Tiandy

Panoramic PTZ Series

User Manual

ISO 9001:2008
ISO 14001:2004

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Preface

Thank you for using our products. This series of IP surveillance products are developed for network video surveillance. It uses high-performance, single-chip SOC chip to realize a media processor integrating audio and video acquisition, compression and transmission. The standard H.264 and H.265 encoding algorithms ensure clearer and smoother video transmission. The embedded Web Server allows users to easily monitor and remotely control the front-end camera in real time through Internet Explorer.

Disclaimer

- This manual may contain inaccuracies, discrepancies in the operation of product functions, or typographical errors.
- Our company will update the contents of this manual according to the enhancement and change of product functions, and regularly improve and update the software and hardware products described in this manual. The updated information will be reflected in the latest edition of this manual without further notice.
- Due to our continuous adoption of new technologies, product parameters are subject to change without notice.
- This manual is only for the customer's reference and guidance, and

does not guarantee that it is completely consistent with the real object. The actual application is subject to the real object.

- All words, tables and figures in this Manual are protected by relevant national regulations and laws and shall not be used without permission.
- The copyright and the right of final interpretation of this manual belong to our company.

Symbols

The flags that appear in this article are described in the following table.

Symbol	Description
 **Warning**	Indicates a potential risk that, if not avoided, could result in injury, equipment damage, or business interruption.
 **Attention**	Indicates to alert the user to an important action or to prevent potential injury or property damage. If not avoided, it may cause injury accidents, equipment damage or business interruption.
 **Explanation**	The expression is the additional information of the text, which is the emphasis and supplement to the text.

Precautions for installation and use

 **Warning**

- Use a power supply that meets SELV (Safety Extra Low Voltage) requirements.

- If the equipment does not work properly, please contact the dealer. Do not disassemble or modify the equipment in any way.
- To reduce the risk of fire or electric shock, do not expose indoor products to rain or moisture.
- When installing the equipment, it must be ensured that the bearing surface can bear 4 times of the total weight of the PTZ and the installation structure.
- Laser beam energy is concentrated, do not look directly.
- PTZ installation should be carried out by professional technicians and comply with local regulations.
- Easy-to-use power failure protection devices shall be incorporated in the building installation wiring.
- Please do not disassemble the internal components of the PTZ by yourself. There are no components in this product that can be repaired by users. The maintenance work must be carried out by the maintenance personnel authorized by our company, and our company will not be responsible for the problems caused by unauthorized modification or maintenance.

Attention

- Please check whether the power supply is correct before operating the Panoramic PTZ.

- Do not drop this product on the ground or subject it to strong blows.
- Do not directly touch the lens front glass and the spherical cover. If necessary, use a microfiber cleaning cloth to gently wipe the surface of the spherical shell, such as glasses cloth. Do not wipe it with force or water.
- Avoid focusing on strong light (such as light, sunlight, laser, etc.), otherwise it is easy to cause too bright or light phenomenon (this is not the failure of the Panoramic PTZ), which will also affect the life of the image sensor.
- Avoid humid, dusty, extremely hot, extremely cold, strong electromagnetic radiation and other places.
- When shipping Panoramic PTZs, it is strongly recommended that they be shipped protected in factory packaging.
- The long-term high-speed cruise of PTZ may lead to the aging of slip ring and synchronous belt, which will affect the service life of Panoramic PTZ.
- The wiper will automatically protect the equipment from damage and prolong its service life in the environment of zero degree and below. Do not use the wiper in non-rainy days to avoid glass damage or wiper wear.
- Note that the bending radius of the optical fiber line of the optical fiber ball shall not be less than 20mm.

- The operating temperature of the warning laser is -15 ℃ to + 45 ℃. If the temperature is out of the range, the laser will automatically shut down.
- The analog video interface is only used for quick debugging such as engineering treasure, and is an informal video output interface.
- The running speed of the PTZ will be automatically adjusted according to the external environment, and the running speed of the PTZ will be slightly reduced in the ultra-low temperature environment (below -20 degrees).
- Please use this product according to the requirements of working environment.

Product	Temperature	Humidity	Power supply
Panoramic dome camera	-40℃ ~ +70℃	<95% (No condensation)	DC 36V
Low-altitude panoramic dome camera	-30℃ ~ 65℃	<95% (No condensation)	AC 24V

Make sure that the outdoor installation of the PTZ meets the waterproof requirements.

- Description of dome camera assembly environment: In order to avoid fog in the dome cover of the high-speed dome, which will affect the

video effect and the service life of electrical devices, please assemble the dome cover under ventilated and dry conditions, and ensure that the screws of the dome camera are tightened.

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1 Product overview

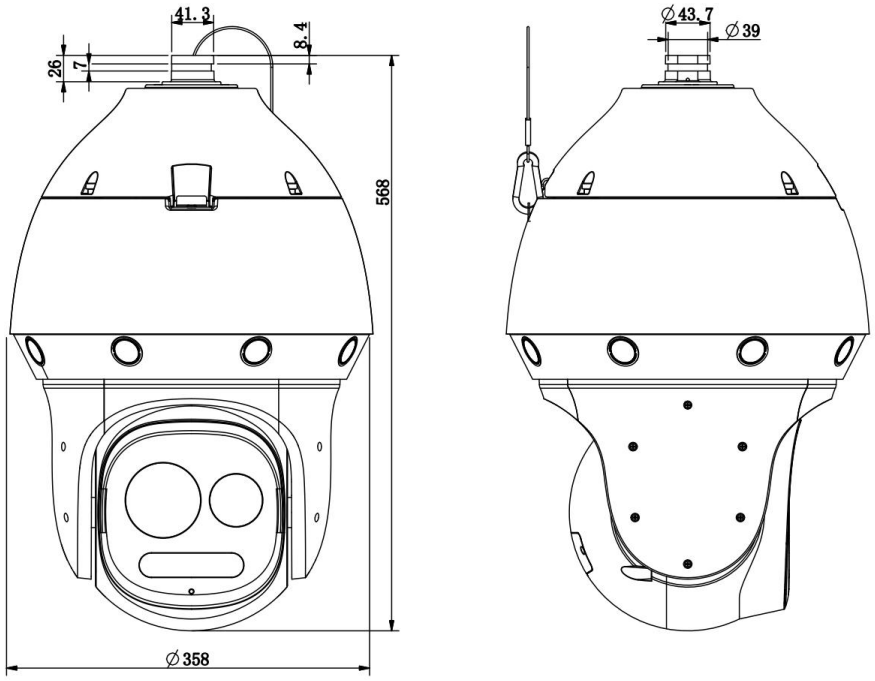
1.1 Product description

This series of products are embedded digital monitoring products integrating traditional network cameras and network video servers. It adopts embedded Linux operating system and leading hardware platform, with high system scheduling efficiency, code solidification in Flash, small size, low power consumption, and high stability and reliability.

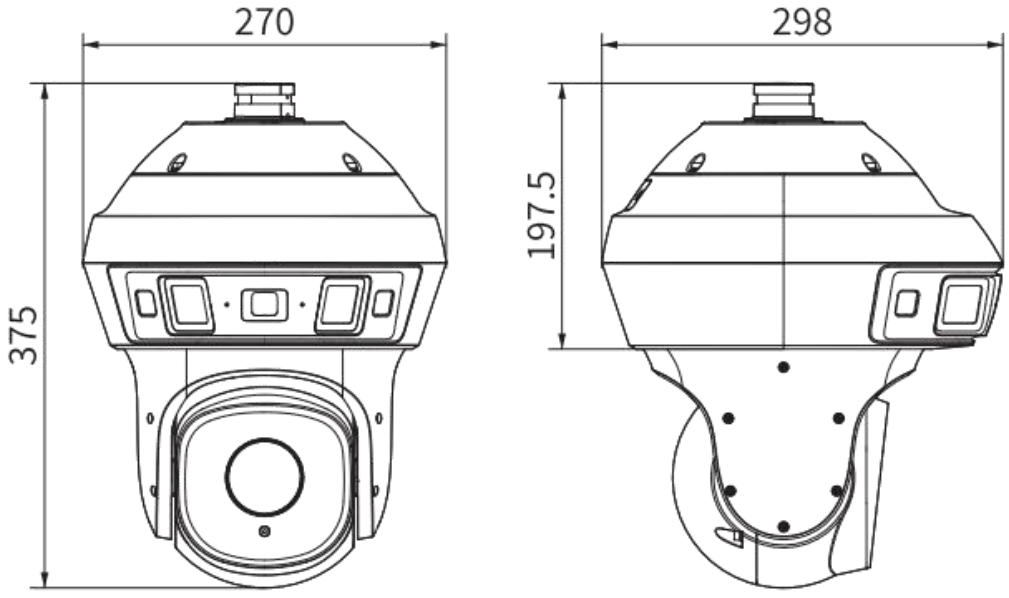
This series of PTZ adopts integrated design, synchronous belt transmission and precise stepping motor, running accurately and smoothly; multiple installation methods to meet the needs of different occasions; all-weather outdoor design, double-layer shell structure, built-in fan and intelligent start; multiple monitoring methods, such as scanning, cruise, mode path, etc., flexible; integrated preset function, more powerful performance; Support panoramic stitching function, wider monitoring range; equipped with long focal length close-up camera, more clear details.

1.2 Appearance dimension

Panoramic dome camera as shown in the figure below.



Low-altitude panoramic dome camera as shown in the figure below.



1.3 Function description

The main functions of the equipment and the general principles for its realization are introduced, and the specific operation methods are not

involved.

Automatic zoom/rotation speed matching technology

The PTZ can automatically adjust the horizontal and vertical rotation speed of the PTZ according to the size of the variable multiple, so that the manual operation is simpler and easier.

Set and call preset bit

The preset function is that the dome camera can store the position parameters such as the horizontal angle, tilt angle and camera lens focal length of the PTZ in the current state into the memory, and can quickly call these parameters and adjust the PTZ and camera to the position when needed. The operator can conveniently and quickly set or call the preset position through the control keyboard and other equipment.

Automatic scanning

Operators can conveniently and quickly preset the left limit and the right limit through equipment such as a control keyboard and the like to realize horizontal automatic reciprocating scanning of the camera between the left limit and the right limit at a set speed. The machine can set 8 scanning paths.

Auto cruise

The dome camera can arrange some preset bits into the automatic cruise queue according to the required sequence through pre-programming, and the operator can conveniently and quickly make

the dome camera automatically scan circularly at specified time intervals according to the set preset bit sequence by controlling the keyboard and other equipment. Each cruise track can store 32 preset points.

Pattern path

The dome camera can continuously record the running track for 180 seconds. After the mode path function is started, the dome camera can automatically scan and monitor circularly according to the recorded running track.

Guard position function

The dome camera can be set to automatically execute the set standby actions after reaching the standby time: preset position, cruise, scan, mode path, and the standby time can be set.

Power-off self-recovery function

The operation state before power failure can be recovered after the PTZ is powered off and powered on again, so that the trouble that the PTZ needs to be operated again due to accidental power failure can be effectively prevented.

2 Installation guide

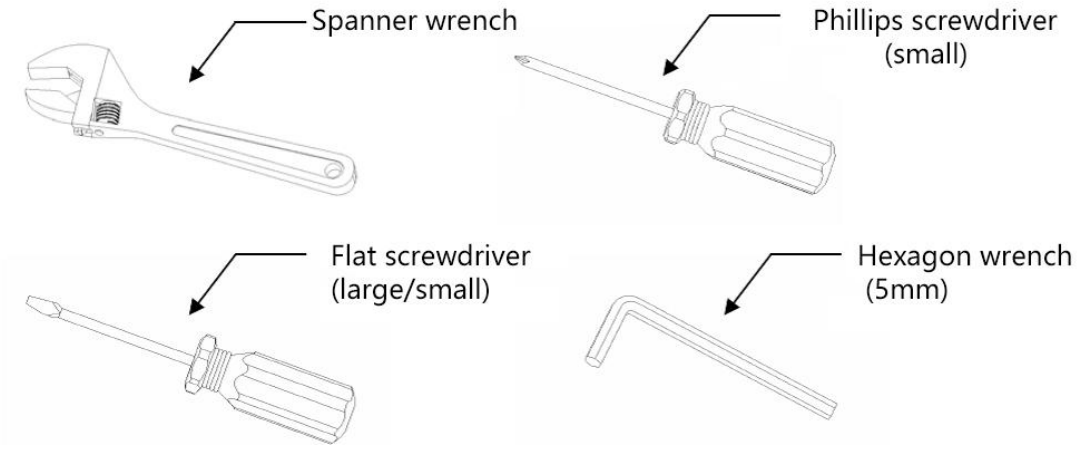
2.1 Installation preparation

（1）Basic requirements

All electrical work must comply with the latest electrical regulations, fire prevention regulations and other relevant regulations; check whether all attached accessories are complete according to the packing list, and determine whether the application place and installation method of the PTZ meet the requirements; if not, please contact the manufacturer. Please use this product according to the requirements of working environment.

（2）Common installation tools

Prepare the required tools according to the actual situation.



（3）Check the structural strength of the installation space and the installation site

Confirm that the installation site has enough space to accommodate

the product and its installation structure. Confirm that the bearing capacity of the ceiling, wall and bracket for installing the PTZ can support the total weight of the PTZ and its installation structure, and it is required to have a safety factor of 4 times.

(4) Please save all packing materials of the Panoramic PTZ

After unpacking the Panoramic PTZ, please keep the original packing materials of the PTZ properly so that the PTZ can be packed with the original packing materials and sent back to the supplier for disposal in case of any problem.

Attention:

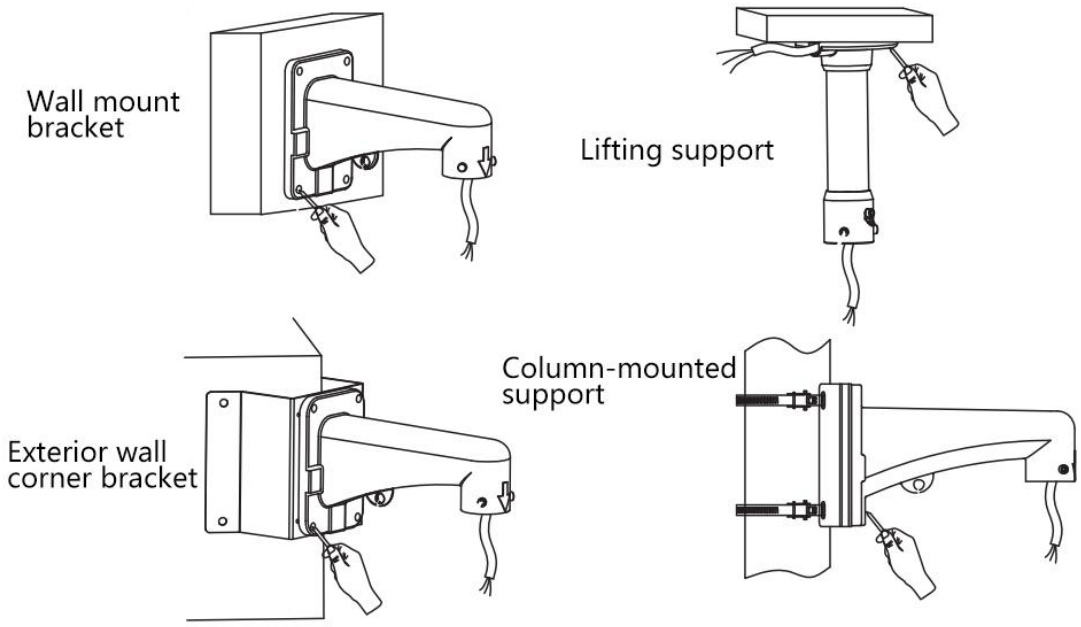
- Non-original packaging materials may cause accidental damage in transit.

2.2 Installation method of dome cameras

Attention:

- The installation height of the panoramic camera is recommended to be more than 8 meters, and it is forbidden to be less than 6 meters. There should be no reflective objects within the radius of 1 meter of the installation position.

Punch according to the size of the positioning hole of the bracket (the same as the installation of the ordinary dome cameras bracket). Thread the wire out of the bracket and fasten the bracket with the expansion screw. The effects of the four bracket installation methods are shown in the figure below:

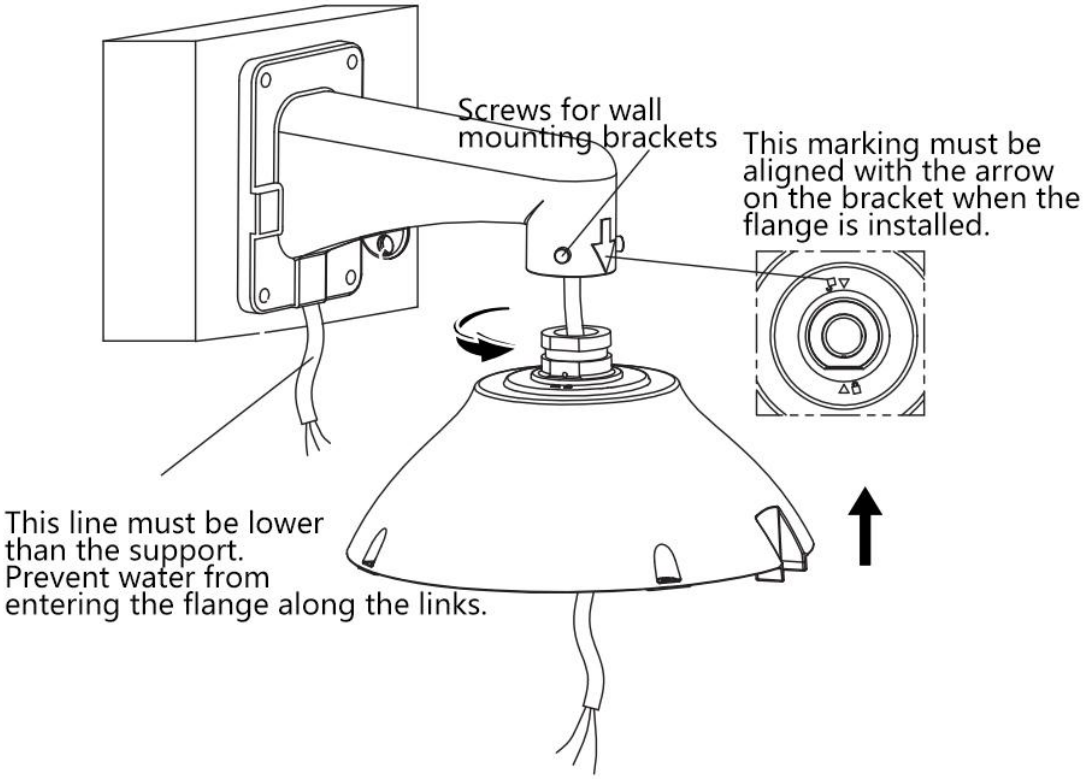


The following installation steps take the installation of wall-mounted support as an example, and the installation method of other supports is the same:

Thread the wire through the dome camera flange. Then install the flange upward into the support according to the illustration, and then screw the flange into the support according to the direction of the arrow.

Attention:

- The final direction of the hook must be parallel to the wall-mounted bracket, so as to ensure that the direction of the four eyes of the dome camera is forward. Finally, tighten the screws of the wall mounting bracket.

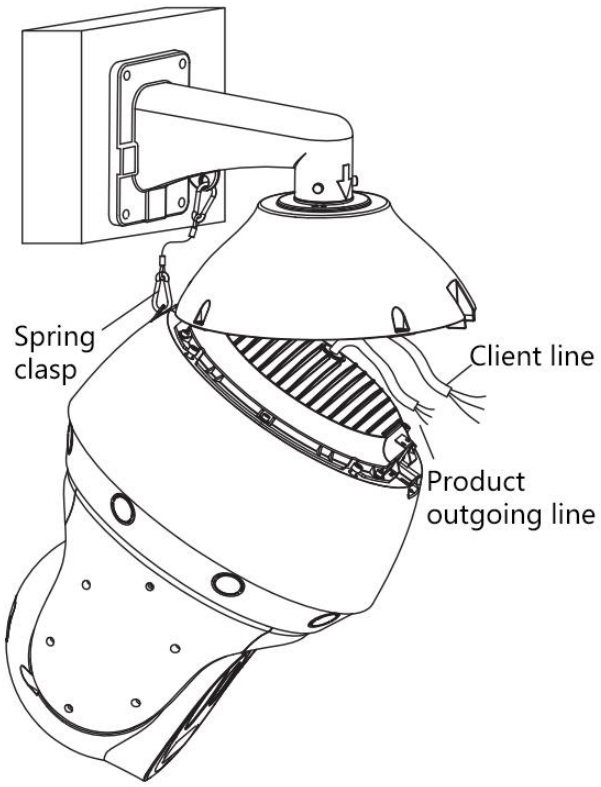


2.2.1 Installation mode of panoramic dome camera

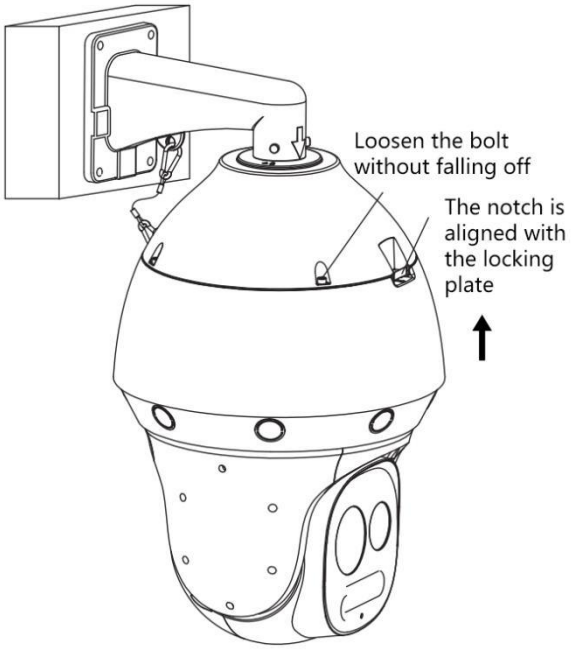
Hang the hook of the tilt dome camera and the spring buckle, and then connect the connecting line of the client and the outgoing line of the dome camera according to the definition of the wire tag of the outgoing line of the Panoramic PTZ, and conduct insulation treatment between different wires.

Attention:

- The flange shall not be exposed to water.

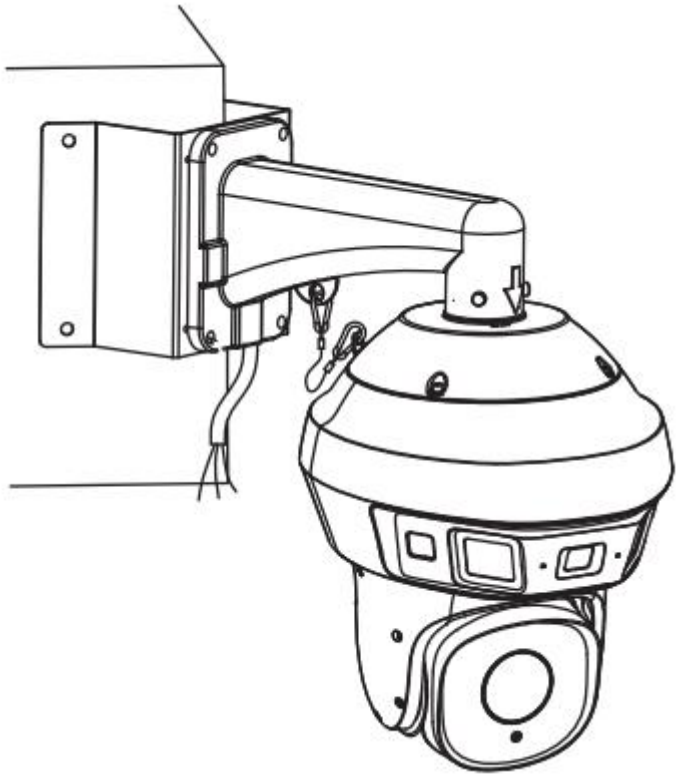


Lift up the dome camera, align the notch with the locking plate, stick it to the flange and clamp the locking plate, and then tighten the 4 bolts that cannot be loosened after locking.

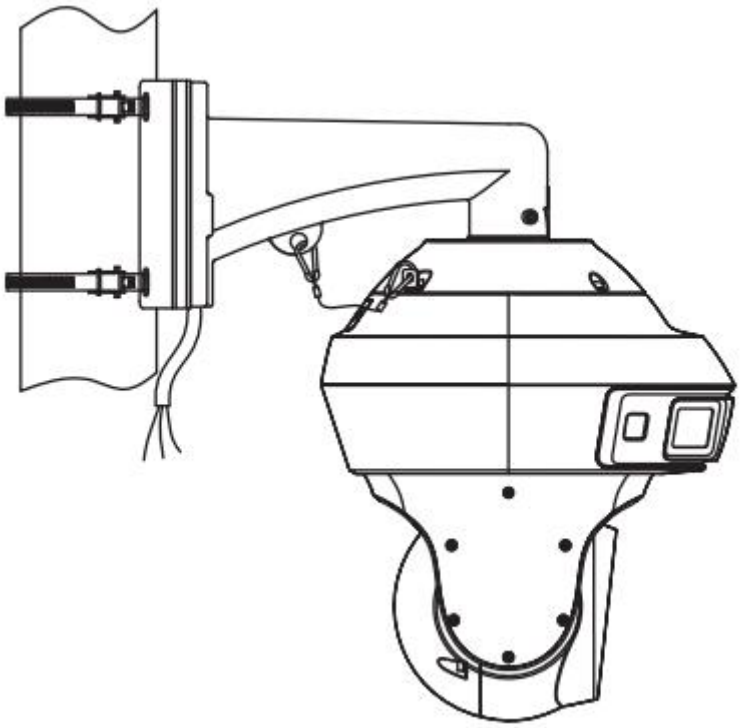


2.2.2 Installation method of low-altitude panoramic dome camera

Align the notch of the dome camera flange with the positioning pin of the bracket, and rotate the dome camera to make the middle part of the splicing gun face the monitoring field of view.

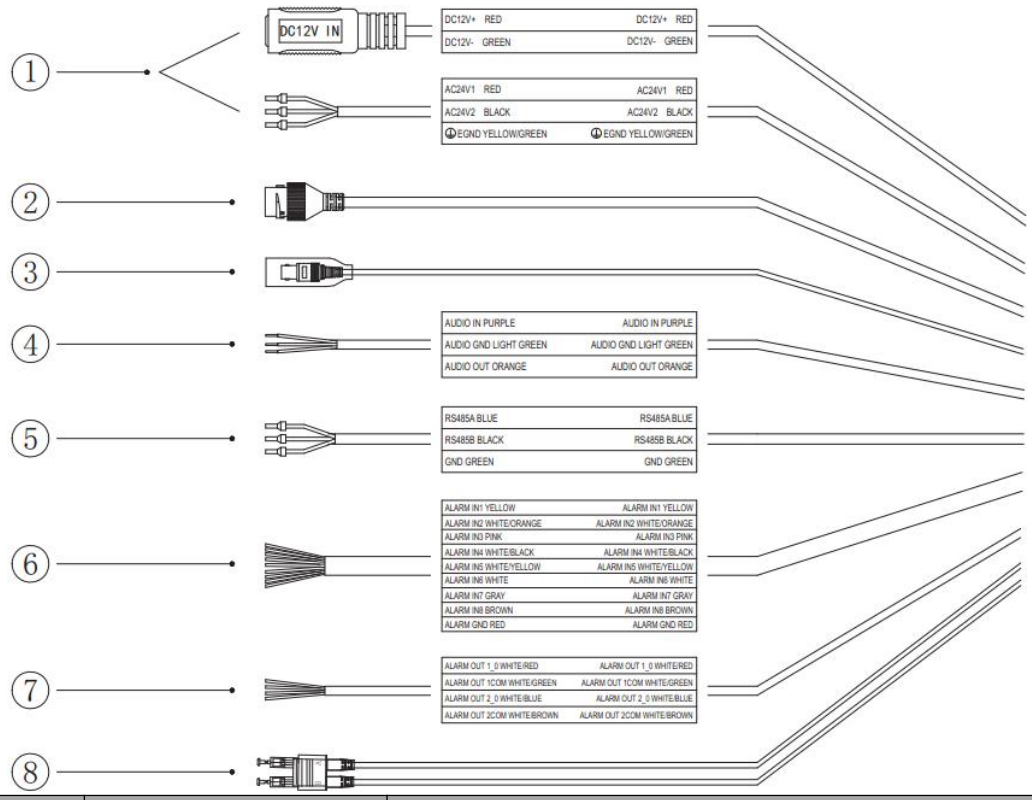


Lock the safety lifting rope to prevent the dome camera from falling off during installation, and tighten the screws on the bracket to fix the dome camera.



2.3 External wiring description

The dome camera adopts the internal outgoing line mode, and all interfaces are led out from the inside of the camera, including power line, control line (network line), audio input line, audio output line, analog video line, alarm input line, alarm output line and 485 communication line. The color definition of the terminal block and its cable is shown in the figure below.



Number	Interface name	Description
①	Power connector	Connect AC36V or AC24V power supply according to the instructions of wire tag or silk-screen. Lightning protection ground wire: connect to the ground to avoid equipment damage caused by lightning strike.
②	Network interface	Connect to a host computer or other network device.
		When connecting the network cable, it is recommended that the length of the network cable should not exceed 100m.
		Some models support POE power supply. Please refer to the actual situation.
③	Analog video	Connect an analog video monitor.

Number	Interface name	Description
④	Audio interface	The audio input is connected with a microphone or other audio source; the audio output is connected with a sound box or a loudspeaker.
⑤	RS485	The dome camera can be controlled by using the keyboard and other devices through the 485 interface.
⑥	Alarm input	Connect the sensor and access the switching value signal.
⑦	Alarm output	Connect the buzzer and output the switching value signal.
⑧	Fiber optic interface	Some models are supported, please refer to the actual situation.

Attention:

- The specific specifications of outgoing lines of different PTZ models can be used according to the online label instructions, subject to the actual situation.

3 WEB client

3.1 Operation requirements

This system is recommended to run under Win7 and Win10 operating system environment. In order to better operate and use the system and fully reflect the performance and effect of the system, it is recommended to ensure that the following items are set or installed correctly after the system is successfully installed:

(1) The monitor resolution is set to 1920 * 1080 or higher, and the color is set to High Color (32-bit). Refer to the Windows User's Manual or online Help for instructions on how to set the display resolution and colors.

(2) Confirm that the fonts required by the system are installed in the Windows operating system. If the interface display of the system is abnormal, it may be that the fonts required by the system are not installed or the required fonts have been damaged, and the fonts need to be reinstalled.

3.2 Plug-in installation instructions

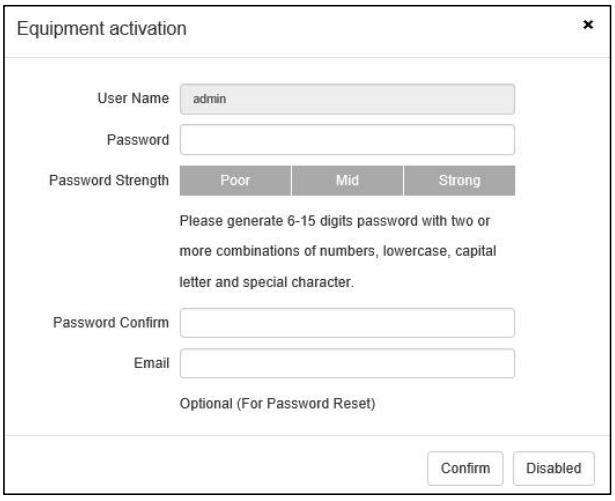
If it is the first time to use this series of network video products, you need to download the video control.

Attention:

- Use the Internet Explorer that comes with the Windows operating system. In addition to Firefox and Google browsers, please do not use other third-party browsers and any Internet Explorer shell programs such as Maxthon. We do not guarantee that you can log on to the network video server normally by using such software.

3.3 Device Login

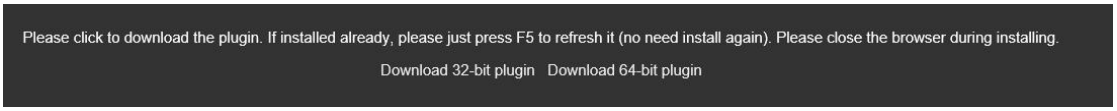
The default IP address of the device is 192.168.1.2, the subnet mask is 255.255.255.0, and the gateway is 192.168.1.1. Please set the IP address of the computer and the IP address of the device in the same network segment. For example, set the IP address of the computer to 192.168.1.3 to access the device through Internet Explorer. Open Internet Explorer, enter the IP address of the network video device in the address bar, and click [Go] to log in to the device. If it is the first time to use, the following interface will appear.



Some devices need to be activated before logging in to the IE interface. Set the login password in the device activation window, and click [OK] to enter the IE login interface.



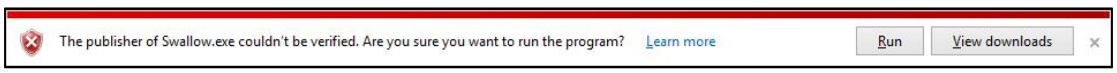
If you have used this product before, you may need to update the plug-in.



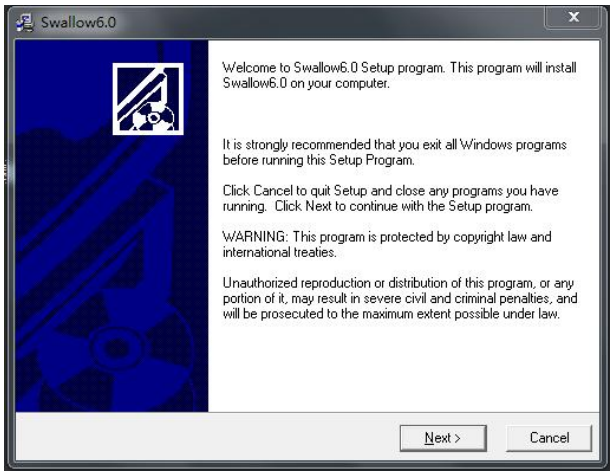
Click the text link to open the save or run Plugin interface, as shown in the following figure. Select "save" to download Swallow.exe to the local area, and select "run" to install Swallow.exe automatically after downloading.

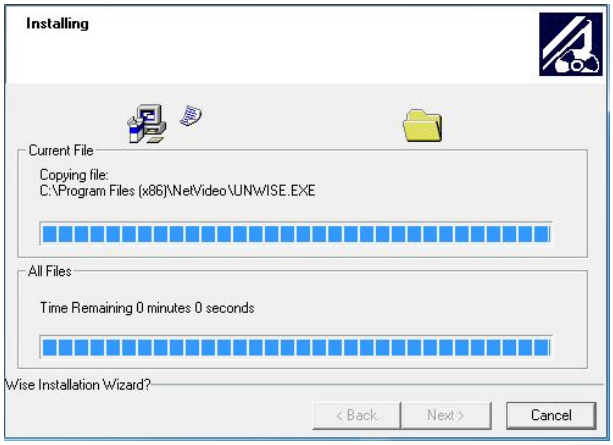


The Plugin needs to be installed after downloading, and the installation program interface for running the Plugin will pop up, as shown below; and then click the "Run" button.



When the installation Plugin interface appears, click "Next" or "Next step", as shown below.





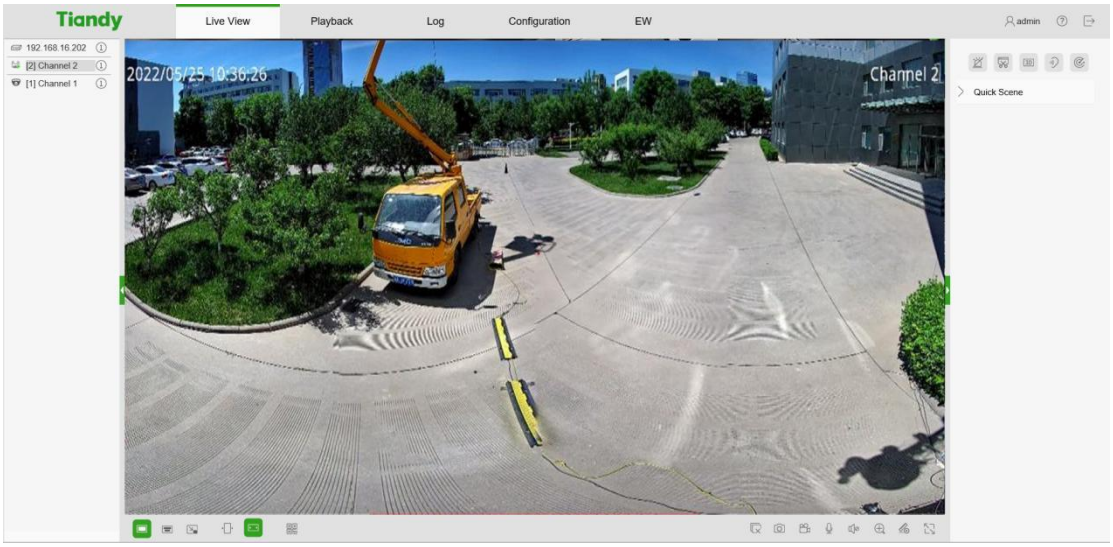


After the plug-in is successfully installed, open the browser again and enter the correct user name and password to enter the preview interface.

Attention:

- If the password is entered incorrectly for 5 consecutive times, the device will be

locked for 5 minutes.



Explanation:

- The panoramic ball is a dual-channel device, which is divided into a detail channel and a panoramic channel. The detail channel can see the image in the video clearly through operations such as zoom focusing and steering wheel adjustment. The panoramic channel can preview the video in real time.

3.4 Live View

After successful login, the system will stay in the [Preview] interface by default. After switching to other interfaces, users need to switch back by clicking the [Preview] button on the banner at the top of the interface.

This page mainly completes the basic control of front-end equipment such as PTZ, lens, wiper, etc.

3.4.1 Video preview interface button

Icon	Description
	Channel 1 is a detail screen. You can select to connect the primary and secondary streams by sliding the mouse over the number on the right.
	Channel 2 is a panoramic picture. You can select to connect the primary and secondary streams by sliding the mouse over the number on the right.
	Click Enable, and the video window will display the main code stream after selection.
	Click Enable, and the video window will display the secondary stream after selection.
	1*1 split screen
	1*2 split screen
	Picture-in-picture display. When enabled, you can drag the small screen in the large screen at will.
	Video automatically adapts to PC resolution display.
	The video is displayed at a fixed scale.

/	All channel video is connected or disconnected.
	Local manual snapshot control button. Click Enable to enable the preview picture to be captured and saved locally. The storage path of the snapshot file can be modified. Modify the page: Configuration-System Settings-Local Settings-Preview Snapshot Storage Path.
	Local manual video recording control button. Click Enable to start local video recording. The video file storage path can be modified. Modify the page: Configuration-System Settings-Local Settings-Video File Storage Path.
	Voice intercom switch, after enabling, local audio can be transmitted to the front-end equipment output through the network.
	Audio preview volume adjustment button. Adjust the local output volume by adjusting the slider position.
	Electronic zoom in button. After this function is enabled, click the left mouse button to draw the area to be zoomed in, and then you can zoom in to view the area.
	Full screen display button. After clicking the icon, the video monitoring picture fills the whole screen. In the full

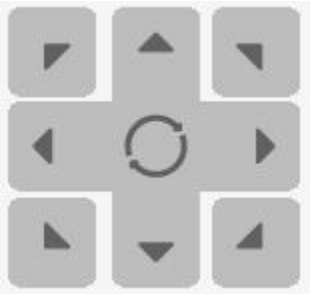
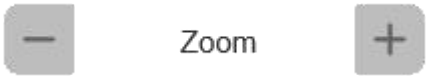
	screen display state, double click the video picture to exit the full screen.
	Target measurement button, click it to draw a rectangle on the video, and the pixel value of the corresponding drawing area will be displayed.

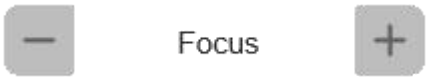
Attention:

- All icons are valid when pressed.
- When there is no video in the interface and the stream type is [Video Only], the audio preview is invalid.
- Only one intercom is supported at the same time. It is recommended to close the intercom in time after the intercom is used, so as to facilitate the use of others.
- Click the arrows  or  on the left and right sides of the video window or to show/hide the control interface.
- Some models support [Target Information], display the target and information identified by the intelligent algorithm, and click the [PTZ]/ [Target Information] tab to switch the page.
- Double-click the left mouse button in the preview window to display the picture in full screen. The dome camera can be controlled through the keyboard: W "↑", S "↓", A "←", D "→", I "Zoom", K "Zoom", J "Focus near", L "Focus far".

3.4.2 PTZ control

Panoramic dome camera dual-channel support content is different, specific to the actual interface.

Icon	Description
	8 direction key, press the corresponding direction key to control the PTZ to rotate in the corresponding direction; the center button is the scanning shortcut key, press it to call No.1 scanning.
	The slider can adjust the rotation speed of the equipment. The closer to the "-" end, the slower the speed is. The closer to the "+" end, the faster the speed is.
	Zoom control button, press "-" to control the device to execute zoom small operation, the field angle becomes larger, and the scene becomes smaller; press "+" to control the device to execute zoom large operation, the field angle becomes smaller, and the scene becomes larger. (This button can also control the zooming of the motorized lens.)

	Focus control button, press "-" to control the device to execute focus near operation, the near scene is clear and the far scene is blurred; press "+" to control the device to execute focus far operation, the far scene is clear and the near scene is blurred. (This button also controls the motorized lens for focusing)
	Aperture control button, press "-" to control the device to perform aperture reduction operation, and press "+" to control the device to perform aperture increase operation.
	Clear the alarm button. Press the button to clear the alarm.
	Front-end interception button, press the button to start the front-end interception function.
	Area exposure button, when the brightness difference of the monitoring scene is relatively large, the area to be adjusted can be selected through the area exposure function, so that the brightness of the key monitoring area is moderate.

	Area focus button, when the depth of field range of the monitoring scene is relatively large, the part of the scene that needs to be focused clearly can be selected through the area focus function.
	By pressing the watch button, you can automatically set the current scene to the watch preset position (default preset position 1) and turn on the watch function. If you want to deactivate the one-button watch function, please deactivate the standby action in Dome Settings-Basic Settings.

	The 3D positioning button is controlled by clicking the mouse to adjust the scene to be monitored to the video center. Specific operation: 1. Left-click the required monitoring point on the monitoring video screen, and move the corresponding point to the center of the video; 2. Press and hold the left button to pull out a rectangular area to the lower right, and then move the center of the corresponding designated area to the center of the video and zoom in; 3. Press and hold the left button to pull out a rectangular area to the upper left, and then move the center of the corresponding designated area to the center of the video and zoom out for viewing.
	Strong light alert button, click Enable to enable the strong light, and then click again to turn off the strong light.
	Audible alert button. Click Enable. When enabled, an audible alert tone is played.

	Manual tracking button, click Enable, and then manually click the target to track the target.
	Face capture enable button, after enabling, when the PTZ has no action, quickly start the face capture algorithm. The default detection area is full-screen 4/5 centered, and the push strategy is the fastest.

3.4.3 Preset position

After entering the preset bit number, you can select the operations for the preset bit, including [Set], [Call], and [Delete]. (Only supported on channel 1)



The preset position function is that the device can store the position parameters such as the horizontal angle, the tilt angle and the focal length of the lens of the device in the current state into the memory, and can quickly call these parameters and adjust the PTZ and the camera to the position when needed.

Operation steps:

(1) Click the icon " ▾ " below the preset position button to display the preset position operation interface, and fill in the required preset position number in the blank box. Click the button " 🔍 ", the list will directly jump to the preset position, or select the corresponding preset position number through the drop-down list.

(2) [Setting]: control the PTZ to move to the specified position, select the desired preset tag number, and then preset the button behind the tag number to add the corresponding preset position successfully; multiple preset positions can be added.

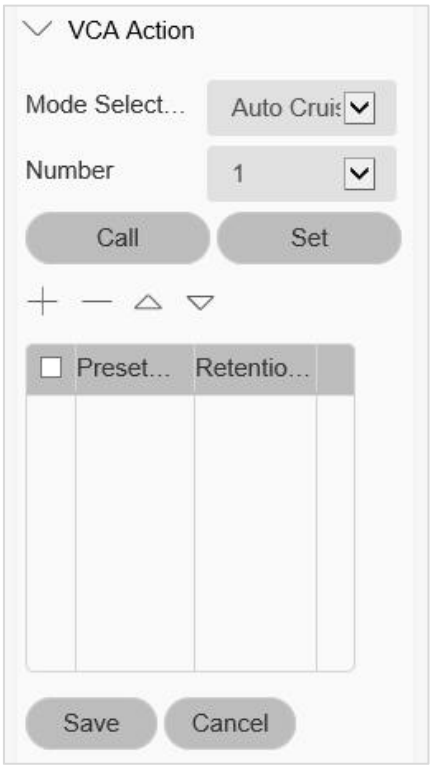
(3) [Call]: input the corresponding preset tag number in the blank column, click the button 🔍 to find the corresponding preset tag number, and then click the button ↪ behind the preset tag number to realize the call. After the call, the PTZ moves to the specified preset position.

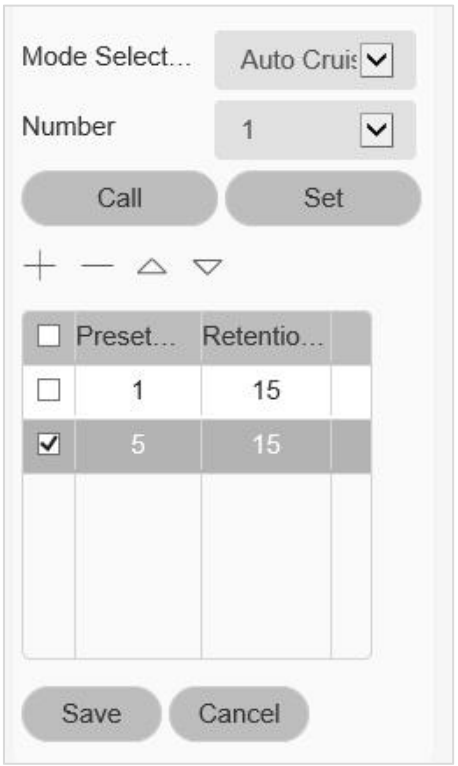
3.4.4 VCA Action

Click the " ▾ " icon below the intelligent action button to display the intelligent action operation interface, which includes the relevant operations of automatic cruise, automatic scanning, mode path and intelligent scene. (Only supported on channel 1)



[Auto cruise]: Some preset bits are arranged into the auto cruise queue in the required order, and the call of the cruise allows the device to automatically call the preset bits in the set order at the specified time interval. Each cruise track can store 32 preset points.

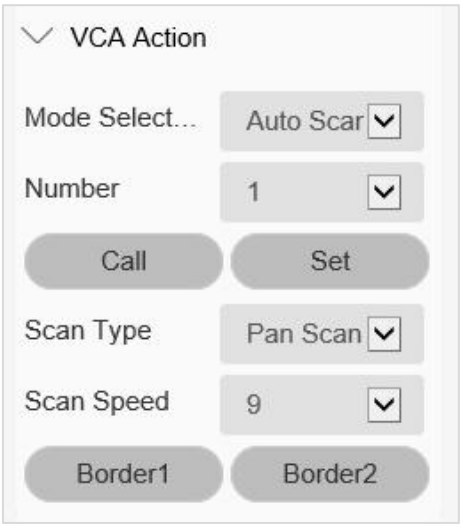




Operation steps: (1) Select the number, and then click "Set". (2) Click " + " to add a preset point to set the preset position number and dwell time. Check the box in front of the preset bit number, click " − "to delete the preset bit, and click" ↑ " " ↓ " to change the order of the

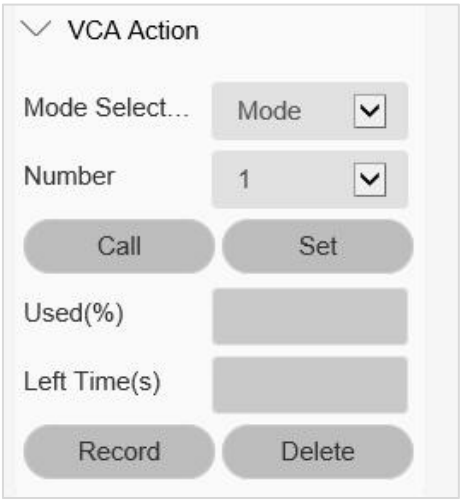
preset bit. (3) Click "Save" after setting. (4) After setting, select the corresponding number to call.

[Automatic scanning]: By setting the left limit and the right limit in advance, the camera can automatically scan back and forth horizontally at the set speed between the left limit and the right limit. There are seven types: horizontal scanning, automatic scanning, frame scanning, random scanning, vertical scanning, panoramic scanning and spiral scanning.



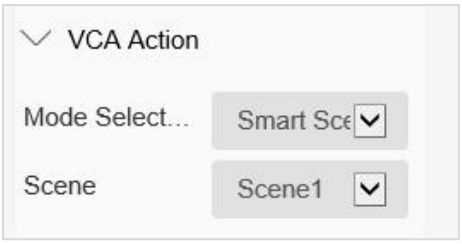
Operation steps: (1) Select the number, and then click "Set". (2) Select the scanning type and set the scanning speed. (3) Horizontal, vertical and spiral scanning need to set left and right boundaries. (4) After setting, select the corresponding number to call.

[Mode path]: The dome camera can continuously record the running track within a period of time. After the mode path function is started, the dome camera can automatically monitor according to the recorded running track.



Operation steps: (1) Select the number, and then click "Set". (2) Click Record, and then operate the PTZ to record the desired path and stop recording. (4) After setting, select the corresponding number to call.

[Intelligent scene]: By selecting the scene set in advance, you can switch the scene and quickly start the intelligent analysis function. If the user has set the intelligent analysis cruise, the cruise mode will be entered after 10 minutes of quick call scene.



3.4.5 Image

Click the icon below the video parameter button to display the parameter adjustment interface, through which the following contents can be adjusted.



Icon	Description
Color Bright	High-definition effect adjustment, adjust the color image effect. Effects are divided into: outdoor, indoor, traffic, wide dynamic, sports, highlight, bright, custom and so on.
B/W Bright	HD effect adjustment, adjust the black and white image effect. Effects are divided into: outdoor, indoor, traffic, wide dynamic, sports, highlight, bright, custom and so on.
	Wide dynamic function button, press the button to start wide dynamic.
	High light suppression function button, press the button to start high light suppression.
	Fog-passing function button. Press the button to turn on the fog-passing function.

3.4.6 Quick Scene

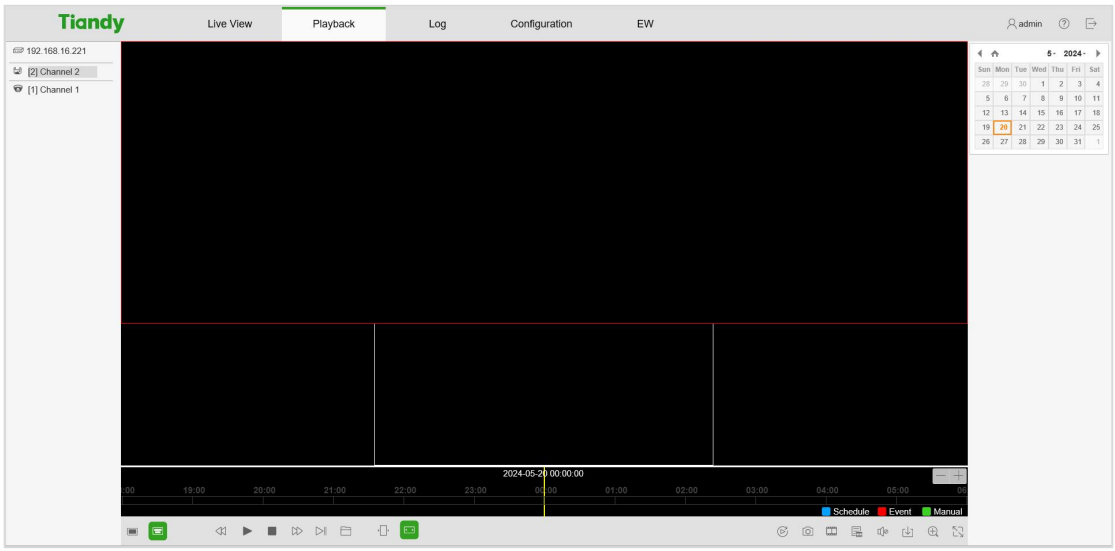
Click the icon below the shortcut scenario button to display the shortcut scenario operation interface, through which the following contents can be adjusted.



Icon	Description
○ Low Band... ○ High Quality	Select the appropriate preview mode from [Low Bandwidth] and [High Quality] according to the specific network environment.
◉ Self-Adap... ○ Minimum...	Two transmission modes of [Self-Adaptive] and [Minimun Delay] can be selected according to the network environment of equipment transmission. In the case of limited network bandwidth, it is recommended to select the adaptive mode to ensure smooth images; in the application environment with high video quality requirements, it is recommended to select the transmission mode with the shortest delay.

3.5 Playback

Click the [Playback] button in the menu bar to enter the [Playback] interface.

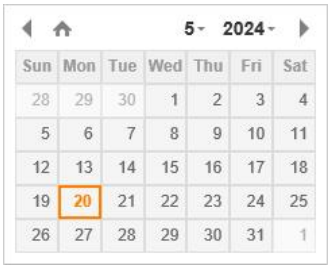


3.5.1 Query front-end video file

In the playback interface, the user can view the video file of the specified date, and can capture and edit the video. The icon functions as shown below.

Icon	Description
	View the playback video in a 1 * 1 split screen.
	View the playback video in a 1 * 2 split screen.
	Slow forward button, the speed is 1/2 times speed, 1/4 times speed, 1/6 times speed, 1/8 times speed.

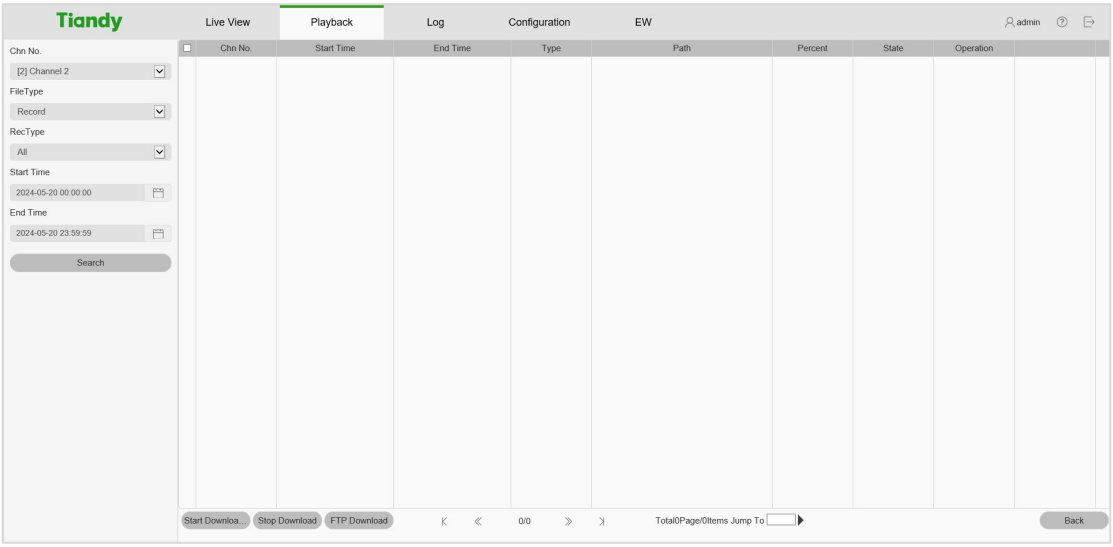
	Play button, you can start to play the video file, pause in the process of playing the video, and end the double speed play in the process of double speed play.
	Stop playing button to stop playing the current file.
	Fast-forward button, the speed is 2 times, 4 times, 6 times and 8 times in turn.
	Step button to play back the video in a single frame.
	Browse button to select the video file to be played.
	Video automatically adapts to PC resolution display.
	The video is displayed at a fixed scale.
	View recorded video in synchronized playback.
	The local capture button is saved in C: \ Users \ admin \ Net Video Browser \ CapturePics \ by default.
	Video clip button, click to start the clip, click again to finish the clip, the default save location is C: \ Users \ admin \ Net VideoBrowser \ CapturePics \.
	Clip management: You can view the type, progress, current status, and other information of the clip video.

	Volume switch.
	Volume size.
	Download management: query or download videos and pictures.
	Electronic magnification, same as "electronic magnification" in preview.
	Full-screen play button. In full-screen mode, double-click the mouse again at any position to exit full-screen mode.
	Select a date in the calendar, double-click the date, and search for files that meet the query criteria.

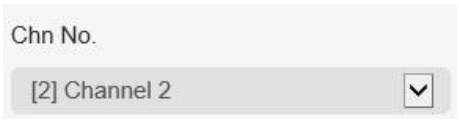
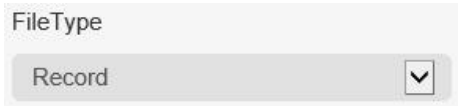
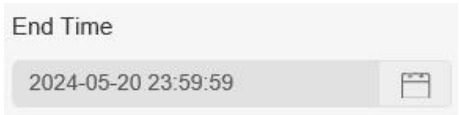
In the timeline mode, the user can drag on the timeline to view the video file of the corresponding time. After selecting the time point, click the play button  to play. Click to zoom out the timeline and click  to zoom in the timeline.

3.5.2 Query in file mode

In the file mode, the user can operate according to the file type, video type, and whether to query remotely, as shown in the following figu



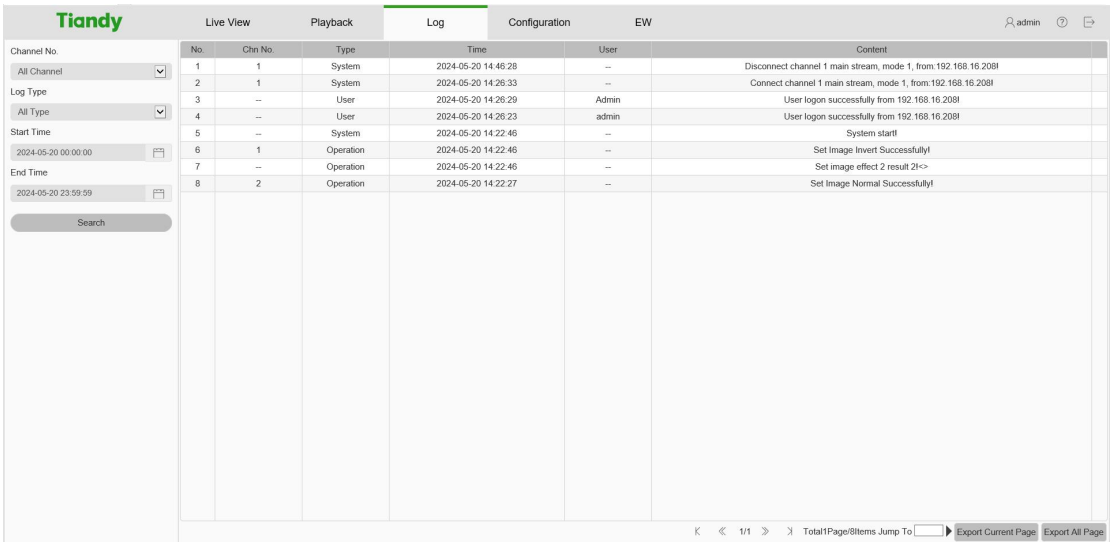
The icon functions as follows:

Icon	Description
	Select the channel number to query.
	Select the file type to query.
	Select the type of video file to be queried.
	Select the start time of the video query.
	Select the end time of the video query.
	Start downloading the selected video file.
	Stop the selected video file being downloaded.

	Download the selected video file via FTP.
	Return to the playback interface.
	Jump to the specified page.
	Click to query the corresponding video information.
	Jump to the first page of the query result.
	Jump to the previous page of the current page.
	Jump to the next page of the current page.
	Jump to the last page of query results.
	Lock: The file can be locked and unlocked. Locked files are not deleted when the disk is full and files need to be deleted.

3.6 Log

Click [Log] on the menu bar to enter the log query page, as shown in the following figure.



Operation steps:

（1） Select the channel number to be queried from the [Channel] drop-down list.

（2） Select the log type to be queried from the [Log Type] drop-down list.

(3) Select the start date in the [Start Time] drop-down list, and enter the time in the edit box behind.

(4) Select the end date in the [End Time] drop-down list, and enter the time in the edit box behind.

(5) Click the [Query] button to query the logs within the specified time range.

（6） When there are many logs, you can use [Home] [Previous] [Next] [Last] in the lower right corner to turn pages to view logs; or enter the page number to be viewed directly in [Jump to] to jump to the specified page.

(7) Click [Export Current Page Log] to export the current page log to the

PC.

(8) Click [Export All Page Logs] to export all the queried logs to the PC.

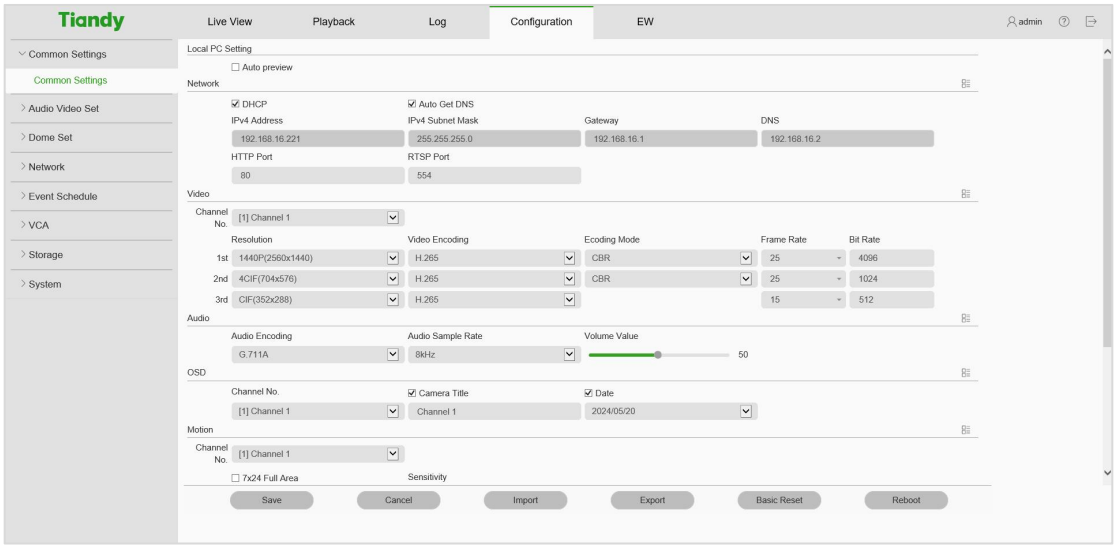
3.7 Configuration

After successful login, the system displays the [Preview] interface by default. Click [Configuration] in the menu bar at the top of the page to enter the parameter configuration page, where you can perform common settings, audio and video parameters, network settings, intelligent monitoring, storage settings, system settings, etc.

Attention:

- Because the functions supported in different modes are different, there will be differences in the interface and menu. Please refer to the actual interface.

3.7.1 Common Settings



Common Settings->Local PC Setting

[Auto Preview]: After it is enabled, the preview video can be displayed directly every time you enter the preview interface.

Common Settings->Network

[DHCP]: When checked, the DHCP server will automatically assign an IP address to the device.

[Auto Get DNS]: When checked, the DNS server will automatically assign a DNS address to the device.

[IPv4 address]: Set the IP address of the device.

[IPv4 Subnet Mask]: Sets the subnet mask of the device.

[Gateway]: Set the gateway of the device.

[DNS]: Sets the DNS server address.

[HTTP port]: input [HTTP port number] in the input box on the page and restart the device to modify the HTTP port number.

[RTSP port]: input [RTSP port number] in the input box on the page and restart the device to modify the RTSP port number.

[ ]: Jump to the network settings screen.

Common Settings->Video

[Channel]: Select the channel name to be set.

[Resolution]: Set the resolution of the video.

[Video encoding]: Set the encoding mode of the video. H.265 encoding

saves bandwidth, but some browsers or playback software do not support H.265.

[Encoding mode]: Set fixed rate or variable rate compression. Under the constant bit rate, the fluctuation of video data is small, and the bandwidth is stable during network transmission; under the variable bit rate, the amount of video data changes with the complexity of the video picture, and the bandwidth is saved when the scene is single. In the variable bit rate, there are several levels, if the better, the greater the average bit rate of the video.

[Frame rate]: Set the frame rate of the current video. Under PAL system, some models support 50 frames, and support up to 25 frames when wide dynamic is turned on. Under the NTSC system, some models support 60 frames, and support up to 30 frames when the wide dynamic range is turned on.

[Bit rate]: set the video code rate in kb/s. Code rate range: 32 ~ 16384kb/s.

Explanation:

- Select the required resolution from the [Resolution] drop-down list, and the code stream can be switched to the specified [Code rate]. When the [compression mode] is [constant code rate], [code rate] represents the actual code rate of the code stream; when the [compression mode] is [variable code rate], [Bit rate] represents the maximum code rate allowed by the code stream.

[ ]: Jump to the video parameter interface.

Common Settings->Audio

[Audio coding]: Set the audio coding mode of the code stream.

[Audio sample rate]: Set the audio sampling rate of the code stream.

[Volume Value]: The output sound can be adjusted within the range of 0 ~ 100. The smaller the value, the smaller the amplitude of the audio signal output by the device; the larger the value, the larger the amplitude of the audio signal output by the device.

[ ]: Jump to the audio interface.

Common Settings->Audio

[Channel No.]: Select the channel name to be set.

[Camera Title]: Set the video channel information superimposed on the video.

[Date]: Set the date and time information to be superimposed on the video.

Explanation:

- If checked, characters are superimposed on the video. If unchecked, no characters are superimposed on the video.

[ ]: Jump to the character overlay interface.

Common Settings->Motion

[Channel]: Select the channel name to be set.

[Sensitivity]: Set the alarm sensitivity. The higher the value is, the more sensitive it is.

Explanation:

- Only when [7X24 Full Area] is checked, the equipment will start the mobile alarm.

[ ]: Jump to the mobile alarm interface.

Common Settings->User Management

[Add]: To add a new user, you need to enter the user name, password and permission. Only English letters and numbers can be entered for the user name and password. After filling in the above three items, click the [Save] button.

Attention:

- Only users with administrator rights can add and modify users.

[Edit]: In the user list, click [Edit] to pop up a prompt box to modify the password. Enter the old password, new password and password confirmation respectively, and then click the [Modify] button.

[Delete]: In the user list, click the [Delete] button and click OK in the pop-up prompt box.

Common Settings->Other icon

Click the [Save] button to save and make it effective.

Click the [Cancel] button to restore the last saved parameters.

[Import]/ [Export]: used for equipment maintenance, mainly divided into three categories:

(1) The [Alarm] option includes the alarm time period and linkage item setting information, and does not include the intelligent analysis class.

(2) The [Smart Analysis] option includes settings related to smart analysis, including rules, time periods, etc.

(3) [System setting] option includes all setting information except the above alarm and intelligent analysis, including information such as character superposition, video recording strategy, network setting, etc.

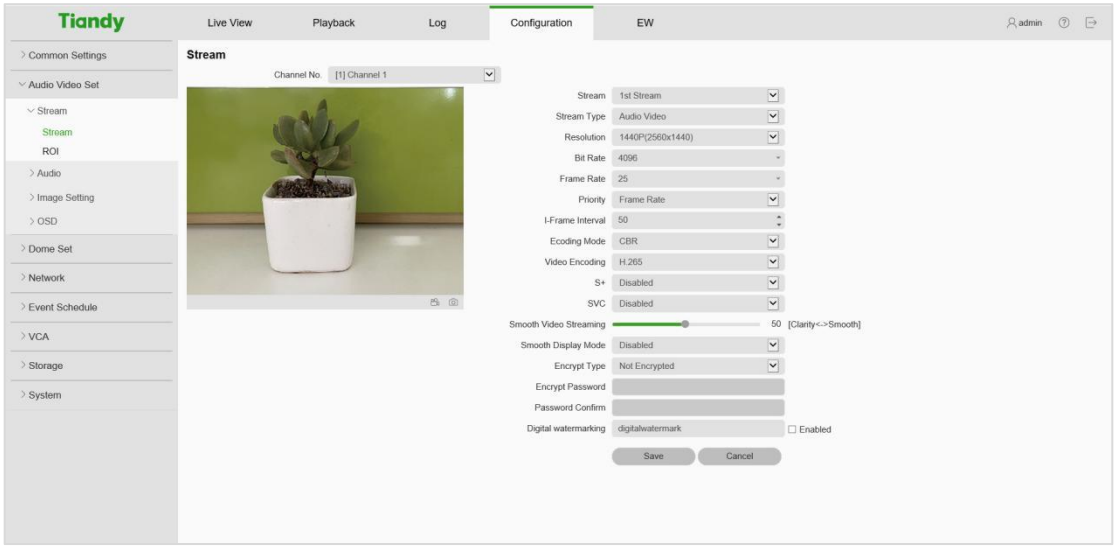
[Basic Rest]: Recover the default parameters of the device. (Critical information such as IP addresses will not be recovered)

[Reboot]: Restart the device.

3.7.2 Audio Video Set

3.7.2.1 Stream

Stream->Stream



Parameters related to video configuration are described as follows:

Parameters	Description
Channel	Select the channel whose video parameters need to be modified.
	Local manual snapshot control button. Click Enable to enable the preview picture to be captured and saved locally. The storage path of the snapshot file can be modified. Modify the page: Configuration-System Settings-Local Settings-Preview Snapshot Storage Path.
	Local manual video recording control button. Click Enable to start local video recording. The video file storage path can be modified. Modify the page: Configuration-System Settings-Local Settings-Video File Storage Path.
Stream	Select the code stream type according to the use requirements.

	Main code stream: large code stream, high definition, large bandwidth, suitable for local storage. Substream: The image is smooth and occupies less bandwidth. It is suitable for low-bandwidth network transmission or standard definition storage. Other code streams: can be set according to the use requirements.
Stream Type	Choose pure video or audio video according to your needs. Video-only: Contains only the video stream. Audio and video: including video stream and audio stream.
Resolution	Set the resolution of the video. Different models are compatible with different maximum resolutions. The higher the resolution, the higher the bandwidth requirements for the network.
Bit Rate	Set the bit rate of the video in kb/s. When the [compression mode] is [constant code rate], [code rate] represents the actual code rate of the code stream; when the [compression mode] is [variable code rate], [code rate] represents the maximum code rate allowed by the code stream. (The code rate supported by different models is slightly different, please refer to the actual situation.)
Frame Rate	Sets the frame rate of the current video. The frame rate

	represents the number of frames per second of the video. The higher the video frame rate, the smoother and more realistic the picture. However, the more bandwidth and storage space are required, please set according to the actual bandwidth.
Priority	Set to [Frame Rate Priority] for smoother video; set to [Quality Priority] for sharper video.
I-Frame Interval	The number of frames between every two I frames can be set, and the settable range is 10 ~ 100. The larger the I frame interval is, the smaller the bit stream is, but the image quality is relatively poor; conversely, the larger the bit stream is, the better the image quality is.
Ecoding Mode	Set fixed rate or variable rate compression. Under constant bit rate, it means that the bit rate is maintained at the average bit rate for transmission, the fluctuation of video data is small, the bandwidth occupied in network transmission is stable, and the compression speed is fast, but it may cause video mosaic phenomenon. Under the variable code rate, it means that the code rate is adjusted on the basis of not exceeding the upper limit of the code rate. The amount of video data changes with the complexity of the video picture. The compression speed is relatively slow, but it can ensure the picture clarity in complex

	scenes. In the variable bit rate, there are several levels, if the better, the greater the average bit rate of the video.
Video Encoding	Sets the encoding method for the video. H.264 is a high-performance video encoding and decoding technology with high compression ratio, flexible processing and ultra-low bit rate, which saves network transmission bandwidth and storage space. H.265 is a high-performance video codec technology with high compression ratio, flexible processing and ultra-low bit rate. Compared with the current H.264, the compression performance is doubled, and the bandwidth and storage space are further saved. MJPEG is a kind of video coding and decoding technology, the compressed image quality is good, and there is no mosaic in the case of picture changes.
S+	You can switch S + on or off in the drop-down list. After S + is enabled, functions such as compression mode, video quality, I frame rate, and key areas will not be available.
SVC	When [SVC] is enabled, non-reference P frames can be encoded for frame extraction video recording to save storage space, and the video file after frame extraction still supports normal decoding. When the [Auto] mode is selected, the device will

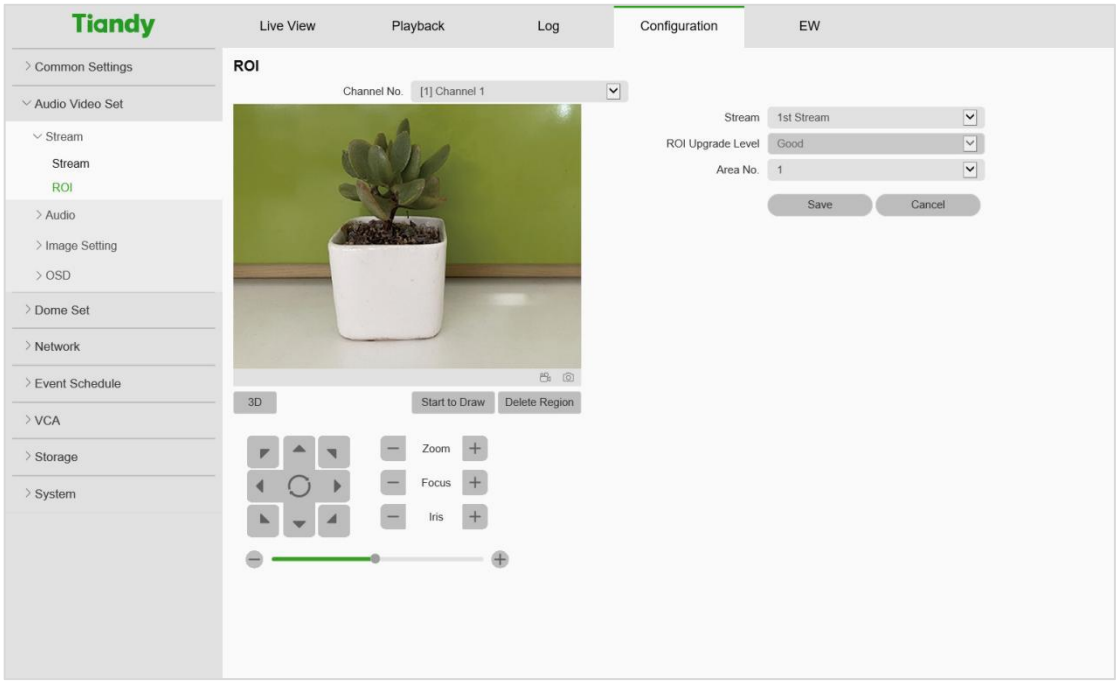
	adapt to the current network environment and decide whether to transmit the frame to ensure that the preview image can be previewed normally.
Smooth Video Streaming	The ratio of I frame and P frame can be set, which can be used to alleviate the network impact caused by too large I frame. The closer to smoothness, the better the fluency of dynamic scenes, and the closer to clarity, the better the video clarity performance of static scenes. Drag the progress bar, the higher the value, the better the smoothness, but the image will be relatively unclear, otherwise the image smoothness is poor, the image is relatively clear.
Smooth Display Mode	Set whether to turn on the smooth display mode.
Encrypt Type	Depending on the situation, users can encrypt video data to improve the security of network transmission. [Encryption type] Select the required encryption algorithm (currently only the AES algorithm is available), [Encryption password] Set the encryption password, [Password confirmation] Enter the encryption password again to ensure that the passwords entered twice are the same, and click the [Save] button to take effect.
Digital watermarking	The anti-counterfeiting mark of the video data prevents the

	video data from being tampered. Recorded video verification can be performed using professional tools.

Click the [Save] button to save and make it effective.

Click the [Reset] button to restore the last saved parameters.

Stream->ROI



The image quality displayed in the focus area is higher.

Operation steps:

(1) Click the "Start Drawing" button to press and drag the left mouse button on the video to set the key area. Several key areas can be set. Click "Delete Area" to delete all the key areas that have been set.

(2) Click the [Save] button to save the corresponding parameter settings. Click [Cancel] to restore the last saved parameters.

[Code stream type]: Set the code stream of the application focus area.

[Upgrade Level]: Set the upgrade level of the video in the key area.

[ROI Type]: There are two types: [Fixed Area] and [Dynamic Tracking]. Enable [Dynamic Tracking] to perform dynamic intelligent tracking on key areas.

Attention:

- After modifying the resolution, video encoding and other options, you need to adjust the bit rate, compression encoding and other parameters according to the actual image effect.

Stream->Area clipping

The area clipping function is only supported by the PTZ channel. The user can clip the video picture as required to eliminate interference or invalid areas.

(1) Enable clipping.

(2) Select the cropping resolution, and the corresponding cropping box will appear in the video window. You can drag the mouse to select the cropping area.

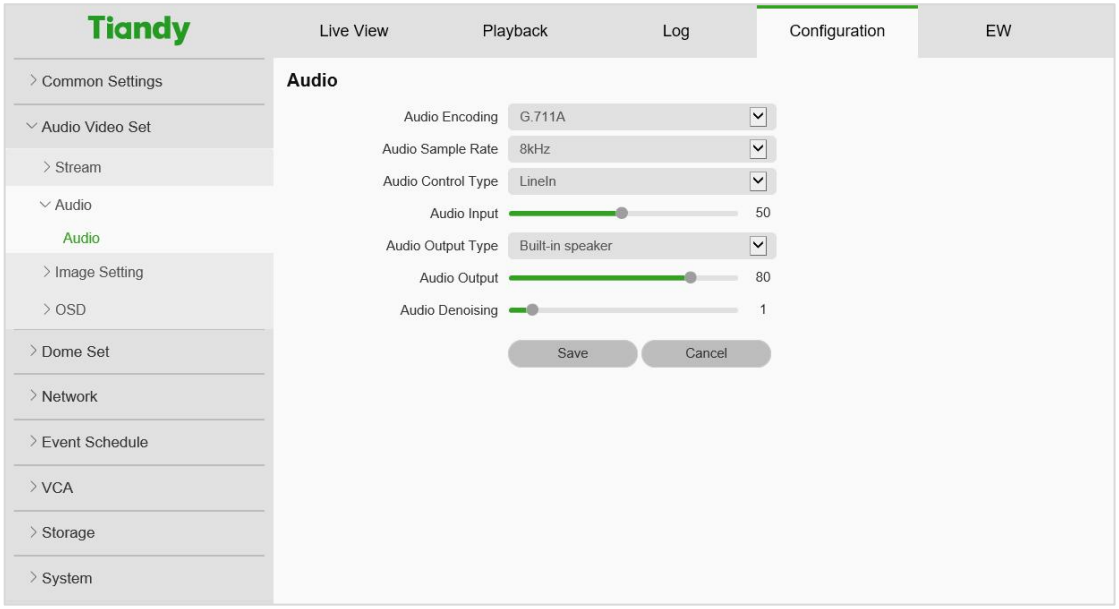
(3) Click the Save button.

Explanation:

- After the area clipping function is enabled, the resolution of all code streams and the snapshot resolution will change automatically, and manual switching of resolution is not supported.

- After the area clipping function is enabled, due to the change of resolution and scene, the character superposition, privacy occlusion, key area and algorithm scene related to the position on the screen will change, so it is recommended to readjust the position.

3.7.2.2 Audio



Parameters such as audio coding mode, audio sampling rate, audio control type, volume value, and audio noise reduction level can be modified.

Parameter	Description
Audio Encoding	Set the audio encoding mode of the code stream.
Audio Sample Rate	Set the audio sampling rate of the code stream.
Audio Control Type	LineIn mode is supported, that is, the output signal amplitude of the external audio device is active audio device (Class V signal).

Audio Input/Out	The output sound can be adjusted within the range of 0 ~ 100. The smaller the value, the smaller the amplitude of the audio signal output by the device; the larger the value, the larger the amplitude of the audio signal output by the device.
Audio Output Type	Audio output types include internal speakers, external audio, and off. When internal speakers are selected, the output volume can be adjusted.
Audio Denoising	You can set the filtering level of the ambient noise. The default level is 1. When the value is 0, the audio noise reduction function is turned off.

You can set the filtering level of the ambient noise. The default level is 1. When the value is 0, the audio noise reduction function is turned off.

Click the [Save] button to save and make it effective.

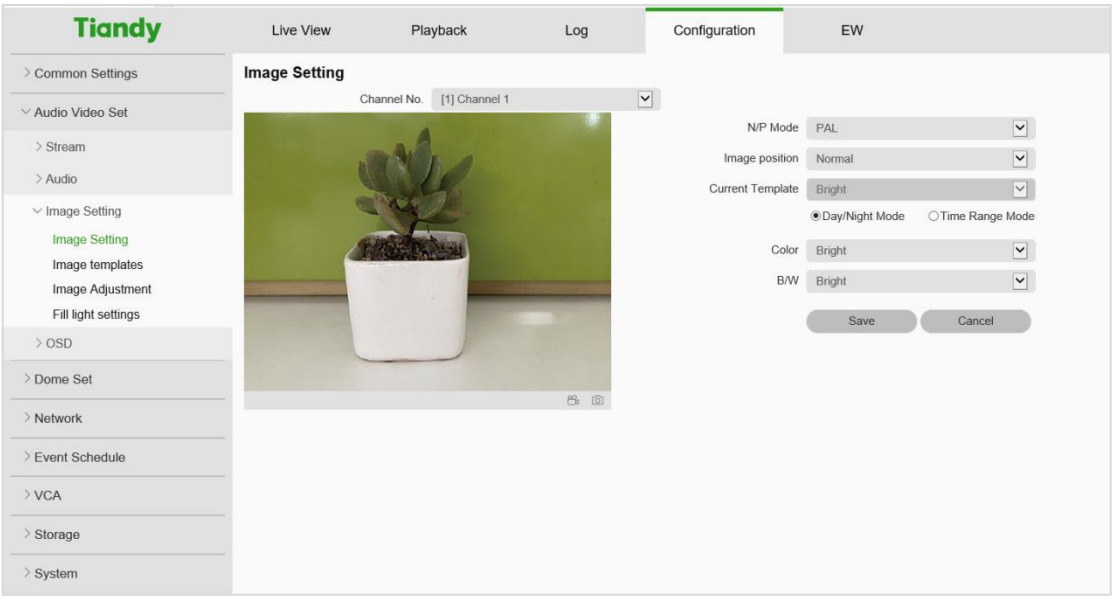
Click the [Cancel] button to restore the last saved parameters.

Attention:

- To modify the audio parameters, you need to turn off the intercom function.
- Modify the audio encoding mode and audio sampling rate parameters, which will take effect after the device is restarted.

3.7.2.3 Image Setting

Image Setting->Image Setting



[Channel No.]: Select the channel whose parameters need to be modified.

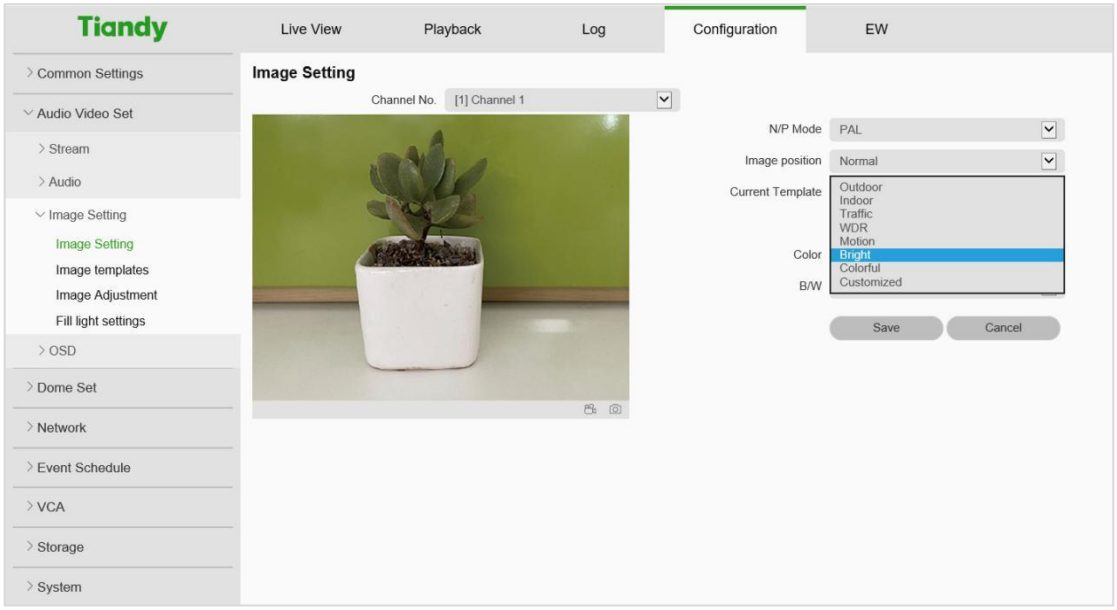
[N/P Mode]: Set the effect of image display. PAL and NTSC are supported.

[Image Position]: Select the image mirror display mode. Two image position display modes are supported: inverted and normal.

[Current Template]: Displays the image template currently in use.

Set different display modes for channel templates. [Day/Night Mode] and [Time Range Mode] can be selected.

Among them, [Day and Night Mode] can be divided into [Color] and [B/W], that is, day or night. You can select eight templates, including outdoor, indoor, traffic, wide dynamic, sports, highlight, bright and custom, as shown in the following figure.



[Time Range Mode] Select different templates according to the time period, as shown in the following figure.

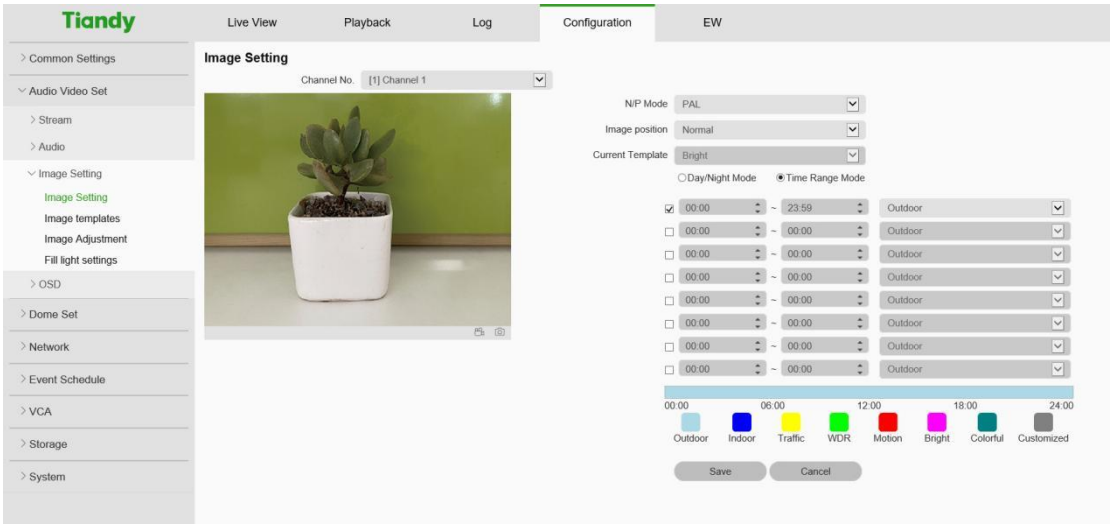
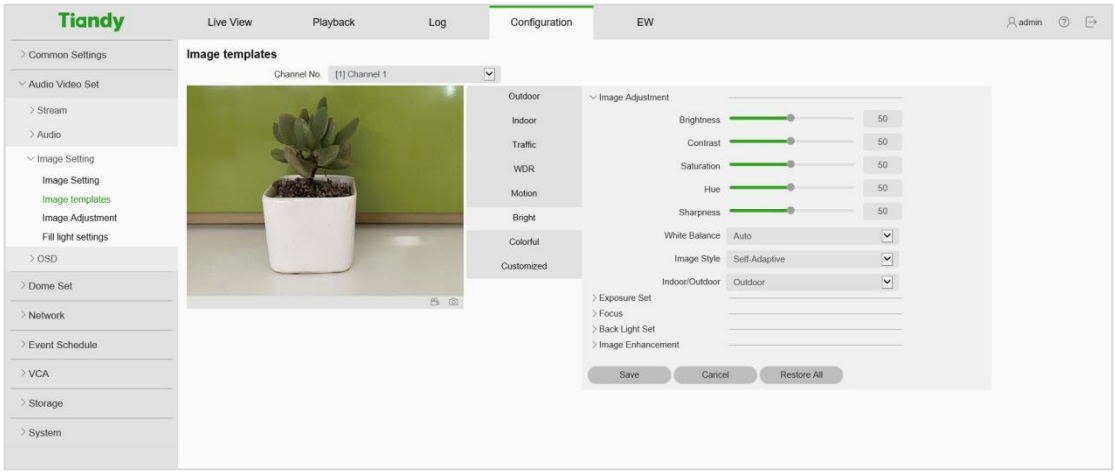


Image Setting->Image templates



Select a different image template, such as indoor, to adjust the template.

Attention:

- Only channel 1 has an image template function.

[Image Template] = > [Image Adjustment]

Click the " > " button next to [Image Adjustment] to expand the [Image Adjustment] interface. Users can set the picture brightness, contrast, saturation, chroma, sharpness, white balance, image style and indoor and outdoor modes through the image adjustment menu.

[Image Template] = > [Exposure Set]

Click the " > " button next to [Exposure] to expand the [Exposure] setting interface.

Parameter	Description
Anti Flicker	Power frequency interference can be reduced by setting,

	automatic, 50HZ and 60HZ can be set.
SmartIR	It is mainly used for infrared night vision models. When there is an overexposed scene in the picture, if this function is turned on, the camera will automatically reduce the brightness to avoid unclear objects due to overexposure.
Exposure Time	You can set the maximum exposure time allowed, which affects image brightness. If the exposure time is too long, the moving image will be smeared, and if the exposure time is too short, the video picture will be black.
Max Aperture Set	Adjust the maximum gain value to modify the compensation of picture brightness under low illumination. The greater the gain value, the greater the brightness increase, but the greater the noise.
Exposure Mode	Auto/Manual/Shutter Priority/Aperture Priority can be selected. In the "Auto" mode, the aperture, shutter and gain are adjusted automatically; in the "Manual" mode, the shutter, aperture and gain can be set manually. In the "Shutter Priority" mode, other parameters are adjusted automatically when the shutter size is adjusted. In the "Aperture Priority" mode, other parameters are adjusted automatically when the aperture size is adjusted.

Brightness	A desired image brightness value is set.
Auto Exposure Speed	You can set the exposure sensitivity. The higher the value, the faster the exposure response when the scene changes.

[Image Template] = > [Focus]

Click the " > " button next to [Focus] to expand the [Focus] setting interface.

Parameter	Description
Focus Mode	[Auto]/ [Manual]/ [Semi-Auto] can be selected. In the [Auto] mode, it automatically focuses according to the change of the monitoring scene. In the [Manual] mode, the manual focus is clear through the focus adjustment in the preview interface. In the [semi-automatic] mode, one PTZ action triggers one focus, and no automatic focus occurs when there is a change in the same scene.
Min.Focus Distance	The minimum focusing distance can be set. It is recommended to set it to 6 meters for outdoor scenes and 1.5 meters for indoor scenes.

[Image Template] = > [Back Light Set]

Click the " > " button next to [Backlight] to expand the [Back Light Set] setting interface.

Parameter	Description
HLC	When there is strong light, turn on this function to properly suppress the strong light and see the video picture clearly. The level of strong light suppression can be adjusted according to the actual scene.
WDR	In the drop-down list, [Close], [Super Wide Dynamic Auto] and [Super Wide Dynamic Manual] are available for selection. Select [Super Wide Dynamic Auto] or [Super Wide Dynamic Manual] to display the [Super Wide Dynamic] slider. Drag the slider to set the wide dynamic level that meets the needs of the scene. The larger the value, the more obvious the effect.

[Image Template] = > [Image Enhancement]

Click the " > " button next to [Image Enhancement] to expand the [Image Enhancement] setting interface.

Parameter	Description
Defog	When the monitoring environment is foggy or in hazy weather so that the distant scenery cannot be seen, you

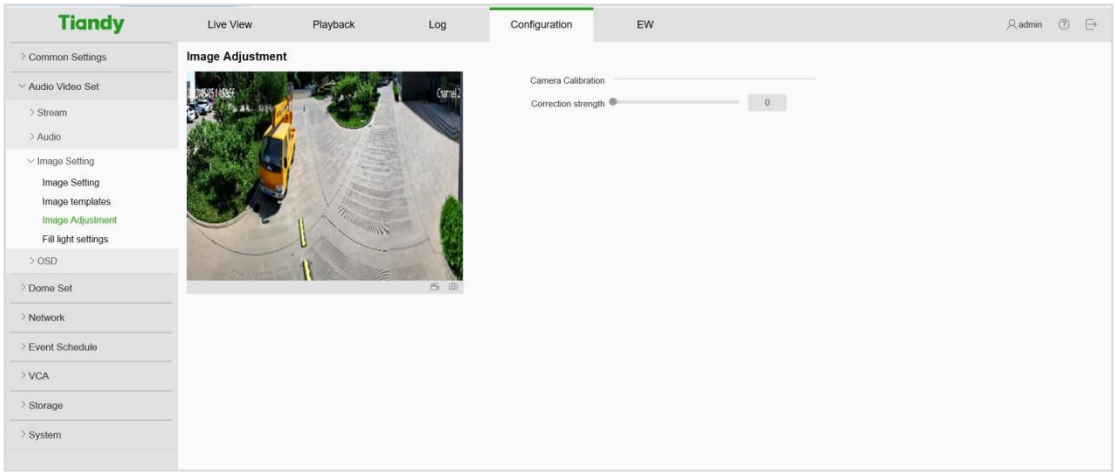
	can turn on the fog-penetrating function to see the distant scenery.
Digital Noise Reduction	In the drop-down list, [Close], [Normal Mode] and [Expert Mode] are available for selection. Select [Normal Mode] to display the [Noise Reduction Level] slider. Drag the slider to set the noise reduction level. Select [Expert Mode], [Spatial Domain Noise Reduction Level] and [Time Domain Noise Reduction Level] sliders will pop up below, and drag the two sliders to set [Spatial Domain Noise Reduction Level] and [Time Domain Noise Reduction Level] respectively.

After setting the HD parameters, click the [Save] button to save it.

Click the [Cancel] button to restore the last saved parameters.

Click the [Restore All] button to restore all the parameters of each template to the default settings.

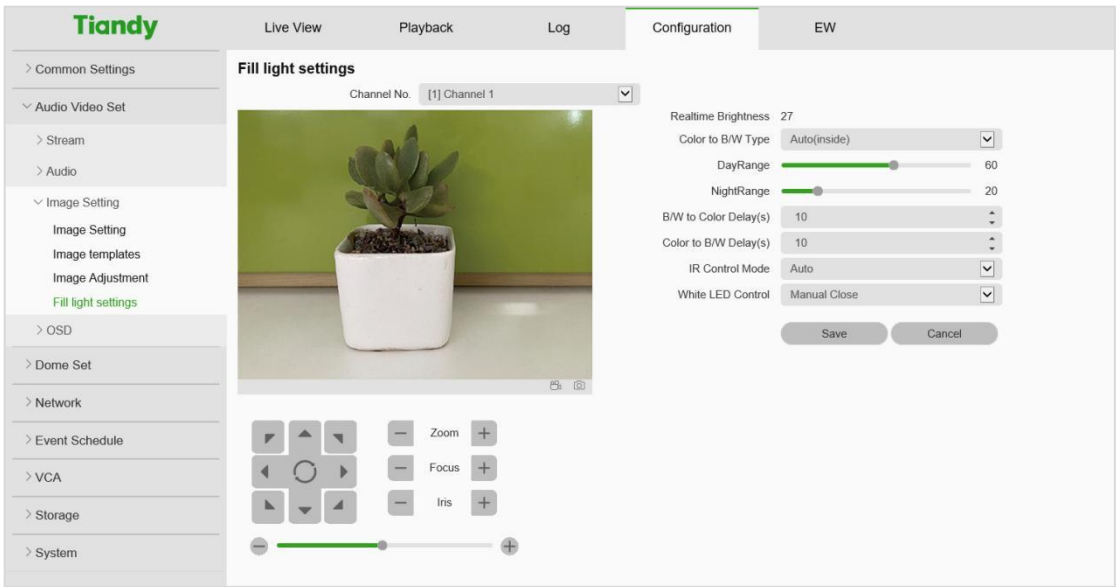
Image Setting->Image Adjustment



For the equipment with electric lens, the image may be curved due to the large curvature of the lens. Turn on the lens distortion correction to make the image display smooth. By adjusting the correction intensity, the image can be corrected.

Image Setting->Fill light settings

In the fill light setting interface, set the equipment to switch to the day or night mode according to the specified conditions, and set the fill light.



Parameter	Description
Realtime Brightness	Displays the current brightness of the picture.
Color to B/W Type	The device can be switched between day and night modes with different regularity. Support color, black and white, internal synchronization, timing, adaptive and other types of color to black.
Auto(inside)	In the internal synchronization mode, the device will automatically detect the brightness of the video screen. When the video brightness is higher than the daytime brightness value, the video will change from black to color; when the video brightness value is lower than the night brightness value, the video will change from color to black. The [Real-time brightness value] at the top of the page is the detected current brightness value.
B/W	Device video is always black and white.
Color	Device video is always in color.
Schedule	In the timer mode, the user can specify the time to switch on and off the infrared light and the white light.
DayRange	Brightness threshold above which the device switches

	from black and white to color.
NightRange	Brightness threshold from color to black and white. Below this value, the device switches from color to black and white.
B/W to Color Delay(s)	When the daytime brightness value is reached, how long is the delay before the device changes from black and white to color.
Color to B/W Delay(s)	When the night brightness value is reached, how long is the delay before the device changes from color to black and white.
IR Control Mode	Set the opening mode of the infrared lamp. Both automatic and manual control modes are supported. When manual control is selected, the brightness of near infrared lamp, middle infrared lamp, far infrared lamp and laser lamp can be adjusted.
IR Control Mode	Slide the slider to set the brightness value of the infrared lamp, with a maximum value of 100.
White LED Control	Set the white light on mode. Support four control modes including automatic and manual closing, manual opening and timing. When automatic is selected, support

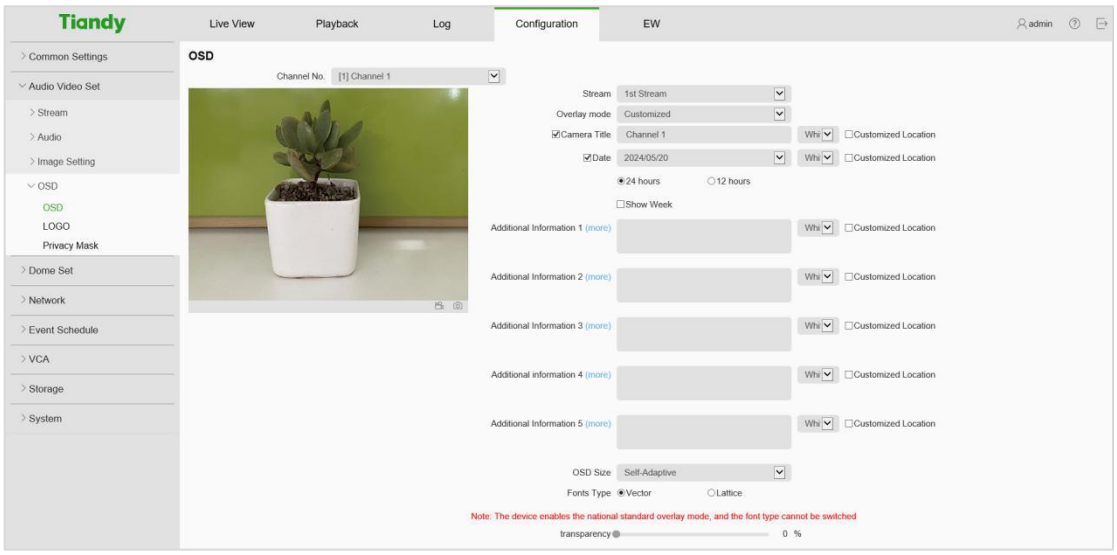
	brightness adjustment of white light.
Brightness of white light	Slide the slider to set the brightness of the white light to a maximum of 100.

Explanation:

- The best filling distance of the white light is about 30 meters, and it is not recommended to manually turn on the white light to fill the light after the zoom exceeds 30 meters.
- White light filling type. It is recommended to manually turn off the white light when it is used in the environment where there is a large area of reflective objects near the indoor and outdoor monitoring scene (2-3 meters), so as to avoid the image effect being affected by the repeated turning on/off of the filling light due to strong reflection.

3.7.2.4 OSD

OSD -> OSD



[Stream]: Select the stream to be superimposed with character information.

Operation steps of overlay [channel name]:

(1) Select the [Channel Name] check box to superimpose the channel name on the screen.

(2) Enter the name in the input box on the right to set the channel name.

(3) Select a preferred color for the superimposed content from the [Color] drop-down list.

(4) If you need to change the position of the superimposed character, select the [Custom Position] check box and click on the small screen with the mouse to specify a new position for the superimposed character.

Overlay [DateTime] Operation steps:

(1) Select the [Date and Time] check box to superimpose the date and time on the screen.

(2) Select your preferred date format from the drop-down list on the right.

(3) If you want to include the day of the week in the displayed time and date, select the [Show Day of the Week] check box.

(4) The time can be displayed in 24-hour or 12-hour format as required. Select the appropriate option from the two radio buttons below.

(5) Select a favorite color for the superimposed content from the [Color] drop-down list.

(6) If you need to change the position of the superimposed character, select the [Custom Position] check box and click on the small screen with the mouse to specify a new position for the superimposed character.

Overlay [additional information] operation steps:

(1) The number of blocks supported by different devices is different. Please refer to the actual situation.

(2) Input the text content to be superimposed from the input box below, including Chinese characters, English and common punctuation marks. You can overlay more than one line of content in an area as needed. Some models support peripheral mode. Click [Insert] to overlay peripheral information.

(3) Select a preferred color for the superimposed content from the [Color] drop-down list.

(4) Select the [Custom Position] check box and click on the small screen with the mouse to specify a new position for the superimposed character.

[Character Size]:

The user can specify the size of the superimposed character, select the preferred character size (unit: pixel) in the [Character Size] drop-down list, or select [Adaptive] to let the system automatically adjust the character size.

[Font Type]:

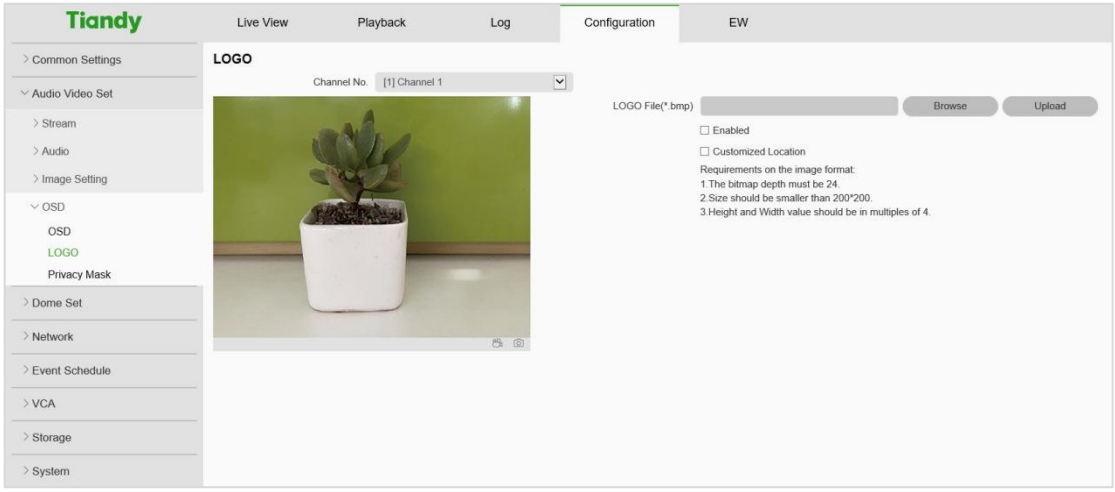
The user can select the display form of characters and select [Vector] or [Dot Matrix] in [Font Type].

After all the above parameters are set, click [Save] to save and take effect; click [Reset] to restore the parameters saved last time.

Explanation:

- The numb of additional information that can be superimposed on each channel is subject to that actual device.

OSD -> LOGO



(1) Enter the path of the picture file in the [LOGO file] input box, or click the [Browse] button to find the picture file in the pop-up window.

(2) Click the [Upload] button, the picture will be uploaded to the device, and the device will automatically restart after uploading the picture.

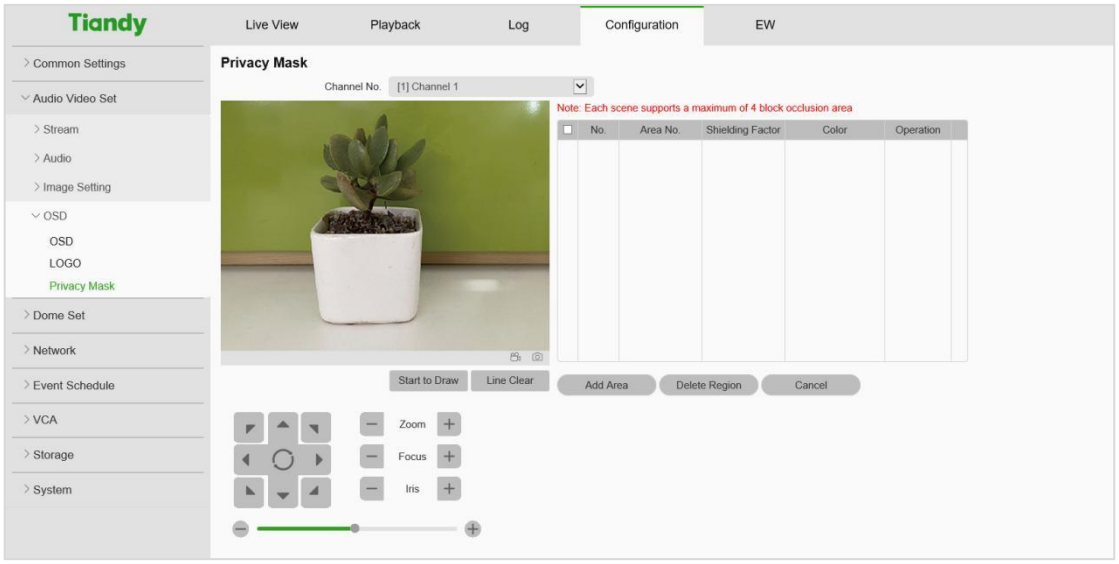
(3) After the device is restarted, select the [Enable] check box, and the LOGO will be superimposed on the video. Cancel the [Enable] check box, and the LOGO will not be displayed.

(4) When [Enable] is selected, select the [Custom Position] check box and click on the video screen with the mouse to specify a new display position for the LOGO.

Attention:

- The LOGO picture must be a bitmap file in BMP format, with a bitmap depth of 24, a size less than 200 * 200 pixels, and a height and width divisible by 4. Please use a picture that meets the requirements.
- The superimposed LOGO automatically removes its black and white background colors.

OSD -> Privacy Mask



According to the user's needs, a shielding area can be set on the screen to protect the key information from being seen. You can set up to 24 occlusion areas per device.

(1) Draw the area to be blocked in the small preview window.

(2) Click the [Add Area] button.

(3) Shielding magnification: Set the magnification value. When the zoom value is less than the shielding magnification, the privacy shielding area will not be displayed. Only when the zoom value exceeds the set magnification value, the privacy shielding area will be displayed.

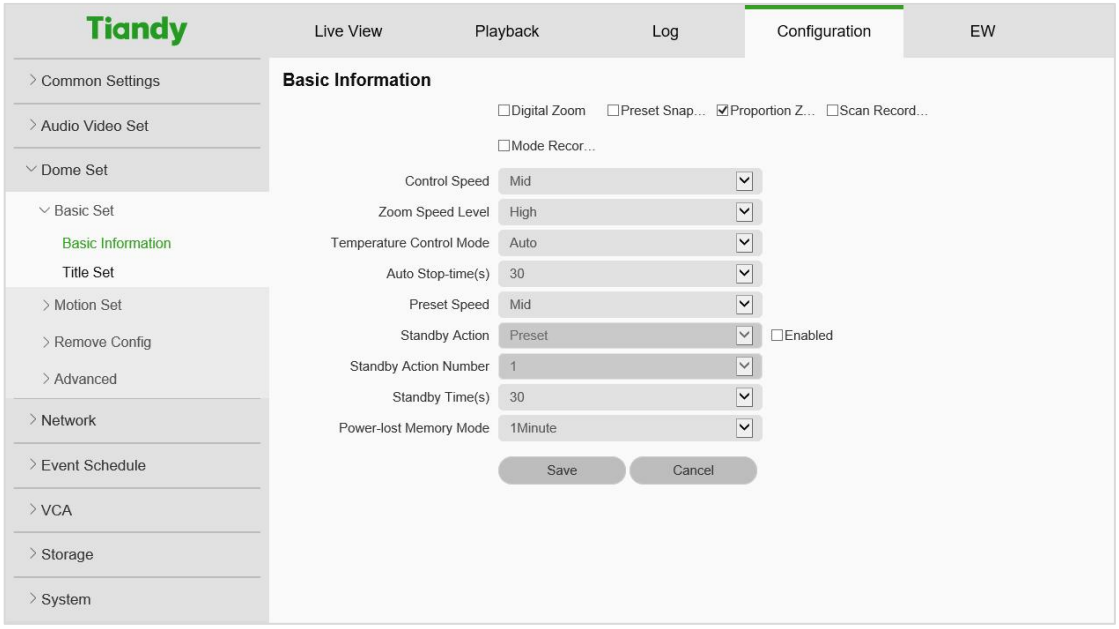
(4) If the user wants to delete the occlusion area, click the box in front of the serial number, select the corresponding occlusion area, and click the [Delete Area] button to delete the area.

3.7.3 Dome Set

The specific parameters displayed depend on the specific model of the Panoramic PTZ, please refer to the actual menu.

3.7.3.1 Basic Set

Basic Set -> Basic Information



[Digital zoom]: After enabling, when the optical zoom reaches the maximum zoom, continue to click the zoom to start the digital zoom.

[Preset Snapshot Enable]: After it is enabled, when the preset bit is called, the captured picture will be stored in the front-end storage medium.

[Proportional Zooming Enable]: After enabling, it will automatically adjust the running speed with the variable multiple. If it is not enabled, any variable multiple will be the same speed. It is recommended to

enable it.

[Enable scanning and video recording]: After enabling, the video will be recorded during the scanning process, and the video files will be stored in the front-end storage media.

[Enable mode path video recording]: After enabling, the video will be recorded in the mode path process, and the video files will be stored in the front-end storage media.

[Control speed level]: The control speed level has three options: high, medium and low. You can change the maximum speed of the control head by modifying the settings here.

[Zoom Speed Level]: There are three options for zoom speed level: high, medium and low. You can change the zoom speed by modifying the settings here.

[Temperature control mode]: [Auto], [Off] and [Defog] can be selected.

[Automatic stop time (s)]: The automatic stop time indicates how long it takes for the dome camera to stop the PTZ action if it does not receive the stop code. You can select 5 seconds, 15 seconds, 30 seconds or 60 seconds.

[Preset bit speed level]: The preset bit speed level has three options: high, medium and low. You can change the preset bit speed by modifying the settings here.

[PTZ Priority]: There are two options: network and RS485. The PTZ priority control mode can be selected according to specific requirements.

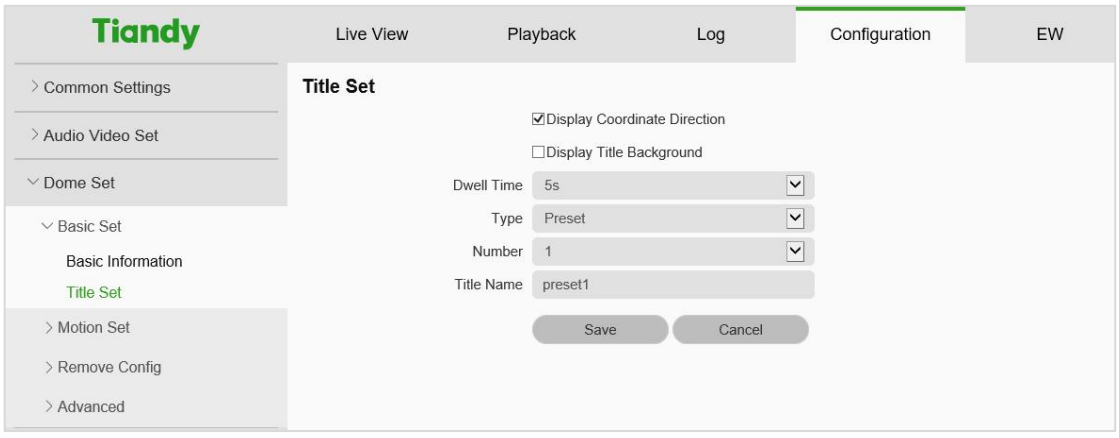
[Standby action]: Select the [Enable] radio box behind the standby action to set the standby action. The standby action has four options: Preset 1, Scan 1, Cruise 1 and Mode Path 1. After modifying the standby action, click the Save button to save the setting.

[Standby time (s)]: Select the [Enable] radio box behind the standby action to set the standby time. The standby time includes 30, 60, 300, 600 and 1800. After modifying the standby action, click the Save button to save the setting.

[Power-down memory mode]: Automatically save the time of PTZ position. After repowering, the dome will return to the last saved PTZ position.

[Automatic wiper]: After being enabled, it can sense the rainfall and automatically turn on or off without manually adjusting the wiper.

Basic Set -> Title Set



[Display Coordinate Direction] : Check the [Display Coordinate

Direction] radio box to display the coordinates of the dome camera after it moves. Uncheck the box to not display the coordinate direction.

[Display Title Background]: If [Display Title Background] is checked, the corresponding action title will have a background color when the dome camera acts. If it is unchecked, the action title will have no background color.

[Dwell Time]: Set the dwell time of the title. The dwell time includes off, continuous, 2S, 5S, and 10s.

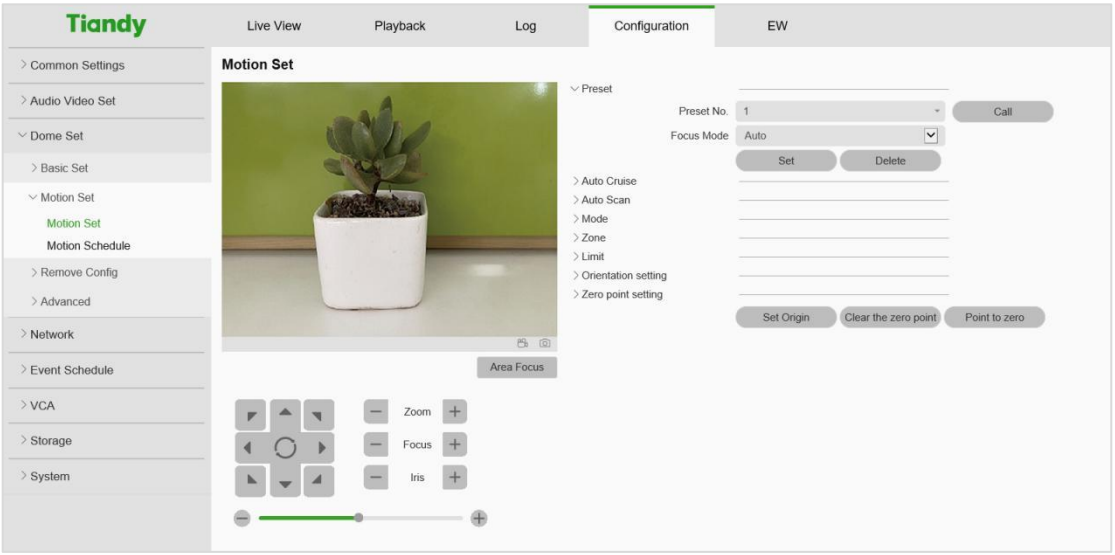
[Number]: Select the title number, the preset bit number range 1-32, the scan number range 1-8, the cruise number range 1-16, the mode path number range 1-8, and the area indication number range 1-8.

[Type]: Preset position, automatic scanning, automatic cruise, mode path and area indication can be selected.

[Title Name]: Sets the name of the title.

3.7.3.2 Motion Set

Motion Set -> Motion Set



[Area Focus]: The user can operate the dome camera, and click [Area Focus] to select an area for focusing after reaching the desired position.

[Motion Set] =>[Preset]

[Preset No.]: The dome camera supports 500 preset positions in total. The non-special preset positions are 1-64 and 100-500. The user can set these preset positions.

[Focus Mode]: The focus mode of preset position can be selected as automatic and fixed.

[Set]: The user can operate the dome camera and click [Set] to store the current position after reaching the desired position.

[Delete]: Click [Delete] to delete the preset bit corresponding to the preset bit number.

[Call]: Clicking [Call] will recall the preset bit corresponding to the preset bit number.

[Motion Set] =>[Auto Cruise]

[Cruise No.]: The PTZ supports a total of 16 automatic cruise, 1-16.

[Cruise list]: Display the preset bit supported by the corresponding automatic cruise number.

[Preset No.]: Preset bits 1-64 and 100-255 can be selected, and then click the [Add] button to add the corresponding preset bits to the cruise list.

[Retention(s)]: The dwell time corresponding to the preset bit can be set to 1-60.

[Add]: Clicking [Add] will add the corresponding preset bit to the cruise list of the current automatic cruise number.

[Delete]: Clicking [Delete] will delete the corresponding preset bit from the cruise list of the current automatic cruise number.

[Call]: Clicking on [Recall] will run the Auto Cruise corresponding to the Auto Cruise number.

[Motion Set] =>[Auto Scan]

[Scan No.]: The PTZ supports a total of 8 automatic scans, 1-8.

[Scan Type]: Scanning types include horizontal scanning, automatic scanning, frame scanning, random scanning, vertical scanning, panoramic scanning and spiral scanning.

[Scan Speed]：The scanning speed of horizontal scanning, automatic scanning, vertical scanning, panoramic scanning and helical scanning can be changed by modifying the scanning speed.

[Border1]：The user can operate the dome camera. After reaching the desired position, click [Set as Boundary 1] to store the current position as the left boundary of the scanning path.

[Border2]：The user can operate the dome camera. After reaching the desired position, click [Set as Boundary 2] to store the current position as the right boundary of the scanning path.

[Call]：Clicking [Call] will run the scan corresponding to the automatic scan number.

[Motion Set] =>[Mode]

[Mode No.]：The dome supports 8 mode paths in total, 1-8.

[Used%)]：Displays the percentage of storage used during the recording mode path.

[Left Time(s)]：Displays the remaining time in the recording mode path (the dome supports up to 600s of recording).

[Record]：Click [Record] to record the mode path. At this time, the user can operate the dome camera, and the dome camera will record the user's operation.

[Delete]: Clicking [Delete] will delete the pattern path corresponding to the pattern path number.

[Call]: Clicking [Call] will run the mode path corresponding to the mode path number.

[Motion Set] =>[Zone]

[Zone No.]: The PTZ supports 8 area indications, 1-8.

[Left Border]: The user can operate the dome machine, and after reaching the desired position, click [Left Boundary] to store the current position as the left boundary of the area indication.

[Right Border]: The user can operate the dome machine and click [Right Boundary] to store the current position as the right boundary of the area indication after reaching the desired position.

[Delete]: Clicking [Delete] will delete the zone indicator corresponding to the zone indicator number.

[Motion Set] =>[Limit]

[Enable limit]: After checking, the movement area of the PTZ will be controlled within the limit area.

[Set]: Click the setting button, and the left preview window will display the prompt information: set the upper, lower, left and right limits according to the prompt information. If you only want to set the

horizontal limit but not the vertical limit, you can set the upper limit and the lower limit at the same position.

[Delete]：Delete the set limit.

[Motion Set] =>[Orientation setting]

[Set North]：The user can operate the dome machine. After reaching the desired position, click [Set to True North] to select a direction as north.

[Motion Set] =>[Zero point setting]

[Set Origin]： The user can operate the dome camera and select an azimuth zero point by clicking [Set as Zero Point] after reaching the desired position.

[Clear the zero point]：Clears the selected azimuth zero.

[Point the zero]：Turn the device field of view to the zero point.

Motion Set -> Motion Schedule

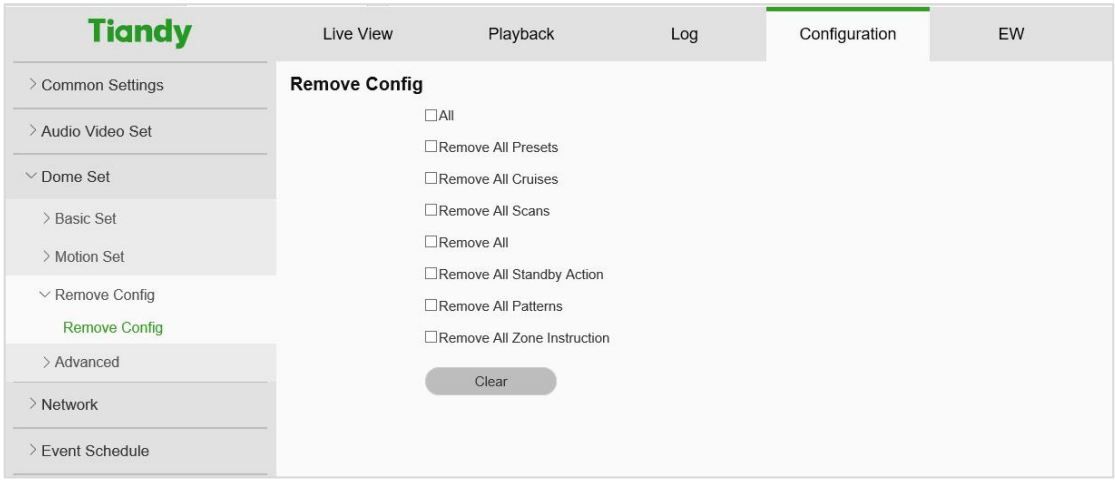


It refers to the completion of preset functions within the time period specified by the user. These functions include preset position, automatic scanning, automatic cruise, mode path and alarm output. Select the corresponding function and drag it in the layout time bar to set the layout time. Click the color bar to edit the function.

Click the [Save] button to save and make it effective.

Click the [Cancel] button to restore the last saved parameters.

3.7.3.3 Remove Config

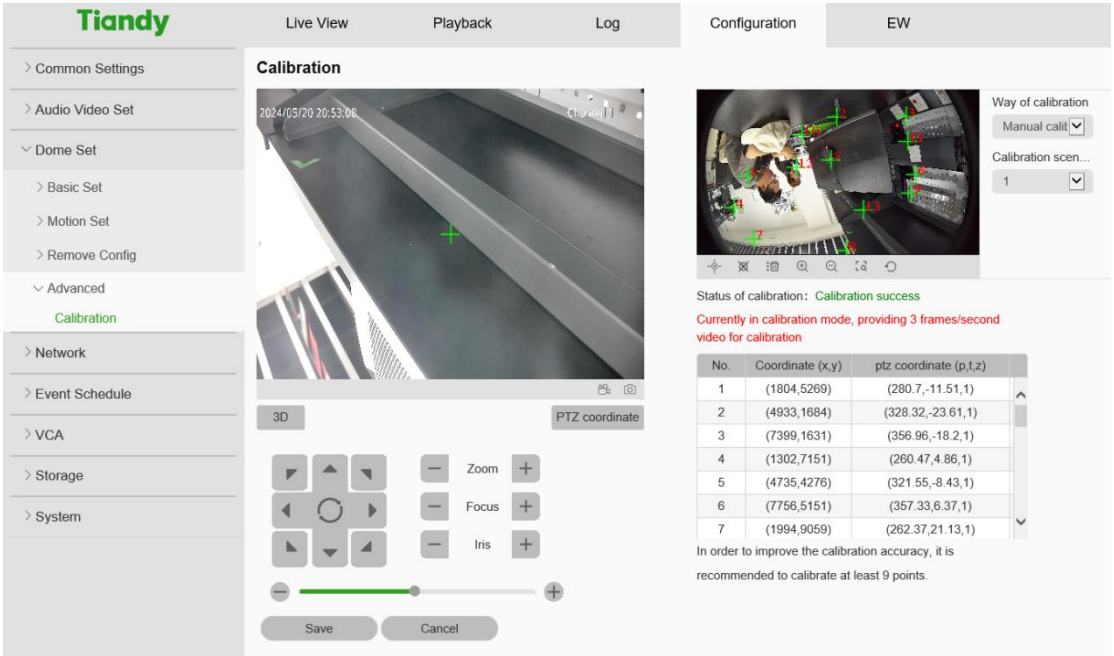


Configuration clearing interface, including select all, clear all preset bits, clear all cruise paths, clear all scanning, clear all limit settings, clear standby action, clear all mode paths, clear all area indications, select the option to be cleared, and click the clear button to clear the corresponding PTZ configuration.

3.7.3.4 Advanced

Advanced -> Calibration

When the user uses the 3D positioning function or the fixed-point channel is linked with the moving-point channel for intelligent tracking, it is necessary to calibrate the moving-point coordinates and the fixed-point coordinates.



Explanation:

- The automatic calibration may fail in the case of low picture brightness, indoor close-range scene, large picture noise, etc. Please adjust the scene condition and calibrate again.

[3D]： Click the mouse to adjust the scene to be monitored to the video center. The specific operations are as follows:

(1) Left click the monitoring point required in the monitoring video screen, and move the corresponding point to the center of the video;

(2) press and holding that left button to pull out a rectangular area to the low right, and moving the center of the corresponding delimit area to the center of the video for zooming in and viewing;

(3) Press and hold the left button to pull out a rectangular area to the upper left, and then move the center of the corresponding designated area to the center of the video and zoom out for viewing.

[PTZ coordinate]: Click to display PTZ coordinate information.

The calibration steps are as follows:

[Auto Calibration]:Select one-click calibration or single-scene calibration according to that position deviation of the panoramic channel and the detail channel. One-key calibration will automatically calibrate all scenes under the panoramic channel, and single-scene calibration will only automatically calibrate the selected channel.

[Manual Calibration]]:

(1) Select the serial number to be calibrated in the lower part, click the "Add" button, and the calibration button "" will appear in channel 1 (the calibrated serial number is in the upper right corner);

(2) Click the position to be calibrated in the interface of channel 1 to locate the calibration position. If PTZ coordinates (p, t, Z) are required to be displayed, click the "PTZ Coordinates" button on the left side of the interface to display the calibrated PTZ coordinates;

(3) Select the calibration serial number to be deleted and click the "Delete" button to delete the calibration;

(4) To recalibrate, click the "Clear Coordinates" button to clear all the current calibration coordinates;

(5) Click the "View" button to view the current calibrated coordinates;

(6) Click the "Save" button to save all the currently set calibrations. At the same time, in the "Calibration Status", the calibration status information is displayed, and the "Calibration succeeded" is displayed. If it fails, "Calibration failed" will be displayed;

(7) Click the "Reset" button to restore the last saved settings.

Explanation:

- The more dispersed the nine groups of calibration coordinates are, the more accurate the calibration is.

Attention:

- It is recommended to add at least 9 calibration points for a single scene, and up to 32 calibration points can be added if high tracking accuracy is required. At the same time, the calibration points should be evenly distributed in the whole live picture as far as possible, such as the three points of far, middle and near are evenly distributed.
- It is recommended to select the position with obvious features in the picture as the calibration point. If there is no obvious calibration point, it is recommended to artificially place some characteristic objects for calibration.

Advanced->Eagle Vision Focus

Eagle vision focusing refers to the function of fast focusing by setting the calibration distance.

(1) Click "Enable" to enable the Eagle Focus function.

(2) Use the PTZ control key to adjust the screen to the required scene, click "Add" to add the current scene to the scene list, and click to select the scene.

(3) Click the Start Drawing button to draw a line segment in the video window, and drag both ends of the line segment to the position to be calibrated. According to the actual scene, select to calibrate by region, and draw a calibration region by clicking the left mouse button in the video window.

(4) Click to start calibration. When the screen prompts "Calibration in

progress", it indicates that calibration is in progress. The lens executes automatic zoom. After completion, it prompts that the calibration is successful and the calibration is completed.

(5) Click the Save button to save the relevant configuration.

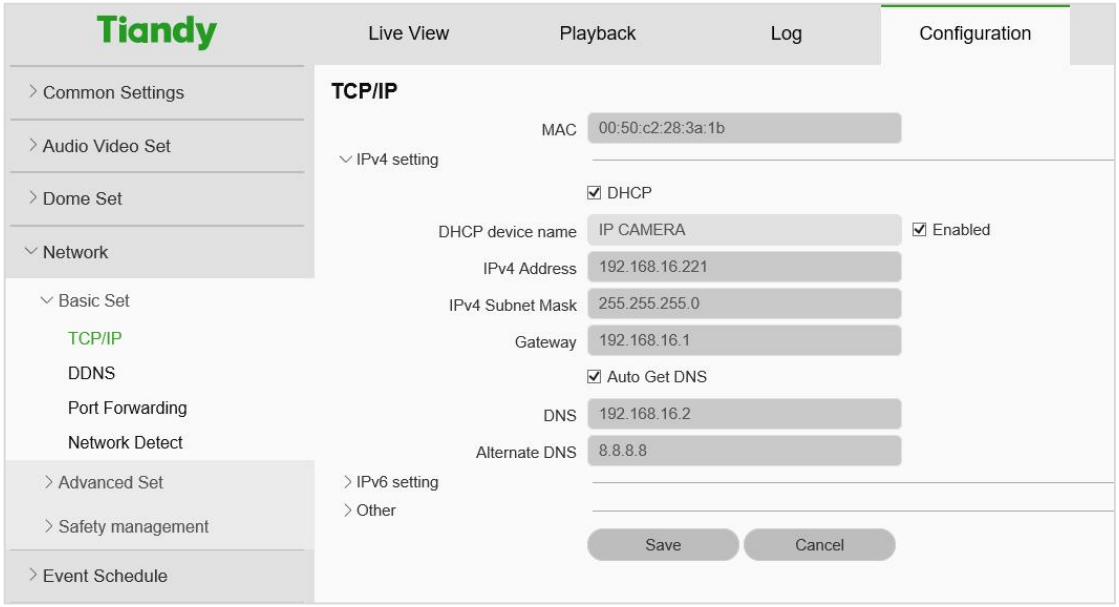
Explanation:

- During the calibration, the PTZ cannot be controlled. After the calibration, the control can be restored.
- When not calibrated, the save is not valid and the scene is not saved.
- The Terminate Calibration button is used to forcibly end the action being calibrated.

3.7.4 Network

3.7.4.1 Basic Set

Basic Set->TCP/IP



Configure the TCP/IP parameters of the device so that the device can be used normally in the network.

IPv4 ：

1、Enable [DHCP], and the device will obtain network parameters automatically according to the network environment.

2、Do not enable automatic acquisition, and manually fill in LAN parameters such as device IPv4 address, IPv4 subnet mask and IPv4 default gateway.

3、[Auto Get DNS] can be checked only after [Obtain IP address automatically] is enabled. Otherwise, you need to fill in the DNS information manually.



IPv6 ：

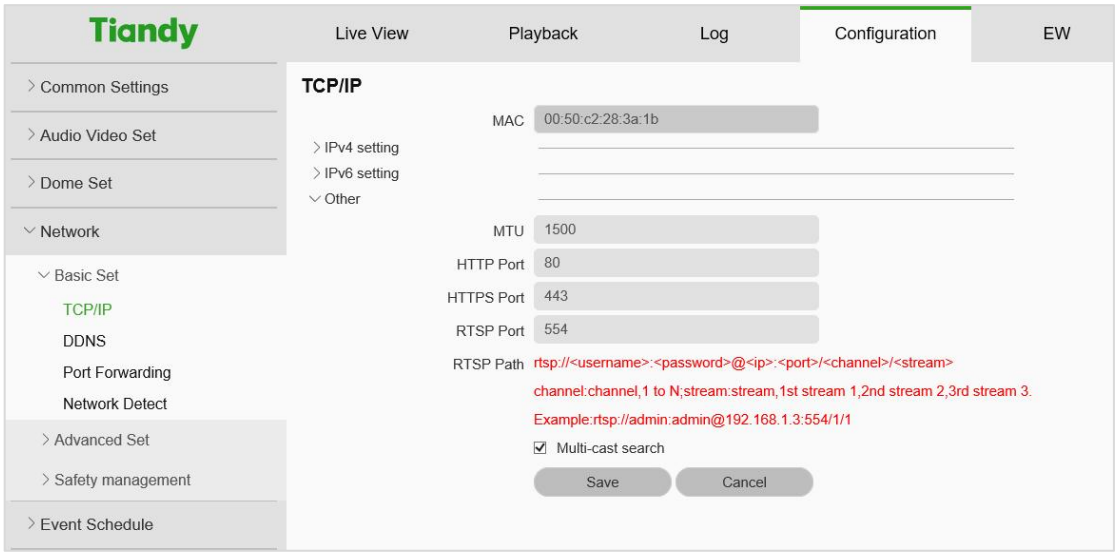
1. Please fill in the IPv6 network parameters as required. If it is not clear, please consult the network personnel.

2. IPV6 mode is divided into manual mode, DHCP mode and route announcement mode.

(1) The manual mode is configured according to the actual network requirements. If it is not clear, please consult the network administrator.

(2) In the automatic acquisition mode, the IPv6 address is issued by the corresponding server, router or gateway.

(3) The route announcement mode uses the announced IP prefix and the physical address of the device itself to generate an IPv6 address.



[MTU]: refers to the maximum transmission unit, which is the size of the largest data packet passed through the TCP/UDP protocol network transmission. The range of MTU size is 500 ~ 1500, and the default is 1500. After the setting is completed, click the [Save] button to save the setting, which will take effect after the device is restarted.

[HTTP port]: input [HTTP port number] in the input box on the page and restart the device to modify the HTTP port number.

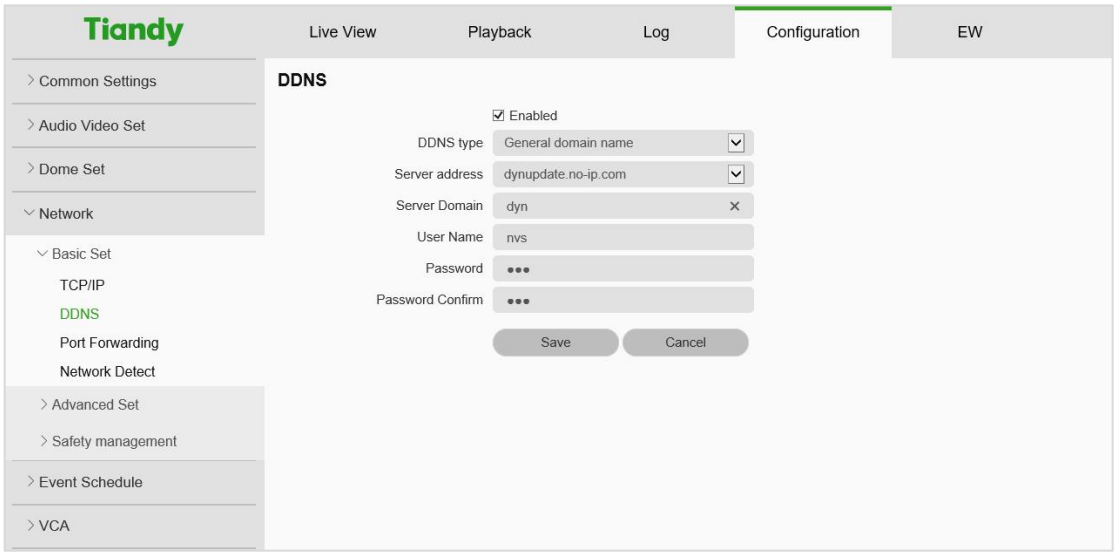
[RTSP port]: input [RTSP port number] in the input box on the page and restart the device to modify the RTSP port number.

[HTTPS port]: Enter [HTTPS port number] in the input box on the page and restart the device to modify the HTTPS port number.

[RTSP Path]: An example path of the reference interface.

[Multicast Search]: The device will send specific information to the clients or devices within the multicast group via a private protocol.

Basic Set ->DDNS



Using DDNS (dynamic domain name resolution) to access the equipment, the dynamic IP address of the equipment can be mapped to a fixed domain name resolution server, thus effectively solving the problem of Internet access for network equipment. Users are required to apply for relevant domain names by themselves.

General domain name operation steps:

1. Complete the port mapping configuration.

2. Select [DDNS type] and domain name. Common domain names include 3322.org, no-ip and dyndns, which require users to apply for domain names on relevant websites.

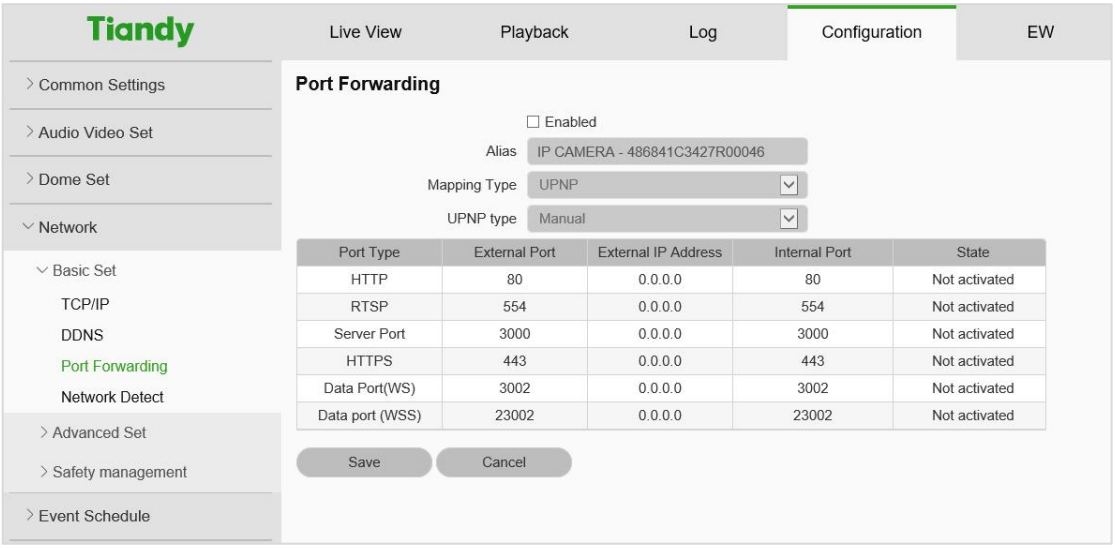
3. Select the common domain name, enter the domain name information and save it.

4. After the configuration is completed, enter the domain name and port number in the browser address bar to access the device.

**Attention:**

- Connect the product to the Internet at your own risk, including but not limited to the product may be subject to network attacks, hacker attacks, virus infections, etc. The company will not be responsible for the problems caused by the abnormal work of the product, information disclosure, etc., but the company will provide you with product-related technical support in a timely manner.

Basic Set -> Port Forwarding



By setting the port mapping, you can access the devices of the specified port. The mapping types are UP, NP, and manual.

Operation steps of UPNP mapping:

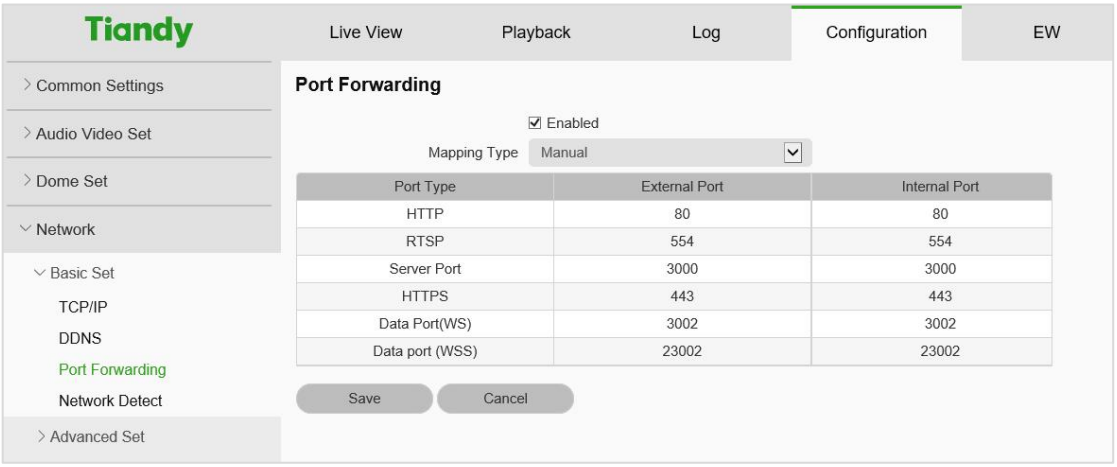
(1) Enable UPNP and select the "Automatic" type. The user only needs to enable the UPNP function on the router. After waiting for a period of time, the external port and external address IP will be automatically generated, and the status will change to "Effective". The external IP address is the public IP address of the router.

(2) Enable UPNP and select the "Manual" type. The user needs to enable UPNP on the router and manually modify the external port on the device web interface without modifying the external IP address. Wait for the status to take effect.

(3) After the port mapping, the status column will display whether it is valid or not. At the same time, the external port under the currently mapped public network IP will be displayed in the external port. If the

user needs to access the network device through the public network, he needs to use the currently mapped external port to access.

Manual mapping operation steps:

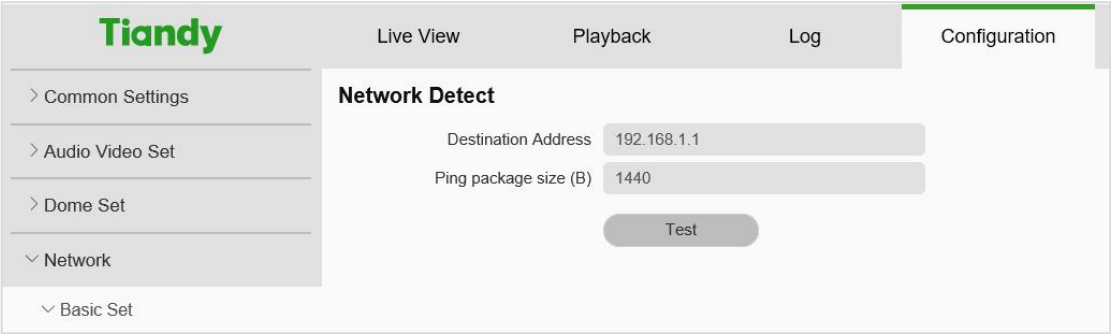


(1) Enable port mapping and select manual. The user needs to perform manual port mapping on the router and configure the same external port as the router on the device web interface.

(2) Take a router as an example: configure one-to-one port mapping in Advanced Settings-Virtual Server. Wherein the internal and external ports are consistent with the internal and external ports in the device web interface, and the internal server IP is the device IP.

(3) If you want to access the device on the public network, enter the router IP (public network IP) and the external port number in the browser.

Basic Set -> Network Detect



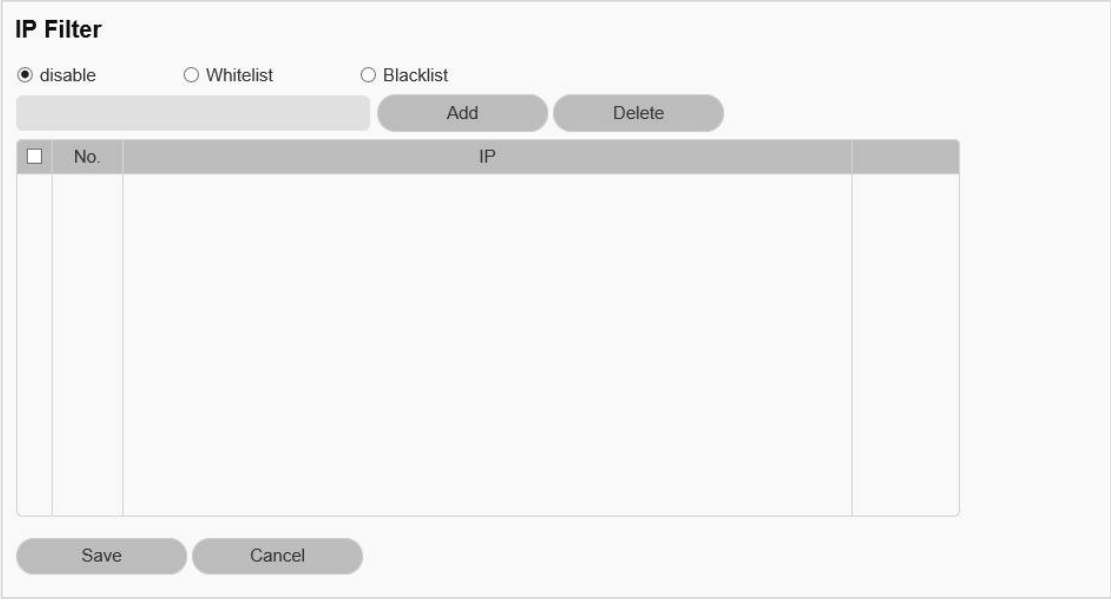
Test the network connectivity of the device to other devices or hosts.

[Destination Address]: Enter the IP address of the destination device.

[Ping package size(B)]: Specifies the size of the packet.

3.7.4.2 Advanced Set

Advanced Set -> IP Filter



IP firewall, also known as black-and-white list, is provided for users to manage access rights more flexibly.

[No Limit]: select the [No Limit] button to remove the restriction of the black and white list. All IP addresses can be accessed, not only the IP

addresses in the list.

[Whitelist]: if you want to allow only a few trusted IPS to access the device, you can select the [Whitelist] button, enter the trusted IP addresses one by one, click [Add] to add to the list, and then click [Save] to make the whitelist effective. At this time, only a number of IPS specified in the list can successfully log in to the device, and login requests from other IPS will be rejected, regardless of whether their user name and password are correct or not. Users can specify up to 16 trusted IP addresses in the white list.

**Attention:**

- when adding the white list, please confirm whether to add the IP address of the current user.

[Blacklist]: if you want to block some IP addresses and prohibit them from accessing the equipment, you can select the button of[blacklist], input the IP addresses you want to block one by one, click [Add]to add them to the list, and then click [Save] to make the blacklist effective. At this time, the login request from any IP in the list will be rejected, regardless of whether its user name and password are correct or not.

**Attention:**

- when adding the blacklist, please confirm whether the IP address of the current user is added.

[Delete]: if you need to delete some IPS from the list, just select the

check box on the left of these IPS and click [delete]. Note that all IPS cannot be deleted when deleting the white list, otherwise the device will not be able to log in successfully.

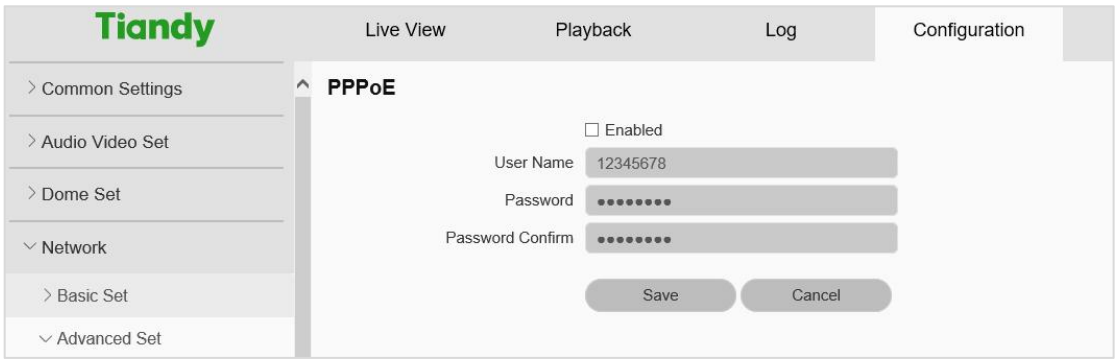
Attention:

- IP filtering can only be judged when a user is newly logged in, and cannot filter the logged in IP. It is strongly recommended to restart the device in time after each blacklist configuration to shield the illegal IP address.

  [Save]: save the current settings.

  [Cancel]: restores the last saved parameter.

Advanced Set->PPPoE



Connect to the network through the PPPoE dial-up method. After successful dial-up, it will automatically obtain a dynamic IP address of the Internet to realize Internet access.

Operation steps:

1、Enable PPPOE.

2、Fill in the PPPOE parameters. The user name is the broadband

account for dial-up Internet access, and the password is the broadband password.

3、Enter the Internet dynamic IP address and port number in the browser address bar to access the device.

Advanced Set -> Multicast

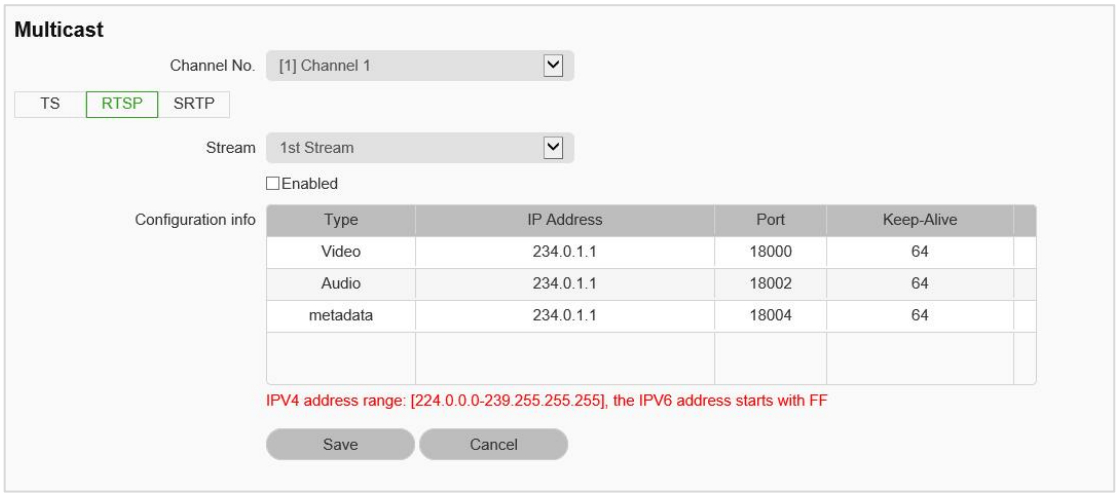
Through multicast, the audio and video of the channel can be pushed to the multicast address, and then the software can be used to pull the stream from the set multicast address. Multicast can solve the repeated copy of data and the repeated occupation of bandwidth in the case of unicast, and also solve the waste of bandwidth resources in the case of broadcast.

[Multicast] ->[TS]



Input the multicast [IP address] (range: 224.0.0.0-239.255.255.255), input the port number (range: 1-65535), and click Save to restart the device. (Supported on select models)

[Multicast] ->[RTSP]



The RTSP function can push the RTSP stream data to the IP address and port set by the user through multicast.

[Channel No.]: Select the channel number of the device.

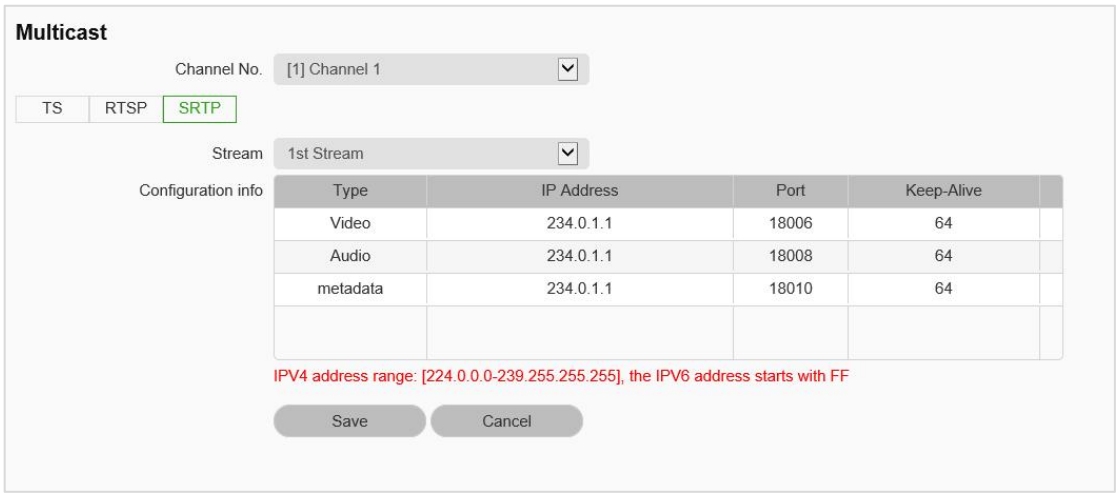
[Stream]: related parameters of main stream, sub stream and third stream can be modified.

[IP Address]: Multicast destination IP address, supporting IPV4 and IPV6.

[Port]: The receive port of the destination address.

[Keep-Alive]: It is the TTL value of socket, which specifies the maximum number of network segments that IP packets are allowed to pass through before being discarded by the router. The allowable range is 0-255.

[Multicast] ->[SRTP]



The SRTP function can push a secure RTP stream to the IP address and port set by the user through multicast.

[Channel No.]: Select the channel number of the device.

[Stream]: related parameters of main stream, sub stream and third stream can be modified.

[IP Address]: Multicast destination IP address, supporting IPV4 and IPV6.

[Port]: The receive port of the destination address.

[Keep-Alive]: It is the TTL value of socket, which specifies the maximum number of network segments that IP packets are allowed to pass through before being discarded by the router. The allowable range is 0-255.

Attention:

- The same multicast address cannot be set for different devices and different code streams of the same device, otherwise cross-screen phenomenon will occur.

Advanced Set -> QoS Settings



By configuring QoS parameters, the problem of network delay and network congestion can be effectively solved.

Enter the DSCP parameters in the input box and click [Save] to save the parameters. The network can determine the priority of data transmission according to the DSCP weight. The higher the DSCP value, the higher the priority, and the same value needs to be set on the router side during configuration.

Advanced Set->802.1x



The 802.1X protocol can be configured to authenticate the user

rights of the connected device.

Select [EAPO Version] to be consistent with the connected network device, and set [User Name], [Password], and [Password Confirmation] to be consistent with the 802.1X server. [Current status] displays the current connection status. Click [Save] to save the parameters. [Reset] displays the current parameters. After the parameters are saved, the device can be automatically connected. [Manual connection] can immediately initiate an authentication connection.

Advanced Set ->Access Platform



[Access Platform]=>[Platform Enabled]

Support the enabling and disabling of ONVIF docking protocol, RTSP and other platforms. After setting, some devices will automatically restart and take effect.

Attention:

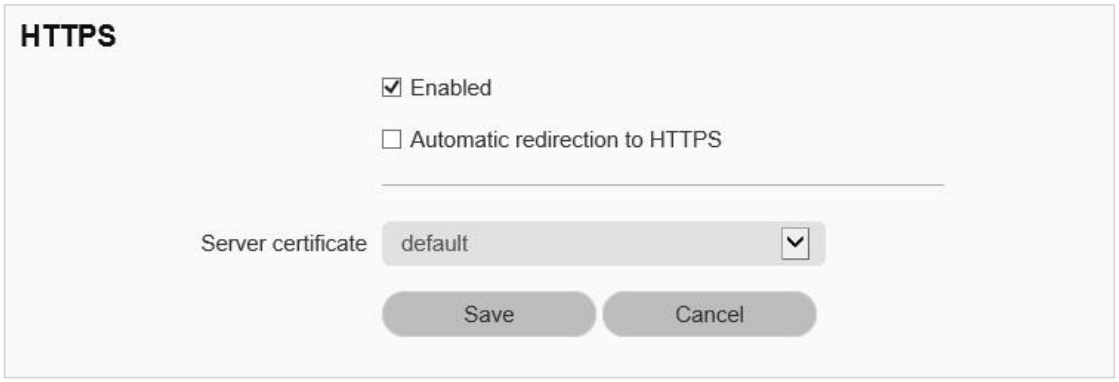
- To replace the access platform, first disable the enabled platform, and then select and enable the new platform.

[Access Platform]=>[RTMP Parameter Setting]



The user is allowed to enable the setting of RTMP parameters. For [Stream Type], you can select "Primary Stream", "Secondary Stream" and "Third Stream" to push. Enter [Stream Pushing Address] and click [Save] to complete the setting. [Current Status] displays whether the connection is normal. [Reset] displays the current parameters.

Advanced Set->HTTPS



The HTTPS certificate can be imported and installed as required.

[Enable]: Enable HTTPS. When opening the webpage of the device, a pop-up window will pop up to let the user choose to jump to HTTPS or HTTP.

[Automatic redirection to HTTPS]: Auto jump HTTPS without user selection.

[Server certificate]: Click the drop-down box and select the type of server certificate to be installed. (Certificates can be managed from Security Management-> Certificate Management)

[Save]: save the current setting;

[Cancel]: Restore the parameters saved last time.

Advanced Set->SRTP



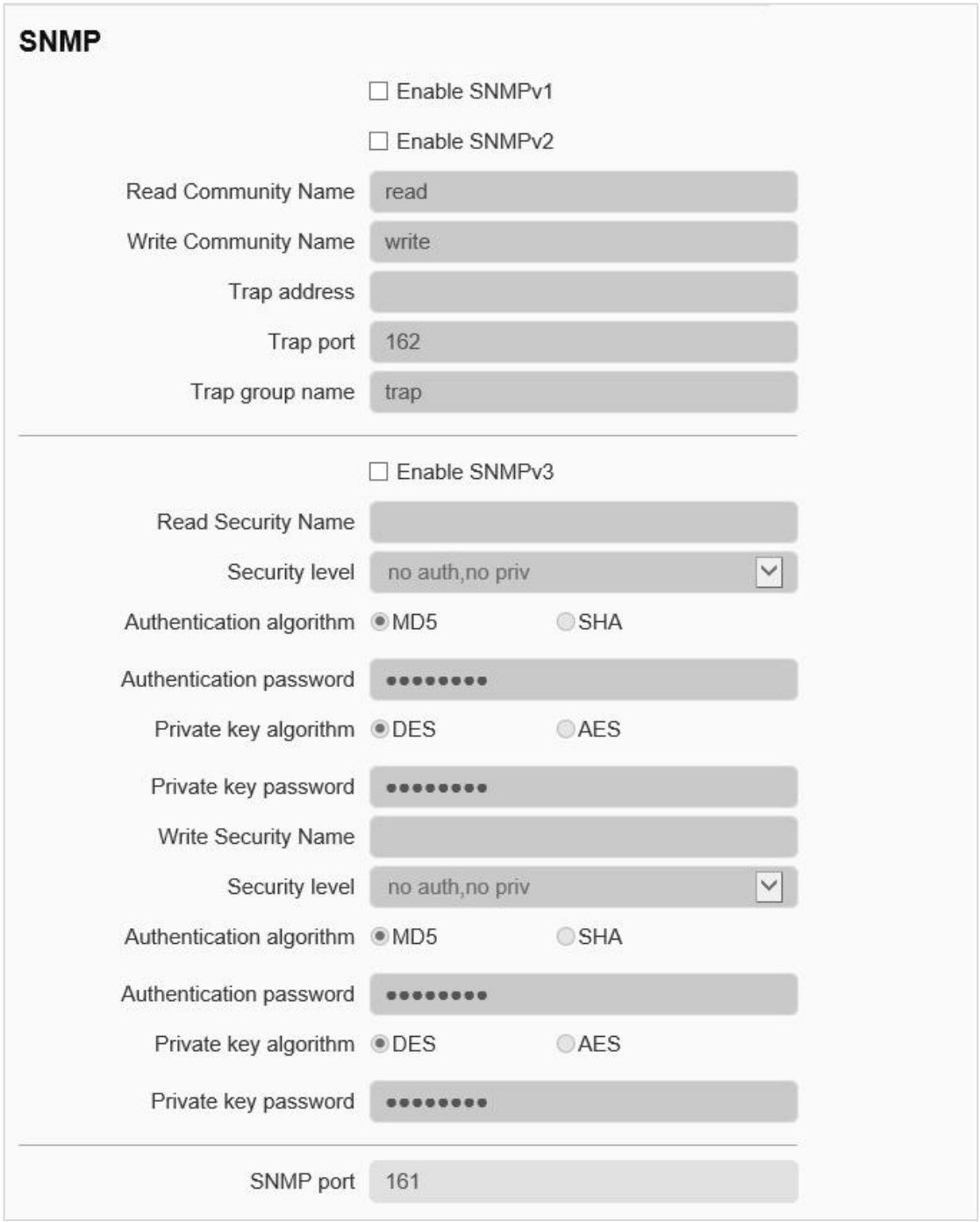
The SRTP function can provide users with a set of secure real-time transmission protocols with encryption, message authentication, integrity protection and Chinese protection to realize the secure transmission of data.

[Server certificate]: configure the server certificate used by the SRTP protocol.

[Encryption Algorithm]: Configure the encryption algorithm used by the SRTP protocol.

[Port]: Configure the service port used by the SRTP protocol.

Advanced Set->SNMP



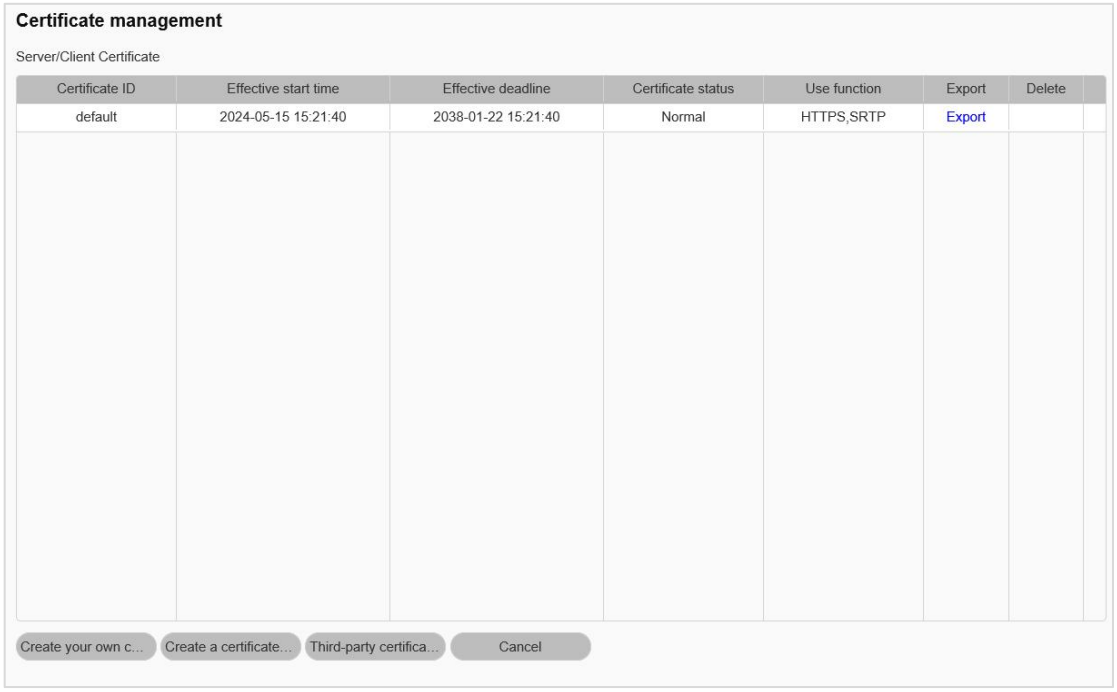
SNMP is the abbreviation of Simple Network Management Protocol, which can realize the acquisition of basic status information of devices.

[Enable]: Enable the SNMP function.

The device supports the functions of different versions of V1, V2 and V3. The V3 version with the highest security is recommended.

3.7.4.3 Safety Management

Safety Management -> Certificate management



Certificate management is used to manage all the certificates of the server and the client.

[Create your own certificate]: The device generates the certificate itself and uses it.

[Create a certificate request and import it]: The device applies for a certificate from the CA institution, and automatically imports the certificate to the device for use.

[Third-party certificate import]: Users can import their own certificate for the device to use.

Attention:

- Some of the above functions are supported by the model. Please refer to the

actual equipment.

- The system's own certificate cannot be deleted.

Safety Management -> Authentication Type

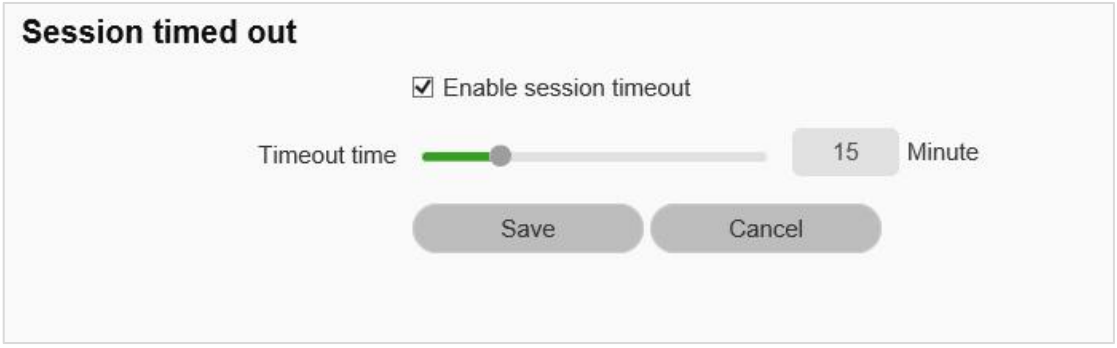


Authentication types provide users with the ability to set authentication and digest algorithms used by RTSP, HTTP, and ONVIF. The authentication types of RTSP and HTTP support "digest" and "digest & basic" respectively; the digest algorithm supports "MD5", "SHA256" and "MD5/SHA256" respectively. ONVIF supports "WSSE" certification.

[Save]: Save the current settings.

[Cancel]: Restore the last saved parameter.

Safety Management -> Session timed out



The session timeout function can provide the user with the setting operation of the timeout exit of the current interface in the case of no operation, so as to improve the security of device access.

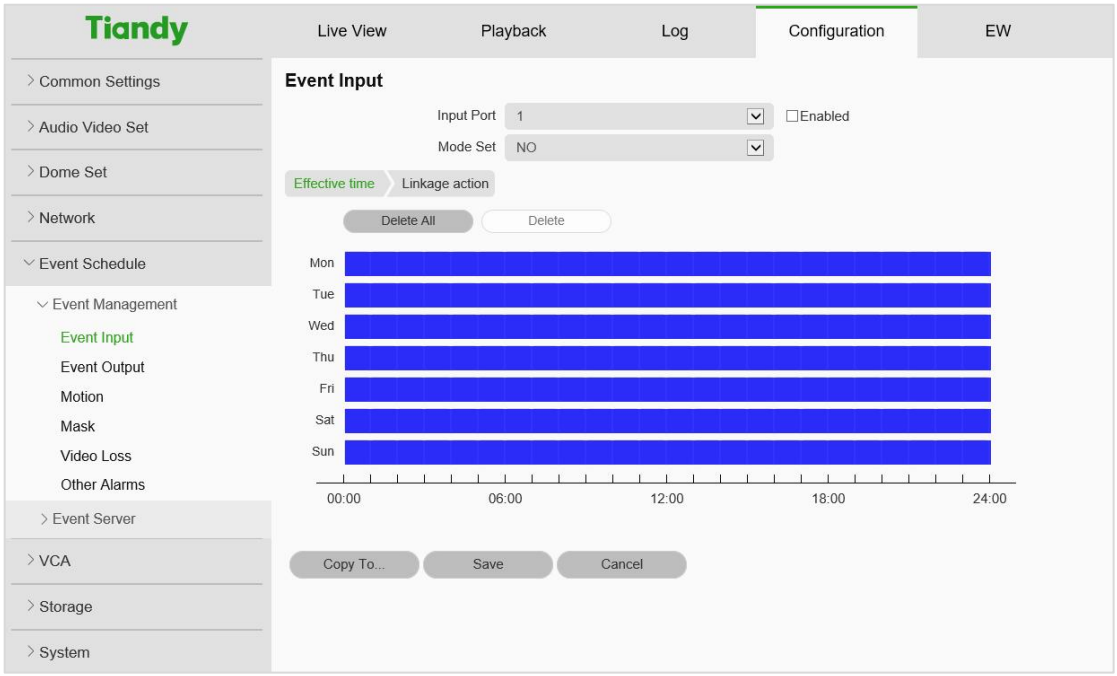
[Enable session timeout]: Enable or turn off session timeout.

[Timeout time]: Set the upper time limit of the timeout push interface, ranging from 1 to 60 minutes.

3.7.5 Event Schedule

3.7.5.1 Event Management

Event Management -> Event Input



Set parameters related to port alarm detection.

(1) When the external alarm detection equipment detects an abnormal situation, it sends a signal (the signal refers to the opening or closing of the line) to inform the IPC equipment, and the IPC immediately takes corresponding measures to deal with it. There are many types of commonly used external detectors, such as sound detectors, infrared detectors, smoke detectors, etc., which are connected to the ALARM IN interface of the IPC.

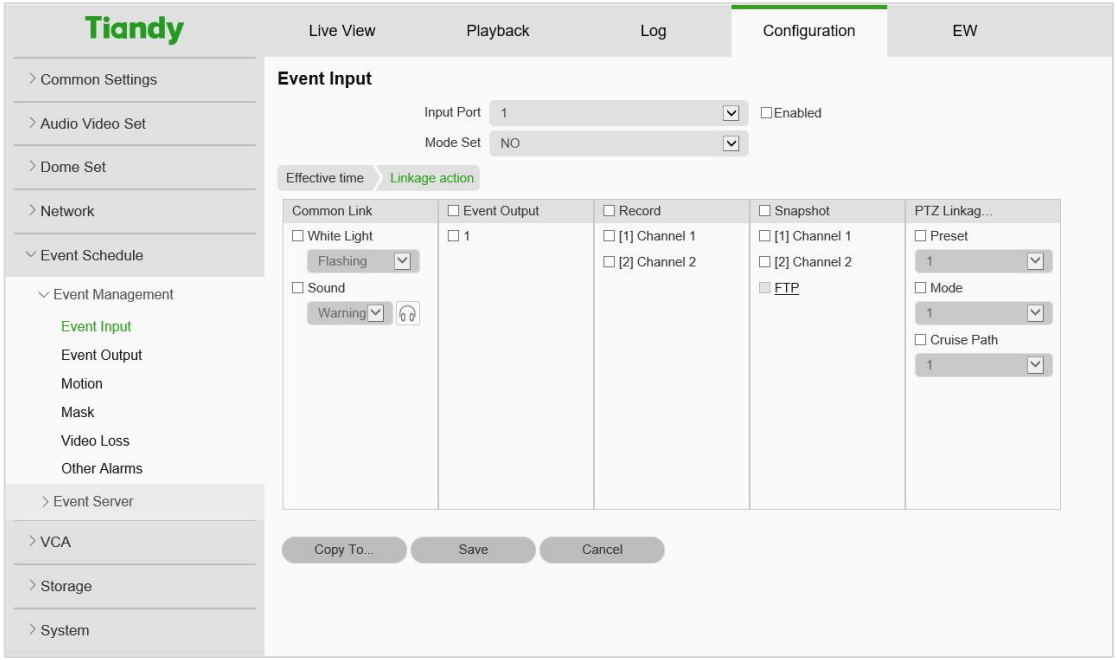
(2) Select the alarm input port and check the [Enable] check box to enable the port alarm detection function. Uncheck it to disable the port alarm detection function.

(3) [Mode Set] is normally open and normally closed, where [NO] refers to the normal state, the port line and the ground line are kept disconnected, and the alarm occurs when the disconnected line is closed (short circuit); [NC] refers to the normal state, the port line and the ground line are kept closed, and the alarm occurs when the connected line is disconnected. For example, when the normally open mode is set, a smoke alarm is connected to the input port. When the alarm detects smoke, and then the control circuit of the alarm is short-circuited (IPC), the IPC device will trigger the alarm. Note: The selection of normally open or normally closed mode depends on the connection mode of the peripheral, and the connection mode of the peripheral depends on the type and model

of the peripheral.

(4) The user can set [Effective time] as required, and the case will only be detected within the set date and time period.

(5) Set [Linkage action] to realize the alarm linkage after the alarm is triggered, such as [Linkage Output], [PTZ Linkage], [Snapshot], [Record], etc., as shown in the following figure.

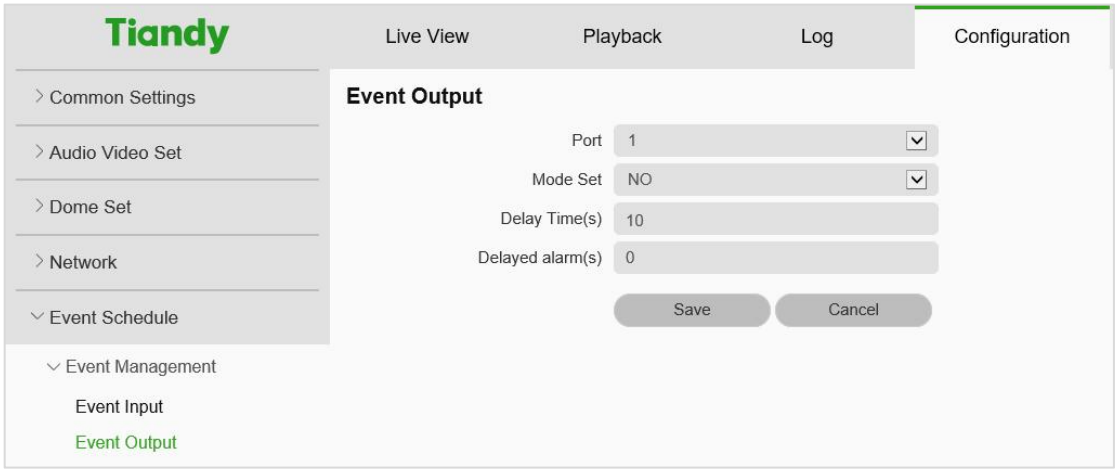


(6) Click the [Save] button to save the corresponding parameter settings, and click [Copy to] to copy the parameters of the current port number to other port numbers. Click [Reset] to restore the last saved parameters.

Explanation:

- Alarm input and alarm linkage output are limited to products supporting alarm input and alarm output functions.

Event Management->Event Output



The camera can realize the specific alarm function through the external alarm. The IPC generates an alarm and transmits the signal to the alarm, and then the alarm takes effect. Commonly used alarms, such as external alarm lights, alarm bells, buzzers and other equipment, are connected to the ALARM OUT interface of IPC.

The user can select two modes of mode setting [NC] and [NO]. By selecting the output port, the delay time of the alarm state can be set by [Delay Time(s)] and [Delay Alarm(s)].

Click the [Save] button to save the corresponding parameter settings, and click [Copy to] to copy the parameters of the current port number to other port numbers. Click [Reset] to restore the last saved parameters.

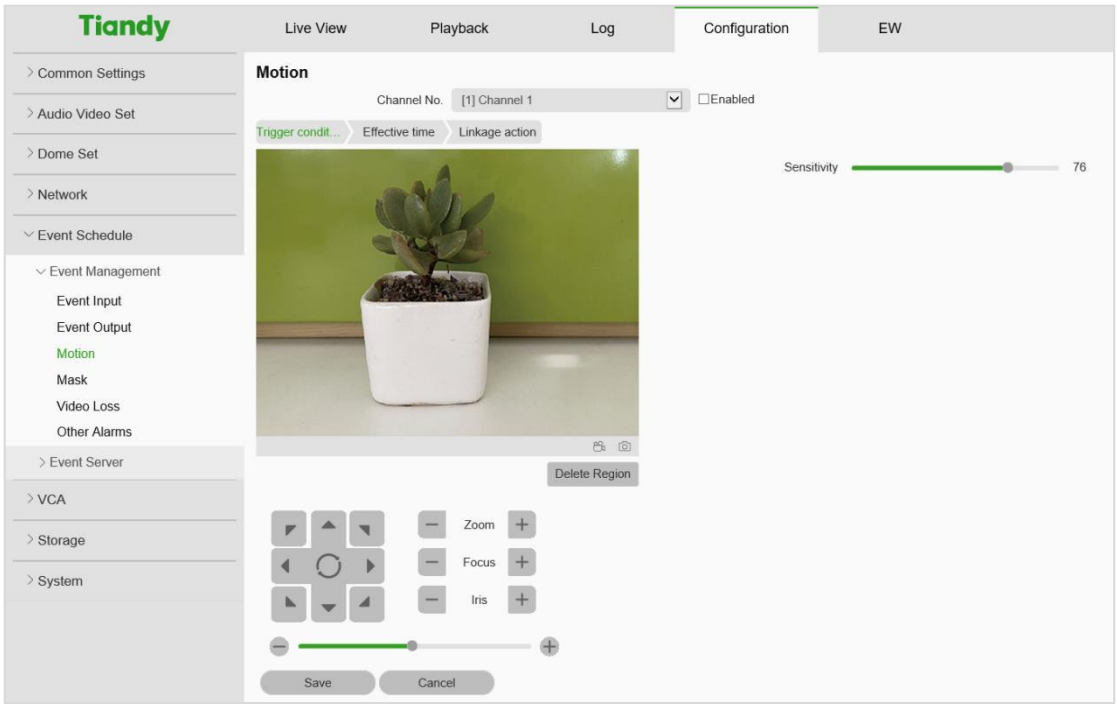
[Normally Closed]: Set the non-alarm state of the output port to be closed, that is, the output port is open when the alarm is generated.

[Normally open]: set the non-alarm state of the output port to open, that is, the output port is closed when the alarm is generated.

[Delay time]: the delay time from alarm elimination to output port recovery to non-alarm state.

[Delay alarm]: The delay time from the alarm to the output port turning into the alarm state.

Event Management->Motion



The user can set the mobile alarm area of two channels respectively. When there is an object moving in the set area, the video preview interface will prompt the video mobile alarm, and the corresponding alarm linkage will be carried out according to the setting.

（1）Select the channel for which the mobile alarm needs to be set, check the [Enable] check box, enable the mobile alarm detection

function, and drag the left mouse button on the video screen to sketch the area for detecting the mobile alarm. Click [Delete Area] to delete the mobile alarm detection area.

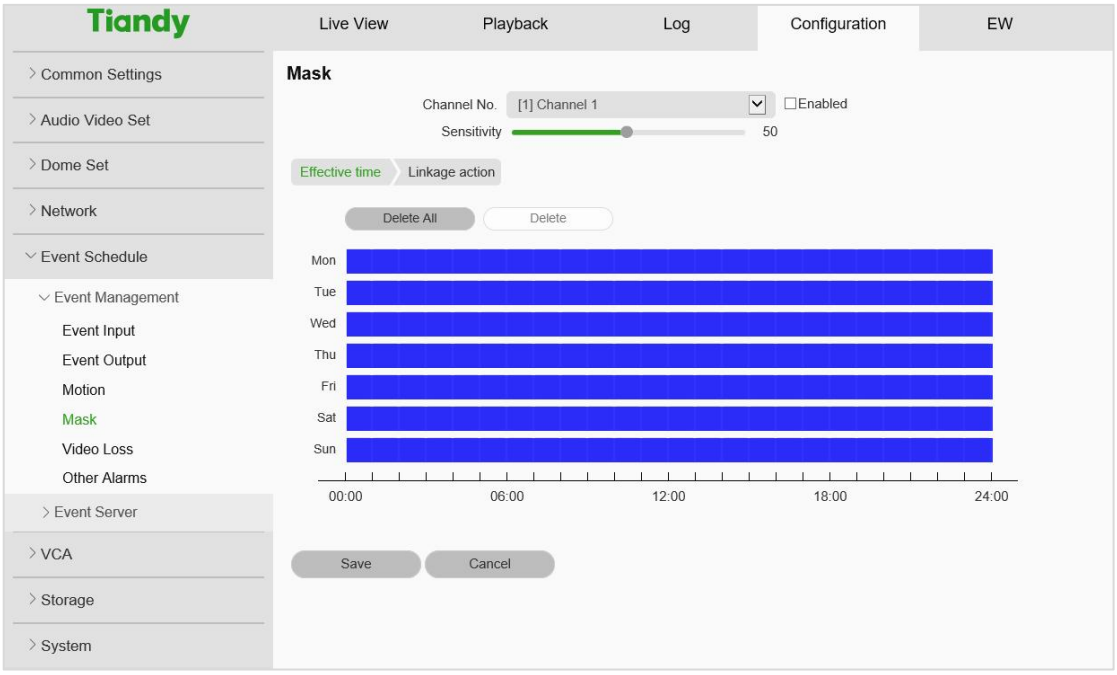
(2) Set the mobile alarm sensitivity. The larger the value is, the more sensitive the mobile alarm detection is.

(3) The user can set [Valid Time] as required, and the case will only be detected within the set date and time period.

(4) Set [Linkage Action] to realize the alarm linkage after the case is triggered, such as [Linkage Output], [Linkage Snapshot], [Linkage Video], etc.

(5) Click the [Save] button to save the corresponding parameter settings, and click [Copy to] to copy the parameters of the current port number to other port numbers. Click [Reset] to restore the last saved parameters.

Event Management->Mask



After the blocking alarm is opened, when the image in the video picture is blocked, the alarm is detected according to the sensitivity.

(1) Check the [Enable] check box to enable the video occlusion alarm detection function. Uncheck it to disable the video occlusion alarm detection function.

(2) Set the video occlusion alarm sensitivity. The larger the value is, the more sensitive the video occlusion alarm detection is.

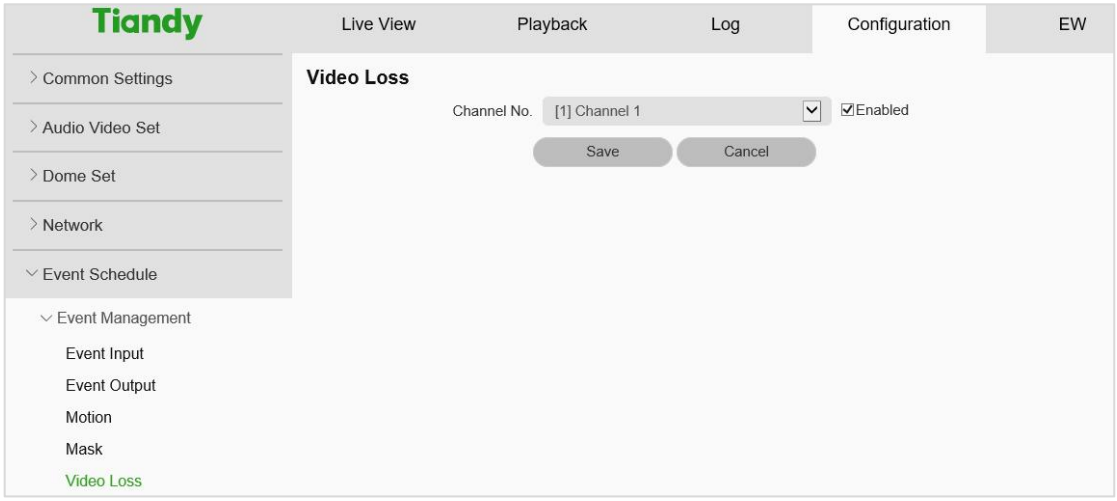
(3) The user can set [defense deployment time] as required, and the case will only be detected within the set date and time period.

(4) Set [Linkage Type] to realize the alarm linkage after the alarm is triggered, such as [Linkage Output], [Linkage Snapshot], [Linkage Video], etc.

(5) Click the [Save] button to save the corresponding parameter settings, and click [Copy to] to copy the parameters of the current port

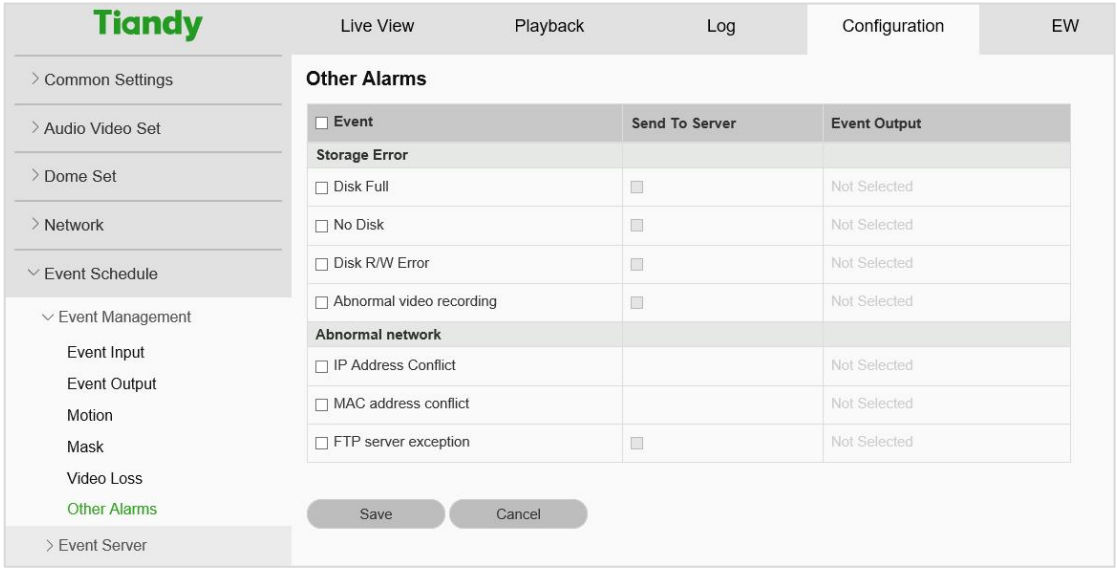
number to other port numbers. Click [Reset] to restore the last saved parameters.

Event Management->Video Loss



After the loss alarm is enabled, when the video is lost, the loss alarm prompt box will be displayed in the preview interface.

Event Management->Other Alarms

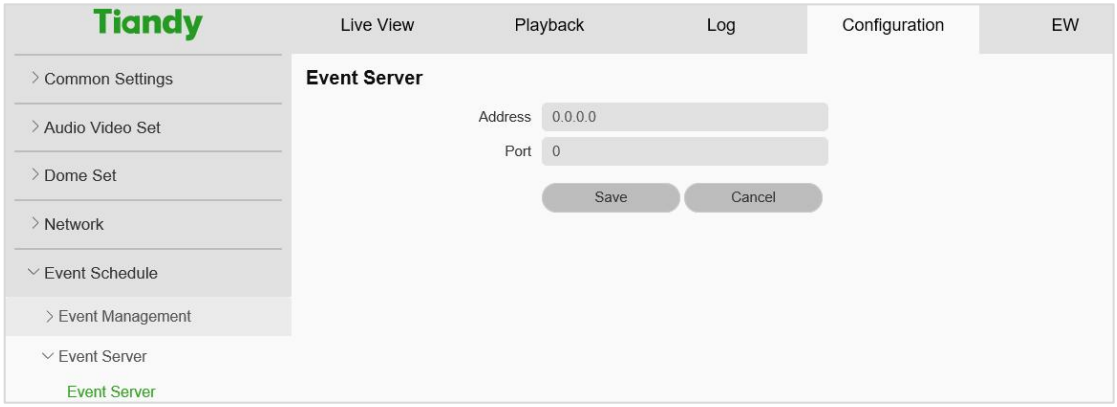


Users can select [Disk Full], [Disk R/W Error], [IP Address Conflict],

[MAC Address Conflict] as the exception type, and you can set [Send To Center] and [Event Output].

[Linkage output] can select the port number of the alarm output end.

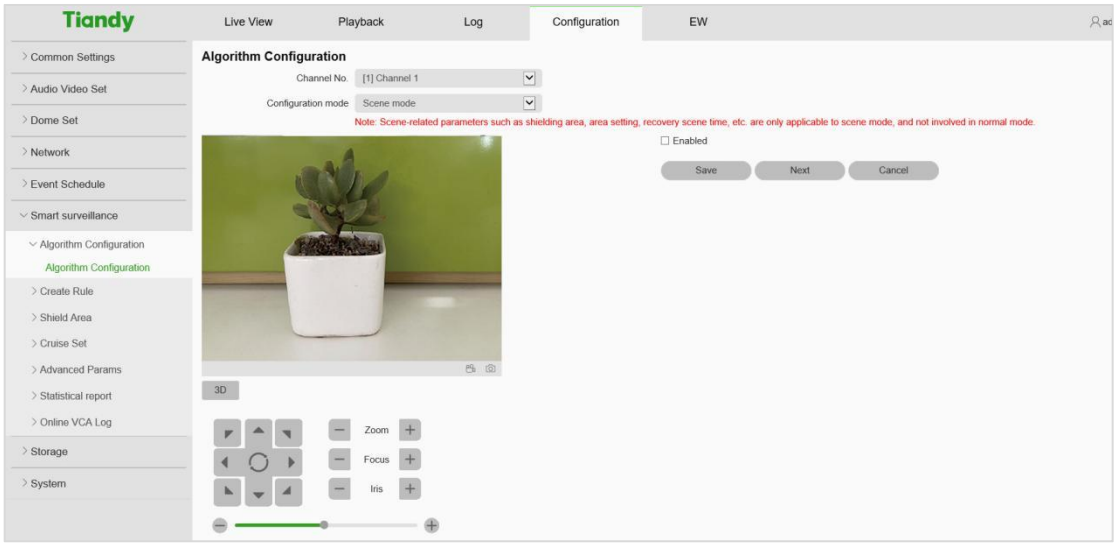
3.7.5.2 Event Server



The user can set the alarm server by himself. After inputting [Address] and [Port], click [Save] to save the parameters.

3.7.6 Smart surveillance

3.7.6.1 Algorithm Configuration

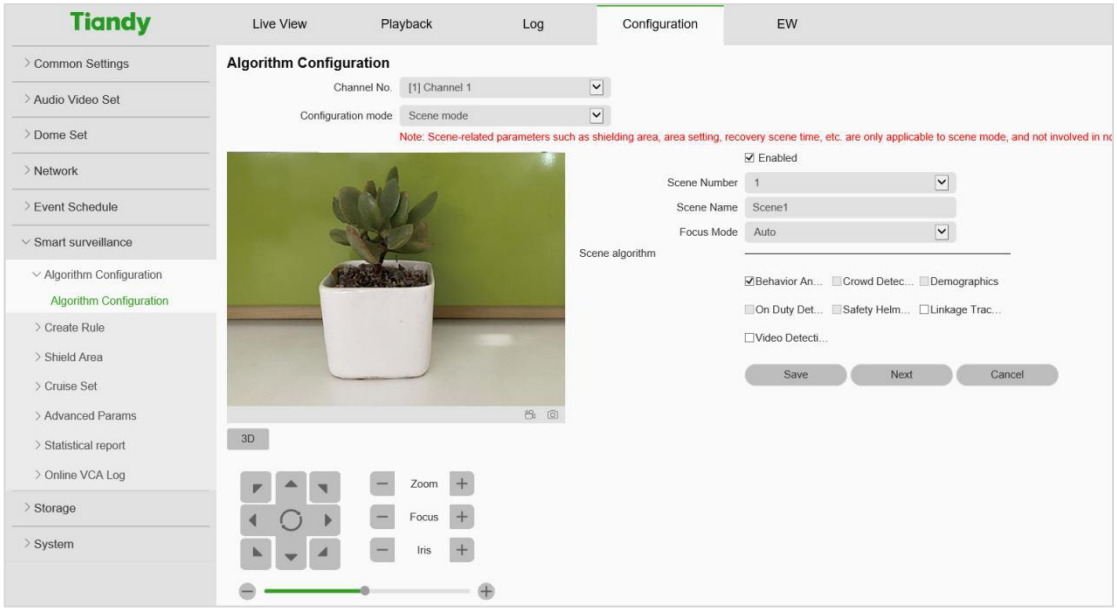


Select the channel whose algorithm needs to be configured according to the user's needs, check [Enable] and click the [Save] button to display the algorithm configuration supported by the current channel.

Explanation:

- When intelligent analysis is enabled, the tracking dome camera will automatically scan horizontally for one week to correct the orientation and improve the tracking accuracy.

Algorithm Configuration->Channel 1



[Channel 1]=>[Scene mode]

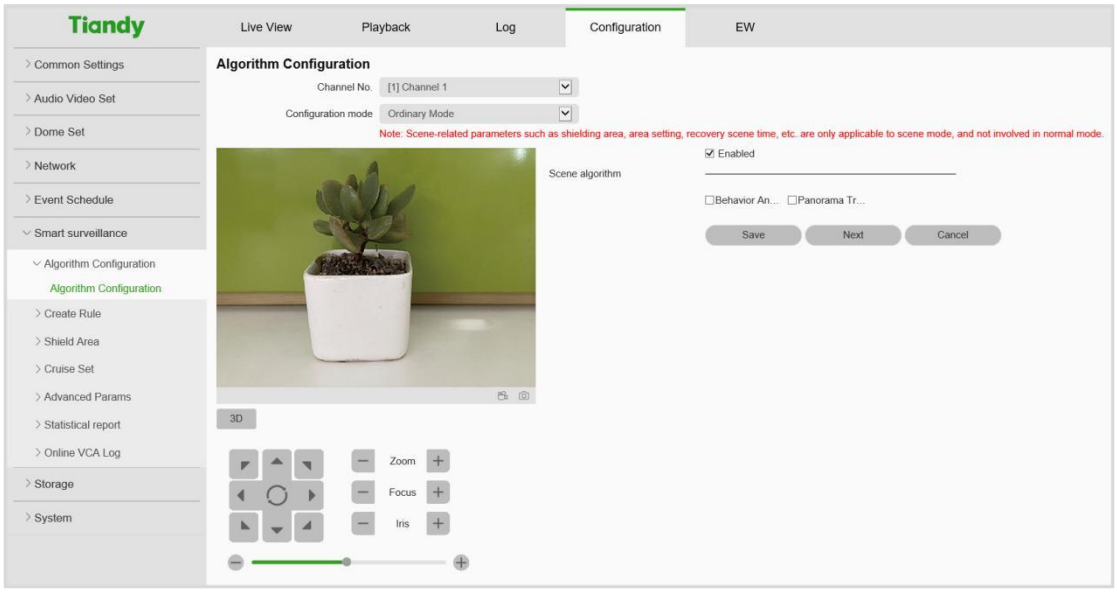
The user selects the scene number, the scene name, the focusing mode, the scene type and the scene algorithm as required.

[Scene Number]: It represents different scenes. A total of 16 scenes can be set. The scene number range is 1-16. Set different scenes through the PTZ control menu in the lower left corner.

[Scene Name]: Users can customize the scene name

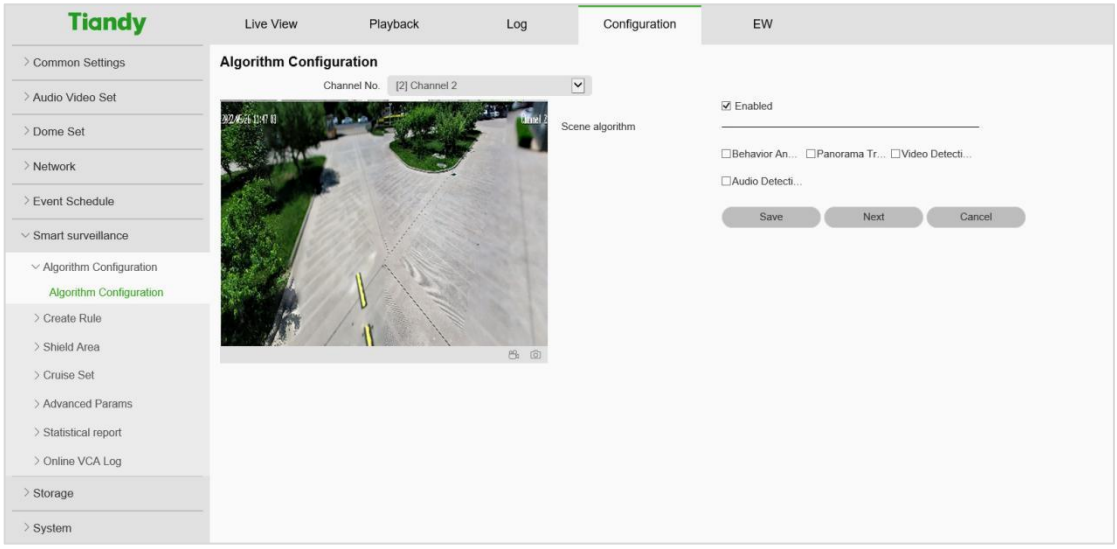
[Focus Mode]: Includes Auto focus and Fixed focus. Auto focus is the default. When the fixed focus mode is set, the focus value needs to be adjusted manually.

[Channel 1]=>[Ordinary Mode]



When enabled, you can select the behavior analysis and linkage tracking algorithms.

Algorithm Configuration->Channel 2



Users can select the scene algorithm according to their needs, and support algorithms such as behavior analysis and panoramic tracking.

Explanation:

- Different channels support different algorithms. Please refer to the actual

interface.

- Some algorithms are mutually exclusive with other algorithms. Other algorithms can be enabled at the same time. Please refer to the actual interface.
- Calibrate again after configuring the algorithm or modifying the scene.

3.7.6.2 Create Rule

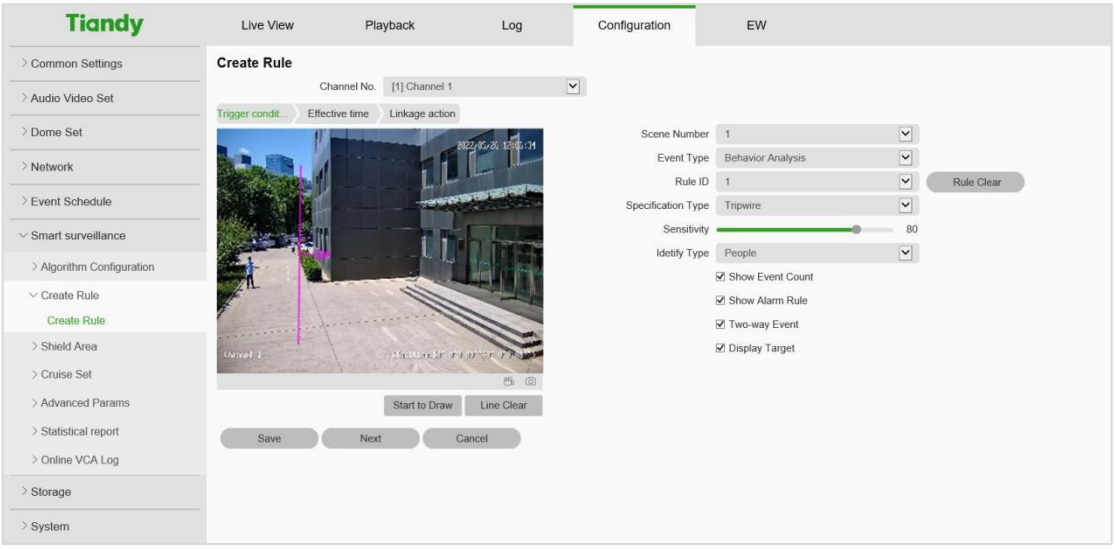
Create Rule->Event Set

On the event setting page, configure the algorithm, click Save after setting, and then click Next to enter the [Defense Time] configuration. See [Effective Time] for details.

[Event Type]=>[Behavior Analysis]

[Behavior Analysis]: The algorithm includes Tripwire, Double Tripwire, perimeter, item retention, item loss, wandering, running, parking, and heat map. The behavior analysis algorithm of different channel support is different, please show the actual channel according to the actual channel.

[Event Type]=>[Behavior Analysis]=>[Tripwire]



Tripwire: When the target crosses the rule line, the alarm is triggered.

(1) Select the channel number and rule number, and set the rule type as tripwire.

(2) Draw a regular line, and the arrow on the regular line indicates the direction of forbidden crossing.

(3) Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(4) Idetify Type: includes human, vehicle, human and vehicle, and all, and is used to distinguish detection targets.

(5) Show Event Count: refers to the statistical number of times the alarm is displayed on the video screen.

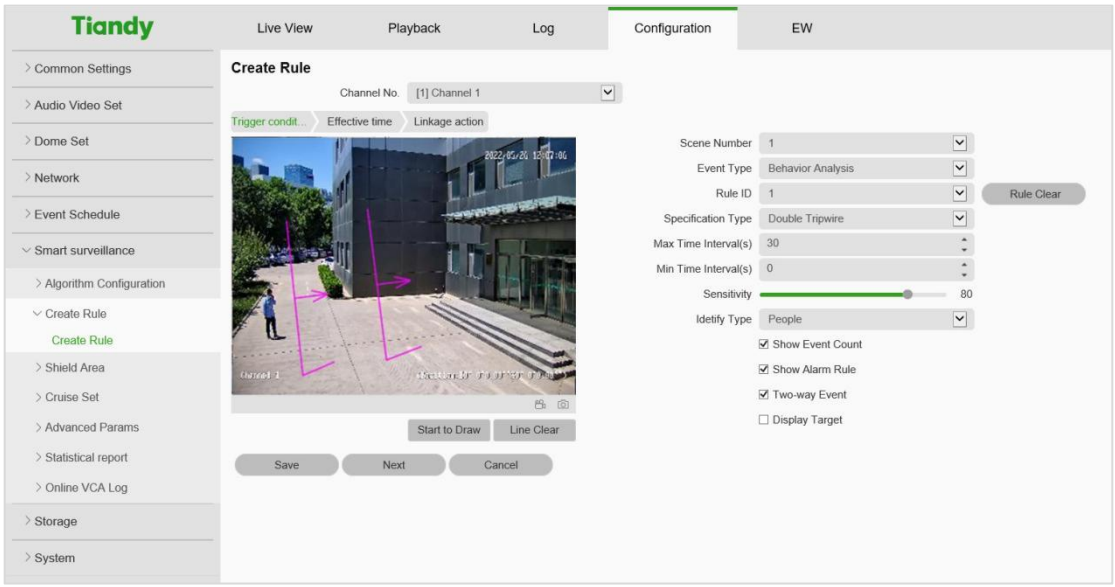
(6) Show Alarm Rule: refers to the rule box that displays the alarm on the video screen.

(7) Two-way Event:If the bidirectional alarm is not checked, the alarm will be triggered only when the target crosses the rule line and the movement direction is consistent with the arrow direction of the rule line. Check the two-way alarm, and the alarm will be triggered when the target crosses the rule line from both directions.

(8) Display Target: It means that in the video screen, the detected object will be framed, such as a person.

(9) Click Save after setting.

[Event Type]=>[Behavior Analysis]=>[Double Tripwire]



Double Tripwire： The alarm will be triggered when the moving target continuously crosses two tripwires and the time interval between crossing the two tripwires is within the set time interval range.

(1) Select the channel number and rule number, and set the rule type as tripwire.

(2) Draw two regular lines. The arrows on the regular lines indicate the direction of prohibited crossing. The directions of the two regular lines should be consistent. Alarm will be given when two lines are passed continuously within the specified time.

(3) Max/Min Time Interval(s):Represents the time range of continuous crossing of two regular lines. Maximum time interval of line crossing: the maximum time limit for the moving target to stay between two lines. When the moving target crosses the first line, the timing starts, and when the moving target crosses the second line, the timing ends. If the time exceeds the maximum time interval of crossing the line, the alarm will not be triggered. Minimum time interval for line crossing: the minimum time limit for a moving object to stay between two lines. When the moving target crosses the first line, the timing starts, and when the moving target crosses the second line, the timing ends. If the time is less than the minimum time interval of crossing the line, the alarm will not be triggered.

(4) Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(5) Idetify Type:Including human, vehicle, human and vehicle, and all, for distinguishing detection targets.

(6) Show Event Count： It refers to the statistical number of times the alarm is displayed on the video screen.

(7) Show Alarm Rule： It refers to the rule box that displays the alarm on the video screen.

(8) Display Target： It means that in the video frame, the detection object will be marked with a frame, such as a person.

(9) Two-way Event:If the bidirectional alarm is not checked, the alarm will be triggered only when the target crosses the rule line and the movement direction is consistent with the arrow direction of the rule line. Check the two-way alarm, and the alarm will be triggered when the target crosses the rule line from both directions.

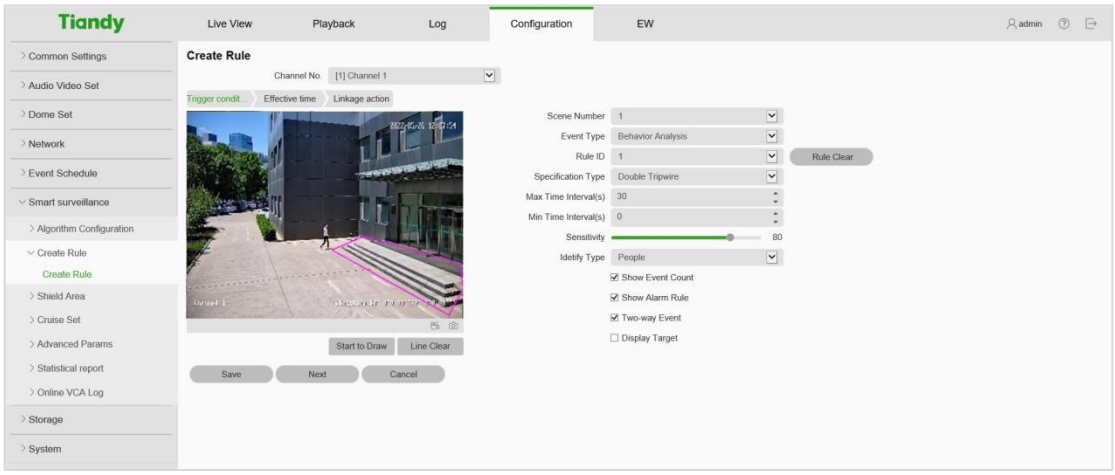
(10) Click Save after setting.

Attention:

- Maximum time interval of line crossing: the maximum time limit for the moving target to stay between two lines. When the moving target crosses the first line, the timing starts, and when the moving target crosses the second line, the timing ends. If the time exceeds the maximum time interval of crossing the line, the alarm will not be triggered.
- Minimum time interval for line crossing: the minimum time limit for a moving object to stay between two lines. When the moving target crosses the first line, the timing starts, and when the moving target crosses the second line, the timing ends. If the time is less than the minimum time interval of crossing the

line, the alarm will not be triggered.

[Event Type]=>[Behavior Analysis]=>[Perimeter]



Perimeter：It refers to the scope of safety protection and triggers alarms according to different detection modes. There are three modes of instrusion, enter and leave.

instrusion：The moving target appears in the detection area, and the duration meets the set intrusion time alarm.

Enter：When a moving object enters the detection area from outside the detection area, the alarm is triggered, and the action of crossing the boundary line is required.

Leave：When the moving target leaves the detection area, it needs to cross the boundary line.

(1)Select the channel number and rule number, set the rule type to Perimeter, and select the mode.

(2)Select the intrusion alarm elimination mode: when leaving the detection area, the alarm will be eliminated when leaving the rule box; when leaving the video area, the alarm will be eliminated when leaving the video screen.

(3)Invasion Time(s)：Set the intrusion time, and the alarm will be triggered only after staying in the detection area for the set time.

(4)Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(5)Idetify Type:Comprises a person, a vehicle, a person and a vehicle, and all, and is used for distinguishing detection targets.

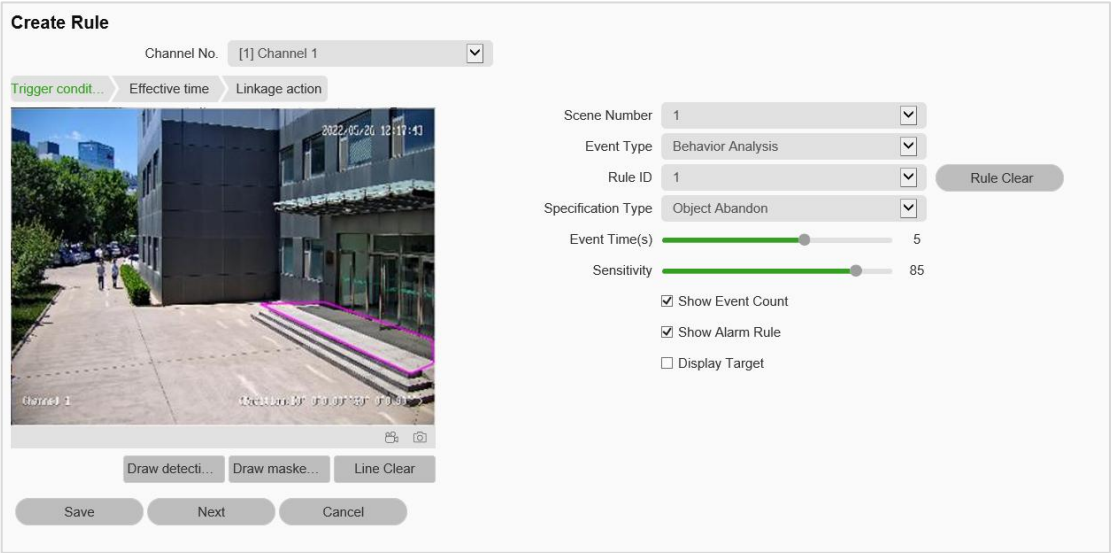
(6)Show Event Count：It refers to the statistical number of times the alarm is displayed on the video screen.

(7)Show Alarm Rule：It refers to the rule box that displays the alarm on the video screen.

(8)Display Target：It means that in the video frame, the detection object will be marked with a frame, such as a person.

(9)Click Save after setting.

[Event Type]=>[Behavior Analysis]=>[Object Abandon]



Object Abandon： It refers to placing an object in the scene and giving an alarm when the time of the object left exceeds the alarm time.

(1)Select the channel number and the rule number, and select the rule type to leave the item.

(2)Draw the left object detection area and the shielding area. When the left object and the lost object are enabled at the same time, the detection areas shall not overlap.

(3)Event Time(s):It indicates that the alarm will be triggered after the target remains in the legacy state in the screen for a certain time, and the maximum alarm time is supported to 8 seconds.

(4)(3)Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(5)Show Event Count：It refers to the statistical number of times the alarm

is displayed on the video screen.

(6)Show Alarm Rule：It refers to the rule box that displays the alarm on the video screen.

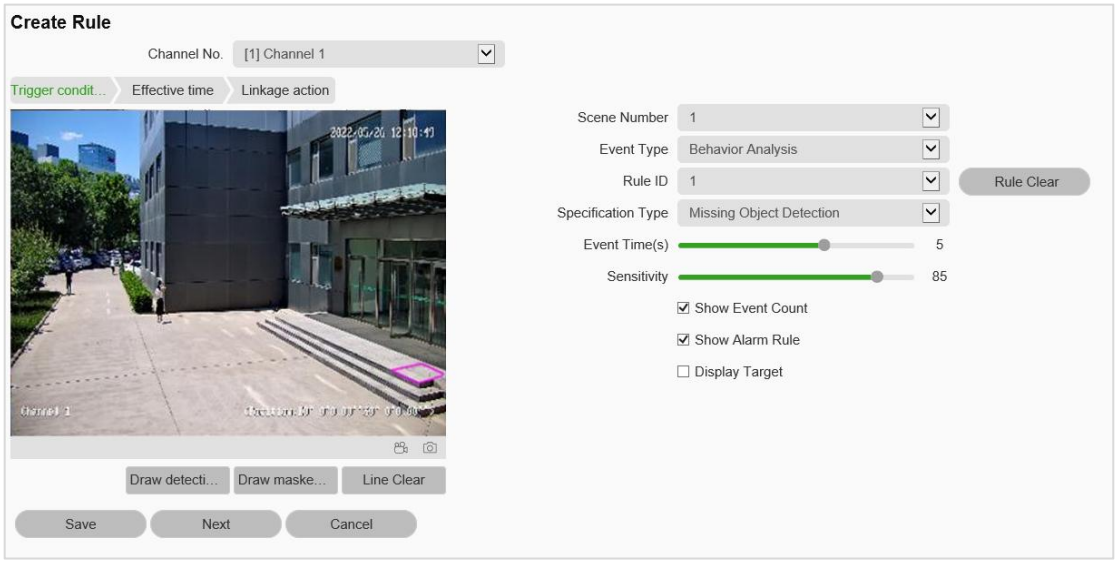
(7)Display Target：It means that in the video frame, the detection object will be marked with a frame, such as a person.

(8)Click Save after setting.

Attention:

- Alarming after the target appears in the area and reaches the set Event time after standstill.

[Event Type]=>[Behavior Analysis]=>[Missing Object Detection]



Missing Object Detection:It means that the alarm is triggered after the item is taken away from the scene and the item is lost for more than Event Time.

(1)Select the channel number and rule number, and the rule type is item lost.

(2)Draw the item loss detection area and the shielding area. When the item loss and the item left are enabled at the same time, the detection areas shall not overlap.

(3)Event time, indicating that the alarm will be triggered after the target is kept in the lost state in the screen, and the maximum alarm time is supported to 8 seconds.

(4)Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(5)Show Event Count:It refers to the statistical number of times the alarm is displayed on the video screen.

(6)Show Alarm Rule:It refers to the rule box that displays the alarm on the video screen.

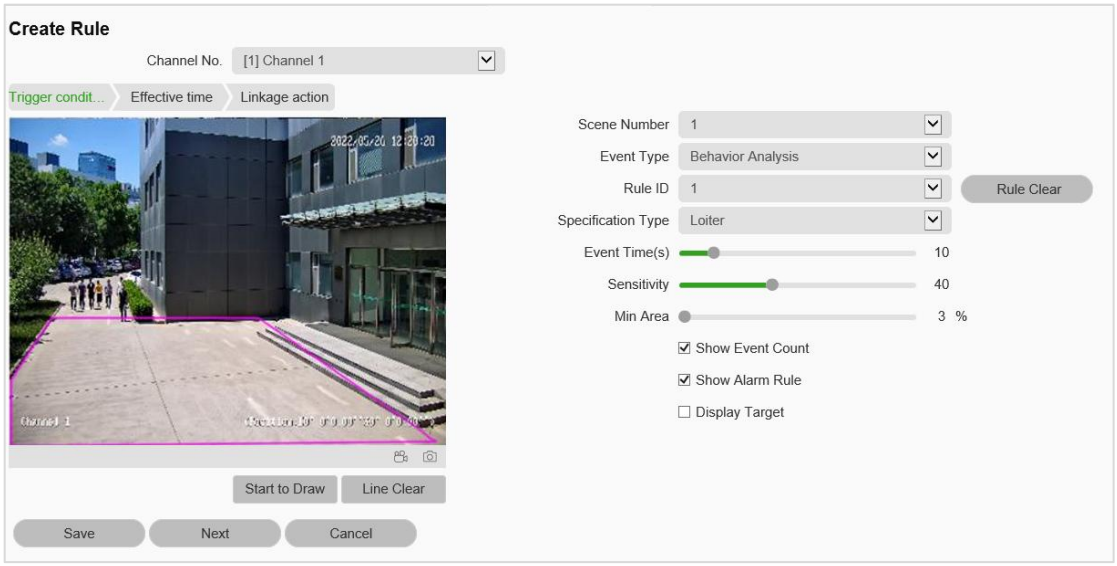
(7)Display Target:It means that in the video frame, the detection object will be marked with a frame, such as a person.

(8)Click Save after setting.

Attention:

- The time when the target in the area disappears, and the alarm will be given after the set alarm time is reached.

[Event Type]=>[Behavior Analysis]=>[Loiter]



Loiter: It means that the alarm is given when the pedestrian meets the set wandering conditions in the area, and it only takes effect on the target whose target type is human.

(1)Select the channel number and the rule number, and set the rule type to Hover.

(2)Draw the loitering detection area.

(3)Event Time:It indicates that the alarm will be triggered after the target stays in the wandering state in the screen for a certain time.

(4)Mini Area:It indicates that the alarm will be triggered when the movement range (area percentage) of the target in the detection area reaches the area.

(5)Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the

smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(6)Show Event Count ： It refers to the statistical number of times the alarm is displayed on the video screen.

(7)Show Alarm Rule ： It refers to the rule box that displays the alarm on the video screen.

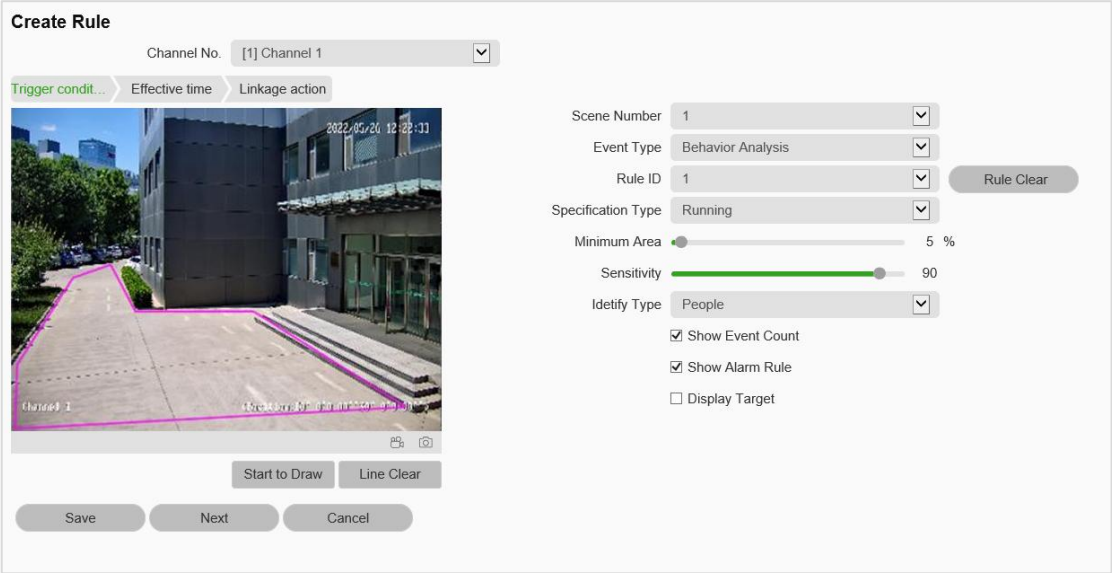
(8)Display Target ： It means that in the video frame, the detection object will be marked with a frame, such as a person.

(9)Click Save after setting.

Attention:

- If the wandering meets any of the following conditions, an alarm will be given: (1) If a person exceeds the time threshold in the area, an alarm will be given. (2) If the area covered by the trajectory exceeds the area threshold and the sensitivity is satisfied, an alarm will be given (the sensitivity controls the number of times the target turns back).

[Event Type]=>[Behavior Analysis]=>[Running]



Running:It refers to alarm when the moving target meets the running conditions in the area.

(1)Select the channel number and rule number, set the event to run, and select Valid to enable the rule.

(2)Draw the run detection area.

(3)Minimum Area:It refers to the percentage of the number of pixels moved by the moving target per second in the pixel width of the picture in the detection area. When the moving distance of the moving target per second is greater than this value, it is considered as running and the alarm will be given. If it is set to 0, it means that the alarm will be given if the target is not stationary. If it is set to 100, it means that the alarm will be given if the moving distance per second is greater than the image width of the detection area.

(4)Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the

smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(5)Idetify Type:Comprises a person, a vehicle, a person and a vehicle, and all, and is used for distinguishing detection targets.

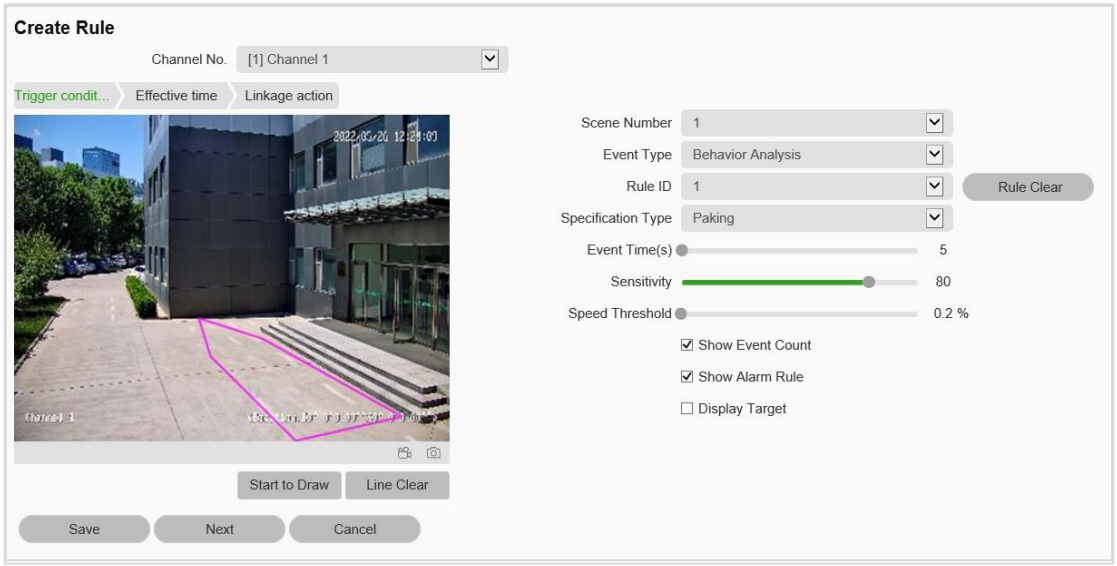
(6)Show Event Count:It refers to the statistical number of times the alarm is displayed on the video screen.

(7)Show Alarm Rule:It refers to the rule box that displays the alarm on the video screen.

(8)Display Target:It means that in the video frame, the detection object will be marked with a frame, such as a person.

(9)Click Save after setting.

[Event Type]=>[Behavior Analysis]=>[Parking]



Parking: It refers to judging the running speed of the moving vehicle and giving an alarm to the vehicle which is lower than the speed threshold

and reaches the alarm time. Parking only detects vehicles, not pedestrians.

(1)Select the rule number and set the rule type Parking.

(2)Draw the parking detection area.

(3)Event Time: Indicating that the alarm will be triggered after the target is kept in the parking state in the screen for this time.

(4)Speed Threshold:The vehicle speed threshold is equal to the product of the pixel width of the detection area and the set percentage. When the vehicle speed is lower than the speed threshold, it is considered to be in the parking state, and the parking timing is started. If the timing time exceeds the alarm time, the parking alarm is triggered.

(5)Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(6)Show Event Count:It refers to the statistical number of times the alarm is displayed on the video screen.

(7)Show Alarm Rule:It refers to the rule box that displays the alarm on the video screen.

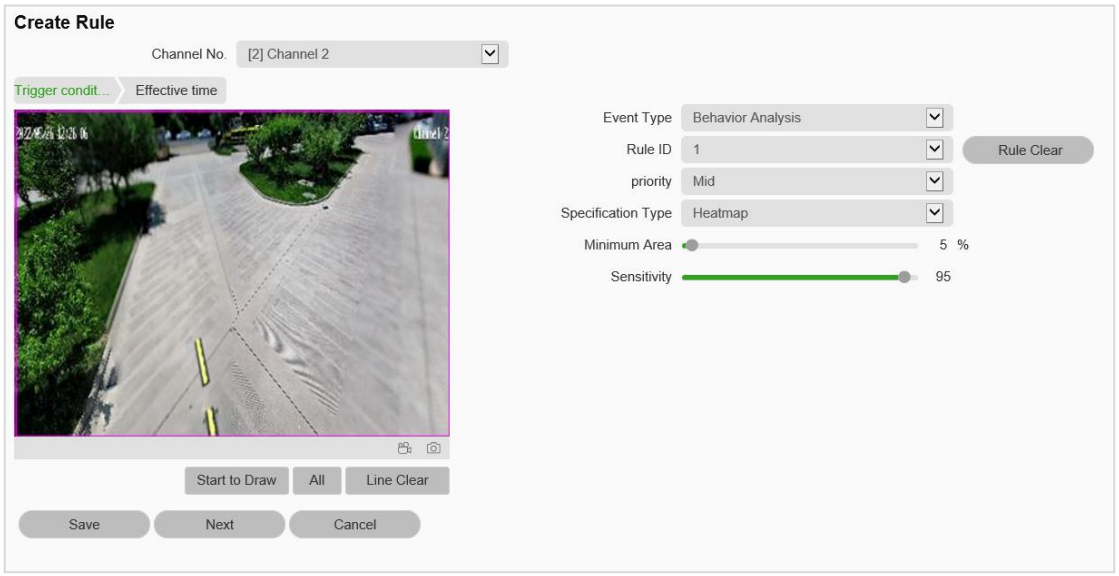
(8)Display Target:It means that in the video frame, the detected object will be marked with a frame, such as a car.

(9)Click Save after setting.

Attention:

- Parking algorithm, the default type is car.
- The speed threshold refers to the number of pixels that the vehicle moves in one second, which accounts for the proportion of the number of pixels in the width of the screen. If the speed is less than this proportion, it is considered that the speed is low enough to meet the parking conditions.
- The purpose of judging the speed of the vehicle is to avoid the situation that the vehicle is actually moving, but for some reasons it is slow and overtime. In this case, alarming is not required.
- The target size detection capability range is the same as the vehicle detection range requirement in the Perimeter function.

[Event Type]=>[Behavior Analysis]=>[Heatmap]



Heat map:It means that each part of the screen shows the distribution of people with the color of heat. A detection area is set to detect the active

information of personnel in the specified area. Through the heat chart report, the personnel distribution can be visually presented in terms of time or space. You can view the space heat map and time heat map in the statistical report.

(1) Select the rule number, set the event as the heat chart, and select Valid to enable the rule.

(2) Draw a detection area of that heat map.

(3) Minimum Area:Indicates that the target moves in the frame at a speed (area%/sec) greater than the speed to enter the active state. When entering the active state, an active point is recorded. In the spatial heat map, the more active points, the redder the area, and the less active points, the blue the area.

(4) Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

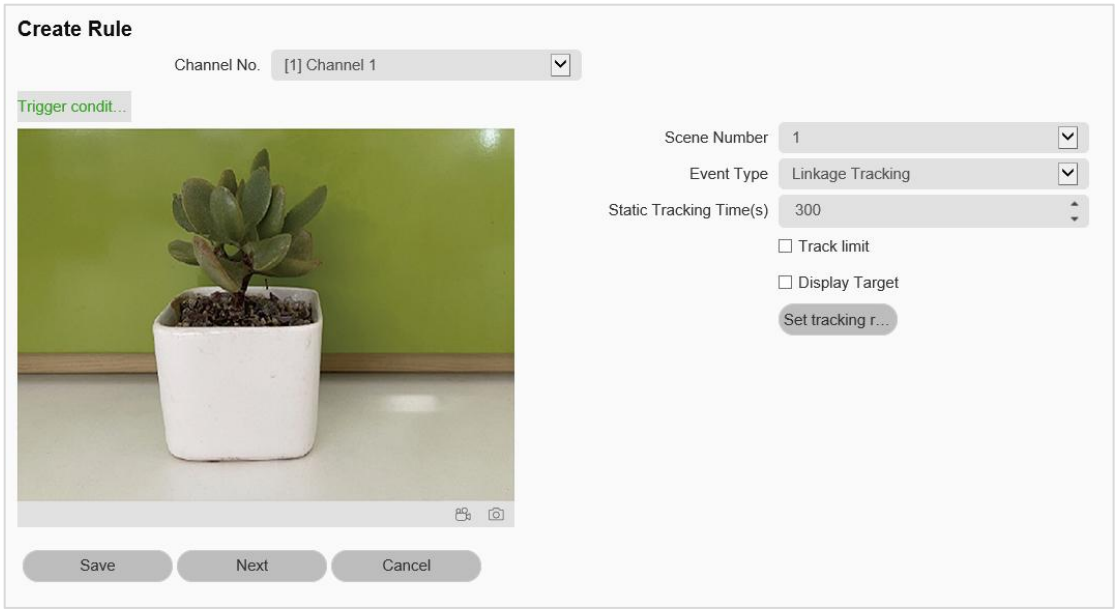
(5) Click Save after setting.

(6) Spatial heat map: the activity of people in different areas of the screen. Red is the densest area, that is, the most active area, and blue is the least dense area.

(7) Time heat map: personnel activities at different times in the screen. The ordinate value is the index calculated according to the number of

people, stay time, etc. The larger the value, the higher the activity, which does not represent the number of people.

[Event Type]=>[Linkage Tracking]

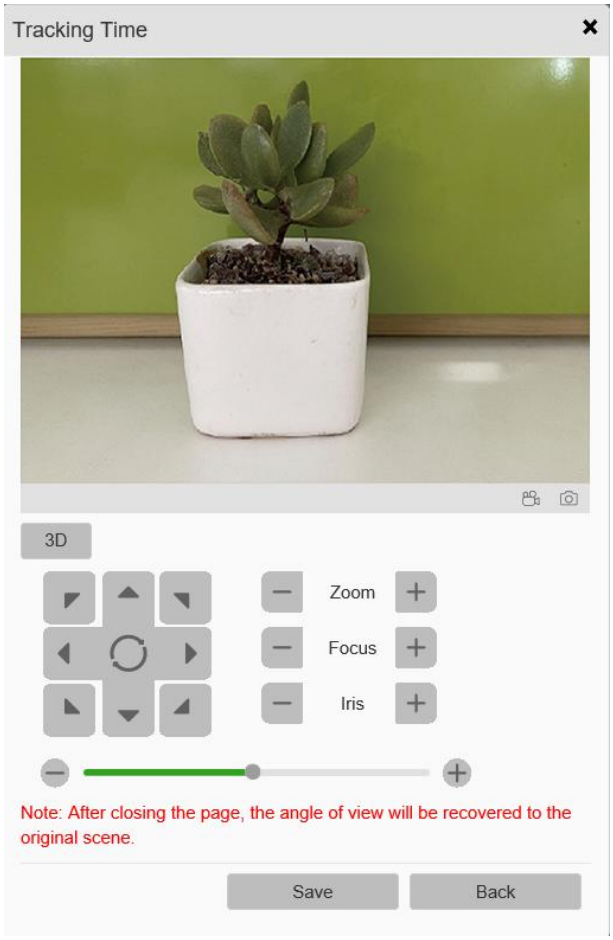


(1) Check behavior analysis and linkage tracking at the same time. When a target triggers the behavior analysis alarm, the linkage tracking action will be taken. Select behavior analysis and intelligent tracking in the algorithm configuration, and then make corresponding settings. The behavior analysis settings are the same as above, and the intelligent tracking settings are as follows.

(2) Set the maximum tracking time (seconds), which indicates the time length for the dome camera to track the target. The default maximum time is 300 seconds. When set to 0 seconds, the ball will track until the target disappears.

(3) Click the Set tracking magnification button to manually set the required tracking magnification. Determine an appropriate proportion of

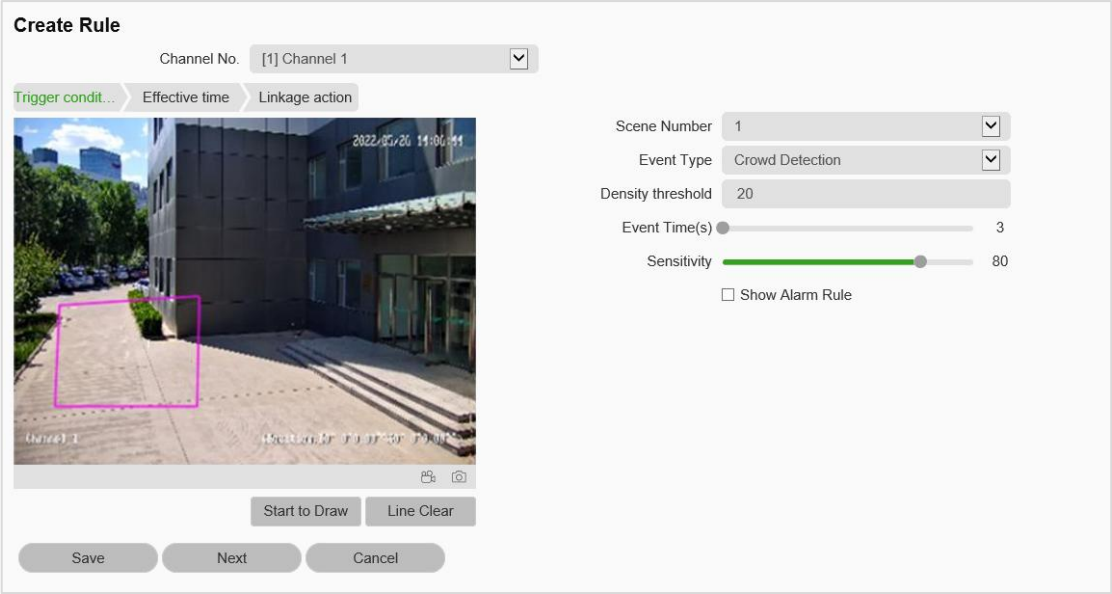
the target in the farthest screen of the tracking path by adjusting the magnification. During tracking, the target will be tracked according to this magnification. Click Set tracking magnification to save the setting.



(4) Set whether to Display Target.

(5) After clicking Save, click Next to link to the alarm setting interface.

[Event Type]=>[Crowd Detection]



Crowd Detection：Count the number of people in the area, and carry out alarming if the condition of alarming is exceeded.

(1) Draw the crowd gathering detection area.

(2) Density threshold:When the number of people in the area exceeds this value, an alarm will be generated.

(3) Event Time(s):When the number of people detected exceeds the set threshold and the duration is greater than the alarm time, the alarm is started.

(4) Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

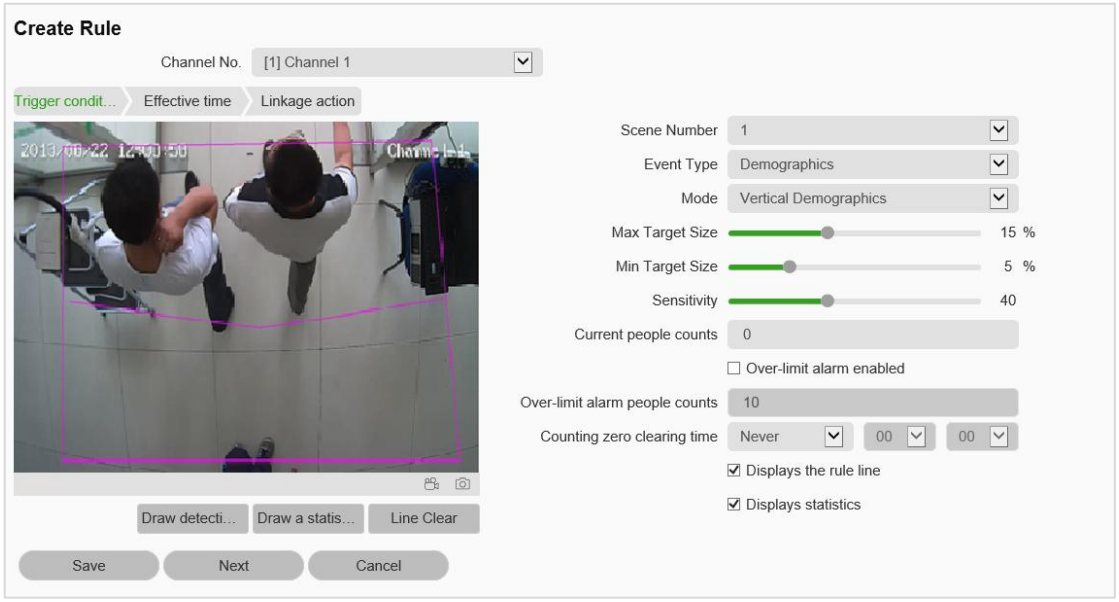
(5) Show Alarm Rule:After it is enabled, the alarm rules can be viewed in the preview interface.

(6) Click Save after setting.

Attention:

- Detect the density of moving targets in the area, and give an alarm when it exceeds the setting.
- The sensitivity represents the proportion of the moving target in the area of the detection region.

[Event Type]=>[Demographics]



(1) Draw the people counting area. Click the [Draw Detection Area] button to draw the area. Double-click to make the boundary automatically connected end to end.

(2) Detection Area:In the area where the algorithm is effective, when a person walks into the area in the picture, the detection result of the person is judged and the trajectory is tracked, and when the person walks out of the area, the detection result is not processed, and the trajectory is disconnected.

(3) Statistical Line:It can be a straight line or a broken line as the identification of the count. When a person's trajectory passes through a regular line, it is counted according to the direction in which it passes. When the rule line is drawn, there will be a red arrow. The direction of the red arrow is the direction of entry, and the opposite direction is the direction of exit. The regular line should be drawn in the middle of the detection area as far as possible to ensure that there is a certain area on both sides of the line. The detection line is not suitable to be drawn at the boundary of the picture.

(4) Mode:Support Vertical Demographics, Statistics of staffs in the area, Queue population statistics and Line drawing people statistics.

(5) Max/Min Target Size:It mainly limits the size of the target to filter some interfering objects that may appear in the actual scene, so as to avoid the impact on the actual detection results.

Max Target Size:When an adult is in the center of the screen, the percentage of the number of pixels of the shoulder width and the number of pixels of the screen width is less than this value, the target is not counted, and it is recommended to use the default value.

Min Target Size:When an adult is in the center of the screen, the percentage of the number of pixels of the shoulder width and the number of pixels of the screen width is greater than this value, the target is not counted, and it is recommended to use the default value.

(6) Set the current number of people, that is, fixed number of people. (Vertical Demographics and Line drawing people statistics support)

(7) Over-limit alarm people counts:Set the number of over-limit alarms, and alarm when the number of people exceeds the limit.

(8) Counting zero clearing time:Support daily clearing.(Vertical Demographics and Line drawing people statistics support)

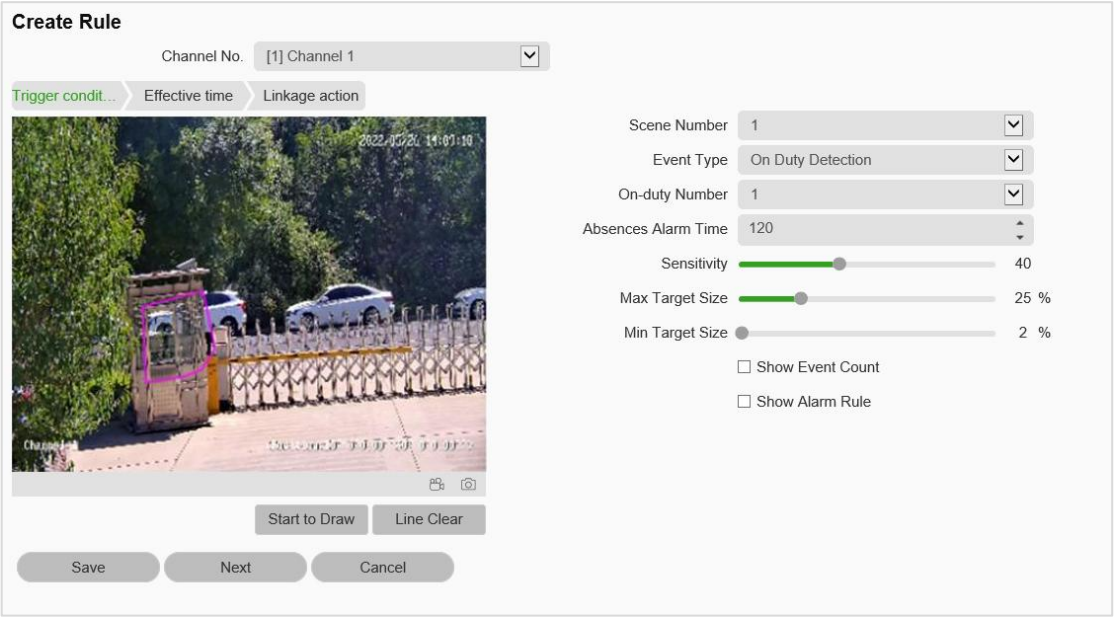
(9) Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(10) Click Save after setting.

Attention:

- When the vertical people counting function is used, it is required to be installed right above the monitoring area, vertically overlooking the monitoring area, and pedestrians in the monitoring area will not be blocked when passing through.
- The queue headcount mode is optimized for the queuing scenario. It is recommended to use it in this scenario.

[Event Type]=>[On Duty Detection]



(1) Draw the on-duty detection area.

(2) On-duty Number:Support single and double duty.

(3) Absences Alarm Time:When the detected number of people is less than the number of people on duty, start timing, and when the timing exceeds the set off-duty alarm time, start alarm.

(4) Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

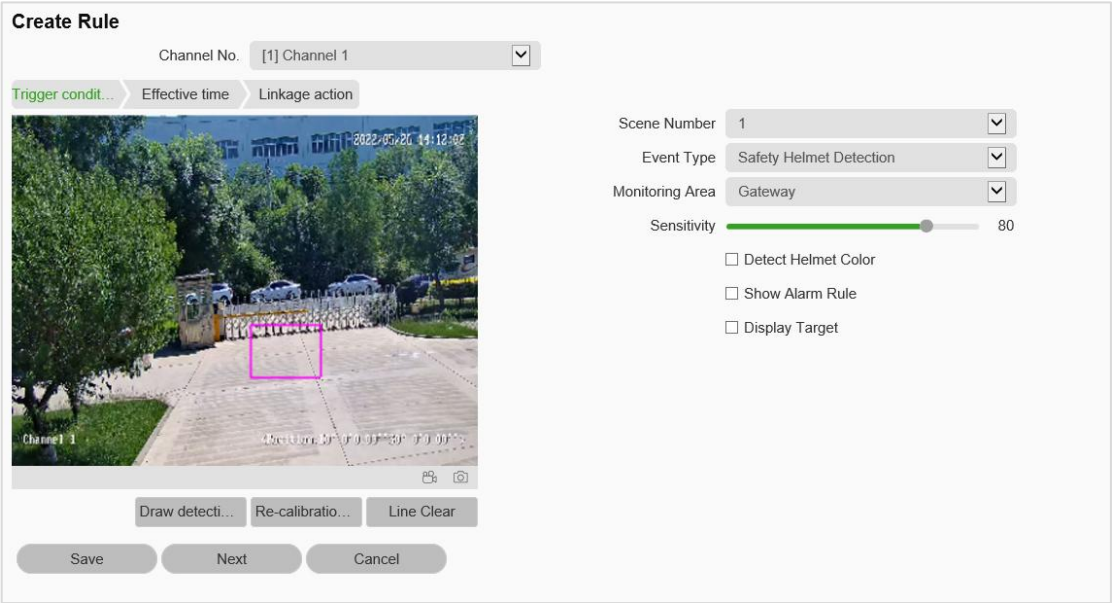
(5) Min Target Size:If the target width is less than the minimum size of the target than the upper screen width, the target is filtered out and is not counted.

(6) Max Target Size:If the target width is greater than the maximum size of the target than the screen width, the target is filtered out and is not counted.

(7) The target size participates in the count between the maximum and minimum sizes, and does not participate in the count beyond the range.

(8) Click Save after setting.

[Event Type]=>[Safety Helmet Detection]



(1)Sensitivity: used to control the minimum detection target to filter small targets. The greater the sensitivity, the smaller the size of the smallest target that can be detected. The higher the sensitivity, the easier it is to detect the object.

(2)Monitoring Area:The area of the target is detected, and the target outside the area is not processed.

(3)Re-Calibration targets：Select the actual size of the head and shoulder of the target in the middle of the detection area. The algorithm will judge the size of the target in the picture according to the size of the calibration box, so as to adjust the algorithm to achieve the optimal

detection (the size of the calibration box is shown in the figure above)

(4)Detection Area:Monitoring area includes Gateway and construction area.

(5)Detect Helmet Color:When it is not enabled, the target without safety helmet will be alarmed; when it is enabled to detect the color of safety helmet, for example, if red is checked, the target without safety helmet in the area will be alarmed, and the target with red safety helmet will also be alarmed, indicating that the personnel with red safety helmet should not appear in the area.

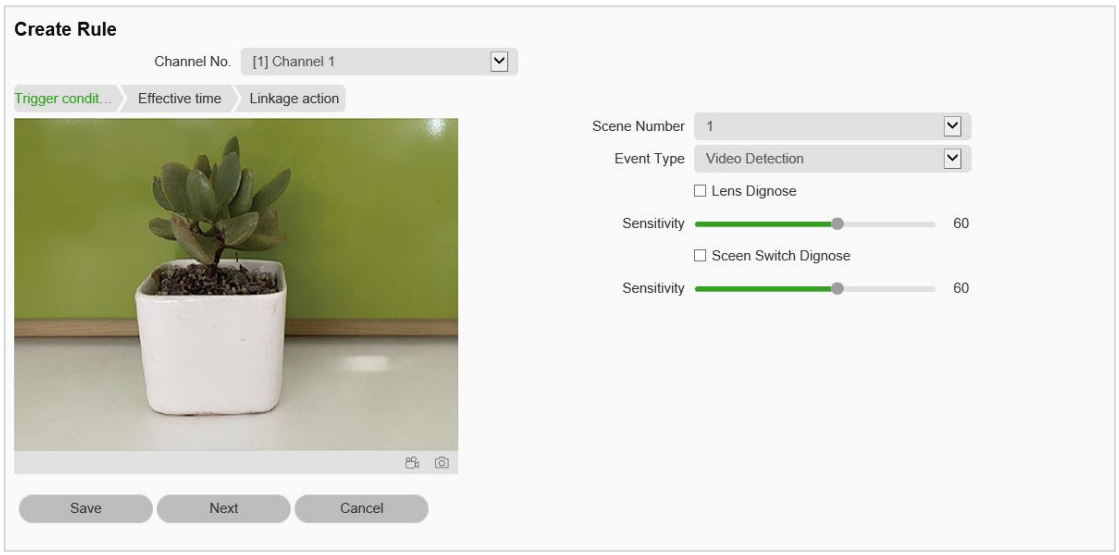
(6)The logic of blue, white and yellow is the same as red. For [Other] in the alarm color, there is no difference whether it is checked or not. The algorithm does not output other colors except the four colors temporarily.

(7)Click Next to set the deployment time and linkage mode.

Attention:

- When the illumination is low, it will affect the recognition rate of the algorithm. Please keep the illumination of the application site. In black and white mode, the algorithm is automatically turned off.

[Event Type]=>[Video Detection]

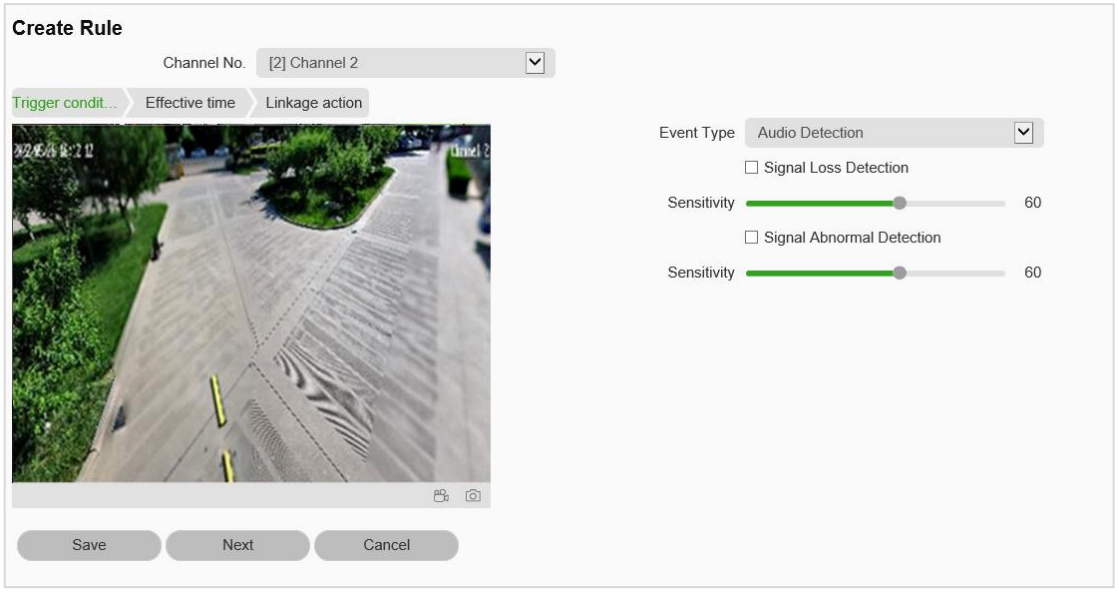


(1) Set whether to enable Lens Dignose and Sceen Switch Dignose.。

(2) Set the sensitivity. The higher the value, the more sensitive it is.

(3) Click Save after setting.

[Event Type]=>[Audio Detection]

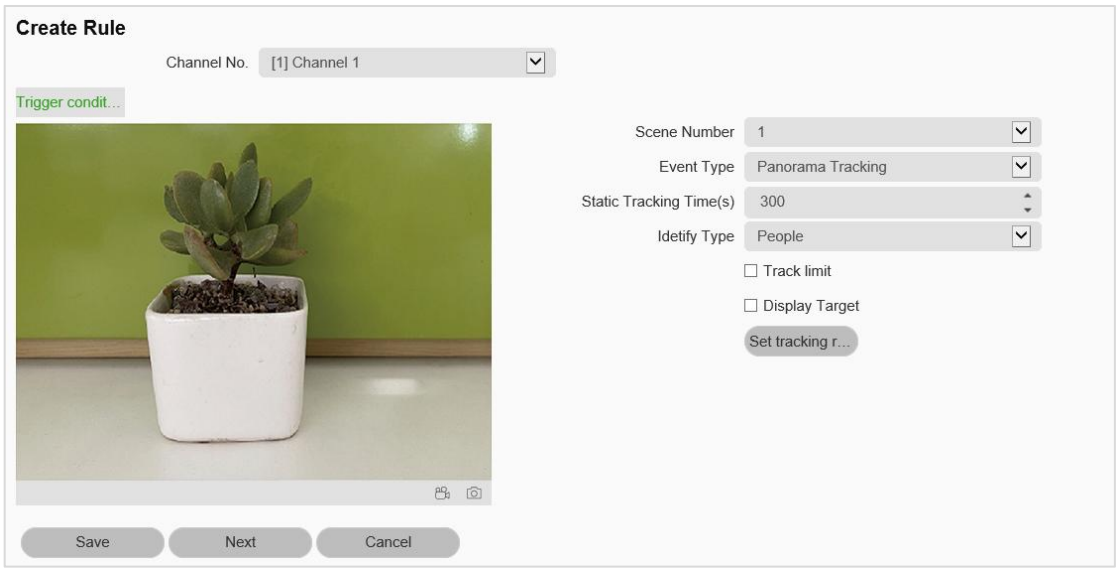


(1)Set whether to enable Signal Loss Detection and Signal Abnormal Detection.

(2)Set the sensitivity. The larger the value, the more sensitive it is, and

the higher the false alarm rate is.

[Event Type]=>[Panorama Tracking]



(1) Static Tracking Time (s): indicates the time length for the dome camera to track the target. The default is 300 seconds. When set to 0 seconds, the ball will track until the target disappears.

(2) Manually set the required tracking magnification. Determine an appropriate proportion of the target in the screen by adjusting the magnification. During tracking, the target will be tracked according to the magnification. Click Set Tracking Magnification to save the setting.

(3) Set whether to Display Target.

(4) After clicking Save, click Next to enter the cruise mode setting.

Create Rule->Effective Time

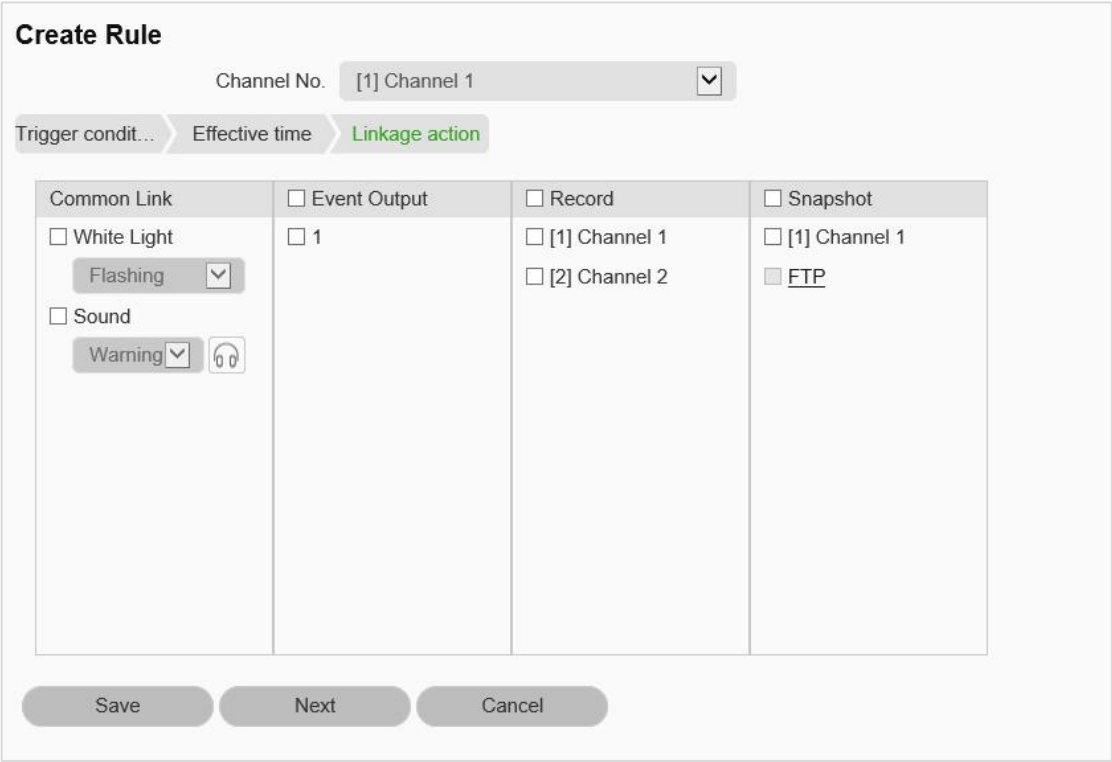


Set the effective time of the rule, and the defense is deployed 24 hours a day by default. Click the blue bar to modify the deployment time, and click the green Copy To button on the right to select the day of the week to copy, as shown in the following figure. Click Save after setting.



Click [Next] to enter the [Linkage Action] setting.

Create Rule->Linkage Action



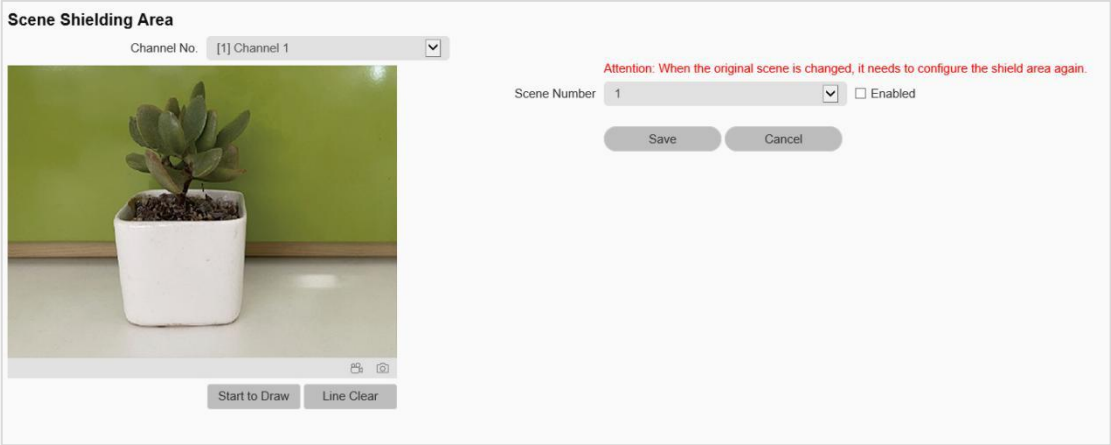
Set the alarm linkage function when an alarm occurs. Such as [Event Output], [Record], [Snapshot], [Common Link], etc. Click the Audition button on the right side of the alert tone to audition.

Click the [Save] button to save the parameter settings. Click the [Reset] button to restore the last saved parameters.

[Snap interval]: After the alarm is triggered, if the alarm continues, the snap push will be performed according to the snap interval.

3.7.6.3 Shield Area

Shield Area->Scene Shielding Area



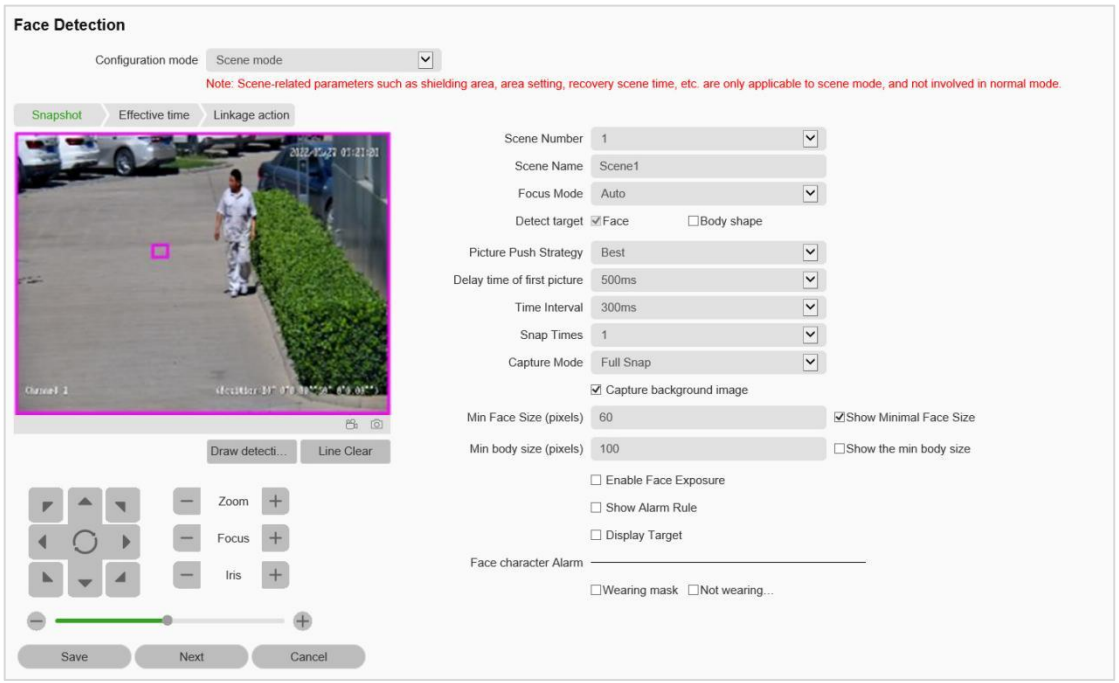
Shielding area means that the false alarm rate is reduced by drawing an area in the scene and not taking the target in the drawn area as the alarm target. For example: lights, branches, etc.

Support the shielding area setting of intelligent analysis scene and alert scene. Each scene supports 8 shielding areas at most. Select the corresponding scene, check Enable, draw the area in the screen, and then click Save to take effect.

Attention:

- If the original monitoring scene changes, the shielding area will automatically fail and need to be reconfigured. This feature only supports settings in Smart Monitor mode.

3.7.6.4 Face Detection (Under Capture facial images)



[Configuration mode]: Ordinary mode and Scene mode. The default is Scene mode. Among them, in Ordinary mode, there is no need to configure the scene and cruise, and it can be used after the algorithm is enabled.

Attention:

- Scene-related parameters such as shielding area, area setting and recovery time are only applicable to Scene mode, and Ordinary mode is not involved.

[Face Detection] => [Snapshot]

You can set relevant Snapshot parameters as required, such as [Detect target], [Picture Push Strategy], [Capture Mode], etc.

(1) Select the scene number and set the scene name under the number. 16 scenarios are supported.

(2) Focus Mode:Include Auto and Fixed, default Auto. When set to Fixed, you need to manually adjust the focus value.

(3) Select the [Detect target] check box. The device supports face and human snapshot modes.

(4) Set [Detect target], [Delay time of first picture], [Time Interval], [Snap Times], [Capture Mode], [Min Face Size (pixels)]、[Min body size (pixels)].

(5) If [Capture background image] is checked, the background image can be captured at the same time as the face/figure image.

(6) Select the [Enable Face Exposure] check box. The device supports face exposure, and parameter information such as [Face Exposure Brightness] and [Face Exposure Time] needs to be set.

(7) Check the [Show Alarm Rule] and [Display Target] check boxes as needed.

(8) The device supports Wearing mask. Check the [Wearing mask/No Wearing mask] check box at the face attribute alarm to set the Wearing mask detection mode.

(9) Click Save after setting.

Explanation:

- [Picture Push Strategy] = > [Best]: It is required to filter out a small face picture with the highest comprehensive quality score in the track.
- [Picture Push Strategy] = > [Fastet]: It is necessary to select a small face picture

that meets the comprehensive quality threshold in a short time.

- [Picture Push Strategy] = > [Timing]: Select a small face picture that meets the comprehensive quality threshold to push at regular intervals.
- [Picture Push Strategy] = > [Full Snap]: It means that all pictures are sent to the picture push module by default without being controlled by the security boundary and filtered by the security boundary threshold.
- [Capture Mode] = > [High Quality]: refers to filtering according to the security boundary threshold configured by the system by default, and sending the filtered results to the map pushing module.
- [Capture Mode] = > [User Defined]: refers to filtering according to the safety boundary value set by the user, and sending the filtered result to the drawing module.
- [Face Exposure Brightness] refers to the reference brightness of face exposure. When a face is recognized in the preview screen, the device automatically adjusts the face brightness according to the reference brightness value. The higher the face brightness value is, the brighter the whole preview screen is. The parameter should not be set too low or too high.

[Face Detection] => [Effective Time]

The user sets [Effective Time] as required, and the face detection snapshot will only be taken within the set date and time period.

Click the [Save] button to save the corresponding parameter settings.

Click the [ ] button to copy the time set in the current time period to other time periods.

Click the [Cancel] button to restore the previously saved parameters.

[Face Detection] => [Linkage Action]

The user can set [Linkage Type] as required to realize the linkage mode after triggering the snapshot, such as [Regular Linkage], [Linkage Output], [Linkage Video], etc.

Click the [Save] button to save the corresponding parameter settings.

Click the [Cancel] button to restore the previously saved parameters.

3.7.6.5 Snapshot Parameters (Under Capture facial images)

Snapshot Parameters->Snapshot Parameters



Users can set [Image resolution], [Background image quality], and [Closeup quality] as required.

[Image Resolution]: Set the image resolution, and support 1440P, 1080P and other resolutions.

[Background image quality]: Set the quality of the captured background image, supporting 1 ~ 100 quality.

[Closeup Quality]: Set the quality of the snapshot close-up image, and support the quality of 1 ~ 100.

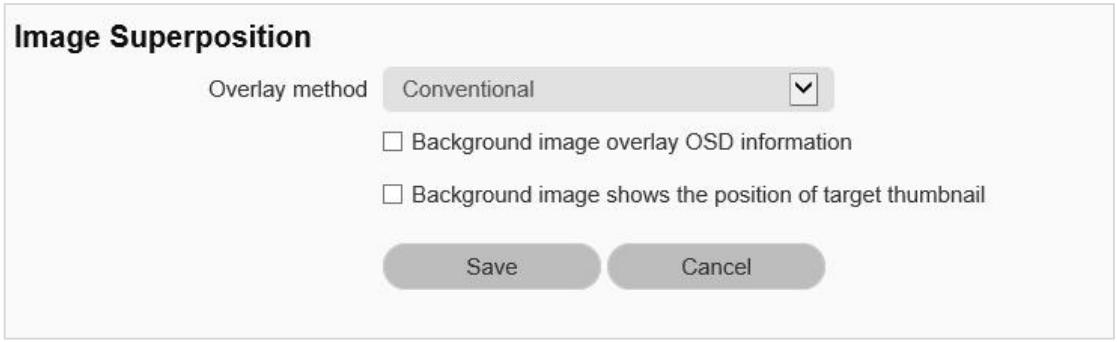
Click the [Save] button to save the corresponding parameter settings.

Click [Cancel] to restore the previously saved parameters.

Snapshot Parameters->Image Superposition

The image superimposition supports the conventional mode and the custom mode for superimposition.

In the conventional mode, it supports the overlay of OSD information on the background image and the position of the background image Display Target thumbnail.

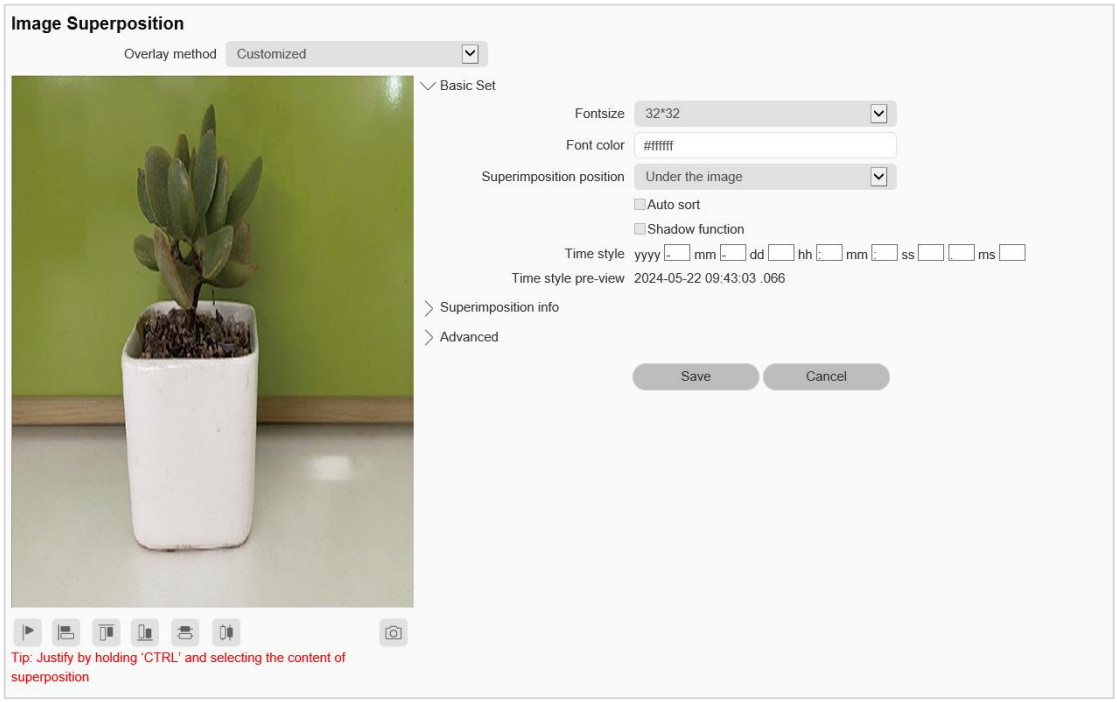


Explanation:

- The conventional superimposition mode is to perform superimposition on the

preview interface, which can be modified from the audio and video parameters-> character superimposition.

In the custom mode, the OSD information can be superimposed on the custom background image.



The following table describes the functions of the icon buttons on the interface:

Icon	Description
	Snap pictures: check the overlay effect for debugging
	Default location: set the storage location of the snapshot for debugging
	Align Left: Press and hold Ctrl to select multiple objects, and then click this button to align the objects
	Align Top: Press and hold Ctrl to select multiple objects, and then click this

	button to align the objects
	Bottom alignment: press and hold Ctrl, select multiple objects, and then click this button to align the objects
	Horizontal equidistance: press and hold Ctrl, select multiple objects, and click this button to align the objects
	Vertical equidistance: press and hold Ctrl, select multiple objects, and click this button to align the objects

[Image Superposition]->[Basic Set]

Users can set [Font Size], [Font Color], [Overlay Position], [Time Style] and other parameters as required.

[Font size]: 16 * 16, 24 * 24, 36 * 36, 48 * 48, 64 * 64 are supported.

[Font color]: After clicking the text box, the color setting interface will appear below. Select the appropriate color, and click the circle button in the lower right corner to confirm and close the color setting interface.

[Overlay position]: supports within the picture, above the picture and below the picture.

[Automatic sorting]: Turn on/off the automatic sorting function, which is valid when the superposition position is "inside the picture".

[Shadow function]: Set the shadow effect, which is valid when the overlay position is "inside the picture".

[Time Style]: Set the time style. See the effect in [Time Style Preview] below.

Click the [Save] button to save the corresponding parameter settings.

Click [Reset] to restore the last saved parameters.

[Image Superposition]->[Superimposition info]

The user sets [Superimposition info] as required. Overlay information supports multiple selections. Select [Select All] to select all overlay information.

[Overlay content]: The overlay content can be modified by double clicking according to the user's requirements.

[Number of newline characters]: Set the maximum number of characters per line.

[Starting number of spaces after line feed]: Set the starting position of the superimposed content text after line feed.

The following table describes the functions of the icon buttons on the interface:

Icon	Description
	Move up: Select the overlay information and click this button to move the overlay information up by one position.
	Move down: select the superimposed information and click this button to move the superimposed information down by one position

Click the [Save] button to save the corresponding parameter settings.

Click [Cancel] to restore the last saved parameters.

Attention:

- The starting number of spaces after the line feed must be two bytes less than the number of line feed characters (the line feed effect takes effect when the picture is automatically sorted).

[Image Superposition]->[Advanced Set]

The user can set the [Background Image Display Target Small Image Position] configuration parameter information as required.

[Background image Display Target thumbnail position]: Select whether to superimpose the background image Display Target thumbnail position in the picture.

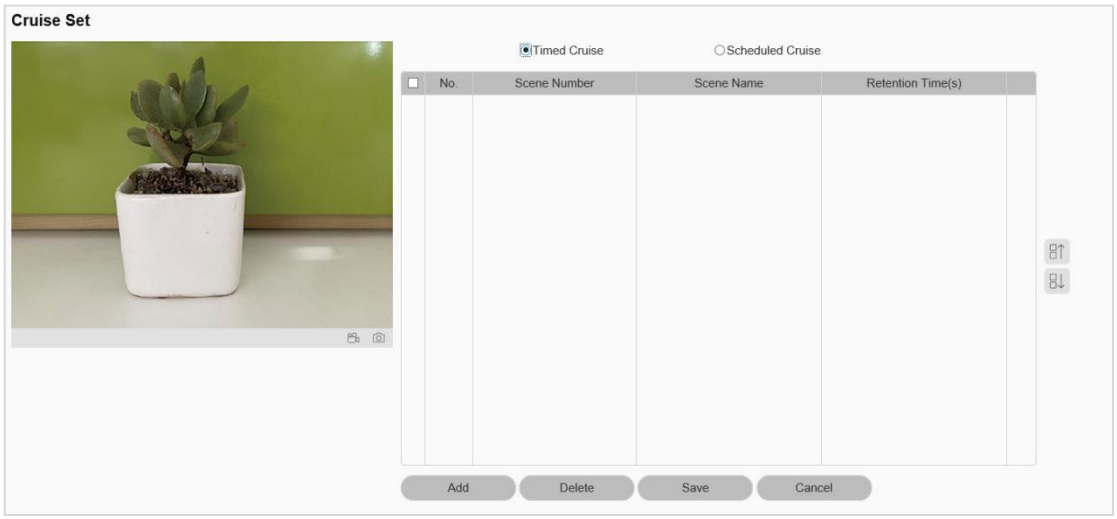
Click the [Save] button to save the corresponding parameter settings.

Click [Reset] to restore the last saved parameters.

3.7.6.6 Cruise Set

Cruise mode is used to set the scene cruise of different intelligent analysis, which can be set as timing cruise and cruise by time period. You can adjust the order of cruise through the up and down buttons on the interface.

Cruise Set->Timed Cruise



[Retention (s)]: Set the retention time of the cruise scene. When the dwell time is reached, the scene is switched.

[Add]: Used to add the scene of the cruise.

[Delete]: After checking the corresponding scene, delete the selected cruise scene.

[Save]: Save the set cruise parameters.

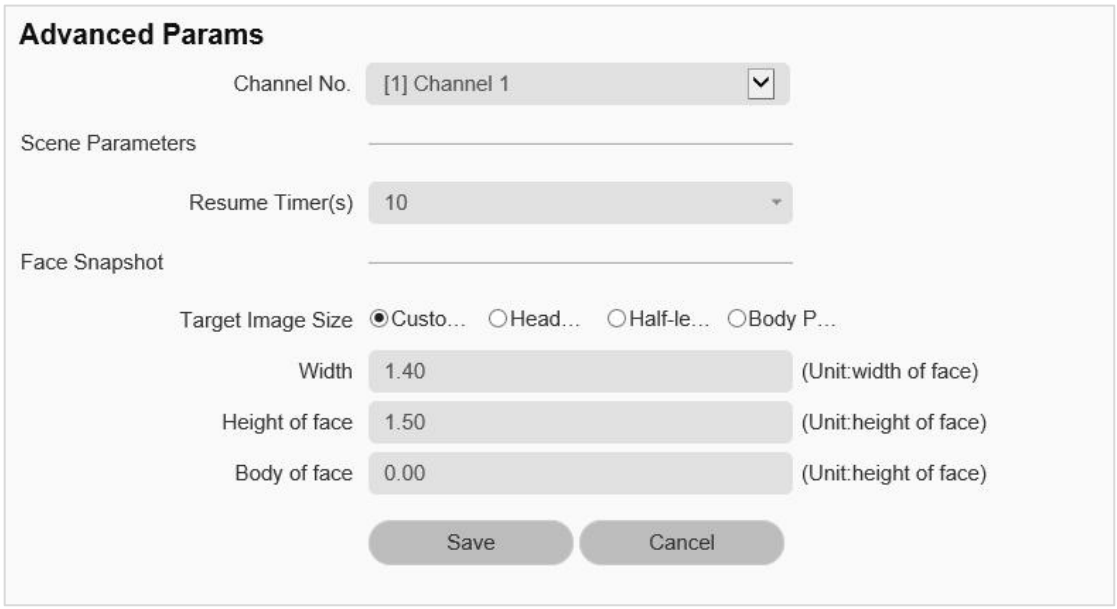
Cruise Set->Scheduled Cruise



Set the valid cruise time. Click the blue bar to modify the deployment time, and click the green Copy To button on the right to select the day of

the week. Click Save after setting.

3.7.6.7 Advanced Params



Explanation:

- Advanced parameter setting can only be debugged under the guidance of the company's technicians.

[Scenario Recovery Time (sec)]: Record the time required for scenario recovery.

[Target detection sensitivity]: 1-100 can be set, the higher the value is, the more sensitive it is.

[Target image size] is divided into four types, [Custom], [Headshot], [Half-length photo], [Full-length photo], only for human face and human figure (effective in face capture mode).

(1) Customization: The user can set the width, the height of the face part and the height of the body part according to the requirements.

(2) Headshot: The picture launched shows the headshot of the face.

(3) Half-length photo: The picture launched shows the half-length photo.

(4) Full-body photo: The picture launched shows the full-body photo.

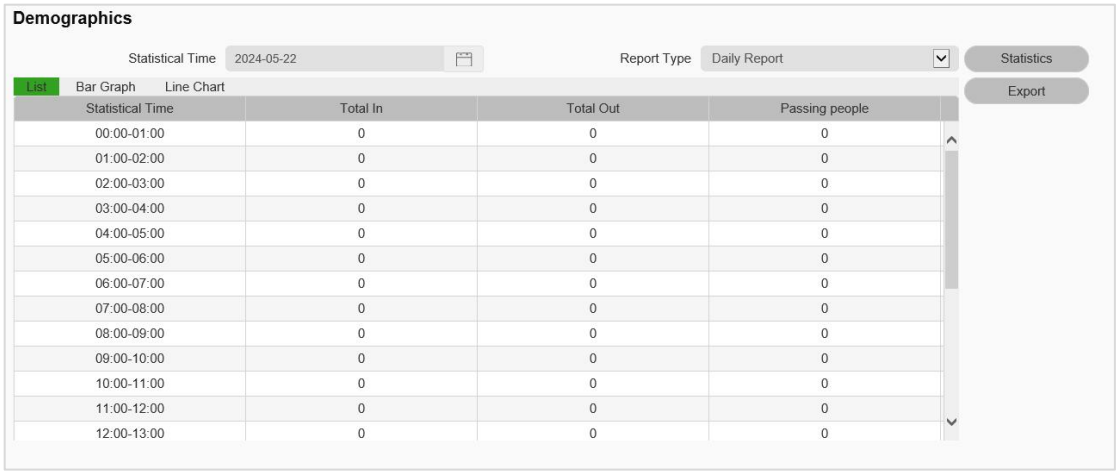
[Display Target Track]: Only the panoramic channel behavior analysis algorithm takes effect. When it is enabled, the running track of the alarm target can be superimposed on the IE preview video.

[Pseudo-color image superimposition]: For the density algorithm, the pseudo-color image is superimposed on the target area to improve the human eye's ability to distinguish image details.

After all the above parameters are set, click [Save] to save and take effect; click [Reset] to restore the parameters saved last time.

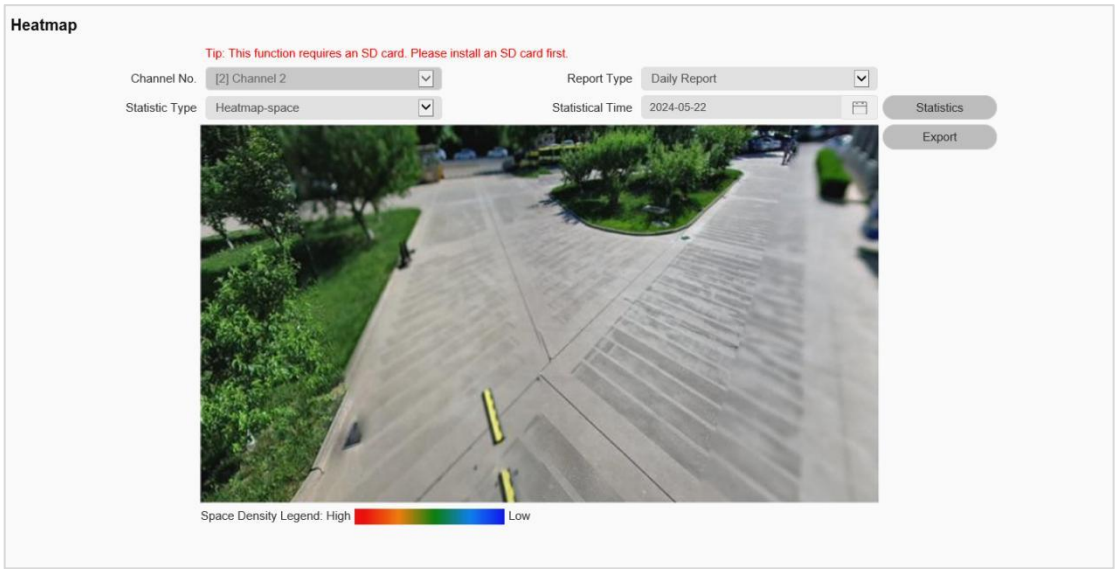
3.7.6.8 Statistical report

Statistical report->Demographics



Users can select the starting time of statistical time and report type, and summarize the statistical number of people entering, leaving, passing and time information in list, histogram and broken line chart formats. Click Export to export the data in Excel form.

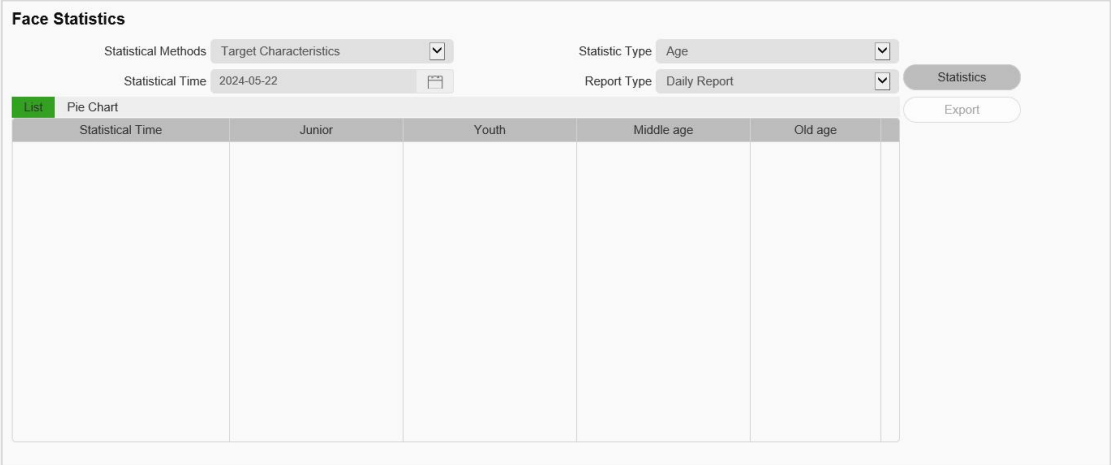
Statistical report-> Heatmap



Some models support heat map statistics. Select channel number, report type and statistics time, and click "Statistics" to perform heat chart statistics on space or time respectively, and display imaging chart or

broken line chart. Click "Export" to export the corresponding picture or report.

Statistical report->Face Statistics

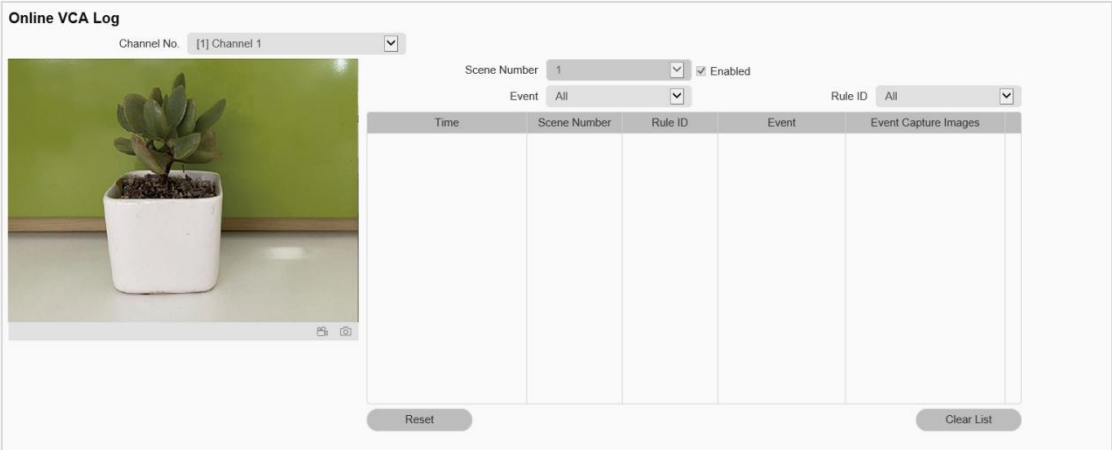


This interface is used for statistics and export of face snapshot data. (If the statistical function is used, the device shall be equipped with a micro SD card.)

After setting statistics, click the [Statistics] button. After the statistics is finished, click [List] and [Pie Chart] to switch the statistics results. Click the [Export] button to export the statistical results from the device to the computer disk.

Some models support face statistics. Select the channel number, report type and statistics time, and click the "Statistics" button to perform face statistics on age, gender, number of people and nationality respectively, and display the statistics list, histogram, broken line chart or pie chart. Click "Export" to export the corresponding xls file.

3.7.6.9 Online VCA Log



[Event]: You can select to view the alarm information of one or all intelligent analysis events.

[Rule No.]: You can select to view the alarm condition of one or all rules.

[Clear the count]: Clear the number of occurrence statistics of the event corresponding to the channel rule. When the event occurs again, the count starts from 1.

[Clear]: Clear the alarm information displayed in the current list.

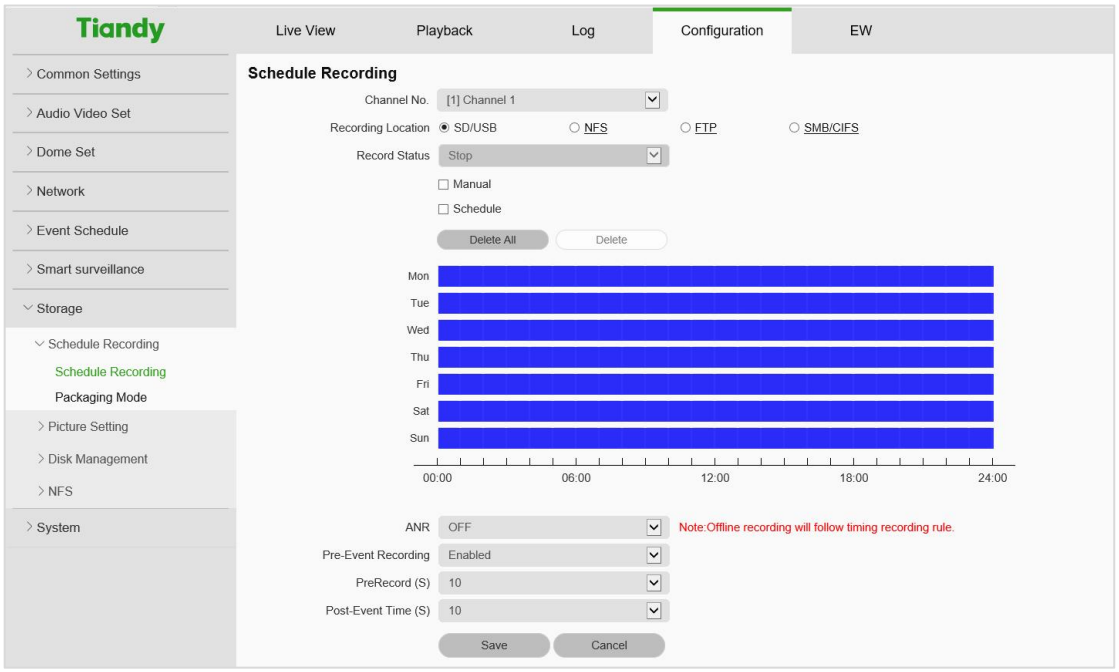
Attention:

- Click the path of the alarm snapshot to preview the local snapshot. This function is real-time, and the information will be cleared and re-recorded after switching the interface. This interface only displays the information of the latest alarm. If you want to view more pictures, you need to view them under the intelligent analysis capture path.

3.7.7 Storage

3.7.7.1 Schedule Recording

Schedule Recording->Schedule Recording



Select the target recording type in the drop-down box, set the Effective Time, and select the pre-Event Recording time and Post-Event Time.

[Channel No.]: Select the channel for which the recording policy needs to be set.

[Recording Location]: Support the storage of video files through SD/USB, NFS, FTP and SMB/CIFS.

[Record Status]: Display the current equipment recording status.

[Manual]: Manual video.

[Schedule]: Four time periods can be set for timing recording, and

the timing recording time period parameter can be set to the selected week.

[ANR]: When the network is disconnected, the video is recorded according to the time period of the timing video, and the video is stored in the SD card.

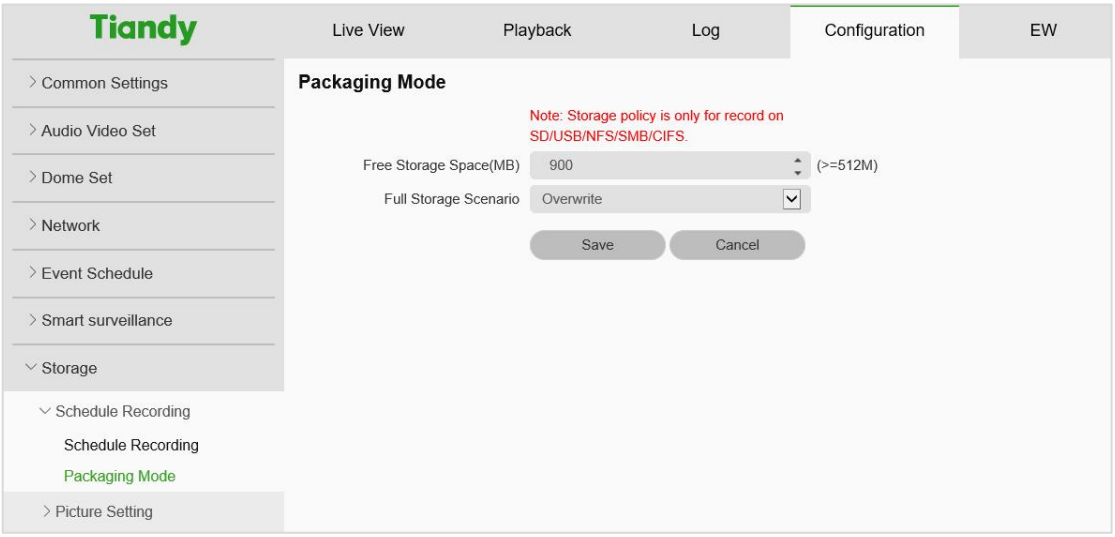
[Pre-Event Recording]: Set the pre-recorded time before the alarm occurs.

Click [Save] to save the set [Recording Policy] parameters, click [Copy To] to copy the parameters of the current port number to another port number, and click [Cancel] to restore the previously saved parameters.

Attention:

- The disconnected video recording requires the equipment to support front-end storage, and the timing video recording is invalid after the disconnected video recording is enabled.

Schedule Recording ->Packaging Mode



Enter the condition for triggering [Full Storage Scenario] in the edit box of [Free Storage Space (MB)]. (Must be greater than 512MB) When the remaining disk space reaches the set value, there are three [save strategies]:

(1) Stop recording: no more recording packing operation;

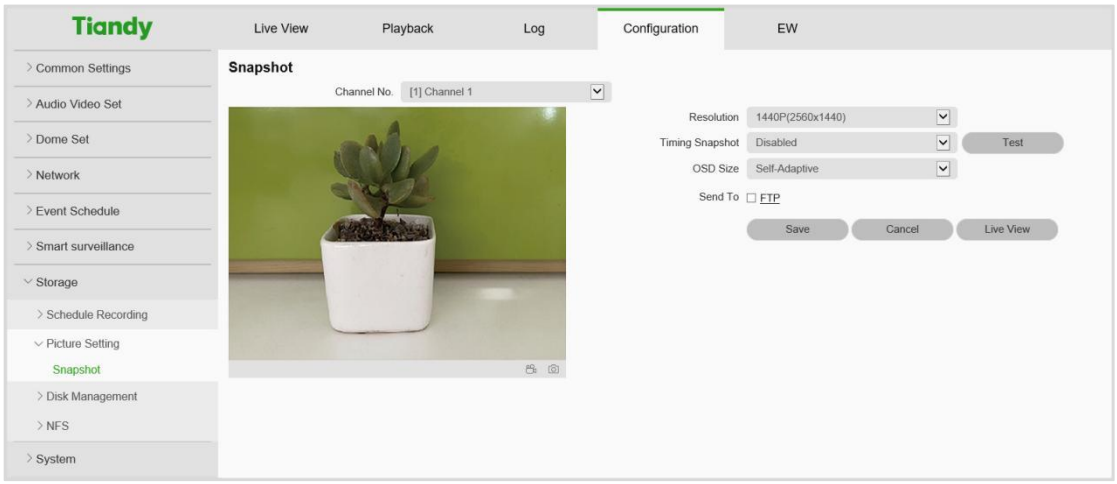
(2) Overwrite: Delete the earliest video files to create space for the latest video;

(3)Overwrite(Exclude Event Record Video):Delete the earliest video file (except alarm video) to create space for the latest video. After setting, click [Save] to take effect.

Click the [Save] button to save the corresponding parameter settings. Click [Cancel] to restore the last saved parameters.

3.7.7.2 Picture Setting

Picture Setting -> Snapshot



Users can set different channels according to their needs.

(1) After the [Timing Snapshot] is enabled, set the time of the snapshot [interval].

(2Interval: The input time Interval in the input frame, and the pull frame can be selected by the Interval unit when switching.

(3) Selecting [SendToFTP], the image is captured and transmitted to the FTP server.

[Test]: Perform a primary capture operation, Test capture settings.

OSD Size: Set the size of the character in the capture, and set the character in the overlay [audio and video parameters].

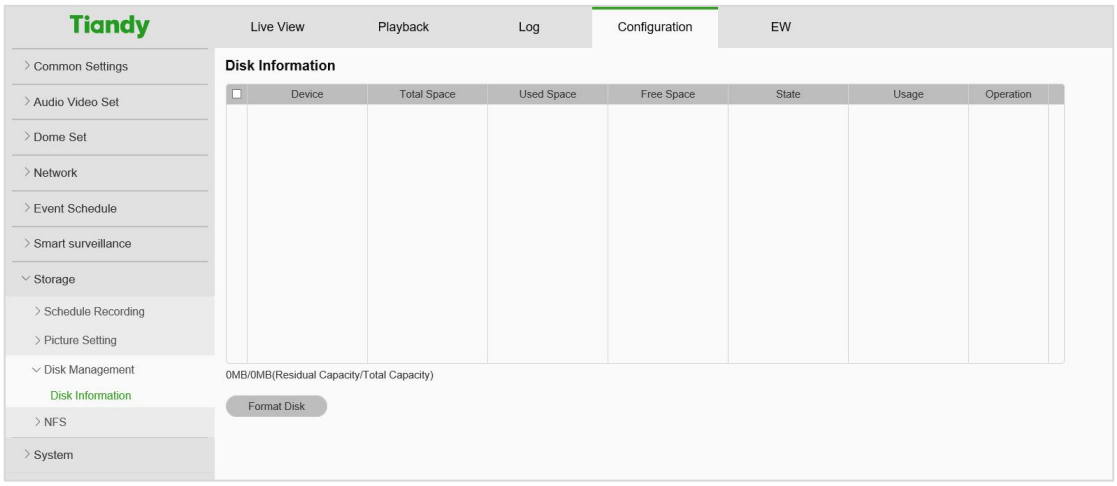
[Save]: Save over capture settings.

[Cancel]: Restore the parameters set last time.

[Live View]: Preview the snapshot below the current screen.

3.7.7.3 Disk Management

Disk Management -> Disk Information

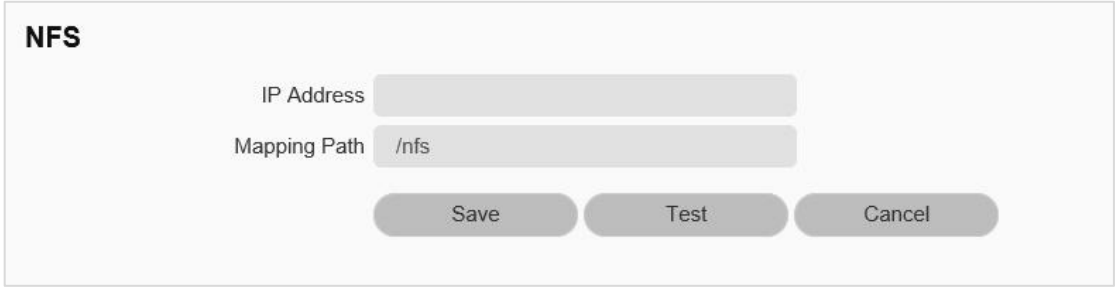


The remaining capacity and total capacity of the current hard disk and virtual disk can be displayed in the interface, and the disk usage can also be set. The disk usage has four options: video recording, backup, redundancy and read-only.

[Format Disk] After selecting a disk in the disk list, click the "Initialize disk" button, and the system will pop up the prompt of whether to initialize the disk. Click "OK" to initialize the disk.

3.7.7.4 NFS

NFS -> NFS



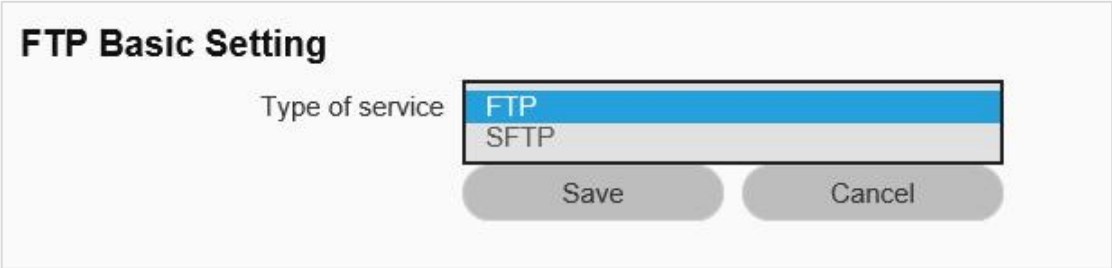
[IP Address]: Set the IP address associated with [Network Storage].

[Mapping Path]: Set the mapped disk path.

[Save]: Save the current settings.

[Test]: Test whether the current configuration can be used normally.

NFS ->FTP Basic Setting



Change [Type of service] to select FTP protocol type as FTP or SFTP.

NFS ->FTP Network Storage

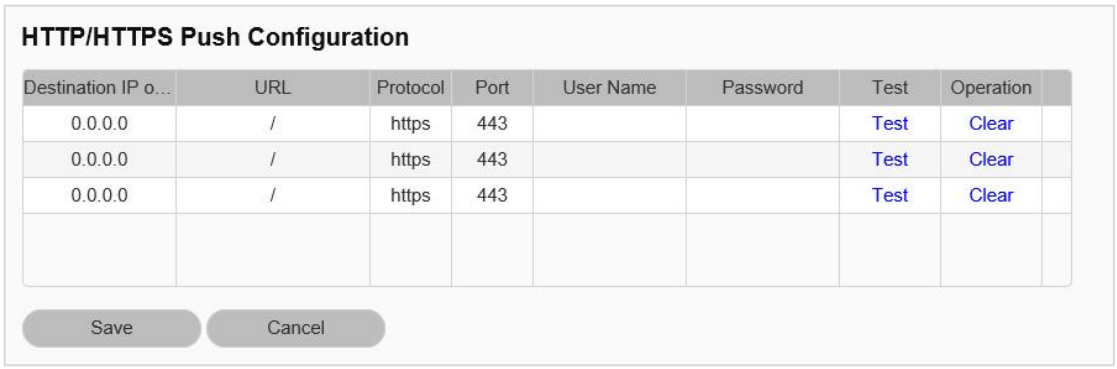


After changing [FTP server address], [Port], [Directory], [User Name], and [Password], click the [Test] button to test whether the settings are correct and effective.

Click the [Cancel] button to restore the previously saved parameters.

Click the [Save] button to save the corresponding parameter settings.

NFS ->HTTP/HTTPS Push Configuration



Enter the destination IP or domain name, URL and configure the corresponding protocol and port number. Click [Test] to verify whether the push configuration is feasible. Click [Clear] to clear the information filled in the destination IP or domain name.

Click [Save] to save the current configuration and click [Cancel] to restore the previously saved contents.

NFS -> SMB/CIFS



[IP Address]: Set the server IP where the shared folder is located.

[Mapping Path]: Set the shared folder path.

[User Name]: Set the login IP of the server.

[Password]: Set the login password of the server.

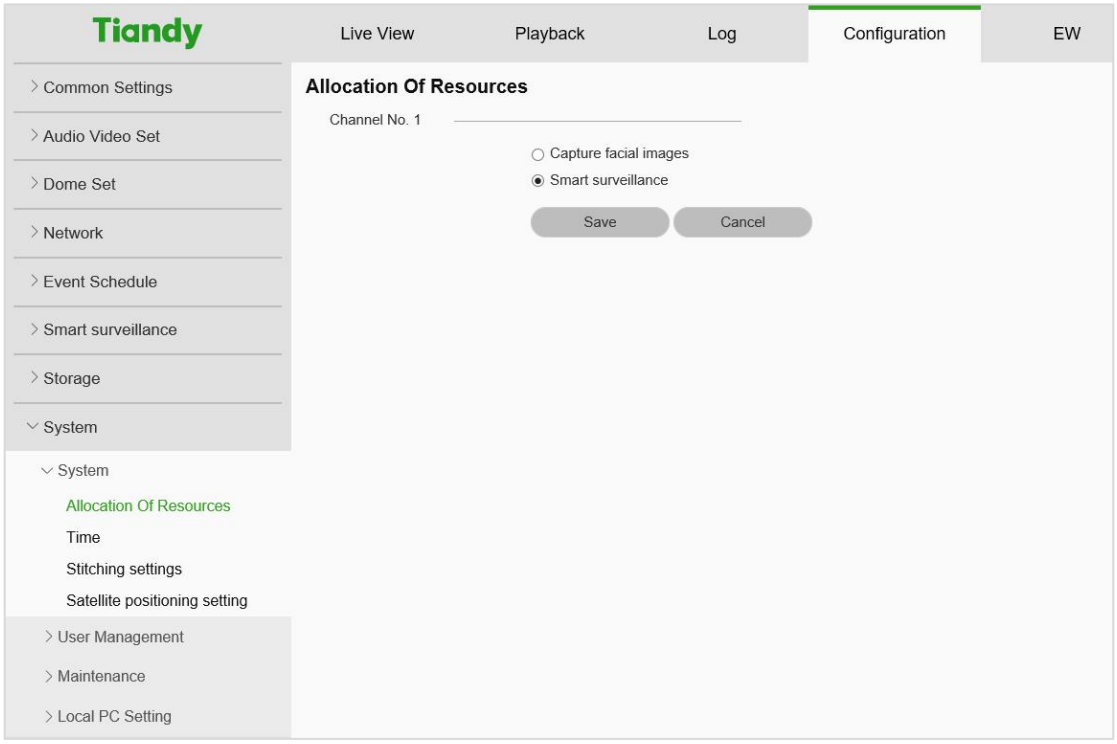
[Save]: Save the current configuration.

[Test]: Test whether the current configuration can be used normally.

3.7.8 System

3.7.8.1 System

System->Allocation Resources



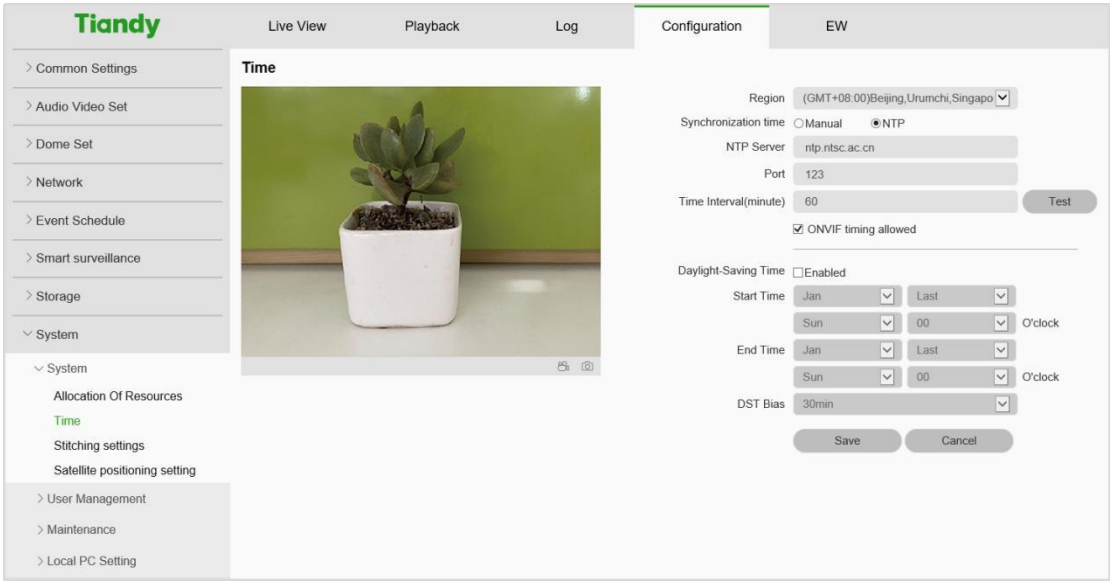
The device supports various application modes such as [Capture facial images], [Smart surveillance], etc. Select an application mode in the [Allocation Resources] menu to set the intelligent analysis algorithm in the corresponding mode. The switching algorithm takes effect after the device is restarted.

[Capture facial images]: When the algorithm finds a face image in the video, it will capture the image according to the set capture strategy

and save it to the preset location.

[Smart Surveillance]: Common surveillance mode, including intelligent algorithms such as behavior analysis, crowd gathering, video diagnosis, audio anomaly detection, and alert.

System->Time



[Region]: Set time zone information.

Local Time: Displays Local Time in real time.

Synchronization time: The synchronization device time is consistent with the local time. The method can be selected by [Manual] and [NTP].

[Manual]: Manual synchronization device time.

NTP: Synchronize device time through NTP server.

Daylight saving time: Whether to set it to summer time. Set the time range and offset time of the summer order.

[NTP Server]: The input server's legitimate IP address.

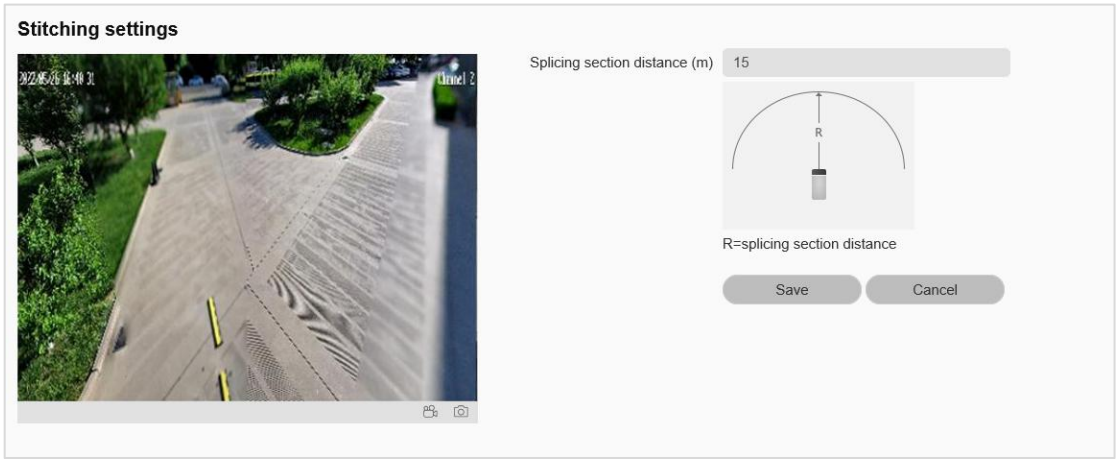
Port: Input the corresponding Port number.

[Time Interval (minute)]: Input the Time Interval for automatic correction.

[Test]: When testing NTP automated school.

Click [Save] to Save the parameters of the current setting. Click [Cancel] to restore the last saved parameter.

System->Stitching settings



Splicing section distance (m)：It is used to set the horizontal distance between the splicing section and the lens, so as to reduce the distortion, loss and fault of the area of interest at the splicing position, and make the spliced image complete and unified.

System->Serial port settings

Serial port settings are divided into [Serial Port Settings] and [Protocol Settings].

[Serial port setting] requires the user to select [Serial port number], [Baud rate], [Check bit], [Data bit], [Stop bit] and [Operating mode].

[Protocol Settings] requires the user to select [Serial Number],

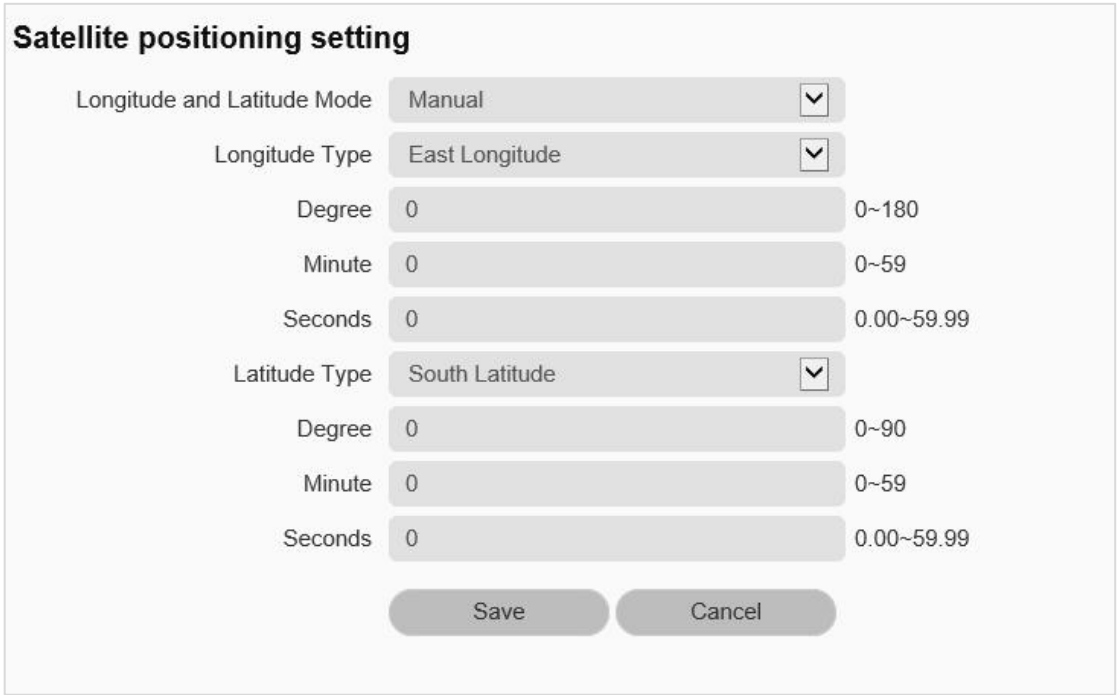
[Protocol], and [Address].

[Save]: Save the current settings. [Reset]: The last saved parameters can be restored.

Attention:

- Please refer to the actual interface because there may be differences between different devices.
- If the working mode is [peripheral mode], you can add the temperature and humidity meter and other peripheral sensors, and set the upper and lower threshold values, deployment schedule and linkage type of the temperature and humidity alarm in [Configuration]- [Alarm Settings]- [Event Management]- [Temperature and Humidity Alarm].

System->Satellite positioning setting



Satellite positioning settings allow the user to manually or

automatically adjust the latitude and longitude information. Automatically identify the longitude and latitude information according to the GPS positioning system of the dome camera, and manually add the longitude and latitude information for the user.

[Longitude Type]: divided into east longitude and west longitude.

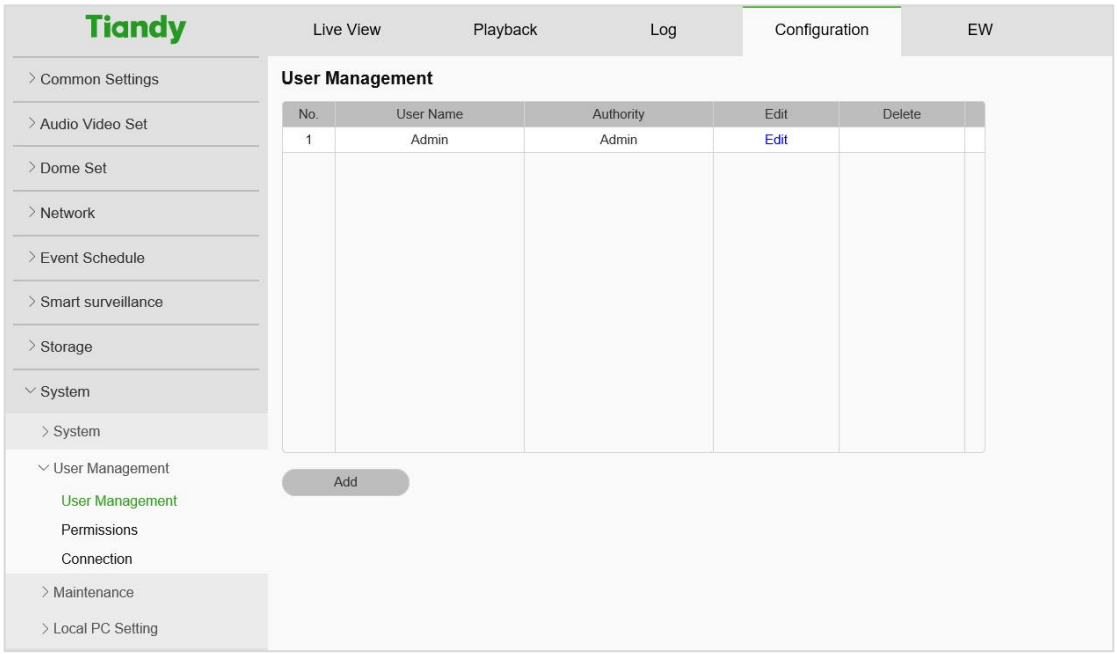
[Latitude Type]: divided into south latitude and north latitude.

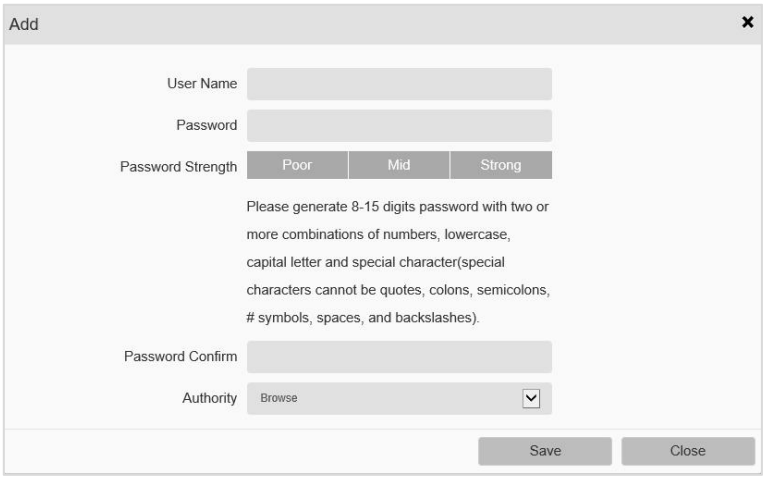
[Save]: Save the current settings.

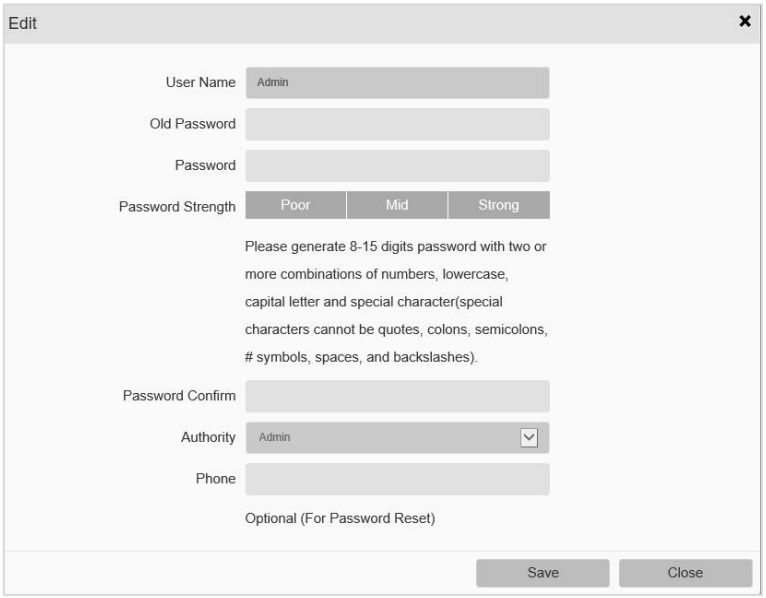
[Cancel]: You can restore the last saved parameters.

3.7.8.2 User Management

User Management->User Management







[Add]: To add a new user, you need to enter the user name, password and permission. Only English letters and numbers can be entered for the user name and password. After filling in the above three items, click the [Save] button.

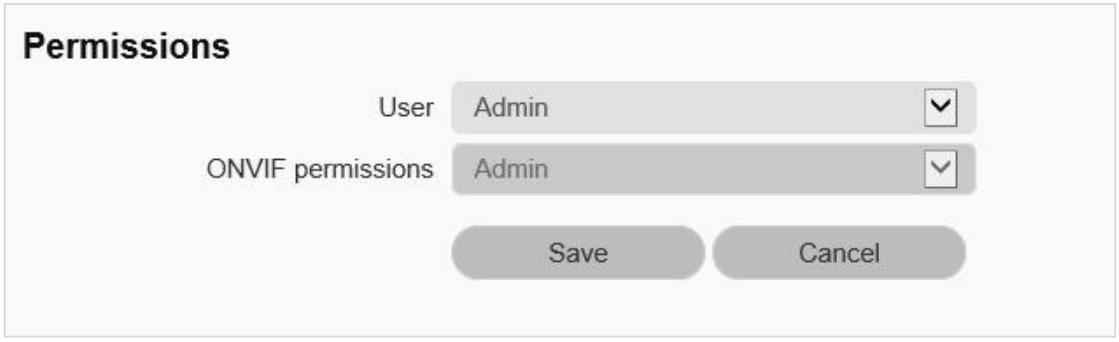
Attention:

- Only users with administrator rights can add and modify users.

[Edit]: In the user list, click [Edit] to pop up a prompt box to modify the password. Enter the old password, new password and password confirmation respectively, and then click the [Modify] button.

[Delete]: In the user list, click the [Delete] button and click OK in the pop-up prompt box.

User Management->Permissions



Configure user privileges. [Admin], [Operator], and Video User are optional.

Attention:

- The Admin user right defaults to administrator and cannot be configured.

User Management->Connection

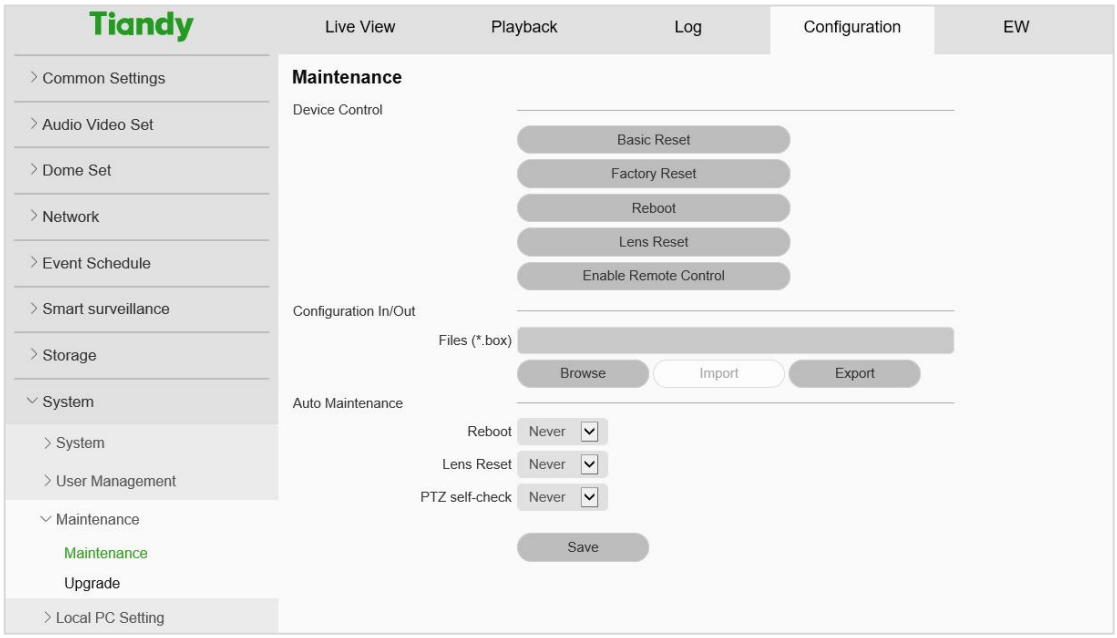


Displays a detailed list of connections/logins to the device, including channel type, network mode, client IP, and user name. Click [Refresh] to

update the list.

3.7.8.3 Maintenance

Maintenance->Maintenance



[Maintenance]=>[Device Control]

[Device Control]: Allow customers to do [Basic Reset], [Factory Reset], [Reboot], [Lens Rest], [Enable Remote Control], etc.

[Maintenance]=>[Configuration In/Out]

[Import]/[Export]: It is used for equipment maintenance and is mainly divided into three categories:

(1) The [Alarm] option includes the alarm time period and linkage item setting information, and does not include the intelligent analysis class.

(2) The [Smart Analysis] option includes settings related to smart

analysis, including rules, time periods, etc.

(3) [System setting] option includes all setting information except the above alarm, intelligent analysis, LOGO, storage strategy and local setting, including video parameters, HD parameters, character overlay, video recording strategy, network setting and other information.

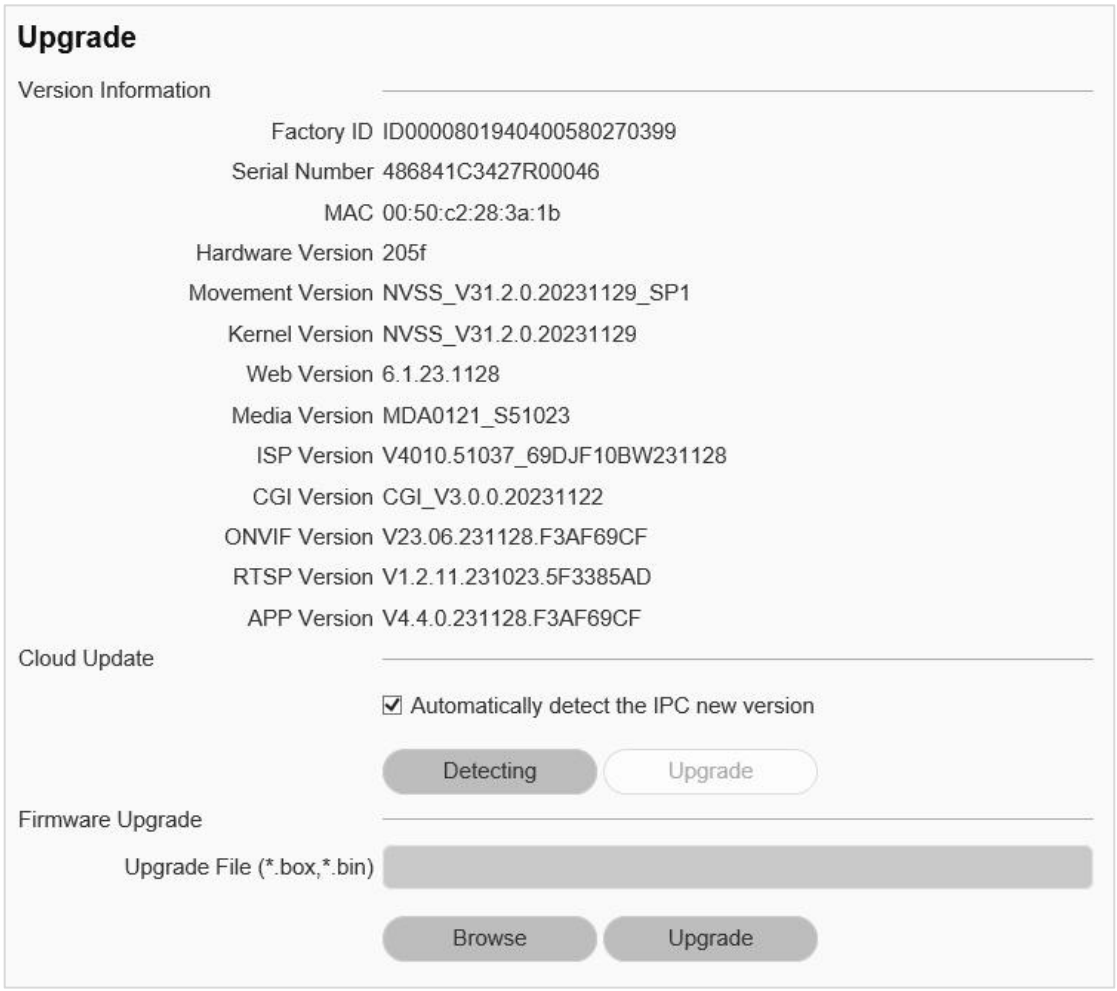
[Maintenance]=>[Auto Maintenance]

[Reboot]: You can set the automatic restart time of the dome for automatic maintenance of the dome.

[Lens Reset]: The automatic lens reset time of the dome camera can be set to reset the movement lens to ensure clear focusing.

[PTZ self-check]: The PTZ self-check time can be set for automatic maintenance of the PTZ.

Maintenance->Upgrade



[Upgrade]=>[Version Information]

[Version Information]: [Factory ID]、[Serial Number]、[MAC]、[Hardware Version]。

[Upgrade]=>[Cloud Update]

[Automatically detect the IPC new version]: When the cloud platform updates the program, it can be automatically detected at the first time, and click "Upgrade" to start the upgrade.

[Detecting]: Manual detection of cloud platform information.

[Upgrade]=>[Firmware Upgrade]

[Firmware Up grade]: The user can select the local legal.box or.bin file

to upgrade the device remotely.

[Browse]: Find the upgrade file from the pop-up window.

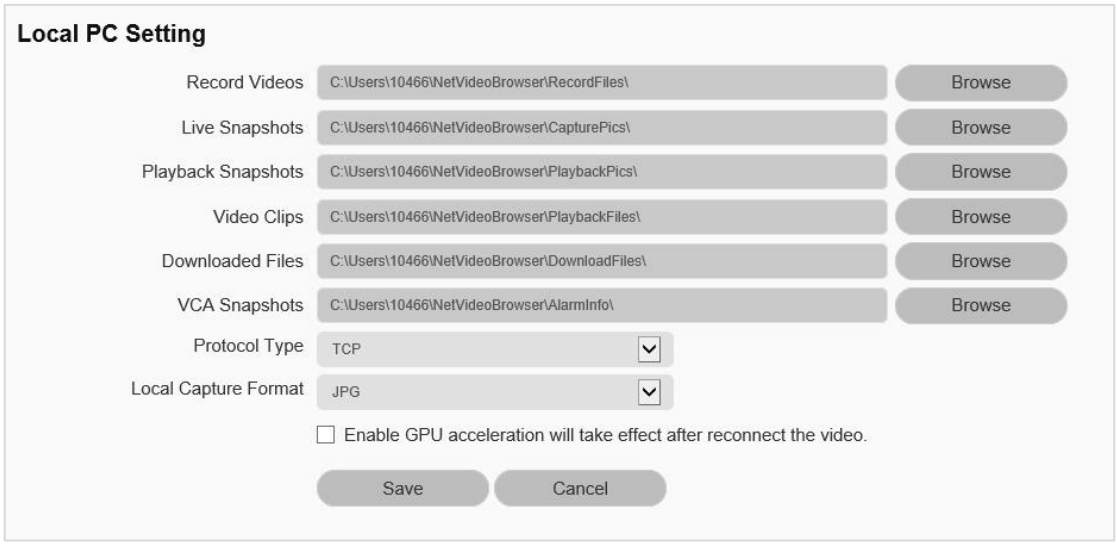
[Up grade]: Upgrade to the latest version over the network.

Attention:

- Version upgrade is the upgrade operation of the kernel program, which needs to be carried out under the guidance of the company's technical personnel.

3.7.8.4 Local PC Setting

Local PC Setting->Local PC Setting



[Record Videos/Live Snapshots/Playback Snapshots/Video Clips/Downloaded Files/VCA Snapshots：User can set the storage path. (Please refer to the actual interface display)

[Protocol Type]：Set the network connection protocol for the device. If it is set to UDP, only one connection is supported.

[Local Capture Format]: Optional [JPG], [BMP]. JPG must be selected for the device to send snapshots to FTP and Email.

[Enable GPU acceleration will take effect after reconnect the video.]: When checked by the user, the device enables the GPU decoding of the graphics card.

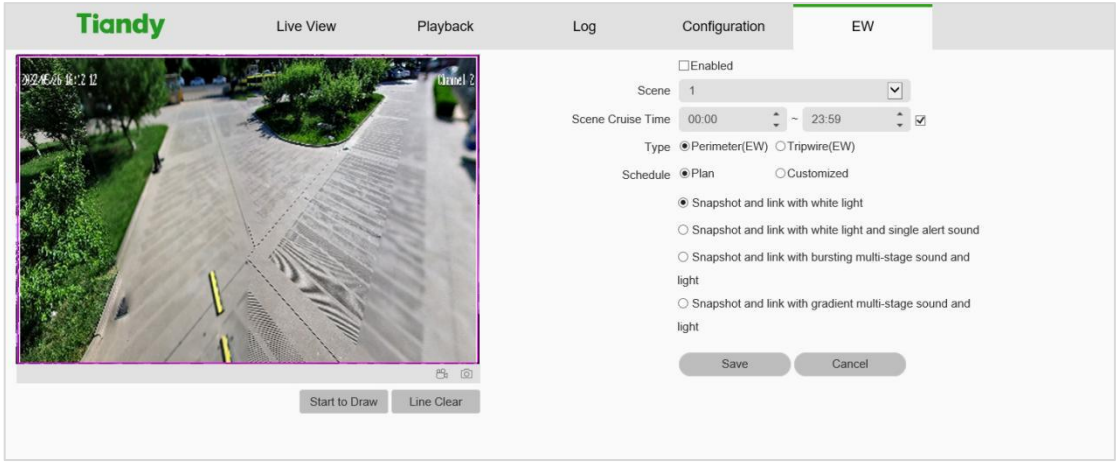
Attention:

- Enable the GPU acceleration function. If the video preview effect is poor or the system crashes, you need to turn off the GPU acceleration function because the PC hardware driver does not match.

3.8 EW

In the alert setting interface, the user can set alert parameters according to the actual situation or preference on site.

3.8.1 Plan



(1) Check Enable Effective Alert Algorithm, and select the scenario to be set as required.

(2) The device supports setting multiple scenarios. Different scenes can be set through the above steps, and the scene cruise of different alert types or different linkage items can be realized by setting different cruise time periods.

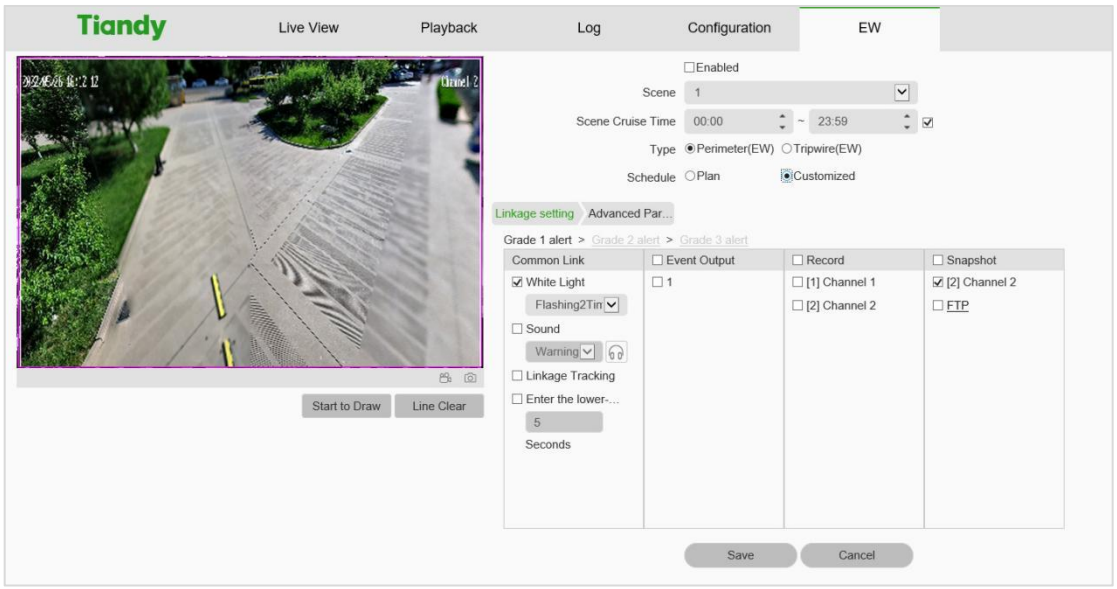
(3) Select [Alert Type], set perimeter alert or tripwire alert, and set the effective time of alert scenario.

And (4) adjusting the scene and drawing a warning area or a warning line. By default, the full screen of the perimeter alert is the alert area. If you need to adjust it, you need to clear the line and draw it again.

(5) Select a preset alert plan.

(6) Click the "Save" button to complete the algorithm setting, and exit the alert setting interface to take effect.

3.8.2 Customized



(1) Check Enable Active Alert Algorithm.

(2) The device supports setting multiple scenarios. Different scenes can be set through the above steps, and the scene cruise of different alert types or different linkage items can be realized by setting different cruise time periods.

(4) Select the alert type: perimeter alert or tripwire alert, and set the effective time of the alert scenario.

And (5) adjusting the scene and drawing a warning area or a warning line.

(6) Alert template selection is user-defined.

(7) Set linkage items or advanced parameters. Linkage items can be set up to three levels of warning, and each level of warning effect can be set separately.

(8) Click the "Save" button to complete the algorithm setting, and exit the alert setting interface to take effect.

Explanation:

- In the perimeter alert, the plan of "explosive multi-level acousto-optic alert" is as follows: after the target intrudes into the alert area, the white light flashes strongly and the voice shouts.
- The plan of "progressive multi-level acousto-optic alert" is divided into three levels by default, and the warning effect is enhanced step by step. When the dwell time in the previous state is greater than the set value, it will enter the next state.
- Linkage settings in user-defined templates can set up to three levels of linkage, and linkage items can be set in each level of settings.
- In the linkage setting, the constant light option of the linkage white light indicates that the white light is turned on when an alarm occurs and automatically turned off after the alarm is cleared.
- The advanced and advanced parameters of the user-defined template include: deployment week, detection mode, trigger alarm target, trigger sensitivity, maximum tracking time, display rules and target box settings.
- The alert type is divided into perimeter alert and tripwire alert, and the alert is carried out for intrusion area, departure area and cross-border behavior. The perimeter alert is the intrusion area alert by default, and the user can modify the detection mode in the Advanced Set of the user-defined template.

- The alert detection targets are people and vehicles by default. Users can make settings in the customized Advanced Set according to their specific needs.
- The longest tracking time takes effect during linkage tracking, indicating that the tracking action is stopped and the alert monitoring scenario is returned when the time is reached.
- The custom alert tone can be set by the following method: download the AudioMaker. Exe software, record the alert tone according to the help document of the software, make the upgrade package, and then download it to the camera through the webpage upgrade mode of the camera.

4 Simple Troubleshooting

4.1 System failure

4.1.1 USB flash disk or micro SD card cannot be identified

Possible Reasons:

(1) Plug and unplug USB flash disk or micro SD card without power failure.

(2) There is a problem with the partition information of the disk, which causes the device to be unrecognizable and needs to be reformatted.

(3) If the card is loose, plug it again after power failure, and then start the equipment.

4.2 Network failure

4.2.1 The device has been powered on and cannot be found in the SearchConfig Tool.

Sequence check steps:

(1) Confirm whether the camera is powered on normally, whether the host network card and driver are normal, whether the network cable connection is normal, and whether the network topology connection is smooth;

(2) Directly connect the host and the HD network camera with a cross network cable. If it is still not working, reset the camera and test again;

(3) Restart the searcher software, or select the IP in the same network segment as the device;

(4) Restart the computer;

(5) If there are spare parts, the host and high-definition network camera can be replaced for testing;

(6) If you still have problems, please contact us.

4.2.2 After logging in to the network front-end product, it is found that the video is not the video of the front-end product.

Possible Reasons: There are network devices with the same IP and MAC addresses on the network.

Sequence check steps:

(1) Disconnect the network connection of the current device, ping the corresponding IP, and check whether there is a return packet;

(2) Use the searcher to search and check whether there is a device with a duplicate IP address, and then search for verification after disconnecting the device network;

(3) Connect to the public network, and select the port mapped to other

devices when logging in.

4.2.3 Users can ping the camera but cannot log in normally

Possible Reasons:

(1) Port 3001 is blocked by firewall;

(2) The port number used for login is incorrect;

(3) The user name and password used for login are incorrect;

(4) There are too many connected clients, and the number of device connections is full;

(5) The black and white list is set for the camera, and it is forbidden to log in from the current computer, so the setting needs to be modified first;

(6) checking whether the listening port of the device is the same as the port used for connection on the software through the searcher;

4.2.4 UDP cannot connect to video

Possible Reasons:

(1) Other clients on the same machine have been connected to the video;

(2) The port of UDP conflicts with the port of other applications on the computer, and the IP of the device is modified for testing.

4.2.5 The videos of two network front-end products are alternately screened, or sometimes connected and sometimes disconnected.

Possible Reasons:

(1) IP address conflict, which can be viewed by the SearchConfig Tool;

(2) MAC address conflict, which can be checked by the SearchConfig Tool;

(3) The IP address conflicts with the IP address of other computers.

4.3 Control failure

4.3.1 The PTZ can be controlled normally in IE, but cannot be controlled in the software.

Sequence check steps: Please confirm that the correct protocol, address and baud rate have been selected in the software.

Possible Reasons:

(1) Please confirm that the address setting in the software is correct;

(2) If Easy7 software is used, ensure that "System Settings- [Host] Interface-Video Channel-Device [Address and Protocol] is set correctly";

(3) If there is still any problem, please contact our after-sales technicians.

4.4 Video failure

4.4.1 The software can normally connect to the video, but the image is unstable, intermittent, frame loss, etc.

Sequence check steps:

(1) Exit the software, check the CPU occupancy rate of the machine, and rule out the reasons for insufficient configuration of the machine itself or whether the host is poisoned;

(2) The host pings the device to check whether there is any packet loss;

(3) Use the bandwidth test software to test the network bandwidth. If the bandwidth is insufficient or unstable, please contact the network operator;

(4) When the network bandwidth is insufficient and the video fluency needs to be ensured, we first consider reducing the resolution of the image. Under the condition of not changing the resolution, in the IE image quality setting, the variable bit rate mode is changed, and the values of the best quality and the worst quality in the image quality are increased, and the video quality is appropriately reduced;

(5) Whether the system performance is insufficient due to the opening of too many functions. For example, if the functions of character superposition, key areas, intelligent analysis and other occupied

functions are opened at the same time, turn off some functions first and then verify whether the video is normal again.

4.5 Audio failure

4.5.1 Video browsing and control are normal, but there is no front-end audio.

Sequence check steps:

(1) Confirm that the driver and wiring of the corresponding sound card of the host are correct, and the music test can be played;

(2) Confirm that "Audio Video Stream" is selected instead of "Video Stream";

(3) Verify whether the front-end pickup equipment and wiring are correct;

(4) Refer to 4.5.2 Solution for weak audio signal;

4.5.2 Weak audio signal

Sequence check steps:

(1) Whether the audio input type is selected correctly. The default audio input of the external passive mic model is MicIn. If the external active audio is used, it should be set to LineIn;

(2) Adjust the audio input volume value through IE to see if it is too low;

(3) The back-end sound playback unit must be an active speaker;

4.6 Alarm failure

4.6.1 No alarm output

Sequence check steps:

(1) Confirm that the wiring mode of the input and output signals of the alarm is correct, ensure that the signals are switching signals, and the wiring shall not be connected incorrectly or falsely;

(2) Check whether the port setting of the network video server is correct and the enabling setting of the input and output ports is correct through IE;

(3) Confirm whether the alarm input and output equipment is normal;

4.7 Not effective after parameter setting

4.7.1 Abnormal power-off after parameter setting

Possible Reasons: The parameters can only be saved normally after being set for a period of time, unless the parameters are automatically restarted or IE clicks [System Restart]. Abnormal power failure may cause the parameters not to be saved normally.

4.7.2 Failure to restart the system as required

Possible Reasons: Some parameters have been changed, and the system needs to be restarted, otherwise it may not take effect.

4.8 Other

4.8.1 The U disk used on the camera is identified on the computer, and the capacity becomes smaller.

Possible Reasons: The camera performs a special partition operation when formatting the U disk and micro SD card, resulting in a part of the capacity not being recognized on the computer. If you want to continue to use it as a normal storage medium, you need to reformat it on the computer.

Solution:

(1) download and installing a software BOOTICE. EXE;

(2) Insert the U disk or micro SD card to be formatted into the computer. Open the software, select the corresponding U disk in the target disk, then select the partition management-> repartition and format-> select the USB-FDD mode-> select the FAT32 or NTFS system format-> input the volume label, such as "U disk"-> finally click OK to complete the repartition of the U disk.

5 After-sales service

For the products produced by the company, the company provides free maintenance service during the product warranty period, but in case of the following circumstances, the material cost and man-hour cost will be charged:

(1) The equipment is damaged due to the operation not in accordance with the provisions of the User's Manual;

(2) Lightning strike, fire and irresistible natural disasters;

(3) Damage caused by matching problems due to poor product design of other manufacturers;

(4) Due to our continuous adoption of new technologies, product parameters are subject to change without notice.

Appendix I: Lightning Protection and Surge Protection

Lightning protection and surge protection shall be considered for the outdoor dome unit. On the premise of ensuring electrical safety, the following lightning protection measures can be taken:

- The signal transmission line must be at least 50 meters away from the high-voltage equipment or high-voltage cable;
- Outdoor wiring shall be routed under the eaves as far as possible;
- Sealed steel pipes must be buried for wiring in open areas, and the steel pipes shall be grounded at one point. Overhead wiring is absolutely prohibited;
- In strong thunderstorm areas or high induced voltage zones (such as high-voltage substations), additional high-power lightning protection equipment and lightning rods must be installed.
- The lightning protection and grounding design of outdoor devices and lines must be considered in combination with the lightning protection requirements of buildings, and meet the requirements of relevant national and industrial standards;
- The system must be equipotential grounded. The grounding device must meet the dual requirements of system anti-interference and

electrical safety, and shall not be short-circuited or mixed with the zero line of the strong power grid. When the system is grounded separately, the grounding impedance shall not be greater than 4Ω, and the sectional area of the grounding conductor must not be greater than 25mm^2.

