Network Video Recorder Version 5.0

User Manual

2023.05.10

CONTENT

CHARPTER 1   Product Introduction

1.1 Product Overview

This equipment is a digital video surveillance product specially designed for the security field. By using the embedded LINUX operating system to enable the system to operate more stably.; besides, with the standard H.265 video compression algorithm, to achieve a high quality, low bit rate, single frame play and other video functions.

This product comply with the national standard GB 20815-2006 "video security monitoring digital video equipment", which has many functions, such as record, play back, monitor at the same time, realize the synchronization of audio and video, has advanced control technology and strong network data transmission ability.

1.2 Product Function

Based on different software and hardware version, product's features are different.

- Real time surveillance
- Compression processing ability
- Recording function
- Recording playback and backup
- IP camera control
- Alarm management and control
- Communication port
- Network function

CHARPTER 2   INSTALLATION GUIDE

2.1 Check

   When user receives product, please check all items according to list

2.2 Hard Disk Installation

  Installation Preparation

     Need to prepare a cross screwdriver. This series of IVR can be installed in the case with 1 to 24 hard disks, and the largest capacity of hard disk could reach to 8TB.

2.3 Installation Steps

Disconnect the power from the IVR before installing a hard disk drive(HDD).

Factory recommended HDD should be used for this installation.

Step 1: Remove the cover from the IVR by unfastening the screws on the back and side.

Step 2: Install 4 crews on HDD.

Step 3: Install HDD in the HDD rack using the provided screws.

Step 4: Turn over the machine and fasten the screws on the button to fix the HDD.

Step 5: Fix the HDD with screws

Step 6: Connect the power cable and SATA cable.

CHARPTER 3 HOST OPERATION

3.1 Boot and Shutdown Operation
3.1.1 Boot

User offer power to NVR, NVR will start,After the boot is completed, the NVR will go boot wizard mode (simple mode) by default, and the normal mode -- administrator password -- time setting -- network setting -- mobile phone monitoring -- disk management -- channel connection interface. After finish the above operations, the basic operations have been completed (the specific operation instructions are introduced in the following sections). Click finish and enter preview interface,The default video output mode is multiple screen output mode. If the boot time is within the set time of recording, the system will automatically start the timing recording function.

⚠️ Note: Please use the right power which matching the network digital video recorder, do not use the other type or brand of power instead of the original one.

3.1.2 Shutdown

✦ To press switch on front panel to shutdown device,((the user should be authorized to Shutdown）

✦ Preview interface, the first icon ⏻ in the bottom left corner, to choose "confirm" in【Shutdown】（Hints：Advise to use this method to shutdown to avoid to damage device)

Note: Need to turn off power before changing hard disk.

3.1.3 Power Off Recovery

If power supply of device is cut off or forced off when network video recorder is in working mode, the video recorder will automatically save

recording before power off and automatically restore to the working state before power on to continue working

3.2 Login System

After finish wizard, device will enter preview interface, click right key of mouse to exit full screen mode, then click other function keys, then user can operate NVR, If you click the exit wizard, enter the full screen, and then click the other function keys, the user log in interface would be popped up. The user can login the system by inputting the correct user name and password (default user name: admin, password: 123456)

3.3 Menu Operation

After log in, user can configure according to tool bar of interface

Preview	Playback	Channel setting	Configuration	Smart search
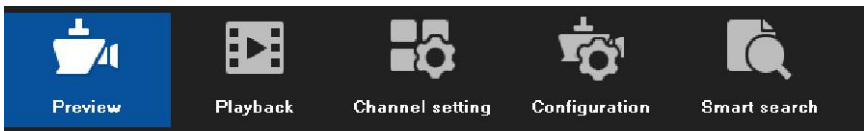
3.3.1 Preview

3.3.2 How to connect IPC to IVR

Before configuring IVR, user needs to know how to connect IPC to IVR. The device support multi-version ONVIF protocol, is compatible with famous brand IP Camera, such as following brand.

Before IPC (network camera) is connected to IVR, please ensure that IP address and IVR are the same network segment, and the main stream and sub stream need to be adjusted to the recommended value. Otherwise,maybe user can not search IPC,no image display,no image access, poor image quality...etc(At present, the MAC address of the added camera is bound, no matter how the camera IP address is changed or the network segment is changed, as long as it can be searched by IVR, IVR can adaptively cross the network segment to display image, only support slink,i9 protocol)

Connect IVR to LAN switch through network cable, then boot it,

click ![Configuration icon] icon to enter into" network management" interface, user configure IP address, Subnet mask,gateway on basic parameter interface. The IP address of IVR can be pinged by running ping command from PC host in LAN to detect whether IVR has been connected to LAN, then click ![Channel setting icon] icon to enter channel connection interface, such as following picture:
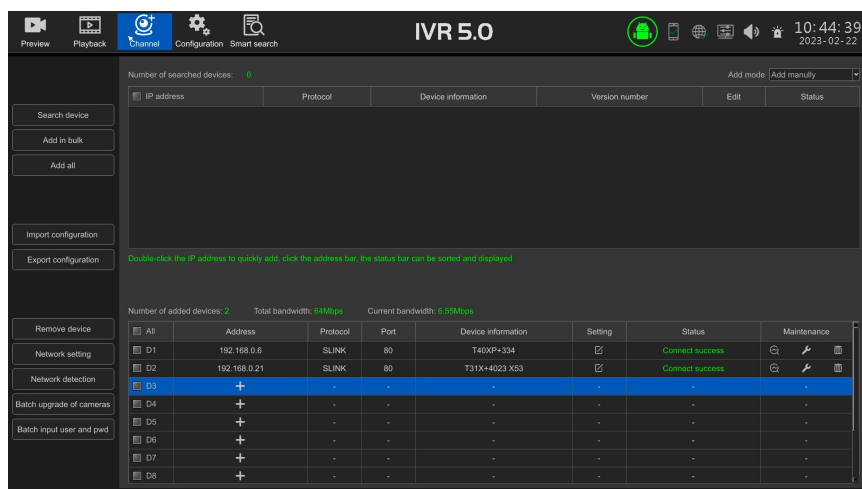
IVR will search automatically all IPC connected to LAN, user can add them to relative channel according to requirement,moreover,under condition that user know IP address, port parameters, click 【 ➕ 】 on address bar to input relative parameters, then save it, it also add channel.(refer to step 3.3.4)

To take real time preview, video recording playback, channel connection and advanced configuration for example to introduce IVR main function.

3.3.3 Preview

After the device starts up normally,like following picture:they are function shortcut key marked in red rectangle, there are relative characters displayed when user use mouse to point there.
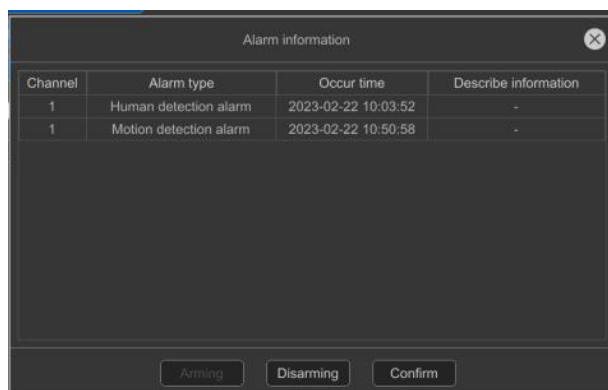
3.3.3.1 Interface Shortcut Function Introduction

There are many tool bars on preview interface,user can hide tool bars manually from upside, rightside and downside, there is different shortcut function on each bar,moreover,there are some hided shortcut function, now introduce them one by one.

✦ Upside Tool Bar

All configuration interface exist on this tool bar under it is not hided

1. Audio Input , user can adjust voice volume by slider

2.Channel audio volume switch , user can adjust volume through slider

3.Real time alarm light , when alarm occurs, light would be flash, after click indicator, it will display detailed alarm information, refer to following picture.

Channel	Alarm type	Occur time	Describe information
1	Human detection alarm	2023-02-22 10:03:52	-
1	Motion detection alarm	2023-02-22 10:50:58	-

Alarm information

Arming   Disarming   Confirm

In order to avoid alarm influence in usage,user can click "disarm" Disarming button to shield alarm information on interface(alarm still occurs, inquiry it on logs),if user need to inquiry realtime alarm information, just click"disarm" button.

4. After clicking APP, the device will display P2P APP download QR code and device ID QR code, device online situation, device series, refer to following picture.

After clicking detailed information on interface, it would be switched to AI cloud video interface, user can inquiry relative detailed information.

5.Network Information, the device network relative information would be displayed after clicking it, and diagnose and configure network, refer to

following picture:

6.Output adjust ⊞ icon, output mode would be displayed after clicking it, will display brightness, chroma, contrast, saturability, user can configure it by self-defined.

7.System information ⬤ icon, system information,hard disk information and recording information would be displayed after clicking it, refer to following picture.

8.Device time display, after clicking "click", it displays system
  Time and modify it quickly

✦ Rightside Tool Bar

    1.Image play mode

       There are two kinds of play mode,preview picture would be
       displayed according to requirements such as"device
       list"and"grouping patrol",default mode is "device list", however
       user needs to configure"grouping patrol" firstly, then it works

✦ Downside Tool Bar

1.Preview split mode ⊞ ,click it,user can choose preview split mode at will

2.Flip over ⟨ ⟩ ,turn the page of the current preview screen

3. Patrol switch and interval time ⊞ , enable patrol and set patrol interval time.

4.Linkage preview switch ⊞ , enable linkage preview swith,if trigger alarm, the preview image of alarm channel would be popped up to current preview interface.

5. Alert flashing frame ⊞ , enable it, if trigger alarm,the frame of preview channel imge will flash automatically.

6.Full screen mode ⊞ , display image in full screen on preview interface

7.Hide OSD ⊞ , hide preview interface OSD

8. P/T control ⊞ , enter P/T control interface

9. File backup ⊞ , enter local backup interface

10. Fullscreen snapshot ⊞ , take snapshot for all channels in preview mode

◆ P/T control interface

Before controlling P/T, please confirm set relative parameters is correct or not, after finish setting parameters,please choose controlling channel on preview interface, then control lens direction on P/T control interface, focal length,focus,aperture zoom in and out, P/T speed setting,

now take following introductions as example to explain how to set preset,cruise,patrol function in detail.
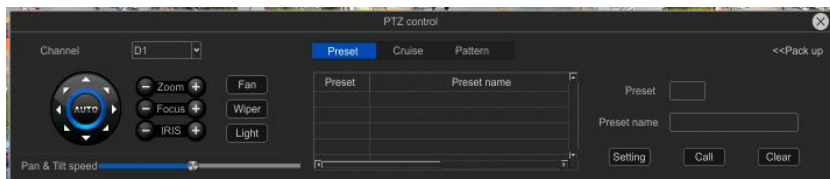
✦ Preset setting and call

    1) First choose channel, second turn camera to appointed place through controlling electronic Pan/Tilt, third choose one preset in the list of preset,finally click" setting"

    2) To choose one preset from list of preset, then click "call"

✦ Configure/call/delete cruise

  1) Choose one cruise number in the "cruise" list, to click"set" to enter"cruise setting" interface, then choose preset, cruise time, cruise speed, to click"add" icon,preset of cruise would be added successfully(add multi- presets) ;

2)Choose one cruise number in the cruise list, to click "call" icon, will call it;

3) Choose one cruise number in the cruise list, to click "delete" icon, it will delete this cruise number;

✦ Configure patrol and call

  1) Choose one patrol number in the patrol list, to click "set" icon to start to record, then carry out a series of direction operation, to click "set" again to stop recording trail, the trail would be recorded successfully.

  2) Choose one patrol number in patrol list, to click"call", will call it

✦ Swap channel

    To choose one channel and drag it to another channel, all configurations are swapped by default

◆   The toolbar is suspended on the lower side of the channel

When the mouse points to the bottom of the screen, it will appear a floating toolbar, refer to following picture.

1. Enable P/T Control

2. Display smart detection switch

3. Current channel snapshot

4. The same channel IPC intercom switch

5. Current channel audio switch

6. Video parameter configuration

7. IPC upgrade maintenance

◆ Right key menu

The menu basically includes above functions in full screen

or non-fullscreen, user can operate it according to

personal requirement, refer to following picture

3.3.3.2 Playback

Click ![Playback icon] icon to enter recording playback interface, there are local recording, local capture picture, external file in playback mode, default mode is local recording interface(like following picture)

3.3.3.3 Local Recording

✦ Channel choice

      System already choosed CH1 from channel list by default, user can choose inquiring recording channel and play it

✦ File search

      Default time is date of the current day, user can choose date,recording style, recording situation would be displayed on blank area of downside bar(note:different style recording corresponds to different color)

✦ Play recording

      User can drag it through mouse for searched recording bar, also slowly enlarge it through mouse roller to adjust time axis scale in 24 hours,time unit scale is 1h,0.5h,15 min,5min, 2min,1min; when mouse cursor move to time axis of colored column, it will display exact time hint, accurancy is second. Double click time axis to playback recording quickly, system will adjust recording scale according to playback accuracy, playback time position would be accurate.

✦ Shortcut function

Name	Screenshot	Function
Play start time	播放起始时间 06:17:25	Customize the start time of playback
Pause/Play	▶ ■	Play/Stop current recording
Stop	■	Stop playing recording
The forward/ reverse key	→ ←	Play recording forwardly/ reversedly according to time

Single frame play key		Play recording by frame
Jump forward/Jump back 30S		Make the video jump forward/backward for 30 seconds
Play slow/play fast	1X速度	Play recording by 1X/2X/4X/8X/16X speed
Split mode		Switch playback split mode
Previous/Next	‹ ›	The page-turning function key matches the split-screen function
Fullscreen		Zoom image in fullscreen
Backup key		Pop up file backup interface
Snapshot key		The capture operation is performed on the selected channel

3.3.3.4 Display Mode

✦ Rightside Tool Bar

Default display mode is "local recording", to choose relative channel , time and recording style,then click" inquiry" to get recording file

3.3.3.5 External File

✦ This module is to visit the files in the USB external storage device inserted into the IVR, and all the backup files can be searched in this module.

✦ Click the "Refresh" button at the under right corner, then the files in the USB external storage device can be retrieved, operate the controls on the toolbar underside the interface, you can do a series of operations to the

selected files to play/pause、stop、fast play、audio adjustment. Otherwise, click the "Delete" button at the under right corner can delete the selected files.

3.3.4 Channel Connection

After entering channel connection interface, IVR will search IPC automatically in LAN, after finish searching, user can add channel according to requirements,please refer to following picture.

1. Add mode: there are two modes- manual add and auto add

Auto mode:For ONVIF,SLINK,I9 protocol, bind adding camera MAC address, no matter how the camera IP address is changed in the future, and the network segment is changed, as long as it can still be searched by IVR, IVR can adaptively display image by cross the network segment

Manual mode: add IP camera by manual

2. Search device: to search through selecting relative protocol, IVR will finish searching all devices in LAN within 10 seconds

3.Add device in batches: IVR will sequence IP address of camera searched by system, to select many ip cameras to add them in batches,

4.Add all: add all searched IP cameras to IVR

5.Export configuration, export system configuration to external storage device connected to IVR by USB

6.Import configuration: import system configuration file in external device into IVR, it would be valid after restarting device.

7.Plug and play: Enable or disable this function

8.Delete device: to delete IPC through selecting one or many IP cameras.

9.Network configuration: enter network management-basic parameters interface

10. Network test: user can make PING test through choosing relative network card or destination address.

11.Upgrade IPC in batches: There are three ways to upgrade IPC: local upgrade, remote detection upgrade, and remote upgrade, as shown in the following figure.

Local upgrade:

Select the corresponding IPC, select the mobile hard disk or U disk upgrade file to upgrade

Remote Detection upgrade: Select the corresponding IPC, click Remote Detection, detect whether there is a new version, if there is, user can upgrade.

Remote upgrade: Select the corresponding IPC, need to connect external network and hard disk, and then upgrade

12. Bulk input user name and password: When there are multiple IP cameras in the LAN which has same user name and password, user can

check the right channel, click the button, bulk input user name and password.

13. Maintenance [icon] : Click Maintenance to maintain and upgrade the current ipc, as shown below

3.3.5 Advanced Configuration
(Note: It is divided into expert mode and simple mode. Expert mode includes all functions of simple mode and more functions, will mark which functions would be appeared in expert mode.)

3.3.5.1 Video Paramenter
3.3.5.1.1 OSD setting
✦ OSD setting
1.Preview playback display VCR channel name: default red font displayed in the upper left corner of the screen, can be modified

2.Superimposed camera name in the video data: is the name of the camera

3.Overlay time information in the video data: user can select different time/date formats for the specified channel, the channel name and time and date are marked with yellow rectangular boxes on the screen, the mouse can be dragged arbitrarily, and the display size can be set;

Copy to: Copies the configuration parameters of the current channel to another channel

Note: The above configuration for the IPC needs the IPC support, then it would be effective!

3.3.5.1.2 Coding Parameter(expert mode)

1. Video type: There are two types: composite stream and video stream. When the channel supports audio output, the composite stream should be selected.

2. Resolution: The resolution of sub-stream and main stream is different, and there are many resolutions to choose from (different models have different IPC resolution options)

3. Bit rate types: including fixed bit rate and variable bit rate two types

4.Bit rate limit: Different values can be selected in the drop down list, and can also be customized

5.Video frame rate: Different values can be selected from the drop-down list, the default is "full frame rate"

6.Image quality: When the bit rate type is variable bit rate, different image quality can be selected according to the need

7. Encoding type: Different values can be selected in the drop down list

8.I-frame interval: The common I-frame interval is 25

3.3.5.1.3 Lens Parameter (Expert Mode)

1. Brightness, contrast, saturation and chromicity can be adjusted from 0 to 255, and user can restore to the default by one key

2.Light mode: Displayed according to the support type of IPC

3.Light control: Shutdown,auto,manual

4.Light brightness: 0-100 adjustable

5.Switch mode: external trigger,auto,color, black and white

6.Trigger level: high and low

7.IR cut trigger: forward and reverse

8.Advanced setting: Various Settings of front-end IPC lens parameters were performed

3.3.5.1.4 Privacy Mask (Expert Mode)

Once enabled, mask the specified video area so that it is not visible for preview and playback

3.3.5.2 Recording Storage

3.3.5.2.1 Recording Schedule

✦ Plan Recording

There are 4 video modes, the default is "timing recording + alarm recording", which can be switched

1.　Timing recording + alarm recording: in the set timing video period, or the alarm has triggered the video, the current channel system will carry out the video operation

2.　Timing recording:The current channel system will perform the recording operation only during the set timing recording period

3.　Alarm recording: Only if the alarm recording function is triggered, the current channel system will perform the recording operation

4.　Stop recording: The current channel immediately stops recording, unless the manual recording function is enabled in the preview screen

5.　Set event recording time: Click, then the described function below will appear

　　Motion detection, alarm input and intelligent event can be quickly entered into the relevant setting interface

6.　Motion detection and defense linkage: Click to directly enter the motion detection interface for setting

7.　Alarm input and defense linkage: Click to directly enter the alarm input page for setting

8.　Intelligent event defense linkage: Click to directly enter the intelligent analysis page for setting

9.　Pre-recording and delay: Whether to enable pre-recording and delay function, and can set different time

　　Note: The setting of video time period is aimed at "timing video recording", pre-recording time and video delay are aimed at "alarm video recording", otherwise it is not set

10.　Set the timing recording time period: click to set any time of the day; After clicking Edit, you can manually set the time period

11. Disconnection supplement recording: Whether to enable the disconnection supplement recording function, the camera needs to insert the SD card to support

3.3.5.2.2 Storage Mode (Expert mode)

The information on the page details the current IVR storage mode, as shown below

1. After recording: There are two ways: "Auto overwrite" and "stop recording", the default is "Auto overwrite"

2. SMART processing: There are two ways to "ignore the error and continue recording" and "stop recording when there is an error"

3. Video stream mode: There are two modes: "main stream + sub-stream" and "main stream"

4. Record retention time: After opening, it will be calculated according to the ivr connected to the current device for the maximum retention time, which is set by the user. The setting time shall not exceed the maximum storage time of the hard disk

5. The system defaults "automatic grouping" for recording, that is, all channels of recording are written to one hard disk by default, and then switch to the next hard disk after recording is full. If IVR only receives one hard disk, it will overwrite the historical recording or stop recording according to the way selected by "Recording post-processing" in the storage management page. It should be noted that when the device has more than 32 channels of video

recording and multiple hard disks are connected to the device, in order to ensure the efficiency and performance of the hard disks, it will record to two hard disks by default. The first 32 channels of video recording will record to one hard disk, and the remaining channels will record to the other hard disk

6. Manual grouping: Enable manual grouping, manual grouping function is to group the channels, different groups of channels can be recorded to different hard disks, and each channel can also be set quotas, as shown below, there are two groups, ch1-ch6 in group 1, ch10-ch15 in group 2, and group 1 has a quota set for the channel. In addition, all channels record to Disk0-2-0, group 2 does not enable quota, and all channels record to Disk1-4-0.
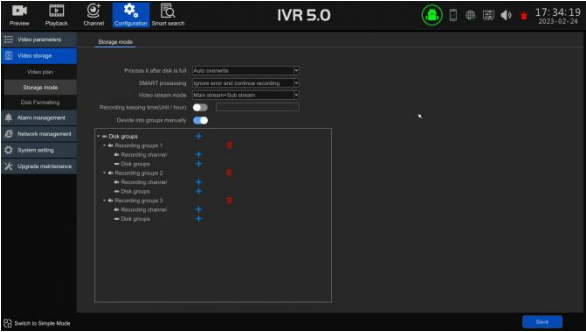
Key note: manual grouping operation, maybe clear the history of video data in hard disk,please be careful, so as not to cause irreparable loss!

7. Advanced Configuration

✦ Select enable RAID, click Save,user needs to restart the device, and the array configuration menu will appear on the interface after restarting;
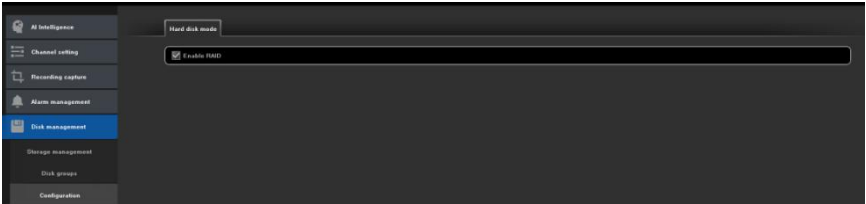
✦ Click to enter the array configuration, physical disk interface, display the status of the hard disk connected to the device, in this interface, you can set up hot spare hard disks, create various types of arrays or configure arrays with one click, etc.;
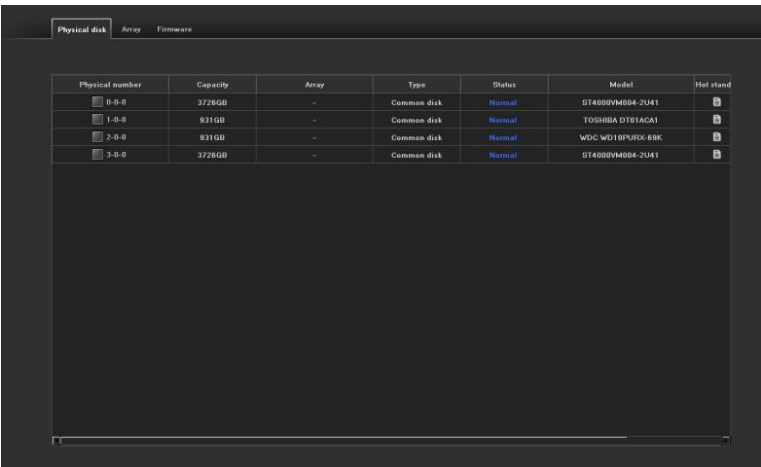
1) One-key configuration

The RAID5 type array is created by default, and the array is named. After clicking OK, all the hard disks connected to the device will be created as a RAID5 array by default, and the hot spare disk will be automatically allocated according to the number of hard disks connected.

Up to two disks can be allocated as Hot Standby;
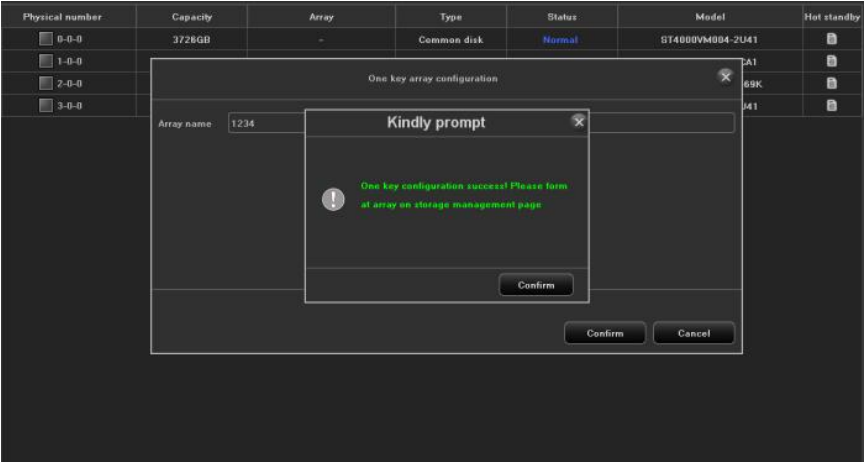
After the configuration is completed, the hard disk needs to be formatted. At this time, a prompt to format the array appears on the storage management
page
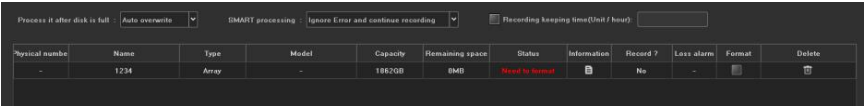
After selecting the array that needs to be formatted, click the format button,interface as shown below;
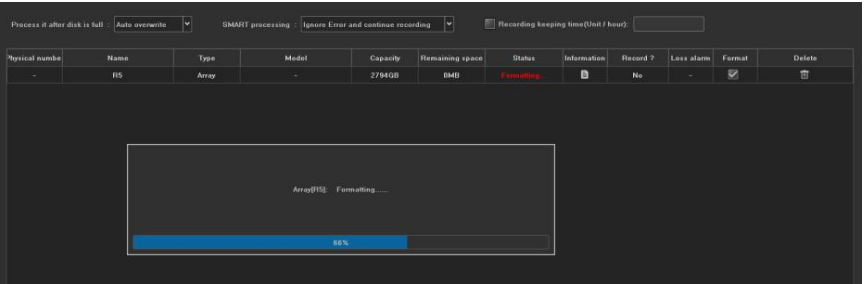
After the formatting is completed, the one-click configuration of the array is completed, and there are automatically created arrays and hot spare displays on the physical disk and array interfaces;

2) Create array

Five array types can be created: RAID0, RAID1, RAID5, RAID6 and RAID10;

✦ RAID0: At least two hard disks are required to be created, and the array capacity is the sum of the two hard disk capacities;

　　Click Create Array, name the array, select RAID0 type, select at least two hard disks, and click OK;
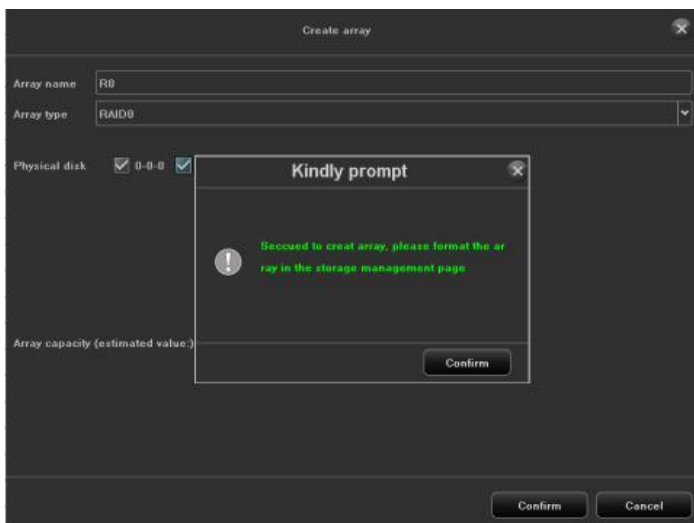
After the creation is completed, the hard disk needs to be formatted; in the storage management interface, check the array to be formatted. After the format is completed, you can see that an array has been created in the array interface;

No.	Name	Capacity	Physical disk	Hot standby	Status	Type	Rebuild	Delete	Task
1	R0	1397GB/1396GB	0-0-0 2-0-0		Normal	RAID0	🗎	🗑	-

The created array is displayed on the physical interface, and hot spare settings can be performed. Select the hard disk that needs to be used as a hot spare. After clicking the hot spare button, the hard disk type becomes a hot spare disk. When the hard disk in the array fails, the hot spare The spare disk can replace the failed hard disk to back up data to avoid data loss; click Delete to cancel the hot backup function of the hard disk;

Physical number	Capacity	Array	Type	Status	Model	Hot stand
0-0-0	931GB	R0	Array	Normal	TOSHIBA DT01ACA1	-
2-0-0	465GB	R0	Array	Normal	WDC WD5000LPVX-2	-
☐ 3-0-0	931GB	-	Common disk	Normal	ST1000VM002-1SD1	🗎

✦ RAID1: At least two hard disks are required to be created, and the array capacity is only equal to the capacity of one hard disk;

Click Create Array, name the array, select RAID1 type, select at least two hard disks, and click OK;
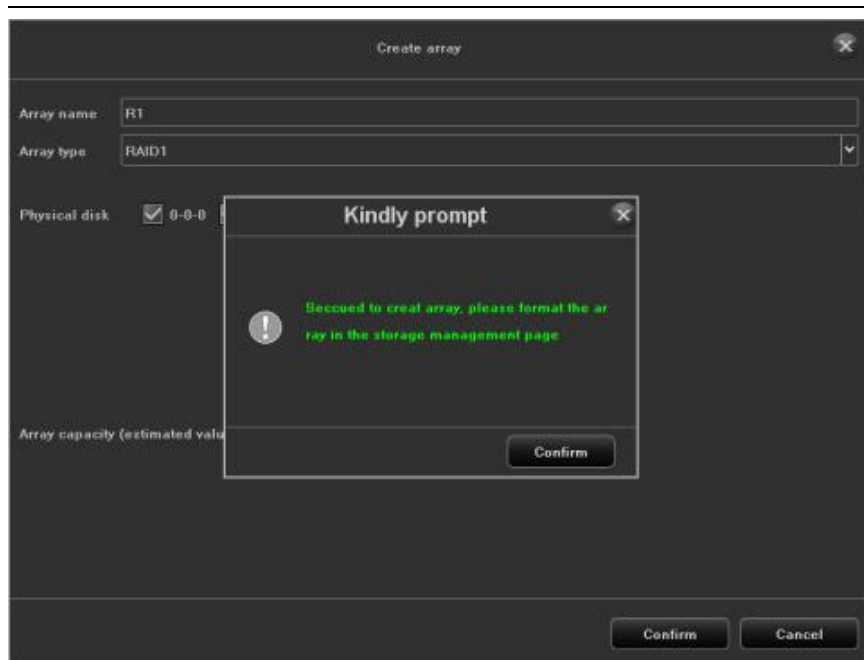
It is also necessary to format the hard disk. After formatting, the created array can be seen on the array interface, as shown in the figure below;

✦ RAID5: Create at least three hard disks (or more), and the array capacity is the number of hard disks n-1;

Click Create Array, name the array, select RAID5 type, select at least three hard drives, and click OK;

It is also necessary to format the hard disk. After formatting, the created array can be seen on the array interface, as shown in the figure below;

No.	Name	Capacity	Physical disk	Hot standby	Status	Type	Rebuild	Delete	Test
1	R'	1397GB/1398GB	8-8-8 2-8-8		Normal	RAID5	🗎	🗑	-

✦ RAID6: At least four hard disks are required to create, and the array capacity is (n-1) minimum capacity*2

Click Create Array, name the array, select RAID6 type, select at least four hard disks, and click OK;
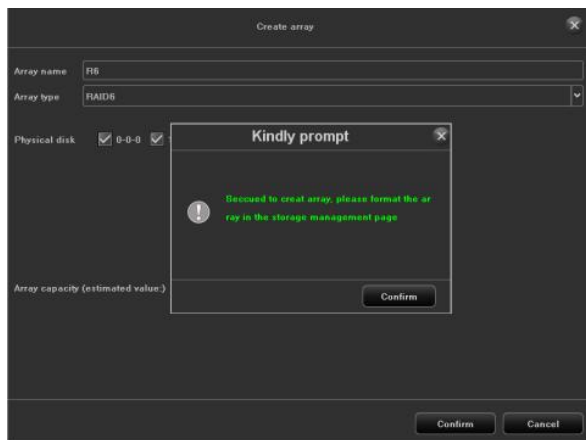
It is also necessary to format the hard disk. After formatting, the created array can be seen on the array interface, as shown in the figure below;

No.	Name	Capacity	Physical disk	Hot standby	Status	Type	Rebuild	Delete	Task
1	R²	1397G8/1398G8	0-0-0 2-0-0		Normal	RAID6	🖪	🗑	-

✦ RAID10: At least 4+2*n disks are required to be created the array (n>=0), and the array capacity can only use half of the disk capacity or less;

Click Create Array, name the array, select RAID10 type, select at least four hard drives, and click OK;
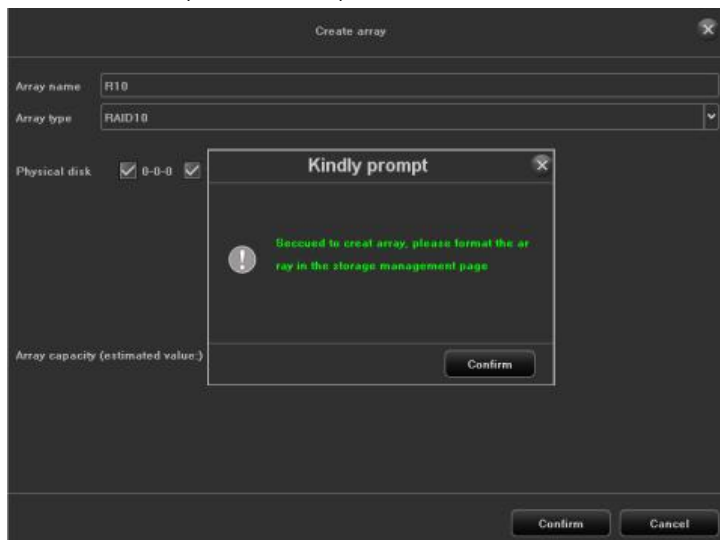
It is also necessary to format the hard disk. After formatting, the created array can be seen on the array interface, as shown in the figure below;

No.	Name	Capacity	Physical disk	Hot standby	Status	Type	Rebuild	Delete	Task
1	R'	1397GB/1398GB	0-0-0 2-0-0		Normal	RAID0	🗎	🗑	-

✦ **Array interface:**

Can delete and rebuild the created array;

No.	Name	Capacity	Physical disk	Hot standby	Status	Type	Rebuild	Delete	Task
1	R0	1397GB/1398GB	0-0-0 2-0-0		Normal	RAID0	🗎	🗑	-

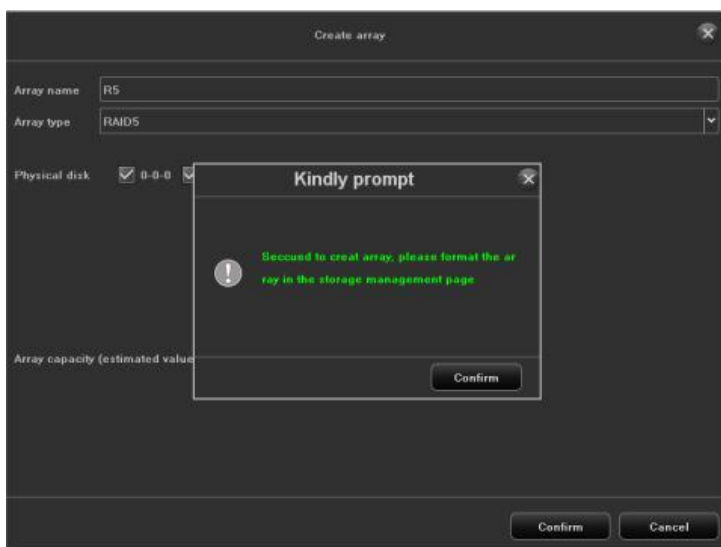Delete: The created array can be deleted, the interface will no longer display the array after deletion, the physical disk interface, the hard disk status will be restored to ordinary disk;

Physical number	Capacity	Array	Type	Status	Model	Hot stand
☐ 0-0-0	3726GB	-	Common disk	Normal	ST4000VM004-2U41	🗎
☐ 1-0-0	931GB	-	Common disk	Normal	TOSHIBA DT01ACA1	🗎
☐ 2-0-0	931GB	-	Common disk	Normal	WDC WD10PURX-69K	🗎
☐ 3-0-0	3726GB	-	Common disk	Normal	ST4000VM004-2U41	🗎

Rebuild: After clicking Rebuild, the interface will display the name and type of the current array and the disks in the array. Choose one of the ordinary disks of the device as a supplementary hard disk. Do not unplug the hard disk during the reconstruction process to avoid data loss;

If the hard disk in the array is damaged and then refill the hard disk, the data can be backed up by rebuilding;

✦ Firmware: display the related information of the array and the background task speed setting;

Version: Display the current software version information of the device;
Number of physical disks: the maximum number of hard disks that the device can access;
Number of arrays: the maximum number of RAID arrays created;
RAID type: RAID type currently supported by the device, RAID0, RAID1, RAID5, RAID6, RAID10, etc.;
Hot spare type: global hot spare, that is, the hot spare disk is for all arrays of the device. If there is a hard disk failure in the array, it will be used as a replacement disk to back up data;
Support for reconstruction: After the hard disk in the array is damaged, the additional hard disk can be rebuilt and restored in the array;
Background task speed: refers to the recovery speed of data reconstruction or hot backup when the array fails. Different speeds can be set, including high speed, medium speed, and low speed;

✦ **Downgrade:**
When the hard disk in the array fails, the array will be automatically degraded. At this time, if there is a hot spare disk in the array, the reconstruction and recovery will start automatically. The reconstruction time will depend on the amount of data;

No.	Name	Capacity	Physical disk	Hot standby	Status	Type	Rebuild	Delete	Task
1	R5	1862GB/1862GB	1-8-0 2-0-0 3-0-0		Degrade	RAID5	📄	🗑	Rebuild(Processing)0%

If the hot spare disk is not set, you need to click the rebuild button to rebuild manually. After clicking OK, the rebuild will start, and the rebuild time will depend on the amount of data;
note:

Currently, only 3536 devices with 10 bays or more support the RAID function;

It is recommended to use professional-grade video hard disk for the hard disk of the connected equipment, and the hard disk model and capacity should be consistent;

It is recommended that the input data for each array be around 100M;

3.3.5.2.3 HDD Format

1. Refer to following picture

2. Format: check the hard disk that needs to be formatted, and then click **格式化** the button (Note: when the state is "need to format", the hard disk must be formatted before it can continue recording. In addition, do not do other operations during the format process)

3. Create network disk: fill in the network disk name, select the protocol, IP address, and network disk directory

3.3.5.3 Alarm Management

3.3.5.3.1 Normal Event

✦ Motion Detection

1. Detection mode: The default is "front-end detection", when "device capability" supports smart (intelligent detection), the mode can be switched to "IVR local detection

2. Sensitivity: When properly set, the accuracy of motion detection trigger can be increased

3. Area setting: directly hold down the left mouse button on the screen and drag to the area that needs to be moved. The red grid area that appears is the selected area for moving detection

4. Arm time: Select the time interval for arm

5. Linkage mode: Select the linkage mode

6. Full screen frame: Set the whole screen area to be the area of motion detection by one click

7. Full screen Clear: One click to clear the previously set movement detection area on the screen

✦ Video Loss (Expert Mode)

The configuration interface for video loss is enabled throughout the day by default, and "Monitor alarm" is enabled by default

✦ Video Occlusion (Expert Mode)

The setting method is similar to motion detection, and the drawn area will form a black block on the screen. It should be noted that the channel accessed by the onvif protocol does not support occlusion alarm function

✦ Alarm Input (Expert Mode)

1. Alarm input: Select local or remote

2. IP device address: can not be modified if color is grey

3. Alarm input name:

4. Only fill in when local alarm input is selected, otherwise it is grey

5. Alarm state: normally open or normally closed, normally closed is selected to trigger the alarm

6. Enable Alert handling (disabled by default)

7. Arm time & linkage mode: Select the time period and linkage mode to be armed

8. Copy to: Copies the above configuration to another channel

✦ Alarm Output (Expert Mode)

1. Choose local alarm output port

2. Customize the alarm output name

3. Set arm time

4. Customize alarm output delay time

✦ Manual Alarm (Expert Mode)

User can manually trigger one or all of the local alarm outputs individually

3.3.5.3.2 Smart Event

Under this mode, the intelligence supported by the ipc is automatically obtained according to the connected channel ipc, as shown in the following figure. The current ipc channel only supports human detection, and the following focuses on the specific operation of other intelligence
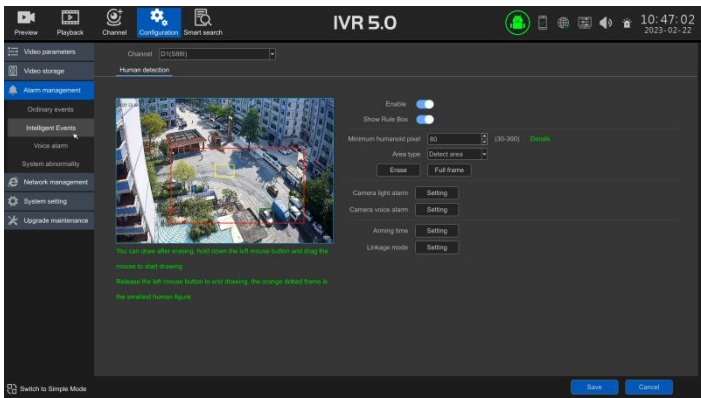
✦Target Count

The function of this page is to configure the relevant parameters, when the moving objects, which is larger than the proportion,cross the set detection line , and number of which is more than quantity of set detection rule,the target count alarm will occur. The following describes how to set parameters on the page:
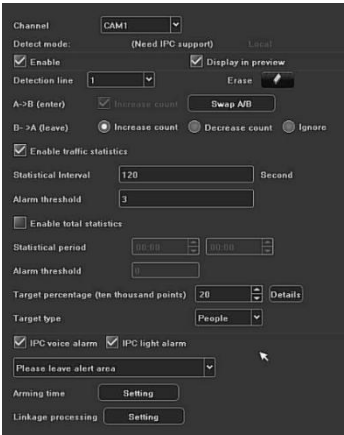
1. Display on preview: After enabling it,user can see the detection line and statistical results on the preview interface;

2.Detection line: user can set maximum 4 detection lines, drag mouse left key to draw the line directly on the screen, release the left key, and click the right key to finish drawing line.Two sides of the detection line are respectively AB area, The statistical results will be displayed on the upper side;

3.Erase: One key to clear drawing line on the screen.

4 .A->B: The default count is from area A to area B, and the position of area A/B   is exchanged;

5 .B->A: "Increase count number" means "flow statistics result='A->B number'+'B->A number", "decrease count number" means "flow statistics result='A->B count number'-'B->A count number'", "ignore" namely "traffic statistics result='A->B'count number";

6 .Proportion: Only when the proportion of the moving object in the screen exceeds the set size, the moving object would be regarded as "target". When setting, a yellow dotted rectangle as a size reference will appear in the center of the screen ;

7. Traffic statistics: After enabling,user can set the "traffic statistics interval and alarm threshold";

8.Total statistics: After enabling,user can set the "statistical time period and total alarm threshold";

9 .Arming schedule: set the arming time, the default is all day arming;

10.Linkage processing:user can enter the linkage configuration page to perform linkage configuration operations when the alarm is triggered

According to the above settings,the Occupation ratio of moving objects (vehicles) on No.1 channel is more than 150, when it cross the detection line, and the number of cross-line vehicles is 2 every 60s, and it does not trigger alarm,but the number of cross-line vehicles is 201 between at 10:00-15:30, which exceeded the threshold of 200 and triggered the target count alarm. The above picture is real-time picture when the alarm occurs.

✦**Object left/loss**

The function of this page is to configure relevant parameters,if time of objects left or loss is more than set detection time for the objects which are larger than the proportion,alarm will occur.The following describes how to set the main parameters on the page

1. Detection area: user can set maximum 4 detection areas on each picture, drag left key of mouse directly on the screen to draw a line, release the left key, move the mouse and click the left key again to form second

lines,   The area would be formed automatically after click right key of mouse, that is detection area (a qualified area must be formed by two lines drawn manually);

2.Detection type: "Object loss", "object left behind", "object loss or object left behind";

3.Proportion: Only when the proportion of moving objects on the screen exceeds the set size,the moving objects would be regarded object

4.Detection time: When time of object loss/left behind exceeds set time, system will trigger alarm

According to the above settings, the Proportion of moving objects on the channel is more than 150, when the moving objects disappear more than 30s in the detection area, system will trigger alarm, following picture is real-time picture in preview mode when alarm occur before and after (the blue rectangular frame is area of object loss.

Before alarm ↓   When alarm ↓

✦ **Electric Fence**

The setting interface as follow
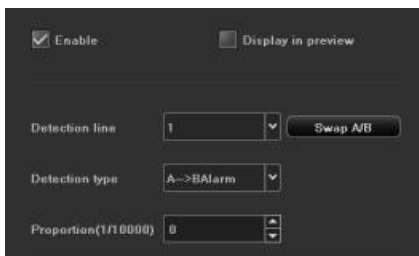
1. Enable:Enable or disable Electronic Fence detection function.

2. Display in Preview:User can set rules and detection result whether are displayed in real time preview, as above picture.

3. Detection Area: user can set maximum 4 detection areas which comply with setting rules.

Detection Style:

1. Intrusion Detection: When object enter detection area, alarm would be triggered until Object leave monitoring area.

2. Object Enter: When object enter into monitoring area from other areas.

3. Object Leave: When object leave from monitoring area.

4. Object Enter or Leave: Object enter into monitoring area or leave from relative area.

5. Object wander: Object wander in the setting area.

6. Proportion: Check object proportion on picture.

7. Detection Time: detection time is valid only for wander detection, when wandering time of object is beyond set time, it would be triggered alarm. Detection time column would be gray for detection time of other detection type.

8. Set detection area: use mouse to click area which need to be line, press mouse left key to draw line, mouse left key will draw one turning line for every click, use mouse right key to end to draw line, it will form a polygon area automatically, like above picture(red area is detection area,blue imaginary line frame is object proportion size) .

9.Erase drawing Line: click "erase Line" to clear area.

10. Schedule time and Linkage processing setting are same with face detection setting

11. Object type: human,vehicle,all(human and vehicle), after choose type, system will count types.

12.Audio linkage: choose audio linkage, trigger electronic fence, detect alarm, will link to alarm and broadcast relative hint sound.

13.Alarm light: Choose alarm light, after triggering electronic fence, detect alarm information, it will link to alarm light output.

14.After finish setting parameters, click"save" button, it would be valid.

✦ **Cross-line detection**

The function of this page is to configure the relevant parameters, when the moving objects, which is larger than the proportion,cross the set detection line,cross line detection alarm will occur. The following describes how to set parameters on the page:

1.Detection line: user mouse to draw detection line on picture,switch from A to B by one key

2.Detection type:"A->B alarm"、"A<->B alarm"two types

3.Proportion:filter moving object which its proportion is less than set

proportion

According to the above settings, the Proportion of moving objects on the channel is more than 30, cross line from A area to B area and trigger area detection alarm, following picture is real-time picture in preview mode when alarm occurs (detection line would flash alternately in red or blue, blue frame would track moving object after moving object cross detection line)

✦ Human Detection

1. Only IP camera support this function

2.Support to detect static and dynamical human shape of monitoring

area.

3.Advise to set accurate human size range according to different usage scene, it will make detection faster and reduce wrong detection.

Human detection configuration as follows:
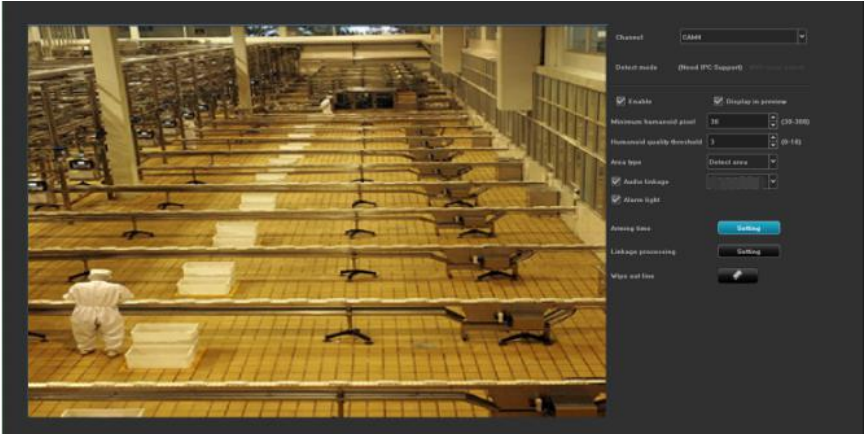
1.Detection Mode: only support IP camera with human detection function.

2. Enable: Make human detection enable or disable.

3. Min human pixel: range from 30 to 300, will detect human shape of

human pixel more than or equal to minimum pixel(blue frame).

4.Human quality grade threshold value: capture human of threshold value

is more than or equal to human quality grade threshold value.
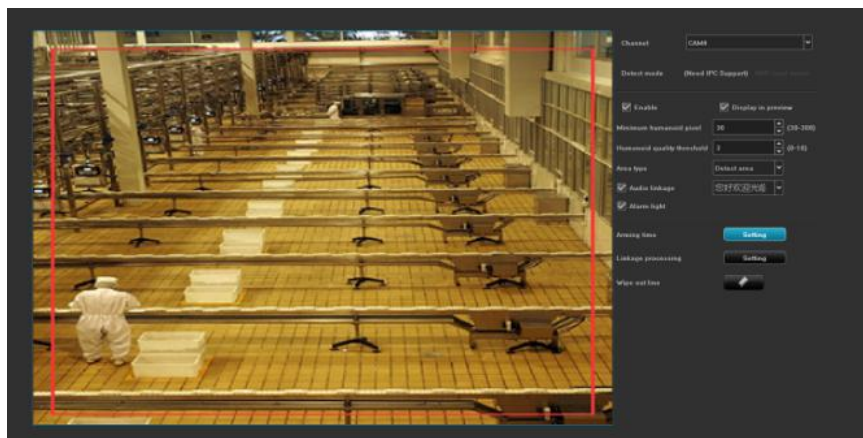
4. Set Detection Area: Press mouse key to click area which would be drawn on picture of channel,whatever direction user hold mouse right key to move to, it will create red frame,if setting is not good, user can erase it and reset it, shielding area setting is same with this.(Note: if shielding area is overlapped on detection area, it would be priority, please refer to following picture.

6.Arming time and Linkage processing operation are same with face detection.

✦ **Retrograde detection**

Retrograde detection setting interface as follows:
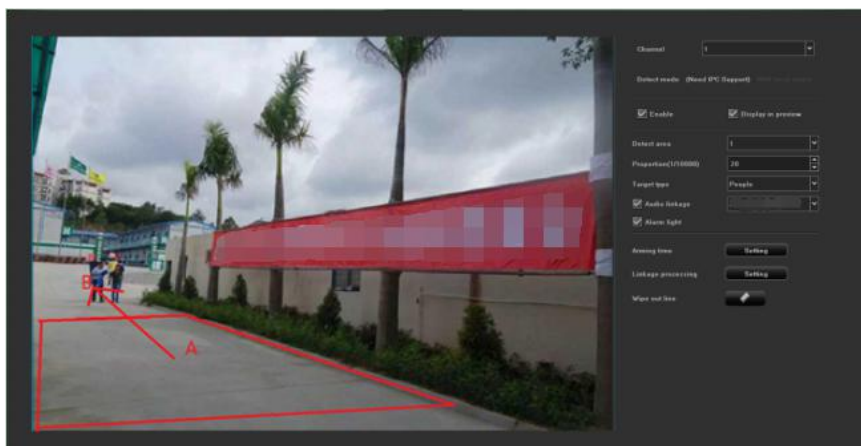
Advise to set accurate detection area according to different usage scene, it will make detection faster and reduce wrong detection.

1.Enable: enable or disable this function.

2.Detection Mode:IP camera must support this function.

3.Display in Preview:User can set rules and detection result whether are displayed in real time preview, as above picture.

4.Set Area: click" start drawing", then click mouse left key to draw turning line in the area, click mouse right key to end to draw line, it will create a polygon area automatically, max support 10 polygon, min support triangle,after drawing area, it will extend one arrow, can turn 360 degree to choose direction, after confirm direction, then loose mouse key, then click"save", if client draw wrong line, can clear it, then restart again. The center point of area is default A point, another side is B point, when people walk from A to B point, it will trigger retrograde alarm.

5.Erase draw-line: click "erase" to clear all lines.

6.Detection Area: Max support 4 detection area setting.

7. Proportion: To check object proportion percentage on picture, it will filter object which is less than this proportion.

8.Arming time and Linkage processing operation are same with face detection.

9.Object type: human,vehicle,all(human and vehicle), after choose type, will count types.

10.Audio linkage: choose audio linkage, system will link to alarm and broadcast relative hint sound after triggering retrograde detect alarm.

11.Alarm light: Choose alarm light, after triggering retrograde detection alarm, it will link to alarm light output.

12.After finish setting parameters, click"save" button, it would be valid.

✦ **Absent Alarm**

Setting interface for leave position as follows:
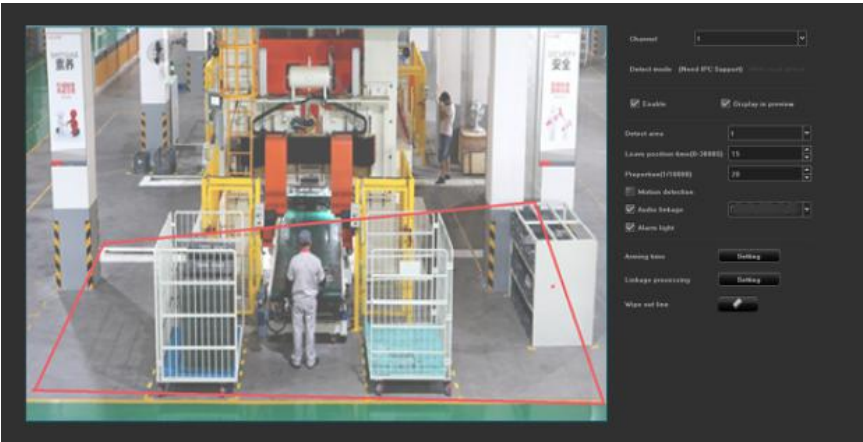
1.Enable: set enable or disable this function.

2.Detection Mode: IP camera must support this function.

3.Display in Preview: User can set rules and detection result whether are displayed in real time preview, as above picture.

4.Setting Area: To use mouse to click area which would be drawed on channel's picture, press mouse left key to extend to draw line, it will create one pcs turning line for each click, mouse right key end to draw, it will create a closed area,, like above picture, blue imaginary line is object proportion size.

5. Erase draw-line: click "erase" to clear all lines.

6.Leave position time:User can set absent time for people between 0-3600s.

7. Proportion: To check object proportion size on picture, it will filter object which is less than this proportion.

8.Detection Area: 4 detection areas can be set.

9. Arming time and linkage processing are the same with face detection.

10.Motion detection: Select this option to detect dynamic human figures in the area.

11.Audio linkage: choose audio linkage, to trigger leave position detection alarm will link to alarm and broadcast relative hint sound.

12.Alarm light: Select alarm light, after triggering leave position detection alarm, system will link to alarm light output.

13.After finishing setting   parameters, click the [Save] button, the setting will be valid

✦ **Electro-Bicycle Detection**

1. Enable: enable electro-bicycle detection function

2. Detection mode: need IP camera support this mode

3. Display on preview mode: Set whether to display the set rules and

detection results on the preview interface, as shown on the right of the figure above

4. Set area: Use the mouse to click the area that needs to be marked on the channel screen, and hold down the left mouse button to extend the line; Each click of the left mouse button will draw a turning line, and the right mouse button will automatically connect to a closed area, as shown in the figure above, the yellow dotted box is the proportion of the target size

5. Erasure:Click erasure to clear set area

6. Sensitivity: After reasonable setting, the accuracy of electric vehicle detection and triggering can be increased

7. Target proportion: detect the proportion of the target in the screen area (10,000), and filter the target objects less than this proportion

8. Target type: electro-bicycle,bicycle

9. Detect area: can set 4 detection areas

10. Arm time and linkage processing with face detection

11. IPC voice alarm: Start IPC voice alarm, trigger electric vehicle detection alarm will sound and move alarm related prompt sound

12. IPC light alarm: Check the IPC light alarm to trigger the electric vehicle detection. When the alarm is detected, the alarm light output will be linked

13. After setting the parameters, click the "Save" button, and the Settings will take effect

3.3.5.3.3 Voice Alert

The following several kinds of intelligent alert support voice alarm function, as shown in the following figure
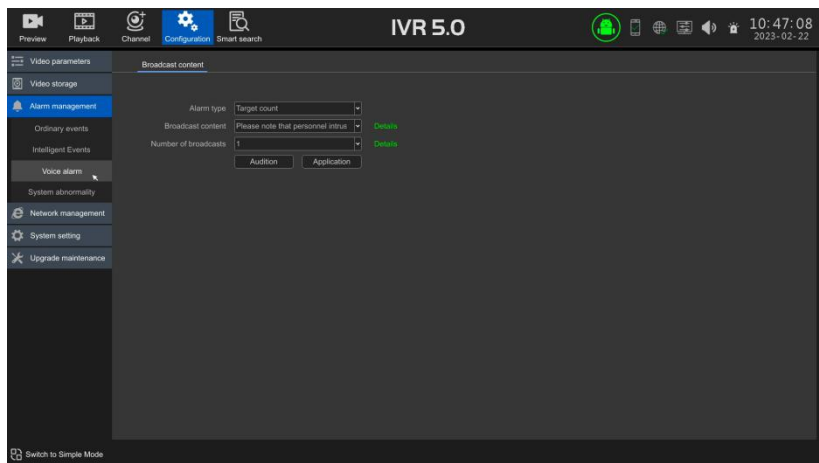
1.Alarm type: include all alarm types

2.Alarm content:It is selected voice content, to click details, there is warming prompt

3.Broadcast time: There are a total of 1 to 10 choices, you can also customize the voice content, click the details of the warm tips

4.Application: Apply the current voice to the intelligent alert. When the alarm occurs, the device will have a voice prompt

5.Audition: Click to listen to the voice alarm (Note: the audition is effective on the ivr broadcast)

3.3.5.3.4 System Abnormal

1) Abnormal type: There are 6 types to choose; HDD full, HDD disconnection, HDD offline, HDD SMART error, network disconnection, IP address conflict

2) Trigger mode: All types of trigger modes enables "Alarm on Monitor" and "Upload Center" by default, and "Hard Disk Error" also turns on "Sound Alarm" by default.

3) Alarm Output:Enable, would link to alarm output when alarm occurs

3.3.5.4 Network Management

3.3.5.4.1 Local Network

✦ Basic Parameters:

1.Network card: choose different network card types according to needs;

2.Physical address: display the physical address of the current network interface, which is not modified;

3.Automatically obtain IP address: the DHCP function. When it is turned on, the IP/mask/gateway cannot be set. If the current DHCP takes effect, it will obtain the new IP/mask/gateway assigned by the router (a new IP is required for remote login Address), if it does not take effect, the IP/mask/gateway will display the previous address (you can use the old IP address to remotely log in to the device);

4. IP address: Enter the corresponding number to change the default IP address;

5.Subnet mask: Enter the subnet mask of the corresponding IP;

6.Gateway address: input the corresponding gateway address.

✦ Advanced Parameters:

1. Enable UPnP
   The default RTSP, RTMP, and HTTP port numbers are 554, 1935, and 80 respectively. The port numbers is modified (modification of the internal port requires restarting the device to take effect). The UPnP state is inactive by default, and the external IP address will be obtained after taking effect.

2.RTSP verification: After device turn on RTSP,click details to prompt   RTSP protocol communication requires verification of the username and password

3.TOE mode:After device turn on TOE mode,maybe it will resolve network fault issue

3.3.5.4.2 Dynamic Domain Name(Expert mode)

The default is the "Disable Domain Name Resolution" status, and all setting fields cannot be set. You need to switch to the "Enable Domain Name Resolution" status. It should be noted that the device must be able to access the Internet normally when using this function.

1.Server type: There are 14 types in the default list;

2.Server domain name: each server type corresponds to the existing default server domain name;

3.Port: Each server type corresponds to the default port;

4.User name & password: manually enter the correct user name and password;

5.Device domain name: manually enter the correct domain name (after the function is OK, the domain name can be used to remotely access the device);

6.Update interval:

3.3.5.4.3 Email Setting (Expert mode)

The settings on this page are used in conjunction with the "Email linkage" function in "Linkage Configuration". The sender's email address and password, recipient's email address, SMTP server address and port and other information must be correct in the corresponding fields according to the format requirements Input, there are other additional functions on the page:

1.Fill in multiple recipient mailboxes, the sender mailbox will send mails to multiple recipient mailboxes at the same time;

2.Select the function, the mail received by the recipient's mailbox will have an attachment, and the content of the attachment is the linked screenshot file of the corresponding channel (compressed package format);

3. Click the icon in the corresponding column of "Test Mail" to send the mail from the sending mailbox to the recipient's mailbox, and a relevant prompt will pop up if it is successful

It should be noted that the use of the Email linkage function requires a good network environment and the equipment can access the external network smoothly.

3.3.5.4.4 Network Protocol

◆ GB28181 Service

The following picture is GB28181 configure interface.

After finishing configuring all setting parameters. User can use GB28181 service

✦ P2P service:

This page is P2P service configure interface, enable or disable P2P, refer to following picture
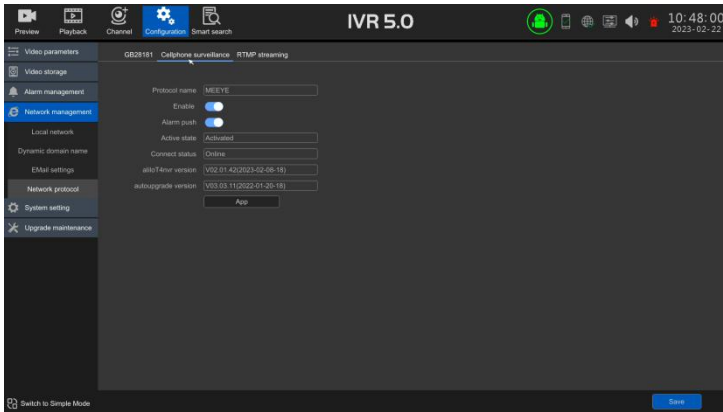
1) Protocol Name: P2P protocol name
2) Enable: Device would be connected to APP after enabling it
3) Alarm push: Enable it, alarm information would be pushed to APP
4) Online: it displays device situation
5) AliLot4 NVR version: Built-in AliLot4 version
6) Auto upgrade version: Built-in auto P2P upgrade version
7) APP download QR code : APP download QR code or ID QR code

◆ RTMP service (Expert mode)
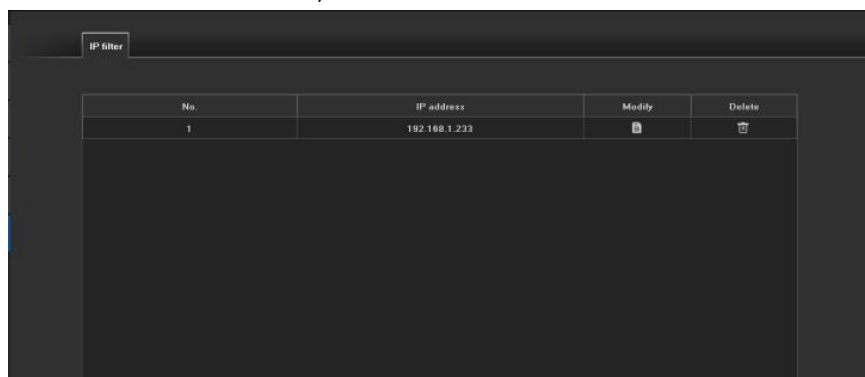
This mode supports RTMP service to push audio and video stream, interface as follows:

1) Choose channel,main stream or sub-stream,enable audio function, user can push audio and video stream to server.
2) Push stream address: rtmp:// server IP address: 1935//live/home

3.3.5.4.5 IP Address Filtering

After adding the IP address of the PC, it is restricted to log in on the web of this PC,user can not login WEB service through PC of which ip address is 192.168.168.128, the interface is as shown below.

3.3.5.5 System Configuration

3.3.5.5.1 Time Setting

✦ Equipment Time
1. Device time: IVR time can be modified manually;
2. Date format: There are three date formats to choose;
3. Time zone: switch the time zone, the page will pop up the new date and time, and some time zones have the summer time function;
4. NTP time calibration: After the function is enabled,user needs to click **Check time** the button to synchronize the network time (the device needs to access the external network).

✦ IPC Manual Calibrate Time

Manual calibrate time: Click button of calibrate time manually, device will calibrate time for all IPC

3.3.5.5.2 User Management

1.Modify user: modify the user name, password and user type of the selected user;

2. Add user: add a new user;

3.Delete user: you can delete the selected user (except admin and default users);

4. User authority: set authority for the selected user.

5. Recover password: user can recover password through APP scanning QR code or mailbox.

3.3.5.5.3 Device Parameters

✦ Basic Settings

1. Equipment name: the name can be set for the IVR device

2. Language selection: the system language of IVR can be modified, and it needs to be restarted to take effect;

3. Main display resolution: The local display resolution of the IVR can be modified (display support is required), and it will take effect immediately after modification;

4. Auto logout time: You can choose the auto logout time, the default is 0 minutes;

5. Boot preview mode: Fullscreen preview or non-fullscreen preview

✦ Advanced Settings(Expert mode)

1. Start-up wizard: function enable/disable, the default is disabled state;

2. System mode: The maximum number of preview channels supported by the device on the same screen and the maximum number of intelligent detection channels (different models have different IVR capabilities), which

need to be restarted to take effect;

3. Mouse speed: adjust the movement speed of the mouse to take effect in time.

✦RS485 device (Expert mode)

There are four working modes: Non, P/T control, 485 keyboard,485-Pelco DJ keyboard, default mode is NON

3.3.5.6 System Maintenance

3.3.5.6.1 System Information (Expert mode)

1.Device information: the software version and hard disk version currently used by the IVR;

2.Online users: user information, it will display user name, login time, IP and login method

3.3.5.6.2 Log Information(Expert mode)

On this page,user can query different types of logs according to different types and time. The main types of logs include "operation", "abnormal", and "alarm". Each type corresponds to multiple sub-types (the system defaults to query All types of logs), login time can be cross-day query as required.

3.3.5.6.3 NVR upgrade

1) Upgrade online: to click"testing"button to upgrade if there is new version

2) USB upgrade:to upgrade ivr on this page,user need to use memory flash to insert usb port of IVR, to choose correct file, then click upgrade, after finish upgrade, device will restart.

　　Note: Do not operate locally or remotely during upgrade to avoid

irreparable errors！

3.3.5.6.4 NVR maintenance

There are three function keys, each key has its function:

1. Export configuration:Export the system configuration to the external storage device

2. Import configuration: import system configuration file from external storage device into NVR, imported configuration will take effect after reboot device.

3. Restore: Choose single or multi configuration according to requirements,the parameter are restored to the factory default value. The device needs to be restarted to take effect.

4. Telnet: it is convenient for engineer to debug after enable it (Export Mode)

5. Maintenance mode: the default status is "disable",user can switch to "one time","everyday" or "everyweek",after finish setting maintenance time, a prompt box will pop up after the system time reaches the maintenance time before 10s, and the system will automatically restart after 10s. (Expert mode)

3.3.6 Smart Search
3.3.6.1 Alarm Event

For all alarm events, the log can be searched directly, as shown in the following figure.

3.3.6.2 Camera Snapshot

User can set search conditions for captured picture, refer to following picture
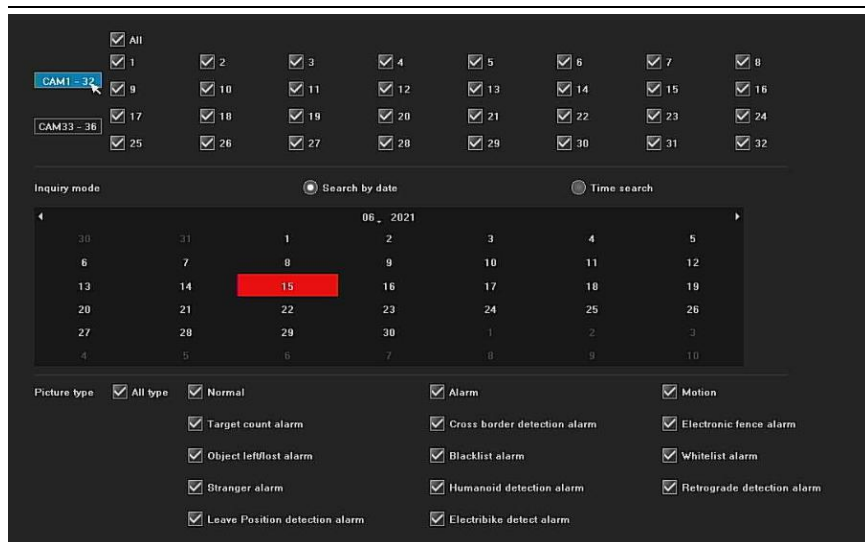
3.3.6.3 Playback Snapshot

Conditional retrieval of images captured during playback is performed as shown below
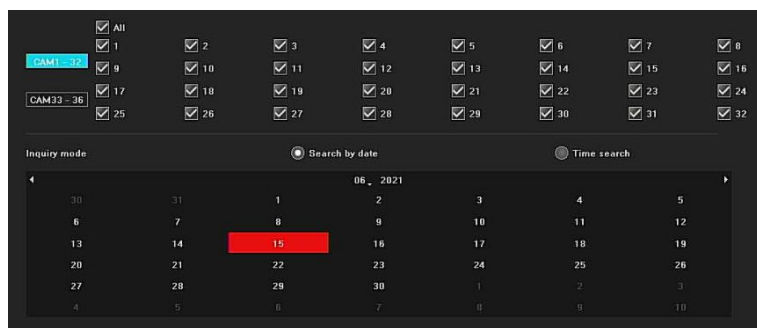
4.1 WEB Browser Operation Guide

4.1.1 Internet Connection

1.Confirm that the network digital video recorder is correctly connected to the network;

2.Set the IP address, subnet mask and gateway for the host computer and IVR respectively. If there is no routing device in the network, please assign an IP address in the same network segment. If there is a routing device in

the network, you need to set the corresponding gateway and subnet mask. Please refer to [System Settings]>[Network Parameters] for the network settings of the network digital video recorder;

3.Please make sure that the IP address is set correctly. After the IP address is set, you can use the ping tool that comes with the system to check whether the network digital video recorder is correctly connected to the network.

4.1.2 Plug-in Installation and User Login and Logout

1.After the network digital video recorder is correctly connected to the network, you can log in and access the NVR through the IE browser;

2.User can download and install the IE plug-in from IVR via the network. After running plug-in, enter the IP address, user name, and password of the network digital video recorder in the IE browser, and the following interface will pop up after the connection is successful:
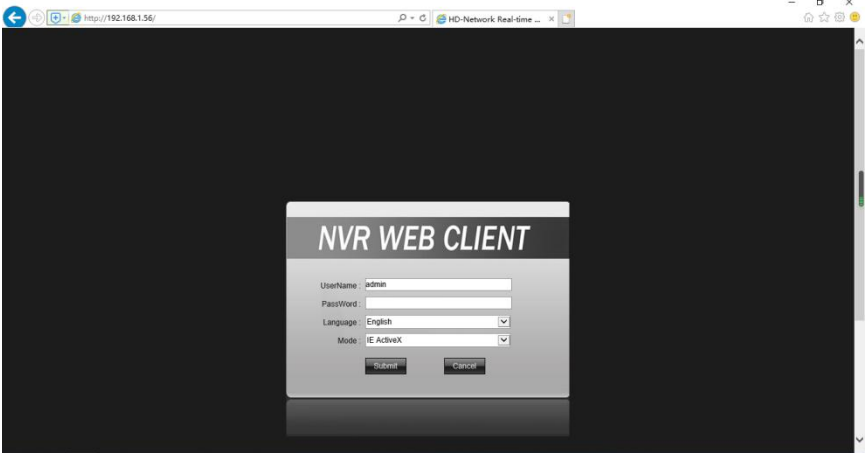
After logging in correctly, user can enter the network preview interface. For details on the operation method of the network terminal, please refer to the host terminal.

Chapter 5 Mobile Phone Operation Guide

This operation guide is an instruction on how to install and use the

mobile client on Android and iOS mobile phones. The mobile client APP commonly used for using our products is [SECVIEW]

The mobile client software supports Android 4.0 and above system versions (mobile phones include commonly used brands on the market, such as Huawei, Xiaomi, Oppo, etc.), and iOS 11.0 and above system versions.

✦Installation and operation instructions

1. Download the current latest version [SECVIEW] installation file from the Android market;
2. Perform online installation;
3. After the installation is complete, click the corresponding program icon to open the APP, see the right picture.

Note: In actual use, mobile phone performance and network conditions will affect the preview effect. If the network condition is poor, you can appropriately reduce the frame rate to ensure smooth preview images.

Connect to NVR and display image under Slink protocol, the process is like this,user set same parameter on IE and NVR, NVR search IPC and display image under Slink, user still needs to choose H.264 coding format.

Chapter 6 Common Troubleshooting

✦ Reasons for The device cannot start or keeps restarting

1.The NVR has upgraded the wrong firmware and caused the system software to be damaged;

2.The main board of the NVR is faulty, please contact the supplier for repair;

3.If the hard disk fails, please replace the hard disk;

4.The panel program selection is wrong, [Advanced Configuration]→[Device Maintenance]→[Device Information]→Panel version. For aluminum profile panels, please choose MINI. For other plastic panels, please choose 01, 02, 05, etc.;

5.IVR IP address conflict.

✦ Reasons for unable to be controlled by remote control

1.Please check whether the battery in the remote control has been installed correctly, especially the positive and negative polarity;

2.Please check if the battery in the remote control is still charged;

3.Check whether the remote control window is covered;

4.Please check whether the remote control address of the NVR matches the remote control address.

✦ Reasons for The PTZ cannot be controlled

1.The RS-485 interface cable is incorrectly connected, and the A and B ports are reversely connected;

2.The type, protocol, baud rate and address bits of the PTZ decoder are not set correctly;

3.The RS-485 bus is connected to a large number of PTZ and there is signal reflection, so a 120Ω resistor must be connected in parallel at the remote end;

4.The RS-485 interface of the main board is broken.

✦ Reasons for Network digital video recorder preview image blurry

The video input format does not match. If the camera is NTSC format

and the network digital video recorder uses PAL format, the preview image will appear blurred.

✦ Reasons for NVR replays the image on the screen or cannot find the video

1. The firmware read error, please try to restart the NVR

2. The hard disk data has errors due to bad sectors and bad clusters, please check the hard disk, if the hard disk is damaged, please replace the hard disk;

3. NVR hardware failure, please contact the supplier.

✦ Reasons for does not connect to the network digital video recorder through the network:

1. Please check whether the network physical connection is normal;

2. Please check the network parameter configuration of the network digital video recorder;

3. Please check whether there is an IP conflict in the network.

✦ Reasons for the downloaded or backup video cannot be played normally:

1. The player is not installed correctly;

2. The file system of the U disk or mobile hard disk used for backup is wrong;

3. The graphics acceleration software of DX9.0 or above is not installed.

✦ Attached IVR FAQ

1. My settings of "motion detection alarm", "occlusion alarm", and "video blocking" are correct, but why not?

Because your IPC uses the ONVIF protocol, these functions are currently not supported.

2. I can't find the IPC, what's the matter?

It may be that your IVR or IPC is not correctly connected to the network. Try to use the ping command to check whether the device is correctly connected to the network, and also check whether there is

an IP conflict.

3.It takes a long time to produce the image
Different brands and models of IPC will have a different time from storage to the appearance of the image, generally no more than one minute, but there are also very few models that take longer

4.There is no image after saving
It may be that the user name and password are wrong, or it may be that some of the camera guns used have a private protocol which causes compatibility problems. It is recommended to use a web camera gun that supports the company's i8 protocol and the international ONVIF protocol.

5. There is a video prompt for an image, and there is an image after double-clicking, but there is no image in the multi-channel preview Right-click on that channel, click "Remote Configuration" in the menu that comes out, there is a mode drop-down menu option in the middle, try to adjust the main stream to the sub stream, and then save. If there is still no image in the split-screen preview, then the sub-stream may be adjusted too high, and it is recommended to adjust it below 1m

6.There is an image in the multi-channel preview of an image and it is normal. When you double-click the single image, the screen is black or the image is stuck, and the video cannot be played back.
Please check whether your IPC is 1080P, if it is, click [Settings] → [Device Parameters] → [Mode] to check whether you have selected the 1080P mode. When 1080P video is connected to 720P channel mode, only sub-stream can be displayed. Please connect the 1080P IPC to the designated channel. Select the correct mode to restart OK.