Network Video Recorders

User Manual

V3.00

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About this Manual

Disclaimer

Due to such reasons as product version upgrade or regulatory requirement of relevant regions, this manual will be periodically updated.

This manual is only for informational purpose, and all statements, information, and recommendations in this manual are presented without warranty.

The illustrations in this manual are for reference only and may vary depending on the version or model. The screenshots in this manual may have been customized to meet specific requirements and user preferences. As a result, some of the examples and functions featured may differ from those displayed on your monitor.

Safety Symbols

The symbols in the following table may be found in this manual. Carefully follow the instructions indicated by the symbols to avoid hazardous situations and use the product properly.

Symbol	Description
₩NOTE!	Indicates useful or supplemental information about the use of product.
	Indicates a situation which, if not avoided, could result in damage, data loss or malfunction to product.
	Indicates a hazardous situation which, if not avoided, could result in bodily injury or death.

1 Local Operations

This chapter introduces operation methods and matters needing attention on the local interface.

1.1 Before You Begin

- Please be aware that functions may vary with NVR model.
- The figures in this manual are for illustration purpose only and may vary with NVR model.
- The parameters that are grayed out on the local interface cannot be edited. The parameters and values displayed may vary with NVR model and version.

1.2 Local Operations

This section introduces mouse operations and front panel buttons.

You can refer to Initial Configuration and complete a quick configuration.

Note: Unless otherwise specified, all operations described in this manual are performed with a mouse by the right hand.

Mouse Operations

Table 1-1: Mouse Operations

Name	Operation	Description
Left button	Click	 Select or confirm an item. Select to edit digits, symbols, uppercase or lowercase letters in a field.
	Double-click	Switch single window or multi-window in live view.
	Drag	Draw or move a rectangle on the screen.Sort windows in a multi-window layout.
Right button	Click	 Show the shortcut menu. Exit digital zoom. Exit the current window when Cancel or Exit is displayed.
Scroll wheel	Scroll up	Scroll up a list, window, or scroll bar.Zoom in on the screen when digital zoom is enabled.
	Scroll down	Scroll down a list, window, or scroll bar.Zoom out on the screen when digital zoom is enabled.
	Long press	Restore to the lowest resolution.

Front Panel Buttons

The front panel buttons may vary with NVR model.

Table 1-2: Front Panel Buttons 1

Button	Description
	Display the main menu.
O	Switch to the next tab on the screen or switch the input method.
FI	Auxiliary function button.
9	Exit the current window.

Button	Description
	Direction button: Switch windows or menu items; or control rotation direction of a PTZ camera when the PTZ toolbar is closed. PTZ stands for pan, tilt, and zoom. • (a) / (b): Rewind or forward 30 seconds in full screen. • (a) / (c): Variable-speed forward or rewind in full screen.
	Confirm an operation, or start/pause the playback.
	Long press at least 3 seconds to start up or shut down the NVR.

Table 1-3: Front Panel Buttons 2

Button	Description
	Enter 1; or display the main menu.
	Enter 2, A, B, or C; or start instant playback.
	Enter 3, D, E, or F; or start manual recording.
(4) or	Enter 4, G, H, or I; or enter the PTZ control interface.
(5 <u>m</u>)	Enter 5, J, K, or L; or switch the screen layout in live view or playback mode.
(G use	Enter 6, M, N, or O; or enable or disable arming.
	Enter 7, P, Q, R, or S; or take a snapshot.
(wr 8)	Enter 8, T, U, or V.
	Enter 9, W, X, Y, or Z.
	Enter 0 or a space.
	Delete.
	Switch the input method.
(F1)	Auxiliary function button.
9	Exit the current window.
0	Switch to the next tab.

Button	Description
	 \langle \begin{aligned} \begin{aligned} \langle \begin{aligned} \ \begin{aligned} \ \begin{aligned} \ \ \begin{aligned} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
6	Long press at least 3 seconds to start up or shut down the NVR.

2 Initial Configuration

This chapter describes the initial configuration of the NVR.

2.1 Preparation

• Make sure that at least one monitor is correctly connected to the VGA or HDMI interface on the rear panel of the NVR, otherwise, you cannot view the local interface.

Note: If no images are displayed after the NVR is powered on, it may be because the monitor does not support the current output resolution of the NVR. Please press and hold the scroll wheel of the mouse to restore to the lowest resolution.

• Make sure that the hard disk(s) are correctly installed. For detailed installation steps, please refer to the quick guide shipped with the NVR.

2.2 Login

Device Login

1. The login page appears after the NVR starts up. Select the default username and enter the password (admin/123456), and then click **Login**.

Login
admin 🗸
Remember Password
Login
Forgot Password?
Unlock Pattern

Note: If you enable **Remember Password**, the username and password will be automatically filled in the next time.

2. Click **Yes** in the pop-up window to change the password into a strong one.

Login		
Please change the default password. Change now?		
Yes	No	

3. In the **Change Password** page, enter the old password, new password, and confirm the new password. You may check **Email** to enter your email address, and then click **OK**.

	Change Password	
Username	admin	
Old Password		
Password		Weak
Confirm		
🗹 Email		
		Apply

Note:

- Use the default username and password (admin/123456) to log in for the first time. After login, you have to change the password, and use the new password to log in the next time.
- For security, you are strongly recommended to set a strong password with at least 9 characters including all three elements: letter, digit, and special character.
- It is recommended to enter your email address in case you need to reset the password. You may also enter it when you need to retrieve the password. See Reset Password for details.
- 4. (Optional) Set an unlock pattern, or click **Skip** to proceed.



Note:

- You can set the unlock pattern later at anytime or disable it under Menu > System > User.
- If an unlock pattern is set, it will replace the password at login.

Reset Password

1. If you forgot the admin password or want to reset the password, click Forgot Password in the login page.

Login
admin 🗸
Remember Password
Login
Forgot Password?
Unlock Pattern

2. (Skip this step if you have already entered your email address) Enter your email address so as to receive the security code, that is, the temporary password.

	Set Retri	eve Mode	
Email			
Please enter your em	ail address used to	o reset password	

3. Follow the instructions on the screen to obtain the security code.

		Retrieve Password		
Serial No Email		3182357665125456769 ****@	6	
Security (Code		de to obtain the securit get Device Password or ,	
Note: The app	o may vary with NVR m	odel.		

- 4. Enter the security code received from the email address, and click **OK**.
- 5. Enter the password, and confirm the password, and then click **OK** to reset the password.

Username	admin
Password	Weak
Confirm	
	ng password is recommended: at least 9 characters ts and special characters
including letters, digi	ts and special characters to managing platform, you also need to edit the

2.3 Wizard

The wizard page appears after you login. Follow the wizard to complete the most basic setup, or click **Exit** to skip this step.

Note: You can also go to Menu > System > Basic to set the basic parameters.



- 1. Scan the QR code and follow the on-screen instructions to add the NVR to your app, and then click **Next** or click **2**.
- 2. Set the time parameters, including time zone, date format, time format, and system time, and then click Next.

	Wizard		
1	2		4
QR Code	Time	TCP/IP	IP Camera
Time Zo	ne (UTC+08:00)	Beijing, Hong Kong,Urun 🗡	
Date For	rmat YYYY-MM-D	י כ י	
Time For	rmat 24-hour		
System 1	Time 2022-08-16	21:21:59 ~	
			성장 이 아이는 것이 같이 않는 것이 같이 않는 것이 아이는 것이
		Previous	Next Exit

3. Configure TCP/IP. Select the working mode and NIC. Check **Enable DHCP** to automatically obtain the IP address, subnet mask and IP default gateway. You can also enter the information manually. Then, click **Next**.

		Wizard	
1	2	3_	
QR Code	Time	TCP/IP	IP Camera
	Working Mode	Multi-address	
	Select NIC	NIC1	
	Enable DHCP		
	IP Address	206 . 2 . 2 . 62	
	Subnet Mask	255 . 255 . 255 . 0	
	IP Default Gateway	206 . 2 . 2 . 1	
	Default Route	NIC1	
		Previous	Next Exit

4. Add IP devices. Select the IP devices to add in the discovered device list, and click Add.

				Wizard	1		
	—		_ 2		3		_4
	QR Code		Time		TCP/IP		IP Camera
	itch to H.265 h to U-Code	Close	O Basic	O Advanced			
Select	IP Address	Status	Qty	Model	Protocol	Port	Manufacturer Serial No.
1	206.2.2.5	\otimes	1			80	210235C2H
2	206.2.2.6		1			80	210235C2H
3	206.2.2.7	\otimes	1			80	210235C5S
4	206.2.2.9	\otimes				80	210235C2H
5	206.2.2.10		1			80	210235C2J)
Die	covered Device(c):721, Added Device	(c)·162·		+	- Add	Q Search
Dis		,	(3).102,		Previous	ОК	Exit

Rote:

- To add IP devices through PoE ports, see *Option 6: Connect via Cable* in Add IPC for details.
- The added IP devices can go online and start live view only if the password is still the default password. If the password has been changed, you need to enter the correct password for the camera to go online.
- If the desired IP device is not in the device list, you may add it in a preview page or under **Camera** > **Camera** > **Camera**. See Channel Management for details.
- 5. Click **OK**.

3 Live View

This chapter introduces the live view page, including window toolbar, screen toolbar, shortcut menu, digital zoom, sequence operation, etc.

Note: The operations may vary with NVR model.

3.1 Live View Status

The following icons are used to indicate alarms, recording status, and audio status in a live view window.

Icon	Description	Icon	Description
Δ	Tampering alarm	ssss.	Recording
3	Motion detection alarm	Ļ	Two-way audio

Table 3-1: Live View Window Icons

3.2 Window Toolbar

Click a window to display the window toolbar for quick configuration.

Button	Name	Description
ç	PTZ Control	 Available for PTZ cameras only. Click to display the PTZ control window. You can also configure PTZ under Menu > Camera > PTZ. See PTZ Configuration for details.
ð	Fisheye Mode	Set the mount mode and display mode for fisheye cameras. This button appears only for fisheye cameras.
6	Local Recording	Record live video in the window to the hard disk. Click 📷 to stop recording.
		Note: Similar to manual recording, local recording is a scheduled recording and has higher priority over other video recording schedules. You can play the local recording in normal mode.
6	Instant Playback	Click to play the video recorded during the past 5 minutes.
Ð	Digital Zoom	Zoom in on an area of interest in the window. See Digital zoom for details.
٢	Image Settings	 Click to set the image mode and parameters so as to get optimal images in the window. You can also edit image settings under Menu > Camera > Image > Image Settings. See Image Enhancement for details.
	Take Snapshot	Click to take a snapshot. The window borders will flash white. You may view and back up snapshots under Menu > Backup > Image .
OSD	OSD	 Click to set OSD. You can also set OSD under Menu > Camera > OSD. See OSD Configuration for details.
¥	Two-way Audio	Start two-way audio with the camera. The sound volume is adjustable. Click to stop.
		Note: Correct audio input and output (AUDIO IN/OUT) connections between NVR and IPC are required.
€]×	Turn Audio On	Click to turn on audio. The sound volume is adjustable. Click adjustable. Click
		Note: When you turn on audio in the current window, audio of the previous window is turned off.
	Camera Info	Hover over the button to view the bit rate of the current window; click the button to view the camera information.

Table 3-2: Window Toolbar

Digital zoom

Zoom in on an area of images in a window for details.

^{1.} In the preview page, click the window, and then click 💭 on the window toolbar.



2. Move your mouse to the area you want to zoom in on, then use your scroll wheel to zoom in. The enlarged image is as follows.



3. Right-click to exit zoom.

3.3 Screen Toolbar

Move your mouse to the bottom of the preview page to display the screen toolbar. Click 📷 to lock the toolbar.

Button	Description
A	Click to select menu, playback, logout, restart, shutdown.
\blacksquare	Select the screen layout, including single window and 4/6/8/9/16/25/36 windows.
	Previous or next screen.

Table 3-3: Screen Toolbar

Button	Description
3	Start or stop sequence. See Sequence for details.
١	Click to go to the Playback page.
0	Click to go to the Face Recognition page. See Face Recognition for details.
	Click to go to the Vehicle Recognition page. See Vehicle Recognition for details.
୭୦	Switch to multi-sensor preview mode.
	Note: This function is only available for dual-channel cameras.
€€	Click to go to the Epidemic Control page. For temperature measurement results, see Thermal Imaging for details.
	Click to display the cloud service window. You may scan the QR code and download an app to manage your NVR.
	Note: This function is only available to certain NVR models.
	Click to view camera information, including camera status and alarm status.
\triangle	Click to view NVR alarm and camera alarm.
臣	Hover over the button to view the NIC information; Click to edit network settings.
20:31	Show device time. Hover over the button to view the date; Click to edit time settings.
ත්⁄ ස	Lock/hide the screen toolbar.

Sequence

Use sequence when you want to view live videos from different cameras at the same time and ensure the image clarity. The function requires you to configure the screen layout, windows, linked cameras, and the sequence interval.

The following example describes how to configure sequence for five cameras based on a 4-window screen layout.

1. In the preview page, right-click and select **Multi-Window > 4 Windows**.



Note: The number of windows that can be displayed may vary with NVR model.

2. Click on the screen toolbar to start sequence.

The system starts to display images of four cameras in four windows on the first screen, and then display the fifth camera' image on the second screen after the set interval.



- Note: The default sequence interval is 8 seconds. You can set it under Menu > System > Preview. See Preview Configuration for details.
- ^{3.} Click 🐼 to stop sequence.

Face Recognition

To view face snapshot records, you need to configure Face List, Face Comparison, and Face Detection first.

1. Click on the screen toolbar.

In this page, you can view the historical face comparison records on the left, and view face snapshots, snapshot details, and prompt message on the right. 1 view is displayed by default, and you can switch to 4 or 9 views to view more face snapshots in the page.

Face	e recogr	nition					ණ	Ð
/								
	Name	Time	Status					
		14:20:21	Match		1.000	TIN	188	
	P-805	14:20:21	Match		20220439		20220439	
	544	14:20:19	Match		N3-2.92TMS 14:20:21		N3-2.94LAPI 14:20:21	
		14:20:18	Match	1 × 1	VIID Match Face List	A STAT	VIID Match Face List	
		14:20:18	Unregistered					
	1000	14:20:17	Match	1	Welcome		elcome	
					20220464 N3-2.95 14:20:19 VIID Match Face List Welcome		20220417 N3-2.94LAPI 14:2018 VIID Match Face List Velcome	
	14:39	2022-(09-29		1	4 9		

2. Click 🔅, configure face recognition parameters, and then click **OK**.

	Configuratior	ı	
Page Name	Face recognitio	n	
Match Message	Show	◯Hide	
Materi Message	Welcome		
Unregister Message	Show	⊖Hide	
	Stranger		
		ОК	Cancel

Item	Description
Page Name	The default is face recognition. Set it as needed.
Match Message	If the face has a match in the face library, the default match message Welcome appears. You can customize the message as needed. Click Hide , the page will not show the match message.
Unregister Message	If the face does not have a match in the face library, the default message Stranger appears. You can customize the message as needed. Click Hide , the page will not show the message.

3. Click to exit the face recognition page.

Vehicle Recognition

To view vehicle recognition details, you need to configure Plate List and Vehicle Alarm Monitoring first.

1. Click on the screen toolbar, and then you can view pass-through records, vehicle snapshot information, etc.



2. Click to exit the vehicle recognition page.

3.4 Shortcut Menu

A shortcut menu as shown below appears when you right-click in a window.



Shortcut Menu

Table 3-4: Shortcut Menu

Item	Description
Menu	Display the main menu.
Common Menu	Go to the Camera, Network Config, and Backup page.
Single Window	Switch to single window.
Multi-Window	Select the screen layout, including 4/6/8/9/16/25/36 windows.
Corridor	Display video images in corridor mode. You can set the number of windows from the Preview Windows drop-down list under Menu > System > Preview . See Preview Configuration for details.
	 Note: To display images in corridor mode, make sure the camera is installed correctly (rotated 90° clockwise or counterclockwise), and then set the Image Rotation parameter under Menu > Camera > Image to rotate images accordingly. When a channel is in corridor mode, all the operations (such as digital zoom and drawing motion detection area) are performed in corridor mode.
Main/Aux Monitor	Switch live video from different video outputs. Press and hold the right mouse button to switch between main monitor and auxiliary monitor.
Playback	Play the video of the current day for the camera linked to the current window. You can also choose to play videos from other days as needed.
Preview Mode	Switch between Normal and Smart. The default is Normal mode.
VCA Search	Search the VCA snapshots and recordings in the Behavior Search page. See Behavior Search for details.
Light Config	Set image parameters for the selected camera, including image enhancement, smart illumination, exposure, white balance, and advanced configuration. See Image Settings for details.
Output Mode	Choose a video output mode, including standard, soft, bright, vivid, and custom. Brightness, saturation, and other parameters are also configurable.

Item	Description
Manual	Manual settings include manual recording, manual snapshot, and manual alarm, buzzer, let through manually. See Manual Operations for details.
POS	Set POS OSD, POS protocol, etc. See POS Configuration for details.

Manual Operations

Manual operations include manual recording, manual snapshot, manual alarm, buzzer, and let through manually. Manual Recording

Note: Similar to local recording is a scheduled recording and has higher priority over other recording schedules. You can play manual recordings in normal mode.

1. Right-click and select Manual > Manual Recording.

			Manual				
Manual Recording	Snapshot						
Select		Camera Name		Sta	itus		
🗆 D1		D01			Enable		
🗖 D2		400W		•	Stop		
D3		N5		•	Stop		
🗖 D4		N3		•	Stop		
🗖 D5		2.241		•	Stop		
🗖 D6		247		•	Stop		
D7		2.5		•	Stop		
D8		N5		•	Stop		
		KIP		-			
			Start		Stop	Exit	

2. Start or stop manual recording.

- Start recording: Select the desired camera(s) and then click Start.
- Stop recording: Select the camera(s) being recorded and then click **Stop**.

Manual Snapshot

1. Right-click and select **Manual** > **Manual Snapshot**.

	М	anual		
Manual Recording Snapshot				
Select	Camera		Status	
□ D1	D01		🥏 Start	
🗋 D2	400W		🔵 Stop	
D3	N5		🔵 Stop	
□ D4	N3		🔵 Stop	
D5	2.241		Stop	
🗖 D6	247		🔵 Stop	
D7	N52.5		Stop	
D8	N5SMD		Stop	
	ALE.			
		Start	Stop	Exit

- 2. Start or stop manual snapshot.
 - Start snapshot: Select the desired camera(s) and then click Start.
 - Stop snapshot: Select the camera(s) that has enabled snapshot, and click Stop.

Manual Alarm

Right-click and select **Manual** > **Manual Alarm**. You can trigger or clear an alarm output manually. See Manual Alarm for details.

Buzzer

Right-click and select Manual > Buzzer. You can stop the buzzer manually. See Buzzer for details.

Let Through Manually

If a license plate not match alarm occurs, and the IPC cannot lift the barrier automatically, you can trigger the IPC to lift the barrier manually on the NVR side as needed.

Rote:

- This function requires you to configure plate not match alarm first. See Vehicle Alarm Monitoring for details.
- This function is available to cameras that support controlling barrier gates.

1. Right-click and select Manual > Let Through Manually.

		Manual	
		Buzzer Let Through Man	ually
No.	Camera ID	Camera Name	Let Through Manually
1	D1	D115	L
2	D2	D118	F
3	D3	01	F
4	D4	02	F
5	D7	07	Ē
	D9	09	F
7	D10	22207	F
8	D12	157-SP51	₽
			Cancel

^{2.} Click the corresponding and trigger the camera to lift the barrier.

4 Channel Configuration

Configure IPC, encoding, audio, snapshot, OSD, image, privacy mask, and PTZ parameters.

Note: The IP devices mentioned in this manual mainly refer to IP cameras (or network cameras).

4.1 Channel Management

Manage IP cameras.

😴 Note:

- Before you start, make sure the IP cameras are connected to your NVR via network.
- An IP camera should be connected to one NVR only. An IP camera managed by multiple NVRs may cause unwanted issues.

4.1.1 IPC Configuration

Add and manage IP cameras. Go to Menu > Camera > Camera > Camera.

🕹 🛛 Add All	+ Custom Add	Ū	Delete	O Refresh	Q Sea	rch Segme	More		
Camera	Address	Status	Protocol	Model _		Add/Del	Cam Config	Configure	Details
□ D2	206.2.2.41								
D3	206.2.2.50	۲					Ø	Ø	
🗖 D4N3	206.2.2.249	۲						0	
D5	206.2.2.241	۲						Ø	
🗖 D6 247	206.2.2.247	۲						0	
D72.5	206.2.2.5	۲					Ø	٥	
D8SMD	206.2.2.57							0	
D9	206.2.2.7	۲						Ø	
D10	206.2.2.9	۲						0	
D12	206.2.2.11						Ø	0	
D132.12	206.2.2.12						Ø	Ø	
D142.13	206.2.2.13	۲				Ū	Ø	Ø	
D15	206.2.2.14								
D162.15	206.2.2.15	۲					Ø	0	
C D17									
Discovered Device(s):	716, Added Device(s):16	54;Idle Rec	eive Bandwidt	h: 417Mbps					
Auto Switch to H.20	65 Auto S	Switch to L	J-Code 🤇	Close O Basi	c C	Advanced			Exit

Add IPC

The system automatically searches for IP cameras and lists the discovered. Click **Refresh**, the system refreshes the list and IPC status. Choose a way to add IPCs.

- Option 1: Custom Add
 - 1. Click Custom Add.

No.	IP Address	Status	Qty	Model
	205.1.1.162	\otimes		
2	206.2.2.5	\otimes		
	206.2.2.6	\bigotimes		
	206.2.2.7	\otimes		
	206.2.2.9	\otimes		
	206.2.2.10			
Add N Proto		IP Ad	ldress	
IP Ad				. 1 . 162
		80		
Port				
	ame	admi		
Port		admi *****		

- 2. In the window displayed, enter the IPC's IP address and complete other settings, then click **OK**. You may check the camera's status.
 - 🜔 : Camera online.
 - O: Camera offline. Point to the icon to view the failure information.
 - ① : The camera is added to another NVR.
- 3. Repeat the above steps to add other IPCs.
- Option 2: Search Segment
 - 1. Click **Search Segment**. Enter the start and end IP addresses, click **Search**. The discovered IP devices are listed.

Start IP	206	2		2	1
		 -	-	-	-
End IP	206	2		2	255
	Search				Exit

- Select the desired camera, click I to add it to the NVR.
- Option 3: Add All

Click Add All to add all the discovered IPCs (if not exceeding the upper limit).

Option 4: Click 🛖

Click 🛨 to add the camera directly.

Option 5: Add From the Preview Window

Note: This option is not applicable to NVRs with PoE ports. Some NVRs have PoE ports and non-PoE ports, and some have PoE ports only. All these NVRs do not support this option.

- ^{1.} In the preview page, click **I** in a window to go to the **Add IP Camera** page.
- 2. Select the desired IP camera and then click **OK**.
- Option 6: Connect via Cable
 - 1. Connect an IP camera to a PoE port or a switching port of the NVR with a network cable. The connected camera will be added to the NVR automatically.
 - 2. Check the camera status under Menu > Camera > Camera > Camera.

Note:

- This option is only applicable to NVRs with PoE ports, and the added camera cannot be deleted.
- If you want to add an IPC that is not connected to the NVR's with a network cable, click change Plug-and-Play to Manual, and complete other parameters.
- For NVR with PoE ports only, appears under **Status** if the power output from a PoE port is below or above the rated power of the connected camera.
- Option 7: Add From Another Network

Use this option when the NVR and the IP camera are connected to different router. Make sure the NVR can access the camera via the camera's public IP address and mapped port number.

- Note: First you need to enable port mapping under Setup > Port > Port Mapping on the IP camera's Web interface.
- Option 8: Use Custom Protocol

Note:

- Use this option when the IP camera supports the standard RTSP.
- Only live and recorded video streams are available from the camera added in this way. Configuration operations are not supported.
- 1. Go to Menu > Camera > Camera > Camera.
- 2. Click Custom Add. Select Custom from the Protocol drop-down list.

		Ad	d IP Camer	a	
No.	IP Address	Status	Qty	Model	
1	205.1.1.162	\odot	1		
2	206.2.2.5	\otimes	1		
3	206.2.2.6	\otimes	1		
4	206.2.2.7	\bigotimes	1		
5	206.2.2.9	\bigotimes	1		
6	206.2.2.10		1		
Protoc IP Add Port Userna Passw Total (lress ame	Cus 20 0 adm ****	5 . 1 in	 Custom1 . 1 . 162 	~
Pr	otocol	Search		ОК	Cancel
				ÖK	Cancer
k Protocol .				UK	Cancer
Protocol.			Protocol	ŬK	Cancer
< Protocol . Custor	n	Cust		UK	- Cancer
Custor	m :ol Name	Cust	om1		
Custor			om1		
Custor Protoc Port		Cust	:om1 :om1 L		
Custor Protoc Port Transf	ol Name	Cust 7891	:om1 :om1 L		~
Custor Protoc Port Transf Enable	ol Name er Protocol	Cust 7891 UDP	:om1 :om1 L		~
Custor Protoc Port Transf Enable Resour	eol Name er Protocol e Main Stream	Cust 7891 UDP	iom1 iom1		~
Custor Protoc Port Transf Enable Enable	col Name er Protocol e Main Stream rce Path	Cust 7891 UDP VDP rtsp:	iom1 iom1	rt>/ hjt	~
Custor Protoc Port Transf Enable Resour Enable Resour	er Protocol e Main Stream rce Path e Sub Stream	Cust 7891 UDP rtsp: rtsp:	:om1 :om1 ! // <ip>:<po //<ip>:<po< td=""><td>rt>/hjt rt>/</td><td>~</td></po<></ip></po </ip>	rt>/hjt rt>/	~
Custor Protoc Port Transf Enable Resour Enable Resour Examp One ch	er Protocol e Main Stream rce Path e Sub Stream rce Path	Cust 7891 UDP rtsp: rtsp: ss>: <port numb<="" td=""><td>:om1 :om1 ! //<ip>:<po //<ip>:<po< td=""><td>rt>/hjt rt>/</td><td>~</td></po<></ip></po </ip></td></port>	:om1 :om1 ! // <ip>:<po //<ip>:<po< td=""><td>rt>/hjt rt>/</td><td>~</td></po<></ip></po </ip>	rt>/hjt rt>/	~
Custor Protoc Port Transf Enable Resour Examp One ch rtsp:// Multi-/ rtsp:// rtsp://	ol Name er Protocol e Main Stream rce Path e Sub Stream rce Path ple : rtsp:// <ip addres<="" td=""><td>Cust 7891 UDP rtsp: ss>:<port num!<br="">ast/c1/s0/live ast/c[%C]/s0/live ast/c[%C+1]/s0 ast/c[%C+1]/s0</port></td><td>:om1 :om1 L //<ip>:<po //<ip>:<po per>/<reso //e Add selec /live Add selec /live Add se</reso </po </ip></po </ip></td><td>rt>/ hjt rt>/ urce path>; elected camera ID elected camera ID+1 elected camera ID-1</td><td>~</td></ip>	Cust 7891 UDP rtsp: ss>: <port num!<br="">ast/c1/s0/live ast/c[%C]/s0/live ast/c[%C+1]/s0 ast/c[%C+1]/s0</port>	:om1 :om1 L // <ip>:<po //<ip>:<po per>/<reso //e Add selec /live Add selec /live Add se</reso </po </ip></po </ip>	rt>/ hjt rt>/ urce path>; elected camera ID elected camera ID+1 elected camera ID-1	~
Custor Protoc Port Transf Enable Resour Examp One ch rtsp:// Multi-/ rtsp:// rtsp://	ol Name er Protocol e Main Stream rce Path e Sub Stream rce Path ele : rtsp:// <ip addres<br="">hannel: 192.168.0.1:554/unica channel: 192.168.0.1:554/unica 192.168.0.1:554/unica</ip>	Cust 7891 UDP rtsp: ss>: <port num!<br="">ast/c1/s0/live ast/c[%C]/s0/live ast/c[%C+1]/s0 ast/c[%C+1]/s0</port>	:om1 :om1 L // <ip>:<po //<ip>:<po per>/<reso //e Add selec /live Add selec /live Add se</reso </po </ip></po </ip>	rt>/ hjt rt>/ urce path>; elected camera ID elected camera ID+1 elected camera ID-1	~
Custor Protoc Port Transf Enable Resour Examp One ch rtsp:// Multi-/ rtsp:// rtsp://	ol Name er Protocol e Main Stream rce Path e Sub Stream rce Path ele : rtsp:// <ip addres<br="">hannel: 192.168.0.1:554/unica channel: 192.168.0.1:554/unica 192.168.0.1:554/unica</ip>	Cust 7891 UDP rtsp: ss>: <port num!<br="">ast/c1/s0/live ast/c[%C]/s0/live ast/c[%C+1]/s0 ast/c[%C+1]/s0</port>	:om1 :om1 L // <ip>:<po //<ip>:<po per>/<reso //e Add selec /live Add selec /live Add se</reso </po </ip></po </ip>	rt>/ hjt rt>/ urce path>; elected camera ID elected camera ID+1 elected camera ID-1	~

4. Set the protocol name, enter the RTSP port number, transmission protocol, resource paths, etc., and then click **OK**.

Note: Contact the camera manufacturer for resource paths of main stream and sub stream.

5. Enter the IP address, username, and password, and then click **OK**. Check status in the camera list.

Edit IP Camera

Select the target camera and click 🔟. Edit the settings as needed, and then click **OK**.

		.	6. ID C		
		Modi	fy IP Came	era	
No.	IP Address	Status	Qty	Model	
1	206.3.0.9	\otimes	1		
2	206.3.0.22	\otimes	1		
3	206.3.0.24	()	1		
4	206.3.0.27	()	1		
5	206.3.0.28	\bigotimes	1		
6	206.3.0.30	()	1		
Add Mo	de	IP Ad	ldress		~
Protoco	bl	Priva	te		~
Protoco IP Addr				. 22 . 207	~
				. 22 . 207	~
IP Addr	ess	206		. 22 . 207	~
IP Addr Port	ess	206 80	n 2	. 22 . 207	~
IP Addr Port Usernai Passwo	ess	206 80 admi	n 2	. 22 . 207	~
IP Addr Port Usernai Passwo	ess ne rd	206 80 admi	n 2	. 22 . 207	~
IP Addr Port Usernai Passwo	ess ne rd	206 80 admi	n 2	. 22 . 207	~

😴 Note:

- To change the IP camera connected to the channel, you can edit the IP channel related parameters (except IP address), or directly click another camera in the list above.
- The configuration items may vary with IPC model.

Delete IP Camera

You can delete IP camera(s) one by one or in batches.

Note: Cameras corresponding to PoE ports or switching ports cannot be deleted.

- Select a camera to be deleted, click **m**, and click **OK** in the pop-up window.
- Select cameras to be deleted, click **Delete**, and click **OK** in the pop-up window.

Change Window Position

Use this function to change window position of channels in the preview page, without changing the channel ID, IP address, and display order in the channel list. Choose a way to change window position.

- In the multi-window preview page, drag a window to another window to swap their positions.
- In the **Preview Configuration** page under **Menu** > **System** > **Preview**, change window positions in the preview page. See Screen Configuration for details.

Sort Camera

Use this function to change a camera IP bound to a channel. This will not only change the camera's position in the camera list, but also change the position of the camera's live view window. The following example describes how to switch camera 1 and camera 4.

Rote:

- This function is not available to NVRs with PoE ports or switching ports.
- This section describes how to sort cameras on an NVR with more than 32 channels. For NVRs with 32 channels or less, you can sort cameras by dragging the mouse.
- 1. Click ··· More , select Sort Camera.

					Sort Camera		
Bound				Unbound			
Camera	Address	Camera Name		Camera	Address	Camera Name	
1	206.2.2.250	D01					
□ ²	206.2.2.41	400W					
3	206.2.2.50						
4	206.2.2.249	N3					All
5	206.2.2.241	2.241	-				
6	206.2.2.247	247					
0 7	206.2.2.5	N52.5					
8	206.2.2.57	N5SMD	~				
0 9	206.2.2.7	N52.7					
10	206.2.2.9		•				
□ 11	205.1.1.162	IP Camera 11					
12	206.2.2.11	N52.11					
13	206.2.2.12	N52.12					
14	206.2.2.13	N52.13					
15	206.2.2.14	N32.14					
16	206.2.2.15	N32.15					
~ 17	206 2 2 16						

2. In the left list, select the check box for camera 1 and click . Then camera 1 with IP 206.2.2.250 now appears in the right list. Perform the same operations to camera 4.



3. In the right list, select the camera 4 with IP 206.2.2.249 and click _____. Then camera 4 appears at the previous line of camera 1 in the list. Perform the same operations to camera 1, so camera 1 appears at the previous line of camera 4 in the list.

Bound			Unbound			
Camera	Address	Camera Name	Camera	Address	Camera Name	
	206.2.2.249					
D 2	206.2.2.41	400W				A THE REAL PROPERTY AND A THE
□ 3	206.2.2.50	N52.50				
4	206.2.2.250	D01				
D 5	206.2.2.241	2.241				
6	206.2.2.247	247				A A A A A A A A A A A A A A A A A A A
07	206.2.2.5	N52.5				
8	206.2.2.57	N5SMD				
9	206.2.2.7	N52.7				
10	206.2.2.9	N52.9				

4. Click **Apply**. IPs of camera 1 and camera 4 are swapped, and the position of preview window will also be swapped. Repeat the above steps to sort other cameras.

😴 Note:

- Click for to move up or move down the current highlighted camera (not the selected camera).
- To move a camera left, select a corresponding check box in the left list first; otherwise the camera will be inserted to the first blank line.
- The settings cannot be saved when the right list is not empty. You need to clear the list first.

Batch Change Password

When multiple IPCs are not added successfully due to incorrect password, and if the login passwords of these cameras are the same, use this function to change the passwords in batches.

Note:

- This function only changes the password used to add cameras. It does not change the cameras' login password.
- This function is only applicable for IPCs with the same login password. If one of the cameras still fails to be added after you change the password, it means the camera's login password is different, and you need to change the password separately.
- 1. Select the cameras with the same password. Click ... More , and select **Batch Edit Password**.

	Password	
Password Confirm		
	ОК	Cancel

- 2. Enter the new password and confirm the password.
- 3. Click **OK**.

Network Configuration

Select the camera, click on under **Configure**. Edit the IP address, IPv4 subnet mask, IPv4 default gateway for the camera. Click **Apply**.

	Net Config
Network	
Camera ID	D2
IP address	206 . 2 . 2 . 41
IPv4 Subnet Mask	255 . 255 . 255 . 0
IPv4 Default Gateway	206 . 2 . 2 . 1
(Note: This operation will change netw	vork settings for the camera.)
	Apply

Note: — indicates the camera does not support changing network settings.

More Info

Select the channel, click end over the detailed information, including remote camera ID, manufacturer, and port number.

	Details	
Remote Camera ID		
Manufacturer		
Port	80	

Other Operations

Item	Description
Auto Switch to H.265	When enabled, the NVR automatically chooses H.265 for a newly added
	camera.

Item	Description		
	 Note: Every time a camera is added to the NVR, it is considered a newly added camera. This function is not effective to cameras that are already added or added cameras that go back online after being offline. This function is enabled by default on some NVR models. 		
Auto Switch to U-Code	Select Basic Mode or Advanced Mode , then the NVR automatically chooses basic U-code mode or advanced U-code mode for a newly added camera.		
	 Note: Every time a camera is added to the NVR, it is considered a newly added camera. This function is not effective to cameras that are already added or added cameras that go back online after being offline. This function is enabled by default on some NVR models. 		
Refresh	Click Refresh to check the camera status.		
Live View	Click 💽 to play live video of the camera.		

4.1.2 Fisheye Configuration

Set the mounting mode and display mode for fisheye cameras. Fisheye configuration is supported only by certain fisheye cameras.

Note: Before using this function, make sure that a fisheye camera has been mounted and that the camera has been added to your NVR.

Configuration

Configure the following parameters after the fisheye camera is installed.

1. Go to Menu > Camera > Camera > Fisheye.



2. Select the fisheye camera and click 🗾.

	Fisheye				
IP Address	206 . 3	. 38			
Mount	Ceiling			~	
			Exit		

3. Set the parameters as needed.

Item	Description
Mount	Select the mounting mode, including ceiling mount, wall mount, and desktop mount. If you change how the fisheye camera is installed, change its mounting mode so as to display proper images.
Angle of View (°)	Set the viewing angle of the fisheye camera.
Fisheye Mode	The display mode of the current camera in the live view window. Set it as needed.

4. Click Apply.

Dewarping

Fisheye cameras provide large wide-angle views, but the image captured is distorted. You may adjust the output image by correcting the shooting angle of the fisheye.

Note: Dewarping is available in live view and playback (in normal and corridor playback modes). The operations are similar. The following describes dewarping in live view.

1. In the preview page, click 🔊 on the window. The figure as shown below appears.



2. Set the mounting mode and display mode.

Mount	Display Mode	Description
Ceiling Mount		360° panoramic original image
Desktop Mount		360° panoramic + 1PTZ
	\square	180° panoramic
	0	Fisheye+3PTZ
	0	Fisheye+4PTZ
		360° panoramic + 6PTZ
	9	Fisheye+8PTZ
Wall Mount		360° panoramic original image
	53	Panoramic
	50	Panoramic + 3PTZ
	pell	Panoramic + 4PTZ
	20	Panoramic + 8PTZ

3. Dewarping operations: Take Ceiling Mount and Fisheye+3PTZ as an example.



• Drag the mouse to rotate the image or use the scroll wheel to zoom in or out on a PTZ image. A box appears on the fisheye image as the image rotates, and as you drag the box or move the scroll wheel on the fisheye image, the corresponding PTZ image rotates or zooms in or out as well.

4.1.3 Advanced Functions

Change the password of online IP cameras or restore factory default settings for cameras.

Note: Changing camera password is available for cameras connected via the private protocol.

Go to Menu > Camera > Camera > Advanced.

) Camera Name	Protocol	Model	Change Password	Default
□ D1	D01	2nielew			
🗆 D2	400W				
D3	N5				
🗖 D4					
🗆 DS	2.241	Bridge			
🗖 D6	247				
D7	N52.5				
D8	N5SMD	Scicies .			
D9	N52.7	ONVIF			
D10	N52.9	ONVIF			
D12	N52.11	ONVIF			Ō
D13	N52.12	ONVIF			
Exit					

Change Camera Password

You can change password of camera(s) one by one or in batches.

1. Select a camera and click **[27]**, or select the target cameras and click **Batch Change Password**.

	Passw	ord		
Password				
Confirm				
Use Administrator Password				
		ОК	Cancel	

2. Enter the new password and confirm the password.

Note: Select Use Admin Password, the camera's password is changed to the admin password of the NVR, and cannot be edited.

3. Click **OK**. Check if the password is successfully changed.

Restore Default Settings

Select the camera, click . A message indicating camera restart appears, click **OK** and then the camera's default settings will be restored.

4.1.4 Camera Type

You can change the camera type to analog or digital. This function is only available for hybrid NVRs.

Change Camera Type

Change camera type to analog or digital.

1. Go to Menu > Camera > Camera > Camera Type.

Camera ID	☑ Analog	Digital
1		
		0
		Ο
4		
Apply Exit		

- 2. Select the camera you want to change and choose the desired type.
- 3. Click Apply, then a message indicating device restart appears.
- 4. Click Yes. The camera type will be changed after the NVR restarts.

Add Analog Camera

Analog cameras can be added to hybrid NVRs only.

- 1. Connect the camera to the video output interface of the NVR via a coaxial cable, and connect the camera to power. The camera will be added to the NVR.
- 2. Check the camera status in the preview page.

4.2 Encoding Settings

Configure storage mode, capture mode, stream type, etc.

Note:

- The configuration items may vary with IPC models or versions.
- Some functions may be unavailable if the IPC version is too low. In this case, you need to upgrade the IPC first.
- 1. Go to Menu > Camera > Encoding.

Encoding				
Select Camera	D1			
Storage Mode	Main and Third Stream			
Capture Mode	1920*1080@30			
	Main Stream	Sub Stream	Third Stream	
Stream Type	Normal	Network Transmission	Network Transmission	~
Video Compressi	on H265	H265	H265	~
Resolution	1920*1080(1080P)	720*576(D1)	352*288(CIF)	~
Bitrate Type	CBR	CBR	CBR	×
Bit Rate(Kbps)	2048	512	128	~
fps	30	30	30	~
Image Quality	0	0		
I Frame Interval	60	60	60	
Smoothing		 0	 0	
U-Code	Close	Close	Close	~
Сору	Apply Exit			
сору	oppo exit			

- 2. Select the camera from the drop-down list.
- 3. Choose a storage mode, including main stream, sub stream, main and sub stream, main and third stream, sub and third stream. The default is main and third stream. Only certain NVR models support all the five modes. The storage mode determines the recording format (HD or SD). It may affect the clarity and output mode of the recording. Set the storage mode as needed by referring to the table below.

Storage Mode	HD Streaming	SD Streaming	
Main stream	Main stream	No video or image	
Sub stream	Sub stream	No video or image	
Main + sub stream	Main stream	Sub stream	
Main + third stream	Main stream	Third stream	
Sub + third stream	Sub stream	Third stream	

Table 4-1: Storage Mode

Note:

This configuration item only changes the storage stream of the NVR, and does not change the video stream sent from IPC. The IPC sends the main stream by default.

- 4. Set the capture mode, that is, combinations of resolution and frame rate. This parameter is configurable only when the camera is connected to the NVR via the private protocol.
- 5. Set the encoding parameters for different streams.

Item	Description		
Stream Type	 Main stream: Select Schedule or Event. Schedule: Set encoding parameters for scheduled recordings. Event: Set encoding parameters for events such as motion detection and alarm input. Sub stream: Set encoding parameters for low resolution videos intended for network transmission. 		
Video Compression	Choose H264 or H265. The supported video compression may vary with IPC model.		
Resolution	The number of pixels in a frame.		
Item	Description		
------------------	---	--	--
Bitrate Type	 VBR: Variable Bit Rate (VBR) is used to keep the quality of video streams as constant as possible by varying the bit rate. CBR: Constant Bit Rate (CBR) is used to keep a specific bit rate by varying the quality of video streams. 		
Bit Rate(Kbps)	The number of bits transferred per second. Select a value from the drop-down ist, or select Custom to set a value as needed.		
Frame Rate(fps)	The number of frames per second.		
Image Quality	This parameter is configurable when Bitrate Type is set to VBR . 1 to 9 levels are available.		
l Frame Interval	The number of frames between two adjacent I frames.		
Smoothing	Use the slider to control the sudden change of bit rate.		
U-Code	Select the U-Code mode, including basic mode and advanced mode. The advanced mode achieves higher compression ratios. You can also turn off the U-Code.		

6. (Optional) To apply the settings to other camera(s), click **Copy** and select the desired parameter(s) and camera(s), and then click **OK**.

				Co	ру				
all all	🗌 Bit Rate	e (Main Stream) e (Sub Stream) e (Sub Stream)	□ Fram	e Rate (Main S e Rate (Sub Sti ate (Third Strea	eam) 🗌 Vid	eo Compressi	on (Sub 🗌 R	-Code (Main St esolution (Sub ideo Compress	Stream)
AII	D1 D16 D24 D32 D43 D52 D61 D71	D2 D17 D25 D33 D45 D53 D62 D72 D80	D3 D18 D26 D34 D46 D55 D63 D73	D4 D19 D27 D36 D47 D56 D64 D74	D5 D20 D28 D37 D48 D57 D67 D75 D00	D6 D21 D29 D39 D49 D58 D68 D76 D76	D7 D22 D30 D40 D50 D59 D69 D77 D77	D8 D23 D31 D41 D51 D60 D70 D78 D78	Cancel

Note:

- When you copy **Storage Mode** to other camera(s), if the target camera does not support the storage mode, the operation will fail.
- When you copy Video Compression and U-Code to other camera(s), Bit Rate will be selected automatically because video compression adjusts bit rate automatically.
- 7. Click Apply.

4.3 Audio Configuration

Configure audio input and audio output of the IPCs.

1. Go to Menu > Camera > Audio.

Audio			
	Select Camera	D1	
	Audio Input		
	Audio Input		
	Access Mode	Line/Mic	
	Input Volume		_
	Audio Compression	G.711U	
	Sampling Rate(KHz)	8KHz	
	□ Noise Suppression		
	🗹 Audio Channel 1	LINE	
	Audio Channel 2	LINE	
	Audio Output		
	Copy Apply Exit		

- 2. Select the desired camera from the drop-down list.
- 3. Configure audio input parameters.

Item	Description		
Audio Input	Check 🔄 to enable audio input.		
Access Mode	 Select the access method according to the IPC's audio interface, including Line, Mic, and RS485. Line-in: The IPC is connected to a sound pickup by a 3.5mm audio cable Mic-in: The IPC is connected to a microphone. RS485: The IPC is connected to a sound pickup by a RS485 cable. You need to set the port mode to sound pickup on the IPC's web interface. See <i>Network Camera User Manual</i> for details. Note: Only certain brands of sound pickups are supported by IPCs. 		
	Contact technical support for details.		
Input Volume	Drag the slider to adjust the audio input volume.		
Audio Compression	Select the audio compression, including G.711A, G.711U, AAC-LC. The supported audio compression may vary with IPC model.		
Sampling Rate(KHz)	 Select the sampling rate based on the audio compression. For AAC-LC, select 8 KHz, 16 KHz, or 48KHz. For G.711A or G.711U, select 8KHz or 16KHz. 		
Noise Suppression	Select 💽 to enable noise suppression.		
Audio Channel 1/Audio Channel 2	Select Select so enable audio channel 1 or audio channel 2, and then select the access mode from the drop-down list.		
	Note: Only certain dual-channel IPCs support two audio channels, but the two audio channels cannot be enabled at the same time.		

4. Configure audio output parameters. Only certain IPC models support audio output.

Item	Description
Audio Output	Select the audio output mode.
	Speaker: The default mode.

Item	Description
	Line: An external speaker or earphone is required.
Output Volume	Drag the slider to adjust the audio output volume.

- 5. (Optional) To apply the audio settings to other camera(s), click **Copy** and select the desired parameter(s) and camera(s), and then click **OK**.
- 6. Click Apply.

4.4 Snapshot

Configure snapshot parameters.

1. Go to Menu > Camera > Snapshot > Snapshot Type.

Snapshot Type				
Select Camera		D1(IP Camera 01)		
Snapshot Type		Schedule		
Resolution			704*576(4CIF) ~	
Image Quality			High ~	
Snapshot Interval		5s ~	5s ~	
Copy Apply	Exit			

2. Select the camera and set the parameters as needed.

Item	Description	
Snapshot Type	Supports scheduled snapshot and event-triggered snapshot. You need set image quality and snapshot interval for them respectively.	
	Schedule: A snapshot is taken according to the set schedule.	
	• Event: A snapshot is triggered by an event such as alarm input and motion detection alarm. Manual snapshots are event-triggered snapshots.	
Resolution	he number of pixels in a frame. Only certain NVRs support setting resolution.	
Image Quality	et the snapshot quality. High, medium, or low are available.	
Snapshot Interval	Select the time interval between two snapshots from the drop-down list.	

- 3. (Optional) To apply the same settings to other cameras, click **Copy** and select the desired camera(s).
- 4. Click Apply.

4.5 OSD Configuration

Configure the characters overlaid on the preview (live view) window. On Screen Display (OSD) are characters displayed with video images, for example, channel/camera name, date and time, and people counting statistics.

1. Go to Menu > Camera > OSD.

OSD					
	Select Camera Camera Name OSD Camera Name (Note: Up to 20 characters o	D1 D016M2250 D016M2250 can be synced to OSD camera name.)	✓ Sync OSD Camera N	ame	
		People g: dd=Day; M=Month; y=Year ag: h/H=12/24 Hour; tt=A.M. or P.M.;	Date Format Time Format Show Time Show Name Count People Font Size Font Color	dd/MM/yyyy HH:mm:ss 2 Medium	▼▼
	Copy Apply	Exit			

- 2. Select the desired camera from the drop-down list.
- 3. Set the OSD parameters.

Item	Description		
Camera Name	The name of the selected camera. You may customize the camera name as needed.		
Sync OSD Camera Name	Sync OSD Camera Name is enabled by default, thus the OSD camera name is synchronized with the camera name automatically.		
	 Note: Up to 20 characters can be synced to OSD camera name. If the camera name exceeds 20 characters, only the first 20 characters will be displayed. If Sync OSD Camera Name is disabled, after the camera name is changed, the new name will not be synced to OSD camera name. 		
OSD Camera Name	The camera name displayed on the video image. OSD camera name is same as the camera name by default. You can customize the OSD camera name after disabling Sync OSD Camera Name . Up to 20 characters are allowed.		
Date Format	Select the date format from the drop-down list.		
Time Format	Select the time format from the drop-down list.		
Show Time	When enabled, the camera time is displayed on the left side of video image.		
Show Name	When enabled, the OSD camera name is displayed on the video image.		
Count People	When enabled, people counting statistics are displayed on the video image, including the number of people entered and exited. This function requires you to configure People Flow Counting first.		
Font Size	Select the front size from the drop-down list, including X-large, large, medium, and small.		
Font Color	Select the front color from the drop-down list.		



- 4. (Optional) To apply the same OSD settings to other cameras, click **Copy** and select the desired camera(s).
- 5. Click Apply.

4.6 Image Settings

Adjust image settings to get optimal images.

1. Go to Menu > Camera > Image > Image.

Image				
Select Camera	D1	∽ Image Scene	Indoor	
2007/2009/00/00/2007 		 ✓ Smart Illumination Smart Illumination 	Image Enhancement Exposure	
		Illumination Mode Control Mode	Infrared Global Mode	
Default	Exit			

- 2. Select the desired camera.
- 3. Select the image scene you want to use.

The IP camera provides several predefined scene modes for different application scenarios. When you select a scene, the parameters will be automatically set, you can also adjust the parameters as needed.

- Indoor: Recommended for indoor scenes.
- Common: Recommended for outdoor scenes.
- Starlight: Recommended for low light conditions.
- Test: Recommended for test scenes.
- Road Highlight Compensation/Park Highlight Compensation: Recommended for capturing vehicle license plates on roads or in parks.
- WDR: Recommended for scenes with high-contrast lighting, such as window, corridor, front door or other scenes that are bright outside but dim inside.
- Custom: Set a scene as needed.
- 4. Configure the parameters under the tabs in this page.

Note:

- Only certain IPCs support scene selection, and the image parameters may vary with IPC model.
- The default settings are scene-adaptive. Use default settings unless modification is necessary. To restore default settings under all the tabs, click **Default** in the lower left corner. This function is available only when the camera is connected to the NVR via the private protocol.
- Image settings apply to both live and recorded videos.

Image Enhancement

Click the Image Enhancement tab, and set the parameters.



Item	Description		
Brightness	The overall lightness or darkness of the image.		
Saturation	The intensity or vividness of colors in the image.		
Contrast	The difference between the lightest and darkest tones in the image.		
Sharpness	The contrast between the edges of an object in the image.		
Noise Reduction	Reduce noises in images, while it may cause image blur or smearing.		
Image Rotation	 The rotation of the image. Normal: Displays images without rotation. Flip Horizontal: Displays images flipped horizontally. Flip Vertical: Displays images flipped vertically. 180°: Displays images flipped vertically and horizontally. 90° CW: Displays images in corridor format. The camera must be installed correctly (rotated 90° clockwise). 90° CCW: Displays images in corridor format. The camera must be installed correctly (rotated 90° counterclockwise). 		
Splice Distance	Adjust splice distance to display splicing image for the dual-lens camera with single channel. The larger the distance, the more natural the splicing effect, thus avoiding video stuttering or image ghosting. The NVR can obtain the current splice distance automatically. Drag the slider to set it as needed.		
	 Note: This item appears only for dual-lens cameras that support this function. Configure the splice distance for the dual-lens camera according to the installation scene so as to achieve the best splicing effect. 		

Exposure

Click the **Exposure** tab, and set the parameters.

Exposure Mode	Indoor 50Hz	~
Shutter(s)	1/50	
Gain(dB)	0	
Slow Shutter		
Slowest Shutter	1/12	
Compensation		
Day/Night Mode	Automatic	~
Day/Night Sensitivity	High	~
Day/Night Switching(s)	3	
WDR	On	~
WDR Level		
WDR Level		

Item	Description
Exposure Mode	 Select the correct exposure mode to achieve the desired exposure effect. Automatic: The camera automatically sets the exposure parameters according to the scene. Custom: User can set exposure parameters as needed. Shutter Priority: The camera adjusts shutter as priority to adjust the image quality. Indoor 50Hz: Reduce stripes by limiting shutter frequency. Indoor 60Hz: Reduce stripes by limiting shutter frequency. Manual: Fine-tune image quality by setting shutter, gain, and iris manually. Low Motion Blur: Control the minimum shutter to reduce motion blur.
Shutter(s)	Shutter is used to control the amount of light that comes into the lens. A fast shutter speed is ideal for scenes in quick motion. A slow shutter speed is ideal for scenes that change slowly. This parameter is configurable when Exposure Mode is set to Manual, Shutter Priority, or Custom. Image: Note: If Slow Shutter is disabled, the reciprocal of the shutter speed must be greater than the frame rate.
Gain(dB)	Control image signals so that the camera can output standard video signals in different light conditions. This parameter is configurable when Exposure Mode is set to Manual or Custom .
Slow Shutter	Select store anable slow shutter. When enabled, the camera improves image brightness in low light conditions.
Slowest Shutter	When enabled, you can set the slowest shutter speed for the camera during exposure.
Compensation	Adjust the compensation value as required to achieve the desired image effect.
Day/Night Mode	 Automatic: The camera automatically switches between night mode and day mode according to the ambient lighting condition to output optimum images. Day: The camera outputs high-quality images in daylight conditions. Night: The camera outputs high-quality images in low light conditions.

Item	Description
Day/Night Sensitivity	Light threshold for switching between day mode and night mode. Ultra-low, low, medium, and high are available. A higher sensitivity level means that the camera is more sensitive to the change of light and is therefore more easily to switch between day mode and night mode. This parameter is configurable when Day/Night Mode is set to Automatic .
Day/Night Switching(s)	Set the length of time before the camera switches between day mode and night mode after the switching conditions are met. This parameter is configurable when Day/Night Mode is set to Automatic .
WDR	Enable/disable WDR from the drop-down list. Enable WDR to ensure clear images in high contrast conditions. This parameter is not available when Exposure Mode is set to Manual or Custom .
WDR Level	 Adjust the WDR level to improve image quality when WDR is enabled. ■ Note: In the case of low contrast, it is recommended to disable WDR or use level 1 to 6. Level 7 or higher is recommended if there is a high contrast between the bright and dark areas in the scene.

Smart Illumination

Click the **Exposure** tab, and set the parameters.

Smart Illumination		
Illumination Mode	Infrared	~
Control Mode	Global Mode	~

Item	Description
Smart Illumination	Click 💽 to enable smart illumination.
Lighting Type	 Select the lighting type from the drop-down list. Infrared: The camera uses infrared light illumination. White Light: The camera uses white light illumination. Dual Light: The camera adjusts the white light or infrared automatically according to the current lighting condition.
Control Mode	 Select the control mode from the drop-down list. Global Mode: The camera automatically adjusts illumination brightness and exposure to achieve the balanced image effect. Overexposure Restrain: The camera automatically adjusts illumination brightness and exposure to avoid regional overexposure. Manual: Control the brightness of illumination manually.
Illumination Level	Drag the slider to adjust the illumination level. This parameter is configurable when Control Mode is set to Manual . The greater the value, the higher the intensity (0 is off).

White Balance

Click the White Balance tab, and set the parameters.

White Balance	Automatic	~
Red Offset	0	
Blue Offset		

Item	Description
White Balance	 Adjust the red and blue gains of the image to remove unrealistic color casts. Auto: The camera automatically adjusts the red and blue gains according to the lighting condition (the color tends to be blue). Fine Tune: Adjust the red or blue offsets manually. Outdoor: Suitable for outdoor scenes where the color temperature varies widely. Sodium Lamp: The camera automatically adjusts red and blue gains according to the lighting condition (the color tends to be red). Locked: Lock the current color temperature to avoid change.
Red Offset	Adjust the red offset manually.
Blue Offset	Adjust the blue offset manually.

Advanced Settings

Click the **Advanced** tab, and set the parameters.

Defog	Close	~
Defog Intensity		

Item	Description
Defog	Enable/disable defog from the drop-down list. Defog is used to improve image visibility in foggy, hazy and other low-visibility scenes.
Defog Intensity	When defog is enabled, you can adjust the defog intensity. In a heavy-fog environment, the higher the defog level, the clearer the image. In a fog-free or light-fog environment, there is not much difference between levels 1 to 9.
	Note: Optical defog is available only for certain IPC models. When the defog intensity is set to 6 or higher, optical defog automatically turns on in thick fog, and images change to black and white.

4.7 Privacy Mask

Privacy mask is used to cover certain areas on the image for privacy, for example, ATM keyboard. When a PTZ camera rotates and zooms, the privacy mask moves and zooms with the camera and the masked area is always covered.

1. Go to Menu > Camera > Privacy Mask.

Privacy N	/lask						
	Select Camera	D1	Enable Privac	y Mask			
	20070070000000		Add Area	lī	Ū Clear All		
	(Note: Up to 8 area(s) allo	wed.)		Redraw		Clear	
	Apply Exit						

- 2. Select the desired camera from the drop-down list.
- 3. Select stoenable privacy mask.
- 4. Click *2*, and then use the mouse to specify a rectangle area on the left-side image. The number of areas supported varies with NVR model. Some NVRs support 4 areas and some support 8 areas.

Privacy I	Mask						
	Select Camera	D1		Enable Privacy Mask			
			Ø	Add Area	🛄 Clear All		
	-		No.	Redraw		Clear	
				ß			
	1000						
				Ø		İ	
			4			İ	
	As were at						
	2 - Die 1997 2004 (M. 202	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					
	(Note: Up to 8 area(s) allo	wed.)					
	Apply Exit	t					

- Adjust the size and position of the mask: Point to a handle of the mask and drag to resize it. Point to any position of the mask and drag it to the desired position.
- Redraw: Click 🗹 to clear all the existing area(s) and draw an area again.
- Delete: Select the mask and click 📺; Or click 🔟 to delete all the masks.
- 5. Click Apply.

4.8 PTZ Configuration

Configure and control PTZ cameras.

Note:

- This function is only available for PTZ cameras.
- The PTZ parameters may vary with IPC model.
- PTZ (pan, tilt and zoom) control is applicable to PTZ cameras only and may vary depending on the functions and protocols supported by the PTZ cameras. Refer to PTZ camera specifications for details.

PTZ Control Mode

Hybrid NVRs support two control modes, including **Coaxial** or **Serial Port**. Choose the control mode before using PTZ function.

- 1. Go to Menu > Camera > PTZ.
- 2. Choose a control mode according to camera connection method, and complete other settings.

Configure PTZ

Option 1: Enter Menu

- 1. Go to Menu > Camera > PTZ.
- 2. Select the target PTZ camera.

2 Configuration										
Select Cam	iera	D2								
			4		No.	Preset Name	Edit	Call	Delete	
					001	Preset001				
City-		-			002	Preset002				
					003	Preset003				
		h. t			004	Preset004				
				1 22 1	Prese	t Patrol Recorded				
	HE WE		THE THE		Preset	t Patrol 1			~	
-	^ ¬	+	Zoom		+ Ac	dd KeyP 🗰 Dele	te All 🛧 Move	Up 🕹 Mov	e Do	
<		+	Focus		KeyPo	int Preset	Duration	Speed Mo	odify Delet	e
	× 1	+	Iris							
PTZ S	peed 💻		-0							
	Ca	ncel								

3. Set the parameters. See below for details.

Option 2: Use PTZ Toolbar

1. In the preview page, select the target window, click 💿 on the window toolbar.



- 2. The PTZ control window appears. You can control the PTZ camera as needed.
- 3. Click PTZ Configuration, and set the parameters.



Table 4-2: PTZ Control Window Buttons

Button	Description					
 □ ↓ /ul>	Control the rotation direction of the PTZ camera; release PTZ control.					
+ Zoom + Focus + Iris	 Zoom in or out on images. Note: You can also zoom in or out using the scroll wheel on your mouse. Focus far or near for clear images. Increase or reduce the amount of light that enters the lens of the camera. Control the rotation speed of the camera. 1-9 are available. 1 means the slowest, and 9 means the fastest. 					
PTZ Configuration	 Click to display the PTZ Configuration page. Turn on/off the light. Turn on/off the wiper. Turn on 3D positioning. Turn on/off the heater. Turn on/off the snow removal. Turn on/off PTZ shortcut operations. Note: Make sure that the 3D positioning, heater and snow removal functions are supported by the camera before using. Use 3D positioning to zoom in or out. Dragging from top down zooms in. Dragging the other way zooms out. 					
Preset/Preset Patrol/Recorded Patrol/ Auto Guard	 For detailed information, see Preset, Preset Patrol, Recorded Patrol and Auto Guard respectively. Call a preset: Click , the PTZ camera goes to the preset position. Delete a preset: Click to delete the preset. Note: And the are displayed for saved presets only. 					
	Start or stop preset patrol.					

OSD Menu

Configure analog cameras on hybrid NVRs. This function is only available for hybrid NVRs.

- 1. In the preview window of an analog camera, click on the window toolbar.
- 2. Click OSD Menu.
- 3. Click 🔲 or 🛹 to open camera settings window, and set the parameters.
- 4. Click the **Let** to save the settings, and then choose **Exit** button to close the window.

Preset

A preset position (preset for short) is a saved view used to quickly steer the PTZ camera to a specific position.

- Add a Preset
 - 1. Use the PTZ direction buttons to steer the PTZ camera to the desired position.
 - 2. Select a preset number not in use, and click 🗾 to edit the preset name.

		Edit Preset	Name					
	Preset Name	Preset001						
Note: Editting a preset name will save the current position as the preset								
			ОК	Cancel				
lick OK	to save. Repeat the above	e steps to add all the	presets.					
No.	Preset Name	Edit	Call	Delete				
001	Preset001	Ø		m				
002	Preset002	Z	_					
003	Preset003			—				

Call a Preset

3.

In the preset list, select the preset to call and click 🔁. Then the camera rotates to the preset position.

Delete a Preset

In the preset list, select the preset to delete, and then click 🔟 .

Preset Patrol

Set a preset patrol route so the PTZ camera can patrol by presets (go from one preset to the next in the specified order).

- Add Preset Route
 - 1. Click **Preset Patrol**, and select a patrol route.

Preset Patrol 1		~ >	
🕂 Add KeyP 🗰 Dele	ete All 🛧 Move Up 🗸 🗸	Move Do	
KeyPoint Preset	Duration Speed	Modify Delete	
Click + Add KeyP	e as shown below appears.		
	Preset Configuration		
Preset	001(Preset001)	~	
Preset Duration	001(Preset001) 10	~	
		~	
Duration	10		

3. Complete the parameters, and click **OK**.

Item	Description
Preset	Set the length of time the camera stays at the preset after performing the patrol. See Preset for setting preset.
Duration(s)	Set the time the camera stays at the preset after the patrol is performed. The valid range is from 120 to 1800 seconds. The default is 10s.
Speed	Set the rotation speed. 1 means the slowest, 9 means the fastest. The default is 5.

4. Repeat the above steps to add more routes.

Note: Up to 4 patrol routes are allowed for each PTZ camera. Up to 8 presets (keypoints) are allowed for each patrol route.

Call a Preset

Select a preset patrol in the list, click 🕞 to start the preset patrol. To stop, click 🔲 .

+ Add KeyP□ Delete All↑ Move Up↓ Move DoKeyPointPresetDurationSpeedModifyDelete1001(Preset001)122s511	
1 001/Procet001) 122c 5	te
1 001(Preset001) 122s 5 🗹 🎹	
2 001(Preset001) 103s 5 🗹 🏢	

- Other Operations
 - Edit: Click 🗹 to edit the preset patrol parameters.
 - Delete: Click 🏢 to delete a keypoint; Click 👘 Delete All... to delete all keypoints.
 - Move Up/Move Down: Click ↑ Move Up / ↓ Move Do.. to adjust the sequence of these presets.

Recorded Patrol

Record a patrol route so the PTZ camera can patrol according to the recorded patrol.

- Add a Recorded Patrol
 - 1. In the **Recorded Patrol** tab, select a patrol route.
 - 2. Click o to start recording. Steer the camera to the desired direction, adjust the zoom, focus, iris as needed during the process.

0			
Recorded Patrol 1	 -	Δ	

- 3. Click 🗖 to stop recording.
- 4. Click Apply.
- Call a Recorded Patrol

Click is to start the recorded patrol. Click is to stop the recorded patrol.

Auto Guard

Configure auto guard so the PTZ camera automatically performs the specified action (e.g., going to a preset or starting a patrol) after being idle (no user operation) for a certain length of time.

Note: Before use, you need to add a preset or a patrol route.

- 1. In the Auto Guard tab, select the Enable check box to enable auto guard.
- 2. Set the parameters.

ltem	Description
Idle State(s)	Set the idle duration for the camera to start auto guard. 1 to 3600 seconds are available. The default is 60s.
Mode	Select preset or patrol route.
Preset/Patrol	Select a preset number or patrol route number.

3. Click Apply.

<u>5 VCA</u>

Configure VCA (Video Content Analysis), analyzer, and VCA search.

5.1 VCA Configuration

VCA includes face recognition, perimeter protection, temperature detection, mixed-traffic detection, exception detection & statistics, and people counting. You can monitor people flow, roads and moving objects by configuring VCA. The VCA functions and parameters may vary with NVR model.

Note: VCA functions are not available if there is no disk in slot 1.

1. Go to Menu > VCA > VCA Config.





- 2. Select a camera.
- 3. Select the check box of the VCA function to be enabled, and choose whether to implement this function on the camera side or the NVR side.
 - Camera Side Analysis: The VCA function is implemented by the camera.
 - NVR Side Analysis: The VCA function is implemented by the NVR.

Note:

- The parameters of some VCA functions supported on the camera side are more than that supported on the NVR side.
- Before you enable camera side analysis, make sure the camera is connected via private protocol.
- VCA functions that are not supported by the camera or NVR are grayed out.
- VCA functions on the NVR side is subject to device capabilities. For more information, go to Menu > VCA > VCA Config > Analyzer Config.
- 4. Click on to configure the function.

5.1.1 Alarm-triggered Actions

Configure actions to be triggered when an alarm occurs to alert you to deal with it in time.

Click or right to Trigger Actions, set the actions, and then click OK.

Note: The actions supported may vary with NVR model and VCA function.

Some actions are detailed below.

				Trigger Ac	tions					
Buzzer Send Email Pop-up Window										
Recording Got	 Preset P1 D9 D18 D26 D34 D42 D50 D58 D56 	eview Alarm D2 D10 D19 D27 D35 D43 D51 D59 D57	Output D3 D12 D20 D28 D36 D44 D52 D60 D60	D4 D13 D21 D29 D37 D45 D53 D61	D5 D14 D22 D30 D38 D46 D54 D54 D52	D6 D15 D23 D31 D39 D47 D47 D55 D63	D7 D16 D24 D32 D40 D48 D56 D64	D D8 D 17 D 25 D 033 D 041 D 49 D 057 D 065		
					Apply		ОК		Cancel]

Buzzer

The NVR makes a buzzing sound when an alarm occurs.

Send Email

The NVR sends an email with alarm information to the specified email address(es) when an alarm occurs.

Pop-up Window

An alarm message pops up when an alarm occurs.

Recording

The NVR records video from the selected camera when an alarm occurs.

Goto Preset

A PTZ camera moves to a preset position when an alarm occurs.

	Trigger Actions		
Buzzer Send Email Pop-up Window			
Recording Goto Preset Preview Alarm Output			
Camera Preset		Edit	Delete
			İ
		Ø	
			Ш.
			Ť.
			1
		ок	Cancel





	Preset	
Camera		~
Preset		~
		Cancel

2. Select the camera to perform this action and select the preset you want the camera to go to when an alarm occurs.

Note: Before use, you need to configure presets on the PTZ camera. See *Network Camera User Manual* for details.

3. Click OK.

😴 Note: To delete or unlink a preset, click 🏢

Preview

The NVR plays the live video of the specified camera(s) when an alarm occurs. To perform this action, you need to configure **Max. Alarm-Triggered Live View Windows** (1/4/9 available) under **Menu > System > Preview**.

Trigger Actions									
Buzzer									
Send Email									
Pop-up Wir	laow		L						
		Preview Alarn							
	□ D1	□ D2	D D3	□ D4	□ D5	🗆 D6	□ D7	D D8	
		D10	□ D12	D13	□ D14	D15	□ D16	□ D17	
	D18	D19	D20	D21	D22	D23	D24	D25	
	🗆 D26	🗆 D27	🗆 D28	🗆 D29	D30	🗆 D31	D32	D33	
	🗆 D34	🗆 D35	🗆 D36	🗆 D37	🗆 D38	🗆 D39	🗆 D40	🗆 D41	
	🗆 D42	🗆 D43	🗆 D44	🗆 D45	🗆 D46	🗆 D47	🗆 D48	🗆 D49	
	🗆 D50	🗆 D51	🗆 D52	🗆 D53	🗆 D54	🗆 D55	🗆 D56	🗆 D57	
	🗆 D58	🗆 D59	🗆 D60	🗆 D61	🗆 D62	🗆 D63	🗆 D64	D65	
								נדיי	
							ОК	Cancel	

The live view page displayed in the event of alarms varies depending on the number of linked cameras and the number of alarm-triggered live view windows. When an alarm occurs, the live view page shows the live video from the linked camera(s) with a red frame; when the alarm ends, the live view page returns to the original state.

• When Max. Alarm-Triggered Live View Windows is set to 1 Window, the live view page plays live video in one window. If more than one camera is linked, the live video switches at 5s.



• When Max. Alarm-Triggered Live View Windows is set to 4 Windows, the live view page plays the live video of each camera in 4-split mode. If more than 4 cameras are linked, the live video switches at 5s. Live view page with 3 cameras linked:



Live view page with 5 cameras linked:



• When Max. Alarm-Triggered Live View Windows is set to 9 Windows, the live view page plays the live video of each camera in 9-split mode. If more than 9 cameras are linked, the live video switches at 5s.

Alarm Output

A third-party device is triggered to raise an alarm when it receives an alarm output by the NVR.

			Trig	ger Actions				
Buzzer Send Email Pop-up Window								
		ew Alarm Outp						
	□ A->1 □ A->8 □ D12->1 □ D46->1 □ D58->1 □ D106->1 □ D115->1 □ D115->1	□ A->2 □ D1->1 □ D13->1 □ D51->1 □ D59->1 □ D97->1 □ D107->1 □ D122->1	A->3 D2->1 D18->1 D52->1 D68->1 D98->1 D108->1 D125->1	 A->4 D3->1 D25->1 D53->1 D69->1 D109->1 D109->1 D126->1 D126->1 	 A->5 D7->1 D34->1 D55->1 D82->1 D100->1 D110->1 D127->1 D127->1 	A->6 D8->1 D39->1 D56->1 D104->1 D113->1 D128->1	□ A->7 □ D10->1 □ D43->1 □ D57->1 □ D105->1 □ D105->1 □ D114->1 □ D129->1	
				Apply		ок	Cancel	

Alarm Sound

The selected camera plays an audio alarm when an alarm occurs. This action is only available to cameras that support alarm sound.

		Trigger Action	s		
Buzzer Send Email Pop-up Window					
Recording Goto Preset Pro Alarm Sound Select day	eview Alarm Output	Alarm Sound			
Copy To	Start Time 00 ○ 00 ○ 00 ○ 00 ○ ○ 00 ○ 00 ○ ○ ○ 00 ○ 00 ○	End Time 00	1.警戒区域,尽快影 3 1.警戒区域,尽快影 3 1.警戒区域,尽快影 3 1.警戒区域,尽快影 3	peat	
			Apply	ОК	Cancel

Configure this action as follows:

1. Select the Alarm Sound check box, select the alarm mode, and configure other parameters as needed.

Mode	Description									
Day/Night Mode	Select the day and time (day/night) in which alarm sound is enabled.									
	Note: The camera automatically switches to day or night mode according to the ambient brightness. See <i>Network Camera User Manual</i> for details.									
Custom Mode	Select the day and time (start/end time) in which alarm sound is enabled.									
	Note: Up to 4 time periods are allowed per day, and the time periods cannot overlap.									
Audio	Select the audio file to be played by the camera when an alarm occurs. By default, 13 audio files are available. You can configure the audio files on the camera's Web interface.									
	Note: The number of built-in audio files varies depending on the camera model, and up to 5 audio files are allowed on certain models.									

Mode	Description
Repeat	Set the number of times the audio file to be played when an alarm occurs. Range: 1 to 50.

2. (Optional) To apply the same settings to other days, select the desired day(s) after **Copy To**.

3. Click OK.

Alarm Light

The illuminator of the selected camera flashes for a certain period of time when an alarm occurs. This action is only available to cameras that support alarm light.

							Trigg	ier A	ctions						
Buzzer Send Email Pop-up Wir															
B	Goto P Alarm Lig link Time	ght e(s)	Preview 10							Light ~ 60]					
	elect day py To		Mon St 00 00 00 00	art Tim C 0 C 0 C 0 C 0 Ion	o ≎ o ≎ o ≎	23 00 00 00	d Time	9 10 10	>	□Fr	🗆 Sat	🗆 Sun			
										Apply		ОК	(Cancel	

Configure this action as follows:

1. Select the **Alarm Light** check box, select the alarm mode, and configure other parameters as needed.

Mode	Description
Day/Night Mode	 Select the day and time (day/night) in which alarm light is enabled. Note: The camera automatically switches to day or night mode according to the ambient brightness. See Network Camera User Manual for details.
Custom Mode	Select the day and time (start/end time) in which alarm light is enabled. Note: Up to 4 time periods are allowed per day, and the time periods cannot overlap.
Blink Time(s)	Set the duration that the illuminator flashes when an alarm occurs.

2. (Optional) To apply the same settings to other days, select the desired day(s) after Copy To.

3. Click **OK**.

Snapshot

The NVR takes a snapshot from a specified camera when an alarm occurs.

				Trigger Ac	tions								
Buzzer Send Email Pop-up Win	dow												
			Output Sna	ipshot									
□ AII	□ D1 □ D12	D2	D3	D 4	Ds	07	D9	D10					
							ОК		Cancel				

Note: This action is only available to certain alarm functions such as motion detection and human body detection, and is not available to VCA functions.

5.1.2 Arming Schedule

Configure an arming schedule to determine when the NVR receives alarms and performs predefined alarm-triggered actions.



			Arming S	Schedule							
Current Camera			D3								
Select day			Mon								
No.				Start Tim	ne			End Tir	ne		
1			00	÷	00	¢	24	Ŷ	00	÷	
2			00	\$	00	\$	00	\$	00	\$	
3			00	\$	00	\$	00	\$	00	\$	
4			00	\$	00	\$	00	\$	00	\$	
Сору То	- Mon	□Tue	Wed	□ Thu		Fri	□ Sat	🗆 Sur		Holiday	
				ply			ОК		Can		

On certain NVRs, the Arming Schedule page shows as follows:

				Arming S	Schedule						
Current	Camera			A<-3							
Select d	ay			Mon							
No.					Start Tin	าย			End Tir	ne	
1				00	¢	00	\$	24	\$	00	\$
2				00	\$	00	\$	00	¢	00	0
3				00	¢	00	\$	00	\$	00	\$
4				00	¢	00	\$	00	¢	00	\$
5				00	¢	00	\$	00	\$	00	0
6				00	\$	00	\$	00	\$	00	\$
7				00	\$	00	\$	00	\$	00	¢
8				00	¢	00	\$	00	\$	00	\$
Сору То		🗌 Mon	🗌 Tue	Wed	🗌 Thu		Fri	🗌 Sat	🗆 Sur		Holiday
				Ap	ply			ОК		Can	cel

Note:

- Up to 4 or 8 time periods are allowed per day, and the time periods cannot overlap.
- (Optional) To apply the same schedule to other days, select the desired day(s) after **Copy To**.
- The number of arming time periods available varies by function.
- If a SIP camera is connected to the NVR and configured with camera side analysis of Intrusion Detection, Cross Line Detection, Enter Area, Leave Area, or Human Body Detection, the arming schedule configured for these functions on the NVR will be synchronized to the camera.

5.1.3 Face Detection

Face detection detects and captures faces in a specified detection area.

Note: The functions and parameters supported by camera side analysis and NVR side analysis are different.

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select Face Detection and click in to configure it.

VCA Config Face Detection		
Current Camera Detection Area	D1 Full Screen	O Specify Area
Image: Ward of the second se	Image: Constraint of the systemImage: Constraint of the systemImage: Constraint of the systemFace Detection SensitivityTrigger ActionsArming ScheduleArming ScheduleAdvanced	
Apply Exit		

- 4. Set the detection area. Only 1 detection area is allowed.
 - Full Screen: Detects all faces in the live video.
 - Specify Area: Detects faces in a specified area of the live video. Select Specify Area and click , then a detection box appears in the left preview window. You can adjust the position of the area or draw an area as needed.



- Adjust the position of the area. Point to a border of the area and drag it to the desired position.
- Draw an area. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.
- 5. Set the face detection sensitivity by dragging the slider. The higher the sensitivity, the more likely a face will be detected. The lower the sensitivity, the less likely a side face or blurring face will be detected.
- 6. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
- 7. Click or right to Advanced, configure the parameters as needed, and then click OK.

	Advanced		
Min Dupillony Distance (py)			
Min. Pupillary Distance(px)	60		
Number of Snapshots	5		
Enable Face Selection			
Face Selection Mode	Effect Priority		~
Number of Selected Photos	1		
Note: Minimum pupillary distance rang	ge: 20px-150px		
		ок	Cancel
	6 H		
On certain NVRs, the Advanced page shows			
	Advanced		
Min. Pupillary Distance(px)	60		
Number of Snapshots			
Note: Minimum pupillary distance rang	ge: 20px-150px		
			Cancel

Parameter	Description
Min. Pupillary Distance(px)	The minimum distance (measured in pixels) between two pupils. Faces with pupillary distance smaller than the value will not be captured.
	Note: The default value varies by image resolution, and the valid range varies by NVR model.
Number of Snapshots	The number of snapshots to be captured when the detection rule is triggered. Range: 1 to 30. Default: 5.
Enable Face Selection	Select whether to select face snapshots to report.
Face Selection Mode	 Effect Priority: Set the Number of Selected Photos, then the NVR selects the specified number of snapshots with the best quality from all the snapshots captured when a face is detected to report. Speed Priority: Set the Number of Selected Photos and Selection Timeout, then the NVR selects the specified number of snapshots from the moment that a face is detected till Selection Timeout is up to report. Range: 1 to 1800.
	Face Selection ModeSpeed Priority~Number of Selected Photos1Selection Timeout(s)30
	• Periodic Selection: Set the Selection Timeout , for example, 600ms, then the NVR selects a face snapshot every 600ms to report.
	Face Selection ModePeriodic SelectionSelection Timeout(100ms)10
Number of Selected Photos	The number of face snapshots to be selected. Range: 1 to 3. This parameter is set to 1 by default and cannot be modified on certain models.
Max/Min Face Width(px)	The NVR only captures faces within Min. Face Width and Max Face Width . Range: 20 to 500.

8. Click Apply.

5.1.4 Face Comparison

Face comparison compares captured faces with face images in face libraries (also called face list). To use face comparison, you need to enable face detection first.

Note: The functions and parameters supported by camera side analysis and NVR side analysis are different.

Configure Monitoring Task

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select Face Comparison and click in to configure it.



- Configure monitoring tasks. A monitoring task of "Default List 80% Match Alarm" is enabled by default.
 You can click if to modify it, or click Add Monitoring Task to add more.
 - (1) Click Add Monitoring Task.

							4	dd Mon	itoring	Task							
Task N	lame																
Enable	9			2													
Cause																	
Monito	Monitoring List														∽ Add	Face List	
Alarm	Thresho	d									_	_					
Monito	oring Typ	e					Mat	ch Alarm	1								
Monitoring Sc	hedule																
	0	2	4	6	8	10	12	14	16	18	20	22	24		Edit		
Mon	Ě						12	14	10	18	20						
Tue Wed															Arming		
Thu															Unarmed		
Fri																	
Sat Sun																	
Holiday																	
			4		8	10	12	14	16	18	20	22	24				
															ОК	Cancel	

(2) Complete the monitoring task settings.

Parameter	Description
Task Name	Enter a name for the monitoring task.
Enable	Enable/disable the monitoring task.
Cause of Monitoring	Enter the cause of the monitoring task.
Monitoring List	Select a face list from the Monitoring List drop-down list or click Add Face List to create a face list to monitor.
Alarm Threshold	Set the alarm threshold by dragging the slider. The NVR takes snapshots when the similarity between a detected face and a face image in the monitoring list reaches the threshold. Default: 80. The higher the alarm threshold, the more accurate the matching result.

Parameter	Description			
Monitoring Type	 Select the monitoring type. Match Alarm: A match alarm occurs when the similarity between a detected face and a face image in the monitoring list reaches the alarm threshold. Not Match Alarm: A not match alarm occurs when the similarity between a detected face and a face image in the monitoring list fails to reach the alarm threshold. All: An alarm occurs when a face is detected. 			
Monitoring Schedule	Set the monitoring schedule. See Recording Schedule for details.			
Match Trigger Action	Set the actions to be triggered by a match alarm. See Alarm-triggered Actions for details.			
Not Match Trigger Action	Set the actions to be triggered by a not match alarm. See Alarm-triggered Actions for details.			

(3) Click OK.

- 5. (Optional) To apply the monitoring tasks to other cameras, click **Copy**, select the desired monitoring task(s) and camera(s), and then click **OK**.
- 6. Click Apply.

View Library Sync Status

This function is only available to cameras with face recognition support and camera side analysis enabled. Library sync indicates the sync of face libraries from NVR to IPC. After IPC receives a face list, it can compare the captured faces with the face images in the face list and upload the comparison results to NVR.

Click **Library sync state** to view the sync status of face lists and faces in the face lists from NVR to IPC. You may manually synchronize the face lists in **Not Started** state.

- View faces by status: Select a state from the Sync Status drop-down list to view faces in this state.
- Manually sync face lists: Select the face list to be synced and click **Manual sync**. If a face in a face list is not synced successfully, you can manually sync the face list.

Other Operations

Operation	Description
Delete	Delete the selected monitoring task(s).
•/ •	Enable/disable the monitoring task.
	Edit the monitoring task.

View Real-time Snapshots

- 1. Right-click on the live view page and select **Preview Mode** > **Smart**, then the real-time snapshots are shown on the right.
- 2. Click a snapshot to view detailed information. See Face for details.

5.1.5 Cross Line Detection

Cross line detection detects objects crossing a user-specified virtual line in a specified direction. The NVR takes snapshots and reports an alarm when the detection rule is triggered.

😴 Note:

- Before you use camera side analysis, make sure an intelligent server with **Platform Communication Type** set to **LAPI** is enabled on the camera.
- The functions and parameters supported by camera side analysis and NVR side analysis are different.
- To perform this function on the camera side, enable Intelligent Mark under Menu > System > Basic.

Configure Cross Line Detection

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select Cross Line Detection and click 🚺 to configure it.

VCA Config Cross Line Detection							
Current Camera Trigger Actions	D56						
Arming Schedule	Ø						
Area Advanced							
<u>R</u> f		Rule Drav	, Drawn Not Dra	Delete	Rule Trigger Direction Sensitivity	1 A<->B	`
E-	3		Not Dra		Priority	High	~
			Not Dra		Object Type	☑ Motor Vehicle ☑ Non-Motor Vehicle ☑ Pedestrian	
Сору Аррі	y Exit						

4. Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Line	Select Rule 1, click A, then click on the left image and drag to draw a detection line. The line defaults to A<->B direction. You can modify it as needed.
Trigger Direction	 Select the direction from which the object crosses the line to trigger an alarm. A->B: A cross line alarm occurs when an object crossing the line from A to B is detected. B->A: A cross line alarm occurs when an object crossing the line from B to A is detected. A<->B (default): A cross line alarm occurs when an object crossing the line from A to B or from B to A is detected.
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely cross line behaviors will be detected, but the false alarm rate will increase.
Priority	Select the priority of the detection rule, including High , Medium , and Low . The NVR detects the rule that is triggered first by default. If multiple rules are triggered at the same time, the NVR detects the rule with higher priority.
Object Type	Select the object(s) to be detected, including Motor Vehicle , Non-Motor Vehicle , and Pedestrian .

5. Under the **Advanced** tab, you can filter objects by size. For example, if you have selected **Motor Vehicle** as a detection object, after you set the **Max. Size** and **Min. Size** for it, motor vehicles larger than the max. size and smaller than the min. size will not be detected.



- (1) Select an object type and click Max. Size box and a Min. Size box appear in the left preview window.
- (2) Modify the max./min. size by adjusting the size of the box as follows: Point to a handle of the box and drag to resize it.

Note:

- The Max. Size and Min. Size settings take effect after you select the object as a detection object.
- The width and height of the maximum size must be greater than that of the minimum size.
- 6. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
- 7. (Optional) To apply the same settings to other cameras, click **Copy**, select the desired setting(s) and camera(s), and then click **OK**.
- 8. Click Apply.

View Real-time Snapshots

- Right-click on the live view page and select Preview Mode > Smart, then the real-time snapshots are shown on the right.
- 2. Click a snapshot to view detailed information. See Perimeter for details.

5.1.6 Intrusion Detection

Intrusion detection detects objects entering a user-specified area and staying for a preset time. The NVR takes snapshots and reports an alarm when the detection rule is triggered.

Note:

- Before you use camera side analysis, make sure an intelligent server with **Platform Communication Type** set to **LAPI** is enabled on the camera.
- The functions and parameters supported by camera side analysis and NVR side analysis are different.
- To perform this function on the camera side, enable Intelligent Mark under Menu > System > Basic.

Configure Intrusion Detection

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select Intrusion Detection and click and to configure it.



4. Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	 Select Rule 1, click and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed. Note: For a rule in Drawn state, you can click for redraw a detection area. To delete a detection area, click for
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely intrusion behaviors will be detected, but the false alarm rate will increase.
Time Threshold(s)	Set the time threshold by dragging the slider. If an object stays in the detection area for the set time, an intrusion alarm will be triggered.
Percentage	Set the percentage by dragging the slider. If the proportion of the object size to the detection area size reaches the set value, an intrusion alarm will be triggered.
Priority	Select the priority of the detection rule, including High , Medium , and Low . The NVR detects the rule that is triggered first by default. If multiple rules are triggered at the same time, the NVR detects the rule with higher priority.
Object Type	Select the object(s) to be detected, including Motor Vehicle , Non-Motor Vehicle , and Pedestrian .

5. Under the **Advanced** tab, you can filter objects by size. For example, if you have selected **Motor Vehicle** as a detection object, after you set the **Max. Size** and **Min. Size** for it, motor vehicles larger than the max. size and smaller than the min. size will not be detected.

nfig Intrusion Detection							
Current Camera	D1						
Trigger Actions	0						
Arming Schedule							
Area Advanced							
* 1		and store it	Object Size	Draw	Max. Size	Min. Size	
			Motor Vehicle		9999 * 9999	20 * 20	
Real .		-	Non-Motor Vehicle		9999 * 9999	20 * 20	
-		-	Pedestrian		9999 * 9999	20 * 20	
		in a					
		×					
Valid range for max. and	min. sizes is 1-9	999 (assume the image	e size is 10000x10000)).			
Copy Apply		Exit					

- (1) Select an object type and click Max. Size box and a Min. Size box appear in the left preview window.
- (2) Modify the max./min. size by adjusting the size of the box as follows: Point to a handle of the box and drag to resize it.

Note:

- The Max. Size and Min. Size settings take effect after you select the object as a detection object.
- The width and height of the maximum size must be greater than that of the minimum size.
- 6. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
- 7. (Optional) To apply the same settings to other cameras, click **Copy**, select the desired setting(s) and camera(s), and then click **OK**.
- 8. Click Apply.

View Real-time Snapshots

- 1. Right-click on the live view page and select **Preview Mode** > **Smart**, then the real-time snapshots are shown on the right.
- 2. Click a snapshot to view detailed information. See Perimeter for details.

5.1.7 Enter Area Detection

Enter area detection detects objects entering a user-specified area. The NVR takes snapshots and reports an alarm when the detection rule is triggered.

Rote:

- Before you use camera side analysis, make sure an intelligent server with **Platform Communication Type** set to **LAPI** is enabled on the camera.
- The functions and parameters supported by camera side analysis and NVR side analysis are different.
- To perform this function on the camera side, enable Intelligent Mark under Menu > System > Basic.

Configure Enter Area Detection

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select Enter Area and click 🚳 to configure it.



4. Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	Select Rule 1, click and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.
	Note: For a rule in Drawn state, you can click to redraw a detection area. To delete a detection area, click m
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely entry behaviors will be detected, but the false alarm rate will increase.
Priority	Select the priority of the detection rule, including High , Medium , and Low . The NVR detects the rule that is triggered first by default. If multiple rules are triggered at the same time, the NVR detects the rule with higher priority.
Object Type	Select the object(s) to be detected, including Motor Vehicle , Non-Motor Vehicle , and Pedestrian .

5. Under the **Advanced** tab, you can filter objects by size. For example, if you have selected **Motor Vehicle** as a detection object, after you set the **Max. Size** and **Min. Size** for it, motor vehicles larger than the max. size and smaller than the min. size will not be detected.



- (1) Select an object type and click Max. Size box and a Min. Size box appear in the left preview window.
- (2) Modify the max./min. size by adjusting the size of the box as follows: Point to a handle of the box and drag to resize it.

Note:

- The Max. Size and Min. Size settings take effect after you select the object as a detection object.
- The width and height of the maximum size must be greater than that of the minimum size.
- 6. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
- 7. (Optional) To apply the same settings to other cameras, click **Copy**, select the desired setting(s) and camera(s), and then click **OK**.
- 8. Click Apply.

View Real-time Snapshots

- Right-click on the live view page and select Preview Mode > Smart, then the real-time snapshots are shown on the right.
- 2. Click a snapshot to view detailed information. See Perimeter for details.

5.1.8 Leave Area Detection

Leave area detection detects objects leaving a user-specified area. The NVR takes snapshots and reports an alarm when the detection rule is triggered.

Note:

- Before you use camera side analysis, make sure an intelligent server with **Platform Communication Type** set to **LAPI** is enabled on the camera.
- The functions and parameters supported by camera side analysis and NVR side analysis are different.
- To perform this function on the camera side, enable Intelligent Mark under Menu > System > Basic.

Configure Leave Area Detection

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select Leave Area and click is to configure it.



4. Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	Select Rule 1, click and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.
	Note: For a rule in Drawn state, you can click to redraw a detection area. To delete a detection area, click
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely leaving behaviors will be detected, but the false alarm rate will increase.
Priority	Select the priority of the detection rule, including High , Medium , and Low . The NVR detects the rule that is triggered first by default. If multiple rules are triggered at the same time, the NVR detects the rule with higher priority.
Object Type	Select the object(s) to be detected, including Motor Vehicle, Non-Motor Vehicle, and Pedestrian.

5. Under the **Advanced** tab, you can filter objects by size. For example, if you have selected **Motor Vehicle** as a detection object, after you set the **Max. Size** and **Min. Size** for it, motor vehicles larger than the max. size and smaller than the min. size will not be detected.
| | ig Leave Area | | | | | | |
|---|----------------------------|---------------------------------------|-----------------------|------|-------------|-----------|--|
| | Current Camera | D1 | | | | | |
| | Trigger Actions | Ø | | | | | |
| | Arming Schedule | 0 | | | | | |
| | Area Advanced | | | | | | |
| | * 1 | | Object Size | Draw | Max. Size | Min. Size | |
| | | | Motor Vehicle | Ø | 9999 * 9999 | 20 * 20 | |
| | | - | Non-Motor Vehicle | | 9999 * 9999 | 20 * 20 | |
| | - | | Pedestrian | Ø | 9999 * 9999 | 20 * 20 | |
| | | X | | | | | |
| | Valid range for max. and r | nin. sizes is 1-9999 (assume the imag | e size is 10000x10000 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| (| Copy Apply | Exit | | | | | |

- (1) Select an object type and click A Max. Size box and a Min. Size box appear in the left preview window.
- (2) Modify the max./min. size by adjusting the size of the box as follows: Point to a handle of the box and drag to resize it.

Note:

- The Max. Size and Min. Size settings take effect after you select the object as a detection object.
- The width and height of the maximum size must be greater than that of the minimum size.
- 6. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
- 7. (Optional) To apply the same settings to other cameras, click **Copy**, select the desired setting(s) and camera(s), and then click **OK**.
- 8. Click Apply.

View Real-time Snapshots

- Right-click on the live view page and select Preview Mode > Smart, then the real-time snapshots are shown on the right.
- 2. Click a snapshot to view detailed information. See Perimeter for details.

5.1.9 Ultra Motion Detection

Ultra motion detection detects motions of motor vehicles or pedestrians in a user-specified area. The NVR takes snapshots and reports an alarm when the detection rule is triggered.

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select **Ultra Motion Detection** and click **or** to configure it.

Select Camera	D1(0	1)							
Trigger Action									
Arming Sched	ule 🙆								
				Rule	Draw		Del	Sensitivity	O
Statistics.					Ø	Drawn	İ	Min. Alarm Interv	
7-01			- Ter			Drawn	١.	Snapshot Object	Motor Vehicle
	#1	1	- 100 M		Ø	Not Dra	1		🗹 Pedestrian
		#2				Not Dra	亩		
14									
			- 12						
Enabling NVR s	ide ultra motion de	etection will simultan	neously						
enable camera :	side motion detecti	ion.							

4. Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	Select Rule 1, click , and then draw a detection area in the left preview window.
Sensitivity	Set the detection sensitivity by dragging the slider. The higher the sensitivity, the more likely motions will be detected, but the false alarm rate will increase.
Min. Alarm Interval(s)	Set the minimum alarm interval by dragging the slider. When a pedestrian or motor vehicle enters the detection area, an alarm is triggered and reported immediately, and a new alarm will only be reported after the set interval. Recommended value: 6s.
Snapshot Object	Select the snapshot object(s), including Motor Vehicle and Pedestrian.

- 5. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
- 6. Click Apply.

5.1.10 Defocus Detection

Defocus detection detects lens defocus. The NVR takes snapshots and reports an alarm when the detection rule is triggered.

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select **Defocus Detection** and click **(19)** to configure it.

VCA Config Defocus Detection	
Current Camera D1	
Trigger Actions 🚳	
Arming Schedule	
Sensitivity O	
Apply Exit	

- 4. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
- 5. Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely defocus will be detected, but the false alarm rate will increase.
- 6. Click Apply.

5.1.11 Scene Change Detection

Scene change detection detects the change of surveillance scene caused by external factors such as intentional camera movement. The NVR takes snapshots and reports an alarm when the detection rule is triggered.

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select Scene Change Detection and click is to configure it.

	-	 		
VCA Config Scene C	hange Detection			
Current Can		D1		
Trigger Acti	ons	0		
Arming Sche	edule	Ø		
Sensitivity			0	
Apply	Exit			
/MEROJ				

4. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.

- 5. Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely scene change behaviors will be detected, but the false alarm rate will increase.
- 6. Click Apply.

5.1.12 Object Removed Detection

Object removed detection detects objects removed from a user-specified area for a preset time. The NVR takes snapshots and reports an alarm when the detection rule is triggered.

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select **Object Removed** and click **object Removed** and click

VCA Config Object Removed						
Current Camera D1						
	Trigger Actions		t.	<u>)</u>		
	Arming Schedule					
	Rule	Draw			Delete	
			Drawn		1	
			Not Dr	awn	₫.	
		Ø	Not Dr	awn		
			Not Dr	awn		
(Note: Maxi. Points:6, Mini. Points:3) (Note: Double click to finish.)	Rule		:	1		
(Note: Double click to mish.)	Sensitivity		Ē			
	Time Threshold(s)					
	Time Threshold(s)					
Apply Exit						

4. Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	Select Rule 1, click , and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.
	Note: For a rule in Drawn state, you can click redraw a detection area. To delete a detection area, click redraw
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely object removal behaviors will be detected, but the false alarm rate will increase.
Time Threshold(s)	Set the time threshold by dragging the slider. If an object is removed from the detection area for the set time, an alarm will be triggered.

- 5. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
- 6. Click Apply.

5.1.13 Object Left Behind Detection

Object left behind detection detects objects left behind in a user-specified area for a preset time. The NVR takes snapshots and reports an alarm when the detection rule is triggered.

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.

3. Select **Object Left Behind** and click **o** to configure it.

VCA Config Object Left Behind					
Current Camera D1					
	Trigger Actions		Ø		
	Arming Schedule		Ø		
	Rule	Draw		Delete	
		🗹 Dra	wn	1	
		🗹 Not	Drawn	1	
		🗹 Not	Drawn		
		🗹 Not	Drawn		
(Note: Maxi. Points:6, Mini. Points:3) (Note: Double click to finish.)	Rule				
	Sensitivity				
	Time Threshold(s)		•		
Apply Exit					

4. Set detection rules. The 4 detection rules shall be set separately. The following takes Rule 1 as an example.

Parameter	Description
Detection Area	 Select Rule 1, click and then draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed. Note: For a rule in Drawn state, you can click to redraw a detection area. To delete a detection area, click for
Sensitivity	Set the sensitivity by dragging the slider. The higher the sensitivity, the more likely object left behind behaviors will be detected, but the false alarm rate will increase.
Time Threshold(s)	Set the time threshold by dragging the slider. If an object is left behind in the detection area for the set time, an alarm will be triggered.

- 5. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.
- 6. Click Apply.

5.1.14 Auto Tracking

Auto tracking detects moving objects in the live video and tracks the first object detected.

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select Auto Tracking and click is to configure it.

VCA Config	Auto Tr	acking										
с	Current Car						D2	Trigger Actio Arming Sche		Ø		
7	A.	5			1-			Tracking Mod		Panorami		
	U	ļ						Tracking Tim Zoom	eout(s)	30 Auto		
	- < L			++++	Zoom Focus Iris	-						
	Sp	eed	_		••••							
			Exit									

4. Set the tracking parameters.

Parameter	Description									
Tracking Area	In the PTZ operation area, use the PTZ control buttons to adjust the tracking area, including shooting angle, zoom, focus, iris and rotation speed.									
	┌ ^ ¬ ┿ Zoom —									
	< 🗆 > 🕂 Focus —									
	∟ ~ → Iris —									
	Speed									
Tracking Mode	Panoramic: Continuously tracks objects that appear in the tracking area until they disappear from the tracking area.									
Tracking Timeout(s)	Set the maximum tracking time. The device stops tracking when the object disappears or the set time is up. Range: 1 to 300. Default: 30.									
Zoom	 Select the tracking zoom ratio: Auto or Current Zoom. The default is Auto. Auto: Automatically adjusts the zoom ratio according to the tracking distance, focusing more on the object behavior. Current Zoom: Keeps the zoom ratio when the object is tracked, focusing more on the whole monitoring scene. 									

5. Set the alarm-triggered actions and arming schedule. See Alarm-triggered Actions and Arming Schedule for details.

6. Click Apply.

5.1.15 People Flow Counting

People flow counting counts people passing a specified tripwire in a user-defined area.

Configure People Flow Counting

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select **People Flow Counting** and click is to configure it.

4. Set the people flow counting rule.

Parameter	Description				
Draw Area	Click And draw a detection area in the left preview window. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.				
Draw Tripwire	Click Z and draw a tripwire in the left preview window. Only 1 tripwire is allowed.				
Direction of arrow	 Set the entry direction. A- >B: A to B is entry, B to A is exit. B- >A: B to A is entry, A to B is exit. 				
Counting Type	 Select the counting type: Total, People Entered, or People Exited. Total is the default counting type. Total: Displays the number of people entering and leaving the detection area. People Entered: Displays the number of people entering the detection area. An entry is counted as a person crosses the tripwire in the direction of the arrow and passes through the detection area. People Exited: Displays the number of people leaving the detection area. An exit is counted as an object crosses the tripwire in the opposite direction of the arrow and passes through the detection area. 				
	 Note: Before use, you need to enable people counting OSD under Menu > Camera > OSD. People that loiter in the detection area, cross the tripwire only, or cross the detection area only are not counted. 				
Report Interval(s)	Set the time interval for reporting people flow statistics. Default: 60. Range: 1 to 60. The NVR reports people flow statistics to the uplink platform at set intervals. The uplink platform must subscribe to the function to receive the statistics.				
Enable Clear by Schedule	Select the Enable Clear by Schedule check box and set the time to clear people counting statistics.				

Parameter	Description
Clear At	The clearing time defaults to 00:00:00. You can modify it as needed. The NVR will clear people counting statistics on the OSD at the set time every day. This operation does not affect statistics and data reporting.
Clear Counting Result	Click to clear people counting statistics displayed on the live video immediately. This operation only affects the people counting OSD and does not affect statistics and data reporting.

- To be alerted when the number of people in the detection area exceeds a certain number, you can enable and configure People Present Alarm under Menu > Alarm > People Present Alarm. See People Present Alarm for details.
- 6. Click Apply.

View Real-time Statistics

Right-click on the live view page and select **Preview Mode** > **Smart**, then the real-time people statistics are shown on the right. See People Flow Counting for details.

5.1.16 Crowd Density Monitoring

Crowd density monitoring monitors the number of people in a specified area and triggers an alarm if the number exceeds the set alarm threshold.

- 1. Go to Menu > VCA > VCA Config.
- 2. Select a camera.
- 3. Select Crowd Density Monitoring and click 🚺 to configure it.

VCA Config Crowd De	nsity Monitoring		
Current Came Arming Sched		D2	
		Report Interval(s) Minor Alarm Major Alarm Critical Alarm Critical Alarm	
🗆 Alarm Sou	nd		
Audio	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Repeat			
Apply	Exit		

4. Set the crowd density monitoring rule.

Parameter	Description
Detection Area	A detection box is displayed in the left preview window by default. You can adjust the position of it or draw an area as needed. Only 1 detection area is allowed.
	• Adjust the position of the default detection area: Point to a border of the area and drag it to the desired position.
	 Draw an area: Click <i>2</i>. Click on the image and drag to draw a line. Repeat the action to draw more lines to form an enclosed shape as needed. Up to 6 lines are allowed.
Report Interval(s)	Set the time interval for reporting crowd density statistics. Default: 60. Range: 1 to 60.

Parameter	Description
	The device reports crowd density statistics to the uplink platform at set intervals. The uplink platform must subscribe to the function to receive the statistics.
Minor Alarm	A minor alarm is triggered when the number of people in the specified area reaches the set value. Select the Minor Alarm check box and set the number of people to trigger minor alarms. Range: 1 to 40.
Major Alarm	A major alarm is triggered when the number of people in the specified area reaches the set value. The value of major alarm must be greater than that of minor alarm. Select the Major Alarm check box and set the number of people to trigger major alarms. Range: 1 to 40.
Critical Alarm	A critical alarm is triggered when the number of people in the specified area reaches the set value. The value of critical alarm must be greater than that of major alarm. Select the Critical Alarm check box and set the number of people to trigger critical alarms. Range: 1 to 40.

- 5. Enable **Alarm Sound** for minor alarm, major alarm, and critical alarm, set the alarm audio and playback times, then the camera will play the alarm audio when an alarm occurs.
- 6. Set the arming schedule. See Arming Schedule for details.
- 7. Click Apply.

5.2 Analyzer Configuration

View the analyzer usage and change the analysis mode.

Analyzer is a smart chip used to process face recognition and perimeter protection. The analyzer capacity varies by NVR model, which requires you to allocate channels appropriately.

Note: An analyzer can only be used for one type of VCA-Face Recognition or Perimeter Protection.

- 1. Go to Menu > VCA > Analyzer Config.
- 2. Select an analysis mode. Face Recognition is the default analysis mode.

Note:

- Changing the analysis mode will disable the channel configuration in the original mode. Before you change the analysis mode, disable the functions in the current analysis mode for all channels. For example, if intrusion detection is enabled for D1 and D2, you need to disable intrusion detection for D1 and D2 first before changing the analysis mode to face recognition.
- If face recognition or perimeter protection cannot be enabled on the NVR, check the analyzer configuration first. If the analysis mode of all four analyzers is face recognition, all NVR perimeter protection functions cannot be enabled unless you set the mode of one analyzer to perimeter protection.
- 3. View the analyzer's capacity usage. The analyzer's capacity is divided into the number of video stream analysis channels and the number of image stream analysis channels. Video stream analysis is NVR-side analysis, and image stream analysis is camera-side analysis.

The settings shown in the figure above means: The NVR has 4 analyzers. Analyzer 3 has been used for 1 video stream channel and 1 image stream channel, and can be used for 7 video stream channels or 15 image stream channels.



5.3 Face List Management

Import face images so the NVR can compare the detected faces with the imported face images.

5.3.1 Face List

Configure face lists for face comparison.

Configure Face List

1. Go to Menu > VCA > VCA Search > List Management > Face List.



2. Configure face lists. A face list is created by default. Up to 128 face lists are allowed.

Parameter	Description					
+	(1) Click 🛖 to add a face list.					
	Add Facelist					
	Name Set as Dynamic Library OK Cancel					
	(2) Enter the list name.					

Parameter	Description					
	(3) (Optional) Select the Set as Dynamic Library check box to set the face list as a dynamic list. The captured face images that do not match any face image in face lists will be automatically added to the dynamic list.					
	 Note: If there is no dynamic face list, you can add a new face list and set it as a dynamic list. You can only configure a dynamic list while adding a face list. Only 1 dynamic list is allowed. To change the dynamic list, you need to delete the original dynamic list and add a new one. (4) Click OK. 					
τīπ	Delete the selected face list(s).					
	Note: Deleting a face list will also delete its related historical alarm records. Please handle with caution.					
⊠/-	Click 📝 to edit the face list. You can only edit the list name. 🗖 indicates that the face list cannot be edited.					
	indicates that the face list is a dynamic list. 🔯 indicates that the face list is not a dynamic list.					
Ø/Ø	Click () to enable/disable Auto Snapshot to Library.					

- 3. Import face images. You can import one by one or in batches.
 - Import one by one
 - (1) Click Add.

	Add Face Info				
	Face Info				
	Face Library	DefaultList			
	Name	De5111			
	Gender (0-Female 1-Male 2-U	Unknown			
	Date of Birth	2022	08	11	
	Nationality				
	Province				
	City				
	ID Type	ID Card			
Select Image	ID No.:				
Selectinge					
			ОК	Cancel	

- (2) Click **Select Image** to import the desired face image.
- (3) Complete the face information including face library, name, gender, date of birth, nationality, province, city, ID type and ID number.
- (4) Click OK.
- Import in batches
 - (1) Click Export Template.
 - (2) Select the location to save the template and click **Backup**.
 - Note: You can export the template to an external storage device (connect a storage device to the NVR) or a PC (log in to the NVR's web interface, go to Smart > List Management > Face List, click DefaultList, and then click Export Template).
 - (3) Complete the template with reference to the import guide.
 - (4) Click Import, select the template, and click Import.

	Im	port		
Partition Location	USB-sdz4 /			Refresh
	Size	Туре	Modify Time	Delete
🛅 Previous Level		dir	2022-08-11 14:50:56	
📩 backup		dir	2022-08-11 14:56:47	歱
🚞 CaptureReport		dir	2022-07-26 20:09:20	
Free	59921MB			
Total	59999MB			
New Folder		Format	Import	Cancel

Note: The number of images allowed for a file depends on the library capacity of the device.

Other Operations

Parameter	Description						
Search	1. Set search conditions.						
	Status All Y Name: Y Search Reset						
	 Select the modeling state: All, Modeled, Modeling Failed, Modeling, or Not Modeled. 						
	• Select Name or ID No. and enter the name or ID number to search.						
	2. Click Search.						
	3. To clear the search conditions, click Reset .						
Edit	Select a face image and click Edit to modify its information.						
Model	Model face images in Not Modeled or Modeling Failed status.						
Export Selected	Export the selected face image(s).						
Export All	Export all face images in the selected face list.						

5.4 Vehicle Monitoring

Search images related to vehicle monitoring events. Before you start,

- 1. Configure VIID. See Configure VIID Local for details.
- 2. Configure plate lists. See Plate List for details.
- 3. Configure vehicle alarm monitoring. See Vehicle Alarm Monitoring for details.

5.4.1 Plate List

Configure plate lists for vehicle monitoring. Configure Plate List

1. Go to Menu > VCA > VCA Search > Vehicle Control > Plate List.

	🔟 Delete	Add	Delete	Delete All	Batch Imp	Export Sel	Export All	Export Te	Refresh	
Name	Edit	No.		Plate No.		Modify		Delete		
🗌 DefaultList		01		Z2334						
		Total: 1 Page	:1/1				« <	> >	> 1	→

2. Configure plate lists. A plate list is created by default. You can add more as needed.

Parameter	Description					
Add	Click 🛖, enter the list name, and click OK .					
		Name				
	Name					
		OK Cancel				
Delete	Select the list(s) you want to delete and click 🔟.					
Edit	Click 🗾 to modify the list name	Click 🔟 to modify the list name.				

- 3. Add plate numbers. You can add one by one or in batches.
 - Add one by one
 - (1) Click Add.

	Add Plate Info
Plate No.	
	OK Cancel

- (2) Enter the plate number.
- (3) Click OK.
- Add in batches by importing a file
 - (1) Click Export Template.
 - (2) Select the location to save the template and click **Backup**.
 - Note: You can export the template to an external storage device (connect a storage device to the NVR) or a PC (log in to the NVR's web interface, go to Smart > Vehicle Control > Plate List, click DefaultList, and then click Export Template).
 - (3) Complete the template with reference to the import guide.
 - (4) Click **Batch Import**, select the template, and click **Import**.

	Im	port		
Partition Location	USB-sdz4 /			Refresh
	Size	Туре	Modify Time	Delete
🛅 Previous Level		dir	2022-08-11 14:50:56	
📩 backup		dir	2022-08-11 14:56:47	1
📩 CaptureReport		dir	2022-07-26 20:09:20	
Free	59921MB			
Total	59999MB			
New Folder		Format	Import	Cancel

Note: A progress bar is displayed during import. The import result will be displayed when the progress bar shows 100%.

Other Operations

Parameter	Description
1	Delete a specific plate number.
Delete	Delete selected plate number(s).
Delete All	Delete all plate numbers in the selected plate list.
	Modify the plate number.
Export Selected	Export the selected plate number(s).
Export All	Export all plate numbers in the selected plate list.
Refresh	Refresh the plate list.

View Real-time Snapshots

- 1. Right-click on the live view page and select **Preview Mode** > **Smart**, then the real-time vehicle snapshots are shown on the right.
- 2. Click a snapshot to view detailed information. See Vehicle for details.

5.4.2 Vehicle Alarm Monitoring

Configure vehicle monitoring tasks so that the NVR can report alarms according to the matching result of the captured plate numbers and the plate numbers in plate lists.

Configure Vehicle Monitoring Task

1. Go to Menu > VCA > VCA Search > Vehicle Control > Vehicle Alarm Control.

		_				
Add Monitoring T						
🗆 Serial No.	Task Name	Cause of Monitoring	Monitoring List	Monitoring Channels	Monitoring Ch	Edit
			DefaultList		🥏 Enable	

2. Click Add Monitoring Task.

	Add Monitoring Task															
	Task Na	me														
	Enable															
	Cause o	f Monit	oring													
	Monitor	ing Cha	nnels													
	Monitor	ing List						Def	aultList							
Monito	oring Sch	edule														
Mor	1	0	2	4	6	8	10	12	14	16	18	20	22	24	Edit	
Tue															Arming	
Wed															Unarmed	
Thu																
Fri																
Sat																
Sun																
Holi	day	0	2	4	6	8	10	12	14	16	18	20	22	24		
(Note	: Click a	color o	n the ri	ght and	then d	raw the		le.)								
															ОК	Exit

3. Complete the monitoring task settings.

Parameter	Description
Task Name	Enter a name for the monitoring task.
Enable	Enable/disable the monitoring task.
Cause of Monitoring	Enter the cause of the monitoring task.
Monitoring Channels	Select the channel(s) to monitor.
Monitoring List	Select the plate list to monitor. Only 1 plate list is allowed.
Monitoring Schedule	Set the monitoring schedule as needed. See Recording Schedule for details.
Match Trigger Action	Set the action(s) to be triggered when a captured plate number matches a plate number in the monitoring list. See Alarm-triggered Actions for details.
Not Match Trigger Action	Set the action(s) to be triggered when a captured plate number does not match any plate number in the monitoring list. See Alarm-triggered Actions for details.

4. Click OK.

Other Operations

Operation	Description
Delete	Delete the selected monitoring task(s).
•/ •	Enable/disable the monitoring task.
	Edit the monitoring task.

5.5 VCA Search

Search for face snapshots, face comparison results, vehicle snapshots, VCA event snapshots and people counting statistics.

5.5.1 Face Snapshot Search

Search for face snapshots.

Search Face Snapshots

1. Go to Menu > VCA > VCA Search > Face Snapshot Search.

Face Snapshot Search			
Select Camer	a	All	
Gender		All	
Age		All	
Glasses		All	
Start Time		2022-08-11 00:00:00	
End Time		2022-08-11 23:59:59	
i e			
Search	Exit		
Search	Exit		

2. Set search conditions.

Parameter	Description
Select Camera	Select the camera(s) to search.
Gender	Select the gender: All, Male or Female.
Age	Select the age: All, Childhood, Teenager, Youth, Middle Age, or Senior.
Glasses	Select the glasses status: All, No Glasses, or With Glasses.
Start/End Time	Specify the time period to search for face snapshots.
	Note: A search range smaller than five months is recommended, because earlier snapshots and recordings may have been overwritten due to full storage.

3. Click **Search**. The search results are shown in tile mode by default. You may click = to switch to list mode.





Note:

- By default, a 10s video (5s before and 5s after the first image) and the detailed information about the first image are displayed on the right.
- You can click any image to view the 10s video and detailed information about it.

List 🔳 :

		VCA					
🖾 Backup Image	Backup Recording	Backup All	Backup	Export Results			
Camera ID	Time	Play			ALC: NO		
D55	2022-08-11 18:04:11	۲			14	Current I	
🗆 D51	2022-08-11 18:04:11						
🗖 D98	2022-08-11 18:04:05						
🗖 D51	2022-08-11 18:04:01				de la		1
D55	2022-08-11 18:04:01				5	Accession	
🗖 D51	2022-08-11 18:03:50						0
D55	2022-08-11 18:03:50				Gender	Male	
🗖 D56	2022-08-11 18:03:50				Age	Youth	
D55	2022-08-11 18:03:38				Glasses	With Glasses	
🗆 D51	2022-08-11 18:03:37						
D51	2022-08-11 18:03:25						
D55	2022-08-11 18:03:25						
D56	2022-08-11 18:03:24						
D51	2022-08-11 18:03:12						
D55	2022-08-11 18:03:12						
D56	2022-08-11 18:03:11						
🗆 D55	2022-08-11 18:02:57						
Total: 18422 Page:	1/461			> ≫ 1 →			

- By default, a 10s video (5s before and 5s after the first item) and the detailed information about the first item are displayed on the right.
- You can click any item and click 🔘 or 下 to view the 10s video and detailed information about it.

Other Operations

Operation	Description
Backup/Backup All	 Enable Backup Image or/and Backup Recording as needed. By default, they are both enabled. Backup Image: Back up the selected image(s) to an external device.

Operation	Description
	Backup Recording: Back up the 10s video of the selected image(s) to an external device.
	2. Select Backup or Backup All.
	 Backup: Back up specified search results. Select the search result(s) you want to back up and click Backup.
	Backup All: Back up all search results. Click Backup All.
Export Results	1. Enable Backup Image or/and Backup Recording as needed, and click Export Results.
	2. Select the export partition and click Export Results to export the search results to an external storage device.

5.5.2 Face Comparison Search

Search for face comparison results.

1	Go to Menu > VCA > VCA Search > Face Com	parison Search
±.		parison scarch.

Face Comparison Searc					
Select Camer	'a	All	~		
Alarm Type					
		Face Match	~	·	
Name					
Matching Rar	nge(%)	1	100		
ID No.:					
Start Time		2022-08-11 00:00:00			
End Time		2022-08-11 23:59:59			
(Note: Use an	asterisk (*) to repres	ent one or more characters	:.)		
Search	Exit				

2. Set search conditions.

Parameter	Description
Select Camera	Select the camera(s) to search.
Alarm Type	Select the alarm type: Face Match or Face Not Match.
Name	Enter the name you want to search.
Matching Range(%)	The similarity between the captured faces and the face images in face lists, ranging from 1% to 100%. The higher the similarity, the more accurate the face comparison. Set it as needed.
ID No.	Enter the ID number you want to search.
Start/End Time	 Specify the time period to search for face snapshots. Note: A search range smaller than five months is recommended, because earlier snapshots and recordings may have been overwritten due to full storage.

3. Click Search. The search results are shown in tile mode by default. You may click = to switch to list mode.





😴 Note:

List ≡ :

- By default, a 10s video (5s before and 5s after the first image) and the detailed information about the first image are displayed on the right.
- You can click any image to view the 10s video and detailed information about it.

	_		VCA				
😡 Backup	o Image (Backup Recording	Backup All	Backup	Export Results		88 📄
□No.	Camera	ID Time	Similari	ty		11/08/2022 13:56:31 2630 (100)12 15:13:4	19/18-2
	D51	2022-08-11 13:57:	24 38%				
2	D51	2022-08-11 13:57:	06 44%			AND AND ADD	
3	D51	2022-08-11 13:56	56 53%				19-
□4	D51	2022-08-11 13:56	45 45%				
5	D51	2022-08-11 13:56:	32 49%			and L	and the second
6	D51	2022-08-11 13:56:	20 50%				0
07	D51	2022-08-11 13:56:	07 78%			Name	V 1
8	D51	2022-08-11 13:55:	52 44%			Gender Date of Birth	Male
9	D51	2022-08-11 13:55:	39 48%			Native Place	10000-000
10	D51	2022-08-11 13:55:	36 50%			ID Type	ID Card
□ 11	D53	2022-08-11 13:55:	25 95%			ID No.	3.1.200888000888000888
12	D51	2022-08-11 13:55:	25 95%			Alarm Info Alarm Time	2022-08-11 13:57:24
13	D51	2022-08-11 13:55:	19 78%			Camera	D51
14	D51	2022-08-11 13:55:	12 41%				
15	D51	2022-08-11 13:54	56 46%				
16	D51	2022-08-11 13:54	42 42%				
17	D51	2022-08-11 13:54:	30 43%				
Total: 781	2 Page:1/1	96					
10181. 781	z rage.1/1	50		« <			Exit

Note:

- By default, a 10s video (5s before and 5s after the first item) and the detailed information about the first item are displayed on the right.
- You can click any item and click 下 to view the 10s video and detailed information about it.
- 4. Back up search results.
 - (1) Enable Backup Image or/and Backup Recording as needed. By default, they are both enabled.
 - Backup Image: Back up the selected image(s) to an external device.
 - Backup Recording: Back up the 10s video of the selected image(s) to an external device.
 - (2) Select Backup or Backup All.

- Backup: Back up specified search results. Select the search result(s) you want to back up and click **Backup**.
- Backup All: Back up all search results. Click Backup All.

5.5.3 Vehicle Search

Search for images based on vehicle monitoring events.

1. Go to Menu > VCA > VCA Search > Vehicle Search.

Select CameraAllStart Time2022-08-11 00:00:00End Time2022-08-11 23:59:59Filter ByAll TypesPlate No.Vehicle ColorAllPlate ColorAllNote: Use an asterisk (*) to represent one or more characters.)	Start Time 2022-08-11 00:00:00 End Time 2022-08-11 23:59:59 Filter By All Types Plate No. Vehicle Color All Plate Color All	hicle Search		
Start Time2022-08-11 00:00:00End Time2022-08-11 23:59:59Filter ByAll TypesPlate No.Vehicle ColorAllPlate ColorAllAll	Start Time2022-08-11 00:00:00End Time2022-08-11 23:59:59Filter ByAll TypesPlate No.Image: Color All Image: Select Camera	All		
End Time2022-08-11 23:59:59~Filter ByAll Types~Plate No	End Time 2022-08-11 23:59:59 Filter By All Types Plate No. Vehicle Color All Vall Plate Color All Other Use an asterisk (*) to represent one or more characters.)			
Filter ByAll TypesPlate No.Vehicle ColorAllPlate ColorAll	Filter By All Types Plate No. Vehicle Color All Plate Color All CNote: Use an asterisk (*) to represent one or more characters.)	End Time		
Plate No. Vehicle Color All Plate Color All	Plate No. Vehicle Color All Plate Color All Color All Color Onte: Use an asterisk (*) to represent one or more characters.)			
Plate Color All ~	Plate Color All ~ (Note: Use an asterisk (*) to represent one or more characters.)			
Plate Color All ~	Plate Color All V (Note: Use an asterisk (*) to represent one or more characters.)	Vehicle Color	All	
	(Note: Use an asterisk (*) to represent one or more characters.)	Plate Color		
		(Note: Use an asterisk (
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			
	Search Exit			

2. Set search conditions.

Parameter	Description
Select Camera	Select the camera(s) to search.
Start/End Time	Specify the time period to search.
	Note: A search range smaller than five months is recommended, because earlier snapshots and recordings may have been overwritten due to full storage.
Filter By	Select the filter type: All Types, Match, or Not Match.
Plate No.	Enter the plate number to search.
Vehicle Color	Select the vehicle color to search.
Plate Color	Select the plate color to search.

3. Click **Search**. The search results are shown in tile mode by default. You may click \equiv to switch to list mode.





Note:

- By default, a 10s video (5s before and 5s after the first image) and the detailed information about the first image are displayed on the right.
- You can click any image to view the 10s video and detailed information about it.
- Double-click an image to magnify it.

List 📃

		vo	CA		
🗹 Backup Image	🛃 Backup Recording	Backup All	Backup	Export Results	88 🔳
Camera ID	Time	Plate No.	Vehicle Color Plate Color	Play	
D145	2022-08-11 17:52:43	Re-Owner C	Yellow	۲	
🗆 D145	2022-08-11 17:52:41				
🗖 D145	2022-08-11 17:52:39	0071040	Yellow		
🗖 D145	2022-08-11 17:52:35	and the local states	Yellow		
🗖 D145	2022-08-11 17:52:29	decree (Yellow		
🗆 D145	2022-08-11 17:52:17	-	Yellow		and the second division of the second divisio
D145	2022-08-11 17:52:07	100101703	Yellow		Camera ID:D145
D145	2022-08-11 17:52:05	MILLION CPUT	Yellow		Time:2022-08-11 17:52:43
D145	2022-08-11 17:52:00	Belling .	Yellow		Plate No.:
D145	2022-08-11 17:51:56	Method .	Yellow		Plate Color:Blue
D145	2022-08-11 17:51:52	B10000000	Yellow		Vehicle Color:Other
D145	2022-08-11 17:51:41	Second Second	Yellow		
D145	2022-08-11 17:51:29				
D145	2022-08-11 17:51:28	6203/02	Yellow		
D145	2022-08-11 17:51:21	Methodo -	Yellow		
🗖 D145	2022-08-11 17:51:18		Yellow		
🗆 D145	2022-08-11 17:51:13	6000003	Yellow		
Total: 4117 Page:I	./42			≫ 1 →	Ēxit

😴 Note:

- By default, a 10s video (5s before and 5s after the first item) and the detailed information about the first item are displayed on the right.
- You can click any item and click 🔘 or 下 to view the 10s video and detailed information about it.
- 4. Back up search results. See Back up search results for details.
- 5. To export the search results as a .CSV file, click **Export Results**.

1	No.	Camera ID	Camera Name	Time	Plate No.	Plate Color	Vehicle Color
2	1	D1	D18Plate22247	2022-08-05 16:02:59	D565656	Blue	Other
3	2	D2	D19Plate2	2022-08-05 16:02:40	₩745413	Blue	White
4	3	D3	D20Plate22249	2022-08-05 16:00:39	A435453	Green	White
5	4	D4	D21Plate22250	2022-08-05 15:58:13	B425434	Blue	Black
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
-	plate	2022081210523	8 (+)			÷ (4)	

5.5.4 Behavior Search

Search for images based on VCA behaviors including cross line detection, enter area detection, leave area detection, smart motion detection, etc. Behaviors supported for search may vary with NVR model.

1. Go to Menu > VCA > VCA Search > Behavior Search.

Search		
Select Camera	All	
Start Time	2022-08-11 00:00:00	
End Time	2022-08-11 23:59:59	
Event Type		
	All	
Object Type	All	
Search Exit		

2. Set search conditions.

Parameter	Description									
Select Camera	Select the camera(s) to search.									
Start/End Time	Specify the time period to search.									
	Note: A search range smaller than five months is recommended, because earlier snapshots and recordings may have been overwritten due to full storage.									
Event Type	Select the event type to search.									
Object Type	Select the object type to search: All, Pedestrian, Non-Motor Vehicle , or Motor Vehicle .									

3. Click **Search**. The search results are shown in tile mode by default. You may click \equiv to switch to list mode.



Note:

List 😑 :

- By default, a 10s video (5s before and 5s after the first image) and the detailed information about the first image are displayed on the right.
- You can click any image to view the 10s video and detailed information about it.

		VCA				
🖂 Backup Image	🖾 Backup Recording	Backup All	Backup			88
Camera ID	Time	Event Type		Play	A 72.04 74 (2. 241)	
🗆 D5	2022-08-11 17:53:50	Cross Line De	etection	\bigcirc		
🗖 D109	2022-08-11 17:53:47	Enter Area			· Party	
🗋 DS	2022-08-11 17:53:46	Cross Line De	tection			
🗖 D5	2022-08-11 17:53:44	Cross Line De	tection		6	
🗆 D5	2022-08-11 17:53:42	Cross Line De	tection			
D5	2022-08-11 17:53:42	Cross Line De	etection			
🗆 D5	2022-08-11 17:53:42	Cross Line De	etection			0,
🗆 D5	2022-08-11 17:53:40	Cross Line De	etection		Camera ID	
🗆 D5	2022-08-11 17:53:40	Cross Line De	etection		Time	2022-08-11 17:53:50
🗆 D5	2022-08-11 17:53:40	Cross Line De	etection		Object Type	Motor Vehicle
🗆 D5	2022-08-11 17:53:38	Cross Line De	etection		Event Type	Cross Line Detection
D5	2022-08-11 17:53:37	Cross Line De	etection			
D5	2022-08-11 17:53:33	Cross Line De	etection			
🗖 D109	2022-08-11 17:53:32	Leave Area				
D5	2022-08-11 17:53:32	Cross Line De	tection			
D108	2022-08-11 17:53:32	Leave Area				
🗖 D5	2022-08-11 17:53:30	Cross Line De	etection			
Total: 39360 Page	:1/394		« <	> » 1		Exit

Note:

- By default, a 10s video (5s before and 5s after the first item) and the detailed information about the first item are displayed on the right.
- You can click any item and click 🔘 or 💽 to view the 10s video and detailed information about it.
- 4. Back up search results. See Back up search results for details.

5.5.5 People Counting Report

Search for people counting data. You can view daily/weekly/monthly/yearly people counting reports-the number of people entering and/or leaving a certain area during a specified time period.

1. Go to Menu > VCA > VCA Search > People Counting Report.

People C	ountir	ng Rep	ort																								
	Solor	Select Camera A										All															
		nting T								Tota																	<u> </u>
		ort Typ								Dail															Cou		
		stical 1	Гime								2022			08			11			17					Bac	kup	
	Resu	lt								🖲 CI	hart								Ота	able							
	n	eople						_	Pag	plo E	ntered			Po	opla	Exited											
									reo	pre Li	interet			i i e	opie	LAILEU											
											10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Hour	
	Exit																										

2. Set search conditions.

Parameter	Description
Select Camera	Select the camera(s) to search.
Counting Type	Select the counting type to search: Total , People Entered , or People Exited .
Report Type	Select the report type to view: Hourly, Daily, Weekly, Monthly, or Yearly.
Statistical Time	Select the time to count.

- 3. Select to create the report as a chart or a table.
 - Chart



• Table

Result		O Chart	Table	
Camera ID	Statistical Time	People Entered	People Exited	
D58	11:00-12:00			

4. Click **Backup** to export the report to an external storage device as a .CSV file. The content of the file exported from a report in chart or table format is the same.

5.6 Smart Preview

View real-time snapshots and statistics of four major categories of VCA functions on the live view page, including vehicle, face, perimeter and people counting.

Right-click on the live view page and select **Preview Mode** > **Smart**, then the real-time snapshots are displayed on the right.

Main Interface



lcon	Description
с Ш	Clear real-time snapshots displayed on the live view page. Search records and statistics are not affected.

Vehicle

View vehicle monitoring information, vehicle snapshot information, and license plate matching/mismatching information.

1. Select a vehicle snapshot.



2. Click on the snapshot to view more details.

In the **View Details** dialog box, a 10s video (5s before and 5s after the snapshot) is automatically played on the left, and the snapshot and its detailed information including camera name, time, license plate number, vehicle color, and plate color are displayed on the right.



Face

View face snapshots, face snapshot information, and face matching/mismatching information.

Туре	Description
Not Match Face Info	 Select a mismatched face snapshot. Image: Constant of the snapshot to view more details
	2. Click on the snapshot to view more details.

Туре	Description
	<image/> <image/> <image/> <image/>
Face Snapshot Info	 Select a face snapshot. Click on the snapshot to view more details.
Match Face Info	 Select a matched face snapshot. The left image is the captured image, and the right image is the face image in the face list. Click on the snapshot to view more details.

😴 Note:

- In the **View Details** dialog box, a 10s video (5s before and 5s after the snapshot) is automatically played on the left, and the snapshot and its detailed information are displayed on the right.
- You can click + under a face snapshot or click Add to Face Library in the details page of a face snapshot to add the snapshot to the face list, and click to search face images in face lists by this snapshot.

Perimeter

View real-time snapshots of perimeter protection functions including cross line detection, intrusion detection, enter area detection and leave area detection.

1. Select a snapshot.



2. Click on the snapshot to view more details.

In the **View Details** dialog box, a 10s video (5s before and 5s after the snapshot) is automatically played on the left, and the snapshot and its detailed information including event type, camera name, time, and object type are displayed on the right.



People Flow Counting

View real-time people flow statistics including the number of people entering/leaving/currently allowed/present.



- Miles The number of people present in the detection area does not exceed the set threshold.
- Clear the people counting statistics on the current page. This operation does not affect statistics and data reporting.

<u>6 Network Configuration</u>

Configure the network parameters of the NVR, such as IP address.

Note: The default IP address of network interface 1 is 192.168.1.30, and that of network interface 2 is 192.168.2.30.

6.1 Platform Configuration

Configure an upper platform for the NVR.

6.1.1 Network Configuration

Configure IP address and other network parameters of the NVR.

1. Go to Menu > Network > Basic > Network.

Pv4 Address Pv4 Subnet Mask Pv4 Default Gateway	NIC1 206 . 2 . 2 . 62 255 . 255 . 255 . 0 206 . 2 . 2 . 1	
Enable DHCP IPv4 Address IPv4 Subnet Mask IPv4 Default Gateway	255 . 255 . 255 . 0	
IPv4 Subnet Mask IPv4 Default Gateway	255 . 255 . 255 . 0	
IPv4 Default Gateway		
	206 2 2 1	
	200 . 2 . 2 . 1	
IPv6 Mode	Router Advertisement	
IPv6 Address		
IPv6 Prefix Length		
IPv6 Default Gateway		
MAC Address	6c:f1:7e:85:6e:f2	
MTU	1500	
Preferred DNS Server	206 . 10 . 5 . 39	
Alternate DNS Server	8.8.4.4	
Default Route	NIC1	
Apply Exi	t	

2. Choose a working mode. Only multi-NIC NVRs support these three working modes.

Working Mode	Description
Multi-address	Two NICs work independently. You need to configure the NICs separately.
Load Balance	Two NICs use the same IP address and work together to share the sending and receiving bandwidth.
Net Fault-tolerance	Two NICs use the same IP address, and if the primary NIC fails, the standby NIC takes over seamlessly to ensure uninterrupted network connection.

Note: Switching working modes with 802.1x and ARP protection enabled will disable 802.1x and ARP protection.

3. Configure the network parameters according to the actual network environment.

Note:

- For a multi-NIC NVR, you can choose an NIC as the default route. When the NVR connects to an external network, data will be forwarded via the default route.
- For an NVR with PoE ports, you can configure an IPv4 address for the internal NIC.
- The MTU must be in the range of [576-1500]. To use IPv6, you must set MTU within [1280-1500], and make sure the IPv6 addresses of the NVR and PC are connected. To use functions such as live view, playback, make sure IPv4 addresses of the NVR and PC are also connected.

4. Click Apply.

6.1.2 P2P STAR4LIVE

With P2P you can manage and operate the NVR remotely on a mobile phone.

Configure P2P STAR4LIVE

1. Go to **Menu > Network > Basic > P2P**. P2P is enabled by default.



- 2. Add the NVR to cloud. See Add Device below.
- 3. (Optional) Select Snapshot Upload, and the NVR will upload images to cloud.
- 4. Click Apply.
- 5. Check the device status. If online, the current username will be displayed. If offline, the common cause will be displayed for your troubleshooting reference.

Note: You can also check the device status on the cloud website (www.star4live.com).

6. (Optional) To delete the NVR from cloud, click **Delete**.

Add Device

Add the NVR to cloud using the app or cloud website.

Add NVR on app

- 1. Scan the QR code with your mobile phone to download the app; or search Optiview or VMSN at app store. The following steps take VMSN as an example.
- 2. Open the app, add the NVR with or without a cloud account.
 - Add with a cloud account:

Sign up for a cloud account, and then log in to add the NVR.

- (1) Tap Log In/Sign Up, follow the on-screen instructions to sign up and log in.
- ⁽²⁾ On the **Live View** page, tap $\Box_1 > +$, and choose a way to add the NVR.
- Add without a cloud account:

Scan the QR code using the app to add the NVR without a cloud account.

- (1) Tap Try Now. The Live View screen is displayed.
- (2) Tap [] > + > Add Without Signup, follow instructions to scan the QR code. You may also scan the QR code on the device body.
- (3) The registered code is filled in automatically. The default username is "admin". Enter the device password, tap **Login**.

Note:

- To add the NVR without a cloud account, ensure that **STAR4LIVE** and **Add Without Signup** are enabled on the NVR, and the NVR's admin password is a strong password.
- Certain functions will be unavailable on the app if the NVR is added without a cloud account. Signup for a cloud account is required to use full functions on the app.

Add NVR on the cloud website

- 1. Visit the Star4live website address (www.star4live.com) using a Web browser.
- 2. Tap Sign Up, follow the on-screen instructions to sign up for a cloud account.
- 3. Log in to the account.

Device Management	Organizati	on Management	Sharing Rec	ords	Personal Info					
Organization	My Clou	d Devices Dev	ices Shared to Me							
Please enter organization name Q	+ Ad	d 🔟 Delete	Ø Refresh			Online Device 1 To	tal Number 1	Please	enter device i	narr C
🗇 🚔 root		IP Address	Device Name	Model	Organization	Latest Online Time	Status		Operation	1
test1		183. 131. 3. 155	the Unit	27 million from	root	02/25/2022 16:33:39	Online (NAT)	a	<u>م</u> ش	« e

4. Go to **Device Management > My Cloud Device**, click **Add**.

Please enter device in	nformation below.	Where to find the register code?	
* Device Name:		$0ption \ 1$ Log in to the Web of the device, and then click Network $>$	
* Register Code:		Option 2: Find the register code sticker on the device.	
* Organization:	oot		
		OK Cancel	

Parameter	Description
Device Name	Set a device name that is easy to recognize.
Register Code	Enter the register code. You can find it on the network>P2P page.
Organization	Choose an organization for the NVR on the cloud. The default organization is root . You can add organizations at Organization Management > My Cloud Organization .

- 5. Click **OK** to add the NVR to cloud.
- 6. Click Save.

6.1.3 DDNS

Configure DDNS so you can access the NVR on the LAN from the Internet by visiting a fixed domain name instead of the changing IP addresses.

Note: You can open the NVR's Web page by visiting http://server address/NVR's domain name using a Web browser.

1. Go to Menu > Network > Basic > DDNS.

🗹 Enable DD	NS			
DDNS Type		DynDNS		
Server Addr	ess	members.dy	ndns.org	
Port		80		
Domain Nar	ne			
Username				
Password				
Confirm				
	Apply		Exit	

- 2. Select **Enable DDNS**, choose a DDNS type, and configure the parameters.
 - DynDNS/No-IP: Third-party DDNS service provider. Enter the domain name and username/password that you acquired from your DDNS service provider.
 - Domain name: Domain name assigned by your DDNS service provider.
 - Username and password: The corresponding username/password for your DDNS account.
 - DDNS: DDNS service provided by members.dydns.org. You can input a domain name, and then click **Test** to check its validity.

🗹 Enable DDNS		
DDNS Type	EZDDNS	~
Server Address	en.ezcloud.uniview.com	
Port	80	
Domain Name		
Device Status	Offline	
Device Address	en.ezcloud.uniview.com/	
Test	Apply Exit	

3. Click Apply.

6.1.4 Email

Configure email so the NVR can send alarm information to specified users through email when an alarm occurs. Note: Select the Send Email checkbox on the Trigger Actions page before you start configuration.

1. Go to Menu > Network > Basic > Email.

🖂 Enable Server Authentica	ation
Username	test01@test.com
Password	•••••
SMTP Server	206.2.2.17
SMTP Port	25
Enable TLS/SSL (If TLS/SS	SL is enabled, use 25 first, and 587/465 as an alternative.)
Sender	hu
Sender's Address	test01@test.com
Select Recipient	Recipient 1 ×
Recipient	hh
Recipient Address	test02@test.com
Arming Schedule	Ø
🗆 Attach Image	
Snapshot Interval	2s ~
Test Apply	Exit

2. Configure the parameters.

Parameter	Description			
Enable ServerSMTP server authentication, when enabled, can enhance email security feature is disabled by default. To enable it, you need to enter the corre username and password.				
Username/Password	Username and password of the SMTP server. Usually it is the username and password of the email box.			
SMTP Server	SMTP server address.			
SMTP Port	Default: 25. Range: [1-65535].			
Enable TLS/SSL	When enabled, communication security will be improved by encrypting emails via TLS or SSL. This feature requires the SMTP server to support TLS/SSL.			
	Note: After TLS/SSL is enabled, if email sending via port 25 failed, try 587 or 465.			
Sender	Sender's name.			
Sender's Address	Sender's email address, which can the same as the recipient's address.			
Select Recipient	Choose a recipient from the list and then complete the recipient information. to 6 recipients are allowed.			
Recipient	Recipient's name.			
Recipient Address	ecipient's email address.			
Arming Schedule Click to configure an arming schedule. See Arming Schedule.				
Attach Image	When enabled, the NVR will send an email attached with snapshot(s) when an alarm occurs.			
	Note: This feature is only available to certain devices.			
Snapshot Interval Options are 2s (default), 3s, 4s, and 5s.				

Click Test. The system will check the recipient address by sending it a test email. in the Status column means the test succeeded and the email address is valid.

		Recipient	Address Test		
No.	Recipient	Recipient Address	Status	Description	
1	hh	test02@test.com	۲		
				ок	

4. Click Apply.

6.2 Basic Configuration

Configure the network, mobile app, DDNS, email, etc.

6.2.1 SNMP

The NVR can use SNMP to interconnect with the upper platform and transfer certain configuration information.

- 1. Go to Menu > Network > Basic > Platform.
- 2. Select Enable SNMP.

SNMP	Alarm Service Configure	VIID Local Configure VIID Server
	🖂 Enable SNMP	
	SNMP Type	SNMPv2 ~
	Read Community Name	public
	Write Community Name	private
	Trap Community Name	private
	Trap Server Address	
	Trap Port	
	SNMP Port	
L.	Apply Exit	

- 3. Choose an SNMP type and configure the parameters.
 - SNMPv2:

Set the read community name and write community name for the platform to read NVR data.

SNMP Type	SNMPv2	~			
Read Community Name	public				
Write Community Name	private				
Trap Community Name	private				
Trap Server Address					
Trap Port	162				
SNMP Port	161				

• SNMPv3:

Set authentication password and encryption password. The authentication password is used by the platform to access the NVR. The encryption password is used to encrypt data sent from the NVR to the platform.

Enable SNMP				
SNMP Type	SNMPv3 ~			
Username	admin			
Encryption	MD5			
Authentication Password				
Confirm				
Encryption	DES			
Encryption Password				
Confirm				
Trap Community Name	private			
Trap Server Address				
Trap Port	162			
SNMP Port	161			
8-32 characters including uppercase and lowercase letters, digits, underscores, hyphens and @.				

4. Click Apply.

6.2.2 Alarm Service

Configure an upper server to receive alarms and images from the NVR.

1. Go to Menu > Network > Platform > Alarm Service.

Alarm Service					
☑ Enable Alarm Service					
Server Addre		92 . 168 . 1 .			
Server Port					
Server Port	445) 			
Apply	Exit				

- 2. Select Enable Alarm Service.
- 3. Configure the parameters.

Parameter	Description
Server Address	Upper server's IP address.
Server Port	Upper server's port number.

Note: This configuration only enables the sending of alarm-related packets to the alarm host. The specific alarm methods on the alarm host need to be configured separately.

4. Click Apply.

6.2.3 Configure VIID Local

Configure VIID local settings so the NVR can monitor vehicles and upload vehicle information to the upper platform.

1. Go to Menu > Network > Platform > Video&Image Database Local.
| Local ID | 34020000001200 | 002302 | | | |
|------------|----------------------|---------------------------|-----------|---------|----------|
| Local Port | 5073 | | | | |
| Camera ID | Camera ID | Device Type | Configure | Status | Advanced |
| D1 | | License Plate Recognition | @ | Offline | Ø |
| D2 | | License Plate Recognition | Ø | Offline | Ø |
| D3 | | License Plate Recognition | Ø | Offline | Ø |
| D4 | | License Plate Recognition | Ø | Offline | Ø |
| D5 | | License Plate Recognition | Ø | Offline | Ø |
| D6 | | License Plate Recognition | Ø | Offline | 0 |
| D7 | | License Plate Recognition | Ø | Offline | Ø |
| D8 | | License Plate Recognition | Ø | Offline | Ø |
| D9 | | License Plate Recognition | @ | Offline | Ø |
| D10 | | License Plate Recognition | @ | Offline | Ø |
| D11 | 34020000001212247018 | License Plate Recognition | Ø | Offline | Ø |
| D12 | | License Plate Recognition | (â) | Offline | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

- 2. The local ID and local port use the default settings by default.
- ^{3.} Choose a camera, click i under **Configure**, and then configure the parameters.

C	Configure VIID Channel	
Camera ID	D1	
Channel ID		
Device Type	License Plate Recognition 🛛 🛩	
Арр	ly Exit	

Parameter	Description
Camera ID	Used for connecting the IP device. Camera IDs consist of VIID-conformant codes and are differentiated by device type and usage. Camera IDs are assigned by the upper platform.
Device Type	 Divided into two types by usage: License plate recognition: Usually installed on road checkpoints to capture license plates of passing vehicles. Collection device: Used to capture faces or plates.

4. Choose a camera, click in under **Advanced**, and then configure the parameters.

	Advanced	
Longitude		
Latitude		
Administrative Div		
Location		
Checkpoint Put in	2106-02-07 14:28:15	~
Checkpoint Type	Other	~
Checkpoint Usage	Other	~
Checkpoint Lanes		
Authority Code		
Apply	Exit	

Parameter	Description
Longitude	Longitude of the region where the IP device is located (-180,180).
Latitude	Latitude of the region where the IP device is located (-90,90).
Administrative Division Code	Administrative division code of the region where the IP device is installed.
Location	Location of the IP device. Max 256 characters, allows uppercase and lowercase letters, digits, underscores, and hyphens.
Checkpoint Put into Use	Time when the camera was put into use.
Checkpoint Type	Choose the actual checkpoint type of the IP device.
Checkpoint Usage	Choose the usage of the IP device.
Checkpoint Lanes	Number of lanes monitored by the IP device.
Authority Code	Organization code of the IP device.

5. Click Apply.

6.2.4 Configure VIID Server

Configure the VIID server so the NVR can upload face and plate information to the upper VIID platform.

- 1. Go to Menu > Network > Platform > Video&Image Database Server.
- 2. Select Enable Video&Image Database Server.

	/IID Local Configure VIID Server
🔄 Enable Video&Imag	e Database Server
Server Address	206 . 2 . 2 . 251
Server Port	5073
Username	admin
Password	*****
Upload Feature Value	
Upload Original Image	
Upload Face Image	
Apply Exit	

3. Configure server parameters.

Parameter	Description
Server Address	VIID platform's IP address.
Server Port	VIID platform's port number.
Username	Username of the VIID platform.
Password	Password of the VIID platform.
Upload Feature Value	When enabled, the NVR will upload feature information of the captured faces or plates to the upper platform.
Upload Original Image	When enabled, the NVR will upload original images of the captured faces or plates to the upper platform. This feature is enabled by default.
Upload Face Image	When enabled, the NVR will upload small face images to the upper platform.

4. Click Apply.

6.3 Advanced Configuration

Configure PPPoE, ports, port mapping, multicast, and FTP.

6.3.1 PPPoE

Use Point to Point Protocol over Ethernet (PPPoE) to connect the NVR to network.

1. Go to Menu > Network > Advanced > PPPoE.

PPPoE	Port	Port Mapping	Multic	ast FTP					
	En:	able PPPoE							
	- Cin								
	User	name							
	Pass								
	IP In								
	Addr	ess							
	Subn	et Mask							
	Gate	way							
	Apply		Exit						

- 2. Select Enable PPPoE.
- 3. Enter the username and password provided by the Internet Service Provider (ISP). IP information is displayed when dial-up succeeds.

Note:

For a multi-NIC device, dial-up shall be performed on the NIC that is configured as the default route.

4. Click Apply.

6.3.2 Port

Configure HTTP, HTTPS, RTSP, HTTP redirect port, and RTSP redirect port.

1. Go to Menu > Network > Advanced > Port.

PPPoE	Port Port Ma					
	HTTP Port	80				
	HTTPS Port	443				
	RTSP Port	554				
		rtsp://	ip>: <port>/unicast/c<channel number=""></channel></port>	>/s <stream type="">/live</stream>		
	RTSP URL Forn	nat <chan< td=""><td>nel number>:1-n</td><td></td><td></td><td></td></chan<>	nel number>:1-n			
		<strea< td=""><td>n type>:0(main stream) or 1(sub stream)</td><td></td><td></td><td></td></strea<>	n type>:0(main stream) or 1(sub stream)			
	HTTP Redirect	Port 8081				
	RTSP Redirect	Port 8082				
	Note: HTTP Re	direct Port and RIS	P Redirect Port are used to access an IP o	camera in a WAN.		
		Exit				

2. Configure the ports.

Note:

- The port range is 1-65535, among which, ports 21, 23, 2000, 3702 and 60000 are reserved for other purposes. Duplicate ports are not allowed.
- The upper platform can access the live video of a camera using the displayed RTSP URL.
- 3. Click Apply.

6.3.3 Port Mapping

Configure port mapping so client computers can access the NVR on the LAN across the Internet.

- 1. Go to Menu > Network > Advanced > Port Mapping.
- 2. Port mapping is enabled by default. You can choose a mapping mode, UPnP or manual port mapping.

UPnP

UPnP is short for Universal Plug and Play. UPnP-enabled network address translation (NAT) can perform automatic port mapping to enable client computers to access the NVR on the LAN from the Internet.

Note: This function requires router support. You need to enable UPnP on the router before starting configuration on the NVR.

1. Choose the **UPnP** mapping mode.

Enable Port Mapping				
Mapping Mode	© UPnP ○ N	lanual		
UPnP Mapping	Auto			
HTTP Port			HTTP Redirect Port	
RTSP Port			RTSP Redirect Port	
HTTPS Port				
Note: HTTP Redirect Po	ort and RTSP Redirect Port are	used to access an	n IP camera in a WAN.	
Port Type	External IP Address	External Port	: Internal Port	UPnP Status
HTTP Port	N/A	80	80	Inactive
RTSP Port	N/A	554	554	Inactive
HTTPS Port	N/A	443	443	Inactive
HTTPS Port HTTP Redirect Port	N/A N/A	443 8081	443 8081	Inactive Inactive
HTTP Redirect Port	N/A	8081	8081	Inactive
HTTP Redirect Port	N/A	8081	8081	Inactive
HTTP Redirect Port	N/A	8081	8081	Inactive
HTTP Redirect Port	N/A	8081	8081	Inactive
HTTP Redirect Port	N/A	8081	8081	Inactive
HTTP Redirect Port	N/A	8081	8081	Inactive

- 2. Choose a mode from the UPnP Mapping list:
 - Auto: The NVR automatically assigns external port numbers, which are usually the same as the internal port numbers.
 - Specify ports: User specifies ports within the range of [1-65535].

Note:

- Auto is recommended. Port conflict may occur when external ports are specified manually.
- For a multi-NIC NVR, port mapping shall be performed on the NIC that is configured as the default route.
- 3. Click Refresh, and check whether Active is displayed in the UPnP Status column.
- 4. Click Apply.

Manual

If the router does not support UPnP, you have to configure internal and external ports manually.

Note:

- Make sure the ports configured on the NVR are consistent with that configured on the router.
- For some routers, the NVR's external and internal ports must be the same, and they also must be the same as the ports on the router.
- 1. Choose the Manual mapping mode.

PPPoE	Port Port Mapping Mul	ticast FTP				
	🗹 Enable Port Mapping					
		O UPnP	Manual			
	HTTP Port	80		HTTP Redirect Port	8081	
	RTSP Port	554		RTSP Redirect Port	8082	
	HTTPS Port	443				
	Note: HTTP Redirect Port a	nd RTSP Redirect P	ort are used to access a	an IP camera in a WAN.		
	Refresh Apply	Exi	t			

- 2. Set the external ports manually.
- 3. Click Apply.

Note:

After port mapping is configured, you can open the Web interface using the following address: *Router's WAN IP:external HTTP port*. For example, the router's external IP address is 10.2.2.10, and the external HTTP port is 82, then enter http://10.2.2.10:82 in the Web browser's address bar.

6.3.4 Multicast

When the number of users accessing the Web client has reached the upper limit and live video is unavailable, you can use multicast to solve this issue.

1. Go to Menu > Network > Advanced > Multicast.

		Multicast				
Enable Multicast Multicast IP						
Port						
Apply	E	xit				

- 2. Select Enable Multicast, enter the multicast IP address and port number.
- 3. Click Apply.

4. Log in to the Web interface, go to **Setup** > **Client**, set **Live View Protocol** to **Multicast**. Now live view is available through multicast.

Default Live Stream	Sub Stream 🗸
Display Ratio	Full
Video Mode	Fluency Priority
Video File Size	1 GB V
Save File To	C: WebPlug Browse Open Fold
Live View Protocol	TCP
Intelligent Mark	On Off
Note: Local recording	gs, snapshots, and downloaded recordings are saved in the Record, Snap, Download folders

Note:

- IP multicast addresses are class-D addresses. 224.0.1.0 238.255.255.255 can be used on the Internet.
- In the range of 224.0.0.0 239.255.255.255, some are reserved for special uses, for example, 224.0.0.0 244.0.0.255 can only be used on the LAN, where packets with these addresses will not be forwarded by a router; 224.0.0.1 is used by all the hosts on the subnet; 224.0.0.2 is used by all the routers on the subnet; 224.0.0.5 is used by OSPF routers; 224.0.0.13 is used by PIMv2 routers; and 239.0.0.0 239.255.255.255 are private addresses (e.g., 192.168.x.x).

6.3.5 FTP

Configure FTP so the NVR can upload images to the FTP server.

Note:

- This feature is only available to certain NVRs.
- To use this feature, you need to deploy an FTP server first.
- After the FTP server is enabled and connected, the NVR can automatically upload images to the FTP server.

1. Go to Menu > Network > Advanced > FTP.

PoE	Port Port M	lapping l	Multicast	FTP	
	Enable FTP				
	Server				
	IP Address				
	Port				
	🔲 Anonymou:				
	Username				
	Password				
	Remote Direc	ctory			
	Upload Inter	val(s)			
	Range(s)		5~60	C	Test
	Schedule				
	Camera		D1		
	Upload Sche	dule	Ô		
	Сору		Ô		
	Apply	Ex			

- 2. Select Enable FTP.
- 3. Configure server parameters. Click **Test** to test the connection between the NVR and the FTP server.

Parameter	Description						
IP Address	FTP server address.						
Port	The default is 21. You can set a different port as needed.						
Anonymous	When enabled, the NVR will connect to the FTP server as anonymous user without username/password required.						
Username	Username used to access the FTP server.						
Password	Password used to access the FTP server.						
Remote Directory	Input the remote directory in the correct format (abc/efg/xyz), and the system will create folders level by level accordingly under the root directory, and then create different folders based on IP, time, and channel.						
	 Note: For example, if the remote directory is abc, then the created folder is FTP > abc > 206.2.5.8 > 2022-10-08 > D5. If the remote directory is abc/efg/ xyz, then the created folder is FTP > abc efg > xyz > 206.2.5.8 > 2022-10-08 > D5. If the remote directory is empty, the system will create folders under the root directory based on IP, time, and channel, for example, FTP > 206.2.5.8 > 2022-10-08 > D5. 						
Upload Interval(s)	The NVR uploads images captured within the set periods to the FTP server at the set interval. The default is 30s. You can alter the setting as needed.						
Range(s)	Show the range of image upload interval: [5-600]s						

4. Set an upload schedule.

- (1) Choose a camera from the list.
- (2) Click behind **Upload Schedule**, configure time periods during which the camera will upload images of the desired type(s). Click **OK**.

		Uplo	ad Schedule				
Select day	Mon		Normal	Event	Motion	Alarm	Video Loss
Period 1	00 \$ 00 \$	24 00 0					0
Period 2	00 \$ 00 \$	00 \C2 00 \C2					
Сору То	AII	Mon 🗖 Tue	Wed	C) Thu	□ Fri DK	🗆 Sat	Sun Cancel

Note:

- Two image upload periods are allowed each day, and the periods must not overlap.
- To apply the schedule to other days, select All or days and then click OK.
- 5. (Optional) To apply the current upload schedule to other cameras, click is behind **Copy**, select cameras, and then click **OK**.

				Сору					
All	D1 D8 D15 D22 D29 D36 D43 D51	D2 D9 D16 D23 D30 D37 D45 D52	D3 D10 D17 D24 D31 D38 D46 D53	D4 D11 D18 D25 D32 D39 D47 D54	D5 D12 D19 D26 D33 D40 D48 D55	D6 D13 D20 D27 D34 D41 D49 D56	D7 D14 D21 D28 D35 D42 D50 D57		
						ОК		Cancel	

6. Click Apply.

1.

6.4 Wireless Local Area Network

Plug in a USB wireless network interface card and connect the NVR to the hotspot of a wireless router.

	www		
IP Address			
Default Gateway			
Signal Strength	((0-		
Signal Strength			
(10-		3	
(()			
(in	CMW		
(i)			
(in	TPGuest_7D2F		
(().			
(†			
*			
†	1		
((1-	BJHL-ZBJ		
(îr.	jn1905028_06927		

- 2. Click **Refresh** to refresh the wireless hotspot list.
- ^{3.} Choose the desired hotspot and then click \swarrow to connect it.

6.5 WiFi AP

Only Wi-Fi Kit NVR models support this function.

6.5.1 WiFi AP

The IPC and NVR have been paired before leaving factory, and the IPC will be automatically added to the NVR after power-on. However, if the user manually changed one of the parameters and caused any inconsistent parameter between the two, the IPC cannot be added automatically, and pairing is needed. There are four methods to pair.

One-click pair (if you have a network cable)

- 1. Connect the camera to the switch via a network cable, and connect the switch to the NVR.
- 2. Power on the camera.
- 3. On the NVR's local interface, choose Menu > Network > Wi-Fi AP > Wi-Fi AP.

Wi-Fi AP	Wi-F	i Cascade						
	SSID			NVRF0C814581813				
	Passw	ord		34567890				
	Region Channel			мкк				
				Other ~ Auto				
	Wireless NIC IP Start IP			172 . 16 . 0 .				
				172 . 16 . 0 .	100			
	End IF			172 . 16 . 0 .	254			
	No.	Camera ID	Status	IP	Model		MAC Address	Signal Strength
		D1	Added	172.16.0.102	IPCI123UL-MORN	86-Q	dc:72:23:75:86:65	†
,	Note: F	ollow local la	ws and r	egulations governing Wi-f	i usage to choose	region.		
R	efresh	QR	Code Pa	air One-Click Pair		Exi		

4. Click One-Click Pair, and wait for successful pair within five minutes after the camera is powered on.

Scan code using the camera:

- 1. On the NVR's local interface, choose Menu > Network > Wi-Fi AP > Wi-Fi AP.
- 2. Click QR Code Pair and use the camera to read the QR Code to pair.

	QR Code Pair	×
0%0	Use the camera to read the QR code.	
	-When IR indicator flashes slowly (1/s), it means the camera is ready to read QR code. Keep the camera reading the code until IR indicator turns off.	
	-If IR indicator flashes quickly (3/s), please reset the camera and then try again.	

Use the VMSN app (if you don't have a network cable)

- 1. Open the playstore or Appstore to download and install the VMSN app on your mobile phone.
- 2. Connect the mobile phone to the NVR's Wi-Fi.
- 3. Open VMSN, tap Settings > Local Config > Device Wi-Fi Configuration, enter the NVR's Wi-Fi name and password.
- 4. Within 10 minutes after the camera is powered on, long-press the IPC's reset button to restore default settings.
- 5. Tap Start on VMSN and wait till the device is added to the NVR.

Pair manually (if you have a network cable)

Log in to the IPC's web interface. On the Wi-Fi configuration page, fill in the NVR's SSID and password.

SSID	INVELOPISTICS NUMBER OF STREET, STREET		
Password	•••••		
Encryption	None	-	
Authentication	WPA-PSK WPA2-PSK	-	
Obtain IP Address	DHCP	•	

6.5.2 WiFi Cascade

1. Click Menu > Network > Wi-Fi AP > Wi-Fi Cascade.

Wi-Fi AP Wi-Fi Cascade				
			Camera	RSSI
		D1(IP Camera 01)	62	
			D2(IP Camera 02)	
сні		D3(IP Camera 03)		
		D4(IP Camera 04)		
NVR CH3				
Wi-Fi Online Offline	——— Unconfigurable			
Help Refresh		Exit		

- 2. When long-distance transmission or IPC needs to transmit across the wall, the IPC can be dragged, connected to another IPC, and then connected to the NVR by cascading.
- 3. (Optional) Click Help to view the detailed instruction.

Instr	uction	×
CH1 (232 (1) (3) (4) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	Drag channel to marked position to change cascade mode: Position 1: to add at tail; Position 2: to insert; Position 3: to exchange with another channel; Position 4: to juxtapose with another channel; Position 5: to connect to NVR;	

4. Click **Apply** to save the configuration.

7 System Configuration

This chapter describes how to configure the system parameters.

7.1 Basic Configuration

Configure the basic information of the system.

1. Go to Menu > System > Basic.

Device Name	MIRONE-201-1-24						
Device ID	1						
Device Language	English	~					
Auto Logout(min)	5	~					
Instant Playback(min)	5						
Mouse Pointer Speed							
🗹 Enable Password Prote	Enable Password Protection						
Enable Startup Wizard			Wizard				
🗆 Intelligent Mark							

2. Configure the basic parameters.

Parameter	Description						
Device Name	The default name is the NVR model. You can change it as needed.						
Device ID	Used to distinguish devices if you have more than one device. You can change it as needed.						
Device Language	Choose the system language. The system will restart after you change the system language.						
	Note: Not all devices can switch the language.						
Auto Logout(min)	If you are not on the live view page and don't perform any operation, you will log out automatically when the set time is over, and the live view page will be displayed. Default: 5 minutes. You can change it as needed.						
Instant Playback (min)	Set the instant playback time. Default: 5 minutes.						
Mouse Pointer Speed	Drag the slider to adjust the speed (left to right: slow to fast).						
Enable Password Protection	When the auto logout time is over, the user needs to enter the login password in order to access the main menu.						
	This feature is enabled by default.						
	Note: Only admin can change the setting.						
Enable Startup Wizard	Startup wizard appears when the NVR starts up for the first time. If the checkbox is selected, the startup wizard appears every time the device starts up. You may click Wizard to set wizard on the Menu page.						
Intelligent Mark	 When enabled, smart detection rules will be displayed on the live video, or smart detection objects will be marked, and the corresponding smart data will be displayed. Smart rules are yellow detection boxes or detection lines. Detection boxes have two colors with different meaning as described below: Green: Data have changed but didn't trigger the rules. 						
	• Red: Data in the area have triggered the rules configured for the VCA alarm and a VCA alarm has occurred.						
	Note: Some smart functions do not support this feature.						

3. Click Apply.

7.2 Preview Configuration

Configure the screen display and preferred stream type for preview.

7.2.1 Preview Configuration

Configure the basic preview parameters and display mode.

Go to Menu > System > Preview.



Basic Preview Configuration

Parameter	Description							
Video Output	Outputs the system display to an external display device. Choose an output port.							
	Note: The NVR provides three output ports (VGA, HDMI1/HDMI2, BNC) and can output the system display to three displays simultaneously for independent operations. The actual port types available may vary with device.							
Resolution	The resolution includes the display format and refresh rate. The display format refers to the number of pixels that can be displayed on the screen, for example, 1920x1080, 1280x720, 1280x1024, etc. More pixels displayed means higher image quality. The refresh rate can be 60Hz, 50Hz, 25Hz, etc. Choose an option that best fits your needs.							
Preview Windows	Displays images in the desired window layout. Choose an option from the list, or click an icon to choose the layout.							
Max. Alarm-Triggered Live View Windows	Three options: 1/4/9 windows. See Preview for more information.							
Enable Sequence	Select the Enable Sequence checkbox. See Sequence for more information.							
Sequence Interval(sec)	Set the sequence interval time. Default: 8 seconds.							
Display Camera No. in Preview Windows	When enabled, camera IDs will be displayed in live view windows. This feature is enabled by default.							

Screen Configuration

By default, camera IDs correspond to live view windows: D1 to window 1, D2 to window 2, and so on. You can change the correspondence relationship as follows. The example below shows how to switch D1 and D2.

Note: You may also drag an image on the live view page to swap windows, and then view the changed window-channel binding relationship on this page. But this method requires the Configure permission, and it cannot switch windows that are not on the same screen.

1. Click window 1 on the right side. Window 1 is selected.

Video Outpu		HDMI1/VGA/B	NC	~ Max	. Alarm-Triggei	ed Li 1 V	Vindow ~
Resolution		1920*1080/60	Hz(1080P)	~ 🗹 En	able Sequence		
Preview Win	dows	4 Windows		~ Seq	uence Interval(sec) 8	
Camera ID	Name						
🥏 D1	01						
🥏 D2	N5			-			2
			D 1	団			D2 🔟
				3			4
			No	ne 🔟			None 🔟
					< 1/	4 >	

2. Click D2 on the left-side channel list. Now window 1 shows D2, and window 2 shows None.

Video Output		HDMI1/VGA/B	NC				Max. Alarm-Triggered Li				1 Window ~			
Resolution		1920*1080/60	Hz(1080P	(1080P)			✓ Enable Sequence							
Preview Wind	dows	4 Windows					Sequ	ence Ir	nterval(sec)	8			
Camera ID D1 22 D2	Name 01 N5											2 None		
						3						4		
					No	one	Ū					None 🔟		

Note: On the left-side channel list, is empty for D1, which means the channel is not bound to any window.

3. Click window 2 on the right side. Window 2 is selected.

Video Outpu Resolution								Alarm- able Se			1 Wine	dow ~
Preview Win	dows	4 Windows					Sequ	ience Ir	nterval(sec)	8	
Camera ID	Name 01											
D2	N5											2
					D2		Ū					None 🔟
												R
												4
					No	one	乛					None 🔟
									1	4		
								<	1/	4		

4. Click D1 on the left-side channel list. Now window 2 shows D1, which means D1 and D2 have switched windows with each other.

Video Output HDMI1/VGA/BN Resolution 1920*1080/60H Preview Windows 4 Windows						Max. Alarm-Triggered Li ☑ Enable Sequence Sequence Interval(sec)				1 Window ~			
Camera ID	Name												
 D1 01 D2 N5 				D2		Ū					2 D1 🔟		
					No	3 ine	Ē					4 None 🔟	
								<	1/	4	>		

5. Click Apply.

7.2.2 Advanced Configuration

1. Go to Menu > System > Preview > Advanced.

Sub Stream First

Note: When selected, the sub stream is used for live view in a multi-window layout.

- 2. Select Sub Stream First.
- 3. Click Apply.

7.3 Time Configuration

Configure the time display mode, time synchronization mode, and holidays.

7.3.1 Time Configuration

Configure the time format and update method.

Configure Time Format

1. Go to Menu > System > Time.

Time Zone	(UTC+06:30) Yangon	~
Date Format	YYYY-MM-DD	Ý
Time Format	24-hour	Ý
System Time	2022-08-06 09:44:07	~
Enable Auto Update		
NTP Server Address		
NTP Port	123	
Update Interval	10m	~

- 2. Choose the time zone, date, and time format.
- 3. Set the system time.

Enable Auto Update

When enabled, the system syncs time with the NTP server.

1. Select Enable Auto Update.

- 2. Enter the NTP server address and port number.
- 3. Choose an update interval.

7.3.2 Camera Time Synchronization

When **Sync Camera Time** is enabled, the NVR syncs time to the connected cameras regularly. This feature is enabled by default.

Note:

- Time sync occurs when a camera goes online for the first time.
- If Sync Camera Time is enabled, time sync occurs every 30 minutes.
- 1. Go to Menu > System > Time.

	🔛 Sync Camera Time		
2.	Enable/disable this feature as needed.		

Click Apply.

7.3.3 Holiday Configuration

Configure special time periods as holidays for use in recording schedules.

1. Go to Menu > System > Time > Holiday.

🗋 No.	Status	Holiday Name	Start Time	End Time	Repeat	Configure	Delete
						A	dd

2. Click **Add** in the lower-right corner.

Holiday Name					
Status	🗹 Enable			🔲 Disable	
Repeat	No No			Yes	
Mode	🗹 By Day			🗆 By Week	
Start Time	2022	08	06		
End Time	2022	08	06		

3. Configure the parameters.

Parameter	Description
Holiday Name	Set a meaningful and easy-to-remember holiday name.
Status	The new holiday is enabled by default. If you want to disable it, select Disable .
Repeat	 No: The holiday is effective once only in the specified year. Specify a year for the holiday. Yes: The holiday is effective every year.
Mode	 By Day: Set the holiday in the specified format: year/month/day. By Week: Set the holiday in the specified format: year/month/week/day of the week.
Start Time/End Time	Set according to the specified format.

4. Click Apply.

5. Click OK.



- Click 🔯 to edit the current holiday.
- Click 📷 to delete a holiday. Deleting a holiday will not delete the relevant recordings.

• Click **Disable** to disable the holiday.

7.3.4 DST

Configure DST.

1.	Go to	Menu	> !	System	>	Time	>	DST.	
----	-------	------	-----	--------	---	------	---	------	--

✓ DST Start Time Mar ~ 2nd ~ Sun ~ 2 \$
Start TimeMar2ndSun2End TimeNov1stSun2\$
End Time Nov ~ Ist ~ Sun ~ 2 ~
DST Bias 60 mins ~

- 2. Select DST.
- 3. Configure the parameters.
- 4. Click Apply.

7.4 POS Configuration

Overlay transaction information to live and recorded videos for check and audit.

POS configuration includes POS OSD Configuration and POS Configuration. After the configuration is completed, POS information will be displayed on both live and recorded videos, and POS recordings can be retrieved for playback.

7.4.1 POS OSD Configuration

Configure POS OSD parameters.

1. Go to Menu > System > POS > POS OSD.

Enable POS OSD		
Position	Left	Ý
Duration(s)	5	Auto
Font	Medium	~

2. Select Enable POS OSD.

3. Configure the parameters.

Parameter	Description
Position	 POS OSD position. Left: In the upper-left corner of the image. Center: In the middle of the image. Right: In the upper-right corner of the image.
Duration(s)	Length of time that POS OSD is displayed on live and recorded video images. Default: 5s. Max. 120s.
Auto	Displays POS OSD according to the POS data duration obtained based on Time Start Identifier and Time End Identifier. For Time Start Identifier and Time End Identifier, see also POS Configuration.
Font	Font size and color of POS OSD. Font sizes include X-large, Large, Medium, and Small.

4. Click **OK**.

7.4.2 POS Configuration

Add POS and configure POS protocols.

1. Go to Menu > System > POS.

No.	Name	Status	Protocol	Connection	Camera	Edit	Delete
A -1		Dalata	Frankla	Char			
Ad	a	Delete	Enable	Stop			

2. Click Add.

	Add/Modify
Name	POS
Enable	
Protocol	General
Set Protocol	Ø
Connection	Network
Set Connection	Ø
Camera	
AII D1	□ D2

3. Configure the parameters.

Parameter	Description
Name	Set a name that is easy to recognize. The POS name must be unique.
Enable	The new POS is enabled by default. You may clear the checkbox to disable the POS, and enable it on the POS page at any time.
Protocol	 General: The POS is directly connected to the NVR. Note: Choose this option with caution. POS connection may fail due to different protocols of different POS machine vendors. AVE: The POS machine transmits data to the AVE device, and the AVE device connects to the NVR. Note: AVE is a device that supports multiple POS protocols. It integrates POS data in different formats and converts them into data transmittable via TCP/UDP.

Parameter	Description				
	 Only applicable to the General protocol. Click . The start identifier, end identifier, and line delimiter must be converted into hexadecimal values using Notepad+ before being entered. Start Identifier: (Optional) The NVR starts receiving POS data from the start identifier. Stop Identifier: (Optional) The NVR stops receiving POS data at the received stop identifier. Line Delimiter: (Optional) The NVR inserts a line break into POS data at the line delimiter. 				
	 Ignore Characters: (Optional) The NVR displays ignored POS data as *. Time Start Identifier: (Optional) Start time of POS data. Time End Identifier: (Optional) End time of POS data. 				
Set Connection	Transmission protocols include TCP and UDP. Transaction data are sent to the NVR via TCP or UDP.				
	Local Receiving Port: Port that the NVR uses to receive data. Set an unused port.				
	Source IPv4 Address: IP address that the POS machine uses to send data.				
	Source Port: Port that the POS machine uses to send data.				
	Destination IPv4 Address: Not required. Address that the NVR uses to forward the received POS data.				
	Destination Port: Not required. Port that the NVR uses to forward the received POS data.				
	Timeout: Time that the NVR receives POS data before it stops. Default: 5s. Range: 1-3600s. If a stop identifier is configured, the NVR stops receiving POS data at the stop identifier; if no stop identifier is configured, the NVR stops receiving POS data when the timeout expires. The AVE protocol does not involve start and stop identifiers. Therefore, it is necessary to configure a timeout for the NVR to stop receiving POS data and to display POS information. If no timeout is configured, the NVR does not stop receiving POS data, and POS information cannot be displayed.				
Camera	Choose the camera to which you want to overlay POS data.				

4. Click **OK**.

No.	Name	Status	Protocol	Connection	Camera	Edit	Delete
V 1	POS1	Enabled	POS	Network	D1		ش ا
Ade	d De	lete	Enable	Stop			

• Click 🔯 to edit the POS.

• Click 📺 to delete the POS.

• Click **Disable** to disable the POS.

7.5 Serial Port Configuration

Configure serial port parameters to connect a keyboard. The serial port settings configured on the NVR must match the serial port settings on the keyboard.

1. Go to Menu > System > Serial.

Serial No.	1	~
Туре	RS485	
Baud Rate	9600	~
Data Bit	8	~
Stop Bit	1	~
Check Bit	None	~
Port Usage	Keyboard	~

2. Configure the parameters.

Parameter	Description
Serial No.	Choose the serial port ID. The number of serial ports available may vary with device.
Туре	Currently only RS485 is available.
Baud Rate	Data transmission speed (unit: bits per second). The greater the value, the faster the transmission speed, and the shorter the transmission distance. Usually the default value is used.
Data Bit	The actual number of data bits in a data packet. Usually the default value is used.
Stop Bit	Indicates the end of a unit of transmission. Usually the default value is used.
Check Bit	Used to check whether the received data bits are erroneous. Choose Odd, Even, or None (default) as needed.
Port Usage	Keyboard.

3. Click Apply.

7.6 User Configuration

Users are entities that manage and operate the system. A user type is a set of operation permissions. After a user type is assigned to a user, the user has all the permissions defined in the type. The system supports four user types:

User Type	Description
admin	The default super administrator, which has the maximum permissions. The initial password is 123456 .
	Note: Only admin can add or delete users and edit other users' permissions.

User Type	Description
default	The default reserved user, which cannot be added or deleted, only has live view and two-way audio permissions by default, and can be configured by admin only.
	Note: If the default user is forbidden to use live view and two-way audio on a camera, the camera will be locked when no user is logged in, and ☐ is displayed in the corresponding window.
Operator	By default, an operator has basic permissions and camera permissions.
Guest	By default, a guest only has camera permissions.

Go to Menu > System > User.

Username	User Type	Edit	Delete
admin	Administrator		
default	Reserved User	Z	
Add Exit			

Add User

1. Click Add.

		Modify/	Add User	
Username				
User Type		Operator		~
Password				Weak
Confirm				
Pattern		Enable	e Unlock Pattern	1ª
platform.	to managing pla	atform, yo	u also need to edit the pass	word on the
Basic Permissions	_			
🗹 Configure	🗹 Upgrade		☑ View and Export L ☑	Restart
Smart Permissions				
🗹 Preview				
Camera Permissions				
Select Permission			🗹 Select Camera	
Live View			▽ D1	
Control PTZ			✓ D2	
Playback			✓ D3	
Manual Recording or	NVR		✓ D4	
			Apply	Exit

2. Configure the parameters. Enter the username, password, choose a user type, enable/disable unlock pattern, and choose permissions.

Item	Description
Username	Set a username as you need. Cannot be empty or include special characters.
Password/Confirm	Set a strong password.
Pattern	To enable the unlock pattern, select the checkbox. Click 🥕 , and then follow on-screen instructions to set a pattern.
Basic Permissions/Smart Permissions	Select the permissions you want to assign to the user.

3. Click OK.

Delete User

- 1. On the **User** page, select the user you want to delete.
- 2. Click m. A confirmation message appears.
- 3. Click Yes.

Edit User

- 1. On the User page, select the user you want to edit.
- 2. Click **[2]**, enter the password.

	Change Password	
Username	admin	
Change Password		
Password	***** W	eak
Confirm		
Sync to Camera	Change Online Private Protocol Camera Pass	
Pattern	🖂 Enable Unlock Pattern	[]\$
🗹 Email		
Note: If NVR is added to managing p platform.	latform, you also need to edit the password on the	
	ОК Ва	ick

4. Click OK.

7.7 Security Configuration

Security configuration includes IP address filtering, Onvif authentication, 802.1x, ARP protection, watermark, and secure password.

7.7.1 IP Address Filtering

IP address filtering can ensure only certain source IP addresses can be used to access the NVR's web interface.

1. Go to Menu > System > Security > IP Address Filtering.

Control Ty	pe				
Start IP					
End IP					
No.	Start IP		End IP	Edit	Delete

- 2. Select Enable IP Address Filtering.
- 3. Configure the parameters.

Parameter	Description
Control Type	Blocklist: Access is forbidden if the IP is on the blocklist.
	Allowlist: Access is allowed only when the IP is on the allowlist. If Allowlist is selected but is empty, remote access will be forbidden.
Start IP/End IP	Enter the start and end IP addresses. If you want to add only one IP address, enter it in the Start IP field.

4. Click Add.

7.7.2 ONVIF Authentication

When Onvif authentication is enabled, a username and password will be required to access the NVR via Onvif. This feature is enabled by default. Go to **Menu** > **System** > **Security** > **ONVIF Auth**.

🖂 Enable Authentication

Note: If enabled, a username and password will be required for access by ONVIF.

7.7.3 802.1x

802.1X can prevent unauthenticated devices from accessing the local area network.

Note:

- Only some NVRs support this function.
- You need to configure and enable this function on the network switch first.
- For multi-NIC devices, this feature will be disabled automatically if you change the NIC's working mode.
- 1. Go to Menu > System > Security > 802.1x.

Select NIC	NIC1	~
🗖 Enable 802.1x		
Protocol	EAP-MD5	
EAPOL Version	1	
Username	admin	
Password	****	

- 2. Choose the NIC. Skip this step if the device has only one NIC.
- 3. Select Enable 802.1x.
- 4. Configure the parameters.

Parameter	Description
Protocol	Default: EAP-MD5.
EAPOL Version	Choose 1 or 2 . It must be the same version configured on the network switch.
Username/Password	Must be the username and password configured on the network switch.

5. Click Apply.

7.7.4 ARP Protection

The Address Resolution Protocol (ARP) dynamically maps an IP address to a MAC address. In a local area network, ARP is necessary for devices to communicate with each other through MAC addresses. ARP attacks exploit ARP vulnerabilities to forge IP addresses and MAC addresses. ARP protection can bind the gateway's IP address and an MAC address to prevent ARP spoofing.

Note: For multi-NIC devices, this feature will be disabled automatically if you change the NIC's working mode. For information about changing the working mode, see Network Configuration.

1. Go to Menu > System > Security > ARP Protection.

Select NIC	NIC1
Enable ARP Protection	
Gateway	206 . 7 . 0 . 1
Gateway MAC Address	Custom ~ 00:00:00:00:00

2. Choose the NIC. Skip this step if the device only has one NIC.

3. Select Enable ARP Protection.

4. Configure the parameters.

Parameter	Description
Gateway	Gateway you have configured in Menu > Network > Basic > Network.
Gateway MAC Address	Custom: Enter the gateway's physical address in the network switch.
	Auto: Automatically obtains the gateway's physical address in the network switch.

5. Click Apply.

7.7.5 Watermark

Use the watermark function to encrypt custom information into video contents to prevent video tampering.

1. Go to Menu > System > Security > Watermark.

Select Camera	D5(IP Camera 05)	
Enable Watermark		
Watermark Content		
Note: When enabled, wa video on EZPlayer.	atermark content is not displaye	ed in live view

- 2. Choose the channel, and select Enable Watermark.
- 3. Enter the watermark contents.
- 4. Click Apply.

7.7.6 Secure Password

Secure password specifies application ranges of strong and weak passwords in different password modes. Secure password is divided into two password modes: friendly password and enhanced password.

Note: Only admin can change the setting.

1. Go to Menu > System > Security > Secure Password.



- 2. Choose whether to enable the Enhanced Password mode. The default is Friendly Password.
 - Friendly Password: In this mode, a strong password is required except when the PC client is in the same network segment as the NVR or in one of the three private network segments (10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/24).
 - Enhanced Password:

In this mode, the system prompts user to set a strong password if the current password is weak. Also, only strong passwords can be set for new users: At least 9 characters long, and include all three types: letters, digits, and special characters.

3. Click Apply.

7.8 Hot Spare

When one of multiple working NVRs failed, the hot spare takes over to replace the faulty one. When the faulty NVR recovered, it takes over the hot spare, and the hot spare transfers data stored during the downtime back to the recovered NVR to ensure reliable and uninterrupted data storage.

Go to Menu > System > Hot Spare.

Normal Mode

On the NVR to be used as a working device, perform the steps to add a hot spare:

- 1. Click Custom Add.
- 2. Add a hot spare. You can enter the IP of the hot spare manually or search the network segment. The steps are similar to the steps described in Add IPC.
- 3. Click Exit to return to the Hot Spare page to complete the setup.

Hot Spare Mode

On the NVR to be used as the hot spare, perform the steps:

1. Go to Menu > System > Hot Spare.

2. Select the Hot Spare mode.

Working Mode	\bigcirc Normal	Hot Spare
Working Device List		
IP Address	Connection	Status Working Status

🛷 Note:

- Switching the working mode will restart the device. After the device is restarted, some of its parameters will change.
- After a working device is switched to a hot spare, some of its functions are unavailable, and some of its parameters are restored to the default settings.
- If multiple NVRs fail simultaneously, only one can be replaced by the hot spare; the rest wait for backup.

8 Backup

This chapter introduces recording backup and image backup.

8.1 Recording Backup

Recording backup refers to backing up videos stored on the NVR's hard disk to a USB storage device. It has the following conditions:

- The USB storage device has been formatted to FAT32 or NTFS.
- Backup permission is required.
- The recording to back up is stored on a hard disk of the NVR.
- The storage device is connected correctly to the NVR.

Note:

- Recordings are backed up as .mp4 files by default.
- You can back up recordings in HD or SD mode.

Normal Video Backup

Normal video backup refers to backing up scheduled recording, manual recording, and event-triggered recording.

- 1. Go to Menu > Backup > Recording.
- 2. Select the desired camera(s). All cameras are selected by default.

Recordin	g									
	I AII	 ✓ D1 ✓ D9 ✓ D17 ✓ D25 ✓ D33 ✓ D41 ✓ D49 ✓ D47 ✓ D49 ✓ D57 ✓ D57 	 ✓ D2 ✓ D10 ✓ D18 ✓ D26 ✓ D34 ✓ D42 ✓ D50 ✓ D58 ✓ D58 	 D3 D11 D19 D27 D35 D43 D51 D59 D67 	 ☑ D4 ☑ D12 ☑ D20 ☑ D28 ☑ D36 ☑ D44 ☑ D52 ☑ D60 ☑ D60 ☑ D60 	 ✓ D5 ✓ D13 ✓ D21 ✓ D29 ✓ D37 ✓ D45 ✓ D53 ✓ D61 ✓ P60 	 ✓ D6 ✓ D14 ✓ D22 ✓ D30 ✓ D38 ✓ D46 ✓ D54 ✓ D54 ✓ D62 ✓ D70 	 ✓ D7 ✓ D15 ✓ D23 ✓ D31 ✓ D39 ✓ D47 ✓ D55 ✓ D63 ✓ D71 	 ✓ D8 ✓ D16 ✓ D24 ✓ D32 ✓ D40 ✓ D48 ✓ D56 ✓ D54 ✓ D72 	
	Start Time				2022-08-15 00:00:0		1070			~
	End Time				2022-08-15 23:59:	59				~
	Туре				All					~
	Event Type									~
	VCA Type									~
	File Type				AII					~
	Clarity				HD					*
	Search	Exit								

- 3. Set search conditions, including the start time, end time, recording type, event type, VCA type, file type, and clarity (HD or SD).
- 4. Click **Search**. Search results are displayed. The image from the first search result is displayed on the right side. Click () to play the video.

			Search R	esults
Camera ID	Time	Size	Status	Play
🗆 D1	2022-08-15 00:00:0100:11:58	171.2MB	•	۲
🗆 D1	2022-08-15 00:11:5800:29:37	254.4MB	•	۲
🗌 D1	2022-08-15 00:29:3700:47:16	254.4MB	•	۲
🗆 D1	2022-08-15 00:47:1601:04:56	254.4MB	•	
🗆 D1	2022-08-15 01:04:5601:22:35	254.4MB	•	۲
🗆 D1	2022-08-15 01:22:3501:40:15	254.4MB	•	
🗆 D1	2022-08-15 01:40:1501:57:54	254.4MB	•	۲
🗆 D1	2022-08-15 01:57:5402:15:33	254.4MB	ef	
🗆 D1	2022-08-15 02:15:3302:33:13	254.5MB	•	۲
🗆 D1	2022-08-15 02:33:1302:50:52	254.4MB	ef	
🗆 D1	2022-08-15 02:50:5203:08:32	254.5MB	ef	۲
🗖 D1	2022-08-15 03:08:3203:26:11	254.4MB	•	
🗆 D1	2022-08-15 03:26:1103:43:50	254.4MB	•	۲
🗆 D1	2022-08-15 03:43:5004:01:30	254.5MB	1	
🗆 D1	2022-08-15 04:01:3004:19:09	254.4MB	•	۲
🗆 D1	2022-08-15 04:19:0904:32:57	199.4MB	•	
~~		054 540	0	
Total: 5061 Pa	ge:1/51		< > »	
Space required	I: 0.0 MB			

- 5. Choose a way to back up recording(s) as needed.
 - Select the recording(s) you want to back up, and then click **Backup**.
 - Or click **Backup All** to back up all the recordings in the list.

	Ba	ackup		
Partition Location	USB-sdz4 /			∼ Refresh
	Size	Type	Modify Time	Delete
🛅 Previous Level		dir	2022-08-15 04:34:04	
🚞 backup		dir	2022-08-11 14:56:47	
📩 CaptureReport		dir	2022-07-26 20:09:20	Ш́.
Free	59921MB			
Total	59999MB			
New Folder		Forma	at Backup	Cancel

6. Select the partition and storage path, and then click **Backup**. You can also create a new folder for the recording(s) by clicking **New Folder**.

Note:

- Click **Format** to format the USB device. A USB device with more than 2TB capacity can only be formatted to NTFS, with 2TB or less capacity can be formatted to NTFS or FAT32. Only certain NVRs can format a USB device with more than 2TB capacity.
- During backup, a progress bar is displayed to indicate the progress (e.g., Exporting X/Y), where X indicates the current number being backed up, and Y indicates the total number of recordings. To stop the backup, click **Cancel**.
- A backup file is named in this format: Camera ID_S recording start time_E recording end time.file extension. For example, D1-S20220823000400_E20220823003148.mp4, where S means the start time, and E means the end time.

Video Clip Backup

Video clip backup refers to clipping a recording and saving it to a USB storage device.

1. Right-click and select Playback to go to the Playback page.



- 2. Click I to select HD or SD on the playback toolbar. The default is HD.
- 3. Select the desired camera to play the recorded video. Click to clip the video during the playback. Click to save the video clip.
- 4. Click is to view the video clip in the Video Clip tab.

🗌 Camera ID	Clip Time	Size	
🗆 D21	2022-08-15 06:00:0106:02:25	34.5MB	
🗋 D21	2022-08-15 06:02:2506:20:03	254.1MB	
🗆 D21	2022-08-15 06:20:0306:37:41	254.2MB	
🗆 D21	2022-08-15 06:37:4106:55:19	254.1MB	- A - A - A - A
🗆 D21	2022-08-15 06:55:1907:12:53	254.1MB	
🗆 D21	2022-08-15 07:12:5307:30:30	254.1MB	
🗖 D21	2022-08-15 07:30:3007:48:08	254.2MB	
🗆 D21	2022-08-15 07:48:0808:05:48	254.4MB	
🗆 D21	2022-08-15 08:05:4808:23:26	254.4MB	
🗆 D21	2022-08-15 08:23:2608:41:04	254.1MB	
□ D21	2022-08-15 08:41:0408:58:42	254.3MB	
Total: 14 Page:1/1		« < > » 1	

5. Select the desired video clip(s) and then click **Backup**.

	Bac	:kup						
Partition Location	USB-sdz4 /	USB-sdz4 ~ /						
	Size	Туре	Modify Time	Delete				
🛅 Previous Level		dir	2022-08-15 04:34:04					
🚞 backup		dir	2022-08-11 14:56:47					
🚞 CaptureReport		dir	2022-07-26 20:09:20	ш́.				
Free	59921MB							
Total	59999MB							
New Folder		Format	Backup	Cancel				

6. Select the partition and storage path, click **Backup**. Then the recordings are saved to the specified path on the storage device. You can also create a new folder for the recording(s) by clicking **New Folder**.

8.2 Image Backup

Image backup refers to backing up images stored on the NVR's hard disk to a USB storage device.

Note: The default format of image backup is *.JPG.

Normal Snapshot Backup

Normal snapshot backup refers to backing up scheduled snapshot, manual snapshot, and event-triggered snapshot.

1. Go to Menu > Backup > Image.

Snapsho	t Backup									
	C AII	 ✓ D1 ✓ D9 ✓ D17 ✓ D25 ✓ D33 ✓ D41 ✓ D49 ✓ D57 ✓ D57 	 ✓ D2 ✓ D10 ✓ D18 ✓ D26 ✓ D34 ✓ D42 ✓ D42 ✓ D50 ✓ D58 ✓ D56 	 ✓ D3 ✓ D11 ✓ D19 ✓ D27 ✓ D35 ✓ D43 ✓ D51 ✓ D59 ✓ D57 	 ☑ D4 ☑ D12 ☑ D20 ☑ D28 ☑ D36 ☑ D44 ☑ D52 ☑ D60 ☑ D60 ☑ D60 	 ✓ D5 ✓ D13 ✓ D21 ✓ D29 ✓ D37 ✓ D45 ✓ D53 ✓ D61 ✓ D61 	 ✓ D6 ✓ D14 ✓ D22 ✓ D30 ✓ D38 ✓ D46 ✓ D54 ✓ D62 ✓ D70 	 ✓ D7 ✓ D15 ✓ D23 ✓ D31 ✓ D39 ✓ D47 ✓ D55 ✓ D63 ✓ D71 	 D8 D16 D24 D32 D40 D48 D56 D64 D71 	
	Start Time				2022-08-15 00:00:					
	End Time				2022-08-15 23:59:	59				
	Image Type				All					
	Search	Exit								

- 2. Select the desired camera(s). All cameras are selected by default.
- 3. Set search conditions, including the image type, start time, and end time.
- 4. Click **Search**. Search results are displayed. The image displayed on the right is from the first result in the list by default.

		Search Results	
Camera ID D21	Time 2022-08-15 00:00:35	Search Results Size 161KB	15/08/2022 00:00:37 Image: Constrained and the second and the
Total: 1 Page:1/1 Space required: 0 KB		\ll \checkmark \gg 1 \rightarrow	Backup All Backup Cancel

Note: The image resolution depends on the resolution from the output interface and the number of windows displayed when the snapshot is taken.

- 5. Choose a way to back up image(s) as needed.
 - Select the desired image(s) you want to back up, and then click **Backup**.
 - Or click **Backup All** to back up all the images in the list.
- 6. Select the partition and storage path, click **Backup**. Then the images are backed up to the specified path on the storage device. You can also create a new folder for the image(s) by clicking **New Folder**.

Playback Snapshot Backup

Playback snapshot backup refers to backing up snapshots that are taken during playback to a USB storage device.

1. Go to the **Playback** page.



- 2. Click 🕸 HD to select HD or SD on the playback toolbar. The default is HD.
- 3. Select the desired camera to play the recorded video. Click 🔯 to take a snapshot during the playback.
- 4. To view the saved snapshot(s), click 📷 .

		File Managemen	t		
Video Clip Playback	Snapshot Locked File Tag				
				DAMAG	
🗖 Camera ID	Time		Size	i iii	
🗌 D21	2022-08-15 00:00:35		161KB	111-	THE division of states
				Resolution: 1920 x 10	80
Total: 1 Page:1/1					
		~ <	> >> 1 >>		
Space required: 0 KB					
			Backup All	Backup	Cancel

5. Select the desired snapshot(s) and then click **Backup**.

	B	ackup						
Partition Location	USB-sdz4 /	USB-sdz4 ~ /						
	Size	Type	Modify Time	Delete				
🛅 Previous Level		dir	2022-08-15 04:34:04					
🚞 backup		dir	2022-08-11 14:56:47					
🚞 CaptureReport		dir	2022-07-26 20:09:20	Ш́.				
Free	59921MB							
Total	59999MB							
New Folder		Form	at Backup	Cancel				

6. Select the partition and storage path, and then click **Backup**. The snapshots are saved in the specified path on the storage device. You can also create a new folder for the snapshot(s) by clicking **New Folder**.

9 Storage

Configure disk storage parameters.

Note: You can configure the storage mode under **Camera > Encoding**.

9.1 Recording Schedule

Make a recording schedule.

A 24/7 normal recording schedule is enabled by default. You can modify the schedule by drawing or editing as needed.

Go to **Menu** > **Storage** > **Recording Schedule**. Select the camera for which you want to make a recording schedule.



Draw a Schedule

1. Select a recording type.

	0	2	4	6	8	10	12	14	16	18	20	22	24	Edit
lon														Normal
ie														Normal
/ed														Event
hu														Motion
ri														Alarm
at														
un														M and A
oliday														M or A
	0	2	4	6	8	10	12	14	16	18	20	22	24	None

Recording Type	Description
Normal	Records video during specified time periods.
Event	Records video in the event of an event-triggered alarm.
Motion	Records video in the event of motion.
Alarm	Records video in the event of alarm input. Configure Alarm Input first before making an alarm schedule.
M and A	Records video when motion and alarm input occur simultaneously.
M or A	Records video when motion or alarm input occurs.
None	No recording schedule.

2. Drag on the time schedule to specify time periods for the recording type. The figure below shows a recording schedule with event recording from 18:00 to 24:00 on Monday and Tuesday, and normal recording during the rest of the time.



3. Click Apply.

Edit a Schedule

1. Click Edit.

2	Select	Day					Monday					~	
All Day							Туре		Norm				
00 🗘	00	$\langle \rangle$	18	< >	00	$\langle \rangle$	Туре		Norm	al			
18 🗘	00	¢	24	\$	00	$\hat{}$	Туре		Event				
00 🗘	00	$\hat{}$	00	\$	00	$\langle \rangle$	Туре		Norm	al			
00 🗘	00	$\hat{}$	00	< >	00	$\langle \rangle$	Туре		Norm	al			
00 🗘	00	¢	00	\$	00	$\hat{}$	Туре		Norm	al			
00 🗘	00	$\langle \rangle$	00	\$	00	$\hat{}$	Туре		Norm	al			
00 🗘	00	¢	00	\$	00	$\hat{}$	Туре		Norm	al			
00 🗘	00	$\langle \rangle$	00	$\langle \rangle$	00	$\langle \rangle$	Туре		Norm	al			
ору То		ΠA	ÍI.	N	lon	Пτ	ue 🗌 Wed	🗌 Thu	🗆 Fri	🗆 Sat	🗆 Sun	Holida	y

2. Select a day.

Monday			~
Monday	-1		
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			
Holiday			

- Note: Before you select Holiday, go to System > Time > Holiday and complete the holiday settings.
- 3. Clear the All Day check box. As a 24/7 normal recording schedule is enabled by default, you cannot modify the schedule unless All Day is unchecked.
- 4. Set time periods and the corresponding recording types.

	S	elect	Day					Monday			~
AII D)ay							Туре		Normal	
00	< >	00	$\langle \rangle$	18	$\langle \rangle$	00	$\langle \rangle$	Туре		Normal	Y
18	< >	00	\$	24	$\hat{}$	00	$\hat{}$	Туре		Event	~
00	$\langle \rangle$	00	$\hat{}$	00	$\langle \rangle$	00	\$	Туре		Normal	~
00	< >	00		00	$\hat{}$	00	$\hat{}$	Туре		Normal	~
00	$\langle \rangle$	00	$\hat{}$	00	$\hat{}$	00	$\hat{}$	Туре		Normal	~
00	< >	00	$\langle \rangle$	00	$\langle \rangle$	00	Ŷ	Туре		Normal	×
00	$\hat{}$	00	$\hat{}$	00	\$	00	$\hat{}$	Туре		Normal	~
00	< >	00	$\langle \rangle$	00	$\langle \rangle$	00	\$	Туре		Normal	~
ору	То		A	II		lon	От	ue 🗋 Wed	🗆 Thu	OFri Sat S	un Holiday Cancel

- 5. To apply the same settings to other days, select the desired day(s) after **Copy To**.
- 6. Click OK.



7. Click Apply.

Ot	hor	Settir	nσc
U	liei	Jetti	igs

Item	Description
Pre-Record	The duration of video to be recorded before an alarm. The default value is 10s.
Post-Record	The duration of video to be recorded after an alarm. The default value is 60s.
Enable Redundant Recording	Recording backup, stores recorded videos to redundant disks synchronously to prevent video loss in case of read/write disk failure. You need to configure at least one redundant disk before enabling redundant recording. See Disk Management for details.
Audio Storage	Set whether to record audio. Audio is not recorded by default.

9.2 Snapshot Schedule

Make a snapshot schedule.

1. Go to Menu > Storage > Snapshot Schedule.


- 2. Select the camera for which you want to make a snapshot schedule.
- 3. Select the Enable Schedule check box.
- 4. Set the snapshot schedule. See Draw a Schedule and Edit a Schedule.

Snapshot Type	Description
Normal	Captures images during specified time periods.
Event	Captures images in the event of an event-triggered alarm.
Motion	Captures images in the event of motion.
Alarm	Captures images in the event of alarm input. Configure Alarm Input first before making an alarm schedule.
M and A	Captures images when motion and alarm input occur simultaneously.
M or A	Captures images when motion or alarm input occurs.
None	No snapshot schedule.

5. Click Apply.

Other Settings

Item	Description
Enable Redundant Snapshot	Snapshot backup, stores snapshots to redundant disks synchronously to prevent snapshot loss in case of read/write disk failure. You need to configure at least one redundant disk before enabling redundant snapshot. See Disk Management for details.
	Note: A redundant disk can be used for both recording backup and snapshot backup.

9.3 Array

Configure RAID (Redundant Arrays of Independent Disks) to improve disk read/write efficiency and data security.

Rote:

- RAID is only available on certain models, and the RAID types supported may vary with NVR model.
- Cannot create a RAID with local disks and disks in an expansion enclosure at the time.
- NAS and eSATA disks cannot be used to create arrays.

Currently 7 RAID types are supported: RAID 0, RAID 1, RAID 5, RAID 6, RAID 10, RAID 50 and RAID 60. The number of disks available to create different RAID arrays varies depending on the number of disks equipped with the device. See the table below for details.

Note: The number of disks listed in the table below does not include global hot spare disks.

RAID Type	Number of Disks
RAID 0	2 to 8

RAID Type	Number of Disks
RAID 1	2
RAID 5	3 to 8
RAID 6	4 to 8
RAID 10	4 to 16 (must be an integer multiple of 2)
RAID 50	6 to 16
RAID 60	8 to 16

Before array configuration, enable RAID as follows:

- 1. Go to Menu > Storage > Array.
- 2. Select the **Open RAID** check box and click **Yes** in the pop-up dialog box.

Automatically Create an Array

Quickly create an array with one click.

1. Go to Menu > Storage > Array > Physical Disk.

🗹 Open RAID									
Physical Disk									
🗌 Disk No.	Capacity(GB)	Home Device	Туре	Array	Status:	Hot Spare			
1	9293.75	Local Disk	Common Disk		Normal				
□ 2	9293.75	Local Disk	Common Disk		Normal				
3	9293.75	Local Disk	Common Disk		Normal				
4	9293.75	Local Disk	Common Disk		Normal				
5	3705.77	Local Disk	Common Disk		Normal	2			
6	3705.77	Local Disk	Common Disk		Normal				
7	3705.77	Local Disk	Common Disk		Normal				
8	3705.77	Local Disk	Common Disk		Normal	Ø			
9	9293.75	Local Disk	Common Disk		Normal	Ø			
				One-Click Cre	ate	Create			
Note: Creating	Note: Creating an array with disks of different capacity causes waste of disk space.								

2. Click **One-Click Create**, then the system automatically completes array creation based on the number of available disks.

Number of Disks Available	RAID Type					
2	RAID 1					
≥3	RAID 5 If there are 4 or more disks available, a global hot spare disk will be created automatically.					
	Note: A global hot spare disk can automatically replace a failed disk in any RAID array to ensure stable array operation.					

3. A message appears to prompt you the creation result. Click **OK** to complete the creation. Check the created array under the **Array** tab.

	✓ Open RAID Physical Disk Array									
No.	Name	Total(GB)	Status	Туре	Disks	Hot Spare Disk	Rebuild	Delete	Task	
	ARRAY1	25937.79	Normal	RAID 5	1,2,3,4,5,6,8,9			Ū	None	
	ARRAY2	22232.39	Normal	RAID 5	10,11,12,13,14,15			Ē	None	
	ARRAY3	59525.50	Normal	RAID 5	1-1,1-3,1-4,1-6,1	1-2		Ē	None	
4	ARRAY4	44644.13	Normal	RAID 5	1-8,1-13,1-14,1-15	5 1-2			None	
Note: S	ome recordi	ngs will be lost af	fter a quick rebuild.							

Manually Create an Array

Manually create a desired array. Take RAID 50 as an example.

Note:

- To avoid wasting disk resources, please make sure all disks are used to create arrays. Disks that are not used to create arrays are unusable.
- No global hot spare disk will be created automatically if you create arrays manually. To ensure successful automatic array rebuilding and stable system operation, it is recommended to set a global hot spare disk.
- The capacity of the global hot spare disk must not be less than that of the smallest disk in the array.
- 1. Go to Menu > Storage > Array > Physical Disk.
- 2. (Optional) Select a disk and click 🗹 to set it as a hot spare disk.
 - **Note:** If there are multiple arrays and you require highly stable arrays, you can configure multiple global hot spare disks. When multiple arrays degrade, the global hot spare disks are used to rebuild them in order of disk number. However, too many global hot spare disks may cause waste of disk resources, so please set them as required.

🗹 Open RAID)					
Physical Dis						
Disk No.	Capacity(GB)	Home Device	Туре	Array	Status:	Hot Spare
1	9293.75	Local Disk	Common Disk		Normal	
2	9293.75	Local Disk	Common Disk		Normal	Ø
3	9293.75	Local Disk	Common Disk		Normal	Ø
4	9293.75	Local Disk	Common Disk		Normal	Ø
5	3705.77	Local Disk	Common Disk		Normal	
6	3705.77	Local Disk	Common Disk		Normal	Ø
7	3705.77	Local Disk	Common Disk		Normal	Ø
8	3705.77	Local Disk	Common Disk		Normal	Ø
9	9293.75	Local Disk	Hot Spare Disk		Normal	İİ
				One-Click Cr	eate	Create
Note: Creatin	g an array with disks of	different capacity caus	es waste of disk space.			

3. Click Create.

	Crea	ate Array					
Name	ARRAY	1					
Туре	RAID 5						~
Initialization Type							
Number of Sub-array Disks	3						~
Note: The total number of selected	disks mu	st be an i	nteger m	ultiple of	f sub-arr	ay disks	
Local Disk	 ✓ 1 ○ 8 ○ 14 	 ✓ 2 9 15 	☑ 3 □ 10 □ 16	₩4 □11	✓ 5 12	☑ 6 □ 13	
Disk Enclosure1	□ 1 □ 13	□ 3 □ 14	☐ 4 ☐ 15	6	7	8	
Array Capacity (Estimated):14823.09G	В						
			Apply			Cancel	

- 4. Enter the array name and select the **RAID 50** type.
- 5. Select the number of sub-array disks.

Note: This parameter is only available to RAID 50 and RAID 60 due to different array creation principles. For example, RAID 50 is a combination of RAID 5 and RAID 0, and RAID 5 is the sub-array of it.

Туре	Number of Sub-array Disks	Number of Disks Required
RAID 50	3 to 8	An integer multiple of the number of sub- array disks. RAID 50 requires at least 6 disks.
RAID 60	4 to 8	An integer multiple of the number of sub- array disks. RAID 60 requires at least 8 disks.

6. Click **OK**. Check the created array under the **Array** tab.

Rebuild an Array

An array is in one of three states: Normal, Degraded, and Damaged. You can maintain disks in time by checking the disk status to take advantage of the disk array and ensure the security and reliability of data storage.

Note: To be alerted when an array is degraded or damaged, you can configure alarm-triggered actions under Menu > Alarm > Alert.

Array Status	Description
Normal	The array is functional.
Damaged	The number of physical disks lost exceeds the allowable limit for this type of array and the lost disks cannot be rebuilt.
Degraded	A state between Normal and Damaged.

Go to Menu > Storage > Array > Array.

Note: For example, in a RAID 5 array with 4 disks, the array is in **Degraded** state when 1 disk is lost, and in **Damaged** state when 2 disks are lost.

• Automatically Rebuild an Array

A degraded array can be automatically rebuilt in ten minutes if a global hot spare disk is available and the capacity of the global hot spare disk is not less than that of the smallest disk in the array.

Note: After rebuilding, replace the failed disk in time and set the replaced disk as a global hot spare to ensure the stable operation of the array. See Manually Rebuild an Array for details.

Manually Rebuild an Array

A degraded array can only be rebuilt manually if no global hot spare disk is available.

Note: Before you start, check if there is an available physical disk. If no, you need to replace the failed disk.

- 1. Go to Menu > Storage > Array > Array.
- 2. Select the array to be rebuilt and click **2**.

	Rebui	ild Array					
Rebuild Mode	Norm	al				~	•
Name	ARRAY1						
Туре	RAID	50					
Disks	1,2,3,5	5,6,7,8					
Local Disk	✓ 9□ 14	□ 10 □ 15	\Box_{11} \Box_{16}	01	2 (13	
Note:Some recordings will be changed at any time during re	lost aft buildin	er a quick Ig	rebuild.	Rebui	ld mo	de can be	9
		Appl	y			Cancel	

- 3. Select the rebuild mode and local disk. The **Quick** rebuild mode takes less time than the **Normal** rebuild mode, but may result in data loss. Please select with caution.
- 4. Click Apply.

Delete an Array

Deleting an array will erase all data stored on it. Please handle with caution.

- 1. Go to Menu > Storage > Array > Array.
- 2. Click 📺 for the array you want to delete. A confirmation message appears. Click **Yes** to confirm the deletion.

9.4 Disk Management

Configure disk usage and property, add external disks, and format disks.

Note:

- Before you start, make sure all disks are installed properly.
- Only admin can format disks and configure the disk property.

Go to Menu > Storage > Hard Disk.

🗆 No.	Total(GB)	Free(GB)	Status	Туре	Usage	Property	Configure	Operate
1	9293.75	9164.25	Normal	Local Disk	Recording/Snapshot	Read/Write	Ø	
2	9293.75	9164.25	Normal	Local Disk	Recording/Snapshot	Read/Write	Ô	
3	9293.75	9292.50	Normal	Local Disk	Recording/Snapshot	Read/Write	Ô	
4	9293.75	9292.50	Normal	Local Disk	Recording/Snapshot	Read/Write	0	
5	3705.77	3704.50	Normal	Local Disk	Recording/Snapshot	Read/Write	Ô	
6	3705.77	3704.50	Normal	Local Disk	Recording/Snapshot	Read/Write	Ô	
7	3705.77	3704.50	Normal	Local Disk	Recording/Snapshot	Read/Write	Ô	
8	3705.77	3704.50	Normal	Local Disk	Recording/Snapshot	Read/Write	0	
1-7	14881.75	14880.50	Normal	Disk Enclosur	Recording/Snapshot	Read/Write	Ô	
1-8	14881.75	14880.50	Normal	Disk Enclosur	Recording/Snapshot	Read/Write	0	
🗌 NAS-1	14828.29	14812.92	Normal	NAS	Backup pshot		Ø	
🗌 eSATA-1	3726.02	3634.25	Normal	eSATA	Recording/Snapshot	Read/Write	Ô	•
			ording Days:Calculat	ing Disses weit				

Refresh	Add	Format	Exit

Configure the Disk Usage and Property

^{1.} Click of for the disk to edit.

	Edit	
No.		
Туре	Local	
Usage	Recording/Snapshot	~
Property	Read/Write	~
	ОК	Back

2. Select the usage and property. You can only configure the usage of NAS and eSATA.

Usage	Description
Recording/Snapshot	Used to automatically store recordings or snapshots.
Backup	Used to manually back up device related files, such as recordings/snapshots, logs, configuration information, etc.

Property	Description
Read/Write	The disk supports recording/snapshot storage, recording playback and snapshot retrieval.
Read Only	The disk only supports recording playback and snapshot retrieval, and does not support recording/snapshot storage.

Property	Description
Redundant	Recordings and snapshots are saved to read/write disks and redundant disks simultaneously.
	Note: To view recordings and snapshots on a redundant disk, you need to change the disk property to Read Only .

3. Click **OK**.

Add an External Disk

You can add external disks to the device, including NAS, eSATA, and disk enclosure. eSATA disks and disk enclosures are automatically added when connected to the device. The following describes how to add a NAS.

1. Click Add.

	Add Extended Dis	k	
Usage	Recording/Snaps	hat	~
		not	· ·
Туре	NAS		~
Server Address			
Directory			
		Add	Back

- 2. Enter the NAS server address and directory.
- 3. Click Add.

Format a Disk

Formatting a disk will erase all data stored on it. Please handle with caution.

- 1. Select the disk you want to format.
- 2. Click Format.
- 3. A confirmation message appears.
 - Local disk: Click Yes.
 - External disk: Select the files you want to format.

Other Operations

Click —/ (+) to unmount/mount an eSATA disk.

9.5 Disk Group

You can group disks and allocate a disk group for videos and images from a specified camera to meet the different storage duration requirements of cameras. Different arrays can be assigned to different disk groups. See Space Allocation for details.

Note:

- Redundant disks cannot be assigned to any disk group.
- Disk group information will be initialized if any disk in the group is formatted.
- 1. Go to Menu > Storage > Disk Group.

2. Select the Enable Disk Group check box.

Enable	Disk Group					
Disk Lis						
No.	Total(GB)	Free(GB)	Status	Туре	Property	Disk Group
1	3705.77	3599.75	Normal	Local	Read/Write	🗹 Disk Group 1
2	0.00	0.00	No Disk	Local		
	0.00	0.00	No Disk	Local		
4	0.00	0.00	No Disk	Local		
5	0.00	0.00	No Disk	Local		
6	0.00	0.00	No Disk	Local		
7	0.00	0.00	No Disk	Local		
8	0.00	0.00	No Disk	Local		
lick 🗹			Disk G	iroup		
	Disk Gr	oup	Disk G	iroup 1		~
				noup ±		
				noup 1		

- 4. Select a disk group for the disk.
- 5. Click Apply.

9.6 Space Allocation

Allocate storage space for videos and images from a specified camera.

1. Go to Menu > Storage > Allocate Space.

Select Camera Used Recording Space(G Used Image Space(GB) Select Group Disk Capacity Group Capacity Max Recording Space(GB Max Image Space(GB)	0 Disk Gr 3705 GE 3705 GE		>
Max Image Space(GB)	0		
Сору Аррі		Exit	

2. Select a camera, select a disk group for storage by the camera, and allocate storage space for videos and images from this camera on the disk group.

Space Type	Description
Recording Space	Used to store first stream videos, smart snapshots, POS data, people flow data, and heat map images.
	 Note: First stream video: If the Storage Mode is set to Main and Sub Stream or Main and Third Stream, the first stream is the main stream. If the Storage Mode is set to Sub and Third Stream, the first stream is the sub stream.
Image Space	Used to store common snapshots, such as snapshots captured by schedule or manually.

3. Click Apply.

4. (Optional) Click **Copy** to apply the same settings to other camera(s).

9.7 Advanced Settings

Configure the storage policy when the storage is full.

1. Go to Menu > Storage > Advanced.

When HDD Full	Overwrite	⊖ Stop

2. Select whether to overwrite the existing data or stop storage when the storage is full.

When HDD Full	Description
Overwrite	The disk space is divided into allocated space and remaining space according to whether the disk is used for storage by cameras.
	 If a camera is not allocated storage space, it will use the remaining disk space, and its oldest data will be overwritten when the remaining space is used up.
	Note: As the remaining disk space is variable and older recordings may be overwritten due to insufficient storage space, please allocate storage space with caution. For example, on a device with 20G disk capacity and two cameras, if camera 1 is allocated 10G, camera 2 will use the remaining 10G if it is not allocated storage space. In this case, you can view the last 5 days of recordings from camera 2. However, if you add a new camera to the device, there will be less storage space available to camera 2, and fewer days of recordings can be viewed.
	• If a camera is allocated storage space, its oldest data will be overwritten when the allocated space is used up.
Stop	This option is only effective to cameras that have been allocated storage space. When enabled, if the allocated space of a camera is used up, new recordings/ snapshots will not be saved.

10 Alarm Configuration

Set alarm rules and alarm-triggered actions so as to alert users when an alarm occurs.

10.1 Motion Detection

Motion detection detects motions in specified grids on the image. An alarm is reported when detection rules are

triggered. 💕 icon appears in the upper right corner of the preview page when the alarm occurs.

1. Go to Menu > Alarm > Motion Detection.

Motion D	Detection				
	Select Camera	D1			
	Enable				
		1	Trigger Actions	٢	
			Arming Schedule	Ø	
			Sensitivity		
			Full Screen	Clear All	
		2010			
	Copy Apply Exit				

- 2. Select the desired camera, and click **Enable**.
- 3. Set the detection area. The default is the full screen. You can adjust grid detection areas as needed.
 - To erase grids, click or drag on grid areas.
 - To redraw grids, click **Clear All**, and then click or drag on blank areas to draw grids.
 - To detect the full screen, click Full Screen.

Note: When a moving object is detected, the grids where the object appears on the left-side image are filled by **Mathematical**.

- 4. Drag the slider to adjust detection sensitivity. The higher the sensitivity, the more likely small motions will be detected, and the more likely false alarms will occur. Set based on the scene and your actual needs.
- 5. Set the alarm-triggered actions and arming schedule. Click the corresponding it to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See Alarm-triggered Actions and Arming Schedule for details.
- 6. (Optional) To apply the same settings to other cameras, click **Copy** and select the desired parameter(s) and camera(s).
- 7. Click Apply.

10.2 Tampering Detection

Tampering detection detects live video tampering. An alarm is reported when detection rules are triggered.

1. Go to Menu > Alarm > Tampering.

Tamperi	ng				
	Select Camera	D1			
	Enable				
	TAN ANA ANA ANA ANA ANA ANA ANA ANA ANA		Trigger Actions	Ø	
	Tel -	-	Arming Schedule	Ø	
			Sensitivity	0	
	(Note: By default, tampering detection is effective to the f screen.)	ull			
	Copy Apply Exit				

- 2. Select the desired camera, and click **Enable**. The tampering detection area is the full screen by default and cannot be edited.
- 3. Drag the slider to adjust detection sensitivity. The higher the sensitivity, the higher the detection rate, and the higher the false alarm rate. Set based on the scene and your actual needs.
- 4. Set the alarm-triggered actions and arming schedule. Click the corresponding to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See Alarm-triggered Actions and Arming Schedule for details.
- 5. (Optional) To apply the same settings to other cameras, click **Copy** and select the desired parameter(s) and camera(s).
- 6. Click Apply.

10.3 Human Body Detection

Human body detection detects humans in a specified area. An alarm is reported when the detection rule is triggered.

1. Go to Menu > Alarm > Human Body Detection.

Tamperi	ing				
	Select Camera	D1			
	Enable				
			Trigger Actions	Ø	
			Arming Schedule	Ø	
			Sensitivity	0	
		Ta			
	(Note: By default, tampering detection is effective to the fiscreen.)	ull			
	screen.)				
	Copy Apply Exit				

- 2. Select the desired camera, and click Enable.
- 3. Set the detection rule. Only 1 detection rule is allowed.

Click **[7]**, drag in the preview window to draw a rectangular detection area. Only 1 detection area is allowed.

Note: To redraw the detection area, select the set rule, and click . To delete the detection area, click

- 4. Drag the slider to adjust detection sensitivity. The higher the sensitivity, the more likely humans will be detected, and the more likely false alarms will occur. Set based on the scene and your actual needs.
- 5. Set the alarm-triggered actions and arming schedule. Click the corresponding to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See Alarm-triggered Actions and Arming Schedule for details.
- 6. (Optional) To apply the same settings to other cameras, click **Copy** and select the desired parameter(s) and camera(s).
- 7. Click Apply.

10.4 Video Loss

A video loss alarm is reported when the NVR loses video signals from a camera.

1. Go to Menu > Alarm > Video Loss.

c 15				
Camera ID D1	Alarm Status	Trigger Actions	Arming Schedule	
D2	🌍 Enable	Ø	Ø	
D3	🥏 Enable	Ø	Ø	
D4	🥏 Enable	Ø	Ø	
D5	🥏 Enable	Ø	Ø	
D6	🥏 Enable	Ø	Ø	
D7	🥏 Enable	Ø	Ø	
D8	🥏 Enable	٥	Ø	
D9	🥏 Enable	٩	Ø	
D10	🥏 Enable	Ø	Ø	
D11	🥏 Enable	Ø	Ø	
D12	🥏 Enable	Ø	Ø	
D13	🛋 Enabla			
Сору	Exit			

- 2. Video loss alarm is enabled by default. To disable video loss alarm for a channel, click , which then changes to .
- 3. Set the alarm-triggered actions and arming schedule. Click the corresponding to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See Alarm-triggered Actions and Arming Schedule for details.
- 4. (Optional) To apply the same settings to other cameras, click **Copy** and select the desired parameter(s) and camera(s), and then click **OK**.

10.5 Alarm Input and Output

Configure alarm input and alarm output.

10.5.1 Alarm Input

Configure the alarm mode, arming schedule, and alarm-triggered actions for external alarm input devices. The external alarm input devices include devices connected to the ALARM IN interfaces on the NVR and the ALARM IN interfaces on the cameras. For example, access control devices.

1. Go to Menu > Alarm > Input/Output > Alarm Input.

No.	Alarm Input Name.	Alarm Status	Alarm Type	Edit	Trigger Actions	Arming Sched	Disarm by Switch	Linked Channel
A<-1	A<-1	Disable	N.C.	Ø	0	Ø	•	Ø
A<-2	A<-2	Disable	N.O.		@	Ø		
A<-3	A<-3	Disable	N.O.		@	Ø		
A<-4	A<-4	Disable	N.O.		0	Ø		
A<-5	A<-5	Disable	N.O.		@	Ø		
A<-6	A<-6	Disable	N.O.		0	Ô		
A<-7	A<-7	Disable	N.O.	Ø	Ø	Ø		
A<-8	A < - 8	Disable	N.O.		0	Ø		
A<-9	A<-9	Disable	N.O.	Ø	0	Ø		
A<-10	A<-10	Disable	N.O.		0	Ø		
A<-11	A<-11	Disable	N.O.		@	Ô		
A<-12	A<-12	Disable	N.O.		0	Ø		
		Dicabla	NO					
Сору		Exi						

- 2. Select the alarm input channel to be set.
 - A<-1: A refers to the ALARM IN interfaces on the NVR, 1 means the first ALARM IN interface. Likewise, A
 -2 means the second ALARM IN interface on the NVR. The number of ALARM IN interfaces may vary with NVR model. See the device datasheet for specifications.
 - D <-1: D refers to channels, the number means channel ID. D<-1 means the alarm input device is connected to the ALARM IN interface of the camera whose channel ID is 1. Likewise, D <-2 means the alarm input device is connected to the ALARM IN interface of the camera whose channel ID is 2. The number is not displayed if the camera has no ALARM IN interface.
- ^{3.} Click mathematical to configure alarm input parameters. After configuration, click **OK**.

	Alarm Input	
Alarm Input	🗹 Enable	
Alarm Input Name.	A<-1	
Alarm Type	N.C.	~
	ОК	Cancel

Item	Description
Alarm Input	Select Enable to enable the alarm input.
Alarm Input Name	The default name is the alarm input number. You may rename it as needed.
Alarm Type	 This item is applicable when Alarm Input is enabled. The default is N.O N.O.: Choose this option if the alarm input device is normally closed. The device opens the circuit to input an alarm, triggers the NVR to open the alarm circuit and report an alarm. N.C.: Choose this option if the alarm input device is normally opened. The device closes the circuit to input an alarm, triggers the NVR to close the alarm circuit and report an alarm.

- 4. (Optional) Set one-key disarming.
 - (1) To enable one-key disarm, select in the **Disarm by Switch** column. When enabled, the configured actions will not be triggered when A<-1 reports alarms.

- (2) To apply one-key disarming to other channel(s), click in the Linked Channel column, select the desired channel(s) or All, and then click Apply.
- 5. Set the alarm-triggered actions and arming schedule. Click the corresponding it to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See Alarm-triggered Actions and Arming Schedule for details.
- 6. (Optional) To apply the alarm input parameters to other cameras, click **Copy**, and select the desired channel(s) or **Copy To**, and then click **OK**.
- 7. Click Apply.

10.5.2 Alarm Output

Configure the alarm mode and arming schedule for external alarm output devices. The external alarm output devices include devices connected to the ALARM OUT interfaces on the NVR and the ALARM OUT interfaces on the cameras, such as alarm light and alarm bell.

1. Go to Menu > Alarm > Input/Output > Alarm Output.

Alarm Output No. Default Status Delay Edit Arming Schedule A->1 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status A->2 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status A->2 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status A->3 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status A->4 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status A->5 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status A->6 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status A->7 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status D1->1 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status D2->1 N.O. 30(s) Image: Constraint of the status Image: Constraint of the status D2->1	Input Alarm Output				
A->2 N.O. 30(s) I I A->3 N.O. 30(s) I I A->3 N.O. 30(s) I I A->4 N.O. 30(s) I I A->5 N.O. 30(s) I I A->6 N.O. 30(s) I I A->7 N.O. 30(s) I I A->8 N.O. 30(s) I I D1->1 N.O. 30(s) I I D2->1 N.O. 30(s) I I D3->1 N.O. 30(s) I I	Alarm Output No.	Default Status	Delay	Edit	Arming Schedule
A->3 N.O. 30(s) I I A->4 N.O. 30(s) I I A->5 N.O. 30(s) I I A->6 N.O. 30(s) I I A->7 N.O. 30(s) I I A->8 N.O. 30(s) I I D1->1 N.O. 30(s) I I D2->1 N.O. 30(s) I I	A->1	N.O.	30(s)	Z	Ø
A->4 N.O. 30(s) C © A->5 N.O. 30(s) C © A->6 N.O. 30(s) C © A->6 N.O. 30(s) C © A->7 N.O. 30(s) C © A->8 N.O. 30(s) C © D1->1 N.O. 30(s) C © D2->1 N.O. 30(s) C © D3->1 N.O. 30(s) C ©	A->2	N.O.	30(s)		Ø
A->5 N.O. 30(s) I I A->6 N.O. 30(s) I I A->7 N.O. 30(s) I I A->8 N.O. 30(s) I I D1->1 N.O. 30(s) I I D2->1 N.O. 30(s) I I D3->1 N.O. 30(s) I I	A->3	N.O.	30(s)		Ø
A->6 N.O. 30(s) Image: Constraint of the const	A->4	N.O.	30(s)		Ø
A->7 N.O. 30(s) C © A->8 N.O. 30(s) C © D1->1 N.O. 30(s) C © D2->1 N.O. 30(s) C © D3->1 N.O. 30(s) C ©	A->5	N.O.	30(s)		Ø
A->8 N.O. 30(s) Image: Compare the symptotic compares the symptoticompares the symptotic compares the symptotic compares the symptot	A->6	N.O.	30(s)		Ø
D1->1 N.O. 30(s) Image: Compared state s	A->7	N.O.	30(s)		Ø
D2->1 N.O. 30(s) Image: Comparison of the second secon	A->8	N.O.	30(s)		Ø
D3->1 N.O. 30(s) 🗹 🔕	D1->1	N.O.	30(s)		Ø
	D2->1	N.O.	30(s)		Ø
D7->1 N.O. 30(s) 🗹 🞯	D3->1	N.O.	30(s)	Ø	Ø
	D7->1	N.O.	30(s)		Ø

- 2. Select the alarm output channel to be set.
 - A>-1: A refers to the ALARM OUT interfaces on the NVR, 1 means the first ALARM OUT interface. A <-2 means the second ALARM OUT interface on the NVR, and so on. The number of ALARM OUT interfaces may vary with NVR model. See the device datasheet for specifications.
 - D >-1: D refers to channels, the number means channel ID. D->1 means the alarm output device is connected to the ALARM OUT interface of the camera whose channel ID is 1. Likewise, D->2 means the alarm output device is connected to the ALARM OUT interface of the camera whose channel ID is 2. The number is not displayed if the camera has no ALARM OUT interface.
- ^{3.} Click 🚺 to configure alarm output parameters. After configuration, Click **OK**.

		Alarm Out	tput	
Default Status				
Default Status		N.O.		
Alarm Duration		Custom	⊖ Ma	ximum
Delay(s)		30		
Relay Mode		Bistable		~
			ОК	Cancel
Item	Description	l		
Default Status	Select the d	lefault status	from the drop-dowr	list. The default is N.O. .

Item	Description
	 N.O.: Choose this option if the external device is normally open. N.C.: Choose this option if the external device is normally closed.
Alarm Duration/Delay(s)	 Set the alarm duration, that is, the length of time that an output alarm lasts after the alarm is ended. Custom: When enabled, you can set the length of time as needed. After an alarm is cleared on the NVR, the third-party alarm device continues alarm till the end of the set duration.
	Note: The delay period supported by channels may vary. For most channels, the valid range is 5 to 3600s. For certain channels, the valid range is 1 to 3600s.
	• Maximum: When enabled, you cannot set the delay period. The third-party alarm device continues alarm until you clear it manually.
Relay Mode	Set the relay mode, including monostable and bistable. The default is bistable.
	Note: Set relay mode to better adapt to third-party alarm devices such as alarm lights. Please set the relay mode according to the trigger mode of the third-party alarm device.
	 Monostable: The circuit can only remain in one stable state. When a trigger pulse is applied, the circuit switches to another state, and then automatically switches back to the original stable state. The circuit will repeat the same actions when the next trigger pulse arrives. Bistable: The circuit can remain in two stable states. When a trigger pulse is applied, the circuit switches to another state, and remains in this state after the trigger pulse is removed. When the next trigger pulse is applied, the circuit switches back to the other stable state and remains in that state.

- 4. Set the alarm-triggered actions and arming schedule. Click the corresponding it to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See Alarm-triggered Actions and Arming Schedule for details.
- 5. (Optional) To apply the alarm output parameters to other cameras, click **Copy**, and select the desired channel(s) or **Copy To**, and then click **OK**.
- 6. Click Apply.

10.6 Thermal Imaging

This function measures body temperature based on infrared imaging, and is suitable for high traffic areas such as hospitals, stations, and shopping malls.

Note: To use this function, please enable face detection in the visible light channel first. To perform face recognition, please enable face comparison at the same time. See Face Detection and Face Comparison for details.

- 1. Add a thermal imaging camera.
 - (1) Go to Menu > Camera > Camera > Camera.
 - (2) Click Custom Add to go to the Add IP Camera page.

		Ac	d IP Camer	a	
No.	IP Address	Status	Qty	Model	
	205.1.1.162	\odot		67-8034-Mg2-8	
	206.2.2.5	\otimes		INC. SHE IN URDER NO. M	48.4
	206.2.2.6	${ \oslash }$		PC-SNJ-ReDP-RI-H	29-F
	206.2.2.7	\odot		IPCIECIUS-SP28-41	
	206.2.2.9	\otimes		PC-1102-DIQUE-DO-N	08-9
	206.2.2.10			IPC2111581-P140-C	
Add M	lode	IP A	ddress		
Proto	col	Unit	1910		
IP Add	dress	20	5.1	. 1 . 162	
Port		80			
Usern	ame	adm			
Passw	ord		••		
Total	Camera Number				

- (3) Set the add mode to **IP Address**, select a protocol, enter the IP address, port, username, and password. There are 2 channels in total, including a visible light channel and an infrared light channel.
- 2. Configure thermal imaging parameters.
 - (1) Go to Menu > Alarm > Thermal Imaging > Body Temperature Measurement.
 - (2) Select the infrared light channel, and enable Body Temperature Measurement.

Select Camera	D6(IP C	lamera 06)	~	
Body Temperature Measurement				
Measurement Mode	Measu	e Internal Temperature		
Alarm Threshold(30°C~45°C)	37.3			
2009-11-19-14(96150)		Black Body Temperature(-4 Correction Temperature(-1 Environment Temperature(-	0°C~10°C)	36.0 0.0 25.0
		Draw Black Body Position	Draw	Delete
			Z	1
Note:To enable body temperature measurement, you nee Note:To configure temperature alarm parameters, you ne				
OK Cancel				



(3) Set the black body position. Click *mage*, drag to draw a bounding box on the left-side image.

Note: The size of the box should be the same as that of the highlighted part of the black body, otherwise measurement results may be affected.

Item	Description	
Measurement Mode	 Measure Internal Temperature: Calculated from the measured body surface temperature by formulas. Measure Body Surface Temperature: Measured directly by the therr imaging camera. 	
Alarm Threshold (30°C~45°C)	An alarm occurs when the measured temperature exceeds the threshold. The default is the normal body temperature of 37.3 °C.	
Black Body Temperature (-40°C~150°C)	Set the same temperature as the black body temperature. 36 °C is recommended. For more information, refer to the camera's site survey and commissioning guide.	
Correction Temperature (-10°C~10°C)	Correct temperature measurement errors. Devices have been calibrated before leaving the factory. You do not need to set the correction temperature. If in harsh conditions, such as high or low temperature, you	

(4) Set the relevant parameters.

Item	Description
	may configure it according to the camera's site survey and commissioning guide.
Environment Temperature (-40°C~100°C)	The environment temperature of the camera will affect the temperature measurement results. The higher the environment temperature, the higher the measurement result. The system can calculate the actual temperature automatically based on the entered environment temperature. 25°C is recommended.

(5) Set alarm-triggered actions in the **Temperature Alarm** page. See **Temperature Alarm** for details.

(6) Click **OK**.

3. View temperature measurement results.

In the preview page, click with on the screen toolbar to go to the **Epidemic Control** page. Then you can view the detailed information, including counting statistics, live video, realtime data, and history data.



10.7 Temperature Alarm

An alarm occurs when the abnormal body temperature is detected.

🛃 Note:

- This function is only available for thermal imaging cameras.
- Before using this function, please enable body temperature measurement in the **Temperature Measurement** page first. See **Thermal Imaging** for details.
- 1. Go to Menu > Alarm > Temperature Alarm > Body Temperature Alarm.

Select Camera	D1	
Abnormal Body Temperature Alarm		
Frigger Actions		
Arming Schedule		

- 2. Select the infrared light channel, and enable Abnormal Body Temperature Alarm.
- 3. Set the alarm-triggered actions and arming schedule. Click the corresponding it to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See Alarm-triggered Actions and Arming Schedule for details.
- 4. Click **OK**.

10.8 Alert

Configure alert actions for device abnormal events. The NVR reports an alarm when an event occurs.

- 1. Go to Menu > Alarm > Alert.
- 2. Select an alert type from the drop-down list.
 - IP Conflict: IP cameras use the same IP address on the network.

- Network Disconnected: An IP camera is offline.
- Disk Offline: No disk or a disk is not properly connected.
- High CPU Temperature: The CPU temperature of the NVR is too high.
- High Motherboard Temperature: The motherboard temperature of the NVR is too high.
- Disk Abnormal: A disk is in position but cannot work normally.
- Illegal Access: Incorrect username/password.
- Hard Disk Space Low: The disk space is about to use up.
- Hard Disk Full: The disk space has been used up.
- Array Damaged: The number of lost physical disks in an RAID exceeds the limit.
- Array Degraded: Some physical disks are lost in an RAID but the number of the lost disks is still below the limit.
- Recording/Snapshot Abnormal: Videos/snapshots cannot be stored normally because the disk is offline or abnormal.
- 3. Set the alert actions, including buzzer, sending email, and pop-up window. See Alarm-triggered Actions for details.
- 4. Set the alarm output channel(s). You may select All, or select specified alarm output channel(s).

IP Conflict ~
0
O
Alarm Output No.
A->1
A->2
A->3
A->4
A->5
A->6
A->7
A->8

6. Repeat the above operations to configure alert actions for other events.

10.9 Audio Detection

Audio detection detects input audio signals. An alarm is reported when an exception is detected. Make sure an audio collection device (e.g. sound pickup) is connected, and audio detection is enabled. See Audio Configuration for details.

1. Go to Menu > Alarm > Audio Detection.

Audio Detection		
Current Camera	D1	
Enable		
Trigger Actions		
Arming Schedule	Ø	
Detection Type	Sudden Rise	
Difference	0-	
Apply Exit		

- 2. Select the desired camera, and click **Enable**.
- 3. Set the alarm-triggered actions and arming schedule. Click the corresponding it to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See Alarm-triggered Actions and Arming Schedule for details.
- 4. Set audio detection rules.

Item	Description		
Detection Type	 Select an audio detection type from the drop-down list. Sudden Rise: An alarm occurs when the rise of volume exceeds the set value. Sudden Fall: An alarm occurs when the fall of volume exceeds the set value. Sudden Change: An alarm occurs when the rise or fall of volume exceeds the set value. Threshold: An alarm occurs when the volume exceeds the set threshold. 		
Difference/Threshold	 Drag the slider to adjust the difference and threshold. The difference between two sound volumes. An alarm occurs when the rise or fall of volume exceeds the difference (range: 0-400). This item is applicable when the detection type is Sudden Rise, Sudden Fall, or Sudden Change. 		
	 Threshold: The limit value of volume. An alarm occurs when the detected volume exceeds the set value (range: 0-400). This item is applicable when the detection type is Threshold. 		

5. Click Apply.

10.10 Buzzer

Configure the alarm duration of the buzzer on the NVR.

1. Go to Menu > Alarm > Buzzer.

Buzzer			
	Alarm Duration	O Maximum	O Custom
	Custom Duration(sec)	1	
_			
	Apply Exit		

- 2. Set the alarm duration. The default is 30s.
 - Maximum: When enabled, you cannot set the alarm duration. When an alarm occurs, the buzzer will alarm continuously until the alarm ends.
 - Custom: When enabled, you can set how long the buzzer will alarm after it is triggered. The valid range is from 1 to 600(s). When an alarm occurs, the buzzer will alarm continuously within the alarm duration, and stop automatically if the alarm ends first within the duration.

Note: To stop a buzzer alarm manually, right-click in the preview window, select Manual > Buzzer. See Buzzer for details.

3. Click Apply.

10.11 People Present Alarm

An alarm occurs when the number of people present in a specified area exceeds the set threshold.

Note: To use this function, make sure that people flow counting is supported by the camera and is enabled in the VCA page. See People Flow Counting for details.

Configure People Present Alarm

1. Go to Menu > Alarm > People Present Alarm.

People Present Alarm	
Select Camera	D58 ~
Trigger Actions	Ø
Arming Schedule	Ø
Enable	
People Present Alarm Threshold	100
Note: To use this function, please e camera and is enabled in the VCA	nsure that people flow counting is supported by the page.
Apply Exit	

- 2. Select the desired camera, and click **Enable**.
- 3. Set the alarm-triggered actions and arming schedule. Click the corresponding to go to the **Trigger Actions** page and **Arming Schedule** page respectively. See Alarm-triggered Actions and Arming Schedule for details.
- 4. Set the people present alarm threshold, which is the maximum number of people allowed in the monitored area. An alarm occurs when the number of people present exceeds the threshold. The valid range is from 1 to 100,000.
- 5. Click Apply.

View Data

In the preview page, select **People Flow Counting** from the drop-down list in the upper right corner, then you can view the number of people entered, left, and present.



10.12 One-Key Disarming

Cancel alarm-triggered actions of NVRs or IPCs with one click.

NVR Disarming

1. Go to Menu > Alarm > One-Key Disarming > NVR Disarming.

NVR Disarming IPC Disarming		
Disarming Mode	Off Disarm by Schedule Disarm Once	۵ ۵
Apply Exit		

- 2. Select a disarming mode and configure parameters.
 - Off: Disarming is disabled on the NVR.
 - Disarm by Schedule: The NVR is disarmed during specific time periods per week.

Disarming Mode	Ooff			
	Disarm by Schedule	Ø		
	⊖ Disarm Once			
Disarm	🖂 AII			
	🗹 Buzzer	🗹 Send Email	🗹 Pop-up Window	Preview

(1) Click oright to **Disarm by Schedule**, and set the disarming periods. Click **OK** to return to the **NVR Disarming** page.

Note:

- Up to 4 disarming periods during one day are allowed.
- To apply the same disarming schedule to other days, select **All** or the intended day(s), and click **OK**.

(2) Select actions to be disarmed. The default is all actions. See Alarm-triggered Actions for details.

• Disarm Once: The NVR is disarmed during a specified time period.

Disarming Mode	Ooff				
	\bigcirc Disarm by Schedule	Ø			
	💿 Disarm Once				
Disarming Time	2022-08-10 18:48:53	~ 1	o 2022-08-11 02:48:53		
Disarm	🖂 Ali				
	🖌 Buzzer	🖌 Send Email	🗹 Pop-up Windo	ow 🗹 Previe	N

(1) Select **Disarm Once**, and set the disarming start time and end time.

(2) Select actions to be disarmed. The default is all actions. See Alarm-triggered Actions for details.

3. Click Apply.

IPC Disarming

1. Go to Menu > Alarm > One-Key Disarming > IPC Disarming.

NVR Disarming IPC I	Disarming		
Select Came	ra D2		
Disarming M	ode 💿 Off		
	⊖ Disa	rm by Schedule	
	⊖ Disa	irm Once	
Сору		Exit	

- 2. Select the desired camera.
- 3. Select a disarming mode and configure parameters.
 - Off: Disarming is disabled on the IPC.
 - Disarm by Schedule: The IPC is disarmed during specific time periods per week.

Select Camera	D2	
Disarming Mode	Ooff	
	回 Disarm by Schedule	\bigcirc
	⊖ Disarm Once	

Click i right to **Disarm by Schedule**, and set the disarming periods. Click **OK** to return to the **IPC Disarming** page.

Note:

- Up to 4 disarming periods during one day are allowed.
- To apply the same disarming schedule to other days, select All or the intended day(s), and click OK.
- Disarming by schedule will cancel all the actions configured on the IPC's web interface by default. You can modify the settings on the IPC's web interface.
- Disarm Once: The IPC is disarmed during a specified time period. Select **Disarm Once**, and set the disarming start time and end time.

D2						
Ooff						
O Disarm by Schedule	$\langle \hat{O} \rangle$					
💿 Disarm Once						
2022-08-10 18:49:41			То	2022-08-11 02:49:41		
	O Off O Disarm by Schedule Disarm Once	O Off O Disarm by Schedule () Disarm Once	O Off O Disarm by Schedule () Disarm Once	O Off O Disarm by Schedule Disarm Once	O Off O Disarm by Schedule () Disarm Once	O Off O Disarm by Schedule () Disarm Once

- 4. (Optional) To apply the same settings to other cameras, click **Copy** and select the desired camera(s).
- 5. Click Apply.

10.13 Manual Alarm

Trigger or clear an alarm output manually.

Note: Manual alarm has the highest priority.

Manual Alarm

1. Right-click and select Manual > Manual Alarm.

		Manual			
	Manual Alarm				
Select			Tri	gger	
□ A->1			Ø	Yes	
🔲 A- > 2			•	No	
🗖 A->3			•	No	
A->4			•	No	
🗖 A- > 5			•	No	
A->6			•	No	
🗖 A- > 7			•	No	
A->8			•	No	
C D 1 1			-		
		Trigger	Clear		Exit

- 2. Trigger or clear alarm(s) manually.
 - Trigger: Select the channel(s) to be triggered and click **Trigger**, and then 💽 changes to 🧔.
 - Clear: Select the channel(s) to be cleared and click **Clear**, and then 💽 changes to 💽.

Buzzer

1. Right-click and select Manual > Buzzer.

			Manual			
Manual Recording		Buzzer				
		002201				
Device Name				De	vice Status	
🗌 Buzzer				•	Stop	
				Stop		Exit
				Stop		Exit

2. To stop the buzzer, select the buzzer (in Started status) and then click **Stop**.

<u>11 System Maintenance</u>

View system operation status to ensure stable system operation.

11.1 System Info

View the basic information and operation status of the device.

11.1.1 Basic Info

View the basic information of the device, including NVR model, firmware version, build date, etc.

1. Go to Menu > Maintenance > System Info > Basic Info. View the basic information of the device.

Model Medie Serial No. Secient Sector Immare Version Medie Build Date 2022-08-12 Operation Time Obs/s) 3 Hour(s) 53 Minute(s) Stan the QR code to dowl and install the app, and use the app to scan the code again to add the device Image: Sector S	asic Info Camera Recording Basic Info	Online User Disk Slot Status
Firmware Version Value Build Date 2022-08-12 Operation Time 0 Day(s) 3 Hour(s) 53 Minute(s) Scan the QR code to download and install the app, and use the app to scan the code again to add the device Image: Code to download and install the app, and use the app to scan the code again to add the device	Model	MARKADA 2568
Build Date 2022-08-12 Operation Time 0 Day(s) 3 Hour(s) 53 Minute(s) Scan the QR code to download and install the app, and use the app to scan the code again to add the device	Serial No.	2102/04/CINWESCERCOURS4
Operation Time 0 Day(s) 3 Hour(s) 53 Minute(s) Scan the QR code to download and install the app, and use the app to scan the code again to add the device Image: Comparison of the transmission of the transmission of the transmission of the transmission of	Firmware Version	WYN WINDL DUW DUWLD
Scan the QR code to download and install the app, and use the app to scan the code again to add the device	Build Date	2022-08-12
	Operation Time	0 Day(s) 3 Hour(s) 53 Minute(s)
	Ext	

Parameter	Description
Model	NVR model.
Product Configuration	Product configuration, which can be the maximum number of channels or product series, for example, 128 means up to 128 cameras can be connected; 8-X means X Series and can connect up to 8 cameras.
Serial No.	Serial number.
Firmware Version	Firmware version of the NVR.
Build Date	Release date of the current firmware version.
Operation Time	Length of time the NVR has been operating since the latest startup.

2. Scan the QR code to download the app and manage the NVR on a mobile phone.

11.1.2 Camera Status

View camera status information.

Go to **Menu** > **Maintenance** > **System Info** > **Camera**. View camera information including name, online/offline status, event type and status.

Info Cam	era Recording Online User	Disk Slot Status				
Camera	ID Camera Name	Status	Motior	Tampering	Video Loss	Audio
D1	D016M2250	Online	Trigge	red Off	On	Off
D2	400W	Online	On	Off	On	Off
D3	N5	Online	Trigge	red Off	On	Off
D4	N3	Online	Trigge	red Off	On	Off
D5	2.241	Online	Trigge	red Off	On	Off
D6	247	Online	Trigge	red Off	On	Off
D7	N5(2.5)	Online	Trigge	red Off	On	Off
D8	N5SMD	Online	Trigge	red Off	On	Off
D9	N5(2.7)	Online	On	Off	On	Off
D10	N5(2.9)	Online	On	Off	On	Off
D11	D1822247	Online	Trigge	red Off	On	Off
D12	N5(2.11)	Online	On	Off	On	Off

11.1.3 Recording Status

View the recording status and encoding parameters of the connected cameras.

Go to **Menu** > **Maintenance** > **System Info** > **Recording**. View recording information including recording type, recording status, diagnosis, and encoding parameters.

asic Int		Recording Online Use							
	Camera ID	Camera Name	Туре	Status	Diagnosis	Stream Type	Frame Rat	. Bit Rate(K	Resolution
	D1	D016M2250	Event	Ongoing	Normal	Main and Third	30	2006	1920X1080
	D2	400W	Normal	Ongoing	Normal	Main and Sub S	30	3769	1920X1080
	D3	N5(2.50)	Event	Ongoing	Normal	Main and Third	30	1710	1920X1080
	D4	N3	Event	Ongoing	Normal	Main and Third	12	2030	2880X1620
	D5	2.241	Event	Ongoing	Normal	Main and Third	25	4211	2880X1620
	D6	247	Event	Ongoing	Normal	Main and Third	30	1522	1920X1080
	D7	N5(2.5)	Event	Ongoing	Normal	Main and Third	30	649	1920X1080
	D8	N5SMD	Event	Ongoing	Normal	Main and Third	25	4056	2880X1620
	D9	N5(2.7)	Normal	Ongoing	Normal	Main and Sub S	20	2462	2304X1296
	D10	N5(2.9)	Normal	Ongoing	Normal	Main and Third	30	243	1920X1080
	D11	D1822247	Event	Ongoing	Normal	Main and Third	30	2678	1920X1080
	D12	N5(2.11)	Normal	Ongoing	Normal	Main and Third	30	2010	1920X1080

Exit

11.1.4 Online User

View the logged-in users, and force non-admin users to log out of the NVR when necessary.

1. Go to Menu > Maintenance > System Info > Online User.

No.UsernameIP AddressLogin Time1admin127.0.12022-08-15 16:18:192admin202.5.1.382022-08-15 16:18:00	asic Info Came
1 admin 127.0.0.1 2022-08-15 16:18:19	
	□ No.
2 admin 202.5.1.38 2022-08-15 16:18:00	
Logout Exit	Logout

2. Choose a non-admin user and then click **Logout**.

Note: Only admin can manage user permissions.

11.1.5 HDD Status

View the status and property of HDDs on the NVR.

Go to **Menu** > **Maintenance** > **System Info** > **Disk**. View hard disk information including the total capacity, free space, status, manufacturer, and property.

ic Info Ca	mera Recording O	nline User Slot Status			
HDD	No. Total(GB)	Free(GB)	Status	Manufacturer	Property
1	7431.79	7284.25	Normal	SEAGATE	Read/Write
	7431.79	7293.00	Normal	SEAGATE	Read/Write
	7431.79	7412.75	Normal	SEAGATE	Read/Write
4	7431.79	7412.25	Normal	SEAGATE	Read/Write
	7431.79	7413.75	Normal	SEAGATE	Read/Write
	7431.79	7411.25	Normal	SEAGATE	Read/Write
	7431.79	7412.75	Normal	SEAGATE	Read/Write
8	7431.79	7407.75	Normal	SEAGATE	Read/Write
	3705.77	3700.50	Normal	SEAGATE	Read/Write
10	3705.77	3701.75	Normal	TOSHIBA	Read/Write
11	3705.77	3704.00	Normal	SEAGATE	Read/Write
12	3705.77	3703.50	Normal	SEAGATE	Read/Write
Total	Capacity(GB) 5	53983.90			
Free	Space(GB) 5	43602.00			
Exit					

11.1.6 Decoding Card Status

View decoding card status. Only certain NVRs support this function.

Go to **Menu** > **Maintenance** > **System Info** > **Slot Status**. View the slot type, number of video outputs, and video output status.

Basic Info	Camera Recording	Online User I	Disk Slot Status			
No.	s	lot		Video Output	Status	
1		ocal			Normal	
Exit						

11.2 Network Information

View network information including network traffic, network latency, packet loss rate, and network status.

11.2.1 Network Traffic

View network interface card (NIC) information including connection status, physical address, MTU, NIC type, and real-time traffic.



1. Go to Menu > Maintenance > Network Info > Network Traffic.

2. Choose an NIC to view the real-time network traffic.

11.2.2 Packet Capture

- Capture, view, and save network packets for network security and troubleshooting.
- 1. Go to Menu > Maintenance > Network Info > Packet Capture.

Network	Traffic Packet Capture						
	Partition Select Port				Refresh		
			○ Specify	○ Filter			
	Select IP	AII	O Specify	○ Filter			
	Packet Size(Bytes)	8192					
	NIC1		IPAddr		PacketBackup	Open	
	NIC1		206.2.2.62		<u>ئ</u>		
	NIC2		192.168.2.30				
	NIC3		192.168.1.102				
	Exit						

- 2. Choose a partition to save the captured packets.
- 3. Specify ports and IPs.
 - All: Capture packets of all the ports and IPs connected to the device.
 - Specify: Capture packets of the specified ports and IPs.
 - Filter: Capture packets except that of the specified ports and IPs.
- 4. Set the packet size. The default is 8192 Bytes, and the range is [0-8192].
- ^{5.} Click for the NIC to start capturing packets.

Note: A progress bar appears. To cancel the task, click Cancel.

6. View the captured data.

When the task is completed, the captured data are saved to the root directory of the USB storage device, and the **Backup** page appears, showing the file containing the captured packets. You may also click **Open** to open the **Backup** page.

	Ba	ickup					
Partition Location	USB-sdz4	USB-sdz4 ~					
	, Size	Туре	Modify Time	Delete			
🛅 Previous Level		dir	2022-08-15 12:25:50				
🚞 backup		dir	2022-08-11 14:56:47	莭			
🚞 CaptureReport		dir	2022-07-26 20:09:20	<u>ش</u>			
i eth0_20220815_163632.pcap	100.1MB	file	2022-08-15 16:36:34				
Free Total	59821MB 59999MB						
New Folder			Format	Cancel			

- Note:
 - The device cannot capture packets if a capturing task is already started on the Web client.
 - The file containing the captured packets is named in this format: *NIC_YYYYMMDD_hhmmss.*pcap, for example, eth0_20220815_163632.pcap.
 - When PPPoE dial-up succeeded, a virtual NIC appears in the NIC list. You can also capture packets of the NIC.

11.2.3 Network Check

Monitor the network traffic, network latency, packet loss rate, etc.

Configure Network Check

- 1. Go to Menu > Maintenance > Network Info > Network Check.
- 2. Select the Select Channel checkbox, select the channel(s) you want to monitor. Up to 5 channels are allowed.
- 3. Select the **Test Address** checkbox, and then enter the address you want to test. You may enter an IP address or a domain name. Up to 2 IP addresses (separated with a semicolon) are allowed.
- 4. Choose the test duration. The system will test the network status during this time. Options are 30s (default), 1 min, 5 min, 10 min, 30 min, and 1 hour.
- 5. Set the size of test packets. The default is 1500 Bytes. The range is [64-4000]. Set according to the actual network condition.

Select Channel	D1(D016M2250),D2(400W-(2.41))					
🔄 Test Address	206.2.2.250		•			
Test Duration	30s	*				
Test Packet Size(Bytes)	1500					
Test Result						
Currently Displayed						
Chart	Packet Loss Rate	O Network Latency				

6. Click Test to test the packet loss rate and network latency.

View Test Results

If the test is successful, the system saves test data and shows the packet loss rate and network latency. If the test failed, the test result shows "The destination is unreachable".

- Note: If you click **Stop Test** before the test is completed, the system will save the existing test data and show the test result.
- 1. You can click the **Currently Displayed** drop-down list to choose the channel or address to be tested.
- 2. Click Packet Loss Rate or Network Latency to view the test result.
 - Packet loss rate

O Network Latency

Network latency

Currently Displayed		D1(D0)	16M2250)		×	
Chart	O Pack	Packet Loss Rate O Network				
ms						
					- + A	
·						

Export Test Results

- 1. Click Export. The Backup page appears.
- 2. Choose the destination path, click **Backup** to export test results to the external storage device.
- 3. The exported file is a **.tgz** package, including ping logs of all the test objects and one summary file. See the examples below.
 - Exported files
 - ping_206.2.2.140.log
 ping_206.2.2.100.log
 ping_206.2.2.67.log
 ping_206.2.2.21.log
 ping_206.2.2.9.log
 ping_206.2.2.7.log
 ping_206.2.2.5.log
 ping_206.2.2.5.log
 - Exported report

	Å	В	С	D	E	F	G	H	I	J	K	L	M	N	0	P	
1	Test Item No.	Section 1	Section	2Section :	Section	Section	Section	(Section 7	Section 8	Section	Section	1Section	1Section	1Section	1Section	1Section	1Se
	Chl 1.	LossPkt: 0 ;Av															
	Chl 2.	LossPkt: 0 ;Av	/LossPkt:	LossPkt:	LossPkt:	LossPkt:	LossPkt:	0 ;AvgRt1	: 1.19980	00 ms;Tim	eNow: 20	22-08-17	13:57:10				
	Chl 3.	LossPkt: 0 ;Av															
	Chl 4.	LossPkt: 0 ;Av	/LossPkt:	LossPkt:	LossPkt:	LossPkt:	LossPkt:	0 ;AvgRt1	: 0.71680	00 ms;Tim	eNow: 20	22-08-17	13:57:10				
6	Chl 5.	LossPkt: 0 ;Av															
7	206.2.2.21.	LossPkt: 0 ;Av	/LossPkt:	LossPkt:	LossPkt:	LossPkt:	LossPkt:	0 ;AvgRt1	: 1.00920	00 ms;Tim	eNow: 20	22-08-17	13:57:10				
8	206.2.2.67.	LossPkt: 0 ;Av	/LossPkt:	LossPkt:	LossPkt:	LossPkt:	LossPkt:	0 ;AvgRtt	: 1.22300	0 ms;Tim	eNow: 20	22-08-17	13:57:10				
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
4	ping	+								÷ •							Þ

11.2.4 Network Status

View network parameters of an NIC.

Go to Menu > Maintenance > Network Info > Network. Choose an NIC to view its network parameters.

Network Traffic Packet Capture	Network Check Network Network Statistics
Select NIC	NIC1 ~
IPv4 Obtainment Mode	Static
IPv4 Address	206.2.2.62
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	206.2.2.1
IPv6 Obtainment Mode	Router Advertisement
IPv6 Address	fe80::6ef1:7eff:fe85:6ef2
IPv6 Prefix Length	64
IPv6 Default Gateway	:
Preferred DNS Server	206.10.5.39
Alternate DNS Server	8.8.4.4
Default Route	NIC1
Enable PPPoE	Off
PPPoE Address	0.0.0
PPPoE Subnet Mask	0.0.0
PPPoE Default Gateway	0.0.0
Exit	

11.2.5 Network Resource Statistics

View bandwidth usage.

Go to Menu > Maintenance > Network Info > Network Statistics. Bandwidth usage is displayed.

Network Tra	affic Packet Capture	Network Check Net	work	Network Statistics
T	ype	Bandwidth		
	? Camera	360Mbps		
	emote Live View	2048Kbps		
Re	emote Playback	Obps		
Id	lle Receive Bandwidth	408Mbps		
Id	lle Send Bandwidth	766Mbps		
Ex	liit			

Note:

- When idle receive bandwidth is low, cameras cannot get online.
- When idle send bandwidth is low, live view, playback, and recording download will fail.

11.2.6 PoE and Network Port Status

View connection status of PoE ports or network ports. This function is applicable to NVRs with PoE ports or network ports.

Go to **Menu** > **Maintenance** > **Network Info** > **PoE Port Status** or **Network Port Status**. The port connection status is displayed. Blue means the port is in use. For PoE device, you may also view power information.

11.3 Log Search

Logs contain information about user operation and device status. You can use logs to keep track of device operation status and view detailed alarm information.

Log Search

1. Go to Menu > Maintenance > Log.

og						
Log	2022-08-15 00:00:00					
End Time	2022-08-15 23:59:59					
Main Type	Operation					
Sub Type	All Types					
Username	Operation Time	Camera ID	Play	Main Type	Sub Type	Details
admin	2022-08-15 16:53:30	D111	۲	Operation	Playback/Download	
admin	2022-08-15 16:52:33			Operation	Quick Search IP Camera	
admin	2022-08-15 16:52:33			Operation	Login	
admin	2022-08-15 16:50:01			Operation	Logout	
admin	2022-08-15 16:43:05			Operation	Start Network Test	
admin	2022-08-15 16:41:26			Operation	Start Network Test	
admin	2022-08-15 16:33:55			Operation	Quick Search IP Camera	
admin	2022-08-15 16:33:55			Operation	Login	
Search	og Backup Exit					→
et the start time.	end time, main type	and sub tv	pe.			
lick Search.	-,, -, -, -, -, -, -, -, -, -, -, -,	•	-			
lick 📑 to view lo	og details.					
		Lo	g Deta	nils		

	Log Details					
Username	admin					
Operation Time	2022-08-15 16:53:30					
IP	127.0.0.1					
Camera ID	D111					
Туре	OperationPlayback/Download					
Description:						
N/A						
	Exit Exit					
ayback						

Click ot view the video recorded at the current log time.

Playback

×



Note:

- This feature is not available to certain log types.
- The video is 11 minutes long (1m before and 10m after alarm).

Log Backup

Click **Backup**. The **Backup** page appears. Choose the destination path, click **Backup** to save the logs to the external storage device.

11.4 System Backup

Back up system configuration and device diagnosis information.

11.4.1 System Backup

Import, export, and delete system configurations. Go to Menu > Maintenance > Backup > System Backup.

		-		
ystem Backup Diagnosis Info				
Partition	USB-sdz4			∽ Refresh
Location				
Location				
Name	Size	Туре	Modify Time	Delete
📩 Previous Level		dir	2022-08-15 12:25:50	—
🚞 backup		dir	2022-08-11 14:56:47	
🚞 CaptureReport		dir	2022-07-26 20:09:20	μ.
📑 eth0_20220815_163632.pcap	100.1MB	file	2022-08-15 16:36:34	
Free	59821MB			
Total	59999MB			
New Folder Import Configurat Exp	ort Exi	t		

Perform the following operations as needed:

- Import configurations: Choose the *.xml file in the directory list, click **Import Configuration**, and then confirm to import the configuration file.
- Export configurations: Choose the destination in the directory list, click **Export Configuration**. Then a *.xml file containing the exported configurations is generated in the specified folder later.

Note:

- Caution: The device will restart after you import configurations. If power is disconnected during the process, the system will be unusable.
- Only admin can import or export configurations.
- Delete: Choose the folder or file to be deleted, click 📊 means the folder or file cannot be deleted.

Note: Caution: Deleted files cannot be recovered.

- Create folder: Choose the destination path in the directory list, click **New Folder**, enter a folder name to create the folder.
- Refresh: Click the **Refresh** button to refresh the list.

11.4.2 Diagnosis Info

View and back up diagnosis information of the NVR and the connected cameras. The NVR keeps 14 days of diagnosis information and overwrites the earliest when the storage is full.

Go to Menu > Maintenance > Backup > Diagnosis Info.

NVR Diagnosis Info

1. Choose NVR as the device type.

	Backup Diagnosis	Info					
	Device Type Current Diagnosis		NVR Export	Oipc			
	□No.		Diagnosis Info g_20220814235900.t		File Size 3645KB	Modify Time 2022-08-15 00:00:00	
	2	NVR_Lo	g_20220813235900.t	gz	3442KB	2022-08-14 00:00:00	
	3	NVR_Lo	g_20220812235900.t	gz	2997KB	2022-08-13 00:00:00	
	4	NVR_Lo	g_20220811235900.t	gz	2369KB	2022-08-12 00:00:00	
	5	NVR_Lo	g_20220810235900.t	gz	3434KB	2022-08-11 00:00:00	
	6	NVR_Lo	g_20220809235900.t	gz	4932KB	2022-08-09 22:00:00	
	07	NVR_Lo	g_20220808235900.t	gz	4608KB	2022-08-08 22:00:00	
	8	NVR_Lo	g_20220807235900.t	gz	4658KB	2022-08-08 00:00:00	
	9	NVR_Lo	g_20220806235900.t	gz	4509KB	2022-08-07 00:00:00	
	10	NVR_Lo	g_20220805235900.t	gz	4380KB	2022-08-06 00:00:00	
	11	NVR_Lo	g_20220804235900.t	gz	4147KB	2022-08-05 00:00:00	
E	Backup	Exit					

- 2. Export NVR diagnosis information.
 - Current Diagnosis Info: Diagnosis information since the latest startup. Click **Export** to export diagnosis information to the external storage device.
 - History Diagnosis Info: All the history diagnosis information in the list. Select the desired item(s), click **Backup**. On the **Backup** page, choose the destination path, click **Backup**.

Camera Diagnosis Info

1. Choose **IPC** as the device type.
| ystem Backup Diagnosis | Info | | | | |
|------------------------------|--------------------------|---------|-----------|---------------------|--|
| Device Type
Select Camera | O NVR
D1 | ● IPC | | | |
| Current Diagnosis | | | | | |
| | History Diagnosis Info | | File Size | Modify Time | |
| | IPC_Log_Chl1_20220814235 | | 1412KB | 2022-08-15 00:05:00 | |
| 2 | IPC_Log_Chl1_20220813235 | 900.tgz | 1417KB | 2022-08-14 00:05:00 | |
| 3 | IPC_Log_Chl1_20220812235 | 900.tgz | 1463KB | 2022-08-13 00:05:00 | |
| | | | | | |
| | | | | | |
| Backup | Exit | | | | |

- 2. Choose the desired camera from the list.
- 3. Export diagnosis information of the selected camera.
 - Current Diagnosis Info: Diagnosis information since the latest startup. Click **Export** to export diagnosis information to the external storage device.
 - History Diagnosis Info: All the history diagnosis information in the list. Select the desired item(s), click **Backup**. On the **Backup** page, choose the destination path, click **Backup**.

11.5 Restore System

Restore default system settings.

1. Go to Menu > Maintenance > Restore.

Default	Restore all factory default settings except network and user settings.
Factory Default	Restore all factory default settings

- 2. Choose **Default** or **Factory Default** as needed. A message appears. The NVR will restart and restore the default settings after you confirm. Choose a method according to your actual needs:
 - Restore: Restore default settings except network settings, user settings, and time settings.
 - Factory Default: Restore all default settings.

Note: Either option will not delete the recorded videos and operation logs.

11.6 Auto-Function

The device can restart or delete files automatically at the preset time. Only admin can perform this operation.

1. Go to Menu > Maintenance > Auto-Function.

Auto-Function		
Auto-Restart System	Never ~	
Auto-Delete File(s)	Never ~	day(s) ago
Note: Auto-Delete File(s) automatically deletes rec	ordings and images saved on hard disk	
12 Martin Carlos de Carlos de Carlos de Carlos de Carlos de Carlos de Carlos de Carlos de Carlos de Carlos de C		
Apply Exit		

- 2. Configure the parameters.
 - Auto-Restart System: The system restarts automatically at the set time.
 - Auto-Delete File(s): The system automatically deletes videos and images saved on the hard disk. Range: 1-240.
- 3. Click Apply.

11.7 System Upgrade

Upgrade the firmware of the NVR and the connected cameras.

Two upgrade methods are available. The device will restart after the upgrade is completed.

- Cloud upgrade: Upgrade through the cloud server.
- Local upgrade: Upgrade using the upgrade files saved in a USB storage device.

Note:

- Make sure the device is always connected to power and network during the upgrade. Use an Uninterrupted Power Supplies (UPS) if necessary.
- Before you start a cloud upgrade, make sure the DNS server is functional. Go to Menu > Network > Basic
 > Network. See Network Configuration for detailed information.
- The cloud upgrade speed is limited by the network transmission speed.

11.7.1 NVR Upgrade

Upgrade the firmware of the NVR.

1. Go to Menu > Maintenance > Upgrade > NVR Upgrade.

NVR Upgi							
	Disk Type Current Version			Cloud Upgrade	O Local Upgrade		
	Latest Version Build Date						
	build bute						
	ograde	heck for Update	Exit				

- 2. Choose Cloud Upgrade or Local Upgrade.
 - Cloud Upgrade
 - Click **Check for Update**. The system checks for updates.
 - If updates are available, the new version number and its build date are displayed. Click **Upgrade** to start.
 - If no updates are available, the system indicates that the current version is already the latest.
 - Local Upgrade

Select the upgrade file in the USB storage device, click **Upgrade** to start.

Note: If the upgrade failed, the failure cause will be displayed, and the device will restart automatically. Fix the problem and then try again.

NVR Upg	rade IPC Upgrade				
	Disk Type	○ Cloud Upgrade		Local Upgrade	
	Partition	USB-sdz4			Refresh
	Location				
	Name	Size	Туре	Modify Time	Delete
	🖄 Previous Level		dir	2022-08-15 12:25:50	
	🚞 backup			2022-08-11 14:56:47	
	🚞 CaptureReport		dir	2022-07-26 20:09:20	İ
	📄 eth0_20220815_163632.pcap	100.1MB	file	2022-08-15 16:36:34	1 III IIII IIII IIII IIII IIII IIII II
	Upgrade Exit				

11.7.2 IPC Upgrade

Upgrade the firmware of the IPC. This function is only applicable to cameras connected via the Private protocol. 1. Go to Menu > Maintenance > Upgrade > IPC Upgrade.

	ID Camera Name	Model	Firmware Version	Cloud Up	Loca
D1	D016M2250	HICTHELIGH HA VA	QFFC-#1208.9-18.211122	ŵ	u£
D2	400W	IPCIADELE-EXEMPTYC	QIPC-82301 12.8.128719		
_ D3	N5(2.50)	IPC-8612-36(0.1-832-F	H0499-R0308-11.03.011032		
🗖 D4		IPODSI-IW-AXSUNIC-DT	GIPC-BROKE & RUESOFS2		
D5	2.241	IP02058-INV-AUP0740-8-DT	GIPC-INCIDE S IN 1211139		
D6	247	IPC-taild-trap Petu-05	CPC-819915.31.201123		
D7	N5(2.5)	1PC-1862-IR400P-IR3-M38-F	IFC, QUIOL-RECOTFICTURE2		
D8	N5SMD	IPC-6315-848PMDK-983-F40.	. GIPC BERGER 3.178794		
D9	N5(2.7)	IPCHOLER-IPOR-A1	DIPC-81223.1.81.236402		
D10	N5(2.9)	1PC-1062-IR(800P-IR)-M08-F	IPC.01201-85807P3003812		
D11	D1822247	HECHILDH-CONVELUET-A	QIPC REDOL IN 16 200105		
D12	N5(2.11)	INCLUMENTAL OUR PERIO	GIPC 88361 28 36 200809		
ote: Befor	e upgrading a camera,	make sure the disk is in normal s	tatus; before upgrading by cloud, please chec	k if update is available	

- 2. Choose Cloud Upgrade or Local Upgrade.
 - Cloud Upgrade
 - Click **Check for Update**. The system checks for updates.
 - If updates are available, the new version number and its build date are displayed. Click sto upgrade a camera, or select multiple cameras and then click **Upgrade** to upgrade in batches.
 - If no updates are available, the system indicates that the current version is already the latest.
 - Local Upgrade
 - (1) Click in to upgrade a camera, or select multiple cameras and then click Local Upgrade.

		Upgrade C	amera	
Partition	USB-sdz	4		~ Refresh
Location				
Name	Size	Type	Modify Time	Delete
🛅 Previous Level		dir	2022-08-15 12:25:50	
🚞 backup		dir	2022-08-11 14:56:47	
🚞 CaptureReport		dir	2022-07-26 20:09:20	
📑 eth0_20220815_163632.pcap	100.1MB	file	2022-08-15 16:36:34	
			U	pgrade Back

(2) On the **Upgrade Camera** page, select the upgrade file in the USB storage device, and then click **Upgrade**.

11.8 HDD Check

Perform S.M.A.R.T. test and bad sector detection. The actual functions available may vary with device.

11.8.1 Run S.M.A.R.T. Test

S.M.A.R.T. tests the hard disk including its head, platter, motor, circuit, etc. and evaluates the disk health status.

1. Go to Menu > Maintenance > HDD > S.M.A.R.T. Test.

			Mai	ntenance						
S.M.A.F	R.T. Te									
] Conti	inue to use the disk	when it fails to pass evalu	uation.						
2	Select	Disk	Slot1							
٦	Test Ty	ype	Short							
I	Test St	tatus	Not tested		Disk Ter	nperature(°C)	38			
١	Manuf	acturer	SEAGATE		Operatio	on Time(day)	208			
M	Model		ST8000VX009-2ZP188		Self-Eva	luation	Pass			
F	Firmwa	are Version	CV10		Overall	Evaluation	Healthy			
10	D	Attribute Name		Status	Flag	Threshold	Value	Worst	Raw Value	
1		Raw_Read_Error_R	ate	Healthy	0x000f	6	80	64	104417750	
		Spin_Up_Time		Healthy	0x0003		92	91		
		Start_Stop_Count		Healthy	0×0032	20	100	100	22	
		Reallocated_Secto	r_Count	Healthy	0×0033	10	100	100		
		Seek_Error_Rate		Healthy	0x000f	45	92	60	1431591504	
Star	t Test		Exit							

- 2. (Optional) Select , so the device can continue using the hard disk even if the disk fails in the self-assessment. However, this may incur great risks. Please choose carefully.
- 3. Choose the disk slot and test type.
 - Short: Less test contents, faster speed.
 - Extended: More comprehensive and thorough, longer time.
 - Conveyance: Detects problems in data transmission.
- 4. Click **Start Test**. The **Status** column shows the real-time progress, for example, Testing: 10%. View test results after the test is completed.

The overall evaluation provides three kind of status: Healthy, Failure, Bad Sectors. It is recommended to replace faulty disks immediately. Contact our technical support for more information.

11.8.2 Bad Sector Detection

The device system detects bad sectors in hard disks in a read-only manner.

1. Go to Menu > Maintenance > HDD > Bad Sector Detect.

Run S.M./	A.R.T. Test Bad Sector Dete	ect			
	Select Disk	Slot1 ~			
	Detect Type	Key Area ~			
	bettett type	Key Alea	Disk Capacity	7452.04 GB	
			Block Capacity	4.66 GB	
			Status	Not detected	
			Error Count	0	
			Start Test		
			Start Test		
	Normal	Damaged			
	Exit				

- 2. Choose the disk slot and detection type.
- 3. Click Start Test. To stop the detection, click Stop Test.

Select Disk	Slot1	~			
Detect Type	Key Area				
			Disk Capacity	7452.04 GB	
			Block Capacity	4.66 GB	
			Status	Detection complete	d
			Error Count		
			Start Test		
			0		
Norr	mal Damaged				
	Damaged				

- means the detected area is in good condition.
- means the detected area is damaged. The detection stops automatically when the error count reaches 100.

11.9 One-Click Collection

Collect NVR and camera diagnosis information.

1. Go to Menu > Maintenance > One-Click Collect

One-Click	Collect				
	IPC diagnosis info		All		☑ NVR diagnosis info
	Collect Time		3Days		
	Export	Informa	ation to collect includes NVI	R diagnosis info, IPC	diagnosis info, and operation
	Export	logs.Th	e export may take a long tin	ne if you choose All	
	Exit				

- 2. Choose the camera and select a number of days of diagnosis information to be collected. NVR diagnosis information is always collected.
- 3. Click Export to collect camera diagnosis information, NVR diagnosis info, and operation logs.
 - Note: Choose the days according to the actual requirements. The export process may take a long time if you choose All.

12 Playback

12.1 Instant Playback

Instant playback plays the video recorded during the last 5 minutes.

Make sure that the video is recorded during the last 5 minutes. Instant playback does not work if there's no recording during this time.

In the preview page, select the target window, and click on an elick



Drag the slider on the progress bar to fast forward. Click

on the window toolbar.

Click to exit the playback.

12.2 Normal Playback

Normal playback plays all recordings of the selected camera(s).

- 1. In the preview page, right-click the desired window and select **Playback**. The system plays the video of the selected camera. You can also choose other cameras to play videos in this page.
 - You can choose multiple cameras for synchronous playback.
 - Click Max. Cameras to select the maximum number of cameras allowed. The performance may vary with NVR model.
 - Click Close All to stop playback for all cameras.



2. Double-click the desired date, or select the date and then click to start playback. By default, the system plays the video of the current day.

Note: The calendar uses different flags to indicate different recording types: blue for normal recording, red for event-triggered recording, and no flag for none.

3. The NVR plays HD videos by default. You can switch to SD mode if SD videos are stored. The supported video clarity depends on the storage mode, and HD videos are supported by all the storage mode. To store SD videos, go to Menu > Camera > Encoding to set the storage mode. See Encoding Settings for details.

Note:

- If no images are displayed in the preview page in SD mode, it indicates SD videos are not stored.
- If SD video is available in SD playback mode, SD video is played by default; it switches to HD video automatically when you double-click the window to maximize it in a multi-window layout.

Table 12-1: Playback Toolbar

Button	Description
--------	-------------

00:09:36	Show playback progress.
00:00 02:00 04:00	 Note: Indicates 4 cameras are selected. Indicates the playback progress in the first window. Indicates the playback progress in the second window, and so on. Different colors on the progress bar mean different recording types: blue for normal recording, red for event-triggered recording, green for smart event recording.
00:00 02:00 04:00	Timeline. Image: Note: In normal playback mode, hover over the timeline to view a thumbnail image to quickly pinpoint an event.
24 h 📉 🗎	Zoom in or out on the timeline. Alternatively, click on the timeline and use the scroll wheel to zoom in or out.

Button	Description
	File saved on a USB storage device.
<i></i> ‰	Start/stop clipping video.
	Manage files (clips, snapshots, locked files, tags); 📷 indicates there is a newly saved file.
6	Take a snapshot. The window borders will flash white.
₩ 30s ~	Rewind/forward 30s, or choose from the drop-down list.
Δ	Reverse.
	Stop playback and return to the start point.
\bigcirc (II)	Play/pause.
	Slow down/speed up.
	 Note: Click >>>> to restore the normal playback speed after clicking , and vice versa.
	Forward by frame.
HD	Set the video clarity, including HD or SD.
6	Enable/disable POS. When enabled, POS OSD appears on the screen, and some toolbar buttons are deactivated.
	 Note: This function is available for certain NVRs. The button only appears in normal playback mode and POS playback mode. In normal playback mode, POS OSD is displayed for 5s. In POS playback mode, the time is configurable.
X	Full screen.

G	Exit the playback screen.
◎ ♥ A ♥ [△]	Click a playback window to show the window toolbar.
Ó	Take a snapshot.
\bigcirc	Add a tag at the current time point.
A	Digital zoom. See Digital zoom for details.
氏	Turn on/off audio.
0	Adjust the sound volume.

Button	Description
£	Lock.

12.3 Smart Playback

In smart playback mode, the system searches smart events in the recording and adjusts the playback speed accordingly. If smart results are detected such as motions, the video plays at normal speed; otherwise, the video plays at 16x speed to save time.

Note:

- This function is available for cameras that support smart functions.
- By default the system searches motion in video.
- Only one camera can be selected for smart playback.
- 1. In the playback page, select **Smart**.



- 2. Select the desired camera.
- ^{3.} Double-click the date you want to play, or select the date and then click or or to start playback.
- 4. Set smart search rules. The default smart search area is the full screen. To specify a smart search area, follow the steps below.
 - (1) Click 🛞 to go to the Smart page.



(2) Click Click to clear the existing areas, then click and drag on the image to specify an area.

Button	Description	Button	Description
\approx	Motion detection: Full screen.		Clear the specified areas.
Q	Start search smart playback of the specified areas.	¢	Exit the Smart page.
Sensitivity 🛑 🛛	Adjust detection sensitivity.		

Table 12-2: Smart Search Buttons

12.4 Corridor Playback

Corridor playback plays recordings in corridor mode in multiple windows. Up to 3 cameras can be selected in corridor mode.

- 1. In the playback page, select **Corridor**.
- 2. Select the desired cameras you want to play.
- 3. Double-click the desired date, or select the date and then click 💿 to start playback.



12.5 External File Playback

This function allows you to play recordings stored in an external storage devices such as USB drive or portable hard drive.

- 1. In the playback page, click **[1]** on the screen toolbar.
- 2. Click Refresh and then wait for the NVR to read the external storage device.
- ^{3.} Double-click the desired recording file, or select the file and then click \bigcirc or \bigcirc to start playback.



12.6 Tag Playback

Use tags to mark specific events in the video for quick location and playback.

Add Tag

- ^{1.} In the playback page, select the desired camera and date, and click () to start playback.
- 2. Click anywhere on the image, and then select 🚫 in the pop-up toolbar.

	Add Tag	
Tag Time Tag Name	2022-08-15 00:00:28	
	ОК	Cancel

- 3. Enter the tag name. Tag time cannot be edited, which is the time when the tag was added.
- 4. Click **OK** to save the settings.

Tag Management

The added tags are saved to **File Management**. To view the newly added tag, click **main** on the screen toolbar.

To rename a tag, click M. To delete a tag, click

		F	ile Management		
		Tag			
Camera ID	Tag Name		Time	Edit	Delete
D27	2		2022-08-16 00:00:05	Z	Π.
Total: 1 Page::	1/1			« <	$> \gg 1 \rightarrow$
					Cancel

Playback by Tag

1. In the playback page, click Video Retrieval, select Tag Search from the drop-down list in the upper left corner.



2. Select the desired cameras with tags, enter keywords, set the time period, and then click Search.



3. Double-click the tag you want to play, or select the tag and then click or or to start playback.

12.7 Playback by Search

This function allows you to search and play recordings by an event type, such as motion detection, human body detection, alarm input, video loss, VCA, tag, POS, and people present alarm.

Note: Before playback, make sure that the alarm and alarm-triggered storage for the event are enabled.

- 1. In the preview window, right-click and select **Playback**.
- 2. In the playback page, click Video Retrieval, select the type and sub type, and enter keywords.



- 3. Select the desired camera(s) and time period, and then click **Search**.
- 4. Double-click the result you want to play, or select the result and then click or or to start playback.

12.8 File Management

File management allows you to manage video clips, tags, snapshots taken during playback, and lock/unlock files. Video Clip

You may clip and back up videos during playback. See Video Clip Backup for details.

Playback Snapshot

You may take a snapshot during playback and then back up the snapshot. See Playback Snapshot Backup for details.

Locked File

You may lock, unlock, and back up a recording file.

- ^{1.} In the playback page, select the desired camera and date, and click () to start playback.
- 2. Drag the slider to play the desired part of the video, click on the image to display the toolbar, and then select

Locking a recording file will prevent all the files stored in the same disk partition (254.4MB in size) from being overwritten.

- ^{3.} Click an on the screen toolbar to view the locked file in the **Locked File** tab.

 - To back up a file, select the file and then click **Backup**.

		File Mai	nagement			
	ack Snapshot <u>Locked File</u> Ta					
Camera ID	Time		Size	Lock		
D11	2022-08-15 23:52:4600:09:51		254.5MB	A		
						A A A
Total: 1 Page:1/1			« <	1 >		
Space required: 0.	0 MB					
					Paskup	Cancel
					Backup	Cancel

Tag

You may view, edit, or delete tags as needed. See Tag Management for details.

13 Shutdown

This chapter describes device shutdown, logout, and restart.

Shutdown refers to turn off the operating system of the device with power supply connected. Please disconnect the power supply if the device will be shut down for a long time.



- To shut down the NVR, long press the power button on the front panel (if available) for more than 3 seconds till an on-screen message appears, and then click **Yes**.
- To shut down, log out, or restart the NVR, hover the mouse at the bottom of the preview page to display the screen toolbar, click and then select shut down, log out, or restart as needed.

Note: Unsaved settings will be lost if the NVR is shut down unexpectedly, for example, due to a power failure. A shutdown during a system upgrade may cause startup failures.

14 Web-Based Operations

You may access and manage the NVR remotely using a web browser on your PC (through the Web interface).

14.1 Preparation

Check the following before you begin:

- Access will be authenticated during login, and operation permissions will be required.
- The NVR is operating properly and has a network connection to the PC.
- A Web browser is installed on the PC. Chrome 60 or later is recommended. Firefox 60 or later, Microsoft Internet Explorer 10.0 or later, Edge 79 or later are also supported.
- The PC uses an operating system of Windows 7 or later.
- A 32-bit or 64-bit Web browser is required if you are using a 64-bit operating system.

Note:

- The parameters that are grayed out on the Web interface cannot be edited. The parameters and values displayed may vary with NVR model.
- The figures below are for illustration purpose only and may vary with NVR model.

14.2 Login

Follow these steps to log in to the Web interface (take IE10 browser as an example).

- 1. Open a Web browser on your PC, enter the IP address of the NVR in the address bar (**192.168.1.30** by default), and then press Enter.
- 2. Install the plug-in.
 - You need to install the plug-in as prompted at your first login, which is mainly used for processing media streams. Close all the Web browsers when the installation starts. Follow the on-screen instructions to complete the installation and then open the browser again to log in.

Please click here to **Download** and install the latest plug-in. Close your browser before installation.

- You may also find the plug-in manually by entering HTTP://IP address/ActiveX/Setup.exe in the address bar, and press Enter.
- 3. In the login page, enter the default username and password (admin/123456) and then click Login.

	English 🗸
Username	
Password	Forgot Password
	Login Reset

Note: The default password is intended only for your first login. You are strongly recommended to set a strong password to ensure account security.

- Strong password: At least 9 characters including all three elements: letter, special character, and digit.
- Weak password: Less than 9 characters including two or less of the three elements: letter, special character, and digit.

14.3 Live View

The **Live View** page is displayed when you are logged in. Select the desired channel on the left, and view the live video.

		👿 Live View 📖 Playback 🌣 Setup 🎝	Smart	admin Logout Privacy
NVR834-256R				
📄 💽 D1N3	3	H		
🗟 💽 D2	3			
📄 💽 D3				
🗟 💽 D4	3		\sim	
💽 D6	<u>ଟ</u> ଟ ମ	A CALLER AND A CALLER AND AND AND AND AND AND AND AND AND AND		
🗟 💽 D7	ର୍ ଜ			
👞 D8	.∞			
🗟 💽 D9	হা হা			
📄 💽 D10	75			
💽 D11	3			
📄 💽 D12	73			
📄 💽 D13	3			
🗑 D14	3			
💽 D15	3			
		⊞ • ⋽ • 🛱 (0fps) (0bps) (0×0) (0.00%)		∞ ❷ ◙ ≝ ୠ ♦ ୬ ঀ) ♨ ୯ ∷

The operations may vary with NVR model.

Table 14-1: Live View Window Control Buttons

Button	Description	Button	Description
Ē	Two-way audio	± ⊡@/∋ @/ ⊡ @/ ⊡ @/	Main/sub/third stream
	Start/stop live video in all windows	* / *	Previous/next screen
	Switch screen layout		Select stream type

Button	Description	Button	Description
	Enable/disable intelligent mark	[25fps] [2.56Mbps] [1920×1088] [H.264] [0.59%]	Frame rate/bit rate/ resolution/packet loss
ê	Open/close the control panel	Ö	Take a snapshot
	Local recording	F	Digital zoom
$\langle \rangle$	Turn on/off audio		Start/stop two-way audio
Cad	3D positioning	К.Я. 2 У	Full screen
Da	Multi-sensor preview	Q	Fisheye mode

😴 Note:

- right to device name means two-way audio with the NVR. right to channel name means twoway audio with the camera.
- Only the main stream 📆 is displayed when the camera is offline or it supports only one stream.
- Snapshots are saved in a snapshot file folder named with the IP address, and snapshot files are named in *Camera ID_ time* format and saved in this directory: \Snap\IP\Camera ID_time. The time is in YYYYMMDDHHMMSSMS format.
- Local recordings are saved in a recording file folder named with the IP address, and recording files are
 named in *Camera ID_S recording start time_E recording end time* format and saved in this directory:
 \Record\IP\Camera ID_S recording start time_E recording end time. The recording start and end times are
 in YYYYMDDHHMMSSMS format.

14.4 Playback

Click **Playback** to go to the **Playback** page. You can select the playback type, clarity, and camera to view recorded videos.



Table 14-2: Playback Control Buttons

Button	Description	Button	Description
► / II	Play/pause		Stop
	Reverse	*	Slow down/speed up

Button	Description	Button	Description
30 √ ▶	Rewind/forward 30s. You can change the time as needed.	∢I / I►	Rewind/forward by frame
-	Set the display ratio, including full or original	Ø	Take a snapshot
a / a	Start/stop clipping video		Save video clip
+	Enable/disable digital zoom	.	Add a custom tag
<u></u> ≠≠∕	Zoom in/out on the timeline	() —•	Adjust sound volume; turn on/ off sound
< / >	Previous/next period		

14.5 Configuration

Click **Setup** on the top, and set the relevant parameters.

		📮 Live View 📖	Playback 🖕 Setup 🏒 Smart	admin	Logout	Privacy
Client	*	Basic Setup				
System	*					
Basic Setup		Device Name	NVRI			
Preview		Device ID	1			
Time		Device Language	English			
DST		Model				
Holiday		Serial No.	210235C3N8321B000054			
Serial Security		Firmware Version	NVR-#12811.01.11.2302728			
Hot Spare		Build Date	2022-07-29			
POS		Operation Time	0 Day(s) 0 Hour(s) 42 Minute(s)			
Camera	*	Save				
Hard Disk	~					
Alarm	*					
Alert	~					
Network	*					
Platform	*					
User	*					
Maintenance	~					
Upgrade	*					
Backup	*					

14.6 Smart

Click **Smart** on the top, and configure the relevant parameters. See VCA Configuration for details.

	📮 Live View	🖩 Playback 🏟 Setup 🧘	Smart		admin La	ogout Privacy
1 26	VCA Config		Intelligence Usage →			
(A=)	I VCA Config					
\odot	Select Camera D1 *					
Ŕ	Face Recognition					
A	Face Detection	Exace Comparison				
	Camera Side A ONVR Side Analy	Camera Side A ONVR Side Analy				
	Perimeter Protection					
	Cross Line Detection	Intrusion Detection	🗹 💽 Enter Area 🔅	🗹 📴 Leave Area 🗳		
	○ Camera Side A ● NVR Side Analy	○ Camera Side A ● NVR Side Analy	Camera Side A O NVR Side Analy	Camera Side A ONVR Side Analy		
	Exception Detection & Statistics					
	Defocus Detection	Scene Change Detection	Dbject Removed	🗌 🌄 Object Left Behind 🔹		
	Camera Side A ONVR Side Analy	Camera Side A NVR Side Analy	• Camera Side A ONVR Side Analy	Camera Side A NVR Side Analy		
	🗌 🧿 Auto Tracking 🔹 🔅					
	Camera Side A NVR Side Analy					

15 Appendix FAQ

Problem	Possible Cause and Solution	
Forgot the login password.	Click Forgot Password in the login page as admin, then follow the on-screen instructions to retrieve password.	
Cannot load the Web plugin.	 Close your web browsers when the installation starts. Disable the firewall and close the anti-virus program on your PC. Enable your Internet Explorer (IE) to check for newer versions of the stored pages every time you visit the webpage (Tools > Internet Options > General > Settings). Add your NVR's IP address to the trusted sites in your IE (Tools > Internet Options > Security). Add your NVR's IP address to the Compatibility View list in your IE (Tools > Compatibility View Settings). Clear your IE's cache. 	
No images are displayed in live view on the Web interface.	 Check if the bit rate is 0Mbps in the live view window. If yes, check if the firewall/anti-virus program is disabled on your PC. If not, check if the graphics card driver on your PC is working properly. Try installing the driver again. 	
A camera is offline, and No Link is displayed.	 Click Menu > Maintenance > System Info. The cause is displayed under Status. Common causes include disconnected network, incorrect username or password, weak password, and insufficient bandwidth. Check network connection and other configuration. If it indicates incorrect username or password, check that the camera password set in the NVR is the one used to access the camera's Web interface. If it indicates denied access for weak password, log in to the camera's Web interface and set a strong password. If it indicates insufficient bandwidth, delete other online IP devices on the NVR. 	
The NVR displays live video for some cameras and No Resource for others.	 Set the camera to encode the sub stream, and decrease its resolution to D1. Set the NVR to use the sub stream first for live view. 	
A camera goes online and offline repeatedly.	 Check if network connection is stable. Upgrade the software version of the camera and NVR. Contact your dealer for the latest versions. 	
Live view is normal, but the recording cannot be found.	 Check if a recording schedule is properly configured. Check if the time and time zone configured in the NVR are correct. Check if the hard disk storing the recording is damaged. Check if the desired recording has been overwritten. 	
Motion detection is not effective.	 Check that motion detection is enabled, and the motion detection area is properly configured. Check that detection sensitivity is properly set. Check that the arming schedule is properly configured. 	
A hard disk cannot be identified by the NVR.	 Use the power adapter delivered with the NVR. Disconnect the power supply of the NVR, and then mount the hard disk again. Try another disk slot. 	

Problem	Possible Cause and Solution	
	The disk is not compatible with your NVR. Contact your dealer for a list of compatible disk models.	
The mouse does not work.	Use the mouse delivered with your NVR.Make sure no cable is extended.	