Education Sharing System

User Manual

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Legal Information

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About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the Hikvision website (***https://www.hikvision.com/***).
Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

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Regulatory Information

FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
FCC compliance: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU.

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: ***http://www.recyclethis.info***.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to

your supplier or to a designated collection point. For more information see: ***http://www.recyclethis.info***.

Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

Applicable Models

This manual is applicable to the models listed in the following table.

Product Name	Model
Education Sharing System	DS-8108LHFHI-K2

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
NOTE	Provides additional information to emphasize or supplement important points of the main text.
WARNING	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
DANGER	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

Safety Instructions

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- Firmly connect the plug to the power socket. Do not connect several devices to one power adapter. Power off the device before connecting and disconnecting accessories and peripherals.
- Shock hazard! Disconnect all power sources before maintenance.
- The equipment must be connected to an earthed mains socket-outlet.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- ϟ indicates hazardous live and the external wiring connected to the terminals requires installation by an instructed person.
- Never place the equipment in an unstable location. The equipment may fall, causing serious personal injury or death.
- Input voltage should meet the SELV (Safety Extra Low Voltage) and the LPS (Limited Power Source) according to the IEC60950-1.
- High touch current! Connect to earth before connecting to the power supply.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- Use the device in conjunction with an UPS, and use factory recommended HDD if possible.
- This product contains a coin/button cell battery. If the battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- This equipment is not suitable for use in locations where children are likely to be present.
- CAUTION: Risk of explosion if the battery is replaced by an incorrect type.
- Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
- Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
- Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.
- Dispose of used batteries according to the instructions.
- Keep body parts away from fan blades and motors. Disconnect the power source during servicing.
- Keep body parts away from motors. Disconnect the power source during servicing.

Preventive and Cautionary Tips

Before connecting and operating your device, please be advised of the following tips:

- The device is designed for indoor use only. Install it in a well-ventilated, dust-free environment without liquids.
- Ensure recorder is properly secured to a rack or shelf. Major shocks or jolts to the recorder as a result of dropping it may cause damage to the sensitive electronics within the recorder.
- The equipment shall not be exposed to dripping or splashing and that no objects filled with liquids shall be placed on the equipment, such as vases.
- No naked flame sources, such as lighted candles, should be placed on the equipment.
- The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains, etc. The openings shall never be blocked by placing the equipment on a bed, sofa, rug or other similar surface.
- For certain models, ensure correct wiring of the terminals for connection to an AC mains supply.
- For certain models, the equipment has been designed, when required, modified for connection to an IT power distribution system.
- identifies the battery holder itself and identifies the positioning of the cell(s) inside the battery holder.
- + identifies the positive terminal(s) of equipment which is used with, or generates direct current. + identifies the negative terminal(s) of equipment which is used with, or generates direct current.
- Keep a minimum 200 mm (7.87 inch) distance around the equipment for sufficient ventilation.
- For certain models, ensure correct wiring of the terminals for connection to an AC mains supply.
- Use only power supplies listed in the user manual or user instruction.
- The USB port of the equipment is used for connecting to a mouse, keyboard, USB flash drive, or Wi-Fi dongle only.
- Use only power supplies listed in the user manual or user instruction.
- Do not touch the sharp edges or corners.

Chapter 1 Introduction and Installation

1.1 Panels Description

1.1.1 Front Panel

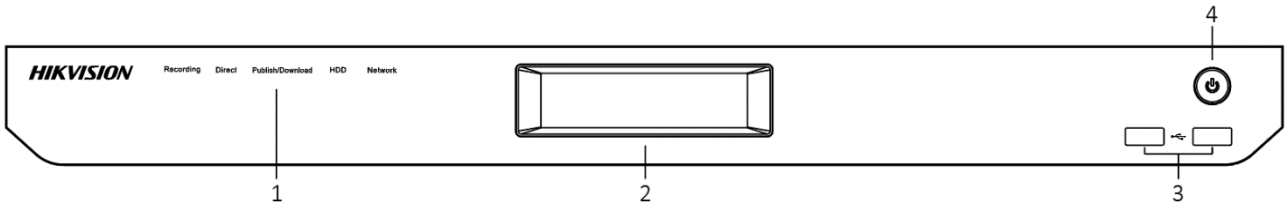


Figure 1-1 Front Panel

Table 1-1 Panel Description

No.	Name		Description
1	**Status Indicators**	**Recording**	● Green: recording ● Unlit: not recording
		Direct	● Solid green: live view control normal ● Solid red: automatic live view control is enabled
		Publish/Download	● Blinking red: downloading and publishing the courseware ● Solid red: downloading and publishing the courseware failed ● Unlit: downloading and publishing the courseware succeeded. Or no downloading or publishing tasks
		HDD	Blinking red: reading or writing hard disk normally
		Network	Blinking green: network communication normal
2	**OLED Screen**		Display IP address and hard disk storage status. You can press the power button to activate the screen display.
3	**USB**		USB interface
4	**Power On/Off**		Press the button for at least 6 seconds to turn on/off the device.

1.1.2 Rear Panel

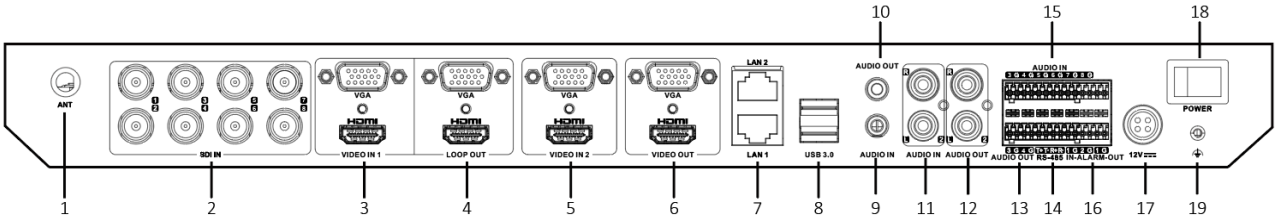


Figure 1-2 Rear Panel

Table 1-2 Panel Description

No.	Name	Description
1	ANT	Antenna interface
2	SDI IN	Video inputs of SDI connector
3	VIDEO IN 1	Video inputs of VGA and HDMI interface
4	LOOP OUT	VGA and HDMI loopback interface
5	VIDEO IN 2	Video inputs of VGA and HDMI interface
6	VIDEO OUT	Video outputs of VGA and HDMI interface
7	LAN1/LAN2	Network interfaces
8	USB 3.0	USB 3.0 interfaces
9	AUDIO IN	Audio input, 3.5 mm connector
10	AUDIO OUT	Audio output, 3.5 mm connector
11	AUDIO IN	Audio input, RCA connector
12	AUDIO OUT	Audio output, RCA connector
13	AUDIO OUT	Single track of green connector
14	RS-485	RS-485 connector
15	AUDIO IN	Audio input
16	IN-ALARM-OUT	Alarm input/output connector
17	12 VDC	Power supply
18	POWER	Power switch
19	GND	Ground

1.2 Device Installation

During device installation:

- Keep all liquids away from the device.
- Use brackets for rack mounting.
- Ensure ample room for audio and video cables.
- When routing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
- Ensure the alarm and RS-485 cables are well connected.
- Allow at least 2cm (≈0.75-inch) of space between racks mounted devices.

- Ensure the device is grounded.
- Environmental temperature should be within the range of -10 to +55° C, +14 to +131° F.
- Environmental humidity should be within the range of 10% to 90%.
- Before cleaning the device, cut off electricity and plug out the power cable.
- To protect the device from short circuit caused by the damp dust in circuit board, clean the circuit, cables, chassis, and fans with a soft brush.
- Use the neutral detergent diluted with water to remove the dirt. Instead of the strong detergent and volatile solvent, like alcohol, benzene, and diluent, or the surface coating will be damaged.
- A factory recommended HDD should be used for this device.

1.3 Hard Disk Installation

Before you start:

Cut off the power supply for the device before installing a hard disk. A factory recommended hard disk should be used for this installation.

Tools Required: Screwdriver.

Purpose:

Follow the steps to install hard disk.

Step 1 Remove the cover from the device by unfastening the screws on the rear and side panel.

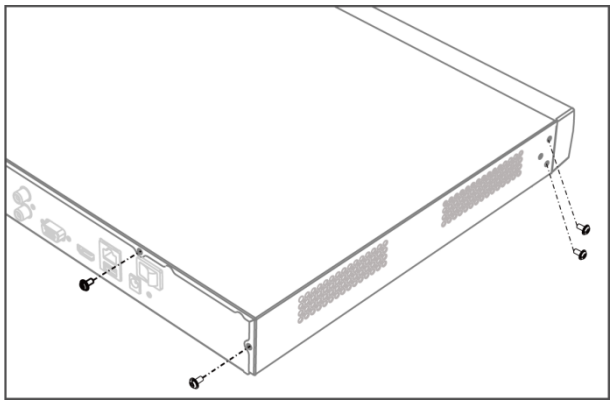


Figure 1-3 Unfasten Screws

Step 2 Connect the data cable and hard disk power cable.

1) Connect the data cable with the device motherboard data port.
2) Connect the data cable with the hard disk data port.
3) Connect the hard disk power cable with the hard disk power port.
4) Connect the hard disk power cable with the device motherboard power supply port.

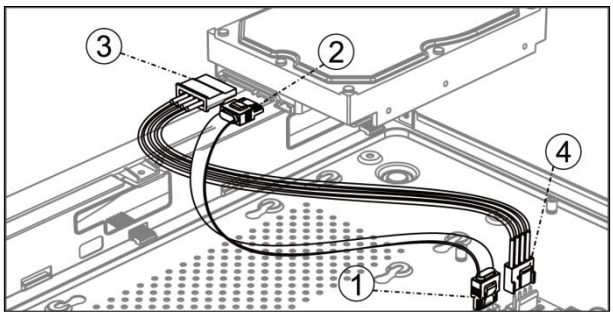


Figure 1-4 Connect Hard Disk and Motherboard

Step 3 Fix the hard disk on the bottom panel by fastening the screws between the bottom panel and hard disk.

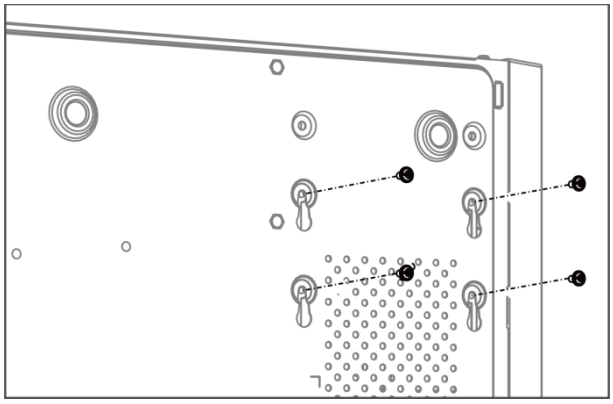


Figure 1-5 Fix Hard Disk

Step 4 Reinstall the cover and fasten the screws on the rear and side panel.

Chapter 2 Start-up

2.1 Startup and Shutdown

Purpose:

Proper startup and shutdown procedures are crucial to expanding the life of the device. Follow the steps to start your device.

2.1.1 Startup

Step 1 Connect the device and a socket with the provided power cord. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device.

Step 2 Turn on the switch on rear panel.

2.1.2 Shutdown

Hold the power button at the front panel for 6 seconds to shut down the device.

2.2 Network Connection

NOTE

- You shall acknowledge that the use of the product with Internet access might be under network security risks. For avoidance of any network attacks and information leakage, please strengthen your own protection. If the product does not work properly, please contact with your dealer or the nearest service center.
- To ensure the network security of the education sharing system, we recommend you to have the device assessed and maintained termly. You can contact us if you need such service.

Purpose:

Create network connection between the education sharing system and your computer. Two methods are provided, including connecting the education sharing system via a LAN (Local Area Network) and via a WAN (Wide Area Network). We take the example of connecting via LAN to describe the steps.

Before you start:

Power on the device and install the SADP software in your computer.

Step 1 Create the network connection between the device and your computer.

- Option1: Directly connect the device to the computer with a network cable.
- Option 2: Connect the device and your computer via a switch or a router.

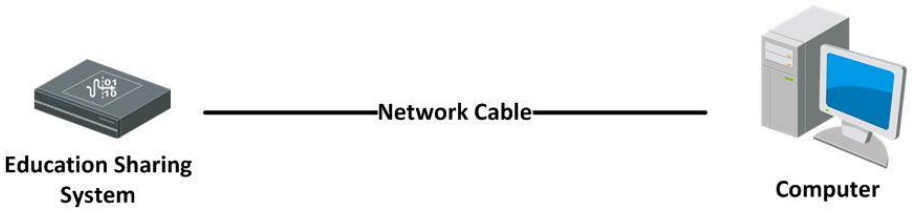


Figure 2-1 Connect Directly

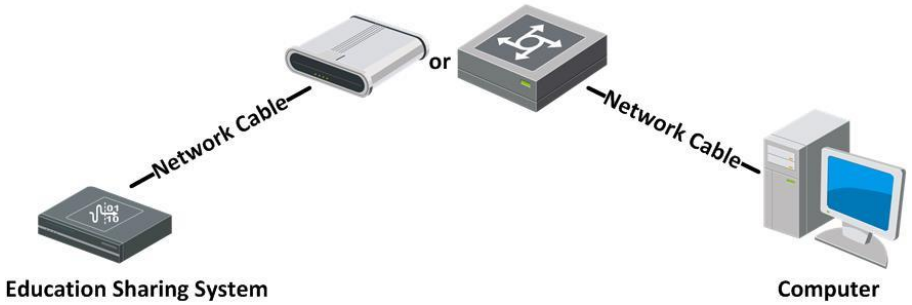


Figure 2-2 Connect via a Switch or a Router

2.3 Access via Web Browser

Purpose:

You can get access to the device via web browser. You may use one of the following listed web browsers: Internet Explorer 6.0, Internet Explorer 7.0, Internet Explorer 8.0, Internet Explorer 9.0, Internet Explorer 10.0, Apple Safari, and Mozilla Firefox. The supported resolutions include 1024*768 and above.

Before you start:

Obtain the device IP address via SADP software. Refer to the *Chapter 15 Appendix*

SADP Software Introduction for the detailed steps of obtain online device and modify device network parameters via SADP software.

Step 1 Open web browser, input the IP address of the device and then press Enter.

Step 2 Log in the device.

- If the device has not been activated, you need to activate the device first before login.

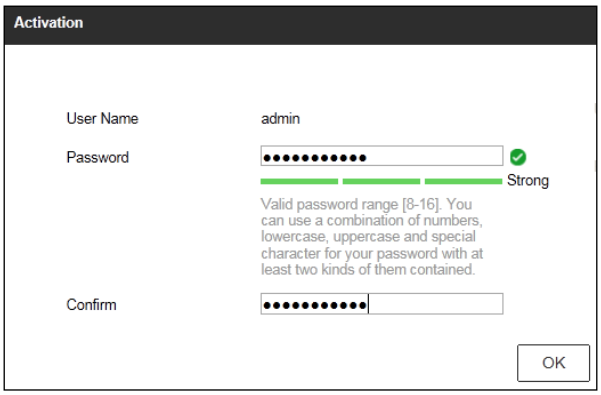


Figure 2-3 Set Admin Password

1) Input the same password in **Password** and **Confirm**.

2) Click **OK** to log in the device.

WARNING

STRONG PASSWORD RECOMMENDED–We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

- If the device is already activated, enter the user name and password in the login interface, and click **Login**.

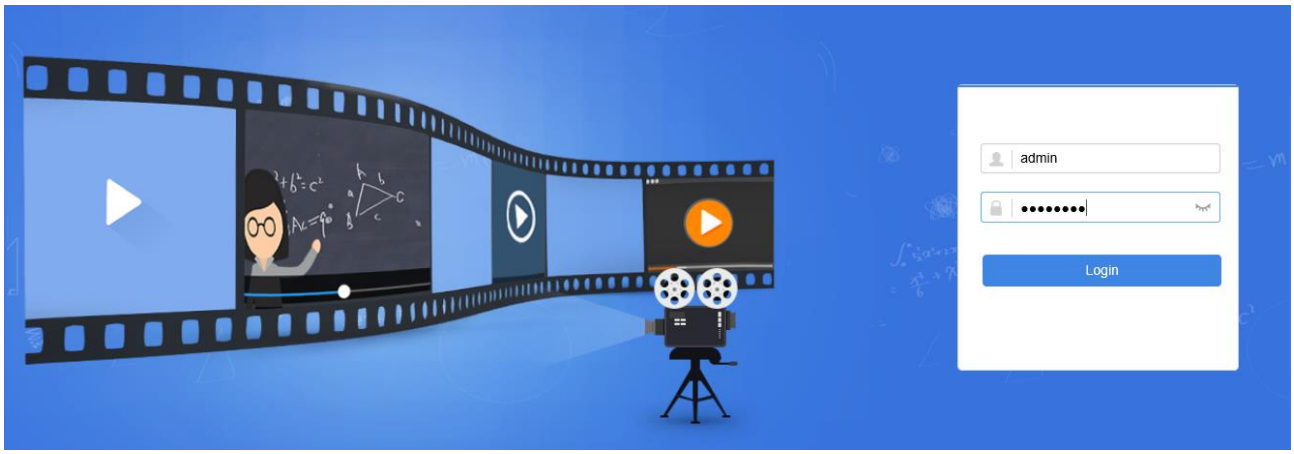


Figure 2-4 Login

Step 3 Install the plug-in before viewing the live video and managing the device. Follow the installation prompts to install the plug-in.

NOTE

- If you enter the wrong password 7 times when login, the current user will be locked for 30 minutes.
- You may have to close the web browser to finish the installation of the plug-in.

2.4 Education Specified Camera Connection

Purpose:

Before you can get the live view or record the image of classroom, connect the education specified camera to the device via analog connector or network.

2.4.1 Connect via Analog Connectors

Step 1 Connect the education specified camera and device video input connector with BNC (Bayonet Nut Connector).

2.4.2 Connect via Network

Before you start:

Connect the education specified camera to network.

Step 1 Go to **Configuration** › **Recording Settings** › **Live View Settings** › **Live View Channel Settings.**

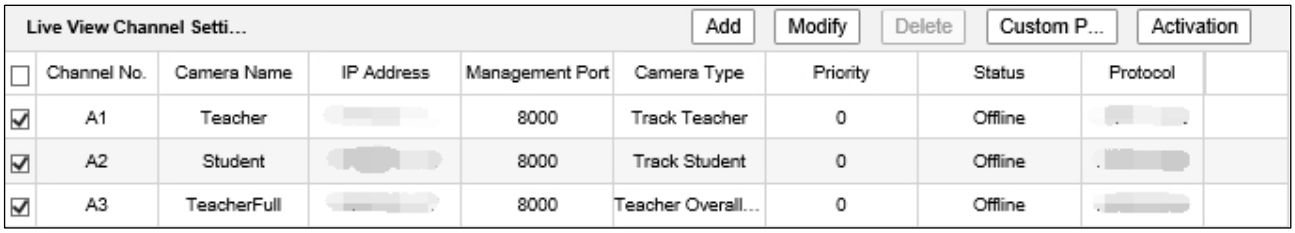


Figure 2-5 Live View Channel Settings

Step 2 Click **Add** to add IP camera.

Step 3 Enter the camera parameters.

NOTE

Camera type cannot be duplicated with each other.

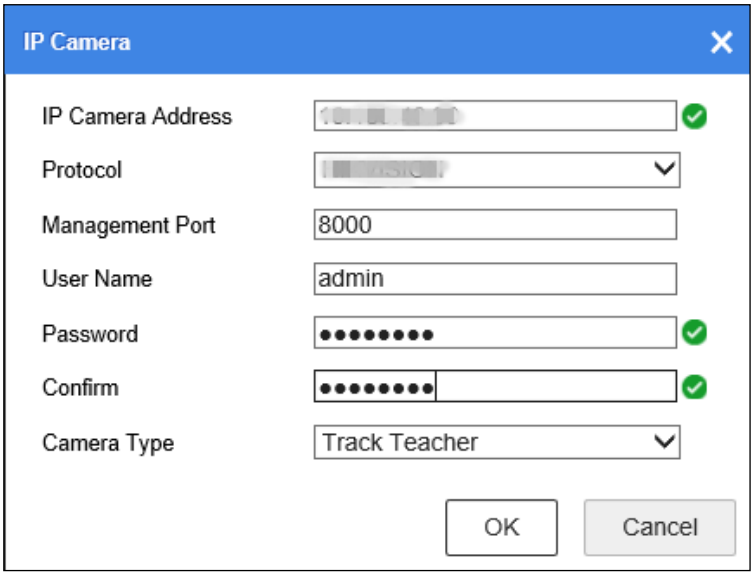


Figure 2-6 Add IP Camera

Step 4 Click **OK**.

2.5 SADP Search

The Purpose:

You search and modify network parameters of IP camera in the same network segment.

Step 1 Go to **Configuration** > **System Settings** > **Camera Management** > **SADP Search**.

Step 2 Click **Refresh** to search the IP camera in the same network segment.

Step 3 Optionally, edit the network parameters of IP camera.

1) Select the camera.
2) Click **Modify**.
3) Edit the network parameters, including IP address and port.
4) Enter the user name and password.
5) Click **OK**.

Chapter 3 Live View

Purpose:

You can view the live image of connected cameras with manual semi-auto or auto mode, and record the course video.

Before you start:

Ensure the device has successfully connected to the education specified cameras, and your web browser has installed the latest web component.

Step 1 Go to **Live View** by web browser.

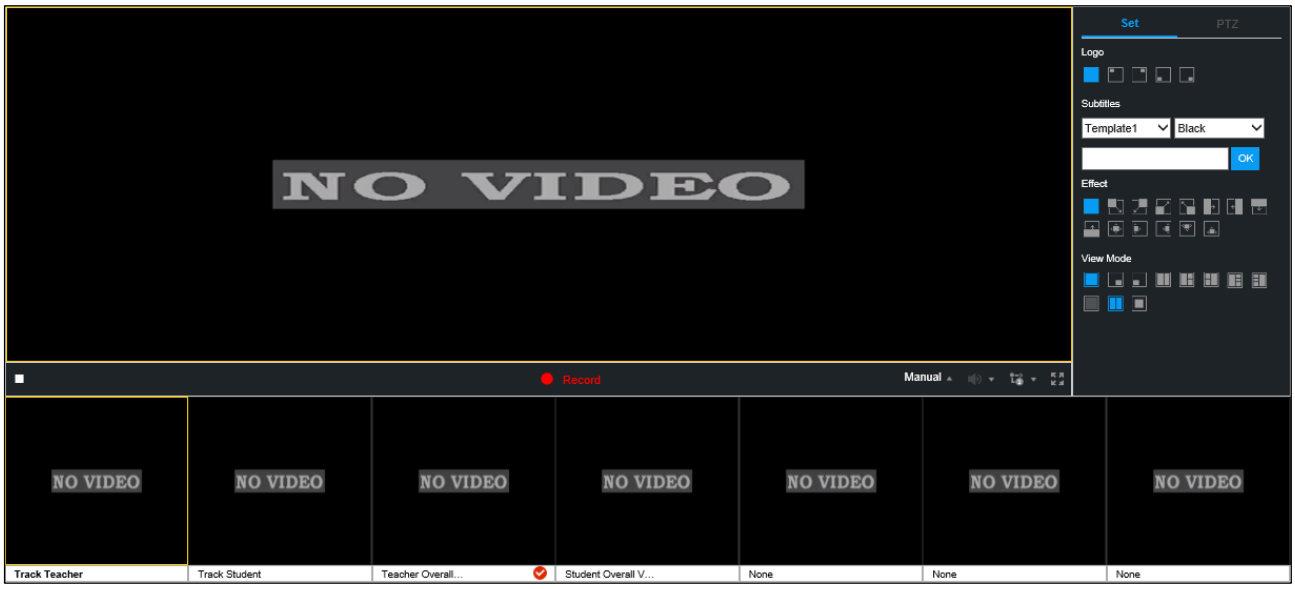


Figure 3-1 Live View

Step 2 Click **Set** to set the view mode.

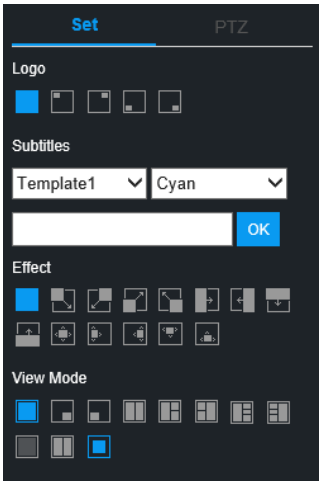


Figure 3-2 View Mode

Table 3-1 View Mode Description

Mode	Icon	Description
Movie		Single screen
Picture-in-Picture		PIP 1, overlay the picture at the lower right corner
		PIP 1, overlay the picture at the lower left corner
Multi-Screen		Multi-Screen 1, split screen in half
		Multi-Screen 2, split screen in three blocks with the larger one at left side
		Multi-Screen 3, split screen in three blocks with the larger one at right side
		Multi-Screen 4, split screen in four blocks with the larger one at left side
		Multi-Screen 5, split screen in four blocks with the larger one at right side

Step 3 Optionally, when you are in single screen, you can double-click the windows at the bottom to switch live view camera.

Step 4 Optionally, click or to start/stop course recording. You shall enter the course informaiton when you start course recording.

1) Enter course information including **Course Name**, **Teacher**, and **Course Introduction**.
2) You can check **Video Head** or **Video Trailer** to add video head or tail to the recording video. Refer to *6.3 Video Head/Tail Configuration* for details.
3) Click **OK**.

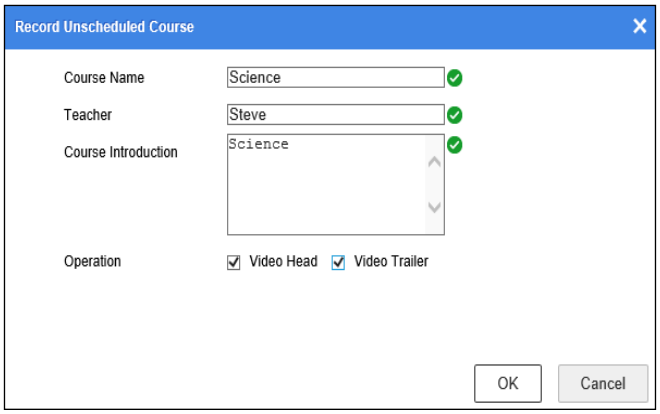


Figure 3-3 Course Information

Step 5 Optionally, select the live mode as **Manual**, **SimiAuto**, or **Auto**.

- **Manual**: Manually dispaly the image to the main screen by double-clicking the camera display window at the bottom. You shall use the PTZ control panel to manually track the object.
- **SimiAuto**: The speed dome can automatically track object, but you still have to manually switch live view image by double-clicking the camera display window at the bottom.
- **Auto**: The speed dome can automatically track object. The device will automatically display image to the main screen when the connected education specified cameras have detected smart events. The auto live view control is enabled by default.

Step 6 Optionally, for the student and teacher channel, click **PTZ** to rotate the camera to desired view.

Figure 3-4 PTZ Control Panel

Chapter 4 PTZ Control

4.1.1 PTZ Settings

Purpose:

For the student and teacher channel, you can rotate them to desired view.

Follow the procedure to set the parameters for PTZ. The configuring of the PTZ parameters should be done before you control the PTZ camera.

Step 1 Go to **Configuration** > **System Settings** > **System Settings** > **RS-485**

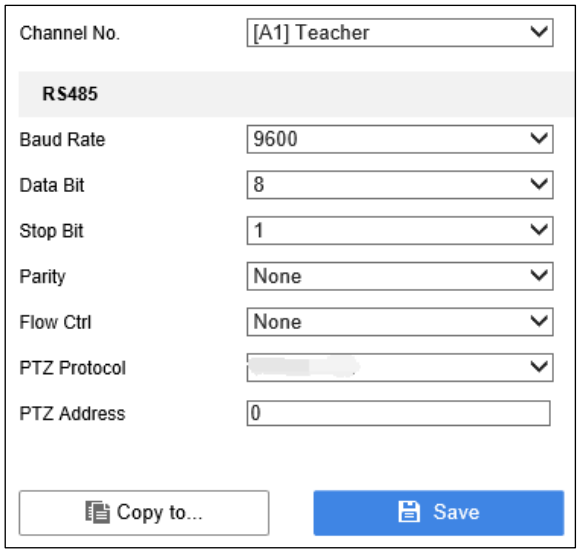


Figure 4-1 PTZ Settings

Step 2 Select the camera for PTZ setting in **Channel No.**

Step 3 Set the PTZ camera parameters.

NOTE

All the parameters should be the same as the PTZ camera parameters.

Step 4 Click **Save** to save the settings.

4.1.2 Set PTZ Presets

Purpose:

Follow the steps to set the preset position location which you want the PTZ camera to point to when an event takes place.

Step 1 Go to **Live View**. And start live view of a channel.

Step 2 Click **PTZ** at the upper right corner.

Step 3 Select a preset.

Step 4 Use the directional button to wheel the camera to the location where you want to set preset. The zoom and focus operations can be recorded in the preset as well.

Step 5 Click to save the preset.

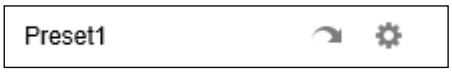


Figure 4-2 Select a Preset

NOTE

Repeat the above steps to set more presets.

4.1.3 Call Presets

Purpose:

This feature enables the camera to point to a specified position such as a window when an event takes place.

Step 1 Go to **Live View**. And start live view of a channel.

Step 2 Click **PTZ** at the upper right corner.

Step 3 Select the preset you want to call.

Step 4 Click to call the preset.

Chapter 5 HDD Management

5.1 Format Hard Disk

Purpose:

A newly installed hard disk must be formatted before it can be used by your education sharing system.

Step 1 Go to **Configuration** > **System Settings** > **Storage Management** > **HDD Management**.

Step 2 Select the HDD(s) you want to format.

Step 3 Click **Format** to start formatting.

5.2 Manage Network Hard Disk

Purpose:

You can add the allocated NAS or disk of IP SAN to the education sharing system, and use it as a network hard disk. Up to 8 network hard disks can be added.

Step 1 Go to **Configuration** > **System Settings > Storage Management** > **NetHDD**.

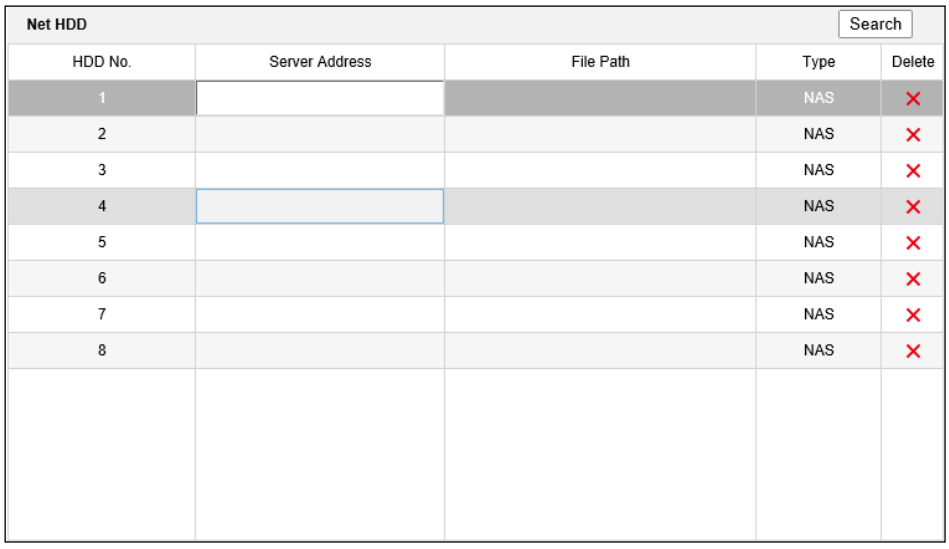


Figure 5-1 NetHDD Settings

Step 2 Enter **Server Address** and **File Path**.

Step 3 Optionally, click **Search** to get the NetHDD file path by its type and server address.

Step 4 Select the NetHDD type.

Step 5 Click **Save** to save the settings.

5.3 Set Cloud Storage

Purpose:

The cloud storage allows you to get alarm pictures from the device.

Step 1 Go to **Configuration** > **System Settings** > **Storage Management** > **Cloud Storage.**

Step 2 Check **Enable Cloud Storage**.

Step 3 Set the related parameters.

Step 4 Click **Save**.

5.4 Manage Hard Disk Property

Purpose:

The hard disk property can be set to redundancy, read-only, or read/write (R/W).

A hard disk can be set to read-only to prevent important recorded files from being overwritten when the hard disk becomes full in overwrite recording mode.

When the HDD property is set to redundancy, the video can be recorded both onto the redundancy HDD and the R/W HDD simultaneously so as to ensure high security and reliability of video data.

Before you start:

Set the HDD mode as Group in local menu.

Step 1 Go to **Configuration** > **System Settings** > **Storage Management** > **HDD Management.**

Step 2 Select an HDD.

Step 3 Select **Property**.

NOTE

At least 2 hard disks must be installed on your education sharing system when you want to set a HDD to Redundancy, and ensure there is one hard disk in R/W property.

Step 4 Click **Set** to save the settings.

5.5 Record Schedule Settings

Step 1 Go to **Configuration** > **System Settings** > **Camera Management** > **Record Schedule.**

Step 2 Select **Channel No.**

Step 3 Check **Enable**.

Step 4 Select the recording type, including **Continuous**, **Motion**, **Alarm**, **Motion | Alarm**, **Motion & Alarm**, and **Event**.

Step 5 Set the recording schedule of selected day.

Step 6 Optionally, you can click **Copy to** to copy the schedule settings to other channel(s).

Step 7 Optionally, click **Advanced** to set the pre-record and post-record time of the recording schedule, and expired time of the recording file.

Step 8 Click **Save**.

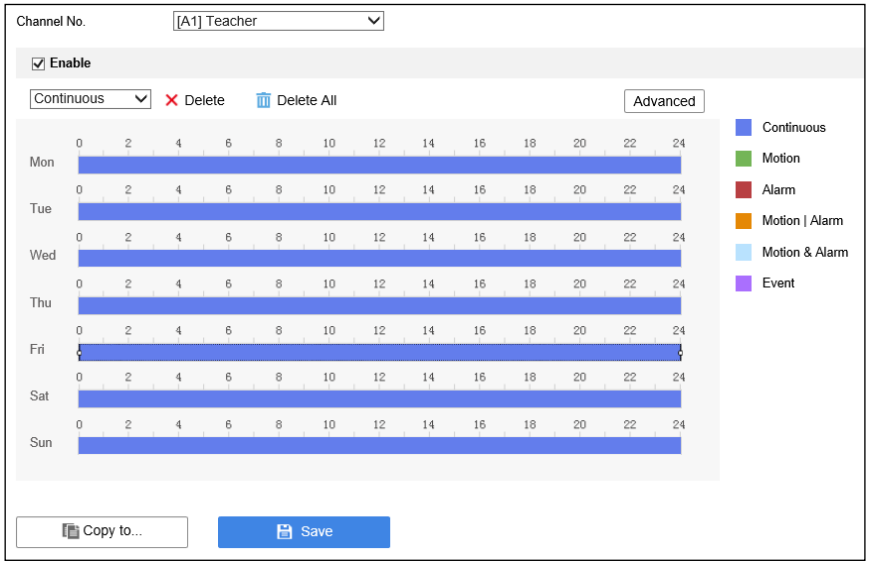


Figure 5-2 Schedule Settings

5.6 Advanced Settings

5.6.1 HDD Sleeping

Purpose:

To reduce consumption and extend hard disk's lifespan, you can enable the hard disk sleep feature. The hard disk will turn into sleep status if it keeps idle for a period.

Step 1 Go to **Configuration** > **System Settings** > **Storage Management** > **Advanced Configuration.**

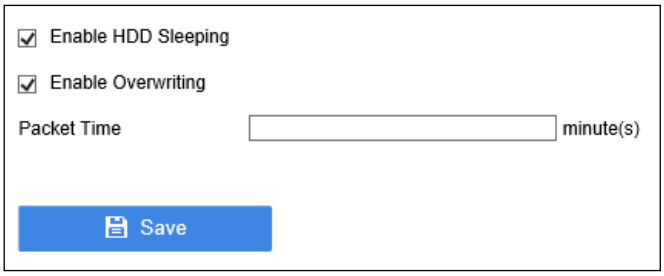


Figure 5-3 Advanced Configuration

Step 2 Check **Enable HDD Sleeping**.

Step 3 Click **Save** to activate the feature.

5.6.2 Overwriting

Purpose:

When the hard disk is full, the overwriting function will keep writing data into the hard disk by replacing its previous data.

Step 1 Go to **Configuration** > **System Settings** > **Storage Management** > **Advanced Configuration.**

Step 2 Check **Enable Overwriting**.

Step 3 Click **Save** to save the settings.

Chapter 6 Recording Settings

6.1 Live View Control Parameters

6.1.1 Manage Background Picture

Purpose:

When the live view control view is set as multi-screen 1, multi-screen 2, or multi-screen 3, in case the collaged image cannot fill in the whole screen and leaves the screen top and bottom filled in black bar, you can upload a background picture to span the whole screen.

Before you start

Ensure you have installed at least one hard disk to the device.

Upload Image

Step 1 Go to **Configuration** > **Recording Settings** > **Auxiliary Settings** > **Picture Upload.**

Figure 6-1 Background Settings

Step 2 Click **Upload Picture** to upload a picture.

NOTE

- Only JPEG format pictures can be uploaded, and the resolution shall be between 352 × 288 and 1920 x 1080.
- Up to 11 pictures can be uploaded.

Step 3 Click **OK**.

Step 4 Optionally, you can click to deleted the picture. But you cannot delete the background picture that is in usage.

Set Background Picture

Step 1 Go to **Configuration** > **Recording Settings** > **Auxiliary Settings** > **Background Settings.**

Step 2 Check **Enable Background Overlay**.

Step 3 Check the live view control view that requires to overlay background image. Only multi-screen is available.

Step 4 Select background image for the multi-screen.

Step 5 Click **Save**.

6.1.2 Courseware Detection

Set Courseware Detection

Purpose:

If auto live view control is enabled, once multimedia change is detected, education sharing system will automatically switch to multimedia channel.

Step 1 Go to **Configuration** > **Recording Settings** > **Courseware Settings** > **Courseware Settings**.

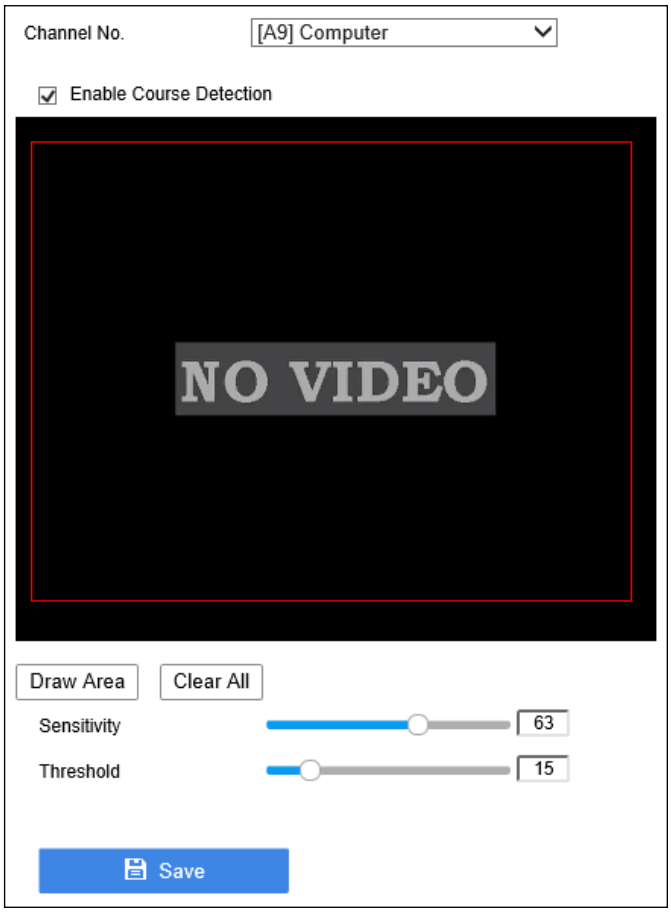


Figure 6-2 Courseware Detection

Step 2 Select **Channel No.** for course detection. **[A9] Computer** and **[A10] Computer** refer to VEDIO IN 1 and VEDIO IN 2 at the rear panel respectively.

Step 3 Check **Enable Course Detection**.

Step 4 Click **Draw Area** to draw the detection area in the camera view.

Step 5 Click **Stop Drawing** when you finish drawing the detection area.

Step 6 Optionally, you can click **Clear All** to detete the drawing area.

Step 7 Set **Sensitivity** and **Threshold** of course detection.

- **Sensitivity**: Sensitivity refers to the how much the detection area pixels change.
- **Threshold**: Threshold refers to how many pixels are changing.

Step 8 Click **Save** to save the settings.

Configure Courseware Input Source

Purpose:

The device can automatically detect the courseware input source at startup. You can configure the input source as your desire.

Step 1 Go to **Configuration** > **Recording Settings** > **Courseware Settings > Input Source Configuration**.

Step 2 Select **Channel No.** for input source. **[A9] Computer** and **[A10] Computer** refer to VEDIO IN 1 and VEDIO IN 2 at the rear panel respectively.

Step 3 Select **Input Source**. The device can automatically detect the courseware input source if you select **Auto.**

NOTE

When **Input Source** is set as **Auto,** and both HDMI and VGA signal source have been detected**,** the device will choose HDMI as its priority input source.

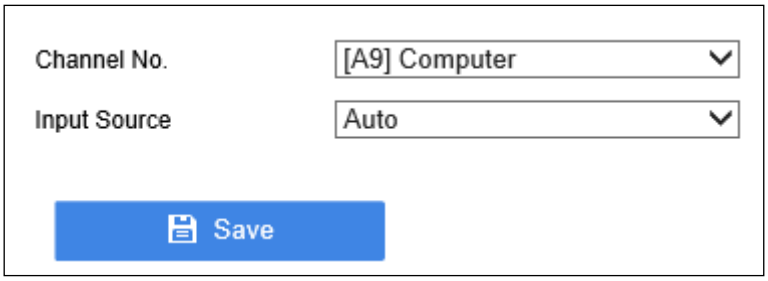


Figure 6-3 Input Source

Step 4 Click **Save**.

6.1.3 Automatic Live View Control

Purpose:

Combined with education specified speed dome and detection camera (including teacher close shot camera, student close shot camera, and multimedia camera), education sharing system can automatic display the teacher image, student image, or HDMI/VGA multimedia image in live view control view according to the speed dome smart detection information. Besides, the speed dome can preciously positioning and track teacher and record the teaching process.

NOTE

- Connect education specified speed dome and detection to education sharing system via network. For detailed steps, refer to *2.4.1 Connect via Analog Connectors*.
- In auto live view control mode, when the education specified speed dome occurs smart events or HDMI/VGA multimedia courseware changes, the cameras will be automatically displayed in the resource channel in the largest window of live view control view according to the set priority.
- You need to log in education specified speed dome configuration interface to configure its smart detection rules.

Configure Live View Control View

Step 1 Go to **Configuration** > **Recording Settings** > **Live View Settings** > **View Settings.**

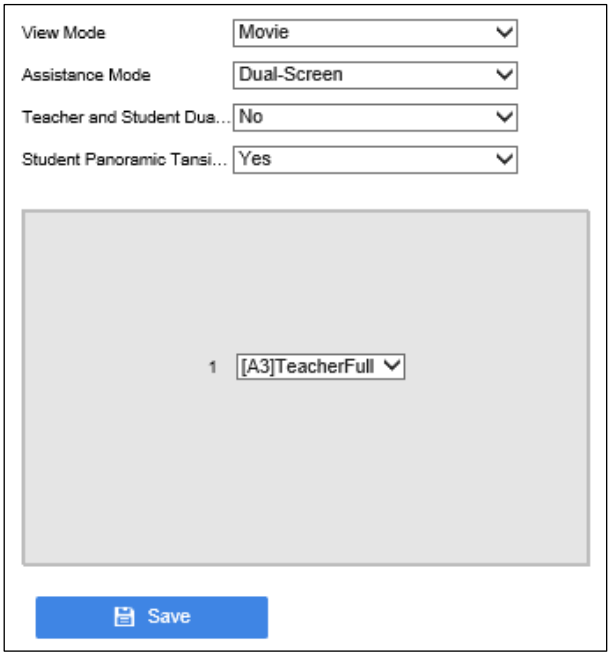


Figure 6-4 Live View Control View

Step 2 Select **View Mode**.

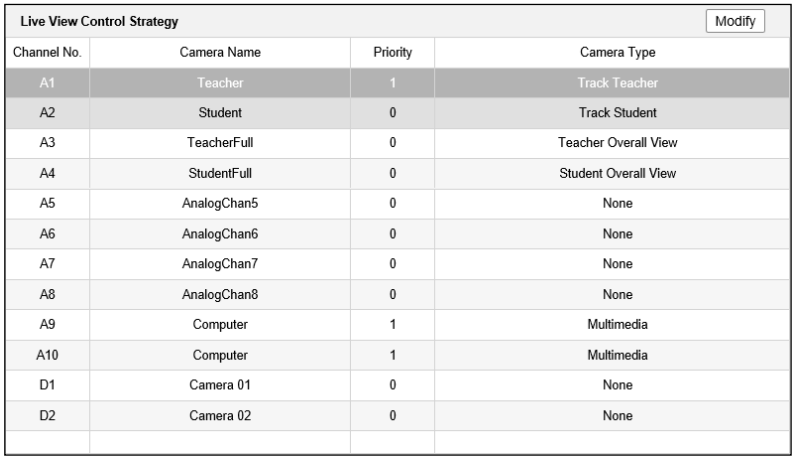
- **Movie**: You need to set **Assistance Mode** for movie mode. When one alarm is triggered, it will display in single screen. But if two or more alarms are trigged, it will display as what the **Assistance Mode** is set, including **Single Screen**, **Dual-Screen**, and **Picture-in-Picture**.
- **PIP:** PIP (Picture-in-picture) is the video display method that when the video is on full screen, another video is displayed in the inset window at the same time.
- **Multi-Screen**: Multi-image of the camera are displayed simultaneously on the screen.

Step 3 Select display channel.

Step 4 Click **Save**.

Configure Live View Control Strategy

Step 1 Go to **Configuration** > **Recording Settings** > **Live View Settings** > **Live View Control Settings**.



Channel No.	Camera Name	Priority	Camera Type
A1	Teacher	1	Track Teacher
A2	Student	0	Track Student
A3	TeacherFull	0	Teacher Overall View
A4	StudentFull	0	Student Overall View
A5	AnalogChan5	0	None
A6	AnalogChan6	0	None
A7	AnalogChan7	0	None
A8	AnalogChan8	0	None
A9	Computer	1	Multimedia
A10	Computer	1	Multimedia
D1	Camera 01	0	None
D2	Camera 02	0	None

Figure 6-5 Live View Control Strategy

Step 2 Select a channel for modification.

Step 3 Click **Modify**.

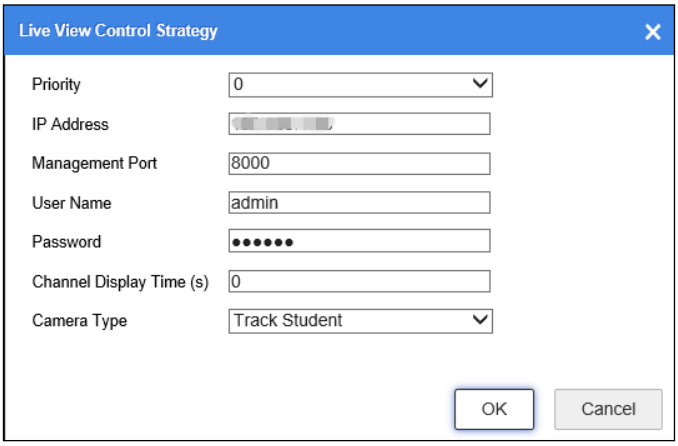


Figure 6-6 Strategy Configuration Interface

Step 4 Set the parameters, including priority, IP address, port, user name, password, etc.

- **Priority:** The priority of the selected channel. The larger the value is, the higher the priority will be.
- **Channel Display Time (s):** The display time of multimedia is recommended to set as its actual duration. Other channel's display time is recommended to set as 0. Valid channel display time range: [0, 900].

Step 5 Click **OK** to save the settings.

Configure One-touch Configuration

Step 1 Go to **Configuration** > **Recording Settings** > **Live View Settings > Live View Strategy Settings.**

Step 2 Click **Add**.

Step 3 Enter the channel parameters of live view control strategy.

Step 4 Click **OK**.

Step 5 Click **One-touch Configuration**.

NOTE

The device will automatically recognize supportable education specified cameras. If issues occur, contact the product distributor for help.

6.1.4 Course Information

Purpose:

You can define the course number, course name, and course instructor.

Step 1 Go to **Configuration** > **Courseware Settings** > **Course Settings > Course Information.**

Step 2 Edit the course information including name, teacher, etc.

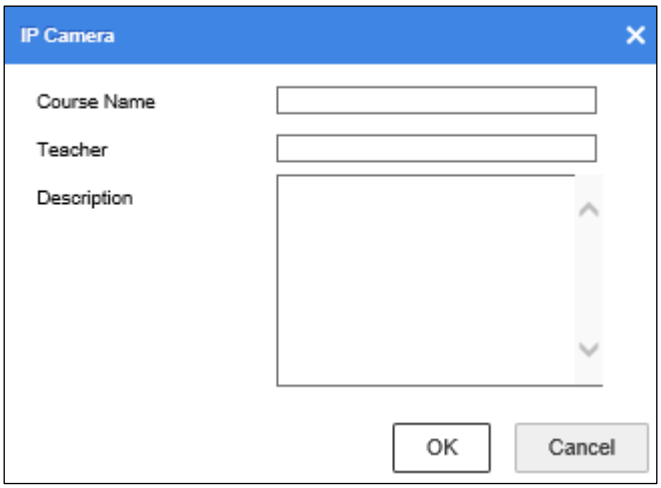


Figure 6-7 Course Information

Step 3 Click **OK**.

6.1.5 Course Plan

Purpose:

You can set the course recording plan as your desire.

Before you start:

Course plan is saved in hard disk. So you need to install at least one hard disk and format it.

Step 1 Go to **Configuration > Courseware Settings > Course Settings > Course Plan.**

Step 2 Select year and week for the plan.

Step 3 Set the recording schedule for each day in the week.

Step 4 Optionally, click **Copy to** to copy the recording schedule to other week.

Figure 6-8 Course Plan

Step 5 Click **Save**.

6.1.6 RTMP Live

Purpose:

You can view the course live view image in RTMP server. The feature is turned off by default.

Step 1 Go to **Configuration** > **System Settings** > **Network Settings > RTMP Live.**

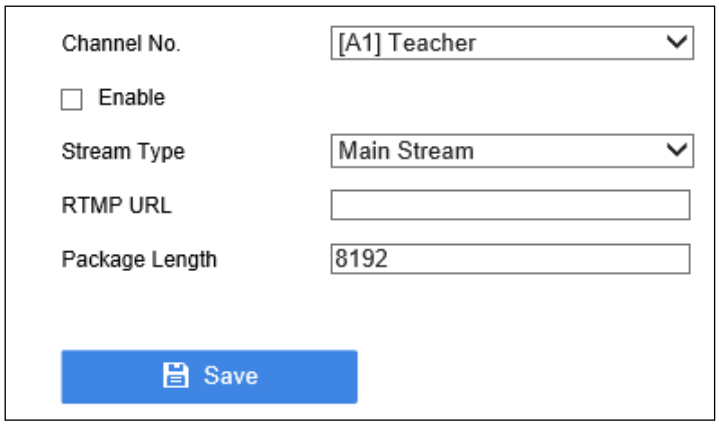


Figure 6-9 RTMP Live

Step 2 Select **Channel No.**

Step 3 Check **Enable** to enable the RTMP live feature.

NOTE

Analog camera and live view control channel support push main stream, sub-stream, and third stream. IP camera supports push main stream and sub-stream.

Step 4 Edit **Stream Type**, **RTMP URL**, and **Package Length**.

NOTE

- RTMP URL format: rtmp://192.168.1.64:1935/live/12345. 192.168.1.64 is the server IP address. 1935 is server port. Live is server name. 12345 is a custom name used to distinguish channels and stream types.
- Valid package length range: [1024, 8192]. Package length is 8192 by default and is a recommended value.

Step 5 Click **Save**.

6.1.7 Sound Mix Settings

Purpose:

You can configure the sound mix parameters, including output volume, input volume, and audio gain.

Step 1 Go to **Configuration** > **Audio/Video** > **Mix Settings.**

Step 2 Click **Output Volume** to view and set audio volume.

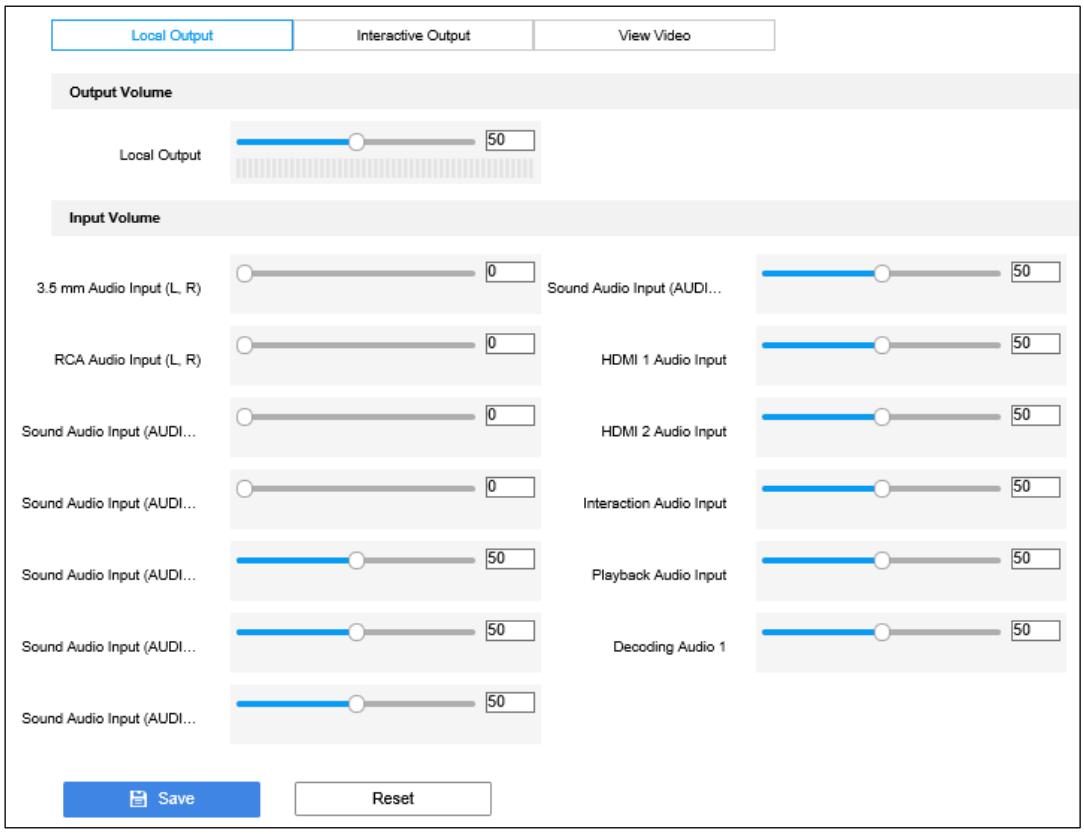


Figure 6-10 Audio Volume

Step 3 Click **More Configure** > **Advance Gain**.

Step 4 Set the audio gain. Audio gain adjusts the input audio, after the adjustment, the mixed sound will be applied to the audio output at rear panel. The gain value ranges from 1 to 100. When it is set as 1, the audio gain reaches to the minimum, and when it is set as 100, it reaches to the minimum.

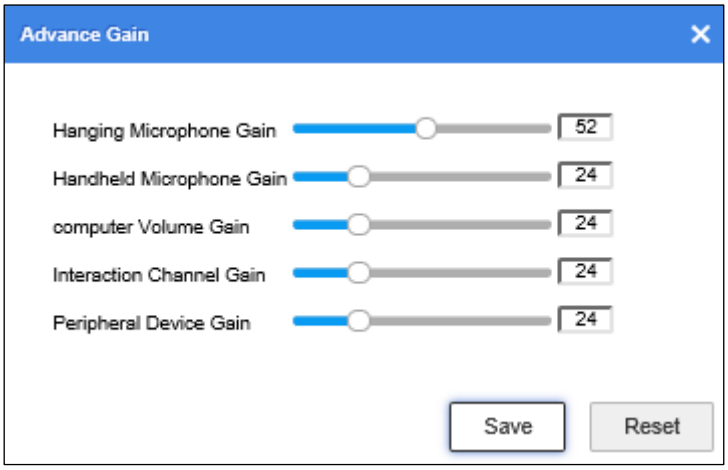


Figure 6-11 Advanced Gain

Step 1 Click **Save**.

6.2 Courseware Publishing and Downloading

6.2.1 Publish Courseware

Purpose:

The recorded courses can be automatically published to FTP server.

Step 1 Go to **Configuration** > **System Settings > FTP Publishing > Publish Configuration.**

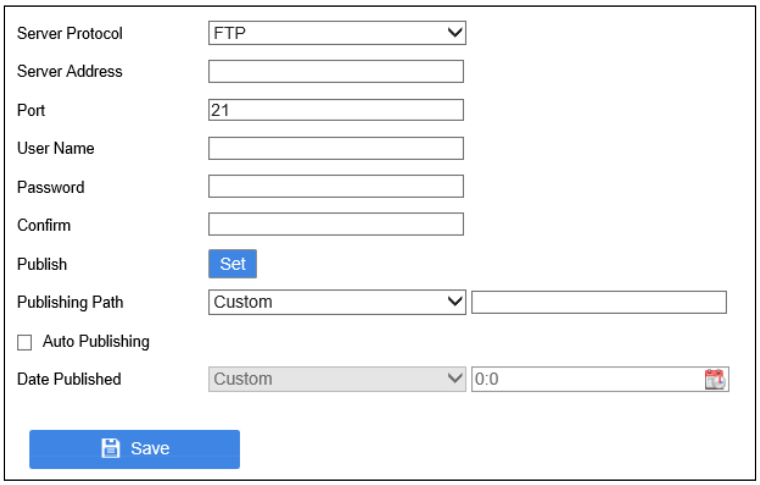


Figure 6-12 Publishing Configuration

Step 2 Enter the FTP server address, port, user name, and password.

Step 3 Click **Set** to select the publishing channel(s).

Step 4 Click **OK**.

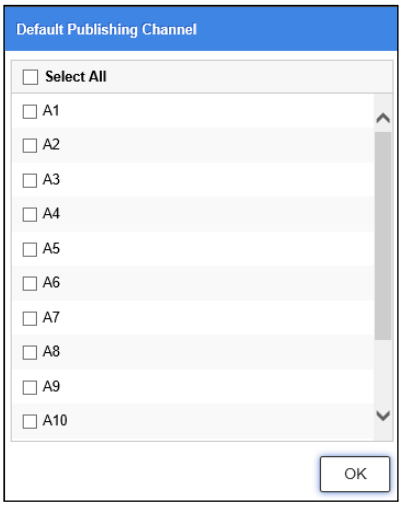


Figure 6-13 Set Publishing Channel

Step 5 Set **Publishing Path**.

Step 6 Optionally, check **Auto Publishing** to automatically publish courses. You can set **Date Published** as **Last Course** or **Custom time** for the course that requires to be published to FTP.

Step 7 Click **Save** to save the settings.

NOTE

The published course video format is MP4.

6.2.2 Search Published Course

Purpose:

After course is published, you can search its publishing progress, publishing status, course introduction.

Step 1 Go to **Configuration** > **System Settings > FTP Publishing > Published Course Search.**

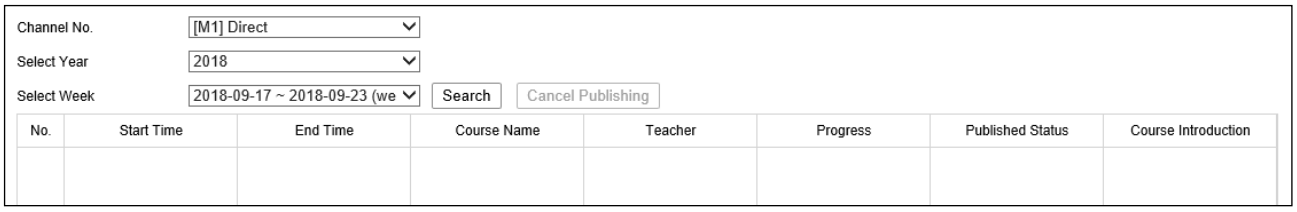


Figure 6-14 Search Published Course

Step 2 Select channel, year, and week.

Step 3 Click **Search**.

NOTE

When multiple courses are waiting to be uploading, to increase the uploading speed of high priority courses, you can cancel uploading of low priority courses.

6.2.3 Download Courses

Step 1 Go to **Playback**.

Figure 6-15 Playback

Step 2 Click .

Step 3 Set the search conditions.

Step 4 Select the course(s) from the search result for downloading.

Step 5 Click **Download** to start downloading.

NOTE

The record file will be downloaded locally. You can set the download path in **Configuration** > **System Settings > System Settings** > **Web Config**.

6.3 Video Head/Tail Configuration

Purpose:

You can insert the picture at the beginning and ending of course video.

Before you start:

Upload background first. For detailed steps, refer to *6.1.1 Manage Background Picture*.

Step 1 Go to **Configuration** > **Recording Settings** > **Auxiliary Settings > Video Head/Tail Configuration**.

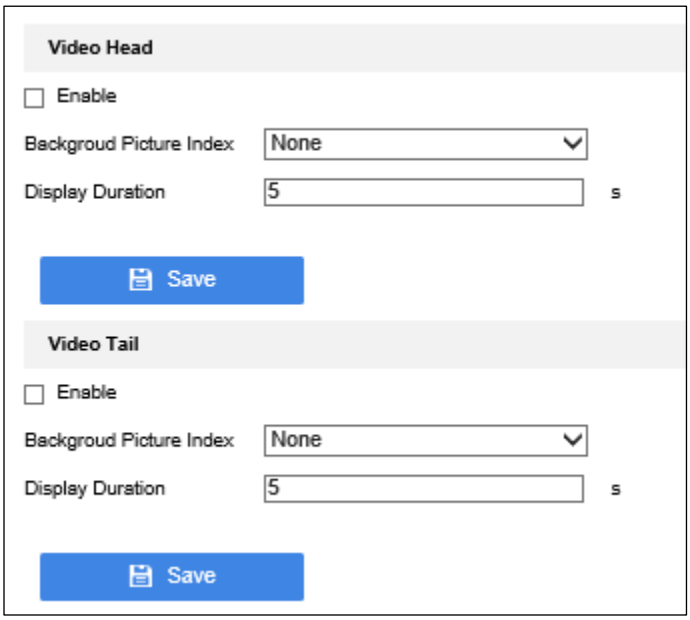


Figure 6-16 Video Head/Tail Configuration

Step 2 Configure video head.

1) Check **Enable** under **Video Head**.
2) Enter **Background Picture Index**. The index No. is the background picture No. in the background settings interface.
3) Enter **Display Duration** for the background picture.
4) Click **Save**.

Step 3 Configure video tail.

1) Check **Enable** under **Video Tail**.
2) Enter **Background Picture Index**. The index No. is the background picture No. in the background settings interface.
3) Enter **Display Duration** for the background picture.
4) Click **Save**.

6.4 Logo Configuration

You can overlay logo image on the live view.

NOTE

The required logo picture format is *.jpeg* and *.jpg*, the resolution shall be smaller than 256 × 128, and file size shall be smaller than 80 KB.

6.4.1 Upload Logo

Step 1 Go to **Configuration** > **Recording Settings** > **Auxiliary Settings > Logo Configuration**.

Step 2 Click **Browse** to select the image path.

Step 3 Click **Save**.

6.4.2 Display Logo

Step 1 Go to **Configuration** > **Recording Settings** > **Auxiliary Settings > Logo Configuration**.

Step 2 Select **Channel No.** The logo will be displayed at the selected channel.

Step 3 Check **Display Logo**.

Step 4 Select **Logo Position** as your desire.

Step 5 Click **Save**.

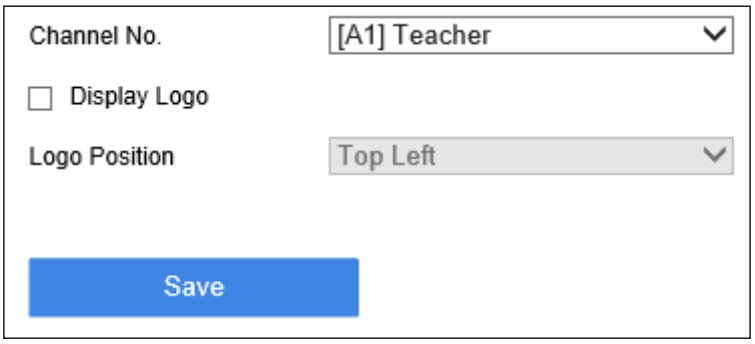


Figure 6-17 Display Logo

Chapter 7 Playback

Purpose:

You can play back videos saved in the device.

Step 1 Go to **Playback**.

Figure 7-1 Playback

Step 2 Click **Video**.

Step 3 Select the channel in the left channel list.

Step 4 Set date and time. The day with mark has record file.

Step 5 Click .

Step 6 You can drag the time bar at the bottom, or click and to adjust time.

Step 7 Click to start playback.

Step 8 Optionally, click **Course** to play back by search courses.

Chapter 8 Interaction

8.1 Interaction Settings

8.1.1 Enable Cloud Interaction

Go to **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **Basic Settings** > **Cloud Interaction Settings**, and check **Enable Cloud Interaction** to enable cloud interaction.

NOTE

- After cloud interaction is enabled, the device will restart automatically and disable 1-ch analog channel.
- After the cloud interaction is turned off, other interaction settings will be disabled.

8.1.2 Account Management

Purpose:

You can manage your interactive meeting account in **Account Management**.

Step 1 Go to **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **Account Management**.

Step 2 Click **Current Login Account** to register the device (your device will log in automatically after registration. If you log out from the current account, you have to log in manually).

Step 3 Enter your user name and password. Click **login** to get access to the platform.

Step 4 Manage your account as required.

Table 8-1 Account Management Procedures

Item	Description
	Change your alias and phone number.
	Change account password.
	Exit current account.

Item	Description
Local Meeting No.	If the device initiates an interactive meeting, other devices shall use the meeting number to join in.
Alias	Alias is your device name, and other participants can find your meeting through it. You can click to edit it. For example, it can be set as the class name.
Service Details	Check your account ID, start time and end time.
Top-up/Record	Top up or check your top-up records.

Step 5 Click **top-up**, fill in your card number and top up.

8.1.3 Configure Platform Parameters

Platform parameters are used for interaction. You can configure platform parameters in **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **Basic Settings**.

Default settings are recommended. If the default parameters are invalid, please contact the installer or technical support service.

8.1.4 Configure Interactive Video Linkage

Purpose:

You can configure Interactive Video Linkage in the interaction view.

Step 1 Go to **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **Interactive Video Linkage**.

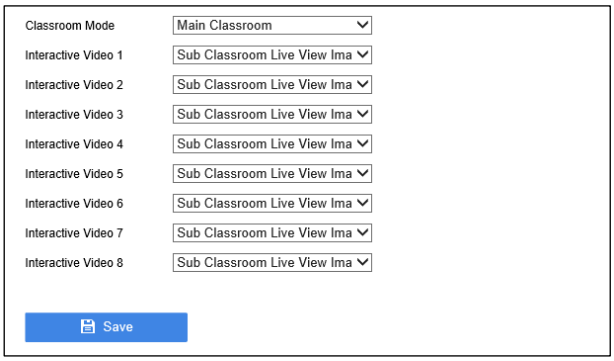


Figure 8-1 Interactive Video Linkage

Step 2 Set your classroom mode as **Main Classroom** or **Sub Classroom**.

Step 3 Select classroom live view image of the interactive video accordingly.

NOTE

You can go to **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **Interaction View** to set the position of interactive video in the interaction view.

8.1.5 Configure Interaction View

Purpose:

You can configure the view mode and the channels of the individual interaction view.

Step 1 Go to **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **Interaction View**.

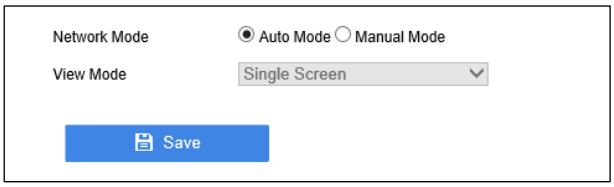


Figure 8-2 View Configuration

Step 2 Select **Network Mode**.

- **Auto Mode**: If no view is provided by other recorder, default view mode would be single screen. Otherwise, it will add new view automatically and switch to multi-screen.
- **Manual Mode**: This mode shows multi-screen view and can match the interactive video with the required view. You can set the presentation of the interactive video if you go to **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **Interactive Video Linkage**.

Step 3 Click and set the channel of each view.

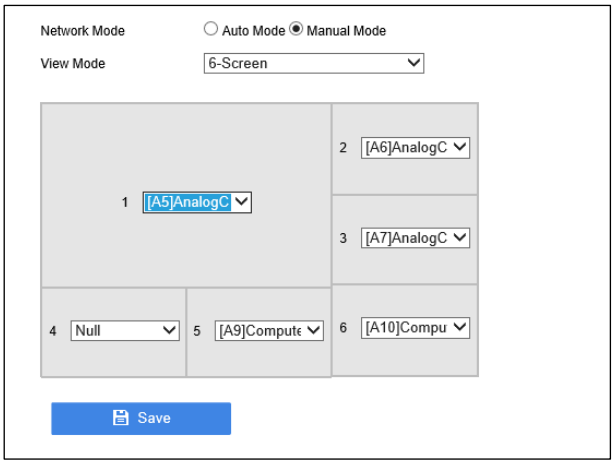


Figure 8-3 Channel Selection

Step 4 Click **Save**.

NOTE

- The screenshots are for reference only, the optional channel is subject to the actual device conditions.
- If the view channel is null, it will present black screen.

8.1.6 Sending Channel Encoding Settings

Purpose:

You can configure the main stream parameters of the sending channels.

Go to **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **Sending Channel** > **Advanced Configuration**.

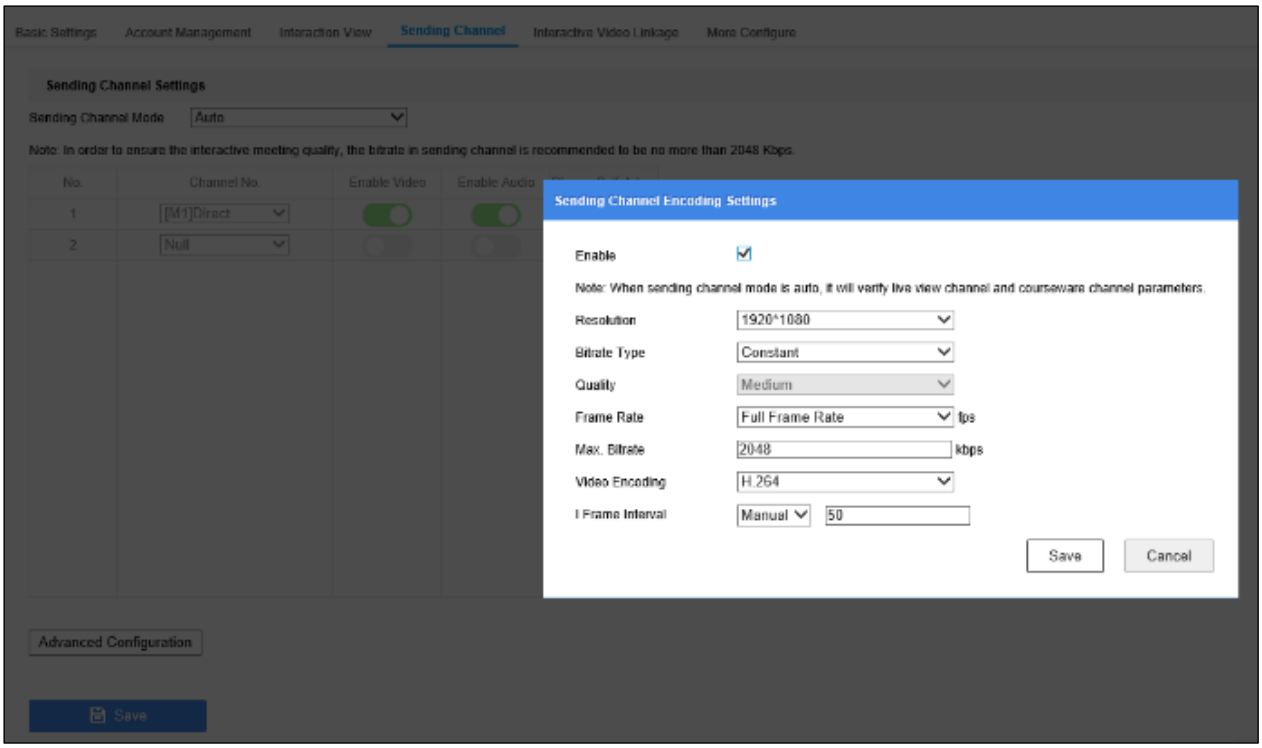


Figure 8-4 Sending Channel Code Configuration

Table 8-2 Parameter Description

Parameter Name	Parameter Description
Resolution	Indicates image precision. The higher the resolution, the clearer the image.
Bitrate Type	Variable Bitrate: Bitrate varies according to the scenarios. 6 levels of image quality are available. You can have higher usage of network bandwidth and higher efficiency of storage space. If the video encoding is H.265 and the **Bitrate Type** is variable, the system would adopt H.265 Pro format.
Quality	Only adjustable when **Bitrate Type** is set as **Variable**.
Frame Rate	Indicates video frame rate per second. The higher the frame rate, the higher the consistency of the video. Default setting is recommended.
Max. Bitrate	A reference number that indicates Max. Bitrate of the video encoding. The higher the Max. Bitrate, the better the video quality. Default setting is recommended. If you have to edit it for better video quality, resolution is suggested to be adjusted together.
Video Encoding	Video encoding format depends on specific camera.
I Frame Interval	You can improve its consistency in video loss by setting I Frame Interval. Generally, you do not need to adjust this setting, and default setting is recommended.

NOTE

The main stream parameters of the sending channels are only effective if configured in Sending Channel Encoding Settings but not in **Audio/Video** > **Video Settings**.

8.1.7 Configure Sending Channel

Purpose:

You can configure the interactive image parameters, and the image will be sent to the interactive meeting.

Step 1 Go to **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **Sending Channel**.

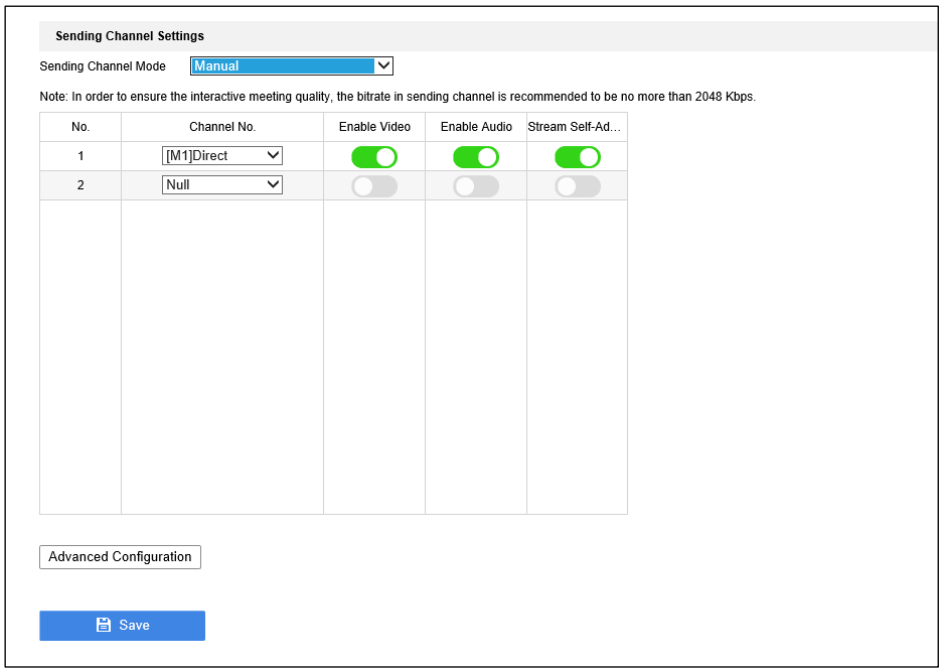


Figure 8-5 Configure Sending Channel

Stream Self-Adaption is recommended. If this function is enabled, it will adjust video bitrate automatically according to the network performance.

NOTE

- If the **Sending Channel Mode** is **auto**, the parameters can not be configured. The courseware channel and the broadcast channel are sent by default. Meanwhile, the main stream, video, audio and **Stream Self-Adaption** are applied by default.
- As the channel No. and the stream cannot be configured during the interaction process, please configure them before the interaction starts.
- Audio can be enabled or controlled only after the video is enabled.
- After enabling the video and audio, if the host is the initiator, / will be available to initiate or stop the sending process, while if the host is the participant, the device will send the video or audio by default, but it cannot stop the sending process.

Step 2 Click **Advanced Configuration** to configure the sending channel No.

8.1.8 Configure Meeting Room Permission

Purpose:

You can configure the meeting room permission (direct participation or participation with verification code).

Step 1 Go to **Configuration > Interaction Settings > Cloud Interactive Class > Basic Settings > Meeting Room Management**.

Step 2 Select **Meeting Room Permission**.

Step 3 If you select encrypted meeting room permission, you should configure the verification code.

NOTE

After you complete the configuration, verification code is required when other devices join in the interactive meeting that initiated by the host.

8.1.9 Configure Course Output

Purpose:
You can configure the course output.

Go to **Configuration** > **Interaction Settings** > **Cloud Interactive Class** > **More Configure**> **Course Output**.

If HDMI and VGA offer simultaneous video output, both HDMI or VGA provide the video of your course; if they offer independent output, the course output can be set manually. By default, VGA can provide access to both main room courseware and the sub room courseware, and this default setting can also be switched to HDMI output.

8.1.10 Overlay Interactive Alias

Purpose:
You can overlay interactive alias on the image of sending channels.

Step 1 Select **Configuration > Interaction Settings > Cloud Interactive Class > Basic Settings > Overlay Interactive Alias**.

Step 2 Check **Enable** and set **Overlay Position**.

8.1.11 Interactive Course Data Counting

Purpose:
Course data counting is available. Statistics such as head rise data and question frequencies.

Go to **Configuration > Interaction Settings > Cloud Interactive Class > More Configure > Interactive Course Data Counting** to enable this function. You can check the counting result on the platform.

8.1.12 Network Status Counting

Purpose:
The interactive view can show network status, and you can configure **Current Packet Loss Rate**

Counting Time Interval with this function.
Go to **Configuration > Interaction Settings > Cloud Interactive Class > More Configure > Network Status Counting** to input required intervals, from 1-1000.

8.1.13 Interactive Facial Image Live View

Purpose:
View the interactive live facial image of teacher.

Step 1 Select **Configuration > Recording Settings > Live View Settings > Live View Strategies Setting**, set configuration mode as auto.

Step 2 Select **Configuration > Recording Settings > Live View Settings > Live View Channel Settings**, click **add**, set camera type as null and add interactive camera as required.

In this process, when teacher stands in front of the interactive screen, the live view will switch to the facial image of the teacher.

8.2 Interaction Operation

Purpose:

The device supports multi-room interaction. You can control the device via web browser and preview the cloud interactive view via local interface.

Before you start

- Enable cloud interaction and configure interactive meeting parameters (Go to **Configuration > Interaction Settings > Cloud Interactive Class**).
- Turn off video meeting.
- The device has been registered, logged in and topped up.

Step 1 Enter the web browser and select **Interaction**.

Step 2 Initiate or join a meeting.

NOTE

The initiator can ask questions to the participant or remove the participant. The meeting No. filled in by participant is the Device Meeting No. (can be obtained from the initiator, on the Web page of the host **Configuration > Interaction Settings > Cloud Interactive Class > Account Management**).

Step 3 Complete the configuration accordingly.

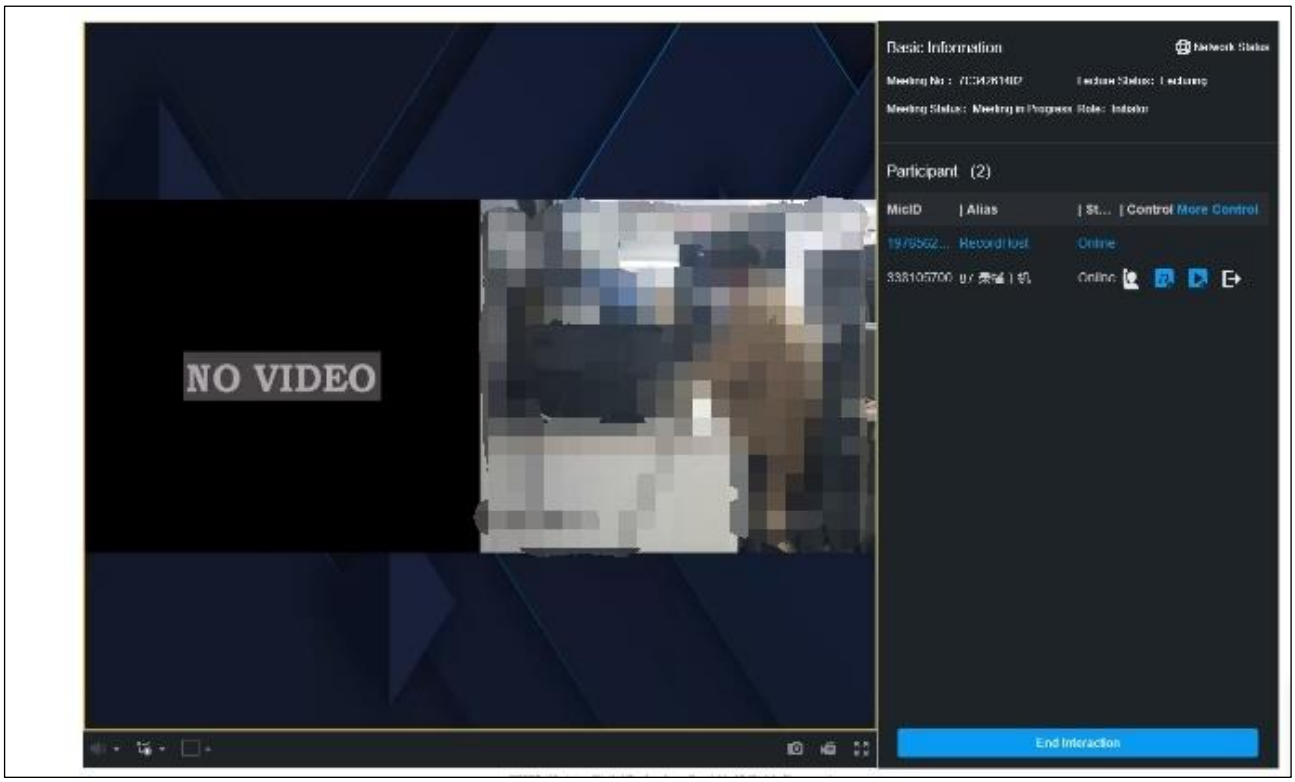


Figure 8-6 Interaction

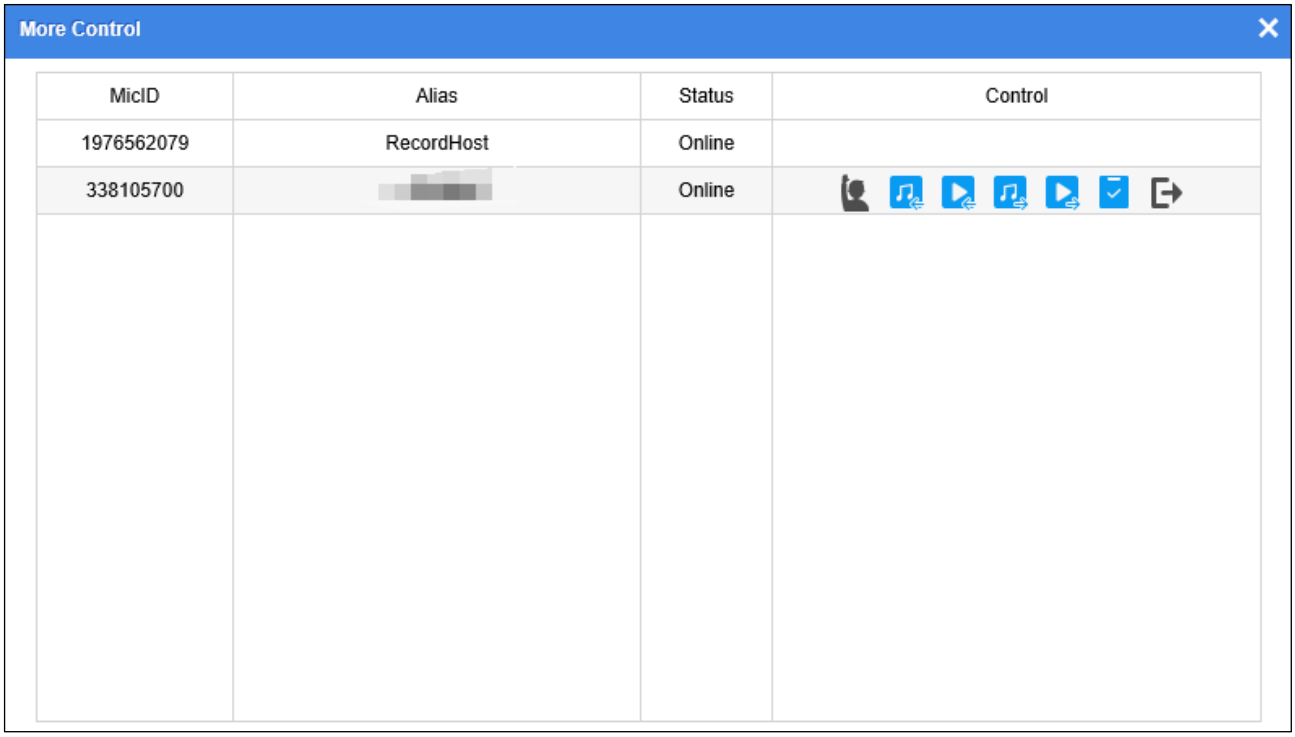


Figure 8-7 More Control

Table 8-3 Interaction and Other Procedures

Icon	Description	Remarks
	Adjust view mode.	This function is only available when the view mode is 'manual' (Go to **Configuration > Interaction Settings > Cloud Interactive Class > Interactive View**).
	Capture current view.	Go to **Configuration > System Settings > System Settings > WEB Config > Save Snapshots** in Live View to.
	Start recording.	Go to **Configuration > System Settings > System Settings > WEB Config> Save Record Files to**.
	Control button of the participant list. Function is as same as the more control.	Blue indicates on, white indicates off, grey indicates channel is offline and unavailable.
	Click and you can control more options.	Null.
	Receive audio. To receive or decline the audio sent by the participant. Only available when video stream is enabled.	Blue indicates on, black indicates off, grey indicates channel is offline and unavailable.
	Receive video stream. To receive or decline the audio and video sent by the participant.	
	Ask question. The initiator can ask questions to the participant, when you go to **Configuration > Interaction Settings > Cloud Interactive Class > Interactive View**,	Only available for initiators. Blue indicates on, black indicates off, grey indicates channel is offline and unavailable.

Icon	Description	Remarks
	select auto mode and enable this function.	
	Receive audio. To receive or decline the audio sent by the participant. Only available when video is enabled.	
	Receive video. To receive or decline the audio and video sent by the participant.	
	To show or hide student name in the meeting room. Only available when individual behavior analytics is configured and when the camera supports this function.	
	Remove meeting. Remove other device from the interaction.	

NOTE

If the interactive view prompts unstable network connection, please check and adjust the network enviornment.

Chapter 9 Smart Settings

9.1.1 Enable Class Statistics Data

Purpose:

You can count view and alarm information via the feature. By default, the feature is turned off.

Step 1 Go to **Configuration** > **Smart Settings** > **Class Data.**

Step 2 Check **Enable Course Data Statistics**.

Step 3 Click **Save**.

9.1.2 Search Class Statistics Data

Step 1 Go to **Smart Data > Class Data**.

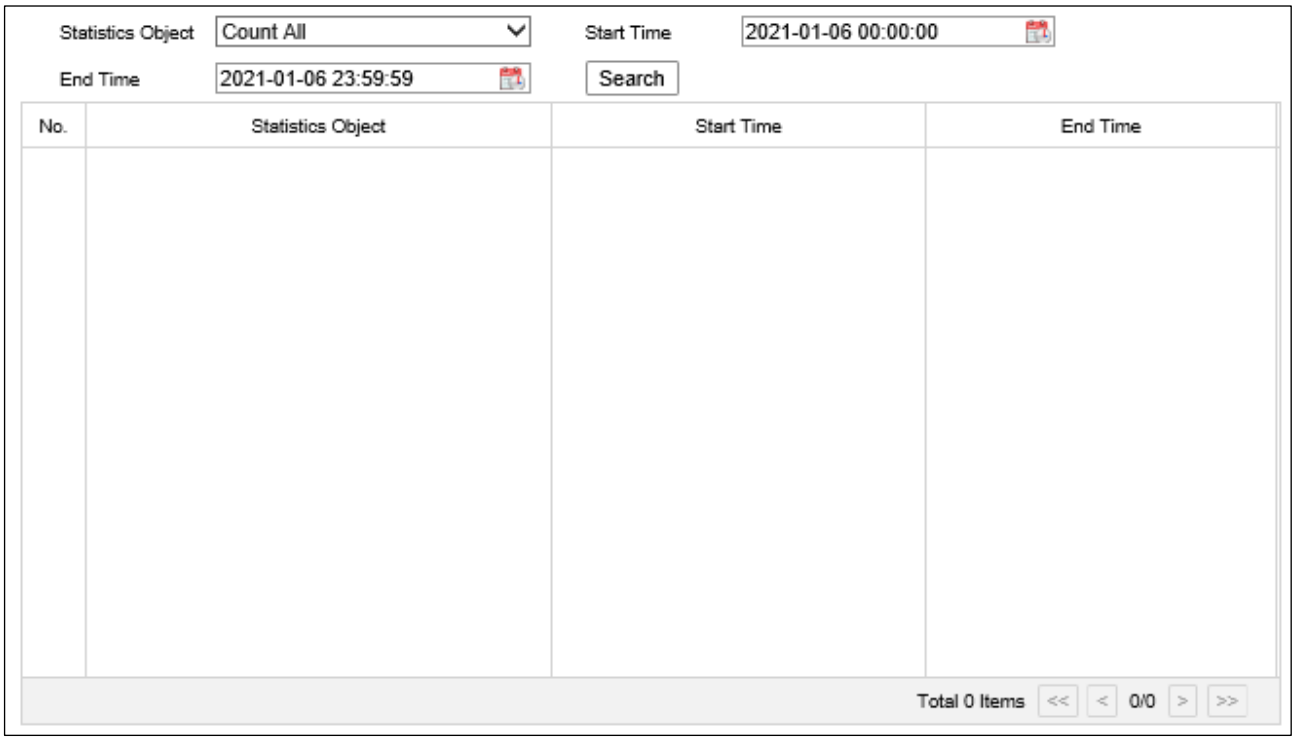


Figure 9-1 Class Data

Step 2 Select **Statistics Object**. 7 views and 10 alarms are selectable.

Step 3 Specify statistic **Start time** and **End time**.

Step 4 Click **Search** to start searching.

NOTE

After statistics finished, wait for 5 minutes to write data into hard disk before shutdown.

Chapter 10 Network Settings

10.1 Basic Network Settings

Step 1 Go to **Configuration** > **System Settings** > **Network Settings** > **TCP/IP**.

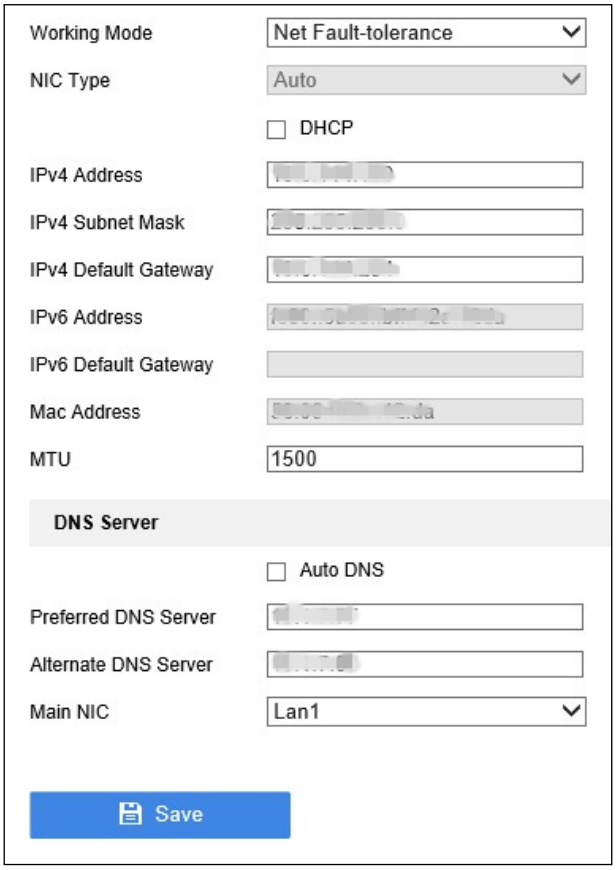


Figure 10-1 Basic Network Settings

Step 2 Select **Working Mode** as **Net Fault-Tolerance**, **Load Balance**, or **Multi-Address**.

- **Net-fault Tolerance Mode**: The two NIC cards use the same IP address, and you can select the Main NIC to any LAN. By this way, in case of one NIC card failure, the system will automatically enable the standby NIC card so as to ensure the normal running of the whole system.
- **Load Balance**: By using the same IP address and two NIC cards share the load of the total bandwidth, which enables the system to provide two Gigabit network capacity.
- **Multi-address Mode**: The parameters of the two NIC cards can be configured independently. You can select a LAN in the NIC type field for parameter settings. You can select one NIC card as the default route. And then the system is connecting with the extranet the data will be forwarded through the default route.

Step 3 Set the NIC settings.

1) Select **NIC Type**.

2) Enter **IPv4 Address**, **IPv4 Subnet Mask**, **IPv4 Default Gateway**. You can check **DHCP** (Dynamic Host Configuration Protocol) to obtain IPv4 address dynamically.

Step 4 Optionally, you can configure the maximum transmission unit (MTU) as your desire.

Step 5 Enter DNS server parameters.

Step 6 Click **Save** to save the settings.

10.2 PPPoE Settings

Purpose

The device can access Internet via dialing up.

Step 1 Go to **Configuration** > **System Settings** > **Network Settings** > **PPPoE**.

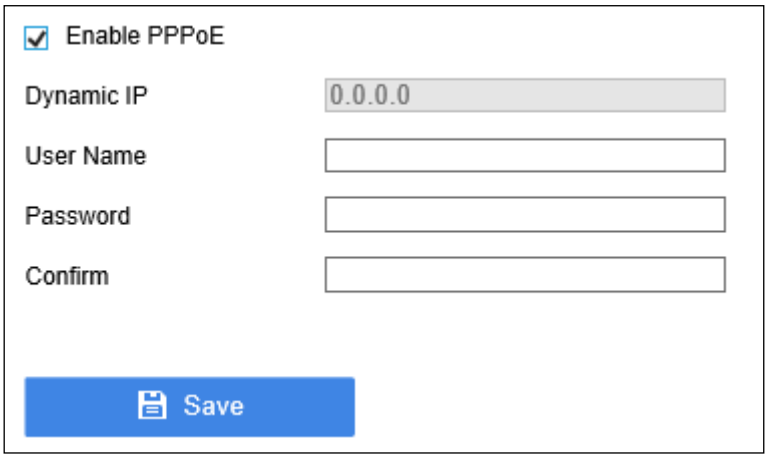


Figure 10-2 PPPoE Settings

Step 2 Check **Enable PPPoE**.

Step 3 Enter user name and password of your dial-up account.

Step 4 Click **Save**.

10.3 DDNS Settings

Purpose:

If your device is set to use PPPoE as its default network connection, you may set Dynamic DNS (DDNS) to be used for network access.

Before you start:

Prior registration with your DDNS Provider is required before configuring the system to use DDNS.

Step 1 Go to **Configuration** > **System Settings** > **Network Settings** > **DDNS**.

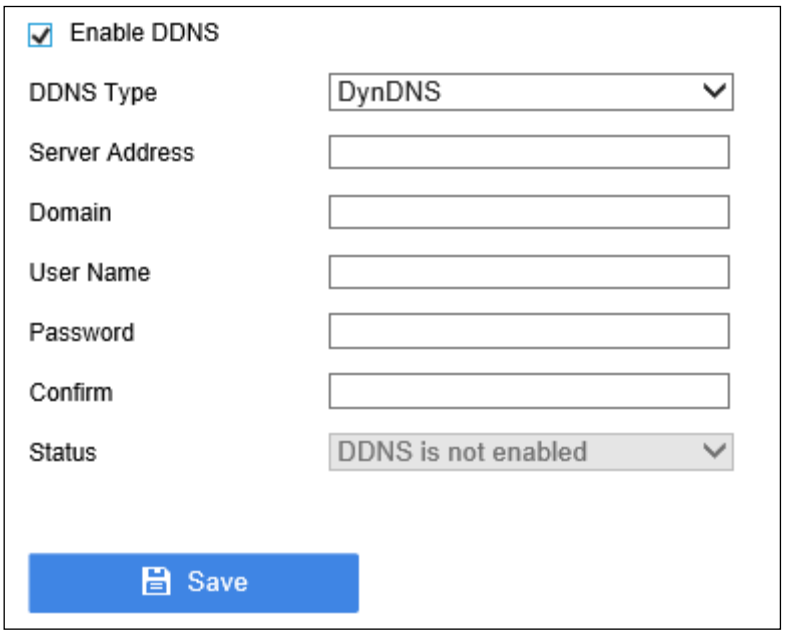


Figure 10-3 DDNS Settings

Step 2 Check **Enable DDNS**.

Step 3 Select **DDNS Type** as **DynDNS**, **PeanutHull**, or **NO-IP**.

- DDNS Type: DynDNS
  1) Enter **Server Address** for DynDNS server.
  2) Enter the domain obtained from the DynDNS website in **Domain**.
  3) Enter user Name and password registered in the DynDNS website.
  4) Click **Save** to save the settings.

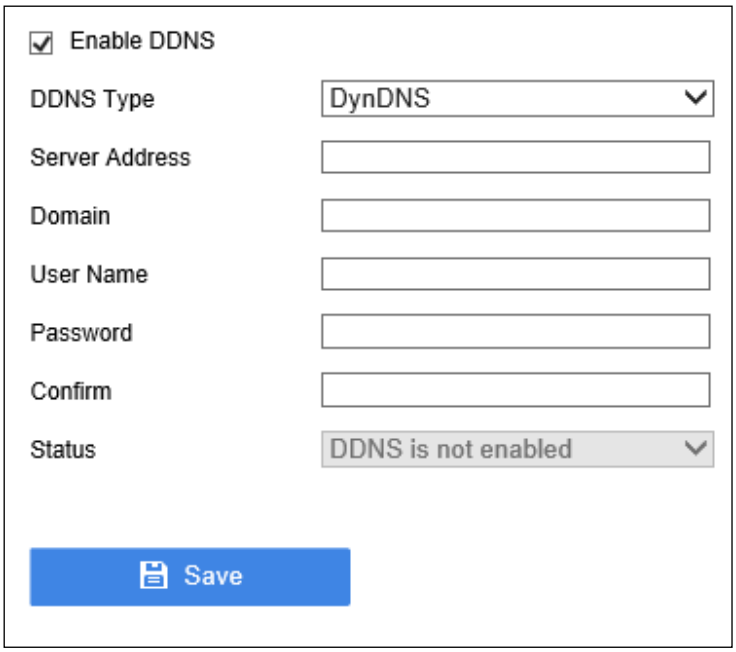


Figure 10-4 DynDNS Settings

- DDNS Type: PeanutHull
  1) Enter the user Name and password obtained from the PeanutHull website.

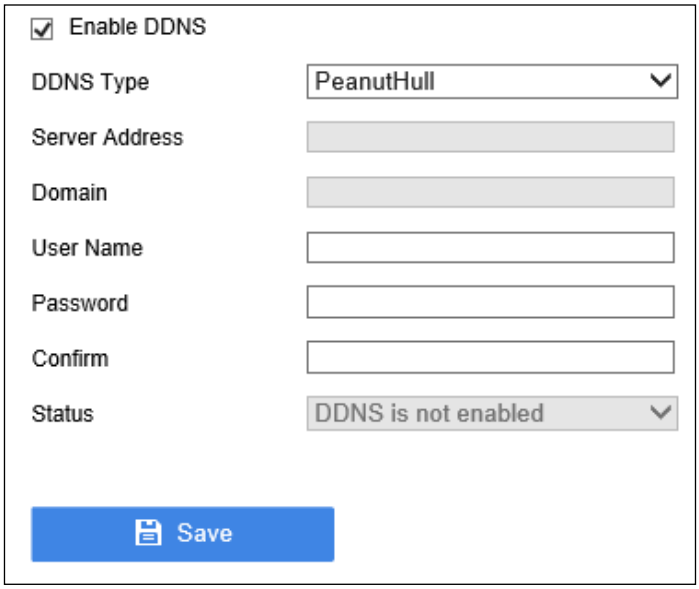


Figure 10-5 PeanutHull

  2) Click **Save** to save the settings.

- DDNS Type: NO-IP
  1) Enter **Server Address** for NO-IP.
  2) Enter the domain obtained from the NO-IP website (www.no-ip.com) in **Domain**.
  3) Enter the user name and password registered in the NO-IP website.
  4) Click **Save** to save the settings.

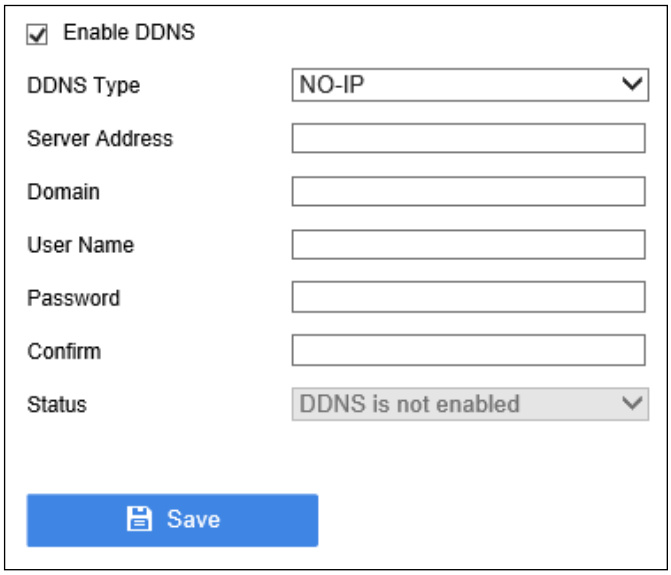


Figure 10-6 NO-IP

10.4 Email Settings

Purpose:

The system can be configured to send an Email notification to all designated users if an alarm event is detected, etc., an alarm or motion event is detected or the administrator password is changed.

Before configuring the email settings, the education sharing system must be connected to a local area network (LAN) that maintains an SMTP mail server. The network must also be connected to either an intranet or the Internet depending on the location of the email accounts to which you want to send notification.

Before you start:

Configure IPv4 Address, IPv4 Subnet Mask, IPv4 Gateway, and the Preferred DNS Server in the basic network setting interface. For detailed steps, refer to *step 5 of 10.1 Basic Network Settings*.

Step 1 Go to **Configuration** > **System Settings** > **Network Settings** > **Email.**

Step 2 Configure the following Email settings:

- **Authentication (optional)**: Check the checkbox to enable the server authentication feature.
- **User Name**: The user name of sender's account registered on the SMTP server.
- **Password**: The password of sender's account registered on the SMTP server.
- **Confirm**: Enter the password again.
- **SMTP Server**: The SMTP Server IP address or host name (e.g., smtp.263xmail.com).
- **SMTP Port**: The SMTP port. The default TCP/IP port used for SMTP is 25.
- **Enable SSL/TLS (optional)**: Click the checkbox to enable SSL/TLS if required by the SMTP server.
- **Sender**: The name of sender.
- **Sender's Address**: The Email address of sender.
- **Select Receivers**: Select the receiver. Up to 3 receivers can be configured.
- **Receiver**: The name of user to be notified.
- **Receiver's Address**: The Email address of user to be notified.
- **Enable Attached Picture**: Check the checkbox of Enable Attached Picture if you want to send email with attached alarm images. The interval is the time of two adjacent alarm images. You can also set SMTP port and enable SSL here.
- **Interval**: The interval refers to the time between two actions of sending attached pictures.

Step 3 Click **Save**.

10.5 NAT Settings

Purpose:

Two ways are provided for port mapping to realize the remote access via the cross-segment network, UPnP™ and manual mapping.

10.5.1 UPnP™ Settings

Universal Plug and Play (UPnP™) can permit the device seamlessly discover the presence of other network devices on the network and establish functional network services for data sharing, communications, etc. You can use the UPnP™ function to enable the fast connection of the device to the WAN via a router without port mapping.

Before you start:

If you want to enable the UPnP™ function of the device, you must enable the UPnP™ function of the router to which your device is connected. When the network working mode of the device is set as multi-address, the Default Route of the device should be in the same network segment as that of the LAN IP address of the router.

Step 1 Go to **Configuration** > **System Settings** > **Network Settings** > **UPnP.**

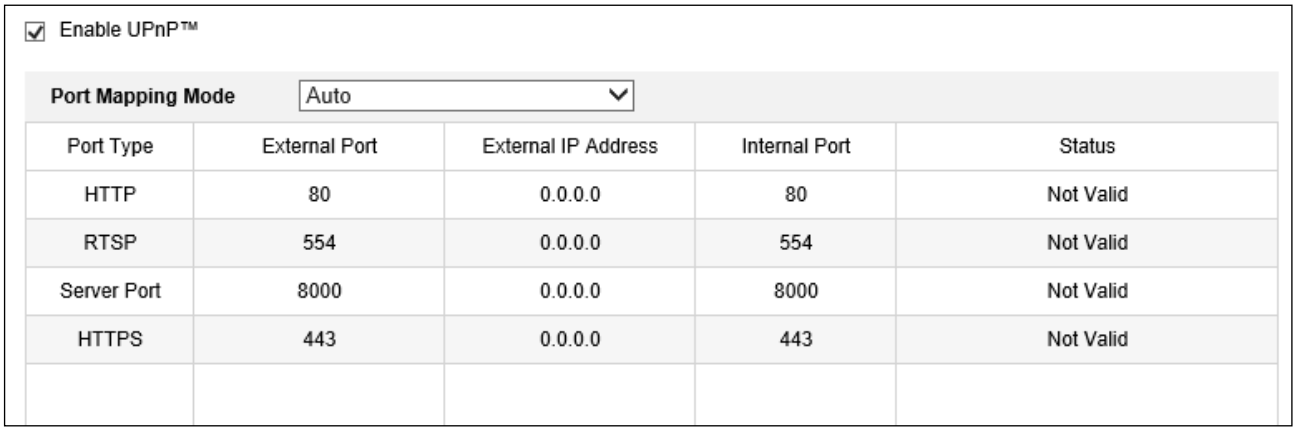


Figure 10-7 UPnP™ Settings Interface

Step 2 Check **Enable UPnP™**.

Step 3 Select **Port Mapping Type** as **Manual** or **Auto**.

- OPTION 1: Auto

  If you select **Auto**, the port mapping items are read-only, and the external ports are set by the router automatically.

- OPTION 2: Manual

  If you select Manual as the mapping type, you can edit the external port as your demand.

NOTE

- You can use the default port No., or change it according to actual requirements.
- External Port indicates the port No. for port mapping in the router.

- The value of the RTSP port No. should be 554 or between 1024 and 65535, while the value of the other ports should be between 1 and 65535 and the value must be different from each other. If multiple devices are configured for the UPnP™ settings under the same router, the value of the port No. for each device should be unique.

Step 4 Click **Apply** button to save the settings.

10.5.2 Manual Mapping

Purpose:

If your router does not support the UPnP™ function, perform the following steps to map the port manually in an easy way.

Before you start:

Make sure the router support the configuration of internal port and external port in the interface of Forwarding.

Step 1 Go to **Configuration** > **System Settings** > **Network Settings> UPnP.**

Step 2 Uncheck **Enable UPnP™**.

Step 3 Click on a value of **External Port**. And enter the external port No. for server port, http port, RTSP port, and https port respectively.

NOTE

The value of the RTSP port No. should be 554 or between 1024 and 65535, while the value of the other ports should be between 1 and 65535 and the value must be different from each other. If multiple devices are configured for the UPnP™ settings under the same router, the value of the port No. for each device should be unique.

Step 4 Click **Save** to save the settings.

Step 5 Enter the virtual server setting page of router; fill in the blank of Internal Source Port with the internal port value, the blank of External Source Port with the external port value, and other required contents.

NOTE

Each item should be corresponding with the device port, including server port, http port, RTSP port and https port.

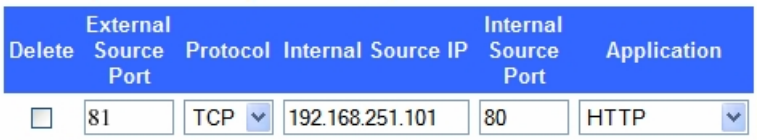


Figure 10-8 Setting Virtual Server Item

NOTE

The above virtual server setting interface is for reference only, it may be different due to different router manufactures. Please contact the manufacture of router if you have any problems with setting virtual server.

10.6 HTTPS Settings

Purpose:

HTTPS provides authentication of the web site and associated web server that one is communicating with, which protects against Man-in-the-middle attacks. Perform the following steps to set the port number of https.

For example, if you set the port number as 443 and the IP address is 192.0.0.64, you may access the device by inputting https://192.0.0.64:443 via the web browser.

Step 1 Go to **Configuration > System Settings > Network Settings** > **HTTPS.**

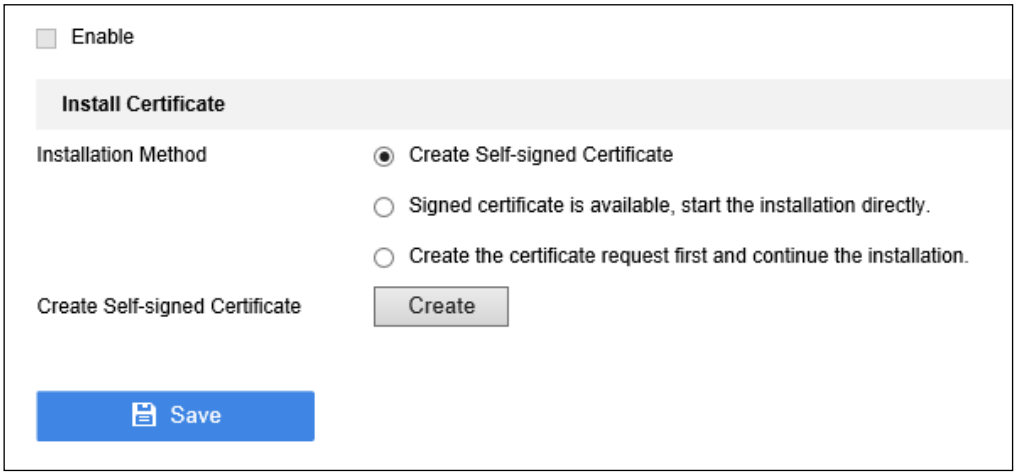


Figure 10-9 HTTPS Interface

Step 2 Check **Enable HTTPS** to enable the function.

Step 3 Click **Save** to save the settings.

10.7 SSH Settings

Purpose:

You can enable SSH feature, thus to effectively prevent information leakage during remote management.

Step 1 Go to **Configuration** > **System Settings** > **Maintenance** > **Security Service.**

Step 2 Check **Enable SSH**.

Step 3 Click **Save** to save the settings.

Chapter 11 Alarm Settings

11.1 Alarm Input

Purpose:

Set the handling action of the external sensor alarm.

Step 1 Go to **Configuration > System Settings** > **Event Configuration** > **Alarm Input**.

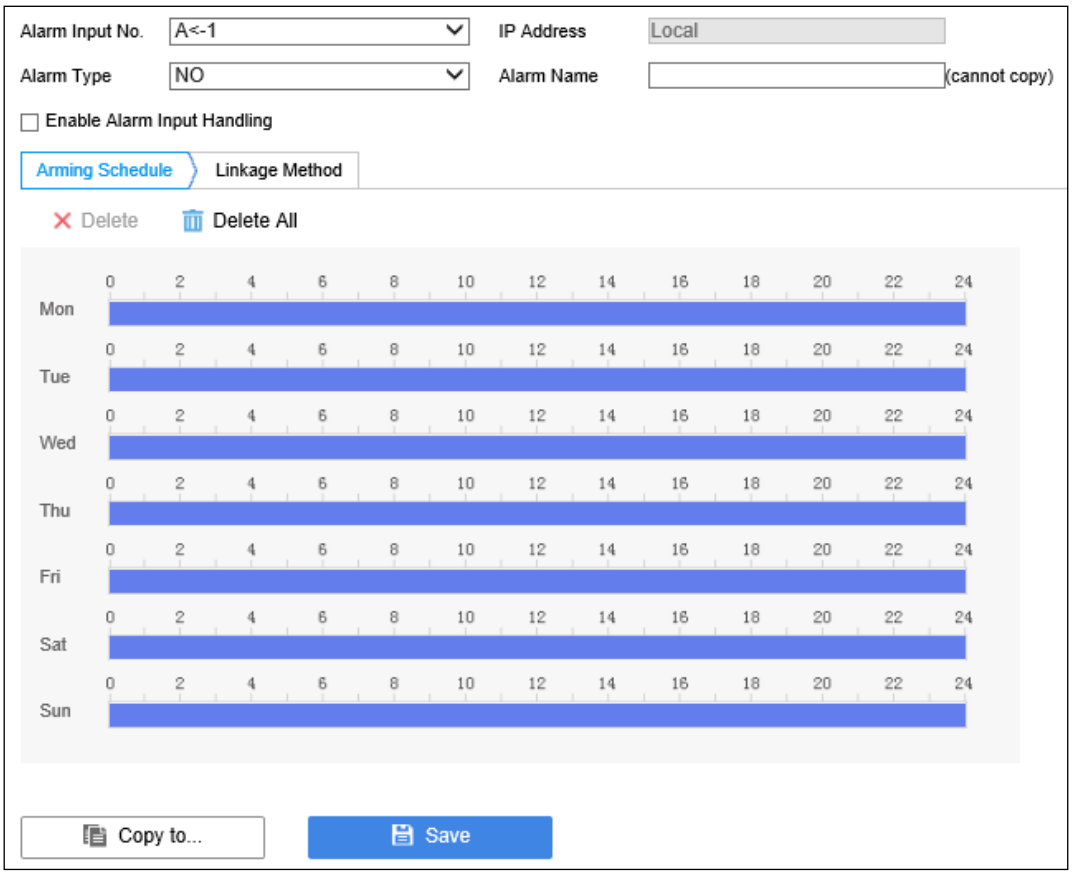


Figure 11-1 Alarm Input Settings Interface

Step 2 Check **Enable Alarm Input Handling**.

Step 3 Select **Alarm Input No.**

Step 4 Select **Alarm Type** as **NO** (normally open) or **NC** (normally closed) for alarm type.

NOTE

- **NO**: Alarm linking method is triggered when the alarm input is closed.
- **NC**: Alarm linking method is triggered when the alarm input is opened.

Step 5 Enter **Alarm Name**.

Step 6 Configure arming schedule. Linking method is only available in the arming period.

1) Select a day in a week to configure arming schedule.
2) Set the arming schedule of the selected day.
3) Optionally, you can click to copy the schedule to other days.
4) Optionally, you can click **Copy to** to copy the arming schedule to other alarm input No.
5) Click **Save** to save the settings.

Step 7 Configure linking method.

1) Set **Normal Linking** action, **Trigger Alarm Output**, **Trigger Recording,** and **PTZ Linking** as your desire. Once an alarm occurs during arming period, the selected linking method will be triggered.
2) Click **Save** to save the settings.

11.2 Alarm Output

Purpose:

You can configure the delay duration, arming period, and alarm output name.

Step 1 Go to **Configuration > System Settings** > **Event Configuration** > **Alarm Output**.

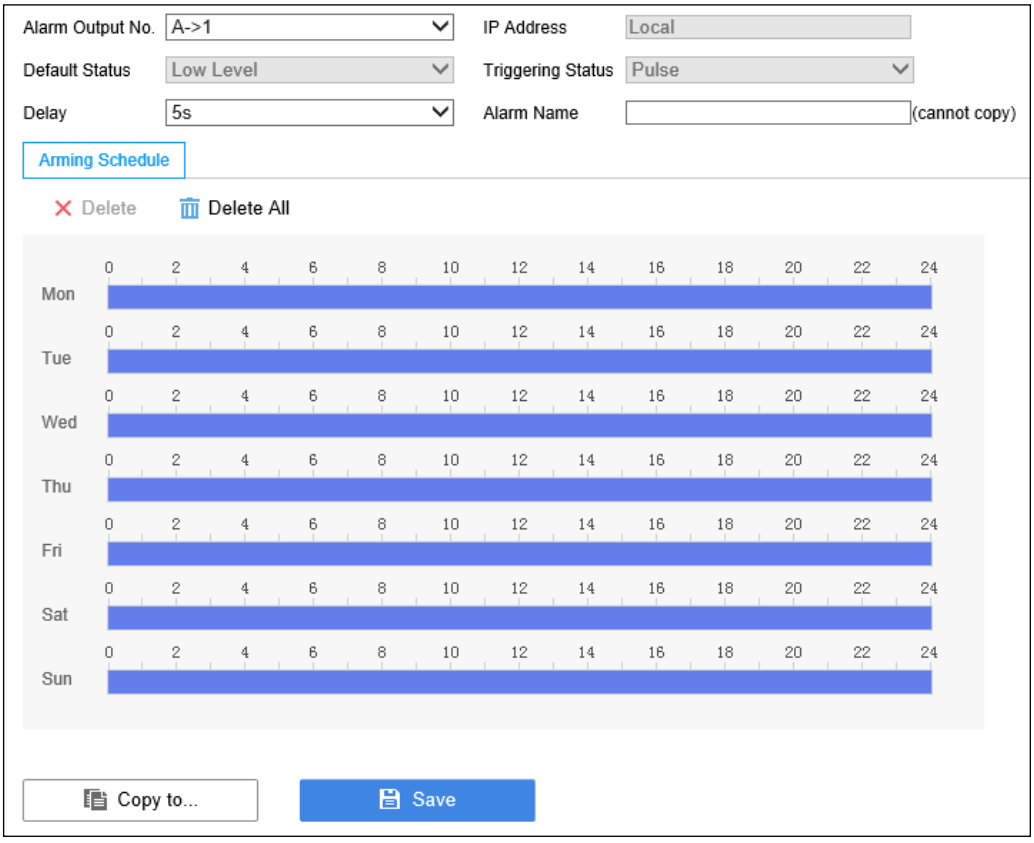


Figure 11-2 Alarm Output Settings Interface

Step 2 Select **Alarm Output** No. to configure in the dropdown list.

Step 3 Select the **Delay** duration. The device sends out alarm output signal for the set duration.

Step 4 Enter **Alarm Name**.

Step 5 Configure the arming time. The alarm output signal is only available in arming duration.

1) Select a day in a week to configure arming schedule.
2) Set the arming schedule of the selected day.
3) Optionally, you can click to copy the schedule to other days.
4) Optionally, you can click **Copy to** to copy the arming schedule to other alarm output No.

Step 6 Click **Save** to save the settings.

11.3 Exception

Purpose:

You can specify the triggered linkage action and alarm output when exception occurs.

Step 1 Go to **Configuration > System Settings** > **Event Configuration** > **Exception**.

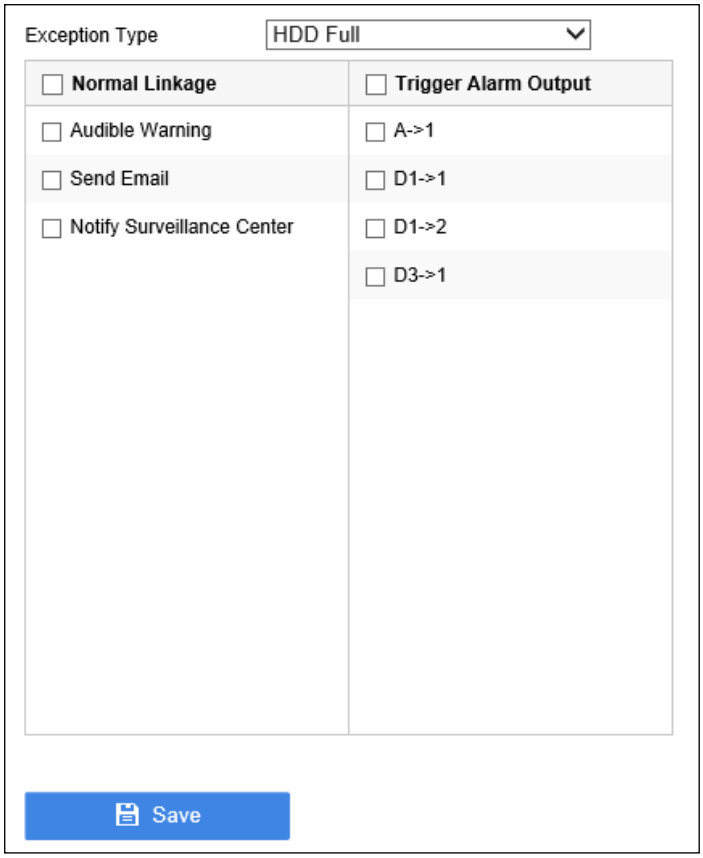


Figure 11-3 Exception

Step 2 Select **Exception Type**.

- **HDD Full:** The HDD is full.
- **HDD Error:** Writing HDD error or unformatted HDD.
- **Network Disconnected:** Disconnected network cable.
- **IP Address Conflicted:** Duplicated IP address.
- **Illegal Login:** Incorrect user ID or password.
- **Record Exception:** Recording abnormal.
- **Resolution Mismatch:** Video files' resolution stored in education sharing system mismatches with the connected camera resolution.

Step 3 Select **Normal Linking** and **Trigger Alarm Output**.

Step 4 Click **Save** to save the settings.

Chapter 12 User Management

Purpose:

You can add, edit, and delete users.

Step 1 Go to **Configuration > System Settings** > **User Management** > **User Management**.

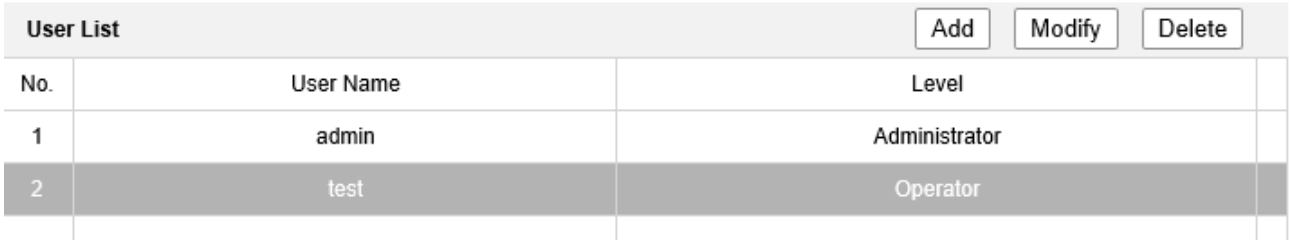


Figure 12-1 User Management

12.1 Add a User

Step 1 Click **Add**.

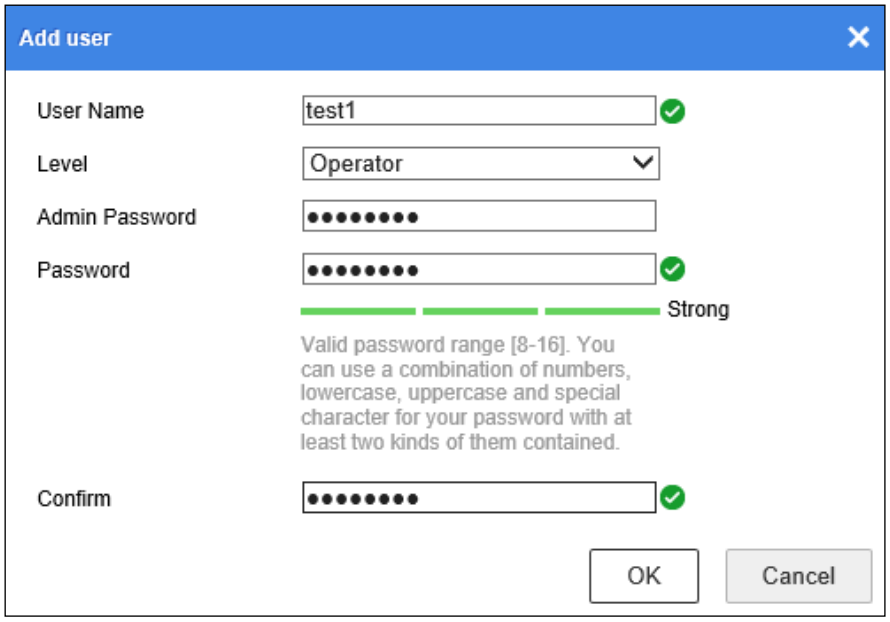


Figure 12-2 Add User

Step 2 Enter user name and password.

WARNING

Strong Password recommended–We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the

security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Step 3 Select **Level** as **Operator** or **User**.

- **Operator:** The *Operator* user can view live image, and achieve playback operation which includes course search and course download.
- **User:** The Guest user only has permission of viewing live image.

Step 4 Click **OK** to add the user.

12.2 Modify a User

Step 1 Select a user account.

Step 2 Click **Modify**.

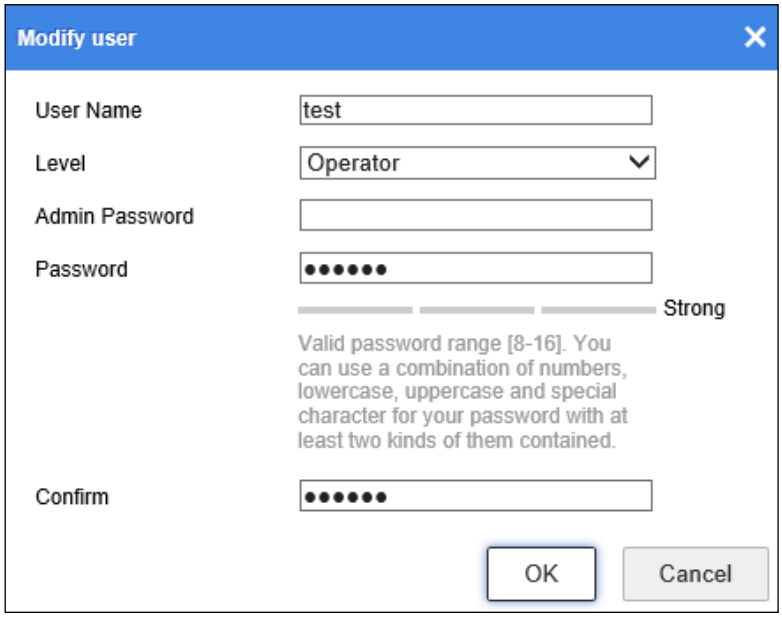


Figure 12-3 Modify a User

Step 3 Edit the user account, including password and level.

WARNING

STRONG PASSWORD RECOMMENDED–We highly recommend you create a strong password of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Step 4 Click **OK**.

12.3 Delete a User

Step 1 Select a user account.

Step 2 Click **Delete,** and a message box will pop up.

Step 3 Click **OK** to delete the selected user account.

Chapter 13 Maintenance

Purpose:

You can restart, restore default, repair database index, export/import configuration file, and upgrade device in **Configuration** > **System Settings** > **Maintenance** > **Upgrade & Maintenance**.

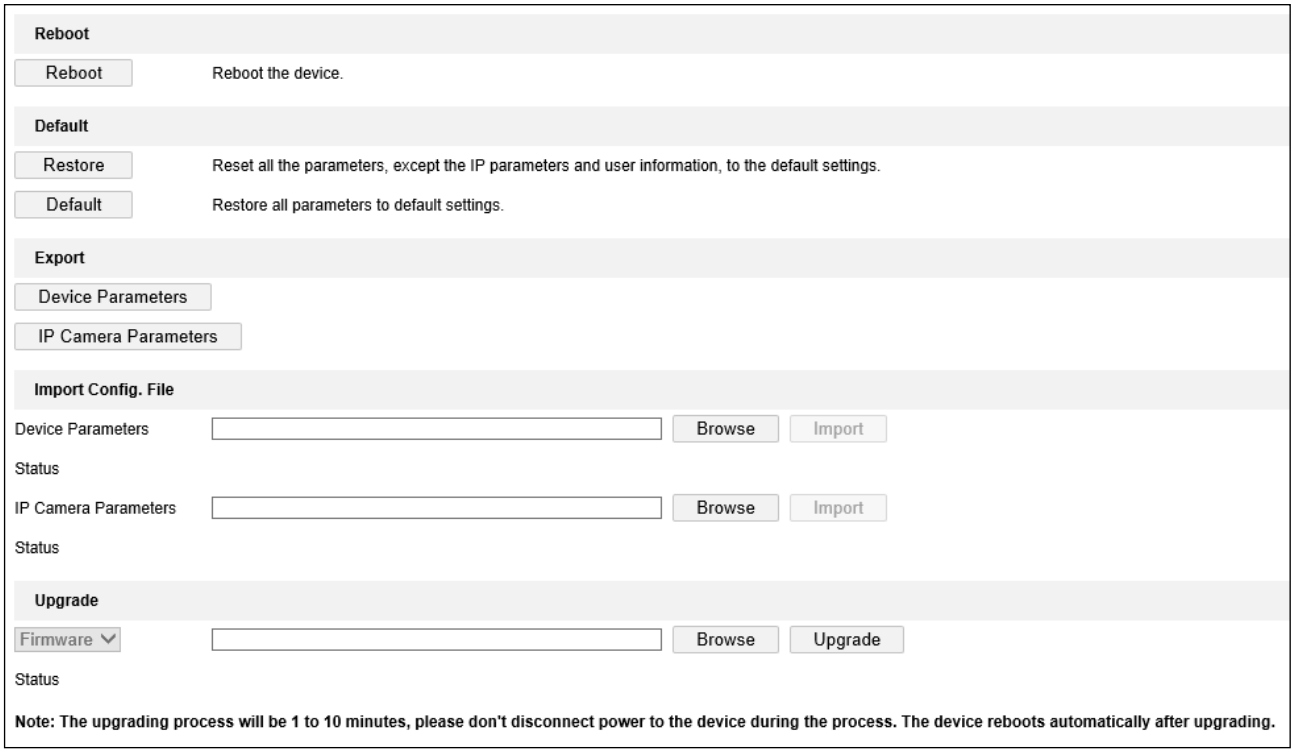


Figure 13-1 Maintenance

13.1 Reboot the Device

Step 1 Click **Reboot** to restart the device.

13.2 Default Settings

Step 1 Select the restoring type as **Restore** or **Default**.

- **Restore**: Restore all parameters, except the network (including IP address, subnet mask, gateway, MTU, NIC working mode, default route, server port, etc.) and user account parameters, to the factory default settings.
- **Default**: Restore all parameters to the factory default settings.

13.3 Export/Import Configuration File

- Import configuration file.

1) Click **Browse**.
2) Select configuration file path.
3) Click **Import** to import the selected file.

- Export configuration file.
  1) Click **Export**.
  2) Select exporting path.
  3) Click **Save** to save the configuration file.

13.4 Import/Export IP Camera Configuration File

Purpose:

You can export the education sharing system's IP camera adding configuration file to the computer. And import the IP camera adding configuration file into the education sharing system.

- Import IP camera configuration file.
  1) Click **Browse**.
  2) Select IP camera configuration file path.
  3) Click **Import** to import the selected file.
- Export IP camera configuration file.
  1) Click **Export**.
  2) Select exporting path.
  3) Click **Save** to save the configuration file.

13.5 Remote Upgrade

Step 1 Click **Browse**.

Step 2 Select upgrade file.

Step 3 Click **Upgrade** to upgrade.

Chapter 14 Other Settings

14.1 Display Settings

Purpose:

You can configure parameters of OSD (On Screen Display) menu.

Step 1 Go to **Configuration** > **Audio/Video** > **Video Settings > OSD and Subtitle**.

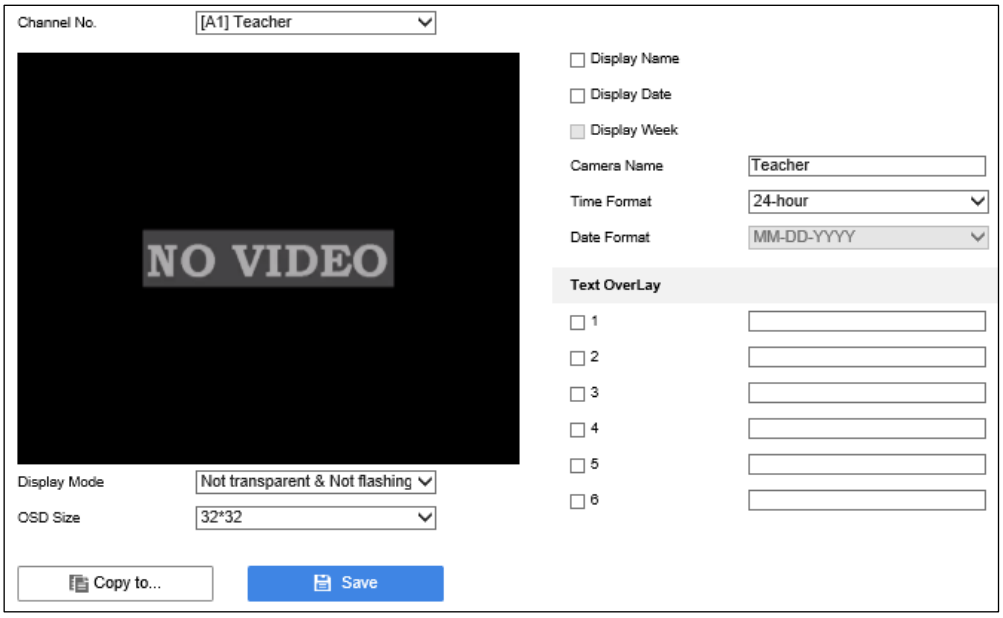


Figure 14-1 Display Settings

Step 2 Select **Channel No.**

Step 3 Configure parameters as your desire.

Step 4 Optionally, you can overlay text on the selected channel.

1) Check the number of **Text OverLay.**
2) **Enter text content.**
3) You can drag the OSD on screen to move its position.
4) Set the **Display Mode** and **OSD Size** as your desire.

Step 5 Click **Save** to save the settings.

14.2 Video Settings

Purpose:

By configuring the video parameters you can define the parameters which affect the image quality, such as the resolution, video quality, and so on.

Before you start:

Ensure the hard disk has already been installed.

Step 1 Go to **Configuration** > **Audio/Video** > **Video Settings** > **Video**.

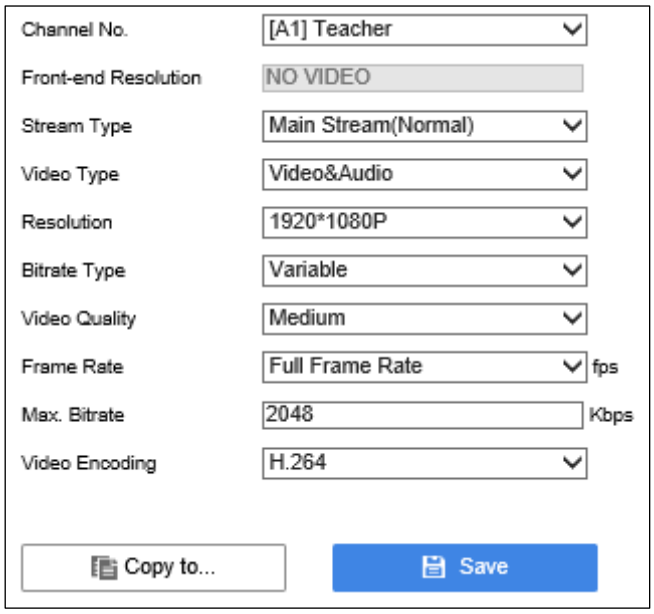


Figure 14-2 Video Settings

Step 2 Select **Channel No.** to configure. For Analog Camera, the camera video format will be shown in **Front-End Resolution**.

Step 3 Select **Stream Type** as **Main Stream (Normal)**, **Third Stream**, **Sub-Stream**. Main stream is for recording and sub-stream is for network transmission.

Step 4 Configure the video parameters as your desire, including **Resolution**, **Bitrate Type**, **Video Quality**, **Frame Rate**, **Max. Bitrate**. The video encoding format and audio encoding format will be shown in **Encoding Format** and **Audio Format**.

Step 5 Click **Save** to save the settings.

14.3 Image Parameter Settings

Purpose:

You can adjust display effect of courseware image and HDMI/VGA output image.

Step 1 Go to **Configuration** > **System Settings** > **System Settings** > **Courseware Image Parameter Adjustment** or **Configuration** > **System Settings** > **System Settings** > **Output Image Parameter Adjustment** as required.

Step 2 Select **Configuration Port**.

Step 3 Set image parameters, including brightness, contrast, saturation, hue, and sharpness.

Figure 14-3 Image Parameter Settings

14.4 Time Settings

Purpose:

You can synchronize the date and time of the device manually or automatically.

Step 1 Go to **Configuration** > **System Settings** > **System Settings** > **Time Settings**.

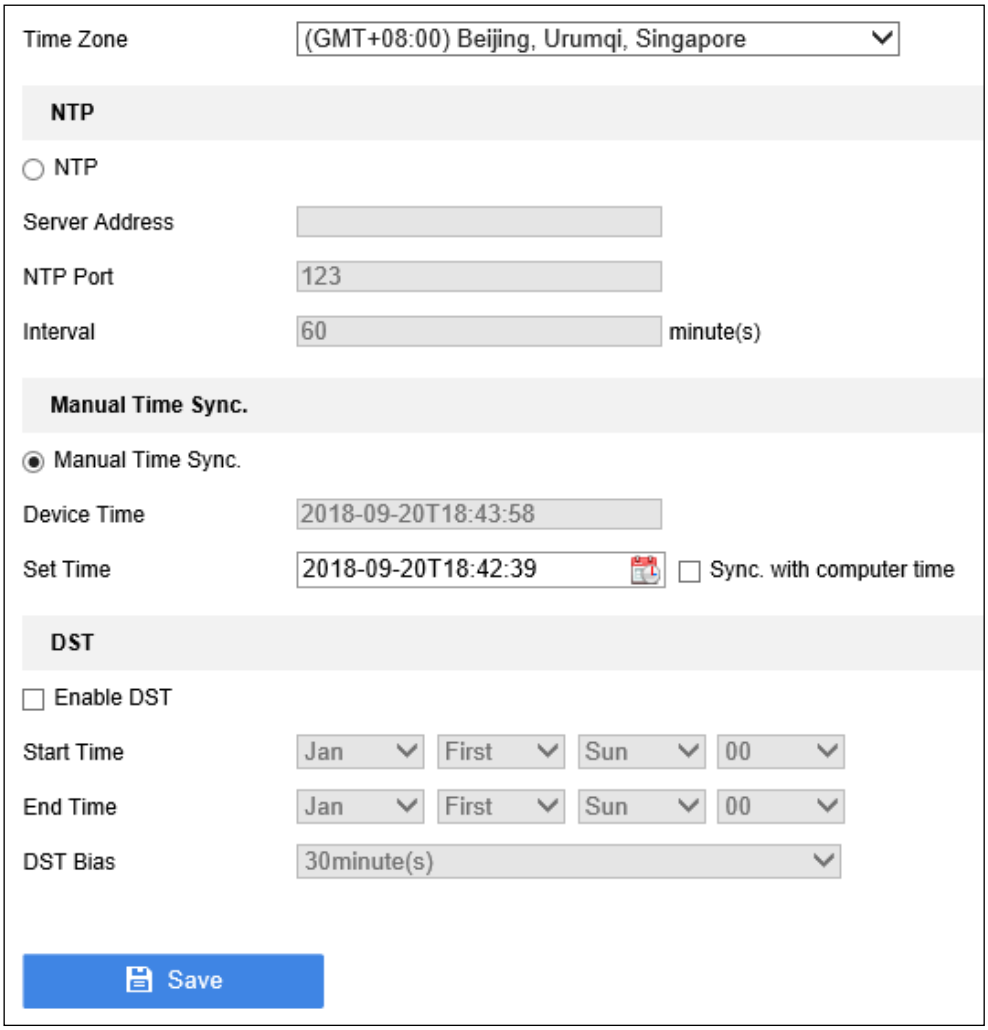


Figure 14-4 Time Settings

Step 2 Select **Time Zone**.

Step 3 Select the clock synchronization mode as **NTP** or **Manual Time Synchronization**.

- **NTP**: Enter NTP server, port and interval time.
- Manual Time Synchronization: Set the time in **Set Time**. Or you can check **Synchronize with computer time**.

Step 4 Click **Save**.

14.5 DST Settings

Step 1 Go to **Configuration** > **System Settings** > **System Settings** > **Time Settings**.

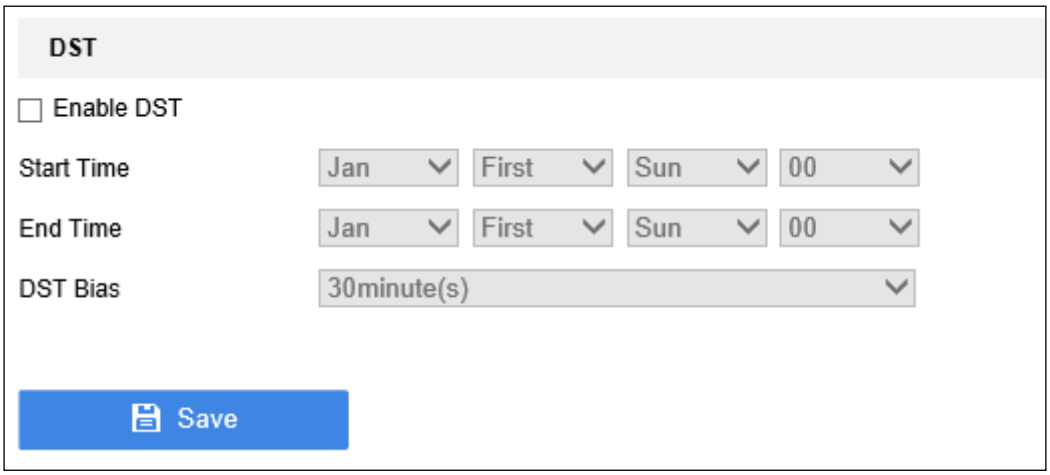


Figure 14-5 DST Settings

Step 2 Check **Enable DST**.

Step 3 Set **Start Time** and **End Time** of the DST period.

Step 4 Select **DST Bias**.

Step 5 Click **Save** to save the settings.

14.6 Menu Output

Purpose:

You can set the local menu output interface and HDMI/VGA output resolution.

Step 1 Go to **Configuration** > **System Settings** > **System Settings** > **Menu Output**.

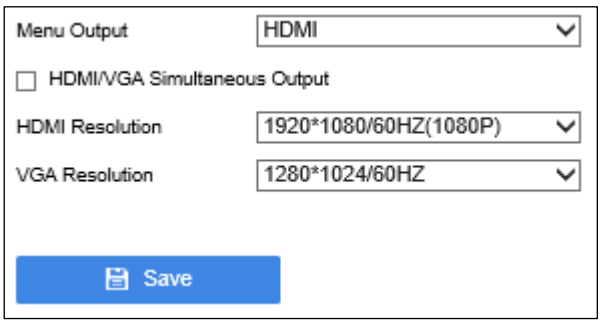


Figure 14-6 Menu Output

Step 2 Edit **Menu Output**, **VGA Resolution**, **HDMI Resolution** and **HDMI/VGA Simultaneous Output.**

- **HDMI/VGA Simultaneous Output:** It means that the screens connected by different interfaces (e.g. HDMI, VGA) share the same output source, so their images are the same, so do the mouse operation and menu content.

Step 3 Click **Save** to save the settings.

Chapter 15 Appendix

15.1 SADP Software Introduction

- Description of SADP

  SADP (Search Active Devices Protocol) is a kind of user-friendly and installation-free online device search tool. It searches the active online devices within your subnet and displays the information of the devices. You can also modify the basic network information of the devices using this software.

- Search active devices online

- Search online devices automatically

  After launch the SADP software, it automatically searches the online devices every 15 seconds from the subnet where your computer locates. It displays the total number and information of the searched devices in the Online Devices interface. Device information including the device type, IP address and port number, etc. will be displayed.

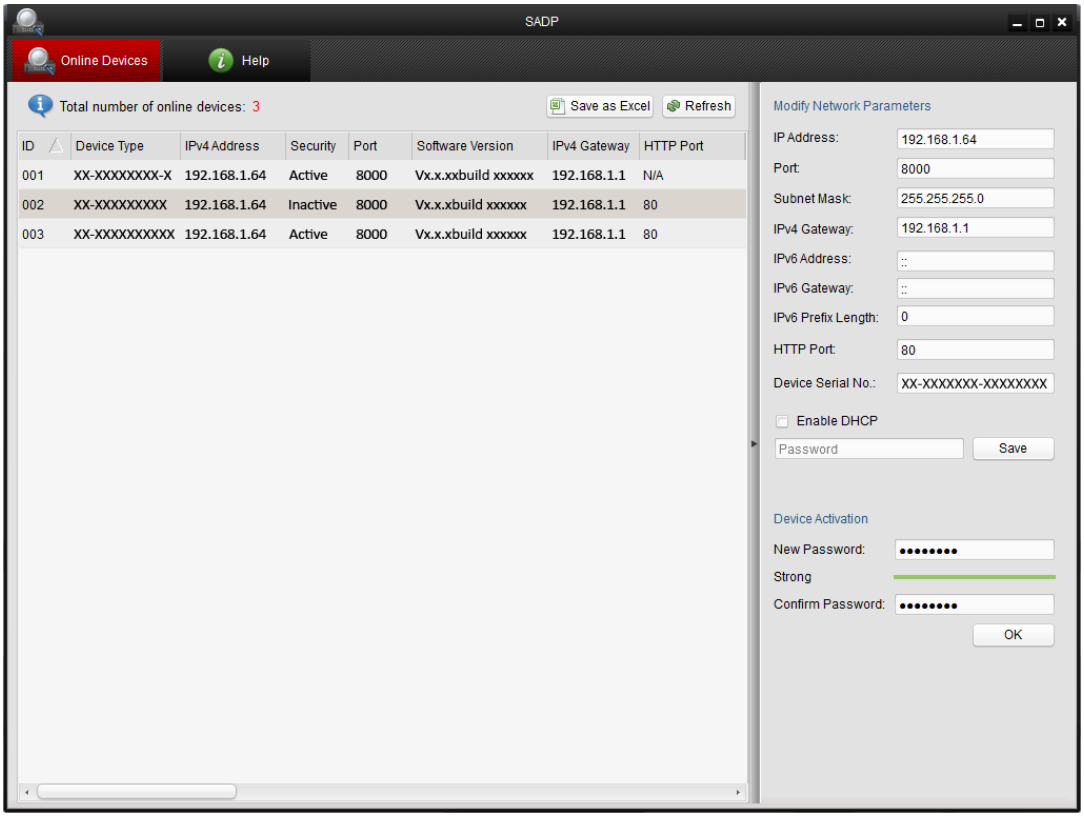


Figure 15-1 Searching Online Devices

NOTE

Device can be searched and displayed in the list in 15 seconds after it went online; it will be removed from the list in 45 seconds after it went offline.

- Search online devices manually

You can also click Refresh to refresh the online device list manually. The newly searched devices will be added to the list.

NOTE

You can click △ or ▽ on each column heading to order the information; you can click ▶ to expand the device table and hide the network parameter panel on the right side, or click ◀ to show the network parameter panel.

- Modify network parameters

Step 1 Select the device to be modified in the device list and the network parameters of the device will be displayed in the **Modify Network Parameters** panel on the right side.

Step 2 Edit the modifiable network parameters, e.g. IP address and port number.

Step 3 Enter the password of the admin account of the device in the **Password** field and click Save to save the changes.

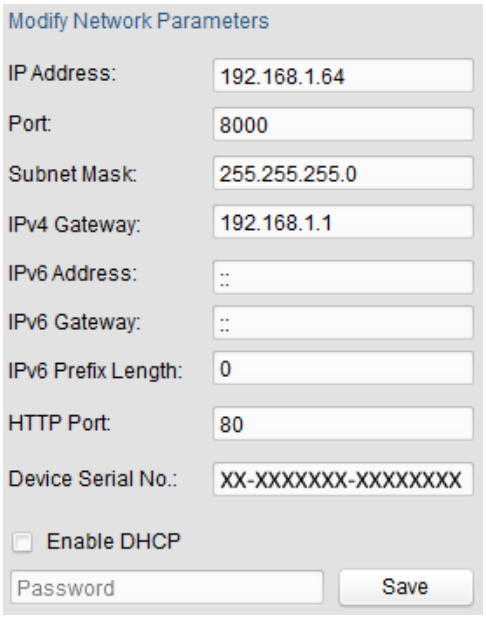


Figure 15-2 Modify Network Parameters

15.2 Glossary

Dual-Stream

Dual-stream is a technology used to record high resolution video locally while transmitting a lower resolution stream over the network. The two streams are generated by the DVR, with the main stream having a maximum resolution of 1080P and the sub-stream having a maximum resolution of CIF.

DVR

Acronym for Digital Video Recorder. A DVR is device that is able to accept video signals from analog cameras, compress the signal and store it on its hard drives.

HDD

Acronym for Hard Disk Drive. A storage medium which stores digitally encoded data on platters with magnetic surfaces.

DHCP

Dynamic Host Configuration Protocol (DHCP) is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.

HTTP

Acronym for Hypertext Transfer Protocol. A protocol to transfer hypertext request and information between servers and browsers over a network.

PPPoE

PPPoE, Point-to-Point Protocol over Ethernet, is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with ADSL services where individual users connect to the ADSL transceiver (modem) over Ethernet and in plain Metro Ethernet networks.

DDNS

Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS.

Hybrid DVR

A hybrid DVR is a combination of a DVR and NVR.

NTP

Acronym for Network Time Protocol. A protocol designed to synchronize the clocks of computers over a network.

NTSC

Acronym for National Television System Committee. NTSC is an analog television standard used in such countries as the United States and Japan. Each frame of an NTSC signal contains 525 scan lines at 60Hz.

NVR

Acronym for Network Video Recorder. An NVR can be a PC-based or embedded system used for

centralized management and storage for IP cameras, IP Domes and other DVRs.

PAL

Acronym for Phase Alternating Line. PAL is also another video standard used in broadcast televisions systems in large parts of the world. PAL signal contains 625 scan lines at 50Hz.

PTZ

Acronym for Pan, Tilt, Zoom. PTZ cameras are motor driven systems that allow the camera to pan left and right, tilt up and down and zoom in and out.

USB

Acronym for Universal Serial Bus. USB is a plug-and-play serial bus standard to interface devices to a host computer.

15.3 Communication Matrix

Please scan the QR code below to view the communication matrix document.

Figure 15-3 Communication Matrix

15.4 Device Command

Please scan the QR code below to view the device command document.

Figure 15-4 Device Command

UD22631B