



NVR4XXX-4KS2\_V4.001.0000000.2

## Release Notes

ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD.

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# Release Notes

## 1 Overview

Item	Description
Product model	NVR4XXX-4KS2 Series
Version	V4.001.0000000.2
Software package information	DH_NVR4XXX-4KS2_MultiLang_V4.001.0000000.2.R.20200424.zip
ONVIF version	2.4.1
OS requirement	None

## 2 New Features

Feature	Description
<b>Security baseline V2.1</b>	<ul style="list-style-type: none"><li>① Blocked dangerous commands in the system.</li><li>② Supports disabling unsafe services, and those services are disabled by default.</li><li>③ Important operations log.</li><li>④ Network data transfer encryption control.</li><li>⑤ Non-sensitive data information saved in device-end.</li><li>⑥ Secondary authentication for restoring factory defaults.</li><li>⑦ Prompts are added when deleting data.</li></ul>
<b>Disk error details</b>	<ul style="list-style-type: none"><li>① Disk error details are written to log.</li><li>② Disk error details are written to hddinfo file.</li><li>③ Supports exporting hddinfo file along with configuration file for system analysis.</li><li>④ Does not support exporting hddinfo file on web.</li></ul>
<b>Optimized playback function on local GUI</b>	<ul style="list-style-type: none"><li>① Supports displaying thumbnail pictures for one channel playback</li><li>② Supports dragging time bar to view video time table.</li><li>③ Supports dragging the cursor on the time bar to view images in iframe of multiple channels.</li></ul>
<b>Security login authentication</b>	<ul style="list-style-type: none"><li>① Optimized network security settings which support login authentication.</li><li>② Supports security mode and compatible mode. Security mode is set by default for safety concerns.</li><li>③ Security mode is recommended. A prompt will be displayed when compatible mode is selected.</li></ul>

<p><b>Optimized plate detection</b></p>	<ul style="list-style-type: none"> <li>① Supports recording the information of detected plates in black list/white list.</li> <li>② Supports entering information of the car owner and validity when adding plate to black list/white list.</li> <li>③ Supports displaying the black list/white list information of the vehicle corresponding to the plate during playback.</li> <li>④ Supports vehicle detection when querying black list/white list.</li> <li>⑤ Black list/white list information is added to plate information exported file.</li> <li>⑥ Supports synchronizing modification of black list/white list to ITC.</li> <li>⑦ Supports sending plate detection data to DSS platform.</li> </ul>
<p><b>POE offline alarm</b></p>	<ul style="list-style-type: none"> <li>① Supports generating IPC offline alarm, event linkage and log when an IPC with POE connection goes offline.</li> <li>② When an IPC with POE connection goes offline, you need to manually delete the device which will not be deleted automatically in <b>Camera List</b>.</li> </ul>
<p><b>Non-motor vehicle face detection in video structuring</b></p>	<ul style="list-style-type: none"> <li>① Non-motor vehicle face detection is supported, and face is set as an attribute of non-motor vehicle detection.</li> <li>② Supports non-motor vehicle + face displaying mode in AI panel.</li> <li>③ Supports searching for face associated non-motor vehicle on face detection interface.</li> </ul>
<p><b>New languages</b></p>	<p>Norwegian, Ukrainian, Hebrew, Turkish, Indonesian.</p>
<p><b>4G module</b></p>	<ul style="list-style-type: none"> <li>① External 4G module.</li> <li>② Supported Model: MF832S.</li> </ul>
<p><b>Product security UI</b></p>	<ul style="list-style-type: none"> <li>① Interface adjustment: Use <b>Security Center</b> as the entry in main menu.</li> <li>② Added security status page.</li> <li>③ Added security information scanning function to detect supported security modules.</li> <li>④ Added detailed information of security modules, and the optimized modules will be displayed in green icon.</li> <li>⑤ 802.1X setting page is moved to <b>SYSTEM</b> submenu.</li> <li>⑥ Added CA certificate management function.</li> </ul>
<p>Support for dual-sensor camera with white illuminator and IR</p>	<ul style="list-style-type: none"> <li>① Supports enabling 2 channels of AI by camera at the same time.</li> <li>② Supports enabled 2 channels of different type of AIs at the same time.</li> <li>③ Supports 2 channels of PTZ.</li> </ul>
<p>Support for Multi-Sensor Panoramic Network + PTZ Camera lite version</p>	<ul style="list-style-type: none"> <li>① Support for Multi-Sensor Panoramic Network + PTZ Camera with 16 million pixels.</li> <li>② Supports only IVS intelligence according to camera features.</li> </ul>

<p><b>Associated playback of multi-sensor camera</b></p>	<ul style="list-style-type: none"> <li>① Support for associated playback of multi-sensor camera.</li> <li>② Multi-sensor cameras includes: Panoramic 1+1 camera with splicing, panoramic 3+1 camera without splicing, double channel thermal camera and so on.</li> <li>③ When playing back the video of any 1 channel of the multi-sensor camera, the video is synchronously played with videos of other channels in multi-sensor fixed mode.</li> <li>④ When playing back the video of 1 channel of multi-sensor camera, and select another channel of other cameras, and then only videos of selected channels will be played.</li> </ul>
<p><b>Motion Detection Waveform Display on Web</b></p>	<ul style="list-style-type: none"> <li>① Supports waveform display of motion detection sensitivity on web.</li> <li>② Supports setting threshold of motion detection sensitivity.</li> <li>③ Supports the comparison of motion detection sensitivity value to the preset threshold, when the value is larger than threshold, the interface glows red; when the value is smaller, the interface glows blue.</li> </ul>
<p><b>UBS Keyboard</b></p>	<ul style="list-style-type: none"> <li>① Supports inputting by USB keyboard.</li> <li>② USB keyboard can input characters limited to soft keyboard. USB keyboard can coexist with soft keyboard.</li> </ul>
<p><b>Alarm Linkage for Disk Health</b></p>	<ul style="list-style-type: none"> <li>① Supports disk health alarm.</li> <li>② Supports linkage action for disk health alarm.</li> <li>③ In linkage settings, log is enabled and buzzer is disabled by default.</li> <li>④ Disk health detection is conducted once a day in every morning, and you can also manually conduct this detection. Every time disk health is detected and health status is updated, the linkage action will be performed.</li> </ul>
<p><b>Quota management</b></p>	<ul style="list-style-type: none"> <li>① Supports storage by quota.</li> <li>② Supports setting quota for both videos and images.</li> <li>③ Support for the switching of disk quota mode and disk group mode.</li> <li>④ The switching of storage mode requires formatting HDD.</li> </ul>
<p><b>One-click disarming</b></p>	<ul style="list-style-type: none"> <li>① Supports one-click disarming, which is disabled by default.</li> <li>② Supports individually disarm linkages such as <b>Buzzer, Show Message, Alarm-out Port</b> and <b>Send Email</b>.</li> <li>③ The <b>Live</b> interface uses a bell icon on the upper-right corner of video channels to display disarming status. The intact bell icon is displayed by default, and when disarming is enabled, the bell icon is displayed with a slash.</li> <li>④ Supports enabling and disabling disarming on the upper-right corner of video channels on <b>Live</b> interface.</li> <li>⑤ Supports one-click disarming function on client software such as DSS client.</li> </ul>

<p><b>AI panel on web</b></p>	<ul style="list-style-type: none"> <li>① The web supports displaying AI alarm on <b>Live</b> interface.</li> <li>② Operations on AI panel will be synchronized to the device end.</li> <li>③ Support for a switch to open and close AI panel.</li> <li>④ Supports displaying attribute settings on AI panel.</li> <li>⑤ Supports displaying linkage pictures on AI panel.</li> </ul>
<p><b>Secondary authentication for restoring factory defaults and formatting HDD</b></p>	<ul style="list-style-type: none"> <li>① Adjusted restoring defaults interface, and simplified one-click restoring defaults.</li> <li>② Secondary authentication for restoring factory defaults (admin user only).</li> <li>③ Data in database will be deleted after restoring factory defaults.</li> <li>④ Secondary authentication for formatting HDD (admin user only).</li> <li>⑤ A dialog box of deleting database option is added when formatting HDD, and the selected option is <b>No</b> by default with risk warning.</li> </ul>
<p><b>SSH Service</b></p>	<ul style="list-style-type: none"> <li>① Supports visiting devices through SSH service.</li> <li>② Provides SSH enable switch. After it is enabled, you can visit devices through SSH service.</li> </ul>
<p><b>APP Do-Not-Disturb mode</b></p>	<ul style="list-style-type: none"> <li>① Supports subscribing events by time period, and only receive event information within the time period</li> <li>② Support setting by week and individually setting time period for each day of the week.</li> <li>③ Event type is not distinguished currently, and events will be pushed to the APP with no difference.</li> </ul>
<p><b>Optimized DST function</b></p>	<ul style="list-style-type: none"> <li>① Removed year setting in DST settings.</li> <li>② DST is automatically adjusted annually.</li> <li>③ Support for automatic adjustment for year setting configured on the client.</li> </ul>
<p><b>Support for multi-rule people counting</b></p>	<ul style="list-style-type: none"> <li>① Support for access of multi-rule people counting camera.</li> <li>② Support for multi-rule people counting configuration.</li> <li>③ Support for multi-rule linkage configuration and linkage action.</li> <li>④ Supports querying and exporting the report of multi-rule people counting.</li> <li>⑤ Supports sending real-time report of multi-rule people counting to platform.</li> </ul>
<p><b>Optimized people counting interface</b></p>	<ul style="list-style-type: none"> <li>① People counting configuration interface is displayed by list.</li> <li>② Supports adjusting configurations for different people counting cameras.</li> <li>③ Supports configuring people counting by preset for speed dome.</li> <li>④ People counting system includes a variety of types: single rule, stereo vision passenger flow, multi-region people counting, multi-rule people counting.</li> <li>⑤ Queuing configuration interface is displayed by list.</li> </ul>

<p><b>Quick Operation Bar</b></p>	<ul style="list-style-type: none"> <li>① Added a quick operation bar in the local secondary menu for fast jumping to the same level menus.</li> <li>② Quick operation bars are added in secondary menu and setting pages.</li> <li>③ <b>SEARCH</b> submenu does not support quick operation bar, and you can jump to SEARCH submenu from quick operation bar in other submenus.</li> </ul>
<p><b>Adding remote devices with IPV6 address</b></p>	<ul style="list-style-type: none"> <li>① Supports adding remote devices with IPV6 address</li> <li>② Supports manually adding remote devices with IPV6 address.</li> <li>③ Searching for front-end devices with IPV6 address is not supported currently.</li> </ul>
<p><b>H.265 auto switch</b></p>	<ul style="list-style-type: none"> <li>① If H.265 Auto Change is enabled when adding a camera, the added device will be switched to the H.265 encoding and the video stream is automatically adjusted according to the conversion strategy.</li> <li>② Priority of adjusting video stream: Acquiring H.265 value recommended by camera &gt; Calculating the average of the sum of the maximum and minimum values when the stream is not within the H265 code stream range.</li> </ul>

### 3 Fixed Bugs

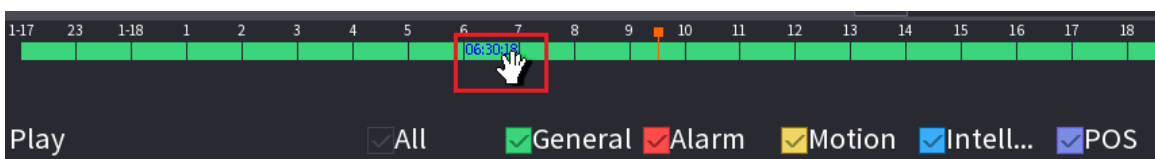
None.

## 4 Instructions for New Features

### 1.4.1. Optimized Playback Function on Local GUI

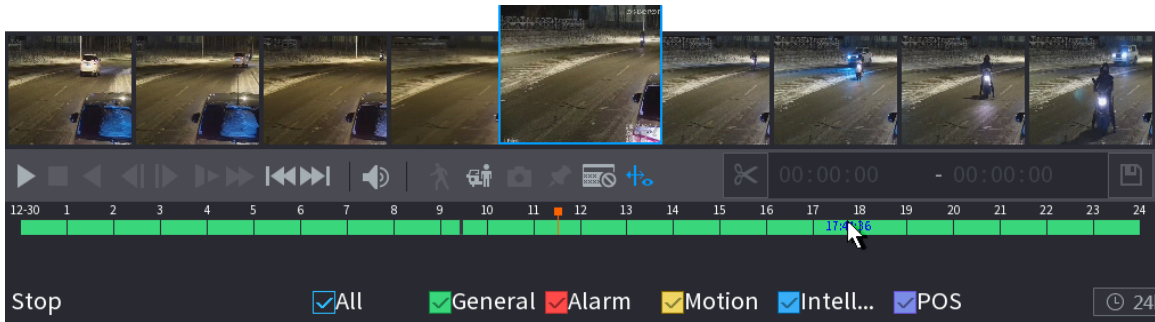
Playback function on local GUI is optimized and the following functions are added: Time bar dragging, thumbnail pictures displaying for one-channel playback, and dragging to view videos for multi-channel playback.

- i. **Click and hold the time bar, and the mouse pointer shall change to a hand icon, and then you can drag to view the playback of the target time.**
  - 1. Supports dragging forward and backward. Supports cross- day dragging, and the date in the calendar automatically updates to the target time.
  - 2. Supports dragging in window split mode. The time displayed on time bar changes synchronously when dragging.

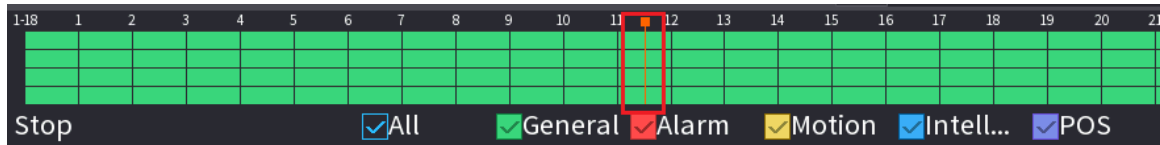


- ii. **Displaying thumbnail pictures:** When playing back video in one channel mode, you can move mouse pointer to time bar for 0.1 seconds to display thumbnail pictures for the video of selected time. 8 pictures before and after the selected time in total will be displayed at most, and 1 picture of the selected time will be displayed.





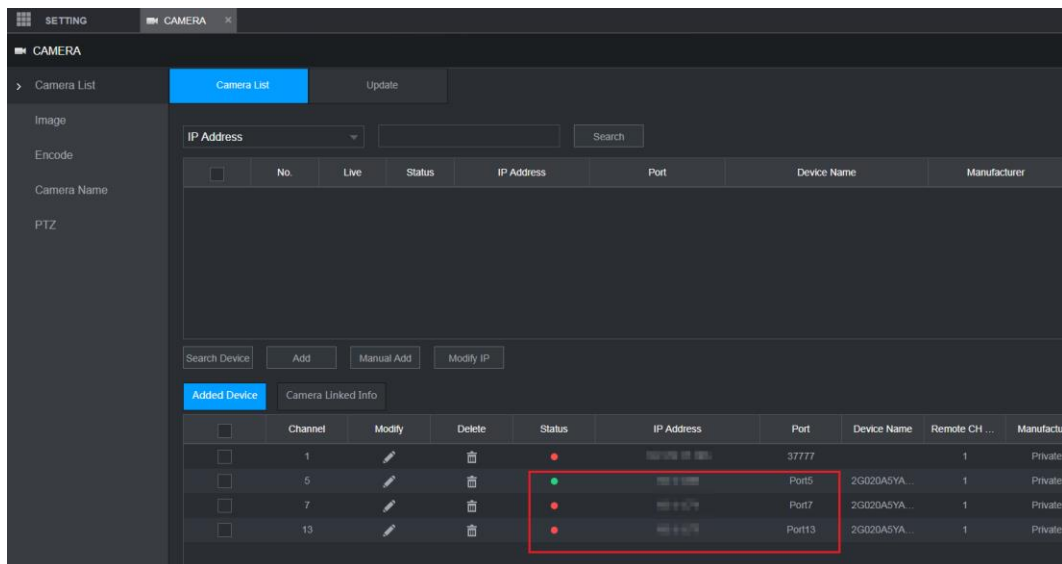
- iii. Multi-channel dragging with picture browsing in iframe. This feature supports prompting a pop-up window for thermal event linkage. When playing back videos, you can drag the vertical orange line on the time bar to rapidly view the playback in iframe format.



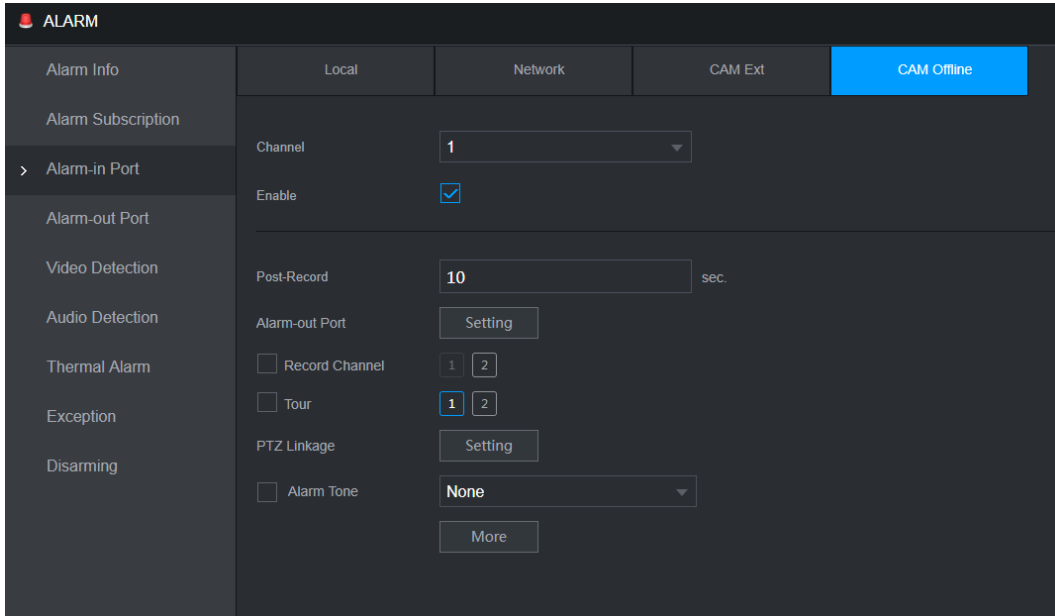
## 1.4.2. POE Offline Alarm

The NVR supports sending an alarm when the device connected to POE port goes offline, and you need to manually delete the device which will not be deleted automatically in **Camera List**. When the camera is offline, text of login timeout will be overlaid on the channel screen.

- i. Optimized POE channel connection status. When the cable of the POE channel is unplugged, the channel information is kept and needs to be manually deleted. When you move an IPC from one POE port to another, the original POE port information still exists and the status is offline. See the following figure.

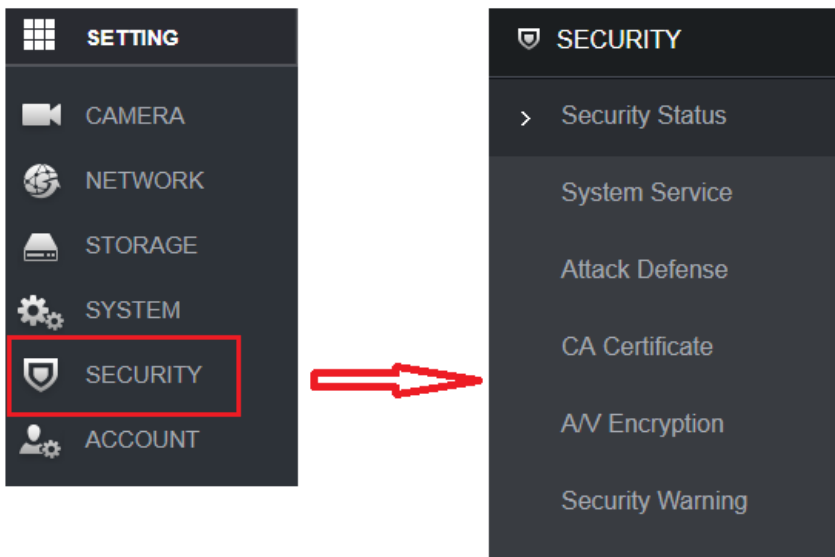


- ii. When the IPC connected to POE port goes offline, the NVR will trigger an IPC offline alarm, and perform linkage operation and write an offline record to log.

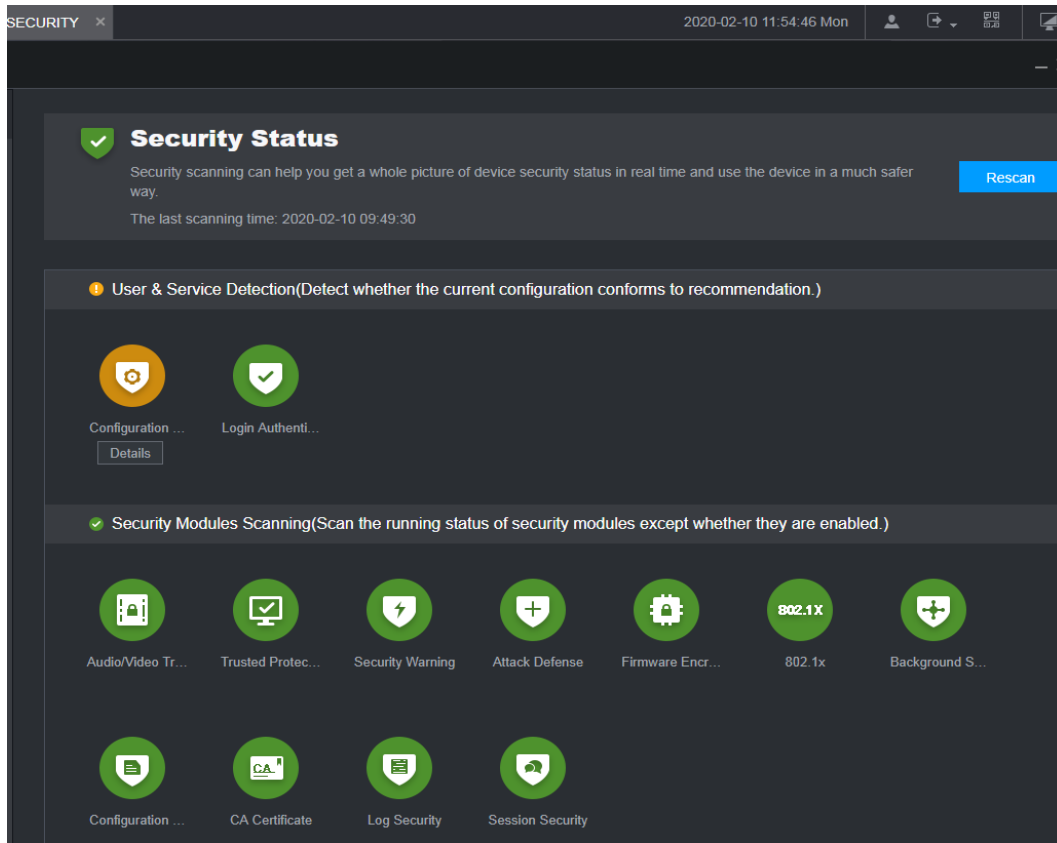


### 1.4.3. Product Security UI

- i. The user interface of product security is adjusted, and all modules are integrated in **Security Center** as the entry in main menu. Those modules include: Security status, system service, attack defense, CA certificate, A/V encryption and security warning.



- ii. Security status and security module scanning are added.



## 1.4.4. Support for Dual-Sensor Camera with White Illuminator and IR

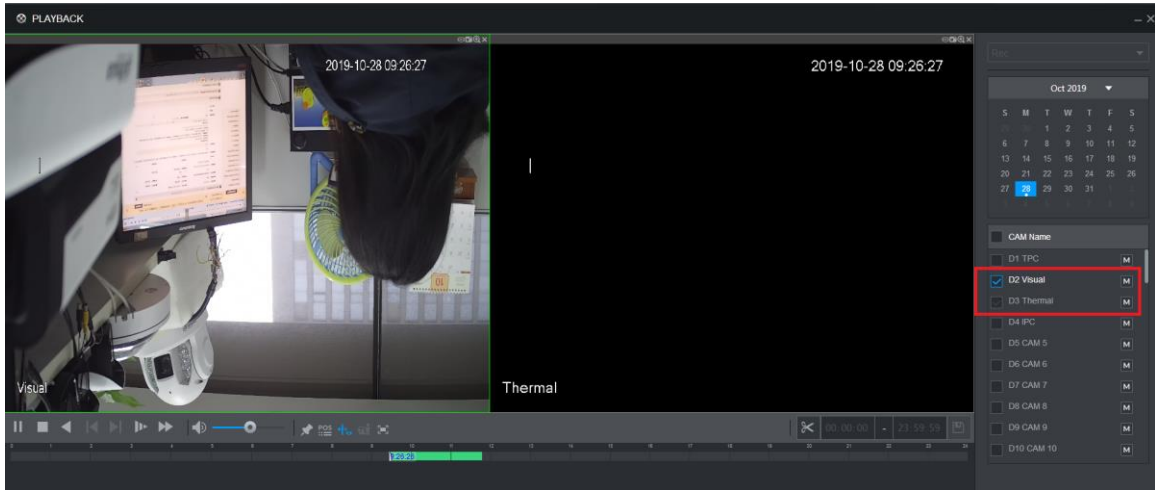
The NVR supports stereo vision cameras, and supports enabling intelligent function combination of two channels according to the camera capabilities. The supported function combination is as follows, and PTZ control of two channels is also supported.

Channel	Panoramic Camera	Detail Camera
Combination 1	Video structuring	Face comparison
Combination 2	/	Video structuring Face comparison
Combination 3	Crowd distribution	Video structuring
Combination 4	Crowd distribution	Perimeter
Combination 5	Perimeter	/

## 1.4.5. Associated Playback of Multi-sensor Camera

When playing back the video of any 1 channel of the multi-sensor camera, the video is synchronously played with videos of other channels, and the display mode is the same with multi-sensor live view mode. The following multi-sensor cameras are mainly included:

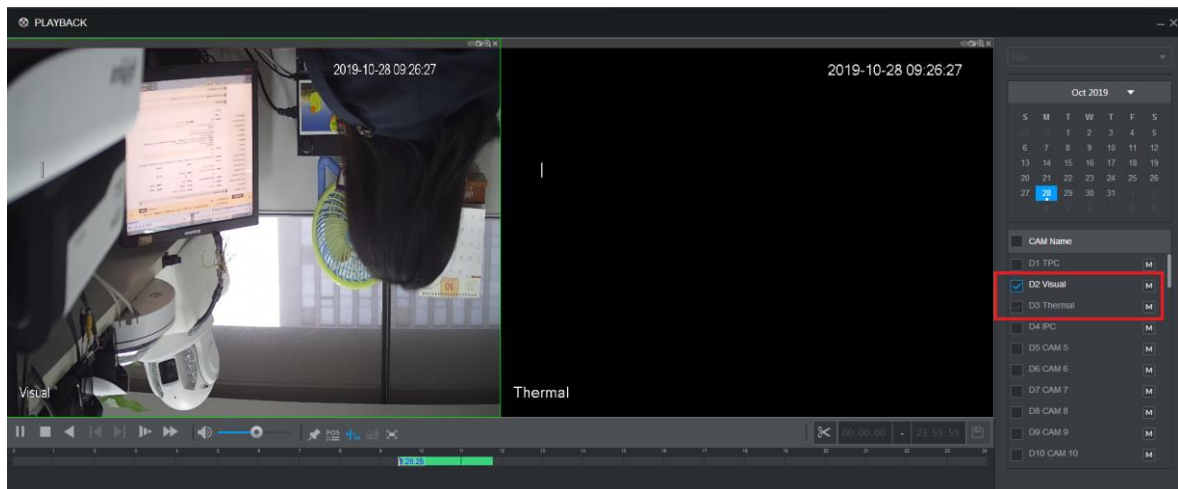
- i. Panoramic 1+1 camera with splicing



- ii. Panoramic 3+1 camera without splicing. The videos of 3 channels are displayed on upper side, and the video of the left 1 channel is displayed on lower side.

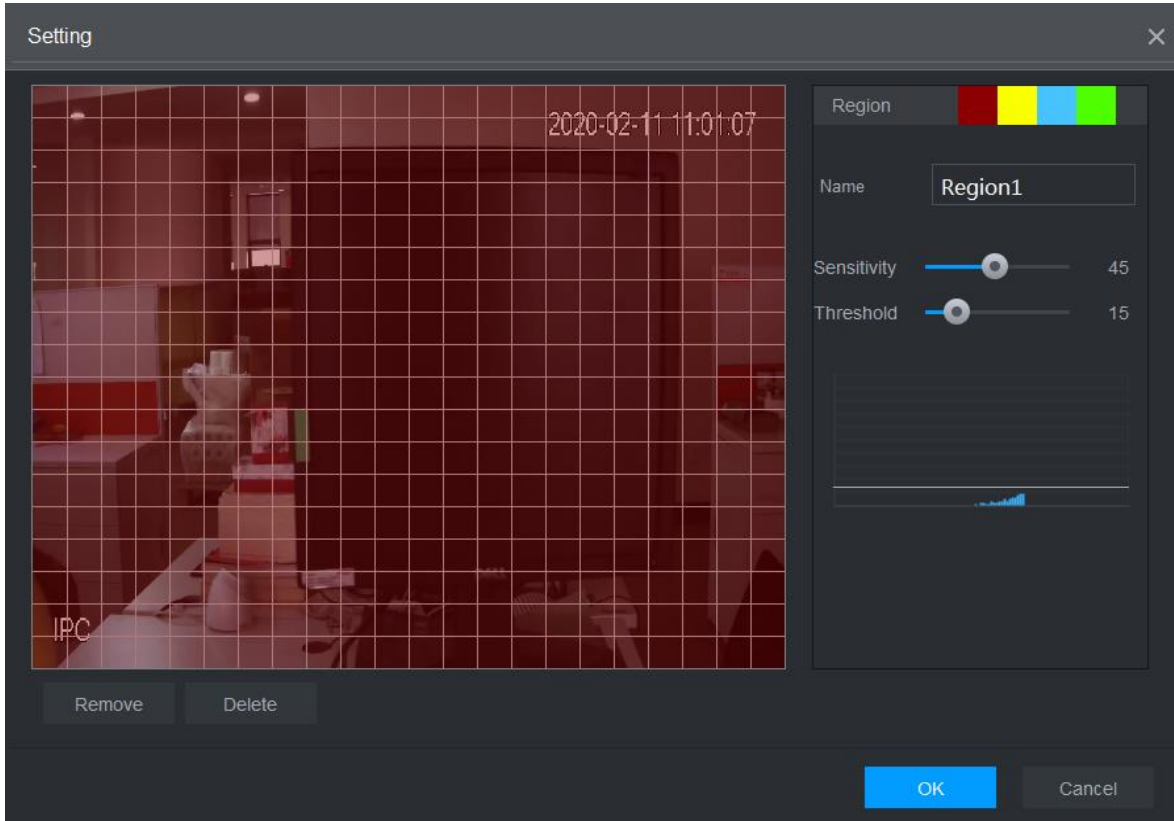


- iii. Thermal imaging is displayed like channel 2 in the following figure.



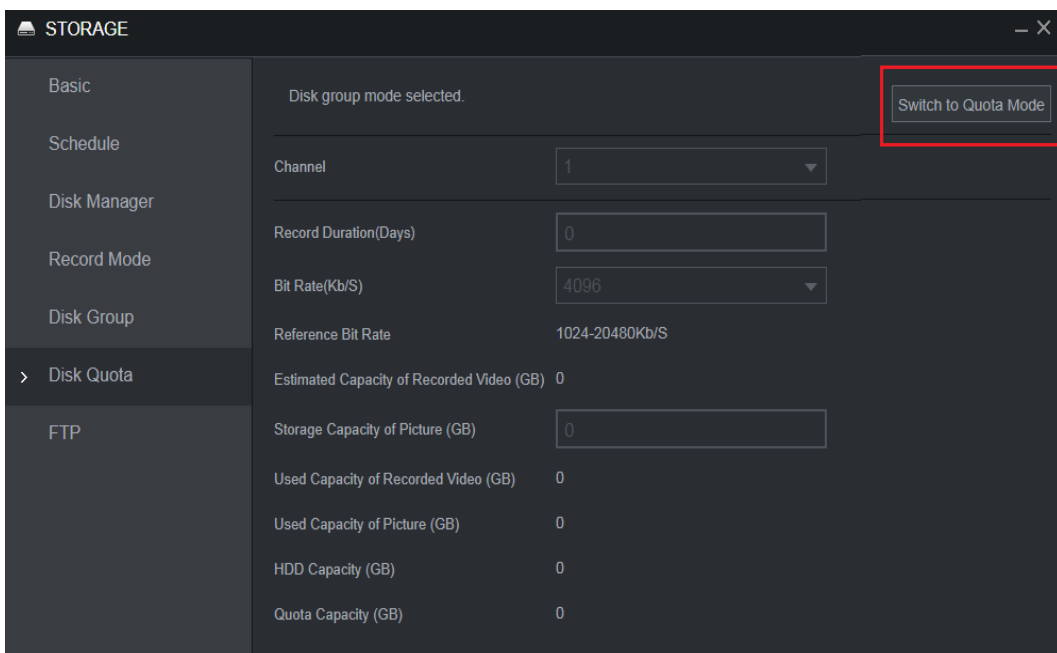
## 1.4.6. Motion Detection Waveform Display on Web

The NVR supports motion detection waveform display on web, when the value of motion detection is larger than preset threshold, the interface glows red; when the value is smaller, the interface glows blue.



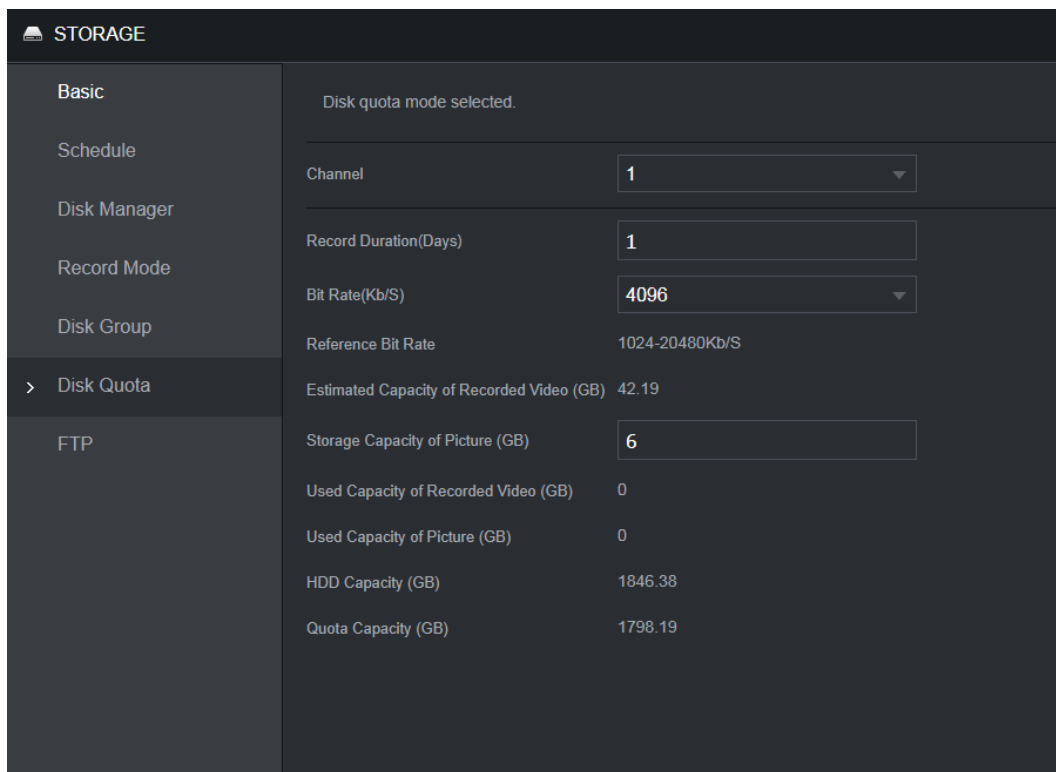
## 1.4.7. Quota Management

- i. The NVR supports quote management. Disk group mode is selected by default, and cannot be enabled with quota mode at the same time. You can switch storage mode on the interface below.

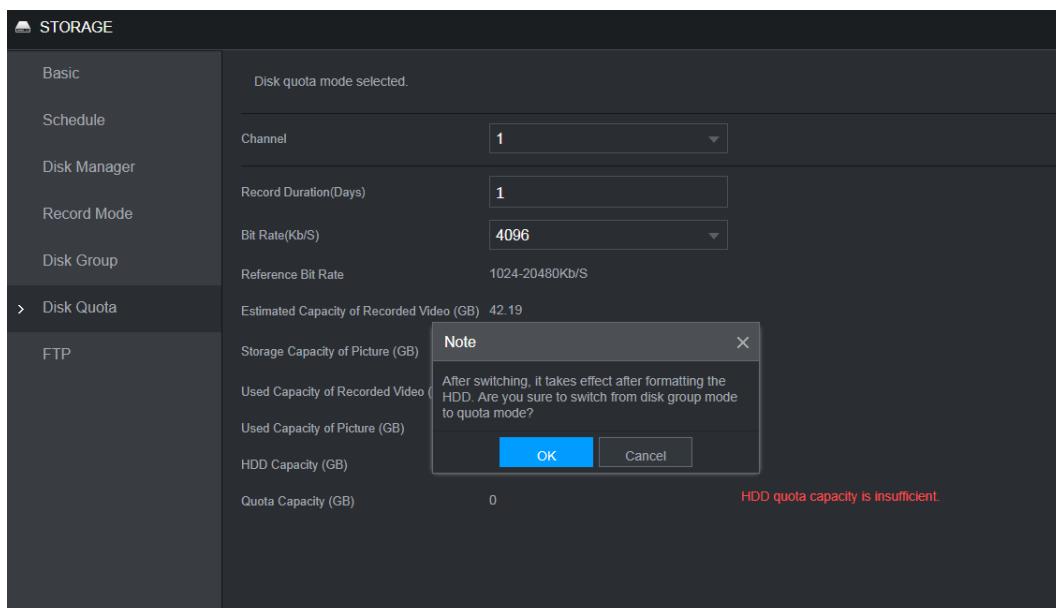


- ii. Quota management allows storage capacity to be set by channel, and videos and images can be configured

separately, and the remaining configurable space is automatically calculated.

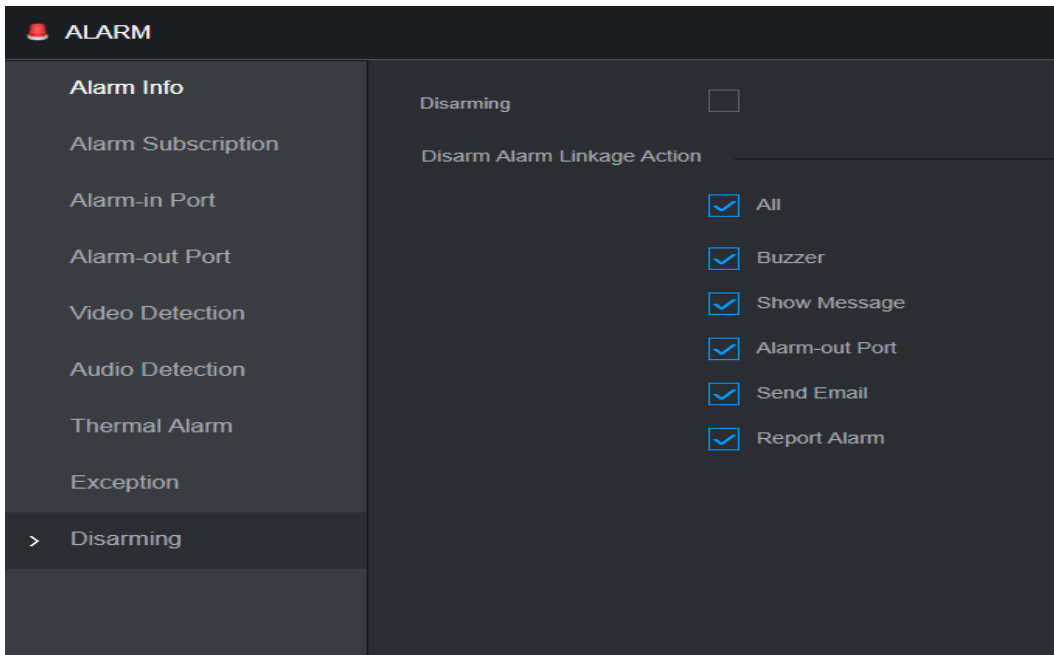


- iii. The interface will display a message indicating HDD quota capacity is insufficient, and will continuously prompt for insufficient quota capacity on local live view interface.



## 1.4.8. One-click Disarming

- i. The NVR supports one-click to disarm all alarm linkages, such as **Buzzer**, **Show Message**, **Alarm-out Port**, **Send Email**, **Report Alarm**. The **Disarming** checkbox is canceled by default, and all alarm linkages will be triggered according to original settings.



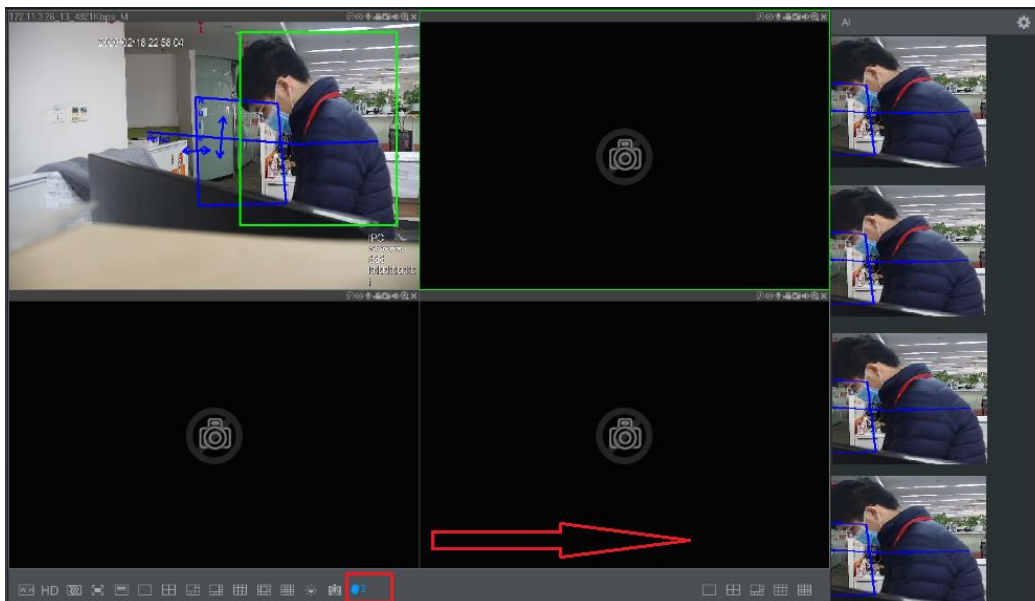
- ii. The **Live** interface supports one-click disarming, and it uses a bell icon on the upper-right corner of video channels to display disarming status. When the bell is disabled, the disarming function is enabled and no alarm linkage will be triggered. When the bell is enabled, the disarming function is disabled and all alarm linkages will be triggered according to original settings.

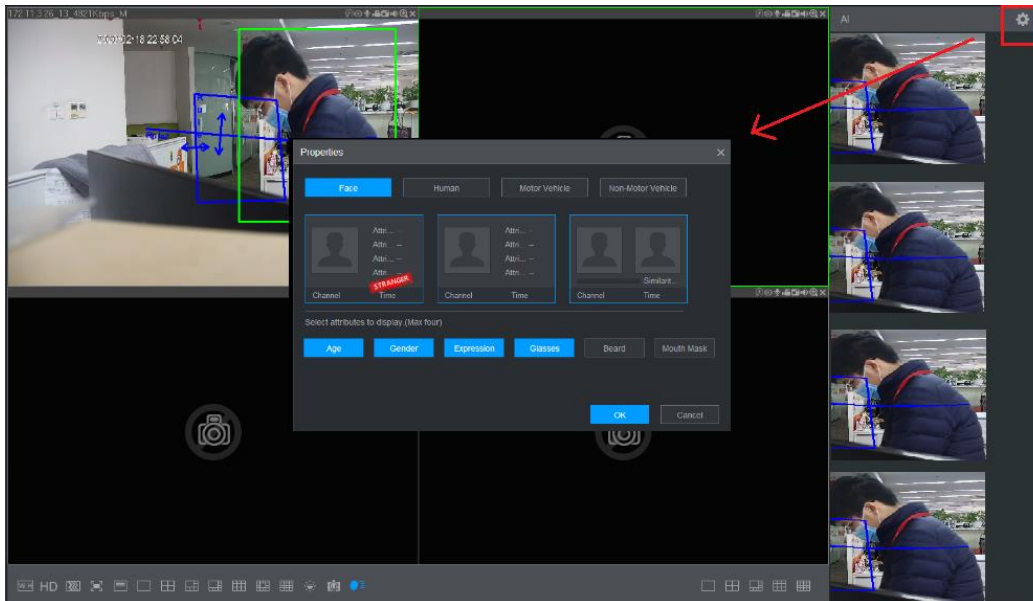


- iii. Supports one-click disarming function on DSS and Imou client.

### 1.4.9. AI panel on web

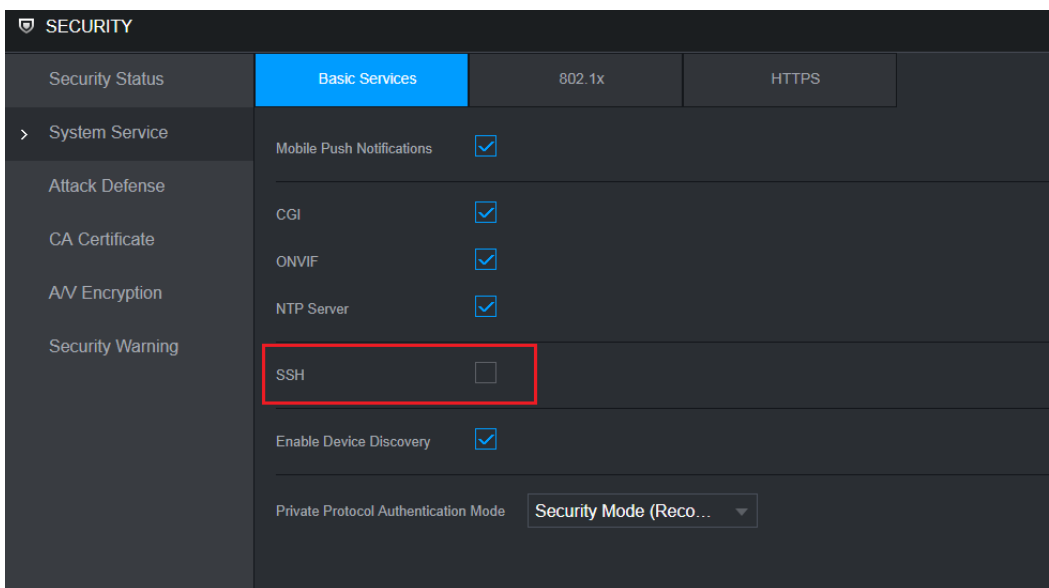
The **AI** panel on web supports the same functions as on local GUI. It can display intelligent events in real time, and display intelligent pictures and intelligent properties. When AI panel is enabled, you can find AI related information on the right side, and the supported intelligent events include: IVS, face detection, face comparison, video structuring, and plate detection.





## 1.4.10. SSH Service

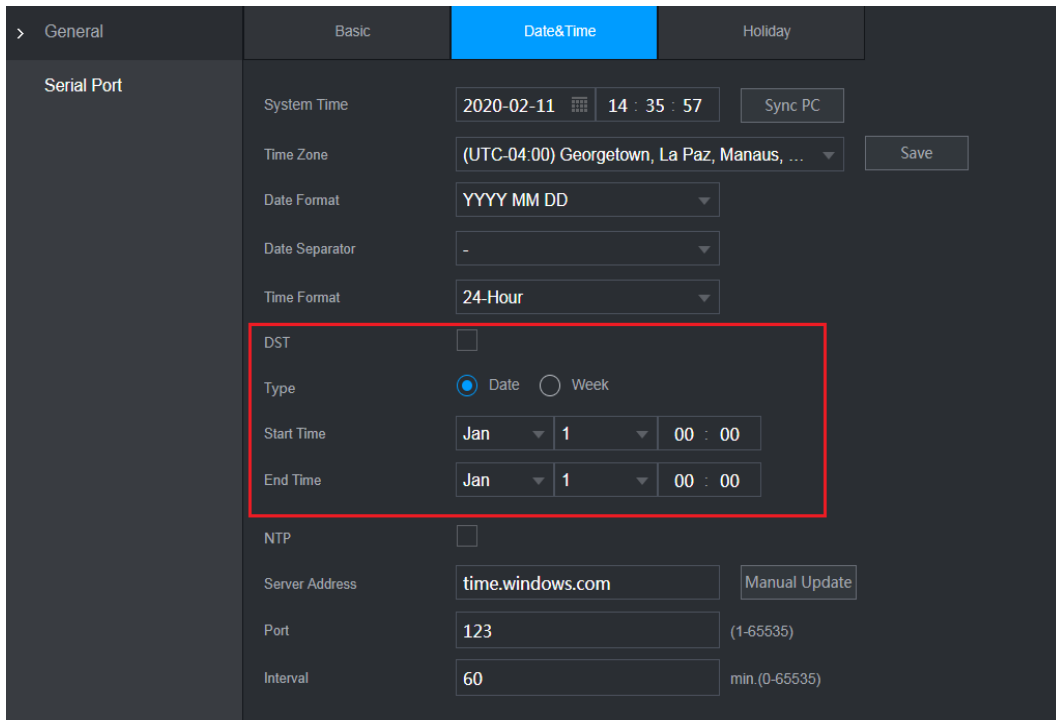
The NVR supports SSH service and provides a SSH enable switch. SSH service is disabled by default.



## 1.4.11. Optimized DST Function

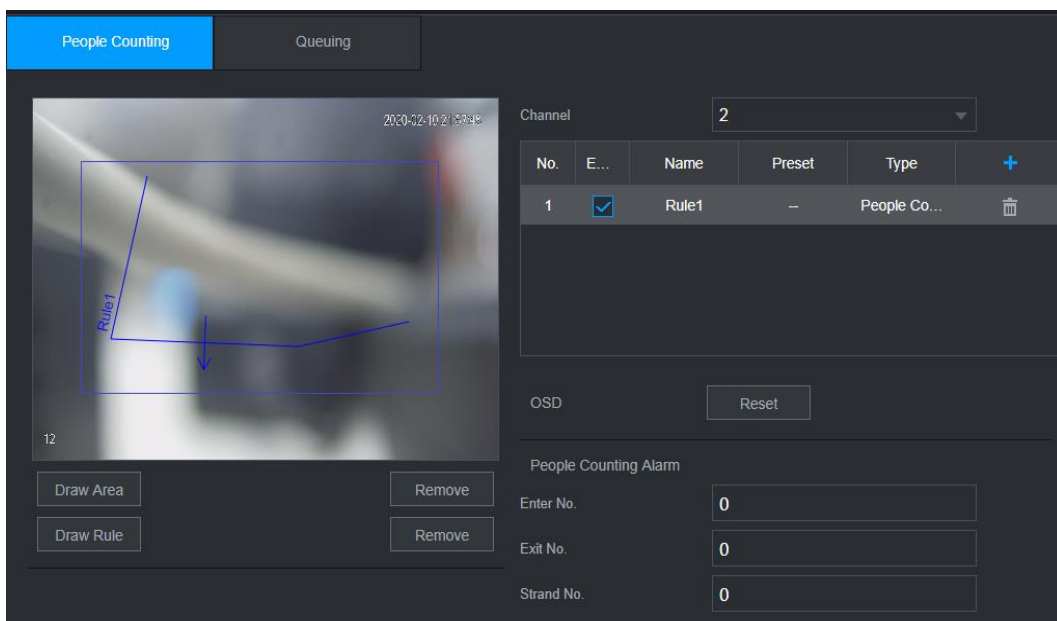
The setting of year in DST is removed because it has no practical use. The new DST function is compatible with the settings on previous devices, and also compatible with the settings on the client whether year is set or not.



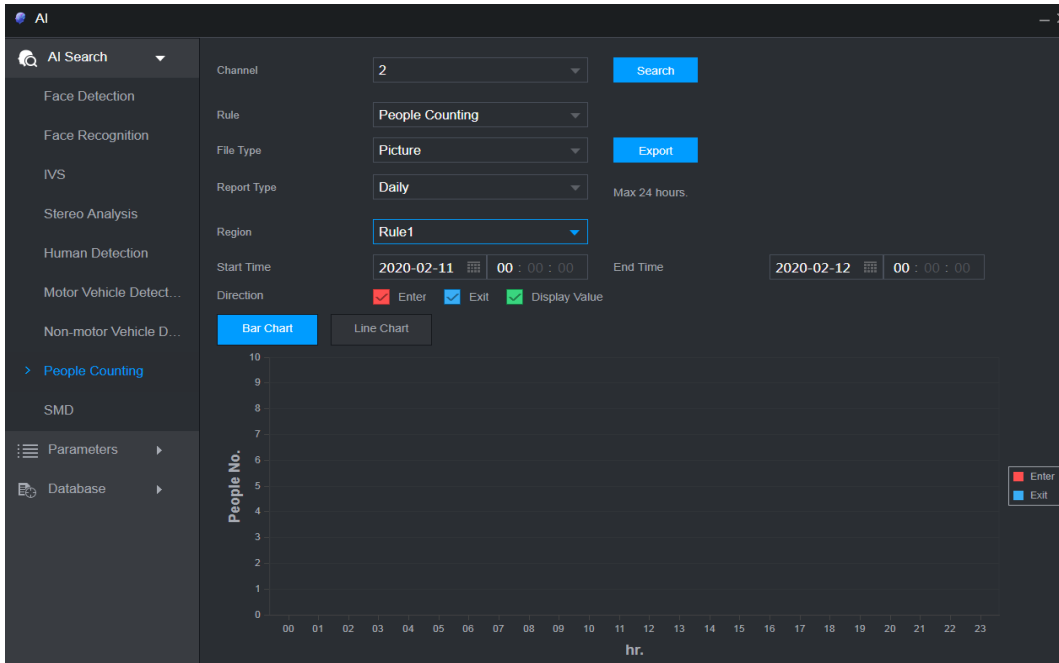


## 1.4.12. Multi-Rule People Counting

- i. When a multi-rule people counting camera is added, you can configure corresponding settings, event storage and linkage actions.



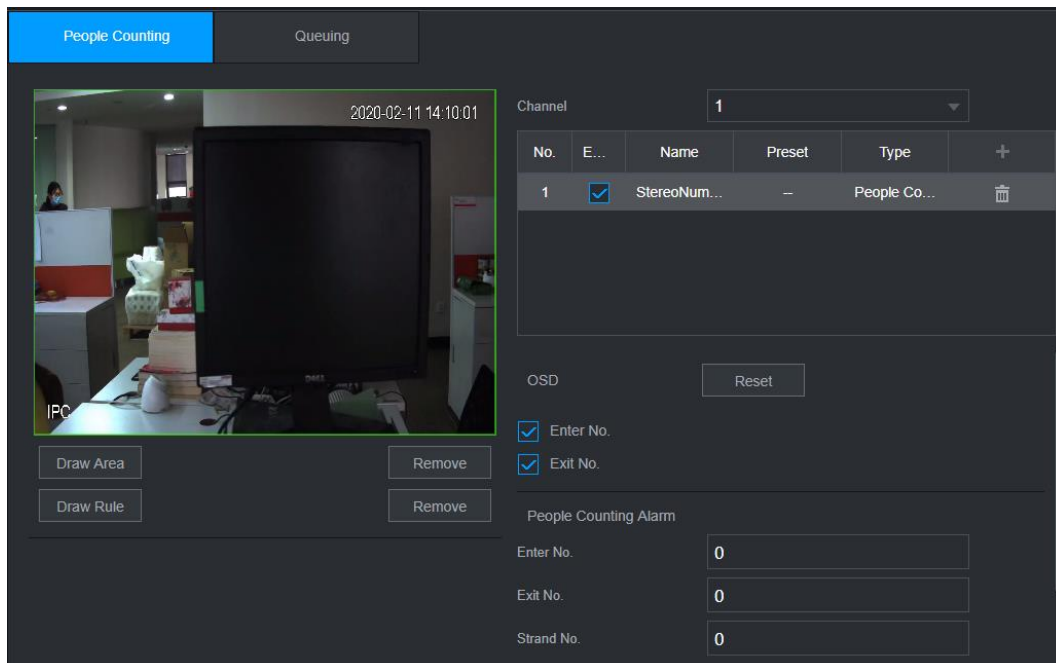
- ii. The NVR supports querying and reporting in charts of multi-area people counting, and also supports querying and reporting in charts of set rules of detected areas.



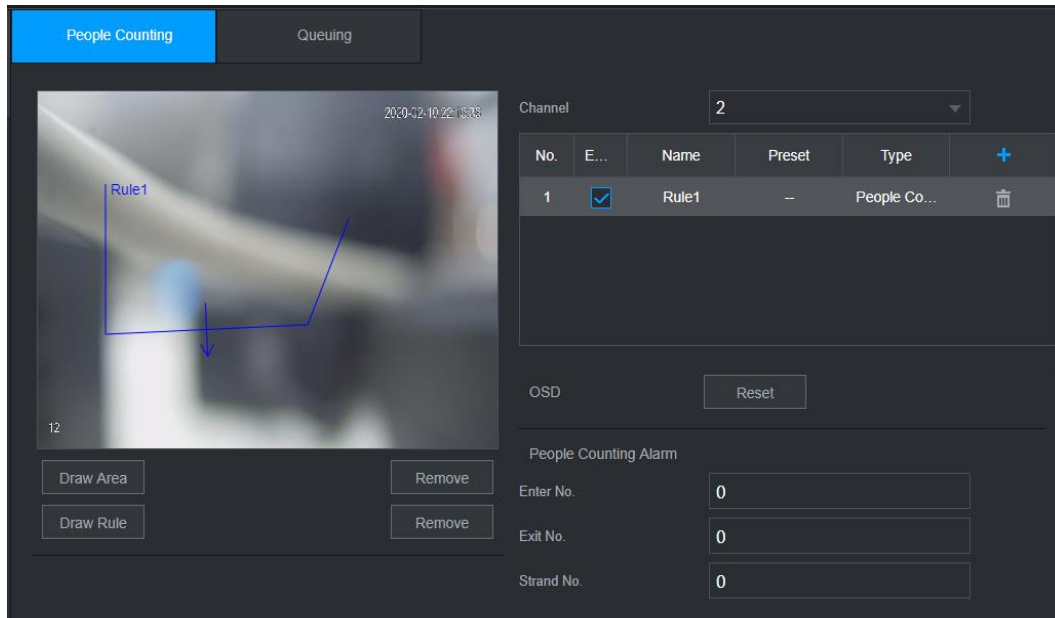
### 1.4.13. Optimized People Counting Interface

People counting configuration interface is unified for the compatibility with different cameras of various types and rules that support people counting, and the interface provides configuration rules list according to the type of rules supported by different cameras. You can only add one rule in the list for cameras supporting only one rule, and multiple rules for cameras supporting multiple rules. The content of configuration rules varies with different cameras.

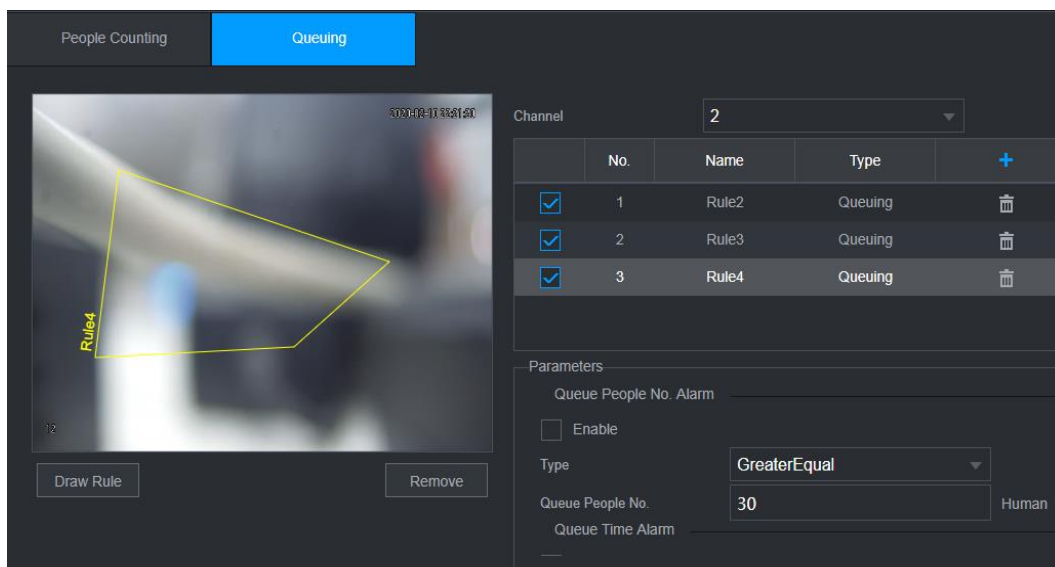
- i. You can only add one rule in the list for cameras supporting only one rule. The + turns grey after one rule is added.



- ii. You can continue to add rules in the list for cameras supporting multiple rules.



iii. Queuing configuration interface provides configuration list as people counting configuration interface.



## 1.4.14. Quick Operation Bar

Quick operation bar is added to local GUI for fast jumping and better user experience. You can use quick operation bar to jump to other submenus of the same level.

**ALARM**

Disarming

Disarm Alarm Linkage Action

- All
- Buzzer
- Show Message
- Alarm-out Port
- Send Email
- Report Alarm

Default Apply Back

**CAMERA**

Camera List | Device Status | Firmware | Update

Search  Uninitialized  Initialize

115	Modify	Live	Status	IP Address	Manufa
1		LIVE	✓	192.168.1.1	Private
2		LIVE	✓	192.168.1.2	Private
3		LIVE	✓	192.168.1.3	Private
4		LIVE	✓	192.168.1.4	Private
5		LIVE	✓	192.168.1.5	Private
6		LIVE	✓	192.168.1.6	Private

Search Device Add Manual Add Modify IP Filter None

Added Device Camera Li...

Channel	Modify	Delete	Status	IP Address	Port	Device
D1			●	192.168.1.1	3777	camera
D2			●	192.168.1.2	3777	4D007D
D3			●	192.168.1.3	3777	4M029C
D4			●	192.168.1.4	3777	IVSS
D5			●	192.168.1.5	3777	IVSS
D6			●	192.168.1.6	3777	YH630-F

Delete H.265 Auto Switch  Import Export

Remaining Bandwidth... 297.21Mbps/328.00Mbps

## 5 Compatibility

This new baseline version is based on the version of Security Baseline 2.1, and it can be rolled back to the versions after Security Baseline 1.4, but cannot be rolled back to a version prior to Security Baseline 1.4.

## 6 Software Environment

Model	Version
DH-IPC-HFW2231SN-S-0280B-S2	DH_IPC-HX2XXX-Mole_MultiLang_NP_V2.800.0000000.3.R.190816.zip
DH-IPC-HFW2831TP-ZAS-27135-S2	DH_IPC-HX25(8)XX-Mole_MultiLang_PN_V2.800.0000000.6.R.191023.zip
DH-IPC-HDW3241TP-ZAS-27135	DH_IPC-HX3XXX-Leo_MultiLang_PN_Stream3_V2.800.0000000.4.R.190927.zip
DH-IPC-HFW5442EP-ZE-2712	DH_IPC-HX5XXX-Volt_MultiLang_PN_Stream3_V2.800.0000000.8.R.190902.zip
DH-IPC-HDW5241TMP-AS-0280B	DH_IPC-HX4XXX-Volt_MultiLang_PN_Stream3_V2.800.0000000.8.R.190902.zip
DH-IPC-HDW5241HP-AS-PV-0280	DH_IPC-HX5XXX-Volt_MultiLang_PN_Stream3_V2.800.0000000.8.R.190902.zip
DH-IPC-HDW5241TMP-AS-LED-0280B	DH_IPC-HX4XXX-Volt_MultiLang_PN_Stream3_V2.800.0000000.8.R.190902.zip
DH-IPC-HFW7442HP-Z-2712F-DC12AC24V	General_IPC-HX8XXX-Nobel_MCU_V2.800.0000000.2.R.190709.zip DH_IPC-HX8XXX-Nobel_MultiLang_PN_V2.800.0000000.2.R.190709.zip
DH-IPC-HDBW7842HP-Z-2712F-DC12AC24V	General_IPC-HX8XXX-Nobel_MCU_V2.800.0000000.2.R.190709.zip DH_IPC-HX8XXX-Nobel_MultiLang_PN_V2.800.0000000.2.R.190709.zip
DH-IPC-HDBW7442HP-ZFR-2712F-DC12AC24V	General_IPC-HX8XXX-Nobel_MCU_V2.800.0000000.2.R.190709.zip DH_IPC-HX8XXX-Nobel_MultiLang_PN_V2.800.0000000.2.R.190709.zip
DH-IPC-HDW8341XP-3D-0280B	DH_IPC-HX8X4X-Kronos_Eng_P_Stream3_V2.622.0000000.5.R.181215.zip
DH-IPC-PDBW5831P-B360-E4-2712	DH_IPC-HX8(5)XXX-Sag_EngSpnFrn_PN_V2.622.0000000.22.R.190225.zip
DH-IPC-PDB4830P-B360-E4-0360B	DH_IPC-HX8(5)XXX-Sag_EngSpnFrn_PN_V2.622.0000000.22.R.190225.zip
DH-PSDW5631SP-B360-E4-D204-DC12V	General_IPC-HX8(5)XXX-Sag_Eng_PN_V2.622.0000000.20.R.190110.zip
DH-IPC-EB5531	DH_IPC-HX5X3X-Rhea_MultiLang_NP_Stream3_V2.800.0000010.0.R.190807.zip
DH-IPC-EBW8630P	DH_IPC-HX8XXX-Nova2_EngSpnFrn_PN_Stream3_V2.622.0000000.7.R.190619.zip
DH-IPC-EBW81242	DH_IPC-EBW8XXXX-Fafnir_MultiLang_PN_Stream3_V2.800.0000000.0.R.190520.zip

Model	Version
DH-PSDW81642	DH_IPC-PSDW8XXX-Fafnir_EngSpnFrn_PN_Stream3_V2.680.000000.1.R.190517.zip
DH-IPC-HCBW8442P	DH_IPC-HX5XXX-Volt_MultiLang_PN_Stream3_V2.800.0000000.1.R.190706.zip
ITC237-PU1B-IR	General_ITC237-PU1B(PW1B)-IR(IRZ)(L)_Eng_PN_Oversea_Europe_V2.622.0000000.1.R.181114.zip
ITC237-PW1B-IRZ	General_ITC237-PU1B(PW1B)-IR(IRZ)(L)_Eng_PN_Oversea_Europe_V2.622.0000000.1.R.181114.zip
ITC215-PW4I	General_ITC215-PW4I-XXX_Eng_PN_Oversea_ITCPUSH_EuropeENTRANCE_V2.623.0000000.1.R.190820.zip
ITC952-RF2D	General_ITCXX2-RF2D-IR_Eng_PN_Oversea_3G_V2.622.0000000.7.R.190321.zip
ITC352-RF2D	General_ITCXX2-RF2D-IR_Eng_PN_Oversea_3G_V2.622.0000000.7.R.190321.zip
ITC314-PH2A	General_ITCXX4-PH1B(PH1C)(PH2A)-(TF2)_Eng_PN_Oversea_Europe_V2.622.0000000.1.R.180418.zip
DH-TPC-SD8X21	DH_TPC-SD8X21-TB_MultiLang_PN_V2.630.0000000.0.R.190831.zip
DH-TPC-SD2221-T	DH_TPC-SD2221-TB_EngItlSpnFrn_PN_V2.630.0000000.1.R.190530.zip
SDT5X225-2F-WA	General_SDT5XXXX-HN-WA-V_MCU_V2.401.0000000.53.R.191028.zip DH_SD-Fafnir_Eng_PN_Stream3-LingtongV2_V2.810.0000000.99.D.191028.zip
DH-SD8A240WA-HNF	DH_SD-Fafnir_Eng_P_Stream3_V2.623.0000000.13.R.190227.zip
DH-SD5A445XA-HNR	General_SD5AXXX-HN_MCU_V2.401.0000000.41.R.190712.zip General_SD-Prometheus_MultiLang_NP_Stream3_V2.800.0000000.15.R.190802.zip
DH-SD49425XB-HNR	General_SD5AXXX-General_SD-Prometheus_MultiLang_PN_Stream3_V2.800.0000000.19.R.190902.zip
DH-SD1A404XB-GNR	DH_SD-Prometheus_MultiLang_PN_Stream3_V2.800.0000002.3.R.191121.zip
DH-PTZ1C203UE-GN	DH_SD-Eos-Civil_MultiLang_PN_Stream3_V2.800.0000000.5.R.190827.zip
DH-SD6CE230U-HNI	DH_SD-Eos_MultiLang_PN_Stream3_V2.800.0000000.5.R.190827.zip
DH-SD29204UE-GN-W	DH_SD-Eos-Civil_MultiLang_PN_Stream3_V2.800.0000000.5.R.190827.zip
DHI-VTO7541G	General_VTO75XXX_Eng_P_SIP_V1.000.0000000.9.R.190724.zip
DHI-VTO2202F-P	General_VTO2202F_MultiLang_PN_SIP_V4.400.0000000.2.R.20190919.zip
DHI-VTO6421F	General_VTO64XXF_Eng_P_128M_SIP_V1.000.0000001.0.R.20190517.zip
DSS PRO	General_OverseasDSS-PRO_Win64_IS_V7.002.10AU003.0.R.20191113.exe
DSSC9100/C9505	General_DSSC9100_MultiLang_Phoenix_V3.000.0000011.0.R.191210.tar.gz

Model	Version
playsdk	General_PlaySDK_MacOS64_IS_V3.042.0000000.2.R.190926.zip
DMSS	General_DMSS-Android-Phone-Plus-Device_MultiLang_Basic_IS_V4.050.0000008.2.R.190924.apk
Player	General_SmartPlayer-Win32_Eng_IS_V4.000.0000001.4.R.191009.zip
NetSDK	General_NetSDK_ChnEng_iOS_IS_V3.051.0000005.2.R.191029.zip
NKB1000	Customer_NKB1000_TurEng_V2.620.13KB100.0.R.20190425.bin
NKB5000	General_NKB5000_MultiLang_V3.212.0000000.1.R.191203.BIN

## 7 Pending Issues

None.

## 8 Update Guide

This product can be upgraded in 3 ways, including ConfigTool, local USB disk and WEB client interface.

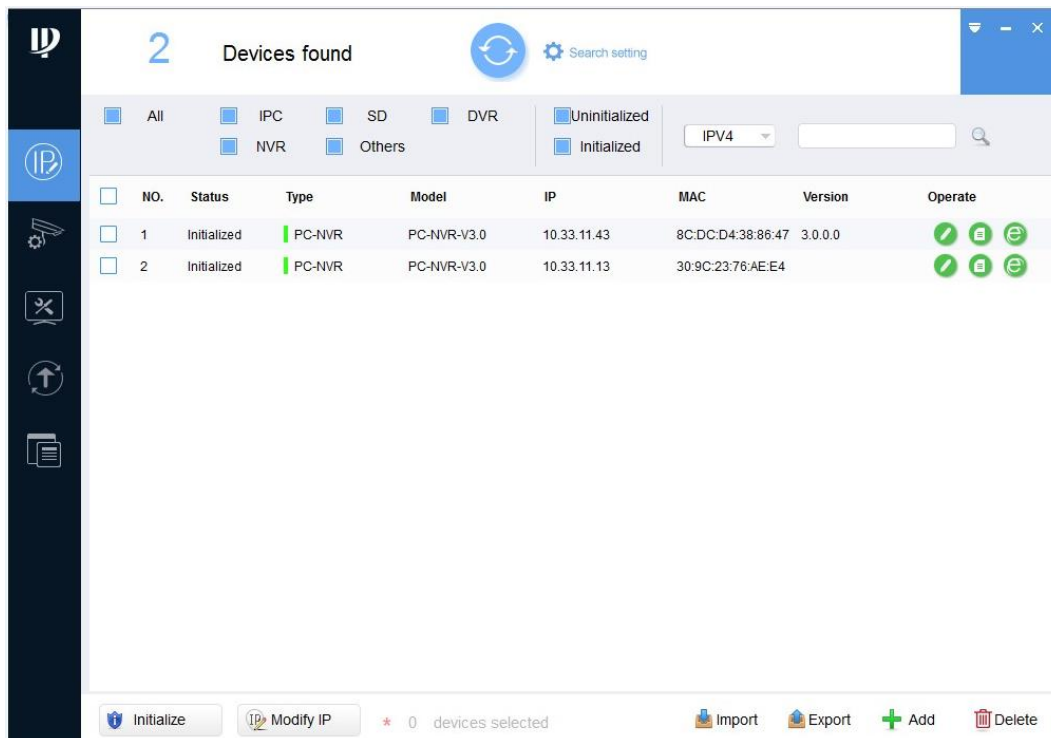
The upgrade time depends on the question whether the device has smart module. It takes about 2-3 minutes to upgrade the version without extension module, and about 7 minutes to upgrade the version with smart module (irrelevant with quantity of smart modules).

VSS takes protective measures to deal with abnormal power-off during upgrade. Upgrade will fail in case of power-off during upgrade, so the user shall try to avoid power-off.

### i. ConfigTool (Based on V4.0.9 and Later Version)

Install Configtool → Add Device → Select upgrade file and upgrade.

Open ConfigTool to search the NVR and IPC in the same network segment, or you can manually enter the IP to search, and update the NVR that needs to be updated. The ConfigTool interface is displayed as follows:



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