.1 Edit Device 6

3.2.2 View Device Details 6

3.2.3 Configure Cloud Service 7

3.2.4 Access Device's Web Interface 9

3.2.5 Delete Device 9

3.3 Change Device Password 9

3.4 Modify Network Parameters 10

3.5 System Configuration 11

3.5.1 Restart Device 11

3.5.2 Restore Defaults 11

3.5.3 Restore Factory Defaults 11

3.5.4 Device Maintenance 11

3.6 Export Device List 12

3.7 Other Operations 12

3.7.1 Select Multiple Devices 12

3.7.2 Refresh Device List 12

3.7.3 Filter Devices 13

3.7.4 Sort Devices 13

3.7.5 Clear Devices 13

4 Device Configuration 13

4.1 Basic Operations 13

4.2 Basic Configuration 13

4.3 Advanced Configuration 17
4.4 Modify Device Names 23
4.5 Modify OSDs 24
4.6 Building Configuration 25
4.7 Server Config 26
5 NVR Channel Management 26
5.1 Add NVR Channel 26
5.2 Delete NVR Channel 27
6 Capacity Calculation 28
6.1 Add Devices for Calculation 28
6.2 Calculate Retention Time 29
6.3 Calculate Disks Needed 30
6.4 Other Operations 32
7 Upgrade Center 33
7.1 Upgrade Configuration 33
7.2 Custom Upgrade 34
7.2.1 Upgrade Device 34
7.2.2 Upgrade Channel 37
7.2.3 Cancel Upgrade 37
7.2.4 Export Upgrade Report 37
8 Client Configuration 38

1 Introduction

This tool is used to manage and configure IPCs, NVRs, display control devices, access control devices, door stations, indoor stations, etc. on local area network (LAN). Major functions are listed in the table below.

NOTE!

- Display control devices only support login, changing password, modification of network parameters, and local upgrade. EC encoders also support channel configuration.
- Indoor stations not support changing password, restarting, restoring defaults, restoring factory defaults, importing/exporting configuration, basic configuration.

Item	Function
Project Management	Create projects and manage devices by project.
Add Device	● Save Device from Default Project ● Auto Search: Automatically searches for devices within a specified network segment. ● Add Device Manually: Searches for a device with a known IP address.
Basic Operations	Basic operations include: ● Edit device settings ● View device details ● Configure the cloud service ● Access a device's web interface ● Export device list
Change Device Password	Change a device's login password.
Modify Network Parameters	Modify a device’s network parameters.
System Configuration	System configuration include: ● Restart device ● Restore defaults ● Restore factory defaults ● Perform device maintenance
Device Configuration	● Basic Configuration: Configure the device name, system time, network, DNS, port, SNMP and ONVIF for a device. ● Advanced Configuration: Configure image, encoding, OSD, audio, and motion detection for a channel.
NVR Channel Management	Adds or deletes cameras connected to an NVR (also referred to as NVR channels).
Capacity Calculation	Calculates the required hard disk space, number of hard disks, and recording time.
Upgrade Center	Custom Upgrade: Select devices for upgrade as needed. Template upgrade, online upgrade, and file upgrade are supported.

Note: Before you start, make sure your devices and the computer running this tool are connected by a network.

Interface Global Operations

- Click the buttons in the top right corner:

Icon	Description
English	Switch the client language.
	Client Configuration.
	View user manual and update information.

- To resize the interface, press and hold the left mouse button on at lower-right corner and drag to the desired size.

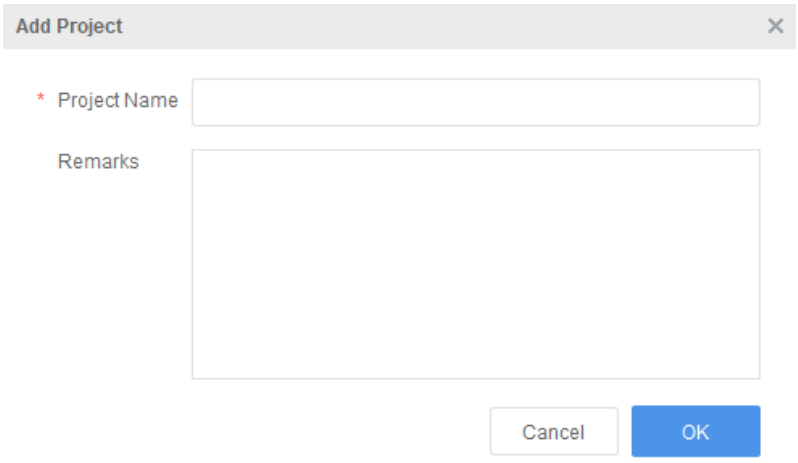
2 Project Management

Create projects and manage devices by project.

The system includes a default project that automatically searches for and adds devices each time the client is launched. You can create new projects and save devices from the default project to your custom projects.

2.1 Add Project

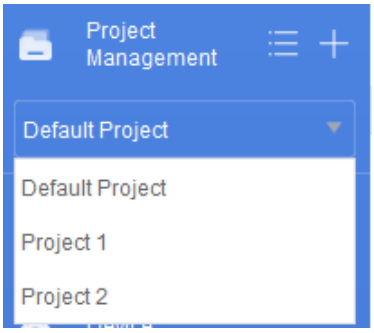
1. Click next to **Project Management** in the upper-left corner.



2. Set a custom project name and enter remarks as needed.
3. Click **OK**.

2.2 Switch Project

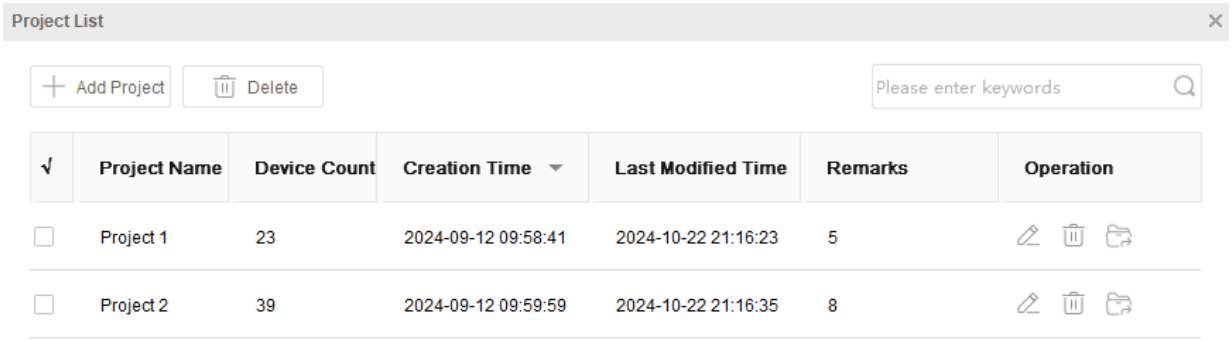
Select a project from the drop-down list in the upper-left corner to enter the project. Functions within the tool are only applicable to the devices in the selected project.



NOTE!
Switching the project will interrupt the ongoing upgrade or download task(s).

2.3 Manage Projects

Click next to **Project Management** to view the existing projects. You can perform operations such as add, edit, and delete.



- Edit project: Click in the **Operation** column. The **Project Name** and **Remarks** columns will be editable. After making your changes, click on any blank area within the project list to save your modifications.
- Delete project: Click in the **Operation** column or select project(s) and click **Delete**.
- Switch Project: Click in the **Operation** column to switch to the project.
- Add project: Click **Add Project**, set a custom project name and enter remarks as needed, and then click **OK**.

3 Device Management

Add devices to projects for basic configuration.

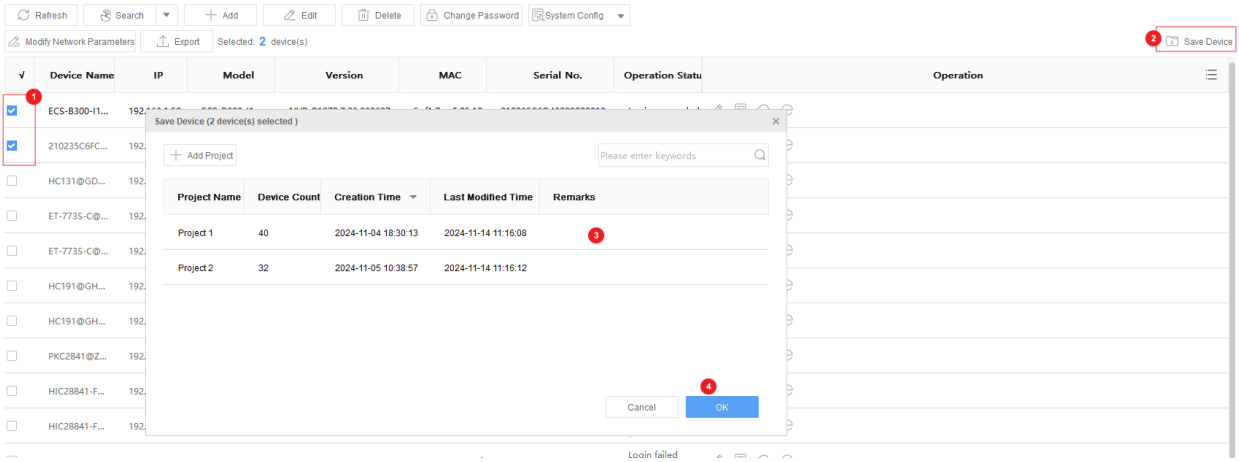
3.1 Add Device

Choose a method to add devices.

3.1.1 Save Device from Default Project

Save devices from the default project to a custom project.

1. Go to the default project to view the devices added via auto search.
2. Select device(s) you want to save (all devices will be saved if none are selected).
3. Click **Save Device** in the upper-right corner.

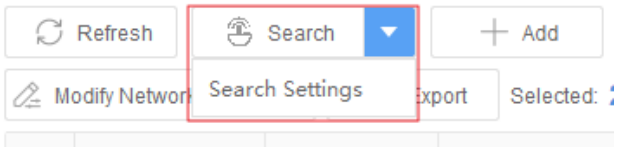


4. Select a destination project and click **OK**. The selected device(s) will be added to the designated project.

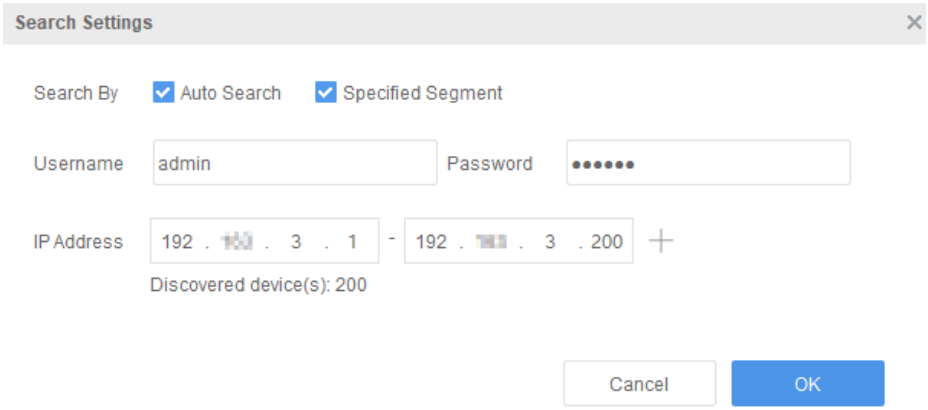
NOTE!
A device can be saved to multiple projects.

3.1.2 Auto Search

Set network segments for automatic search. The system can automatically search for and add devices within the specified network segments.



1. Click ▼ next to **Search** and select **Search Settings**. Complete the settings and click **OK**.



Item	Option	Description
Search Mode	Auto Search	The default mode. This mode searches for devices within the same network segment as the PC. Specifying network segments manually is not supported.
	Specified Segment	• Specify an IP segment, and the system will immediately detect the number of devices within the segment. • Click + to add a network segment. Up to 40 segments are allowed.
Username/Password		Enter the device's actual login username and password. The default username/password is admin/123456.

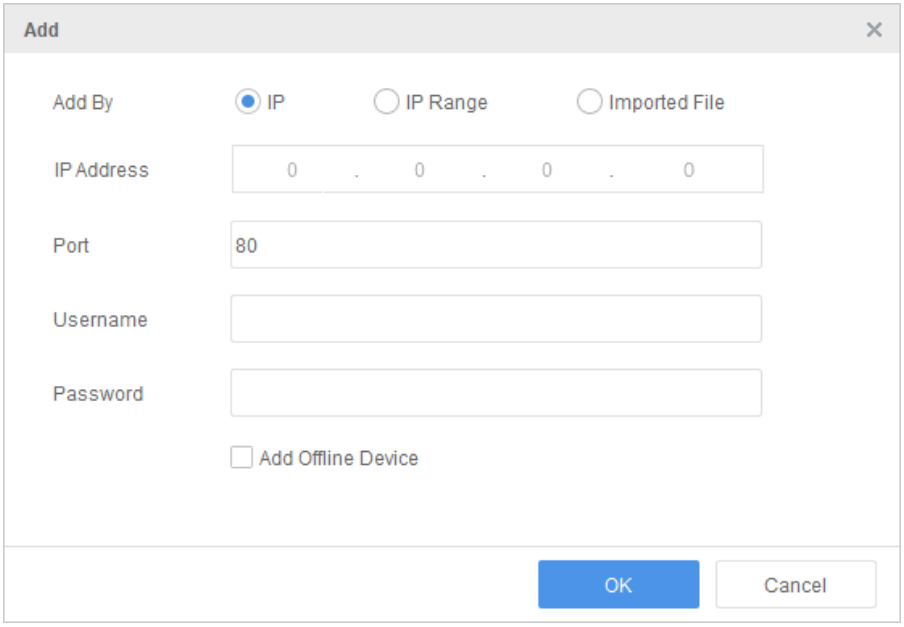
2. Click **Search**. The system will automatically search for and add devices within the corresponding segments and log in to the device.

NOTE!
When you modify the search settings and conduct a new search, newly discovered devices will be added additionally without affecting the previously added devices.

3.1.3 Add Device Manually

If the device IP or IP segment is known, you can add the device manually.

1. Click **Add**. A page as shown below appears.



2. Choose a way to add devices.
   - By IP: Enter the device IP address, port number, username, and password to add a device.
   - By IP range: Enter the IP range, port number, username, and password to add all devices within the IP address range.
   - Import File: Click **Export** to export the template, then complete device information in the template, and import the template to add the devices specified in the file. A message appears when the import is completed. If a device failed to be added, you can click **View Failure Details** to see the cause of failure. You can modify settings and then import again.

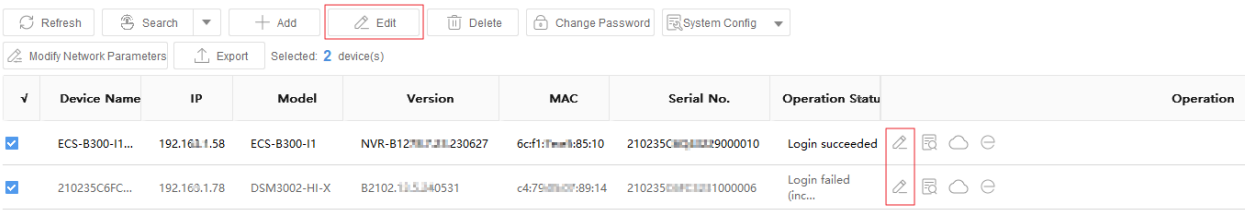
3. (Optional) Check **Add Offline Device** to add offline devices to the device list. The device information will not be verified when they are added to the device list; it will be verified when you configure the devices.
4. Click **OK**.

3.2 Basic Operations

3.2.1 Edit Device

Edit the device username and password saved by the tool. The username and password will be used to access the device during subsequent configuration.

Choose a way to change the device username and password.

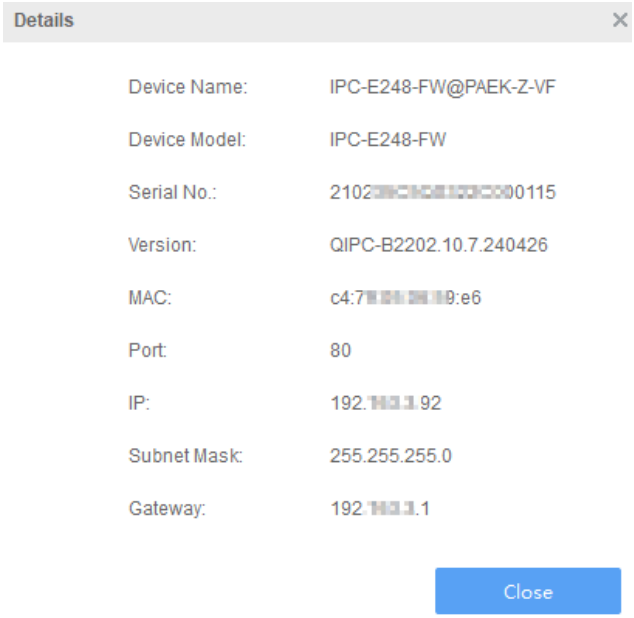


- Edit devices in batches: Select the devices you want to edit, click **Edit**. A dialog box appears. Enter the new username and password, and then click **OK**.
- Edit one device: In the **Operation** column, click for the device you want to edit. A dialog box appears. Enter the new username and password, and then click **OK**.

NOTE!
After modification, the device will log in automatically.

3.2.2 View Device Details

Click in the **Operation** column to view device details, including device name, model, serial number, version information, and IP address.

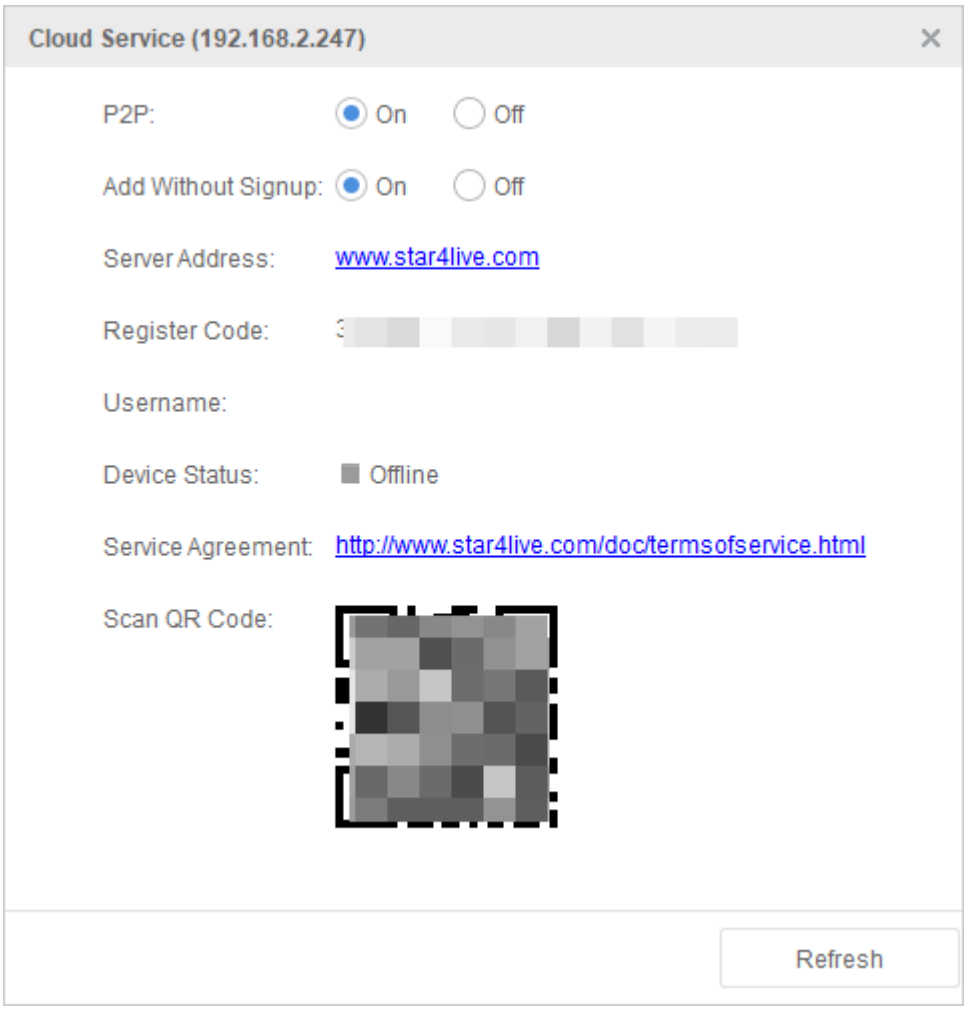


3.2.3 Configure Cloud Service

Enable/disable cloud service and the add without signup function.

- After enabling the cloud service, you can add the device to your cloud account. Then, you can use the device by logging in to your cloud account in other applications, without the need to repeatedly add the device.
- When the add without signup function is enabled, you can add and use a device using the corresponding app, without the need to sign up for a cloud account.

Click in the **Operation** column. A page as shown below appears.



- Enable or disable the cloud (P2P) service for the device.

  When the cloud service is enabled, you can log in to your cloud account in the app and use the app to scan the QR code to add the device. If the device status is displayed as “online”, it indicates the device is connected to the cloud server and can be added to your cloud account.

NOTE!
After enabling or disabling the cloud service, you need to click **Refresh** to update the device status.

- Enable or disable the add without signup function for the device.

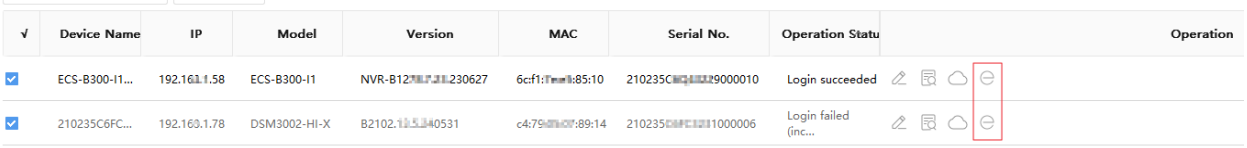
  When enabled, you can use a corresponding app to scan the QR code below to add the device. This enables you to access the device remotely from a mobile phone without requiring you to sign up for a cloud account.

NOTE!
The add without signup function requires that the device has enabled cloud service and set a strong password.

- Delete device: To remove a device from your cloud account, click **Delete**. This operation does not affect using the device in the tool.

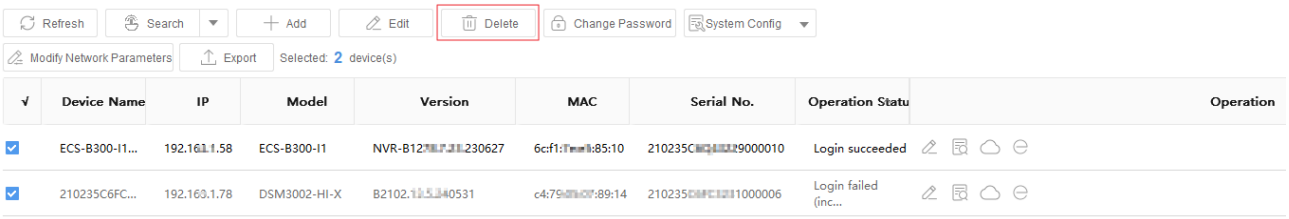
3.2.4 Access Device's Web Interface

Click in the **Operation** column to open the login page on the device's web interface.



3.2.5 Delete Device

Select the devices you want to delete, and then click **Delete** on the top to delete the devices from the device list.



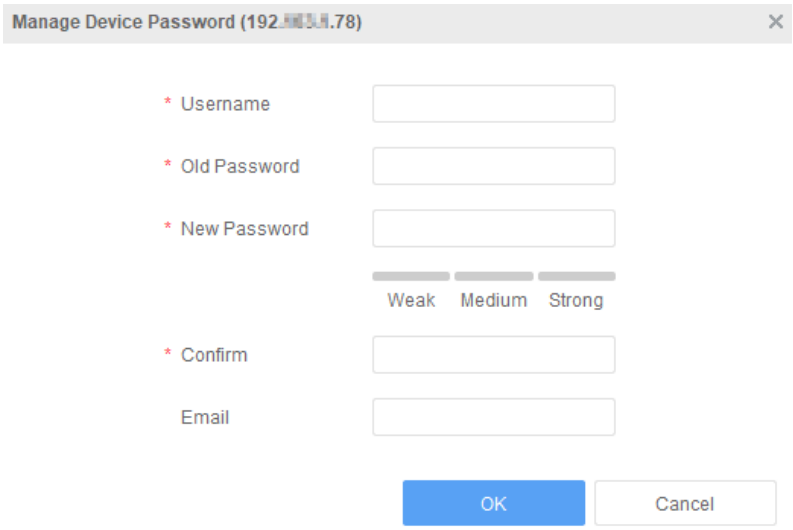
3.3 Change Device Password

Change the login password for a device. After the password is changed, you need to use the new password to access the device's web interface.

1. Select the target device, and then click **Change Password**.

NOTE!
If you select multiple devices to change passwords, make sure that the usernames and original passwords of the selected devices are the same.

2. On the page as shown below, enter the device's username, old password and new password.

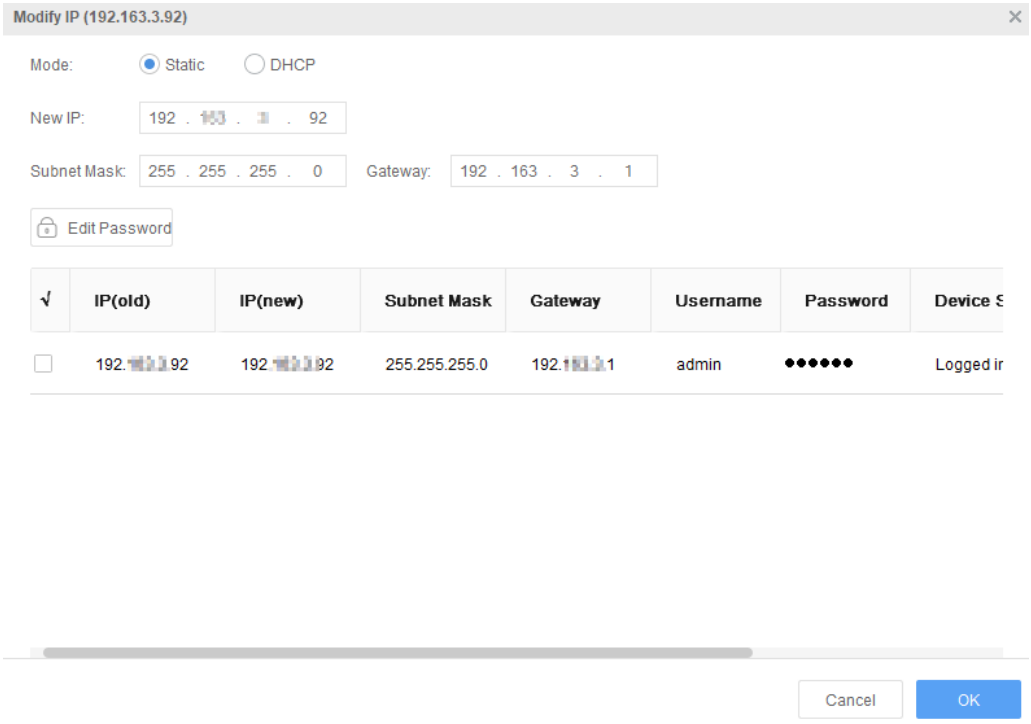


3. (Optional) Enter an email address for the device. The entered email address can be used to receive a security code that is used to reset the device password in case you forget it.
4. Click **OK** to save the new password.

3.4 Modify Network Parameters

Modify the network parameters of a device manually or by using Dynamic Host Configuration Protocol (DHCP).

1. Select the device, and then click **Modify Network Parameters**.
2. Choose **Static** or **DHCP** on the **Modify IP** page.



- Static: Enter the IP (for multiple devices, enter an IP address range), subnet mask, and gateway.
- DHCP: IP address will be assigned dynamically.

3. You can double-click on cell to modify the new IP, subnet mask, gateway, username, and password as needed.

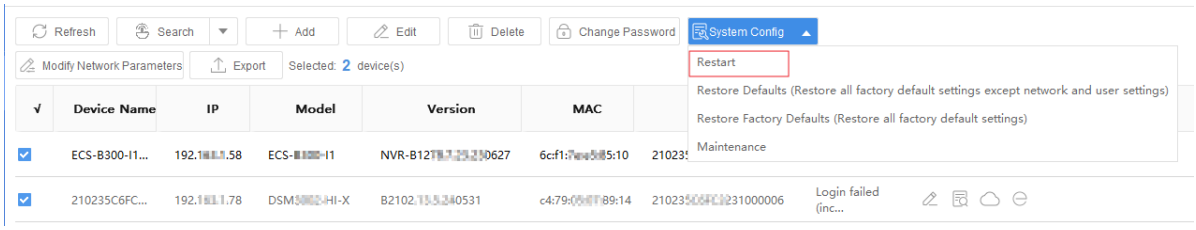
NOTE!
The username and password are for verification purposes. Incorrect username or password will cause the network parameter modification to fail.You can select devices and click **Edit Password** to modify login passwords in batches.

4. Click **OK**. Check the **Device Status** column to see whether the modification is successful.

3.5 System Configuration

3.5.1 Restart Device

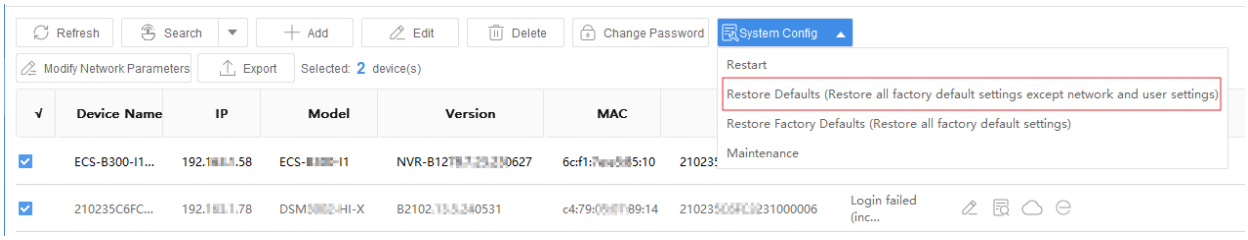
Select the devices you want to restart, click **System Config** > **Restart Device**, and then confirm.



3.5.2 Restore Defaults

Restoring defaults means to restore all the parameters of a device to factory defaults except network, user, and time parameters.

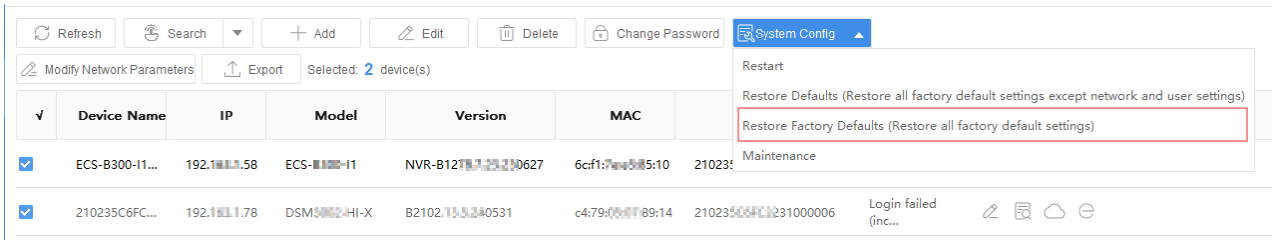
Select the target devices, click **System Config** > **Restore Defaults**, and then confirm.



3.5.3 Restore Factory Defaults

Restoring defaults means to restore all the parameters of a device to factory defaults.

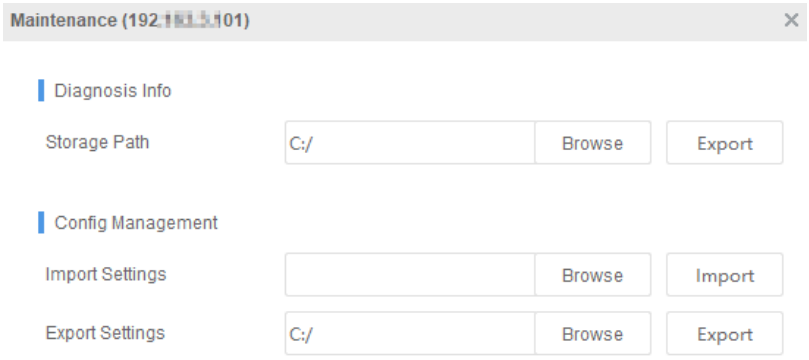
Select the target devices, click **System Config** > **Restore Factory Defaults**, and then confirm.



3.5.4 Device Maintenance

Device maintenance allows you to import device configurations, export diagnostic information and configurations.

1. Select devices, click **System Config** > **Maintenance**.

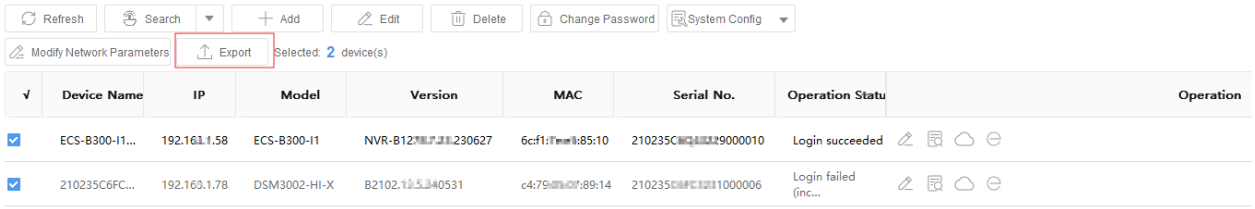


2. Perform the following operations as needed:
   - Export diagnostic information, including log information and system configuration information. Click **Browse**, specify the destination, and then click **Export**. The diagnostic information will be saved as a .csv file to the specified location on your computer.
   - Import configuration: Import a local configuration file into a device to replace the existing configuration file and change the device's configuration. Click **Browse**, locate the configuration file, and then click **Import**.
   - Export configuration: Export the system configuration file of a device to a local folder for backup. Click **Browse**, specify the destination, and then click **Export**.

3.6 Export Device List

Export device information including device name, IP address, model, version information, MAC address, and serial number to a .csv file.

Select the devices from the list, click **Export**, choose the destination, and then click **Save** to export information of the selected devices.



3.7 Other Operations

3.7.1 Select Multiple Devices

Select devices one by one or select multiple devices by click-and-drag. The total number of devices and the number of devices selected will be displayed on top of the device list.

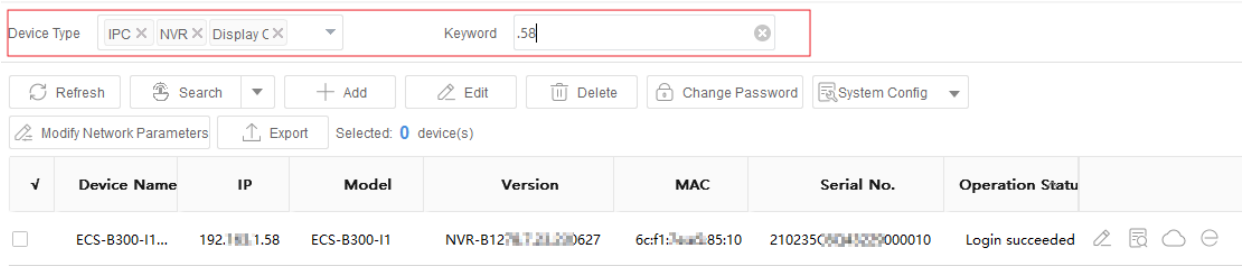
3.7.2 Refresh Device List

Click **Refresh** to refresh the login status and device information of the added devices.

If no devices are selected, this operation will apply to all devices in the list. If you have selected device(s), this operation will only apply to those selected devices.

3.7.3 Filter Devices

Select device types or enter keywords to filter the device list by device name, IP, device model, version information, serial number, and operation status. To clear the keywords you have input, click ⊗.



3.7.4 Sort Devices

Sort column contents in the device list in ascending or descending order by clicking a header: Device Name, IP, Device Model, Version Information, MAC, Serial Number, Operation, and Operation Status.

3.7.5 Clear Devices

In a custom project, you can click **Clear** in the upper-right corner to clear all devices under the project.

4 Device Configuration

4.1 Basic Operations

Click the corresponding icon the **Operation** column to perform the following operations:

- : View Device Details
- : Configure Cloud Service
- : Access Device's Web Interface

4.2 Basic Configuration

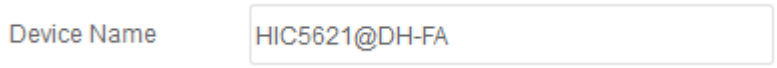
NOTE!
This function is only available to IPCs, NVRs, and ECs.

1. Device Name

Change device name.

NOTE!
The device name appears only when one device is selected.

1. Enter the new name.

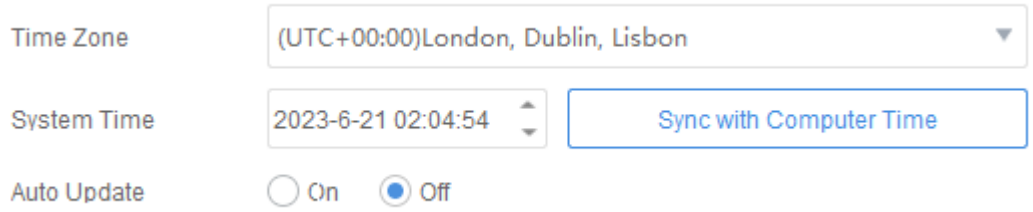


2. Click **Save**.

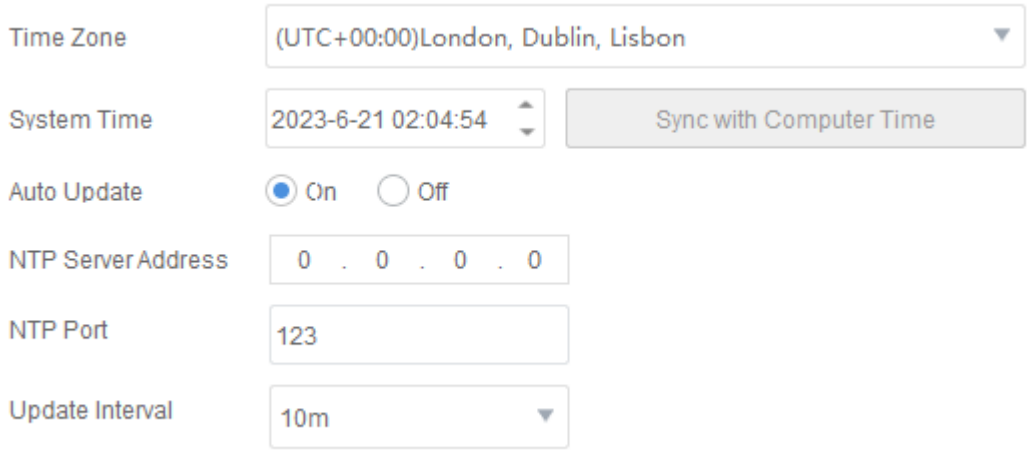
2. Time

Choose a way to change the device's time zone and system time.

- Change manually: Manually change the time zone and system time.
- Sync with computer time: Click **Sync with Computer Time** to sync the device's system time with the computer's system time.



- Enable **Auto Update**: Set the NTP server address, port, and update interval, and the device's system time will automatically synchronize with the NTP server time.

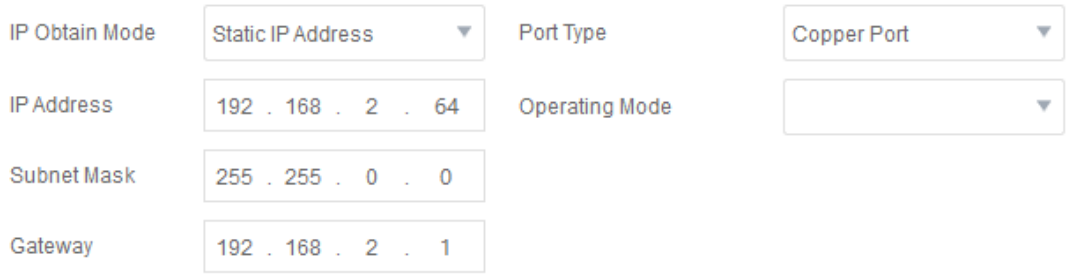


3. Network

Modify a device's network configuration.

NOTE!
The network configuration appears only when one device is selected.

1. Configure the IP obtainment mode, network type, IP address, operating mode, subnet mask, and gateway. An NVR also allows the selection of a network interface. The specific configuration options are subject to the actual user interface.



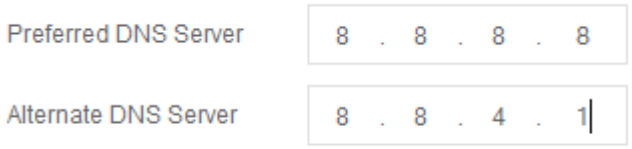
2. Click **Save**.

4. DNS

Configure the domain name server.

1. Modify the preferred DNS server address and alternate DNS server address.

   The preferred DNS address is used when the preferred DNS is functioning properly. When the preferred DNS server is unavailable, the alternate DNS server address is activated automatically to ensure uninterrupted network operation.



2. Click **Save**.

5. Port

Configure device port.

1. Change the HTTPS port and the HTTP port.

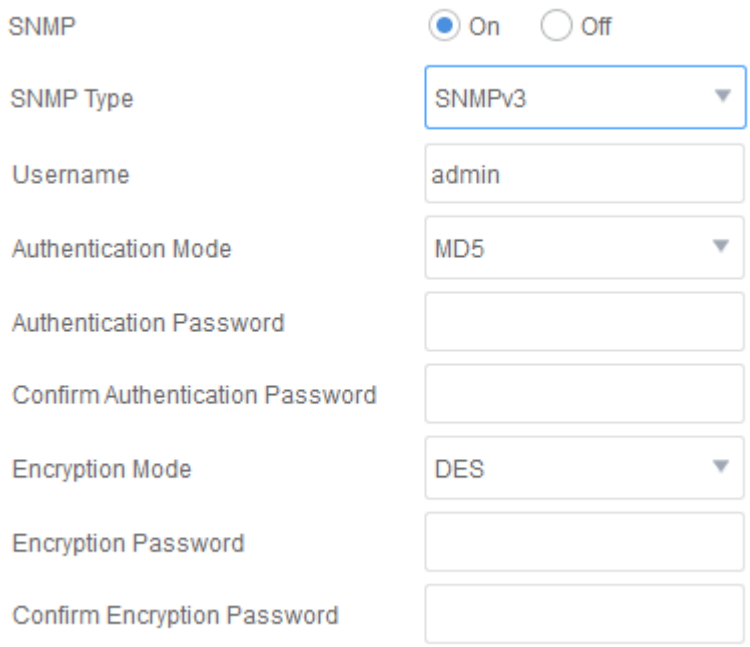
2. Click Save.

6. SNMP

SNMP is used to monitor device status and locate device faults.

1. Click **Enable** to enable SNMP.
2. Choose an SNMP type: SNMPv2 or SNMPv3.
   - (Recommended) SNMPv3

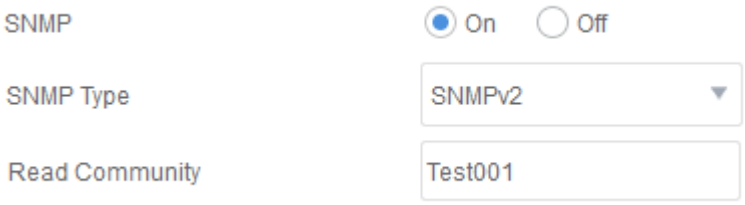
     When the network security level is low, SNMPv3 is recommended due to its high level of security. SNMPv3 uses username and password authentication and DES encryption to provide a higher level of security.



Parameter	Description
SNMP Type	The default is SNMPv3.
Authentication Password	Used to verify packets sent from the device.
Confirm Authentication Password	Re-enter the authentication password.
Encryption Password	Used to encrypt data sent from the device.
Confirm Encryption Password	Re-enter the encryption password.

- SNMPv2

  SNMPv2 is allowed when the network security level is high. SNMPv2 uses community string authentication and thus is less secure than SNMPv3.



Parameter	Description
SNMP Type	Choose SNMPv2. A message appears to remind you of security risks. Click **OK** to proceed.
Read Community	Set SNMP read-only community name to enable the management end to verify messages from the device. After successful authentication, SNMP messages with that community name can be received.

7. ONVIF

Configure IPC authentication mode.

- Standard: Uses the ONVIF-recommended authentication mode.
- Compatible: Uses the device's current authentication mode.

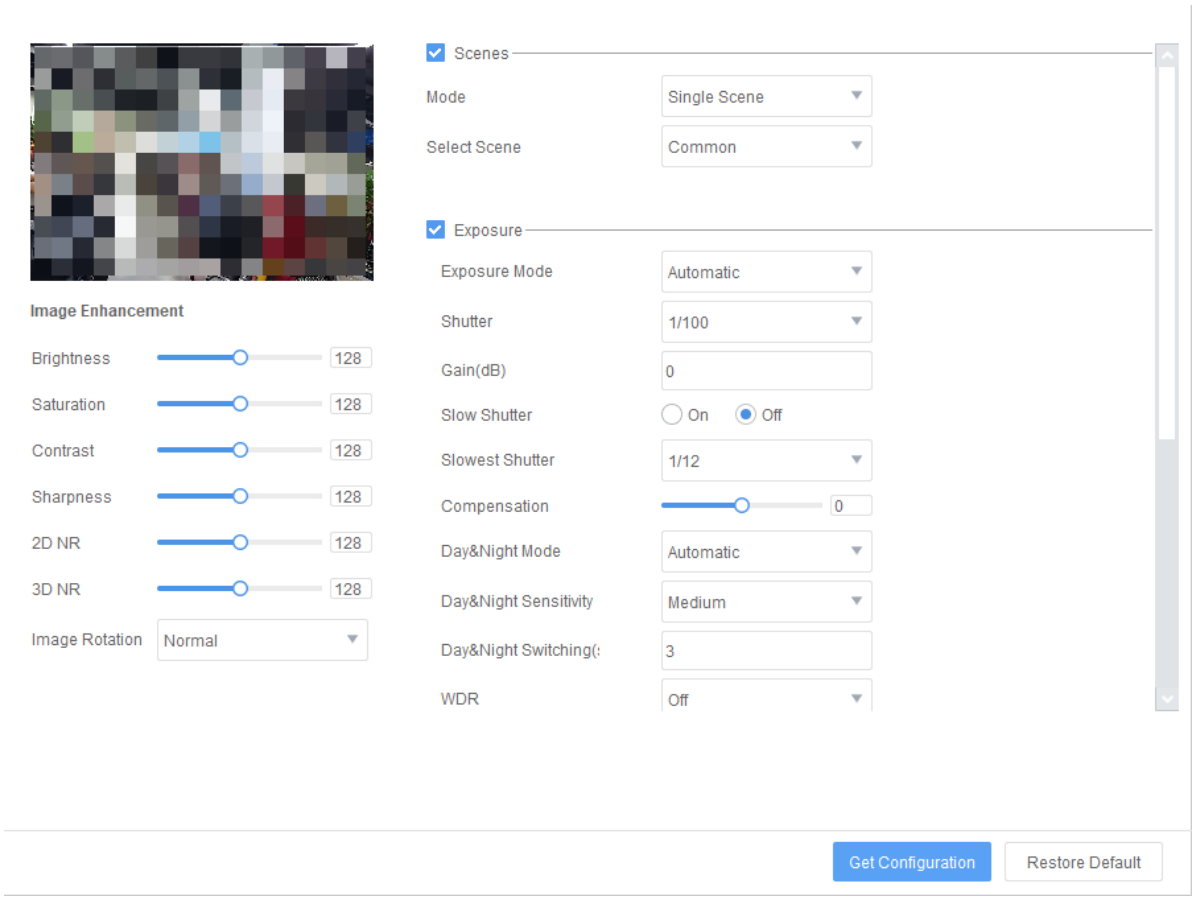
4.3 Advanced Configuration

Advanced configuration includes images, encoding format, OSD, audio, motion detection, and intelligent server parameters of IPCs and NVR channels. The parameters displayed may vary depending on the device model.

NOTE!
The EC encoder channel only supports the configuration of image, encoding, and OSD parameters.

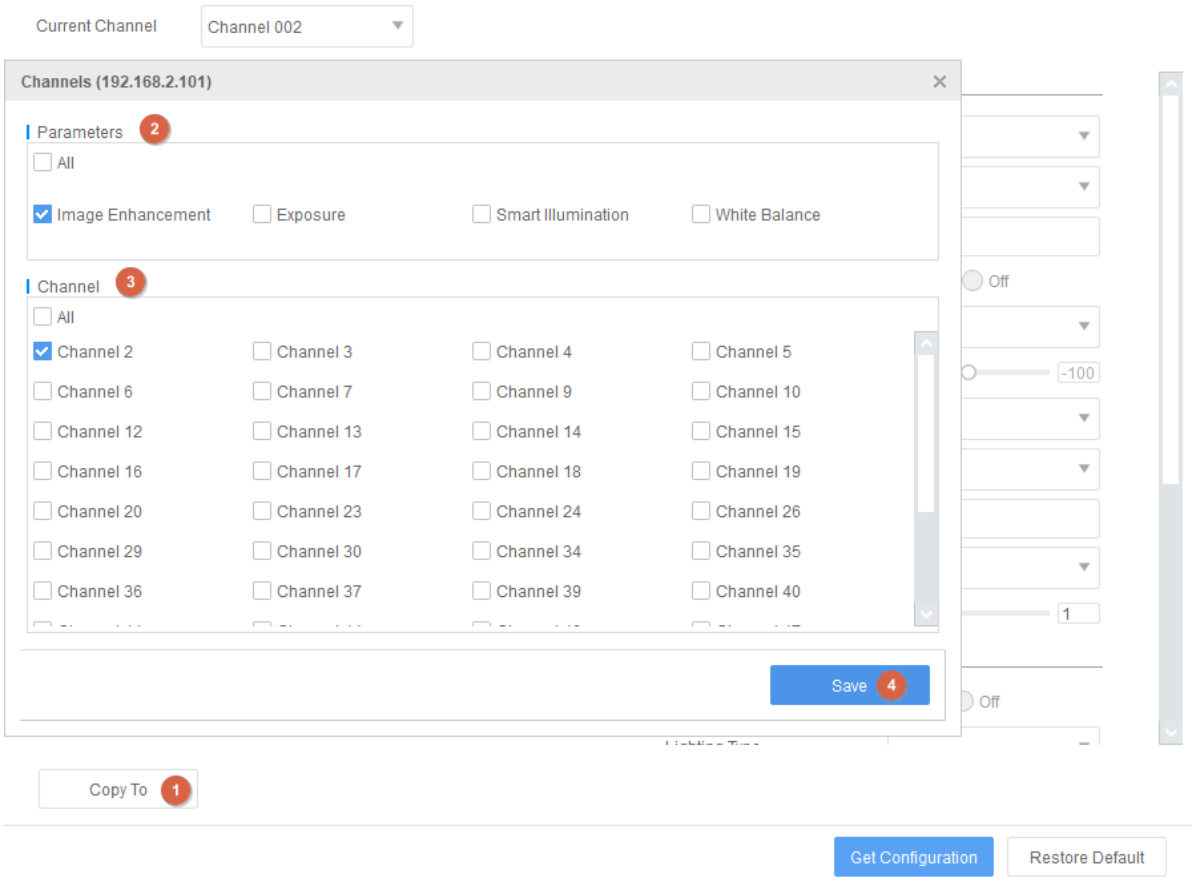
1. Image

Configure image parameters include display effects, image enhancement, scene, exposure, smart illumination, and white balance.



Operations:

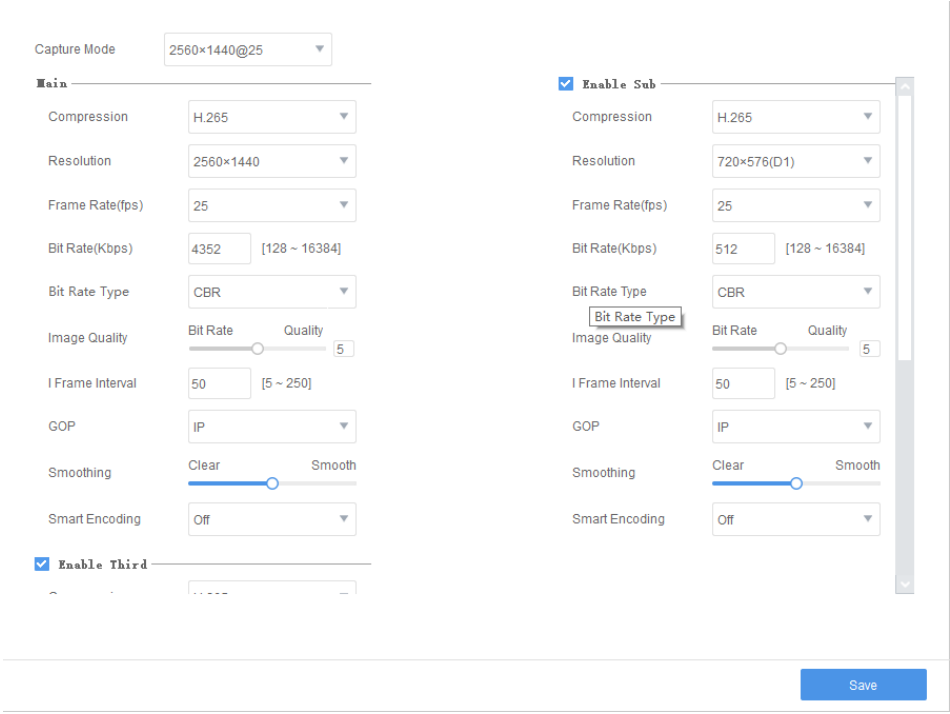
- View display effects: You can view live video while adjusting image settings. The adjustments take effect immediately, allowing you to see the changes in real time. You can double-click the image to maximize it to full screen; double-click again to restore.
- Restore defaults: Click **Restore Default** to restore the default settings.
- Obtain configuration: Click **Get Configuration** to obtain the latest parameters from the device.
- To apply different scenes during different time periods, choose **Multiple Scenes** from the **Mode** drop-down list, set the scene type, schedule, illumination, and elevation for each scene, and then select **Enable Scene Schedule**. When the conditions set for the schedule, illumination, and elevation range are met at the same time, the selected scene will be applied. If the conditions are not met, the default scene will be used (with displayed in the **Operation** column). Clicking in the **Operation** column will set the current scene as the default scene.
- Copy to Channel: Copy image settings of a channel to other channels for quick configuration. Click **Copy To**, select parameters and channels, and then click **Save**.



NOTE!
The copy function only applies to channels that are connected via the private protocol.

2. Encoding

Configure encoding parameters, including capture mode, main/sub/third stream.

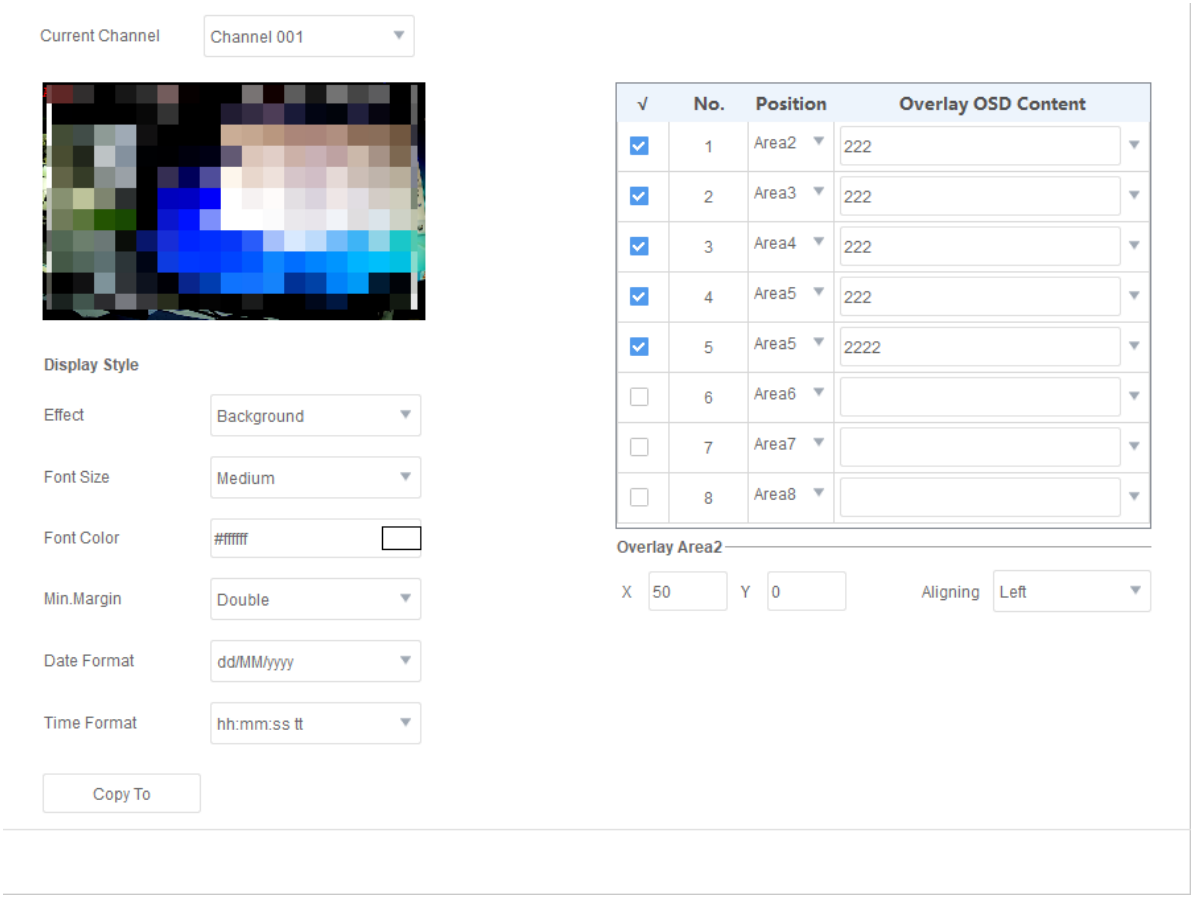


Operations:

- To apply the changes, click **Save**.
- To copy configuration to a channel: Copy the encoding configuration of a channel to other channels. See Copy to Channel.

3. OSD

Configure OSD parameters. OSD refers to contents (such as text) overlaid on video images. OSD configuration includes display effects, channel name, content style, OSD content, and display area.



NOTE!
For EC encoder channels, the Channel Name option is not available in the OSD content list.

Operations:

- View display effects: You can view live video while adjusting image settings. The adjustments take effect immediately, allowing you to see the changes in real time. You can double-click the image to maximize it to full screen; double-click again to restore.
- Add or delete OSD: Adjust the OSD style on the left, and enter the OSD content in the box on the right. The checkbox is automatically selected for the OSD content. To delete an OSD, clear the checkbox or clear the OSD content.
- Adjust OSD position: The position of each OSD is adjustable. Click a row on the right side, the coordinates of the OSD are displayed. Adjust the position as needed to avoid overlap.
- Use the copy function to copy the OSD configuration of an NVR channel to other channels of the NVR. See Copy to Channel.

4. Audio

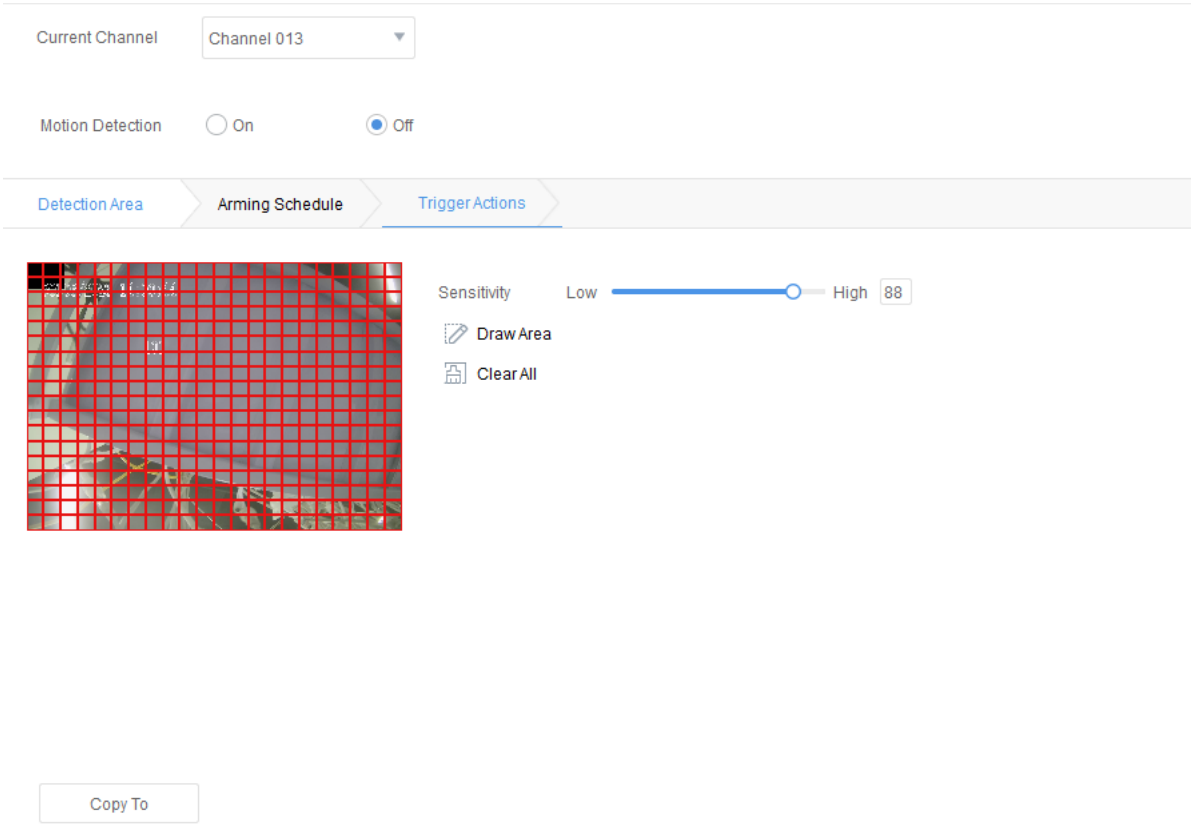
Configure audio parameters, including audio input, audio input gain, encoding format, and sampling rate.

NOTE!
NVR channels do not support audio configuration.

5. Motion Detection

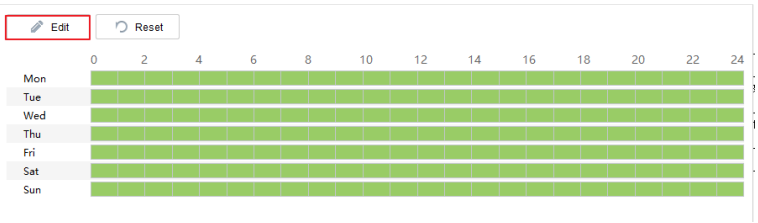
Configure motion detection parameters. Motion detection is used to detect motion within the detection area during a specified time period. Motion detection configuration includes:

- Enable or disable motion detection
- Draw detection area
- Configure arming schedule
- Configure alarm linkage (alarm-triggered actions)



Some parameters are described below.

Item	Description
Detection Area	You can specify detection areas by drawing on the image. The red grid indicates the detection area. Click **Draw Area** to start drawing, and click **Finish Drawing** when you have finished.
Sensitivity	The higher the sensitivity, the smaller the detectable pixels, and it is easier to trigger detection rules, but the false alarm rate will also increase accordingly. The specific value should be determined according to the actual scene or test.

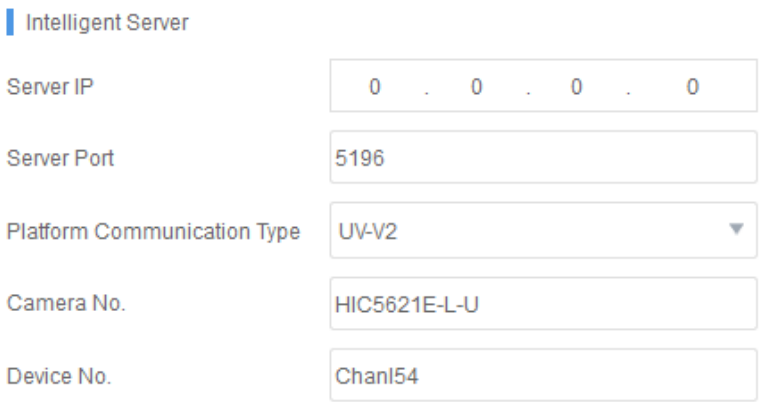
Item	Description
Trigger Actions	Set actions to be triggered when a motion detection alarm occurs.
Arming schedule	Configure an arming schedule. The device generates alarms only during the arming schedule.  ● Click or drag on the green area to configure the arming schedule. ● Click **Edit** to input precise time periods manually. After finishing the configuration, you can click **Copy** to copy the arming schedule of the current day to other days.
Copy To	Copy the motion detection configuration of a channel to other channels of the same NVR. See Copy to ChannelCopy to ChannelCopy to ChannelCopy to ChannelCopy to ChannelCopy to ChannelCopy to ChannelCopy to ChannelCopy to ChannelCopy to Channel.

6. Intelligent Server

If a device is to be connected to the intelligent server for centralized management, you need to configure the server parameters for the device.

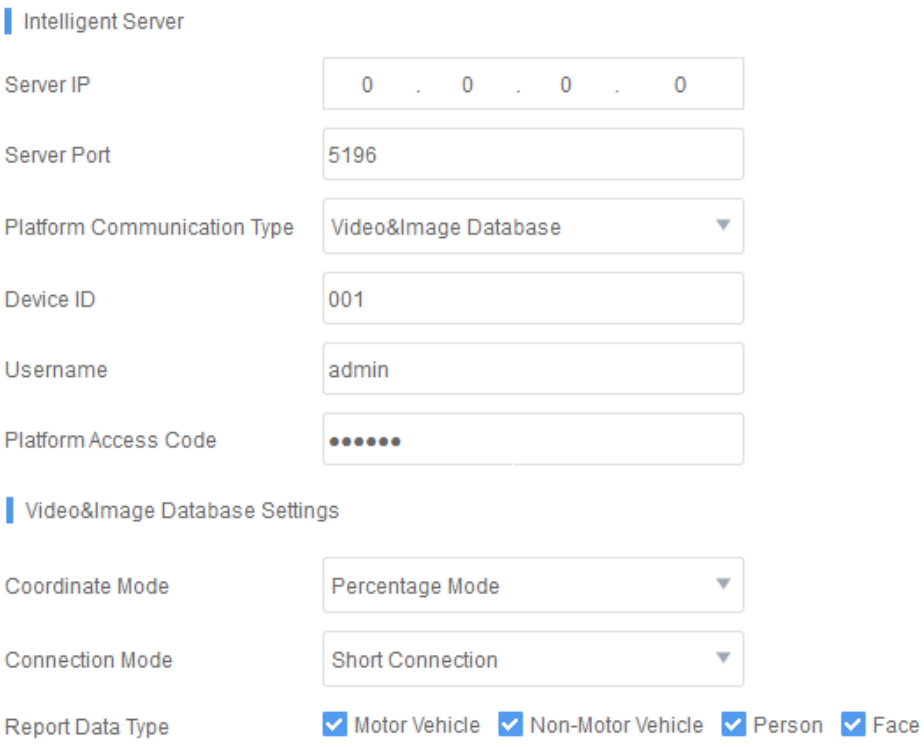
NOTE!
Only IPC supports intelligent server configuration.

The configuration may vary depending on the communication type. See the descriptions below for details.



UV (Persistent Connection) Parameter Description

Item	Description
Camera No.	Configure an identification number for the camera for device identification.
Device No.	Configure a VIID code for device identification on the server.



GA/T 1400 Parameter Description

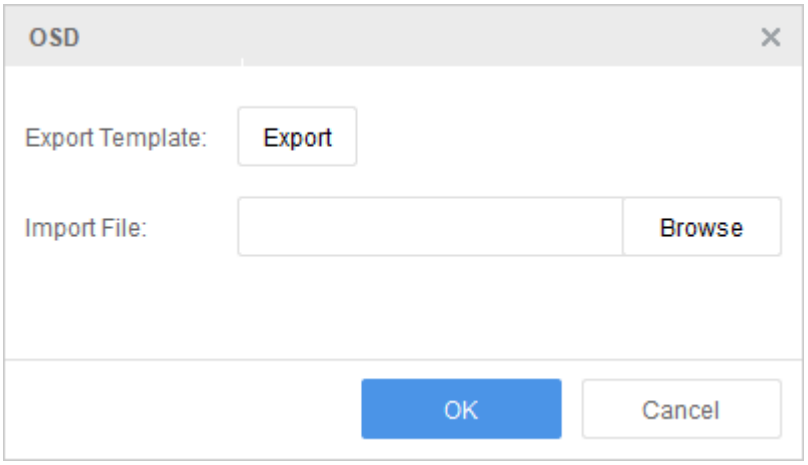
Item	Description
Device ID	Enter a protocol-compliant number, where, digits 11-13 must be 119.
Username	Username that the device uses to access the upper-level platform.
Platform Access Code	Password that the device uses to access the upper-level platform.
Coordinate Mode	Indicate coordinates of the detection object. The percentage mode is recommended. ● (Recommended) Percentage mode: It specifies the range of 0-10000 for the x and y axes and uses it as a coordinate system to determine the detection object's position in the image. ● Pixel mode: It reports the coordinates of the horizontal and vertical pixels of the detection object in the image to determine the detection object's position in the image. ● Normalized mode: It specifies a range of 0-1 for x and y axes and uses it as a coordinate system to determine the detection object's position in the image.
Connection Mode	● Short Connection: Implemented by the standard HTTP protocol, and the connection mode used between devices and the upper-level platform is determined by the upper-level platform. ● Standard: Used only when the device is connected to our server.
Report Data Type	Select the types of data to be reported: motor vehicle, non-motor vehicle, person, and face.

4.4 Modify Device Names

Change device names in batches by importing a .csv file containing the modified device names. You need to export a file containing the current device names first.

1. Select the target devices, click **Modify Device Name**. A page as shown below appears.

2. Click **Export** to export a template file containing information of the selected devices, including IP, serial number, device type, and device name.



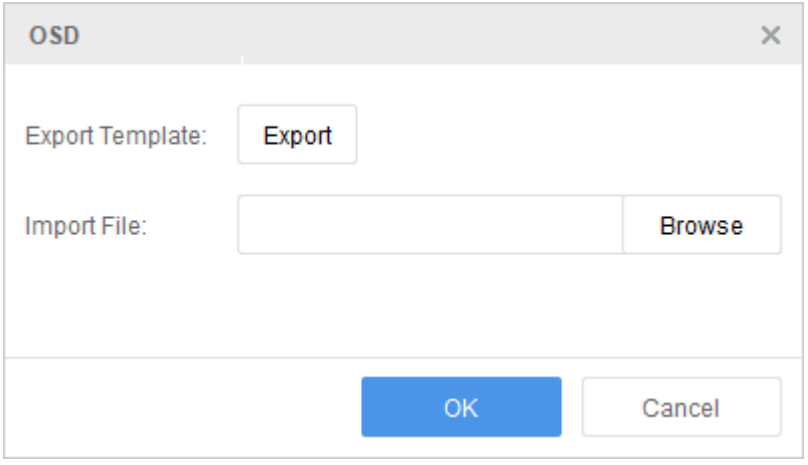
3. Modify the device names in the file, and then save the changes.
4. Click **Browse** to select the file.
5. Click **OK**. The current device names will be replaced by the device names contained in the imported .csv file.

4.5 Modify OSDs

Change device OSDs in batches by importing a .csv file containing the modified OSD configuration. You need to export the current OSD configuration first.

NOTE!
Only IPCs and EC encoders support changing OSDs in batches.

1. Select the target devices, click **Modify OSD**. A page as shown below appears.
2. Click **Export** to export a template file containing the current OSD configuration of the selected devices.



3. Modify the OSD configuration in the file, and then save the changes.
4. Click **Browse** to select the file.
5. Click **OK**. The current OSDs will be modified based on the OSD configuration contained in the imported file.

4.6 Building Configuration

Import a template to configure location linkage relationships for door stations, indoor stations, zone stations, and management stations in batches. After configuration, the device can conduct video intercom with devices it is linked with.

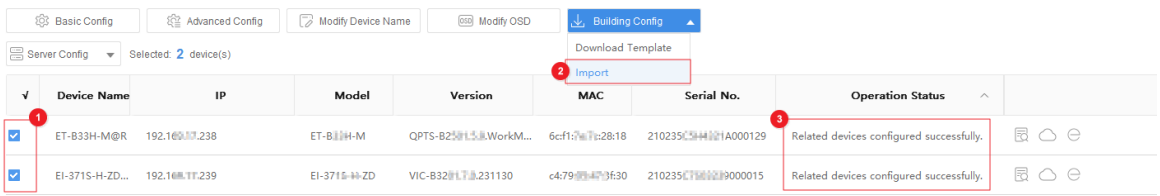
1. Ensure that door stations, indoor stations, and zone stations have been added to the system (management stations don't need to be added beforehand; their locations will be configured based on their relation with other devices).
2. Complete the information in the template.
   (1) Click **Building Config** > **Download Template** to download the template locally.
   (2) Fill in the device and location information in the template.

Serial No.	IP(*)	Subnet Mask(*)	Gateway(*)	Device Type(Ind	Residentia	Phase	Building	Unit	Room	Extension Station
	192.16	255.255.255.0	192.169.17.	Door Station	1	1	1	1		0
	192.16	255.255.255.0	192.169.17.	Indoor Station	1	1	1	1	1	0

NOTE!

- Items marked with an asterisk (*) are required.
- Device serial number is optional.
  - If the serial number is provided, the device will be matched based on it. If the serial number in the template matches an added device but has different network information, the device's network information will be modified according to the template.
  - If the serial number is not provided, the device will be matched based on IP address.
- Device type must be one of the types listed in the template header.
- Location information requirements:
  - Management station: Residential Compound/Phase are required; leave other fields blank.
  - Zone station: Residential Compound/Phase are required; Extension Station is optional; leave other fields blank.
  - Door station: Residential Compound/Phase/Building/Unit are required; Extension Station is optional; leave other fields blank.
  - Indoor station: Residential Compound/Phase/Building/Unit/Room are required; Extension Station is optional.

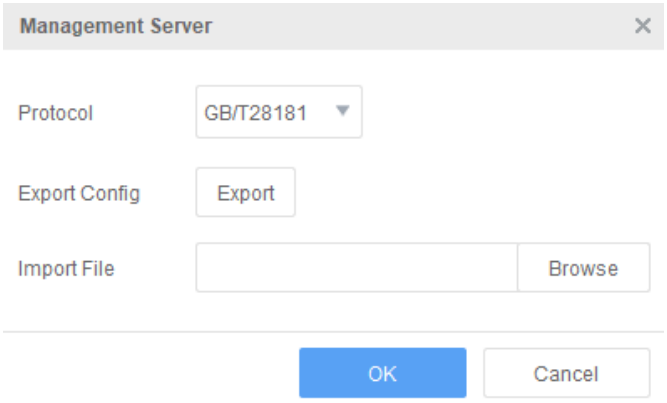
   (3) Save the modified template.
3. Import the template.
   (1) Select devices in the list that you want to import location information for (must be devices listed in the template).
   (2) Click **Building Config** > **Import**. Upload the modified template from local. The import result is displayed.
   (3) When imported successfully, the operation status will be displayed as "Related devices configured successfully".



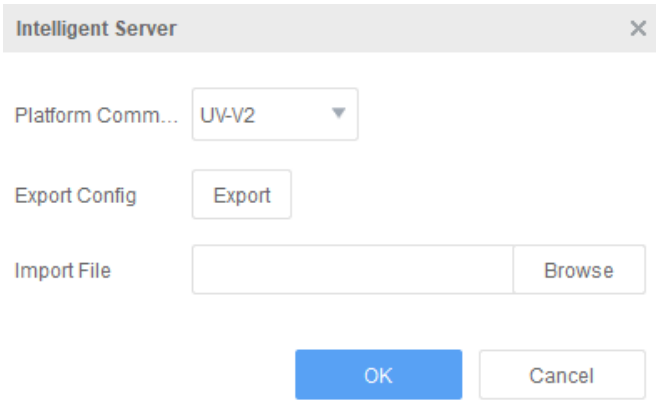
4.7 Server Config

Change the server configuration for IPC(s) by importing a .csv file containing the modified server configuration. You need to export the current server configuration first.

1. Select the IPC(s) for which you want to modify the server configuration, click **Server Config**, and then select **Management Server** or **Intelligent Server**.
2. Export the current device configuration information into a .csv file.
   - Management Server: Select the management protocol, and click **Export**.



   - Intelligent Server: Select the platform communication type, and click **Export**.



3. After modifying the file locally, click **Browse** to select the modified file.
4. Click **OK**. After importing successfully, the server configuration of the device will be modified based on the server configuration contained in the imported file.

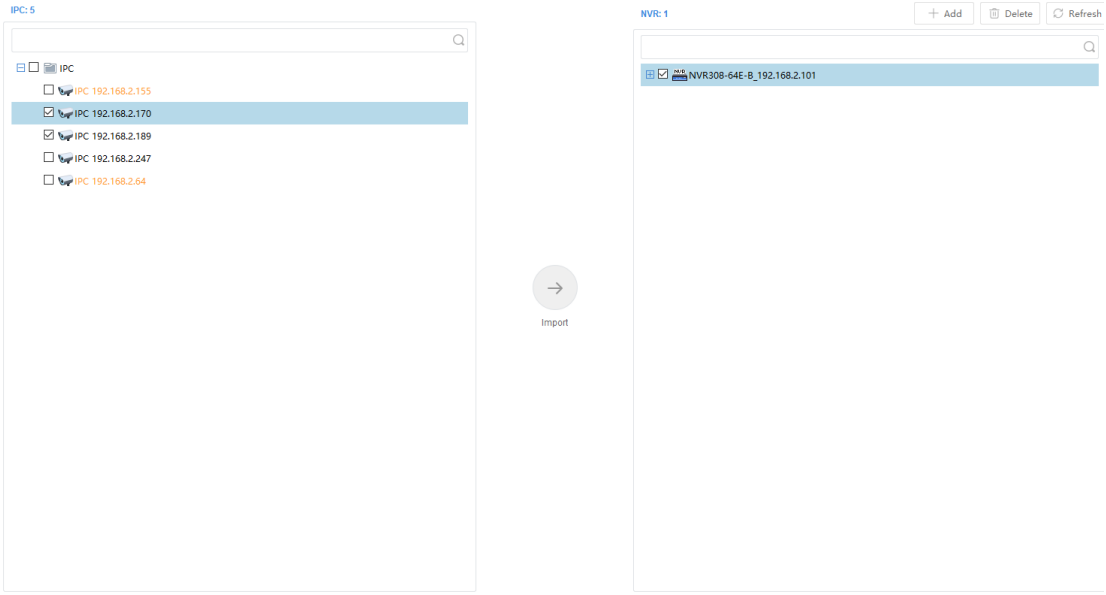
5 NVR Channel Management

Add or delete NVR channels.

5.1 Add NVR Channel

1. Click the NVR Channel Management tab on the main page.
2. Choose a way to add NVR channels:

➢ Select and add: Select the target IPCs in the IPC list, select the target NVR in the NVR list, and then click **Import**. The selected IPCs will be added as channels to the specified NVR.



➢ Add manually: Select the target NVR, click **Add**. On the pop-up page, complete information for the IPC you want to add, and then click **OK**. The IPC will be added as a channel to the NVR.

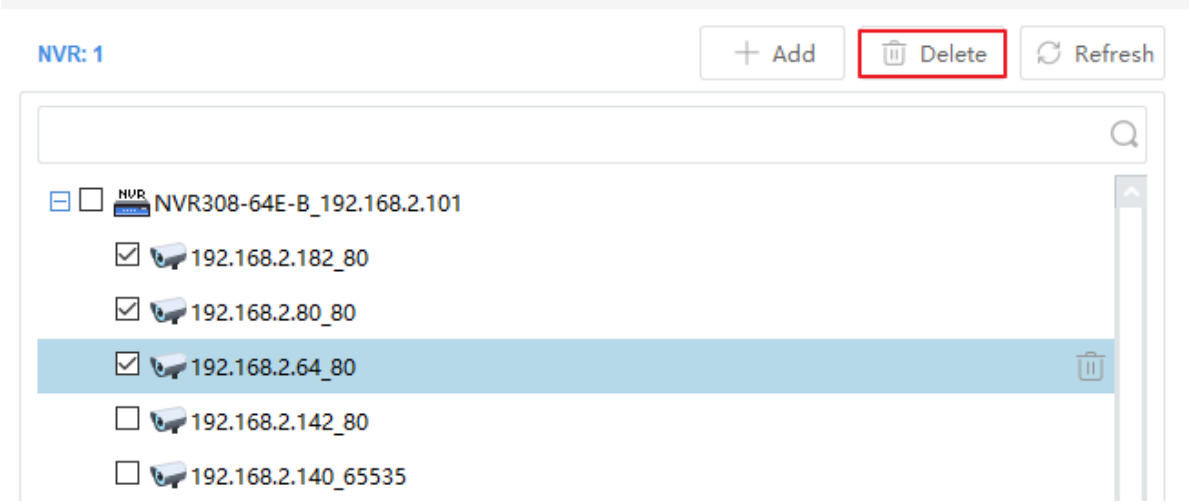
NOTE!

- In the IPC list, orange indicates IPCs that have been added to the NVR.
- In the NVR list, blue indicates the newly added channels.

5.2 Delete NVR Channel

Delete NVR Channel

- Delete channels in batches: Select multiple channels under an NVR, and then click **Delete**. The selected channels will be deleted.



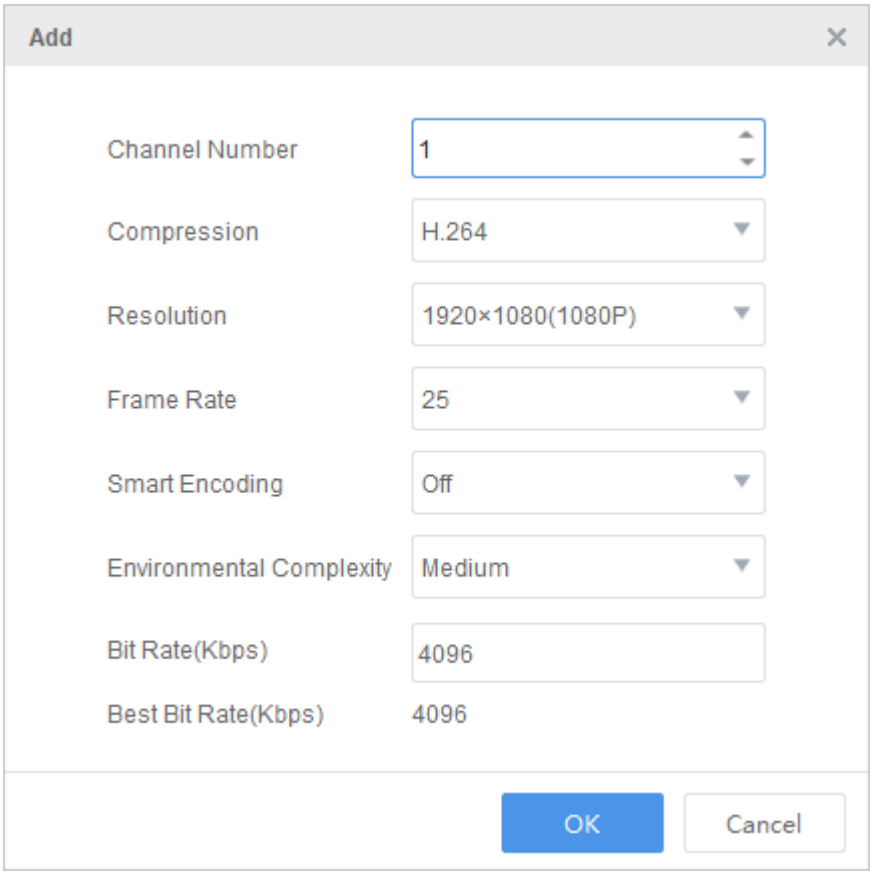
- Delete one channel: Hover over the channel you want to delete, and then click to delete it.

6 Capacity Calculation

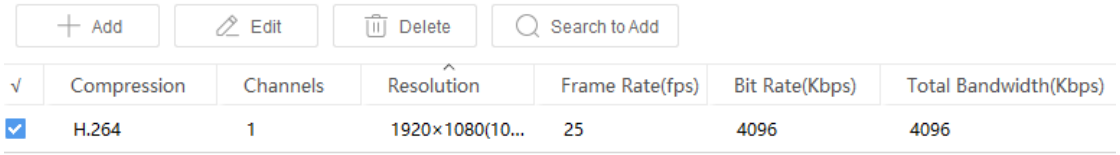
Calculate the allowed recording time or required hard disk space to facilitate capacity configuration.

6.1 Add Devices for Calculation

1. Click the **Calculation** tab.
2. Choose a way to add devices for calculation:
   - Click **Add**. On the page as shown below, configure the parameters as needed, and then click **OK**. The tool will calculate based on the settings you provided.



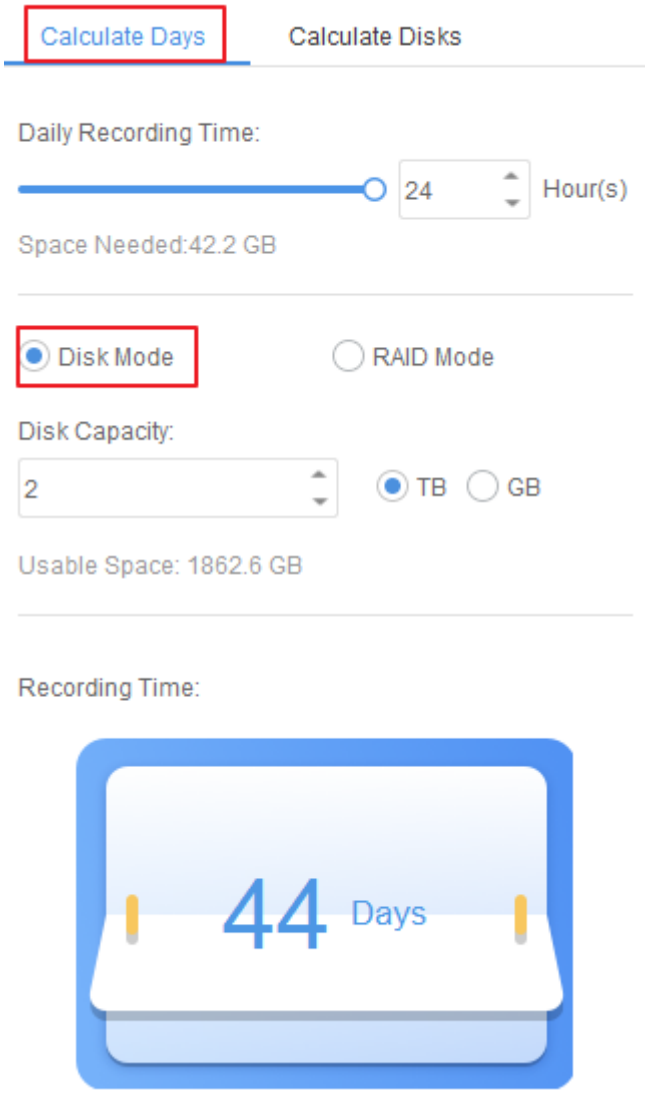
   - Click **Search**, and then select the devices for which you want to calculate. The tool will calculate based on the actual configuration of the selected devices.
3. Repeat the above steps to add all the devices you need.



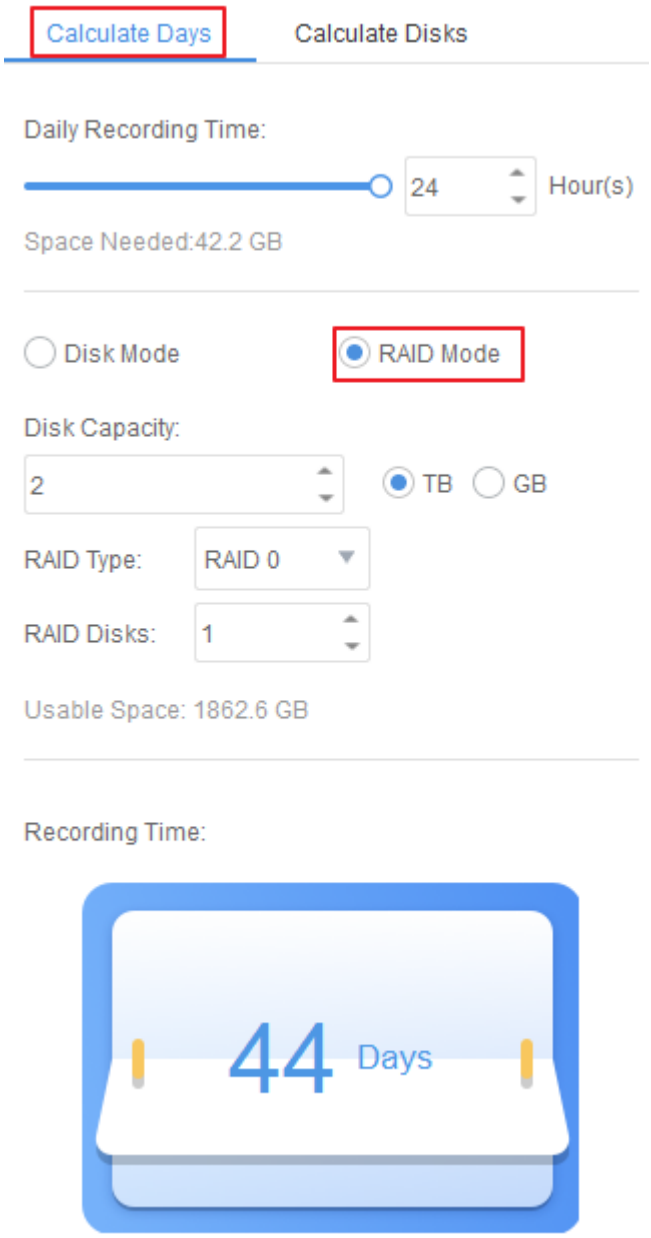
6.2 Calculate Retention Time

Select the devices from the list, and then click the **Calculate Retention Time** tab on the right. Choose **Disk Mode** or **RAID Mode**. The tool will calculate retention time for the selected mode.

- Disk mode: Set the daily recording time and disk capacity. The number of days allowed for recording will be displayed below.



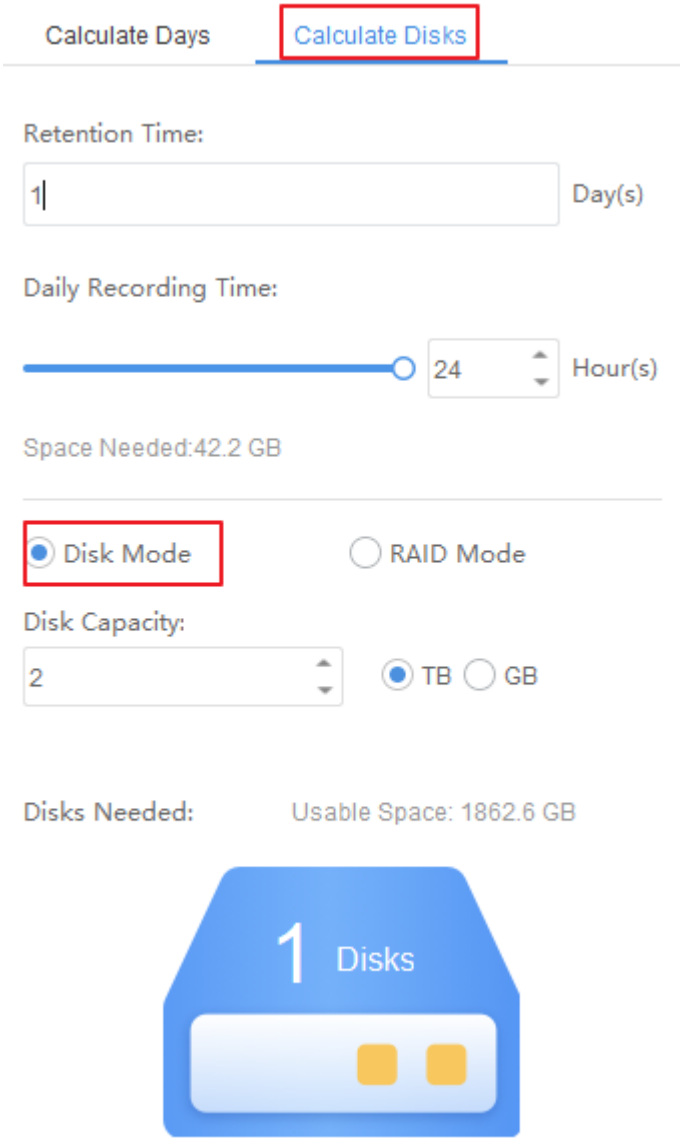
- RAID mode: Set the daily recording time, RAID type (0/1/5/6), RAID disk capacity and quantity. The number of days allowed for recording will be displayed below.



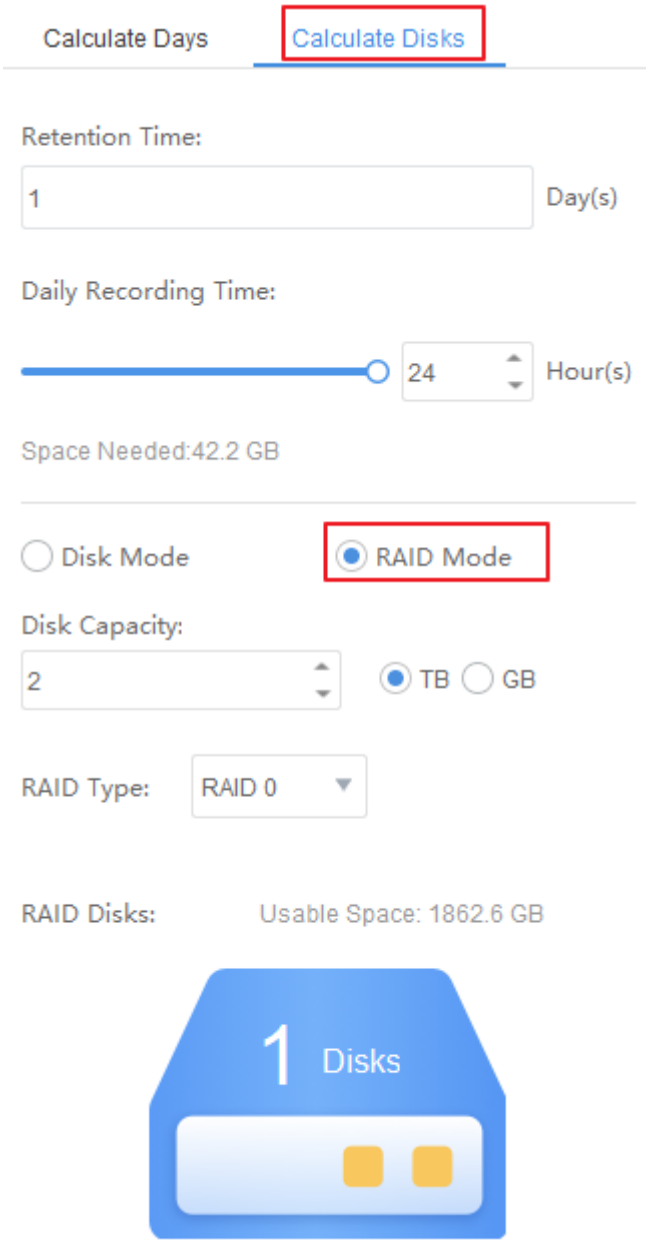
6.3 Calculate Disks Needed

Select devices from the list, and then click the **Calculate Needed Disks** tab on the right. Choose **Disk Mode** or **RAID Mode**. The tool will calculate the required number of disks for the selected mode.

- Disk mode: Set the retention days, daily recording time, disk capacity. The required number of disks will be displayed below.



- RAID mode: Set the daily recording time, retention days, RAID disk capacity, and RAID type. The required number of RAID disks will be displayed below.

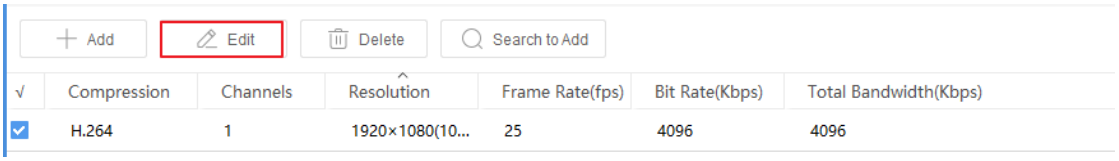


6.4 Other Operations

Edit or delete the devices that have been added for calculation.

Edit

1. Select the devices you want to edit, and then click Edit.



2. Modify the parameters as needed.
3. Click **OK**.

Delete

Select the devices you want to delete, and then click **Delete**.

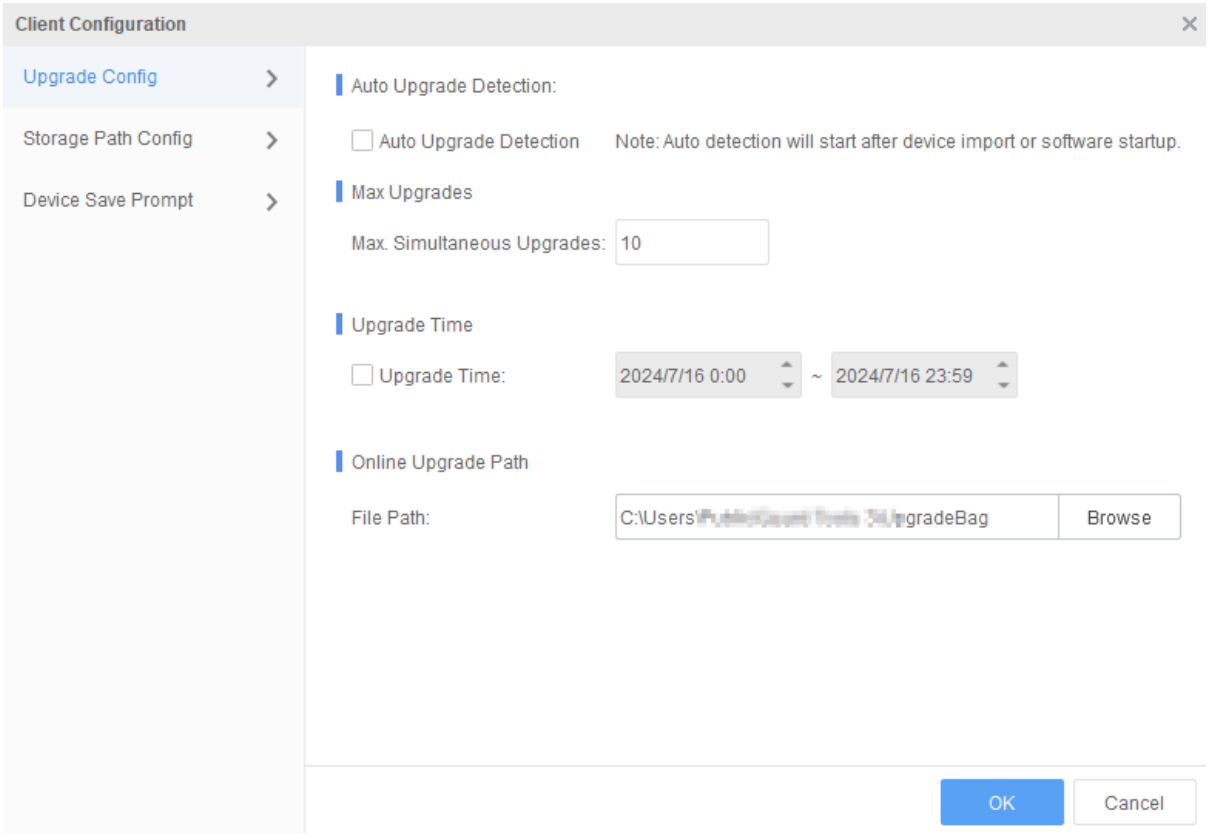
7 Upgrade Center

Upgrade versions for devices and channels.

7.1 Upgrade Configuration

Set the maximum number of devices that can be upgraded simultaneously and an upgrade period.

1. Click  in the top right corner. A page as shown below appears, select **Upgrade Config** tab.



2. Configure the following parameters.
   - Auto Upgrade Detection: When selected, in a WAN environment, the system will automatically detect version upgrades for devices after device import or software startup.
   - Max. Simultaneous Upgrades: Enter the number of devices that can be upgraded simultaneously. The greater the number, the higher the network requirements. The default is 10.
   - Upgrade Time: When selected, the upgrade will begin during the specified time period; otherwise, the upgrade will start immediately. If an upgrade period is specified, make sure the tool is running during that period. Otherwise, the upgrade will fail.

NOTE!
Only 1 scheduled upgrade task can be saved at a time. If there are multiple upgrade tasks, the previous ones will be overwritten.

- Online Upgrade Path: Click **Browse**, and then specify the download destination for the upgrade packages.

3. Click **OK**.

7.2 Custom Upgrade

Upgrade the version of devices or channels by choosing an upgrade mode below:

- Template upgrade: Uses a template that specifies paths to upgrade packages on your computer and uses them to upgrade different types of devices.
- Online upgrade: Obtains upgrade packages from the cloud to upgrade various types of devices.
- File upgrade: Uploads upgrade files to upgrade devices of the same type.

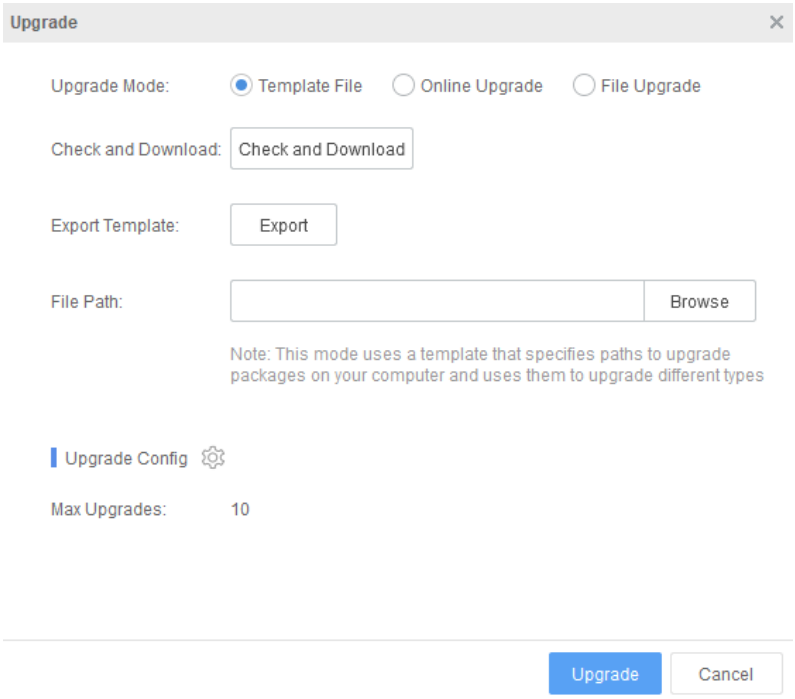
7.2.1 Upgrade Device

1. Template Upgrade

This mode uses a template file containing paths to the upgrade packages on your computer and uses these upgrade packages to upgrade devices of various types in batches.

Scenario 1: A local upgrade package is available

1. Select the devices you want to upgrade, and then click **Device Upgrade**.
2. Choose **Template File**.



3. Click **Export** to export a template containing the basic information about the selected device. In the template file, enter paths to the upgrade packages on your computer.
4. Click **Browse** to locate the configured template file, and then click **Open** to import the template.
5. (Optional) Click ⚙. See Upgrade Config.
6. Click **Upgrade**. The devices will be upgraded during the configured upgrade time.

Scenario 2: LAN device, no local upgrade pacakge, a computer can switch networks

1. Connect your computer to the WAN. Select the devices you want to upgrade, click **Device Upgrade**, choose **Template File**, and then click **Check and Download** to download the upgrade package and template.
2. Connect your computer to the LAN. Import the upgrade template from the downloaded folder.

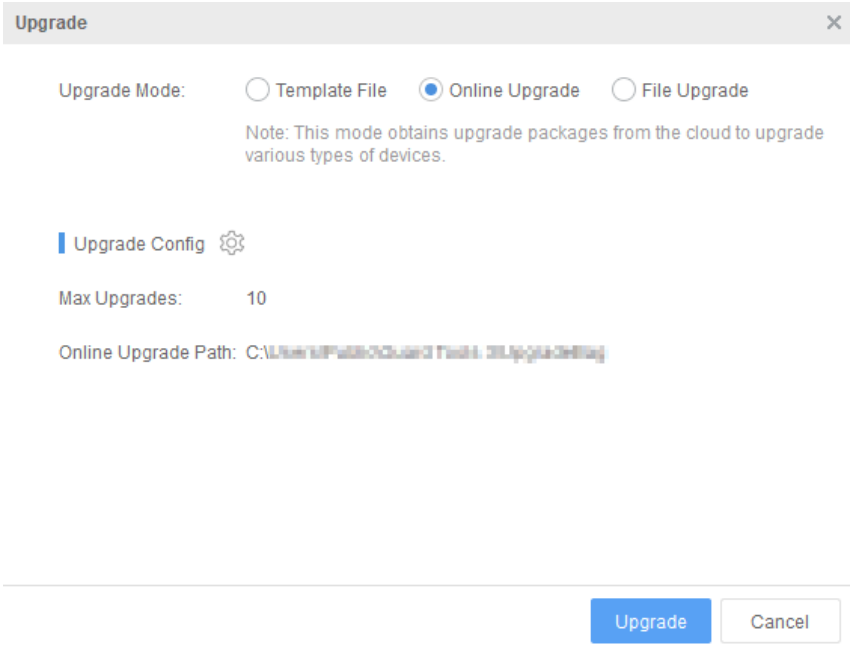
Scenario 3: LAN device, no local upgrade package, a WAN computer, a LAN computer

1. On the LAN computer, select the devices you want to upgrade, click **Device Upgrade**, choose **Template File**, and then click **Export** to export the device information template.
2. On the WAN computer, go to **Device Management** > **Add** to import the device information template to add devices. Then, go to the **Template File** page, click **Check and Download** to download the upgrade package and upgrade template.
3. Copy the downloaded folder to the LAN computer.
4. On the LAN computer, go to the **Template File** page to import the upgrade template.

2. Online Upgrade

This mode checks for updates for the connected devices and downloads upgrade packages (if updates are available) to your computer to upgrade devices of various types.

1. Select the devices you want to upgrade, and then click **Check for Updates**. The tool checks for updates for the selected devices. If updates are available, **Upgradable** will be displayed in the **Operation Status** column.
2. Select the upgradable devices, and click **Device Upgrade**.

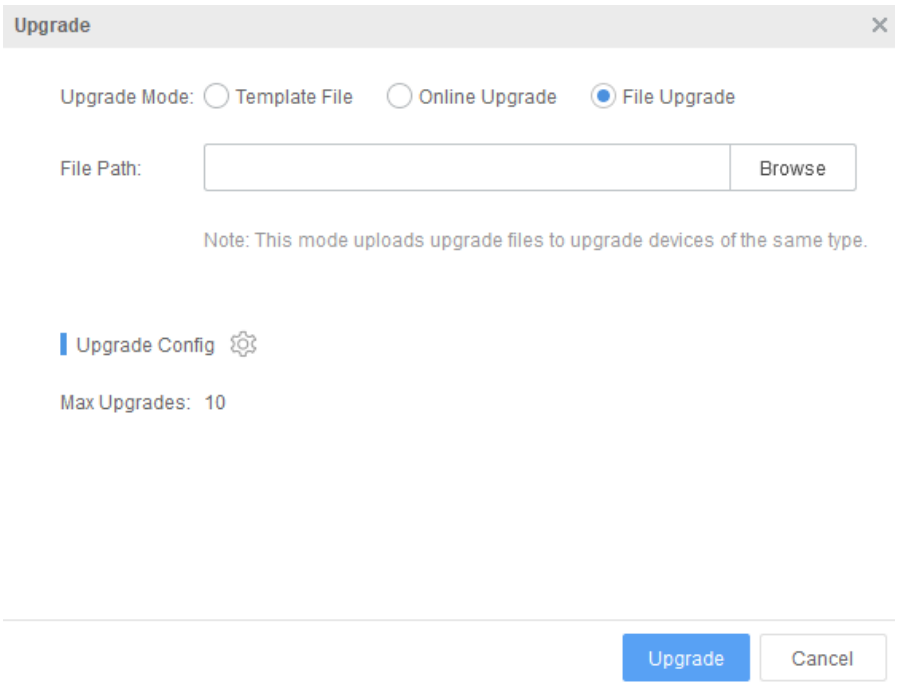


3. Choose **Online Upgrade**.
4. (Optional) Click ⚙. See Upgrade Config.
5. Click **Upgrade**. The devices will be upgraded during the configured upgrade time.

3. File Upgrade

This mode allows upgrading devices of the same type by uploading upgrade files.

1. Select the devices you want to upgrade, and then click **Device Upgrade**.
2. Choose **File Upgrade**.



3. Click **Browse**, and then locate the upgrade packages on your computer.
4. (Optional) Click . See Upgrade Config.
5. Click **Upgrade**. The devices will be upgraded during the configured upgrade time.

7.2.2 Upgrade Channel

Upgrade camera connected to an NVR (also known as NVR channels).

1. Select the NVR, click **Channel Upgrade**.
2. Select the channels you want to upgrade, and then click **OK**.
3. The remaining operations for upgrading a channel are the same as upgrading a device. See Upgrade Device for details.

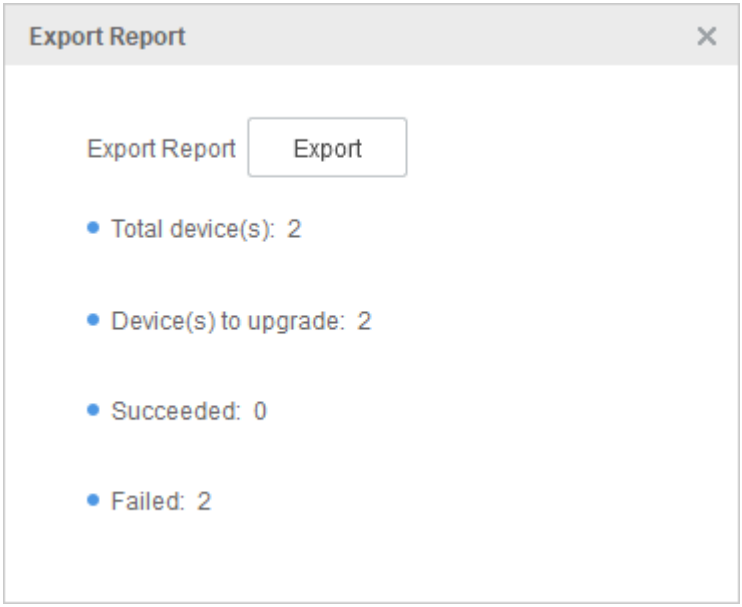
7.2.3 Cancel Upgrade

If an upgrade task is scheduled, the upgrade time will be displayed at the top, and you can click **Cancel** behind it to cancel the task.

NOTE!
Only the pending upgrade tasks will be cancelled. If the upgrade task has already started, the ongoing tasks will remain unaffected.

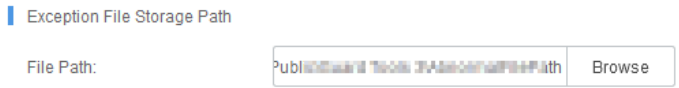
7.2.4 Export Upgrade Report

1. Select the desired devices, and then click **Export Upgrade Report**. The **Export Report** page as shown below appears
2. View the total number of devices, the number of devices to be upgraded, and the number of successful or failed devices in the upgrade. To export the report, click **Export**.



8 Client Configuration

Click  in the top right corner, go to **Client Configuration** page.

Item	Description
Upgrade Config	See Upgrade Config.
Storage Path Config	During the tool's operation, some files recording exceptions will be generated. Click **Browse** to select the storage path for these files, and click **OK** to save. 
Device Save Prompt	Set whether to display a reminder to save devices from the default project before exiting the client. **Note:** Each time you enter the client, the system clears the devices in the default project and searches for new devices. If you have not saved the devices from the default project to a custom project, the existing devices in the default project will be lost.