

IPNVR/AHDVR ADVANCE SERIES

Please read this manual thoroughly before use and keep it for future reference.



Notes

- Please read this user manual carefully to ensure that you can use the device correctly and safely.
- There may be several technically incorrect items or printing errors in this manual. Updates will be added to the new version of this manual. The contents of this manual are subject to change without notice.
- This device should only be operated from the type of power source indicated on the marking label. The power voltage must be verified before use. Unplug the cables from the power source if the device is not used for a long period of time.
- Do not install this device near any heat sources such as radiators, heat registers, stoves or other devices that produce heat.
- Do not install this device near water. Clean only with a dry cloth.
- Do not block any ventilation openings and make sure there is proper ventilation around the machine.
- Do not power off the device under normal recording conditions.
- This machine is for indoor use only. Do not expose the machine to rain or damp environments. If any solid matter or liquids get inside the machine case, please turn off the device immediately and have it checked by a qualified technician.
- Do not try to repair the device yourself.
- When this product is in use, relevant content from Microsoft, Apple and Google will be involved. The pictures and screenshots in this manual are only provided to illustrate product usage. The trademarks, logos and other intellectual properties relating to Microsoft, Apple and Google remain the property of the above-mentioned companies.
- It is recommended to back up and delete the personal data stored on the device before returning it for repair or replacement, except the data essential for the purposes of repair or replacement. The device will be restored to the default factory settings and all personal data will be deleted after repair or replacement. Our company ensures that the customer's data is not made available to third parties if the device is exchanged.
- This manual applies to many models. All examples and pictures used in the manual are from one of these models for reference purposes.

Disclaimer

- With regard to the product with internet access, product usage shall be wholly at your own risk. Our company accepts no liability for abnormal operation, privacy leakage or other damages resulting from cyber attacks, hacker attacks, viruses or other internet security risks. However, our company will provide technical support if necessary.
- Surveillance laws vary from country to country. Check all laws in your region before using this product for surveillance purposes. We shall not assume responsibility for any consequences resulting from illegal operation.
- The personal data storage period depends on the capacity of the storage devices. Our company shall not be held responsible for data loss.

Cybersecurity recommendations

- Change passwords regularly and use strong passwords. At least 8 characters and a combination of characters, numbers and upper and lower case letters should be used in your password.
- We recommend updating the firmware to the latest version to install the latest security patches and fixes.
- Regularly change the passwords for your devices to ensure that only authorised users can access the system.
- Change default ports (such as HTTP, data port) to reduce risks.
- We recommend setting the firewall for your router. But please note that some important ports cannot be closed (such as 80, 443, 6036).

Table of Contents

1	Introduction.....	1
	1.1 Features	1
	1.2 Front panel descriptions	4
	1.3 Rear panel descriptions	5
	1.4 Connections	8
2	Basic Operating Guide	11
	2.1 Startup & Shutdown	11
	2.1.1 Startup	11
	2.1.2 Shutdown	11
	2.2 Mouse control.....	11
	2.3 Text-input instructions.....	12
	2.4 Operating buttons.....	12
3	Wizard & Main Interface	13
	3.1 Startup Wizard	13
	3.2 Main interface.....	19
	3.2.1 Main interface introduction	19
	3.2.2 Setup panel.....	21
	3.2.3 Main functions	22
4	Camera Management.....	23
	4.1 Add/Edit Camera	23
	4.1.1 Add camera	23
	4.1.2 Edit camera.....	25
	4.2 Add/Edit Camera Group	26
	4.2.1 Add camera group	26
	4.2.2 Edit camera group.....	26
	4.2.3 IP planning	27
5	Live View Introduction	28
	5.1 Live View Interface	28
	5.2 View Mode	29
	5.2.1 Screen mode.....	29
	5.2.2 Quick sequence view	31
	5.2.3 Camera group view in sequence	32
	5.2.4 Scheme view in sequence	33
	5.3 POS Settings.....	34
	5.4 Preview Image Configuration	37
	5.4.1 OSD settings.....	37
	5.4.2 Image settings.....	38
	5.4.3 Privacy Mask settings	38
	5.4.4 Fisheye settings	39
	5.4.5 Audio settings.....	39
	5.4.6 Image adjustment.....	40
6	PTZ.....	42

6.1 PTZ Control Interface	42
6.2 Preset Setting.....	45
6.3 Cruise (Tour) Setting	45
7 Recording & Disk Management.....	47
7.1 Recording Configuration.....	47
7.1.1 Mode configuration.....	47
7.1.2 Advanced configuration	49
7.2 Encode Parameters Setting	49
7.3 Schedule Setting	50
7.3.1 Add schedule	50
7.3.2 Recording schedule configuration	52
7.4 Recording Mode.....	53
7.4.1 Manual recording	53
7.4.2 Scheduled recording	53
7.4.3 Motion-based recording	53
7.4.4 Sensor-based recording.....	53
7.4.5 Analytics-based recording	53
7.5 Disk	53
7.5.1 Disk management	53
7.5.2 Storage mode configuration	56
7.5.3 View Disk Information and S.M.A.R.T. Information.....	57
8 Playback & Backup	58
8.1 Instant Playback.....	58
8.2 Playback Interface Introduction	58
8.3 Smart Playback	62
8.4 Recording Search, Playback & Backup.....	64
8.4.1 Search, Playback & Backup by Time-sliced Image	64
8.4.2 Search, Playback & Backup by Time	66
8.4.3 Search, Playback & Backup by Event	66
8.4.4 Search & Playback by Tag	67
8.4.5 Image Management	68
8.4.6 View Backup status.....	68
8.4.7 Smart Behaviour Search	68
9 Alarm Management	70
9.1 Sensor Alarm.....	70
9.2 Motion Alarm	71
9.2.1 Motion configuration.....	71
9.2.2 Motion Alarm Handling Configuration	72
9.3 Combination Alarm	72
9.4 Smart Event	73
9.4.1 Face Detection.....	73
9.4.2 Face Match	75
9.4.3 Crowd Density Detection.....	76
9.4.4 People Intrusion Detection	78
9.4.5 People Counting.....	80
9.4.6 Object Detection.....	82
9.4.7 Exception	84

9.4.8 Tripwire	85
9.4.9 Intrusion Detection	87
9.5 Exception Alarm	89
9.5.1 IPC Offline Settings	89
9.5.2 Exception Handling Settings	89
9.6 Alarm Event Notification	90
9.6.1 Alarm-out	90
9.6.2 E-mail	91
9.6.3 Display	91
9.6.4 Buzzer	91
9.6.5 Push Message	92
9.6.6 Alarm Server	92
9.7 Manual Alarm	92
9.8 View Alarm Status	92
10 Face Recognition	94
10.1 Face Match View	94
10.2 Target Database Settings	97
10.3 View Statistical Information	99
10.4 Face Smart Search	100
10.4.1 Face Search	100
10.4.2 Image search by Image	101
10.4.3 Track Playback	104
10.4.4 Face Search by Snapshot	106
10.5 Smart Playback by Face Search	107
10.6 Face Attendance	107
10.7 Face Check-In	109
11 Account & Permission Management	111
11.1 Account Management	111
11.1.1 Add User	111
11.1.2 Edit User	112
11.2 User Login & Logout	114
11.3 Permission Management	114
11.3.1 Add Permission Group	114
11.3.2 Edit Permission Group	115
11.4 Black and White List	115
11.5 Preview On Logout	116
11.6 Network Security	116
11.7 Password Security	117
11.8 View Online User	117
12 Device Management	118
12.1 Network Configuration	118
12.1.1 TCP/IP Configuration	118
12.1.2 Port configuration	121
12.1.3 PPPoE configuration	123
12.1.4 DDNS configuration	124
12.1.5 E-mail configuration	124
12.1.6 UPnP Configuration	125

12.1.7 802.1X.....	126
12.1.8 P2P configuration.....	126
12.1.9 FTP Configuration.....	126
12.1.10 Platform Access	127
12.1.11 SNMP	127
12.1.12 View Network Status	128
12.2 Basic Configuration	128
12.2.1 General settings.....	128
12.2.2 Date and Time settings	130
12.2.3 Recorder OSD settings	130
12.3 Factory Default.....	130
12.4 Device Software Upgrade	131
12.5 Backup and Restore.....	131
12.6 Restart Automatically.....	132
12.7 View Log	132
12.8 View System Information.....	133
13 Remote Surveillance	134
13.1 Mobile Client Surveillance	134
13.2 Web LAN access.....	136
13.3 Web WAN access	137
13.4 Web Remote Control.....	138
13.4.1 Remote preview	138
13.4.2 Remote Playback.....	141
13.4.3 Remote Search and Backup	141
13.4.4 Intelligent Analysis.....	142
13.4.5 Remote configuration	142
Appendix A - FAQ	143
Appendix B - Calculate Recording Capacity.....	149
Appendix C - Compatible Device List.....	150
Appendix D – AHDVR Rear Panels	151

1 Introduction

1.1 Features

Basic functions (depending on model)

- Support network device access including IP camera/dome and ONVIF IP cameras
- Support H.265 and H.264 protocol
- Support standard ONVIF protocol
- Support dual stream recording
- Support IP cameras to be added quickly or manually
- Support collective or individual configuration of the cameras' OSD, video parameters, mask, motion etc.
- Support a maximum of 8 user permission groups including Administrator, Advanced and Ordinary which are the default permission groups for the system
- Support a maximum of 16 users, multiple web client logins using one username at the same time and the user's permission control to be enabled or disabled
- Support a maximum of 10 web client logins at the same time

Live preview (depending on model)

- Support 4K/1920x1080/1280x1024 (HDMI) and 1920x1080/1280x1024 (VGA) high definition synchronous display
- Support multi-screen modes such as 1/4/6/8/9/13/16/25/36
- Support auto adjustment of the camera's image display ratio
- Support audio monitoring of the camera
- Support manual snap of the preview camera
- Support the sequence of the preview cameras
- Support display mode to be added and saved. Saved modes can be recalled directly
- Support quick tool bar operation of the preview window
- Support camera group view and scheme view sequence, quick sequence view and dwell time setting
- Support motion detection and video mask
- Support PTZ control protocol and setup of the preset and cruise
- Support direct mouse control of the IP dome including rotating, zoom, focusing etc.
- Support single camera image to be zoomed by sliding the scroll wheel on the mouse
- Support any area of the image to be zoomed, up to a maximum of 16 times
- Support image and lens adjustment
- Support quick camera adding in the camera window of the live preview interface

Disk management (depending on model)

- Each SATA interface of the NVR supports the HDDs with max 8TB storage capacity
- Support disk group configuration and management and each camera can be added to different disk groups with different storage capacity
- Support disk information and disk working status viewing
- Support batch formatting of the disks

Record configuration (depending on model)

- Support main stream and sub-stream recording at the same time and batch or single configuration of the record stream
- Support manual and auto record modes
- Support schedule recording, sensor alarm recording and motion detection recording, etc.
- Support smart playback by drawing line, quadrilateral and rectangle
- Support schedule recording and event recording setting with different record streams
- Support record schedule setting and recycle recording
- Support pre-recording and post-recording configuration of the event recording

Record playback (depending on model)

- Support quick playback; the playback date and time can be set by scrolling the mouse and the time interval for the time scale can be zoomed
- Support record searching by time slice/time/event/tag
- Support time view and camera view in searching by time slice mode
- Support time slice searching by month, by day, by hour and by minute and time slice to be displayed with camera thumbnail
- Support a maximum of 16 cameras to be searched at the same time
- Support event searching by manual/motion/sensor/intelligent events
- Support tag searching by manually added tags
- Support instant playback for the selected camera in the live preview interface
- Support a maximum of 16 synchronous playback cameras
- Support acceleration (maximum 32 times the normal speed), deceleration (minimum 1/32 times the normal speed) and 30s' addition to or reduction of current playing time

Record backup (depending on model)

- Support record to be backed up via USB (U-disk, mobile HDD)
- Support record to be backed up by time/event/image searching
- Support record cutoff for backing up when playing back
- Support a maximum of 10 backup tasks in background and backup status viewing

Alarm management (depending on model)

- Support alarm schedule setting
- Support motion detection, alarm input, combination alarm, intelligent alarm and exception alarms (including IP address conflict, disk IO error, disk full, no disk, illegal access, network disconnected, IPC offline, etc.), alarm trigger configuration
- Support IPC offline alarm trigger configuration of PTZ, snap, pop-up video, etc.
- Support event notification modes of alarm-out, pop-up video, pop-up message box, buzzer, email, etc.
- The snapped images can be attached to the email when the alarm is triggered
- Support alarm status view of alarm-in, alarm-out, motion detection and exception
- Support alarm manual trigger
- Support system auto reboot when exception occurs

Face recognition (available in models with face recognition function only)

- Support 5000 face pictures stored in the database
- Support search by image, playback and database
- Support face attendance and face check-in
- Support face information statistics
- Support face match alarm

Network functions (depending on model)

- Support black and white list function
- Support remote configuration, import/export of the parameters, remote upgrade, system restart and other system operations
- Support remote camera configuration
- Support remote searching, playback and backup
- The auto-focusing camera can be adjusted via web client (support zoom in/out, but one key focus is not currently supported)
- Support Comelit Advance VMS
- Support NAT function and QRCode scanning by mobile phones and tablets
- Support mobile surveillance by phones or tablets with iOS or Android
- Support remote access through telnet
- If one camera recording is enabled or disabled manually via web client, it will be simultaneously enabled or disabled in the NVR

Other functions (depending on model)

- The NVR can be controlled and operated using the buttons on the front panel, the remote control and the mouse
- You can switch between setting interfaces conveniently by clicking the main menus at the top of the setting interfaces
- Support NVR information

- Support auto recognition of the display resolution
- You can click the right mouse button on any interface to go back to the upper interface
- You can click the middle mouse button on any interface to go to the live view interface
- The display language and video format for the NVR will not be changed and the system logs will be preserved if you reset the NVR to factory default
- Press and hold the right mouse button for 5 seconds in any interface to switch the output to VGA





1.2 Front panel descriptions

The following descriptions are for reference only.

Type I:

Name	Description
REC	When recording, the light is blue
Net	When accessing the network, the light is blue
Power	Power indicator; when ON, the light is blue
Fn	No function

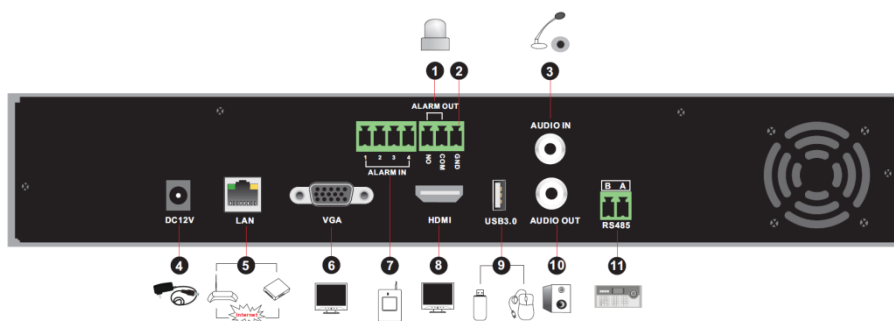
Type II:

Name	Description
Power	Power indicator; when ON, the light is blue
HDD	The light turns blue when reading/writing HDD
Net	When accessing the network, the light is blue
Backup	The light turns blue when backing up
Play	The light turns blue when playing video
REC	When recording, the light is blue
AUDIO /+	Adjust audio / Increase the value in setup
PTZ / -	Enter PTZ mode / Decrease the value in setup
MENU	Enter Menu in live
INFO	Check device information
BACKUP	Enter backup mode in live
SEARCH	Enter search mode in live
Exit	Exit the current interface
	Manually record
	Play/Pause
	Speed down
	Speed up
1-9	Enter digits and select camera
0/--	Enter number 0 / numbers above 10
Arrow keys	Change direction
Multi-Screen	Change the screen mode

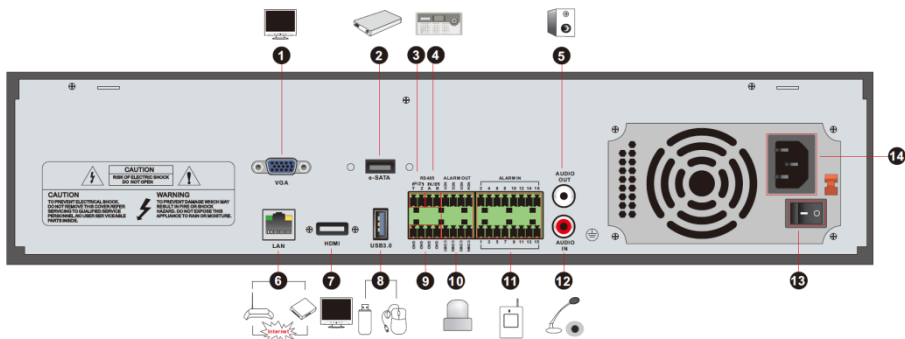
Name	Description
Enter	Confirm selection
USB	To connect external USB devices such as USB mouse or USB flash

1.3 Rear panel descriptions

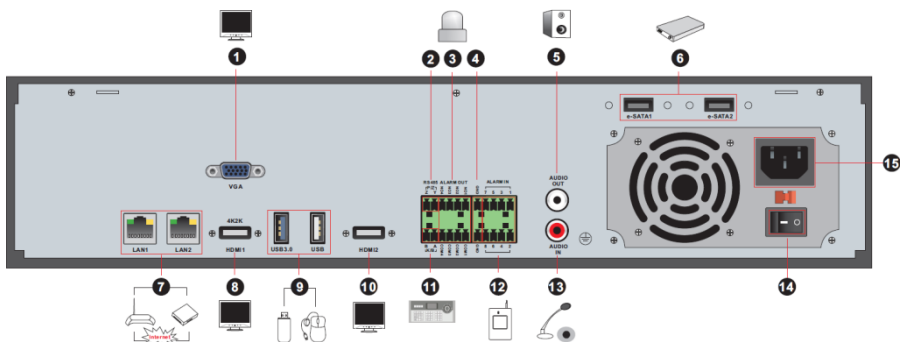
Here we only take a part of real panels as an example, to introduce their interfaces and connections. The interfaces and interface locations are only for reference. Please take the real object as the standard.



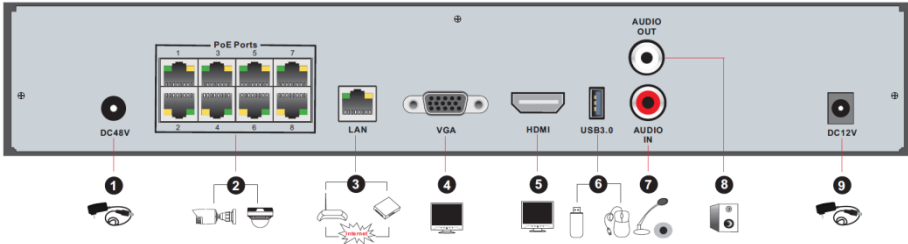
No.	Name	Description
1	ALARM OUT	Relay output, connect to external alarm
2	GND	Ground
3	AUDIO IN	Audio input for connecting audio input devices, such as microphones, etc.
4	DC12V	12VDC power input
5	LAN	Network port
6	VGA	Connect to monitor
7	ALARM IN	Alarm inputs, connect the sensors
8	HDMI	Connect to high definition monitor
9	USB	Connect USB storage device or USB mouse
10	AUDIO OUT	Audio output, connect the loudspeaker
11	RS485	Connect the keypad (A is TX+, B is TX-)



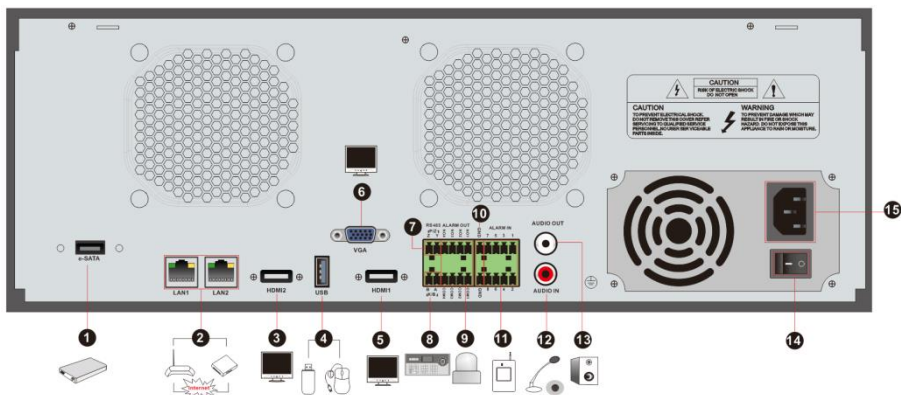
No.	Name	Description
1	VGA	Connect to monitor
2	e-SATA	Connect to HDD with e-SATA interface
3	RS485 Y/Z interface	Connectors for speed dome (Y is TX+, Z is TX-, this interface in some models is unavailable)
4	RS485	Connect the keypad (A is TX+, B is TX-)
5	AUDIO OUT	Audio output, connect the loudspeaker
6	LAN	Network port
7	HDMI	Connect to high definition monitor
8	USB	Connect USB storage device or USB mouse
9	GND	Ground
10	ALARM OUT	Relay output, connect to external alarm
11	ALARM IN	Alarm inputs, connect the sensors
12	AUDIO IN	Audio input for connecting audio input devices, such as microphones, etc.
13	Power Switch	Press the switch to turn the NVR ON/OFF
14	Power Supply	Power supply port



No.	Name	Description
1	VGA	Connect to monitor
2	RS485 Y/Z interface	Connectors for speed dome (Y is TX+, Z is TX-, this interface in some models is unavailable)
3	ALARM OUT	Relay output, connect to external alarm
4	GND	Ground
5	AUDIO OUT	Audio output, connect the loudspeaker
6	e-SATA1/ e-SATA2	Connect to HDD with e-SATA interface
7	LAN1/LAN2	Network ports
8	HDMI1	Connect to 4K high definition monitor
9	USB3.0/USB	USB3.0 and USB 2.0 interface, connect USB storage device or USB mouse
10	HDMI2	Connect to 1920x1080 high definition monitor. Spot monitor, no menu shown
11	RS485	Connect the keypad (A is TX+, B is TX-)
12	ALARM IN	Alarm inputs, connect the sensors
13	AUDIO IN	Audio input for connecting audio input devices, such as microphones, etc.
14	Power Switch	Press the switch to turn the NVR ON/OFF
15	Power Supply	Power supply port



No.	Name	Description
1	DC 48V	48VDC power input
2	PoE port	8 PoE network ports
3	LAN	Network port
4	VGA	Connect to monitor
5	HDMI	Connect to 1920x1080 high definition monitor
6	USB3.0	USB3.0 interface, connect USB storage device or USB mouse
7	AUDIO IN	Audio input for connecting audio input devices, such as microphones, etc.
8	AUDIO OUT	Audio output, connect the loudspeaker
9	DC 12V	12VDC power input



No.	Name	Description
1	e-SATA	Connect to HDD with e-SATA interface
2	LAN1/LAN2	Network ports
3	HDMI2	Connect to 1920x1080 high definition monitor. Spot monitor, no menu shown
4	USB	USB interface, connect USB storage device or USB mouse
5	HDMI1	Connect to 4K high definition monitor
6	VGA	Connect the monitor
7	RS485 Y/Z interface	Connectors for speed dome (Y is TX+, Z is TX-, this interface in some models is unavailable)
8	RS485	Connect the keypad (A is TX+, B is TX-)
9	ALARM OUT	Relay output, connect to external alarm
10	GND	Ground
11	ALARM IN	Alarm inputs, connect the sensors
12	AUDIO IN	Audio input for connecting audio input devices, such as microphones, etc.
13	AUDIO OUT	Audio output, connect the loudspeaker
14	Power Switch	Press the switch to turn the NVR ON/OFF
15	Power Supply	Power supply port

1.4 Connections

● Video connections

Video Output. Supports VGA/HDMI video output. You can connect to the monitor through these video output interfaces simultaneously or independently.

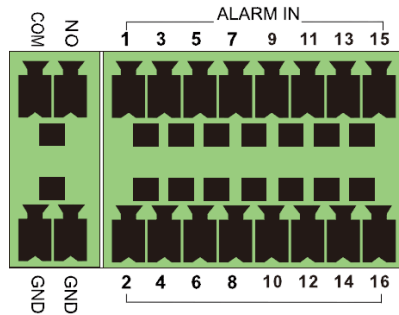
● Audio Connections

Audio Input. Connect to microphone, etc.

Audio Output. Connect to headphone, loudspeaker or other audio output devices.

- **Alarm Connections**

Some models may not support this function. Alarm inputs and alarm output.

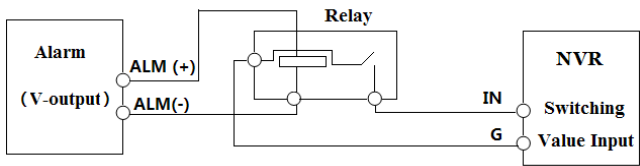


Alarm Input

Alarm IN 1~16 are alarm input interfaces. NO and NC type sensors are both available. Senso-device connection takes place as shown below:

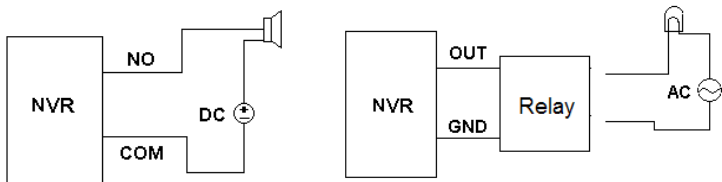


If the input is not an open/closed relay, please refer to the following connection diagram:



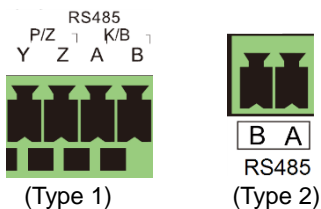
Alarm Output

Pull out the green terminal blocks and loosen the screws in the alarm-out port. Then insert the alarm output device signal wires into the NO and COM ports separately. Finally, tighten the screws. If the external alarm output devices need a power supply, you can connect the power supply as per the following figures.



● RS485 Connection

There are two types of RS485 interface:



Type 1: the P/Z interfaces are unavailable now. K/B interfaces are used to connect the keypad.

Type 2: the RS485 interfaces are used to connect the keypad. A is TX+, B is TX-.

2 Basic Operating Guide

2.1 Startup & Shutdown

Please make sure all the connections have been performed properly before you power on the unit.

2.1.1 Startup

- ① Connect the monitor to the VGA/HDMI interface.
- ② Connect the mouse and the power. The device will boot up and the power LED will turn blue.
- ③ After you read the privacy statement, a wizard window will pop up (you should select the display language the first time you use the NVR).

2.1.2 Shutdown

You can power OFF the device using the mouse.

- ① Click Start→Shutdown to make the Shutdown window pop up. Select “Shutdown” in the window. The unit will power off after a while once the “OK” button has been clicked.
- ② Disconnect the power.

2.2 Mouse control

➤ Mouse control in Live & Playback interface

In the live display & playback interface, double-click on any camera window to show the window in single screen mode; double-click the window again to restore it to the previous size.

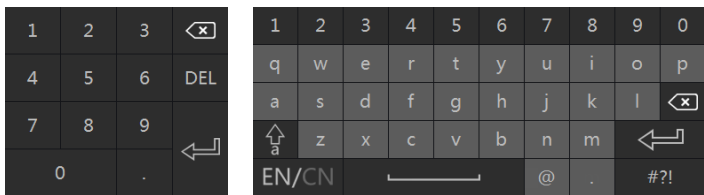
In the live display & playback interface, if the interfaces display in full screen, move the mouse to the bottom of the interface to make a tool bar pop up. The tool bar will disappear automatically after the mouse is moved away from it for some time. Move the mouse to the right side of the interface to make a panel pop up; the panel will disappear automatically after you move the mouse away from it.

➤ Mouse control in text-input

Move the mouse to the text-input box and then click the box. The input keyboard will pop up automatically.

Note: the mouse is the default tool for all operations unless an exception is indicated.

2.3 Text-input instructions



The system includes two input boxes. Refer to the above pictures. The left box is the number input box and the right box is the input box for the input of numbers, letters and other characters. An introduction to keys in the input boxes is provided below.

Button	Description	Button	Description
	Backspace key		Switch key for special characters
	Delete key		Enter key
	Switch key between upper and lower case		Space key
	Switch key for language		

2.4 Operating buttons

Button	Description
	Show the menu list.
	Change the list sequence.
	Change the camera display mode.
	Close the current interface.
	Go to the earliest camera recording date.
	Go to the latest camera recording date.

3 Wizard & Main Interface

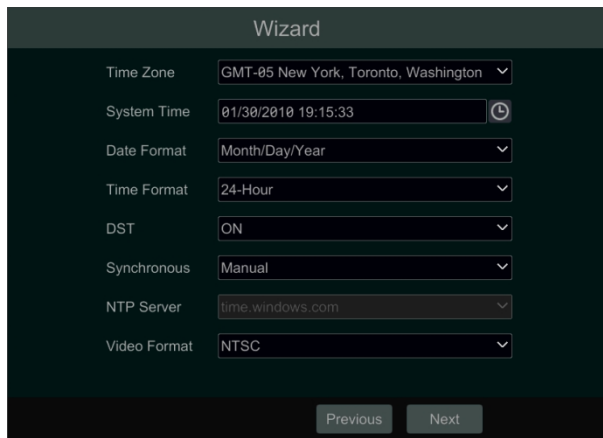
3.1 Startup Wizard

The disk icons will be shown at the top of the startup interface. You can view the number and status of each disk through the icons (🔲: no disk; ⚠️: unavailable disk; ✅: RW available disk).

You can quickly configure the NVR using the wizard setup. You must configure the wizard when you start the NVR for the first time (click “Skip” to cancel the wizard the next time). **Different versions have different wizards. The following steps are for reference only.**

① Choose the language and locality, read the privacy statement, tick “I have read and agree” and click “OK”.

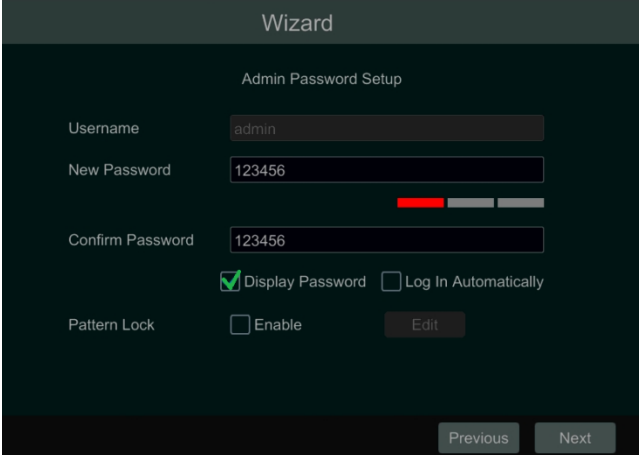
② **Date and Time Configuration.** The system date and time need to be set up when you use the wizard for the first time. Refer to the following figure. Set the time zone, system time, date format, time format and video format. DST (BST) will be enabled by default if the selected time zone includes DST (BST). Click “Next” to continue.



The screenshot shows a 'Wizard' configuration window with a dark background. It contains several settings, each with a label and a value field, mostly using dropdown menus. At the bottom, there are 'Previous' and 'Next' buttons.

Setting	Value
Time Zone	GMT-05 New York, Toronto, Washington
System Time	01/30/2010 19:15:33
Date Format	Month/Day/Year
Time Format	24-Hour
DST	ON
Synchronous	Manual
NTP Server	time.windows.com
Video Format	NTSC

③ **System Login.** Set your own password or use the default when you use the wizard for the first time (the default **username** for the system is **admin** and the default password is **admin**).

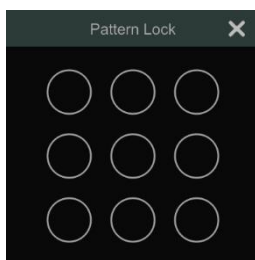


The image shows a 'Wizard' window titled 'Admin Password Setup'. It contains the following fields and options:

- Username:** A text field containing 'admin'.
- New Password:** A text field containing '123456'. To its right is a strength indicator with a red bar followed by two grey bars.
- Confirm Password:** A text field containing '123456'.
- Display Password:** A checkbox that is checked (indicated by a green checkmark).
- Log In Automatically:** An unchecked checkbox.
- Pattern Lock:** An unchecked checkbox. To its right is an 'Edit' button.

At the bottom right of the window are two buttons: 'Previous' and 'Next'.

"Enable" Pattern Lock and click "Edit" to set the pattern lock.



Click "Next" to set questions and answers for admin password security.
Click "Next" to continue.

- ④ **Disk Settings.** You can view the disk number, disk capacity, serial number and R&W status of the HDD. Click "Format" to format the disk. Click "Next" to continue. Then click "Wizard Setup".
- ⑤ **Network Settings.** Tick "Obtain an IP address automatically" and "Obtain DNS automatically" to get the IP address and DNS automatically (the DHCP function of the router in the same LAN should also be enabled), or manually enter them. Enter the HTTP, RTSP and Server ports. Click "Next" to continue.

Wizard

Network Settings > Add Camera > Record Settings > QR Code

Ethernet Port 1 (Online)

☒ Obtain an IP address automatically

Address: 10 . 10 . 10 . 109

Subnet Mask: 255 . 255 . 240 . 0

Gateway: 10 . 10 . 0 . 1

☒ Obtain DNS automatically

Preferred DNS:

Alternate DNS:

Default Route: Ethernet Port 1

HTTP Port: 80

HTTPS Port: 443

RTSP Port: 554

Server Port: 6836

Previous Next Cancel

Note:

- If you use the NVR with the PoE network ports, the online status of the internal Ethernet port will be shown on the interface. Refer to the picture below.

Wizard

Network Settings > Add Camera > Disk Mode > Record Settings

Ethernet Port 1 (Online)

☒ Obtain an IP address automatically

Address: 10 . 10 . 13 . 255

Subnet Mask: 255 . 255 . 240 . 0

Gateway: 10 . 10 . 0 . 1

☒ Obtain DNS automatically

Preferred DNS:

Alternate DNS:

HTTP Port: 80

HTTPS Port: 443

RTSP Port: 554

Server Port: 6836

Previous Next Cancel

Internal Ethernet Port 1 (Online)

Address: 10 . 10 . 13 . 5

Subnet Mask: 255 . 255 . 240 . 0

- If the NVR has two or more network ports, you can select the network work pattern as required. Network Fault Tolerance and Multiple Address Setting are available. Refer to the pictures below.

Wizard

Network Settings > Add Camera > Record Settings > QRCode

☒ TOE Enable (Modifying toe status need to reboot)

Work Pattern: Multiple Address Setting

Ethernet Port 1 (Online)

☐ Obtain an IP address automatically

Address: 192 . 168 . 2 . 200

Subnet Mask: 255 . 255 . 255 . 0

Gateway: 192 . 168 . 2 . 1

☐ Obtain DNS automatically

Preferred DNS: 8 . 8 . 8 . 8

Alternate DNS:

Default Route: Ethernet Port 1

HTTP Port: 80

HTTPS Port: 443

Ethernet Port 2 (Offline)

☐ Obtain an IP address automatically

Address: 192 . 168 . 3 . 200

Subnet Mask: 255 . 255 . 255 . 0

Gateway: 192 . 168 . 3 . 1

RTSP Port: 554

Server Port: 6036

Previous Next Cancel

Wizard

Network Settings > Add Camera > Record Settings > QRCode

☒ TOE Enable (Modifying toe status need to reboot)

Work Pattern: Network Fault Tolerance

☒ Obtain an IP address automatically

Address:

Subnet Mask:

Gateway:

Primary Card: Ethernet Port 1

Ethernet Port 1 (Online)

MAC Address: 00 . 18 . AE . 8D . 8E . 45

Ethernet Port 2 (Offline)

MAC Address: 00 . 18 . AE . 00 . 06 . 88

☒ Obtain DNS automatically

Preferred DNS:

Alternate DNS:



HTTP Port: 80

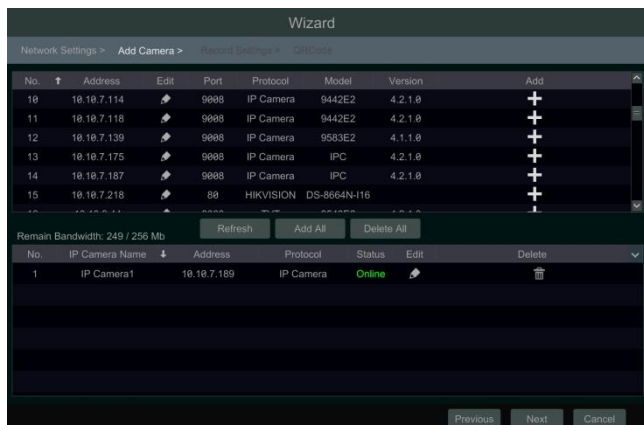
RTSP Port: 554

HTTPS Port: 443

Server Port: 6036

Previous Next Cancel

⑥ **Add Camera.** Click “Refresh” to refresh the list of online IP cameras and then click  to add. Click “Add All” to add all the cameras in the list. Click  to delete the added camera. Click “Delete All” to delete all the added cameras.



Click to edit the IP camera as shown below left. Enter the new IP address, subnet mask, gateway, username and the password for the camera. Click “OK” to save the settings.

Edit IP

MAC Address: 88 : 18 : AE : 8D : 5E : 45

Address: 192 . 168 . 2 . 200

Subnet Mask: 255 . 255 . 255 . 0

Gateway: 192 . 168 . 2 . 1

Username: admin

Password: *****

OK Cancel

Edit Camera

Camera Name: IP Camera1

Address: 18 . 18 . 7 . 189 ☐ Sync to IPC

Port: 9008

Protocol: IP Camera

Model: 9583E2

Username: admin

Password: *****

Test OK Cancel

Click to edit the camera as shown above right. Enter the new camera name, IP address, port, username and the password. You can tick “Sync to IPC” to change the IP address for the IPC so it is in the same network segment as the NVR. Then click “Test” to test the connection. Click “OK” to save the settings. You can only change the IP camera name when the added camera is online. Click “Next” to continue.

Tips: Please skip Step ⑦ and ⑧ if the NVR does not support RAID function.

⑦ **Disk Mode.** Click “Enable RAID” to enable the RAID function. Click “Next” to continue.

⑧ **Create an array.** Set the array name and select the array type (RAID0, RAID1, RAID5, RAID6 and RAID10). Click “Next” to continue.

⑨ **Record Settings.** Two recording modes are available: auto and manual.

Auto. Select one mode in the interface as shown below and then click “Next” to save the settings. Click “Advanced” to define the recording mode yourself.

The screenshot shows the 'Wizard' interface with the 'Record Settings' step selected in the breadcrumb trail. The 'Mode' section has a green bar labeled 'Auto'. Below it are several radio button options: 'Motion Record', 'Sensor Record', 'Motion Record+Sensor Record', 'Always(24x7) Record+Motion Record', 'Always(24x7) Record+Sensor Record', 'Always(24x7) Record+Motion Record+Sensor Record', and 'Always(24x7) Record+Motion Record+Sensor Record+Analytics Record'. The last option is selected with a green dot. An 'Advanced' button is located below the radio buttons. At the bottom right are 'Previous', 'Next', and 'Cancel' buttons.

Manual. Set the “Sensor Record”, “Motion Record” and “Schedule Record” for each camera. Click “OK” to save the settings.

The screenshot shows the 'Wizard' interface with the 'Record Settings' step selected. The 'Mode' section has a green bar labeled 'Manual'. Below it is a table with columns: 'Camera Name', 'Sensor Record', 'Motion Record', 'Analytics Record', 'OS Record Sche.', and 'Schedule Record'. Each of the last four columns has a dropdown arrow. The first row is for 'IP Camera1' and all dropdowns are set to '<None>'. There are four empty rows below. At the bottom right are 'Previous', 'Next', and 'Cancel' buttons.

Camera Name	Sensor Record	Motion Record	Analytics Record	OS Record Sche.	Schedule Record
IP Camera1	<None>	<None>	<None>	<None>	<None>

⑩ **QRCode.** Enable the NAT function in the interface or set it in the network configuration after exiting the wizard. You can scan the QR Code via mobile client to login instantly. Click “OK” to save the settings.



3.2 Main interface

3.2.1 Main interface introduction




The buttons in area ① are introduced in the table below.


Button	Description
	Start button. Click it to make area ③ pop up.
	Full screen button. Click it to show full screen; click it again to exit the full screen.
	Screen mode button.
	Sequence button.
	Click it to enable OSD; click again to disable OSD.
	Click to set the default playback time before starting instant playback or going to the playback interface for playback operations; click to go to the playback interface.
	Manual record button. Click it to enable/disable recording.
	Manual alarm button. Click it to trigger or clear the alarm-out manually in the pop-up window.
	Record status button. Click it to view the recording status.
	Alarm status button. Click it to view the alarm status.
	Disk status button. Click it to view the disk status and RAID status.


Button	Description
	Network status button. Click it to view the network status.
	Information button. Click it to view system information.

Introduction to area ②:









Area ② is hidden by default. Move the cursor to the right to reveal this area. Click “Camera” to view all the added cameras in the camera list. Select one camera window on the left side of the interface and then double click one camera in the list to preview the camera image in the selected window.

Click  in the top right corner and then select “Single Channel Sequences” to view all the added groups in the group list; click one group in the list to view all the added cameras in the group. Select one camera window on the left side of the interface and then double click one group in the group list to preview the cameras’ images one by one in the selected window.

Click  on the top right corner and then select “Customize Display Modes” to view all the display modes in the display mode list. Double-click one display mode in the list to switch to that display mode for previewing.

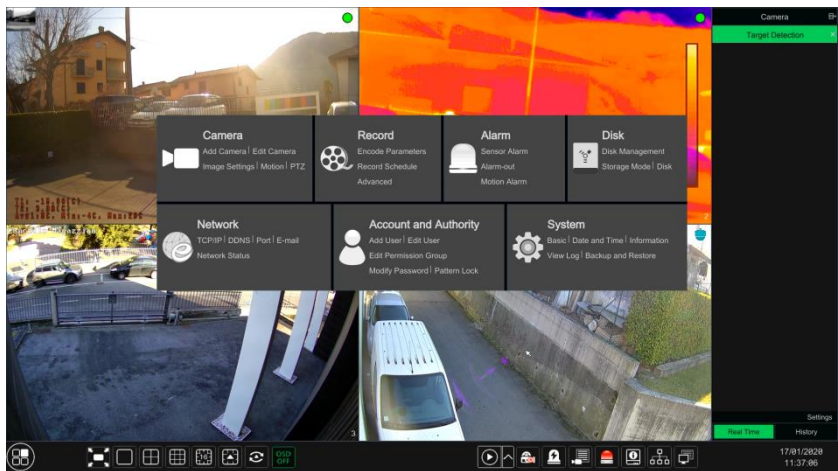
Click  in the top right corner and then select “Face Match” to go to the face recognition interface (this function is only available for models with the face recognition function).

Introduction to area ③:

Icon / Button	Description
	Shows the current user login.
 Intelligent Analytics	Click it to go to the intelligent analytics interface.
 Search and Backup	Click it to go to the recording search and backup interface.
 Playback	Click it to go to the playback interface (click  on the toolbar at the bottom of the live preview interface to set the default playback time).
 Settings	Click it to make the setup panel pop up.
 Logout	Click it to log out of the system.
 Shutdown	Click it and then select “Logout”, “Reboot” or “Shutdown” in the pop-up window.

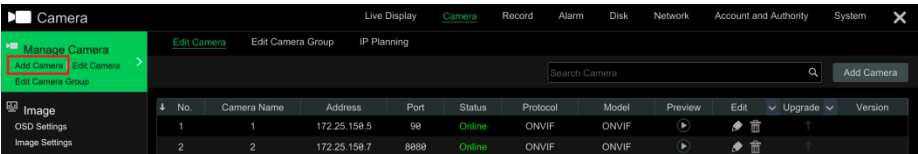
3.2.2 Setup panel

Click Start→Settings to bring up the setup panel as shown below.

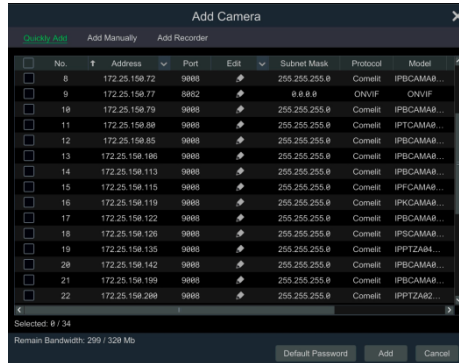


The setup panel includes seven modules. Each module provides some function entries with links for convenient operation.

Here we take the **Camera** module as an example. The **Camera** module provides links such as “Add Camera”, “Edit Camera”, “Image Settings”, “Motion”, “Intelligence Analysis” and “PTZ”. Click **Camera** to go to the camera management interface as shown below.



There are some function items on the left side of the camera management interface. Click each item to go to the corresponding interface or window. For instance, click “Add Camera” to make the window pop up as shown below.



Click the main menus at the top of the camera management interface to go to the corresponding interfaces. Refer to the picture below. For instance, you can go to the system setup interface by clicking the “System” tag.



3.2.3 Main functions

➤ Camera

The module covers functions such as **Camera Management**, **Image Settings**, **Motion** and **PTZ**.

➤ Record

The module covers functions such as **Encode Parameters**, **Record Schedule** and **Advanced**.

➤ Alarm

The module covers functions such as **Sensor Alarm**, **Alarm Out** and **Motion Alarm**.

➤ Disk

The module covers functions such as **Disk Management**, **Storage Mode** and **Disk**.

➤ Network

The module covers functions such as **TCP/IP**, **DDNS**, **Port**, **E-mail** and **Network Status**.

➤ Account and Authority

The module covers functions such as **Add User**, **Edit User**, **Edit Permission Group**, **Modify Password** and **Pattern Lock**.

➤ System


The module covers functions such as **Basic**, **Date and Time**, **Information**, **View Log** and **Backup and Restore**.

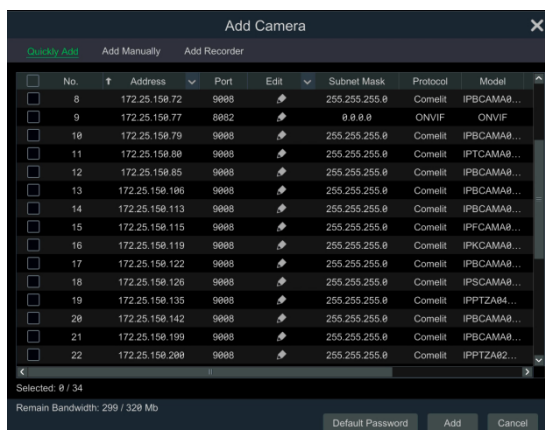
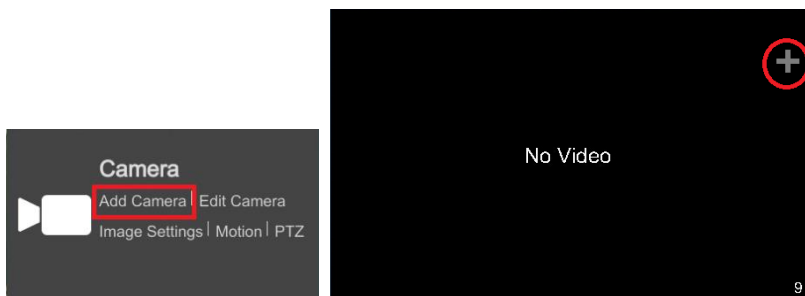
4 Camera Management

4.1 Add/Edit Camera


4.1.1 Add camera

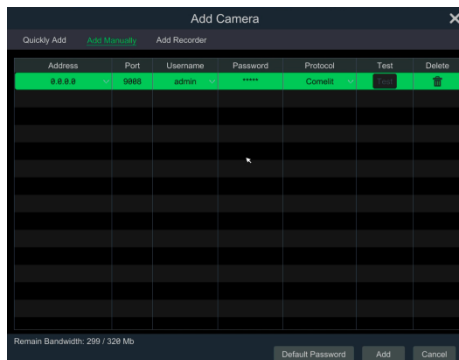
The NVR network should be set before adding the IP cameras.

Refer to the pictures below. Click **Add Camera** in the setup panel or  in the top right corner of the preview window to make the “Add Camera” window pop up as shown below. You can quickly add the IP camera or add it manually.





➤ Quickly Add

Tick the cameras and then click “Add”. Click  to edit the camera’s IP address, username and password, etc. Click “Default Password” to set the default username and password.



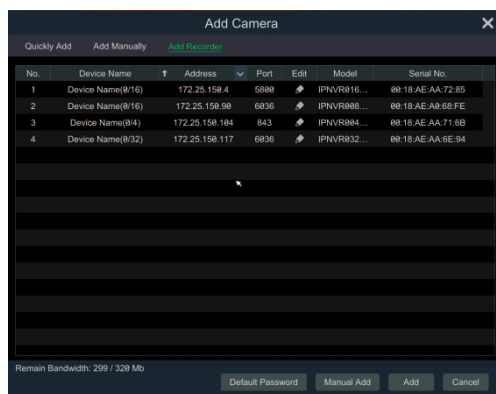
➤ Add Manually

Enter the IP address or domain name (click  in the IP address column to make the domain name input window pop up, enter the domain name of the IPC in the window and then click “OK”), port, username and password of the camera and then select the protocol. Click “Test” and then click the “Add” button (you can enter the information for one or more cameras, such as IP address, username and password, before clicking the “Add” button). Click  to delete the camera. Click “Default Password” to set the default username and password.

Note: some models may not support this function.

Click Start→Settings→System→Basic→General Settings to tick “Enable Add IPC by Zero Operation”. If the NVR has unoccupied channels, IPCs can be added without any procedures.

➤ Add Recorder















- Quickly Add: select the NVR and then click “Add”.

- Manually Add: click “Manual Add” and then enter the IP address or domain name, port, username and password. Tick the remote channel number and click “Test”. Then click “OK” to return to the previous interface.

Note: only if the local NVR has unoccupied channels, may the IPCs for other NVRs in the same local network be added.

4.1.2 Edit camera

Click “Edit Camera” in the setup panel to go to the interface as shown below. Click  to view the live image from the camera in the pop-up window. Click  to edit the camera. Click  to delete the camera. Click  in the “Operation” header line and then click “Modify IPC Password” to make a window pop up (tick the IPCs in the window, set the new password and then click “OK”; only the online IPCs’ passwords can be changed and a batch of IPCs’ passwords can be changed at the same time).

Edit Camera Edit Camera Group IP Planning										
Search Camera <input type="text"/> <input type="button" value="Add Camera"/>										
↓ No.	Camera Name	Address	Port	Status	Protocol	Model	Preview	Edit	Upgrade	Version
1	1	172.25.158.5	98	Online	ONVIF	ONVIF				
2	2	172.25.158.7	8888	Online	ONVIF	ONVIF				

Note:

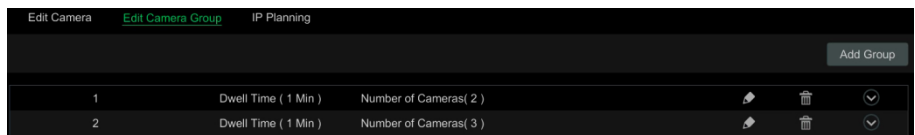
If you use the NVR with the PoE network ports, the IP cameras (with PoE function) which are directly connected to the PoE port on the NVR will automatically appear in the camera list. The IP camera which occupies the PoE resource has a prefix shown before its camera name. The prefix consists of PoE plus PoE port number. The IP camera which connects to the PoE port cannot be deleted from the camera list manually.


- The IP camera directly connected to the PoE port on the NVR through private protocol will automatically appear in the camera list.
- One of the two conditions must be met if the IP camera which is directly connected to the PoE port on the NVR through ONVIF protocol should automatically appear in the camera list:
 - ✓ The IP camera which is directly connected to the PoE port is in the same network segment as the internal Ethernet port.
 - ✓ The DHCP (obtain an IP address automatically) of the IP camera which is directly connected to the PoE port is enabled.

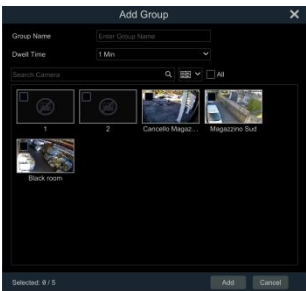
4.2 Add/Edit Camera Group

4.2.1 Add camera group

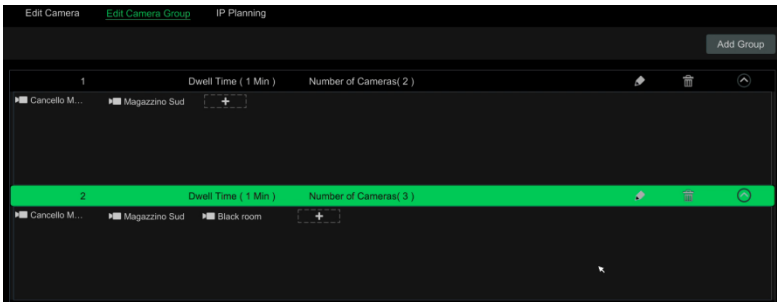
Click “Edit Camera Group” in the above interface to go to the interface as shown below.





Click “Add Group” to make the window pop up as shown below. Set the group name and dwell time (the dwell time for the camera group sequence view). Tick the cameras and then click “Add” to add the group. Click  to view the cameras in the group.



4.2.2 Edit camera group

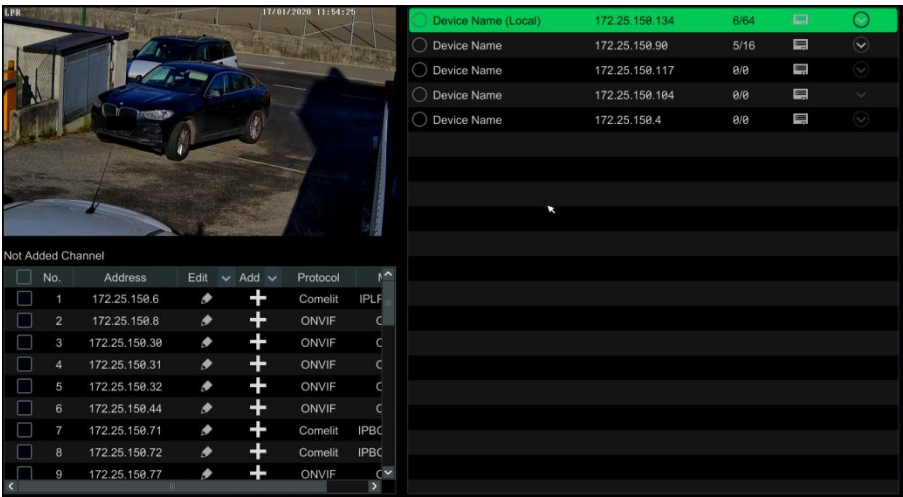



Click  to change the group information such as group name and dwell time. Click  to delete the group.



4.2.3 IP planning

Some models may not support this function.

Click “IP Planning” to go to the interface as shown below. This function supports searching other NVRs that are in the same local network as the local NVR. The user may add the IPCs of other NVRs to the unoccupied channels of the local NVR.



Click  to edit the IP address, user name or password and other information for the NVRs.

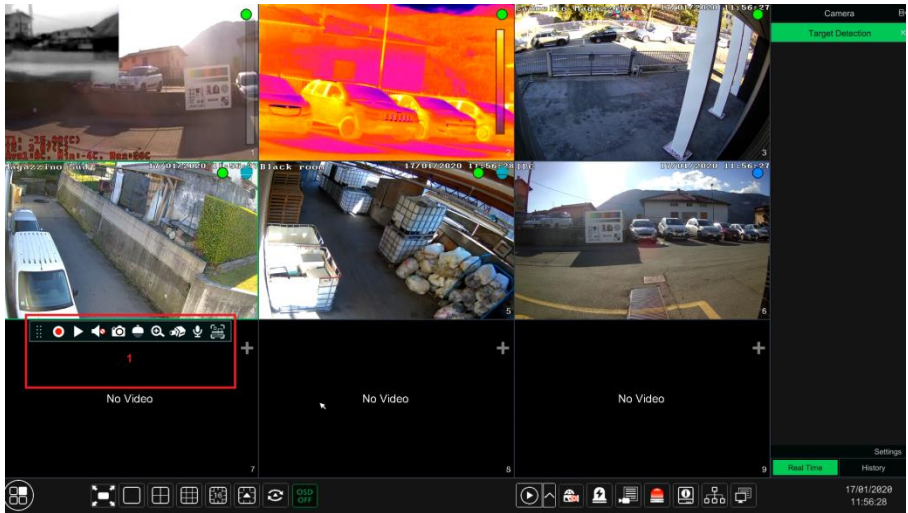
Click  by the “Add” button to add the selected IPC; the user may edit the IP address, user name or password by clicking  by the “Edit” button.

5 Live View Introduction

5.1 Live View Interface




You should add a camera first after logging on to the system (see [4.1.1 Add Camera](#) for details). Refer to the interface as shown below, drag one camera in the preview window to another window to switch the camera preview window.



The recording symbols have different colours in the live preview window, referring to different recording types (green: manual record, red: sensor-based record, yellow: motion-based record, blue: schedule record, cyan: intelligence record).



Click the preview window to show the toolbar as shown in area ①; right-click the preview window to show the menu. The toolbar and menu are introduced in the table below.

Button	Menu	Description
	--	Move tool. Click it to move the toolbar anywhere.
	Manually Record On	Click it to start recording.
	Instant Playback	Click to playback the recording. Click "Instant Playback" to select or define the instant playback time yourself.
	Enable Audio	Click it to enable audio.
	Snap	Click it to make the snapshot window pop up. Click "Save" to save the image. Click "Export" to export the image.
	PTZ Control	Click it to go to the PTZ control interface.
	Zoom In	Click it to go to the single channel Zoom+ interface.

Button	Menu	Description
	--	Click it to go to the image adjustment interface.
	Start/Close Talk	Click it to enable the microphone.
	Face Recognition	Click it to go to the single channel face comparison interface (only applicable to some models)
--	Camera Info	Click it to view the camera information.

The single channel Zoom+ interface is as shown below. Press and drag the green box to select the Zoom+ area. Click  /  to zoom the image. Click the camera selection box to select another camera. Click “Back” to return to the live preview interface.



5.2 View Mode



5.2.1 Screen mode

Set different screen modes and camera display sequences as required and then save. Refer to the picture below. Double-click one display mode in the list to view the live images in this mode.




➤ Add Display Mode



Method one:

- ① Click “Customize Display Modes” in the above interface.
- ② Click  to add a display mode name and then set the screen mode.
- ③ Add the cameras and adjust the camera display sequence.
- ④ Click  under the display mode list.

Method two:

- ① Click Start→Settings→System→Basic→Output Settings to go to the interface and then set the screen mode.
- ② Double-click the camera or camera group in the list to add them to the selected window.
- ③ Click  to save the current display mode. The display mode will be saved and displayed in the display mode list in the live preview interface.

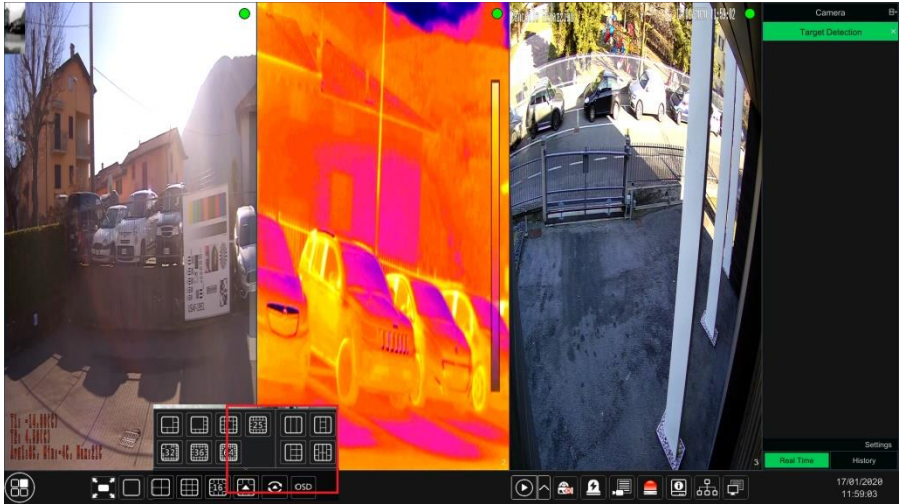
➤ Edit Display Mode

Click “Customize Display Modes” tab in the live preview interface and then select one display mode in the list. Click  to edit the display mode name; click  to delete the display mode.

➤ Corridor Pattern

Some models may not support this function.

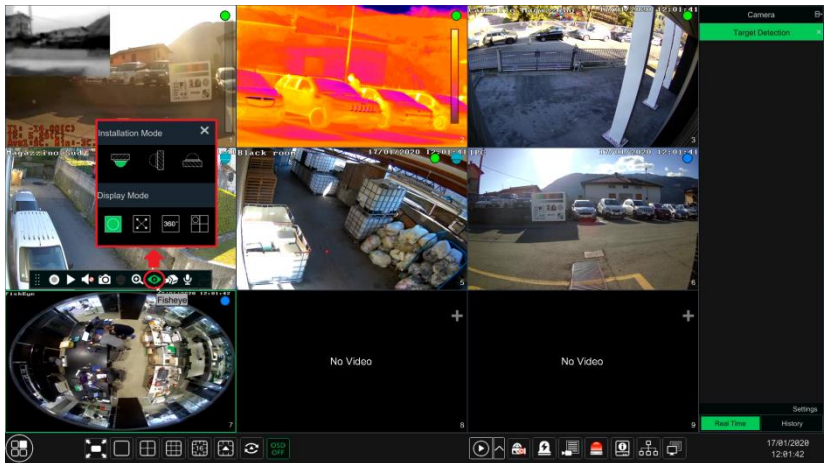
Select corridor pattern in display mode. You can change the direction of the video image using this function. Please refer to the User Manual for the camera.



➤ Fisheye Mode

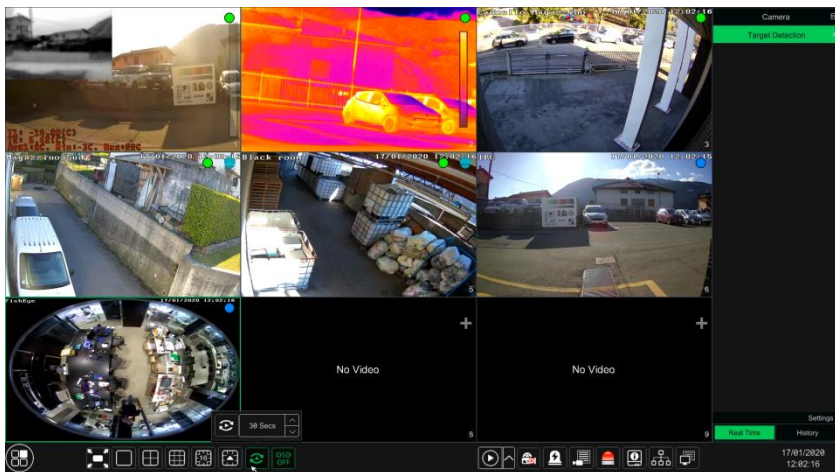
Some models may not support this function.




In the live preview, select the view mode for the fisheye camera. Please refer to the User Manual for the camera.



5.2.2 Quick sequence view

You can start a quick sequence view if the scheme has not been created.

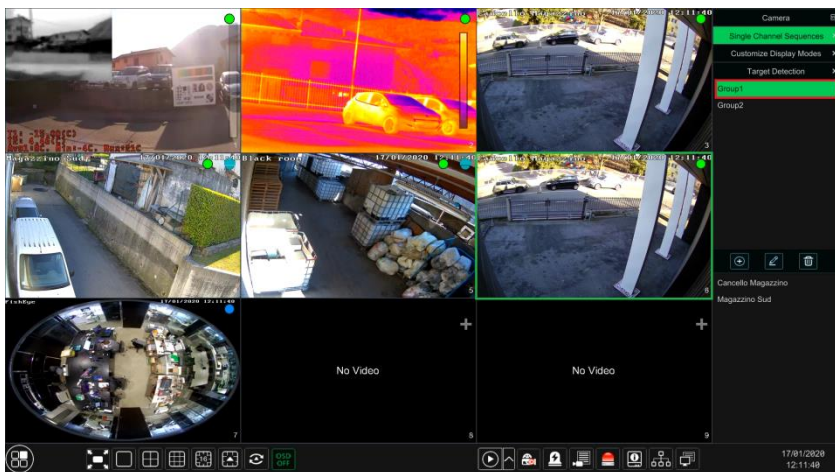


Go to the live preview interface and then click  to make a little window pop up. Set the dwell time in the window and then click  to view the live feed group by group according to the camera number of the current screen mode. Double-click the sequence view interface to pause viewing, double-click again to restore viewing. Click  to stop viewing.

5.2.3 Camera group view in sequence

You can start camera group view in sequence if a camera group has been created.

- ① Go to the live preview interface and then select a camera window.



- ② Double-click one camera group on the right side of the interface. You can watch the cameras in the group one by one in the selected camera window.

You can also drag the group directly to any preview window. Right-click on the group view window and then click “Close Dwell” to stop the view.

5.2.4 Scheme view in sequence

Click Start→Settings→System→Basic→Output Settings to go to the interface as shown below.

Area ① displays all the dwell schemes; area ② shows the detailed information for the scheme; area ③ displays all the cameras and groups; area ④ is the toolbar (☒: clear button; ★: favourite button, click it to make a window pop up, enter the display mode name in the window and then click “OK” to save the current display mode; other buttons are screen mode buttons).






➤ Add Scheme

Click + in area ① to create a new scheme. Click ✕ in the top right corner of the scheme to delete it.

➤ Configure Scheme

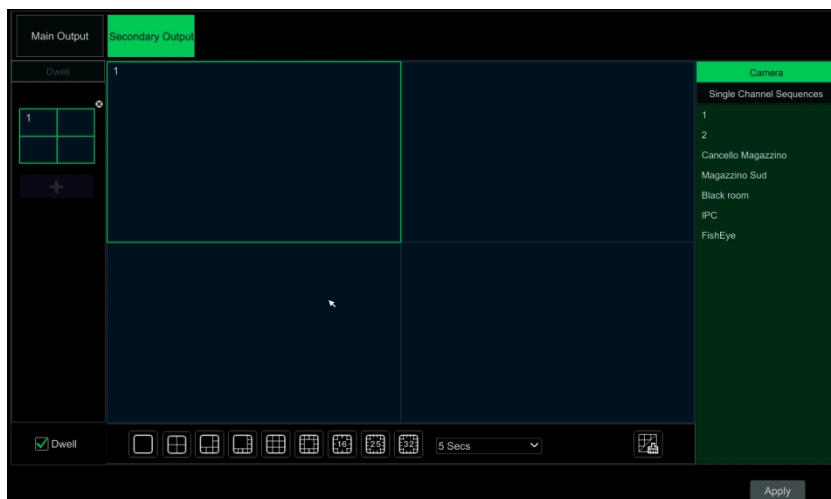
- Select a scheme in area ① and then click the screen mode button on the toolbar.
- Select a camera window in area ② and then double-click the camera or group in area ③. The camera or group will be added to the selected window. You cannot repeat one camera in the same scheme. Click the right-click menu “Clear” in area ② to remove a single camera or click ☒ to remove all the cameras.
- Click “Apply” to save the settings.

➤ Start Sequence View

Go to the live preview interface and then click  to make a window pop up. Set the dwell time in the window and then click  to start scheme view in sequence. Double-click the sequence view interface to pause viewing; double-click again to restore viewing. Click  to stop viewing.

Note:

You can set the secondary output preview if the NVR has dual outputs. Refer to the interface as shown below.



Tick “Dwell” and then set scheme view in sequence for the spot output. The setting steps are similar to those for the main output.

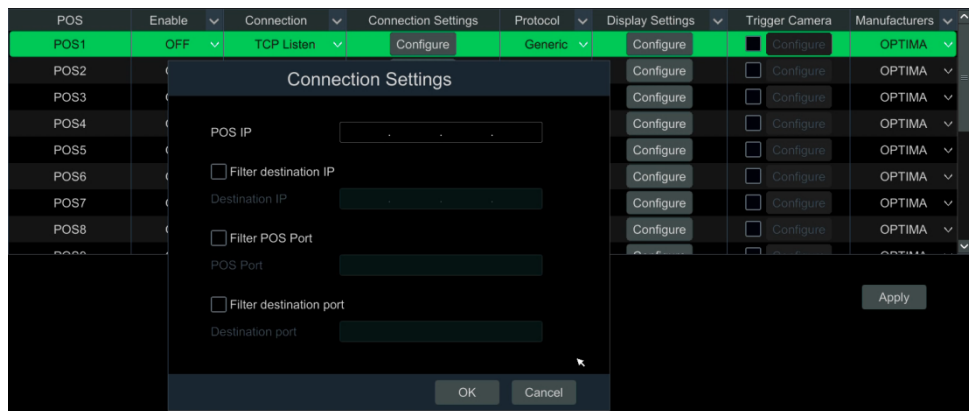
Set quick sequence view if “Dwell” is not ticked. The setting steps are as follows:

- ① Set the screen mode by clicking the relevant buttons on the toolbar.
- ② Select one window and then double-click one camera or group in the list.
- ③ Click “Apply” to save the settings after adding cameras or groups to the windows.

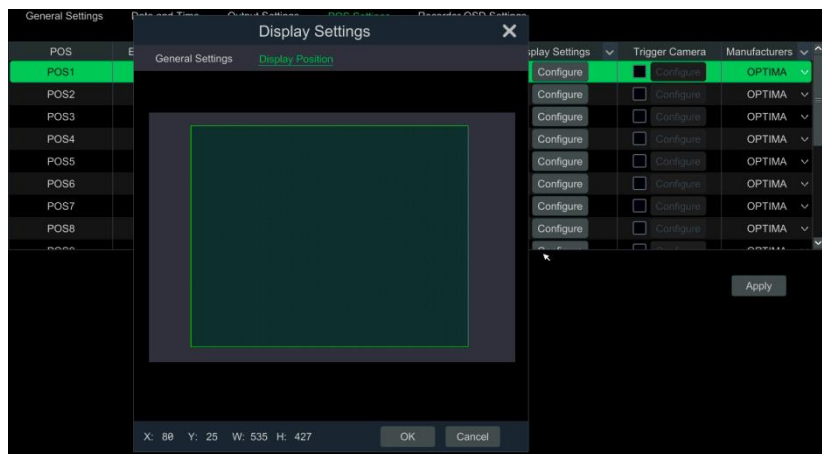
5.3 POS Settings

This function is only available for some models.

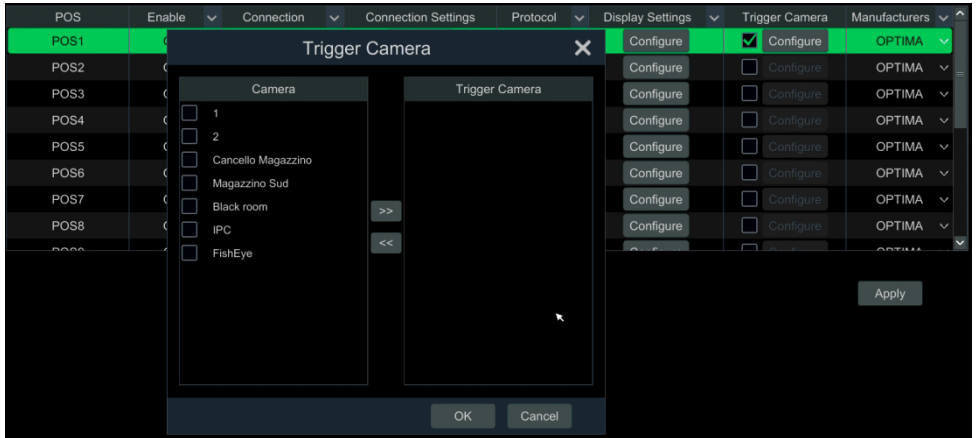
- ① Click Start→Settings→Basic→POS Settings to go to the interface.
- ② Enable POS and click “Configure” under “Connection Settings” to go to the following interface.
- ③ Enter the IP address of the POS you want to add.
- ④ Tick “Filter destination”, “Filter POS port” and “Filter destination Port” (If you do not tick them, please skip this step) and enter the destination IP, POS port and destination port you want to filter.



⑤ Click “Display Position” under “Display Settings” to set the position of the POS information.

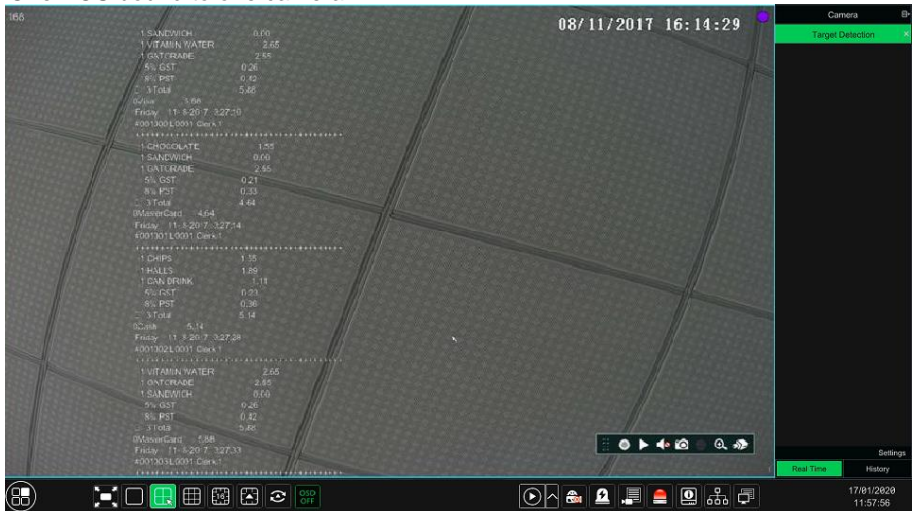


⑥ Tick “Trigger Camera” and click “Configure” under it to bind the POS to the camera. One POS can be bound to multiple channels, but a channel can only be bound to one POS.

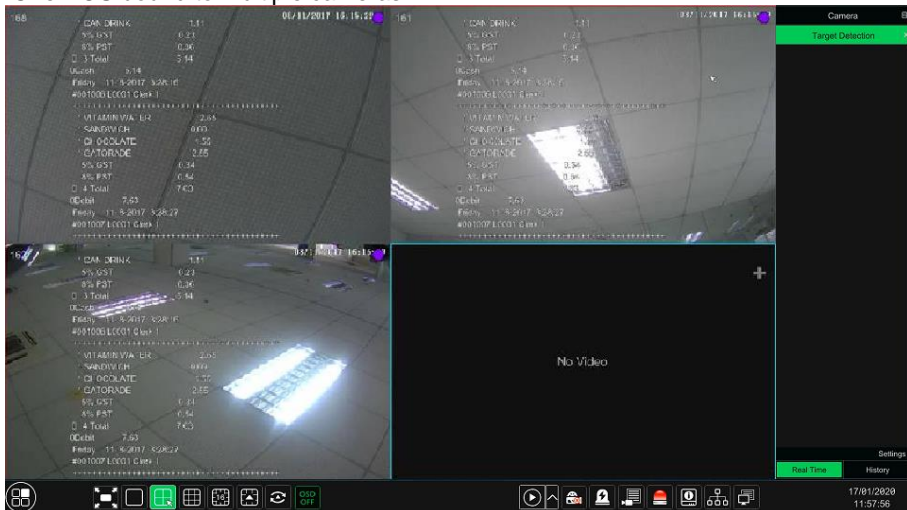


⑦ Click “Apply” to save the settings and then the transaction information will be displayed on the preview image in real time.

One POS bound to one camera:




One POS bound to multiple cameras:



5.4 Preview Image Configuration

5.4.1 OSD settings

Click Start→Settings→Camera→Image→OSD Settings to go to the interface as shown below. Select the camera, enter the camera name (or double-click the camera name in the camera list to change the camera name), enable or disable the name and time OSDs (if enabled, drag the red name and time OSDs directly into the image view area to change the OSDs' display position) and select the date and time formats. Click “Apply” to save the settings.



Camera Name	OSD Name	OSD Time	Date Format	Time Format	Address
1	ON	OFF	Year/Month/Day	24-Hour	172.25.150.5
2	ON	OFF	Year/Month/Day	24-Hour	172.25.150.7
Cancello Magazz...	ON	ON	Day/Month/Year	--	172.25.150.136
Magazzino Sial	ON	ON	Day/Month/Year	--	172.25.150.137
Black room	ON	ON	Day/Month/Year	--	172.25.150.138
IPC	ON	ON	Day/Month/Year	--	172.25.150.209
FishEye	ON	ON	Day/Month/Year	--	172.25.150.115

Camera

IPC

Camera Name

IPC

Name OSD

ON

Time OSD

ON


Date Format

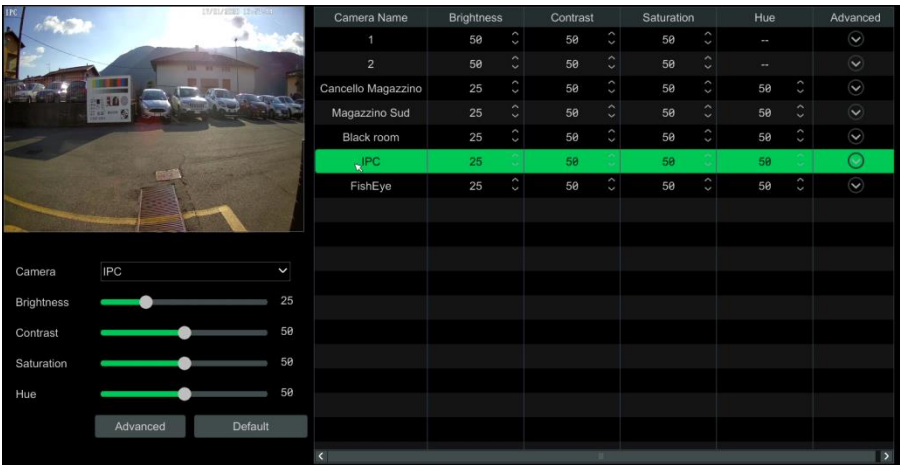
Day/Month/Year

Time Format

Apply

5.4.2 Image settings

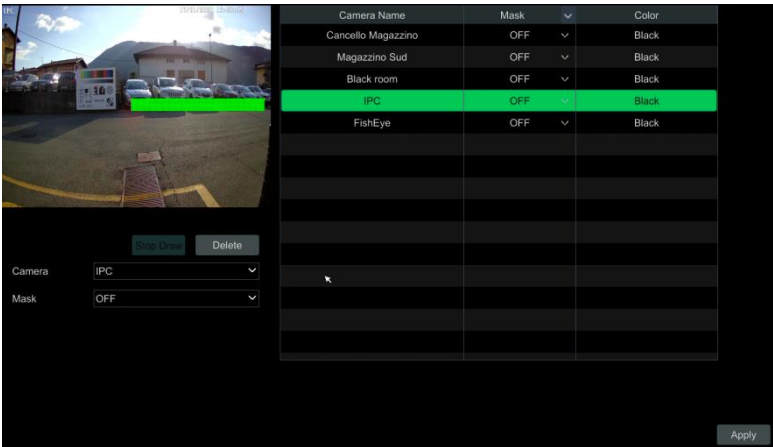
Click Start→Settings→Camera→Image→Image Settings to go to the following interface. Select the camera and then set the brightness, contrast, saturation and hue. Click the “Advanced” button or  in the camera list on the right side of the interface to make the “Image Adjust” interface pop up and then set the relevant items. You can click “Default” to restore the image settings to the default factory settings.



Camera Name	Brightness	Contrast	Saturation	Hue	Advanced
1	50	50	50	--	
2	50	50	50	--	
Cancello Magazzino	25	50	50	50	
Magazzino Sud	25	50	50	50	
Black room	25	50	50	50	
IPC	25	50	50	50	
FishEye	25	50	50	50	

5.4.3 Privacy Mask settings

Some areas of the image can be masked for privacy. Up to four masks can be set for each camera. Click Start→Settings→Camera→Image→Mask Settings to go to the interface as shown below.



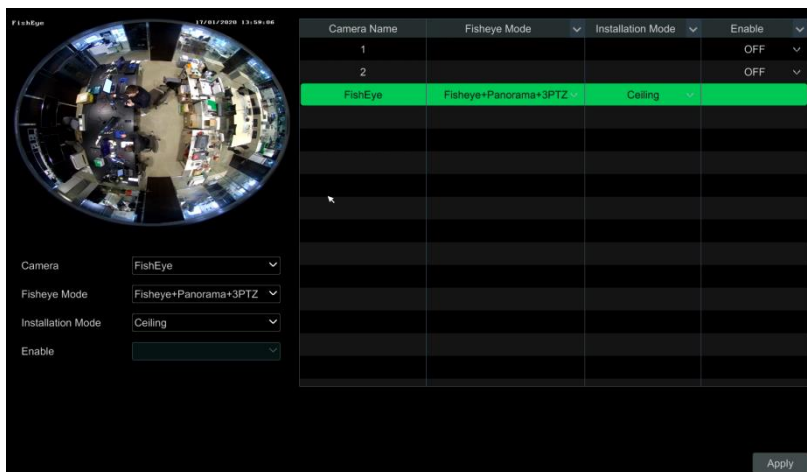
Camera Name	Mask	Color
Cancello Magazzino	OFF	Black
Magazzino Sud	OFF	Black
Black room	OFF	Black
IPC	OFF	Black
FishEye	OFF	Black

Select the camera and enable the mask. Click the “Draw” button and then drag the mouse over the image area to set the mask area. Click the “Delete” button to delete the mask areas. Click “Apply” to save the settings.

5.4.4 Fisheye settings

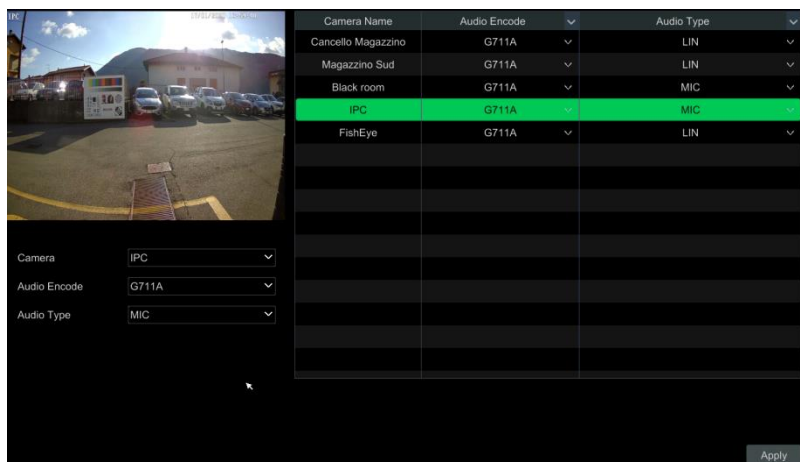
Some models may not support this function.

Click Start→Settings→Camera→Image→Fisheye Settings to go to the interface as shown below. Select the camera and the fisheye mode and installation.



5.4.5 Audio settings

Click Start→Settings→Camera→Image→Audio Settings to go to the interface as shown below.




In this interface, the audio encoding and type for each camera can be selected.

Audio Encode: G711A or G711U.

Audio Type: MIC or LIN.

5.4.6 Image adjustment

Go to the live preview interface and then click  on the toolbar under the camera window to go to the image adjustment interface.





➤ **Image Adjustment**

Select the camera and then click “Image Adjustment” to go to the interface as shown above. Drag the slider to set the camera brightness, contrast, saturation and hue value. Tick sharpen, wide dynamic and denoise and then drag the slider to set the value. Click “Default” to set these parameters to default values. An introduction to these parameters is as follows:

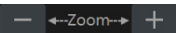


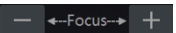


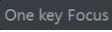
Parameter	Description
Brightness	Brightness level of the camera image.
Contrast	Contrast level of the camera image.
Saturation	Saturation level of the camera image
Hue	Colour degree of the camera image.
Sharpen	Resolution level of the image plane and sharpness level of the image edge.
Wide Dynamic	The wide dynamic range (WDR) function helps the camera provide clear images even under backlight circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provides clear images with details.
Denoise	Decrease the noise and make the image more thorough. Increasing the value will make the noise reduction effect better but it will reduce the image resolution.
White Balance	Automatically adjust the colour temperature according to the environment.

Parameter	Description
BLC	HLC: lowers the brightness of the entire image by suppressing the brightness of the bright area in the image and reducing the size of the halo area. BLC: the auto exposure will activate according to the scene so that the object of the image in the darkest area will be seen clearly.
Image Mirror	Flip the current video image horizontally.
Image Flip	Flip the current video image vertically.

➤ Lens Control

Select the camera and then click “Lens Control” to go to the lens control tab. Click  or  to adjust the zoom and focus parameters for the camera lens. Click “Save” to save the settings.


An introduction to these parameters and buttons is as follows.

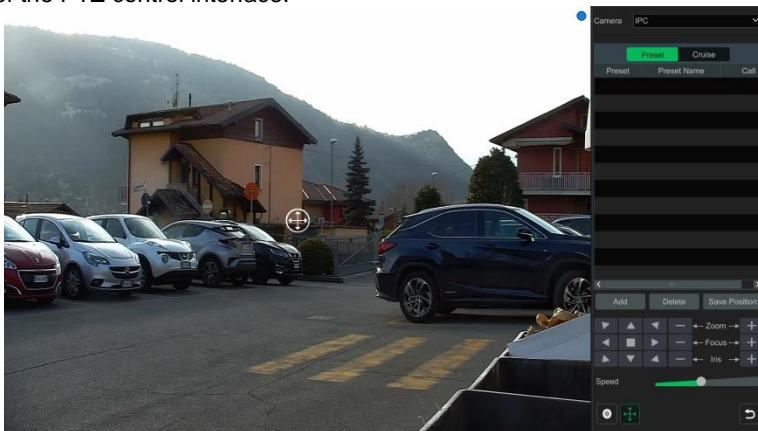
Button/Parameter	Description
	Click  /  to zoom in on/out of the image.
Focus Mode	If manual mode is selected, the focus button, “One Key Focus” and “Day/night mode switch autofocus” will be available. If auto mode is selected, the time interval setup will be available.
	Click  /  to increase/decrease the focus.
	Click it to focus automatically.
Day/night mode switch autofocus	If ticked, the lens will focus automatically when the camera is switching between day/night mode.
Time Interval	This is the time interval when the camera lens is auto-focusing. The interval can be set in the drop-down list.

Note: if the lens of the camera connected to the NVR is fixed, the lens control function is unavailable.

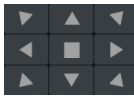









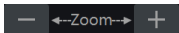


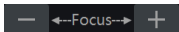


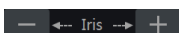










6 PTZ

6.1 PTZ Control Interface

Click  on the toolbar at the bottom of the live preview window to go to the PTZ control interface as shown below. You can select another camera in the top right-hand corner of the PTZ control interface.



An introduction to the buttons at the bottom right-hand corner of the interface:

Button	Description
	Click  /  /  /  /  /  /  /  to rotate the dome. Click  to stop rotating the dome.
	Click  /  to zoom into / out of the camera image.
	Click  /  to increase / decrease the focal length.
	Click  /  to increase / decrease the iris of the dome.
	Drag the slider to adjust the rotating speed of the dome.
	Click  /  to start / stop recording.
	Click  /  to hide / show the analogue joystick.
	Click it to return to the live preview interface.

➤ Analogue Joystick Control

The analogue joystick on the left side of the interface provides quick PTZ control. The PTZ will rotate when you drag the analogue joystick. The further you drag the analogue joystick from the middle of the image, the faster the PTZ will rotate. The PTZ will stop rotating when you stop dragging the analogue joystick.

➤ 3D Control

Click the camera image in any area and then the image will be centred on the clicked point.

Refer to the picture as shown below. Drag the mouse from A to B to make a green rectangle; the rectangle area will be zoomed in.



Refer to the picture as shown below. Drag the mouse from C to D to make a green rectangle; the rectangle area will be zoomed out.



➤ Advanced 3D Control

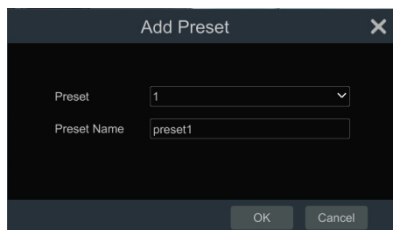
Double-click the left mouse button in any area of the camera image; the image size will be doubled and centred on the clicked point.


Press and hold the left mouse button in any area of the camera image to zoom in on the image; press and hold the right button to zoom out of the image.

Move the mouse cursor to the camera image and then slide the mouse scroll wheel forward to zoom in on the image; slide the mouse scroll wheel backwards to zoom out of the image.

➤ Preset Setting

Click “Preset” to go to the preset operation tab and then click “Add” to make a window pop up as shown below. Select the preset and then enter the preset name in the window; finally click “OK” to save the settings. You can add 255 presets for each dome.

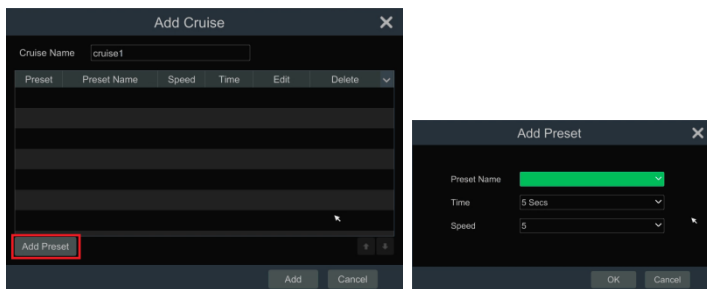




Adjust the dome direction and then click “Save Position” to save the current preset position (you can also click another preset in the preset list and then save the preset position after adjusting the dome direction). Click  in the preset list to recall the preset. Click “Delete” to delete the selected preset.



You can also go to the preset setting interface for preset setting.

➤ Cruise (Tour) Setting

Click “Cruise” to go to the cruise operation tab and then click “Add” to make a window pop up as shown below left. You can add up to 8 cruises for each dome.



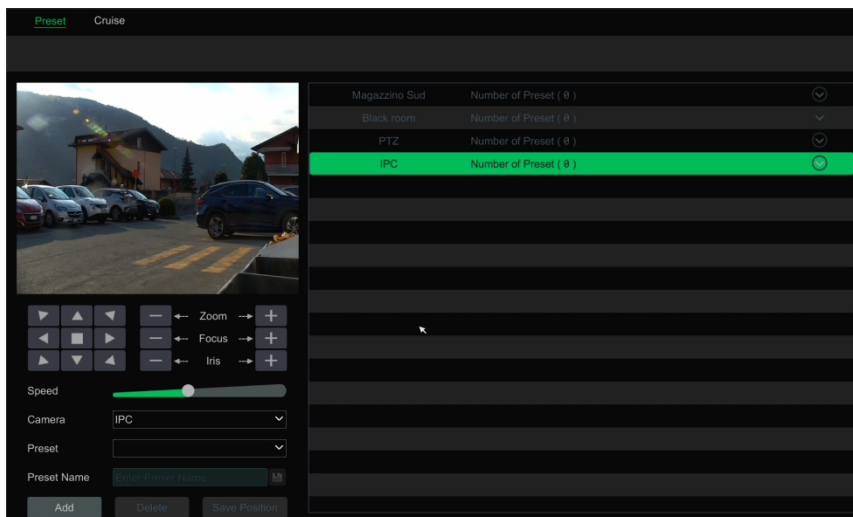
- ① Enter the cruise name in the “Add Cruise” window and then click “Add preset” to make the “Add Preset” window pop up (before adding a preset to the cruise, please add the dome preset).
- ② In the “Add Preset” window, select the preset name, preset time and preset speed and then click “OK”.
- ③ In the “Add Cruise” window, you can click  to edit the preset, then change the preset time and speed. Click  to delete the preset. Click “Add” to save the cruise.

Click  to start the cruise and click  to stop the cruise. Click “Delete” to delete the selected cruise.



You can also go to the cruise setting interface to set the cruise.

6.2 Preset Setting


Click Start→Settings→Camera→PTZ→Preset to go to the interface as shown below.



➤ Add preset

Select a camera and then click “Add” to add preset or click  in the camera list on the right side of the interface to display the preset information for the dome. Click  to add a preset. The “Add Preset” window procedures are similar to those in the PTZ control interface.

➤ Edit preset

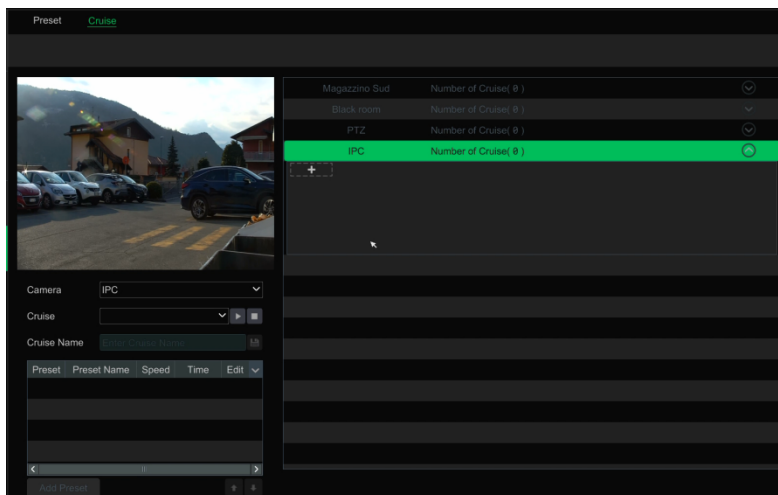
Select camera and preset. Enter the new preset name and then click  to save. Adjust the rotating speed, position, zoom, focus and iris of the preset and then click “Save Position” to save.

➤ Delete Preset



Select a camera and preset and then click “Delete” to delete the preset.

6.3 Cruise (Tour) Setting








Click Start→Settings→Camera→PTZ→Cruise to go to the interface as shown below.





➤ Add Cruise

Click  in the camera list on the right side of the interface to display the cruise information for the dome. Click  to add a cruise. The “Add Cruise” window procedures are similar to those in the PTZ control interface.

➤ Edit Cruise

Select the camera and cruise. Enter the new cruise name and then click  to save. Click “Add Preset” to add a preset to the cruise. Click  to edit the preset. Click  to delete the preset from the cruise. Click one preset in the preset list and then click  to move down the list and click  to move up the list. Click  to start the cruise and click  to stop it.

➤ Delete Cruise

Click  in the camera list on the right side of the interface to display the cruise information for the dome and then click  in the top right-hand corner of the cruise to delete the cruise.

7 Recording & Disk Management

7.1 Recording Configuration

7.1.1 Mode configuration

Please format the HDDs before recording. Click Start→Settings→Record→Mode Settings to go to the mode settings interface. You can set the recording time under “Manual Record Settings” and then click “Apply” to save the settings. There are two recording modes: auto mode and manual mode.

Mode Settings Advanced

Record Mode

Mode Auto

☐ Motion Record

☐ Sensor Record

☐ Motion Record+Sensor Record

☐ Always(24x7) Record+Motion Record

☐ Always(24x7) Record+Sensor Record

☐ Always(24x7) Record+Motion Record+Sensor Record

☒ Always(24x7) Record+Motion Record+Sensor Record+Analytics Record

Advanced

Manual Record Settings

Record Time Manual

Apply

➤ Auto Mode

Motion Record: motion alarm record will be enabled when a motion alarm occurs.

Sensor Record: sensor alarm record will be enabled when a sensor alarm occurs.

Motion Record+Sensor Record: motion/sensor alarm record will be enabled when a motion/sensor alarm occurs.

Always (24 x 7) Record+Motion Record: normal record is enabled all the time; motion alarm record will be enabled when a motion alarm occurs.

Always (24 x 7) Record+Sensor Record: normal record is enabled all the time; sensor alarm record will be enabled when a sensor alarm occurs.

Always (24 x 7) Record+Motion Record+Sensor Record: normal record is enabled all the time; motion/sensor alarm record will be enabled when a motion/sensor alarm occurs.

Always (24 x 7) Record+ Analytics Record: normal record is enabled all the time; analytics record will be enabled when an analytics alarm occurs.

You can add more auto modes for analytics record. Click “Advanced” to go to the interface as shown below. Tick the modes in the window and then click “Add” to show the modes in the recording mode list (in the window, the ticked modes can be shown in the recording mode list. You need to tick “**Analytics Record**”).



Select one auto mode to make the corresponding window pop up. Set the encode, GOP, resolution, FPS, bitrate type, quality, max bitrate and audio for each camera and then click “OK” to save the settings.



Video Encode: H.265 or H.264 if the connected IP camera supports H.265; otherwise the option will be H.264 only.

Resolution: set the camera resolution.

FPS: the higher the frame rate is, the smoother the video. However, more storage space is required.

Bitrate Type: CBR or VBR. CBR means that no matter how much change occurs in the video scene, the compression bitrate will be kept constant. VBR means that the compression bitrate will be adjusted according to scene changes. This will help to optimise the network bandwidth.

Quality: when VBR is selected, you must set the image quality. The higher the image quality, the higher the required bitrate.

Max Bitrate: 32Kbps - 10240Kbps.

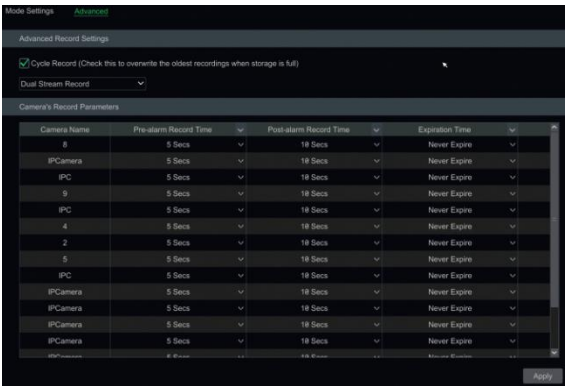
GOP: group of pictures.

➤ Manual Mode

If manual mode is selected, you need to set the encoding parameters and recording schedules for each camera.

7.1.2 Advanced configuration

Click Start→Settings→Record→Advanced to go to the interface as shown below. Enable or disable cycle record (the earliest recording data will be replaced by the latest when the disks are full). Choose the recording stream. Set the pre-alarm record time, post-alarm record time and expiration time for each camera and then click “Apply” to save the settings.



Pre-alarm Record Time: set the time to record before alarm recording begins.

Post-alarm Record Time: set the time to record after alarm recording is finished.

Expiration Time: set the expiration time for recorded video. If the set date is overdue, the recorded data will be deleted automatically.



7.2 Encode Parameters Setting

Click Start→Settings→Record→Encode Parameters to go to the interface as shown below. Set the encode, resolution, FPS, GOP, bitrate type, quality, max bitrate and audio for the main stream of each camera in the Event Recording Settings” and “Schedule Recording Settings” interfaces. Click “Apply” to save the settings. You can set the recording stream for each camera one by one or set them for all cameras at the same time.







Click Start→Settings→Record→Stream Settings to go to the “Sub-stream” interface. Set the encode, resolution, FPS, GOP, bitrate type, quality and max bitrate for the sub-stream of each camera in the interface and then click “Apply” to save the settings.

Set the schedule name and schedule time and then click “Add” to save the schedule.

You can set a day schedule or week schedule. : add button, : delete button.

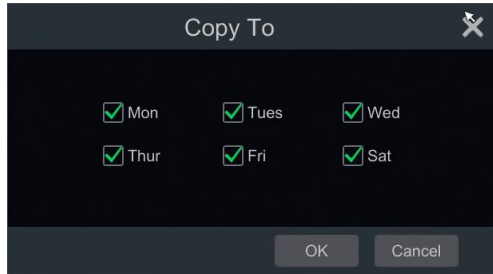
➤ Set Day Schedule

Click  and then drag the cursor on the time scale to set the recording time. Click  and then drag the cursor on the time scale to delete the selected area.




You can manually set the recording start time and end time. Click  or  and then click “Manual” on each day to make a window pop up as shown below. Set the start and end time in the window and then click “OK” to save the settings.

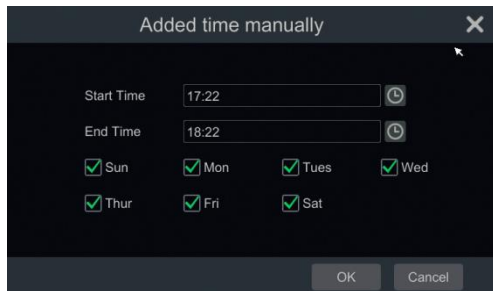
Click “All” to set all-day recording. Click “Reverse” to swap the selected and unselected time in a day. Click “Clear All” to clear all the selected area in a day.

Click “Copy To” to copy the schedule for the day to other days. Refer to the picture below. Tick the days in the window and then click “OK” to save the settings.



➤ Set Week Schedule

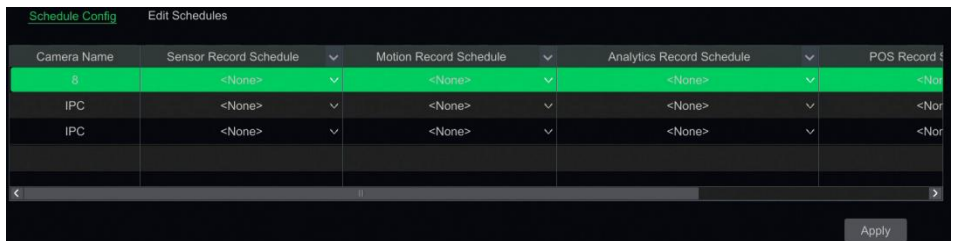
Click  or  and then click “Manual” beside  to set the week schedule. Refer to the picture below. Set the start and end time, tick the days in the window and then click “OK” to save the settings.





Click “All” to set all-week recording. Click “Reverse” to swap the selected and unselected time in a week. Click “Clear All” to clear all the selected area in a week.

7.3.2 Recording schedule configuration


Click Start→Settings→Record→Record Schedule→Schedule Configuration to go to the interface as shown below. Set the schedule for sensor record, motion record, scheduled record and intelligence record. Click “None” in the drop-down menu to clear the schedule. Click “Apply” to save the settings.




Go to the “Edit Schedules” interface and then click  to edit. The settings in “Edit Schedule” are similar to those in “Add Schedule”. Click  to delete the schedule.

7.4 Recording Mode

7.4.1 Manual recording

Method one: click  on the toolbar at the bottom of the live preview interface to enable camera recording.

Method two: go to the live preview interface and then bring up the right-click menu “Manually Record On” in the camera window or click  on the toolbar under the camera window to start recording.

Note: click **Start→Settings→Record→Mode Settings** and then set the manual record time in the interface. Click “Apply” to save the settings.

7.4.2 Scheduled recording

Scheduled recording: the system will record automatically according to the schedule. Set the recording schedule timing for each camera.

7.4.3 Motion-based recording

Motion-Based Recording: the system will start motion-based recording when the motion object appears in the setup schedule. The setup steps are as follows:

- ① Set the motion-based recording schedule for each camera.
- ② Enable the motion and set the motion area for each camera.

The camera will start motion-based recording once you complete the above settings.

7.4.4 Sensor-based recording

- ① Set the sensor-based recording schedule for each camera.
- ② Set the type of the sensor (NO/NC). Enable the sensor alarm and then tick and configure the “Record”.

7.4.5 Analytics-based recording

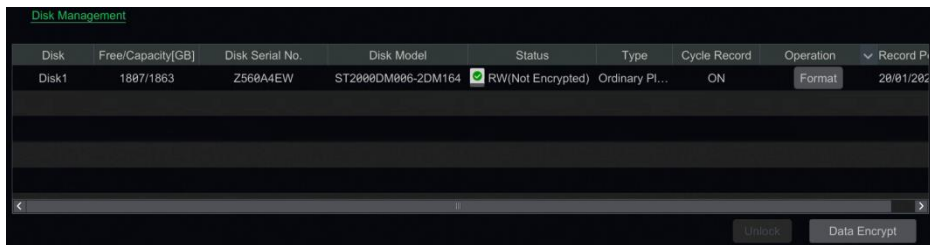
- ① Set the analytics-based recording schedule for each camera.
- ② Enable smart detection (object detection, exception, tripwire, intrusion or face detection) and draw the alert surface or warning area for each camera.

The camera will start analytics recording once you complete the above settings. **This function is only available for some IPCs.**

7.5 Disk

7.5.1 Disk management

Click **Start→Settings→Disk→Disk Management** to go to the disk management interface. You can view the NVR's disk number and disk status, etc. in the interface. Click “Formatting” to format the HDD.



Data Encryption

- ① Click “Data Encrypt”.
- ② Enter the username and password used to login to the NVR. This username and password will have disk management permission.
- ③ Tick the disk you want to encrypt and then enter the password.

After you have encrypted the data on a disk, this disk cannot be read by other NVRs unless it is unlocked.

Data Decryption

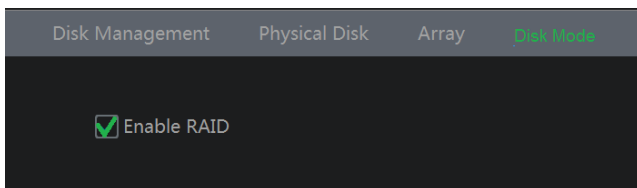
- ① Click “Change Encrypt”.
- ② Enter the username and password used to login to the NVR. This user will have disk management permission.
- ③ Tick the disk you want to decrypt and then clear the password.
- ④ Click “Close Encrypt”.

Unlock the disk: when one encrypted disk is transferred from another NVR, it will be in locked status. Then you can select this locked disk and click “Unlock”. After you enter its data encryption password, its status will be “Read Only”. Now you can read the data on this disk but nothing can be written.

Some models may not support the RAID function. The RAID settings are as follows. Please skip the settings for the physical disk, array and disk mode if the NVR does not support this function.

➤ RAID

- ① Enable RAID
(Go to Start→Settings→Disk→Disk Mode)

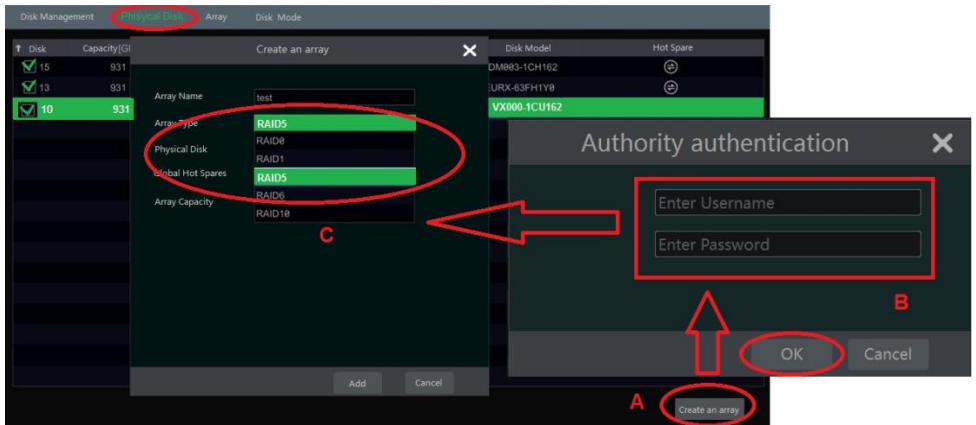


② Create an array. (Go to Start→Settings→Disk→Physical Disk)

a. Click the “Physical Disk” tab and then click “Create an array”.

b. Enter the username and password with Disk Management authority. If you don't have one, you can use the username and password that you login to the system with (default **username: admin**; default **password: admin**).


c. Enter the array name and select an array type (such as RAID5).







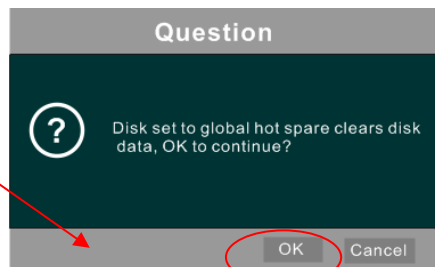
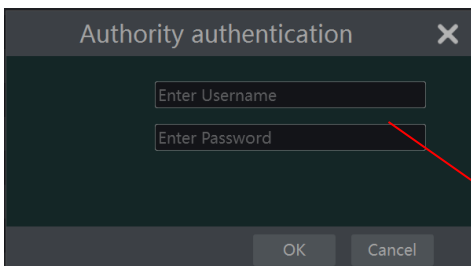
d. Select physical disk.

If you have 16 disks, please tick 15 disks. The remaining one should be set to hot spare.

If higher data security is needed, you can decrease the physical disks and increase the hot spare disks. Please set them as required.


e. Select a hot spare. In the physical disk interface, select the disk that is not in the array and click  as shown in the following pictures.

Disk	Capacity[GB]	Array	Type	Status	Disk Model	Hot Spare
1	931	test	Array disk	Normal	xxxxx	
2	931	test	Array disk	Normal	xxxxx	
3	931	test	Array disk	Normal	xxxxx	
4	931		Ordinary plate	Normal	xxxxx	

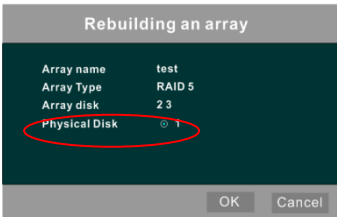


- RAID rebuilding

If one of your disks is broken, the disk indicator on the front panel will turn red. Of course, a warning alert will pop up if the relevant HDD exception alarm is set. You need to rebuild the RAID after replacing the broken disk with a new one.

Disk Management		Physical Disk	Array	Disk Mode			
No.	Name	Capacity[GB]	Physical Disk	Hot Spare Position	Status	Type	Rebuild
1	test	1882	2 3	4	Downgrade	RAID5	

Click the icon circled above and then select the physical disk to rebuild.





7.5.2 Storage mode configuration

Click Start→Settings→Disk→Storage Mode to go to the interface as shown below.

Storage Mode					
Storage Mode		Group			
Group	Disk	Disk2			
1	Disk(1) Camera(4)	(Capacity: 931GB)			
2	Disk(0) Camera(0)	IP Camera1	IP Camera2	IP Camera3	IP Camera4
3	Disk(0) Camera(0)				
4	Disk(0) Camera(0)				

There are four disk groups. To use a disk group, you can register the camera to the disk (the recording data for the camera in the group will be stored on the disks in the same group). The NVR with e-SATA interface supports e-SATA recording.

The added disks and cameras will be added to group one automatically. The disks and cameras in the groups can be deleted except for those in group one (select a disk group and then click  in the top right-hand corner of the added disk or camera to delete it from the group). The deleted disks and cameras will be moved into group one automatically.

Each group can add disks and cameras from other groups. Each disk and camera can only be added to one group. Select a disk group and then click  in the disk or camera row to make a window pop up. Tick the disks or cameras in the window and then click “Add”.

7.5.3 View Disk Information and S.M.A.R.T. Information

Click Start→Settings→Disk→View Disk Information to view the HDD information; click “S.M.A.R.T. Information” to view the status of the HDD. Refer to the picture below.

Disk

Live Display

Camera

Record

Alarm

Disk

Network

Account and Authority

System

Disk Management

Storage Mode

Storage Mode Settings

Disk

View Disk Information

S.M.A.R.T. Information

Disk

S.M.A.R.T. Information

Disk1

Disk Serial No. Z5684AEW

Disk Model ST2000DM006-2DM164

Temperature 36

Power-on Time (day) 536



S.M.A.R.T. Status Normal

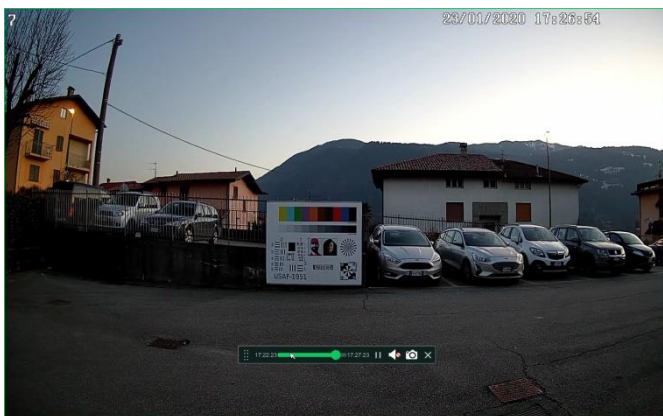
ID	Attribution	Value	Worst Value	Threshold	Raw Value	Status
0x01	Read Error Rate	118	99	6	181558664	Normal
0x03	Spin-Up Time	95	94	0	0	Normal
0x04	Start/Stop Count	100	100	20	120	Normal
0x05	Reallocated Sector Count	100	100	10	0	Normal
0x07	Seek Error Rate	83	60	30	210016905	Normal
0x09	Power-On Hours	86	86	0	12847	Normal
0x0a	Spin Retry Count	100	100	97	0	Normal
0x0c	Power Cycle Count	100	100	20	120	Normal
0xb7	SATA Downshift Error Count	97	97	0	3	Normal
0xb8	End-to-End error	100	100	99	0	Normal
0xb9	Reported Uncorrectable Errors	100	100	0	0	Normal
0xbc	Command Timeout	100	99	0	65537	Normal
0xbd	High Fly Writes	78	78	0	22	Normal

57



8 Playback & Backup

8.1 Instant Playback

Click  on the toolbar at the bottom of the preview camera window to play back the recording (click  on the toolbar at the bottom of the live preview interface to set the default playback time). Refer to the picture below. Drag the playback progress bar to change the playback time. You can also bring up the right-click “Instant Playback” menu in the camera window and then set the instant playback time to play back the recording.



8.2 Playback Interface Introduction

Click  on the toolbar at the bottom of the live preview interface or click Start→Playback to go to the playback interface as shown below (click  on the toolbar at the bottom of the live preview interface to set the default playback time).





















In the panel on the right you will see the channel number and the recorded data coded by colour. The bar that runs across them represents the playback time being viewed. You can move this bar around to export; highlight a section of the desired recording, click export and follow the prompts. You can export single or multiple channels at the same time.

The added cameras will playback their recordings in the playback interface automatically. You can also add the playback camera manually. Click **+** in the playback window to make the “Add Camera” window pop up. Tick the cameras in the window and then click “Add” to add playback camera. The system supports a maximum of 16 synchronous playback cameras.




The buttons on the toolbar (area ①) at the bottom of the playback interface are introduced in the table below.

Button	Description
	Start button. Click it to make area ② pop up.
	Full screen button. Click it to enter full screen mode; click it again to exit.
	Screen mode buttons.
	OSD ON button. Click it to enable OSD; click it again to disable OSD.
	Stop button.
	Rewind button. Click it to play video backwards.
	Play button. Click it to play video forwards.
	Pause button.


Button	Description
	Click it to decrease the playing speed.
	Click it to increase the playing speed.
	Previous frame button. It works only when forwards playing is paused in single screen mode.
	Next frame button. It works only when forwards playing is paused in single screen mode.
	Click  to skip backwards 30s and click  to skip forward 30s.
	Open/close POS information.
	Event list/tag button. Click it to view the manual/schedule/sensor/motion event recording and the tag information.
	Backup button. Drag the mouse on the time scale to select the time periods and cameras. Click the button to backup the recording.
	Backup status button. Click it to view the backup status.
	Back button. Click it to return.
	Full screen motion button.
	Draw rectangle. You can search motion detection recording in the pre-defined rectangular area.
	Draw line. You can search the recording for crossing the line after drawing the line.
	Draw quadrilateral. You can search the recording in this quadrilateral area after drawing it.
	Select face button. Click it to select a face (only available for some models)
	Smart playback settings. Click it to set smart playback.











Note: some models may not support face search and face smart playback.

Introduction to area ②.











Button	Description
 Intelligent Analytics	Click it to go to the intelligent analytics interface.
 Search and Backup	Click it to go to the recording search and backup interface.
 Live Display	Click it to go to the live preview interface.

Click on the playback window to show the toolbar as shown in area ③. Right-click on the window to show the menu list. The toolbar and menu list are introduced in the table below.






Button	Menu List	Description
	--	Click it to move the toolbar anywhere.

	Enable audio	Click it to enable audio and listen to the camera audio.
	Snap	Click it to make a snapshot.
	Zoom In	Click it to go to the zoom in interface. The zoom in interface is similar to that of the camera window in the live preview interface. Click  to pause the recording play mode. Click  to play the recording. When the recording is paused in forward playing mode, you can click  to view the previous frame and click  to view the next frame.
	Add Tag	Click it to add a tag. You can playback the recording by searching the added tag. Click it and then enter the tag name in the pop-up window. Click "Add" to add a tag.
	Switch camera	Click it to switch the camera to playback. Click it and then tick the camera in the pop-up window. Click "OK" to change the camera.
	Close camera	Click it to close the playback.


Introduction to area ④.

Click  to set the date; click  to set the time and then the playback camera will play the recording from the time you set. You can tick the recording type for the playback. First you should click  on the toolbar at the bottom of the interface to clear all playback cameras, then tick the recording type (: manual record; : sensor-based record; : motion-based record; : schedule record; : intelligence record; : POS record). Click  in the playback window to add a camera for playback (the recording time scale will show the recording data for the ticked recording type only after the above steps).

Introduction to the recording time scale (area ⑤).

A toolbar will appear after moving the mouse to the recording time scale. Click  /  to zoom the timeline. Click  to restore the timeline to a 24-hour ratio. Drag the timeline or slide the mouse scroll wheel on the time scale to show the hidden time at the top or bottom of the timeline. You can also click  to show the hidden time at the top of the timeline or click  to show the hidden time at the bottom of the timeline. Drag the slider at the bottom of the time scale to show the hidden playback cameras.


The recording time scale shows different recording types with different colours. The green block represents manual recording, red block represents sensor-based recording, yellow block represents motion-based recording, blue block represents schedule recording and cyan block represents intelligence recording. Click the recording block to set the time and then the playback camera will play the recording from the time you set.

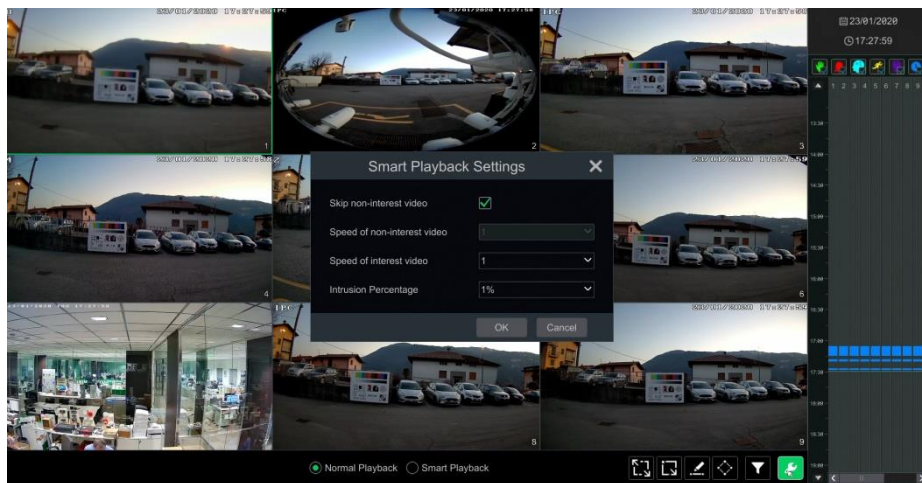
Drag the colour block on the time scale to select the backup area and then right-click the area or click  to make a backup information window pop up. Click the "Backup" button in the window to make the backup window pop up. Select the device, backup

path and backup format and then click the “Backup” button to start the backup.

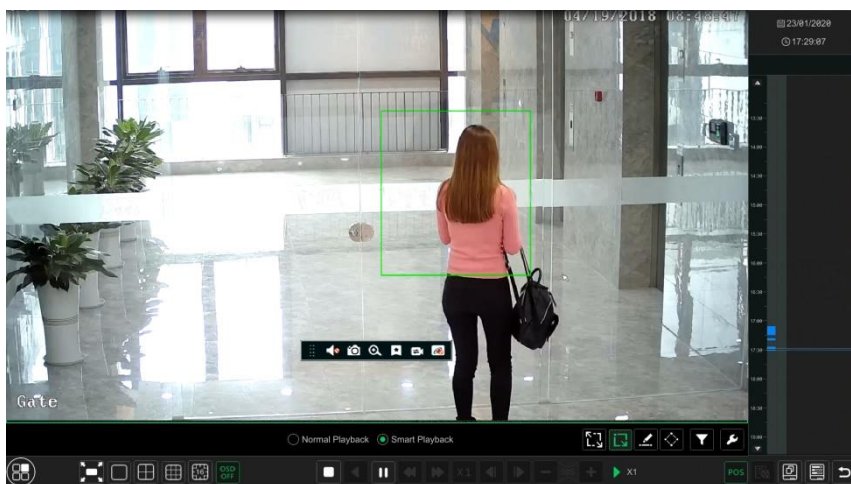
8.3 Smart Playback


- Smart Playback settings

Click  to go to the following interface. Set the value for “Speed of non-interest video”, “Speed of interest video” and “Intrusion percentage”.




- Smart Playback by drawing rectangle




Click  and draw a rectangle in the desired area. Then the system will automatically search the recording files for this area. The cyan blocks indicate that there are intelligent recording files. Move the cursor to this block and click to play the recording.

- **Smart Playback by Drawing Line**

Click  and draw a line in the desired area. Then the system will automatically search the recording files for instances of crossing this line. The cyan blocks indicate that there are intelligent recording files. Move the cursor to this block and click to play the recording.



- **Smart Playback by Drawing Quadrilateral**

Click  and draw a quadrangle in the desired area. Then the system will automatically search the recording files for this area. The cyan blocks indicate that there are intelligent recording files. Move the cursor to this block and click to play the recording.

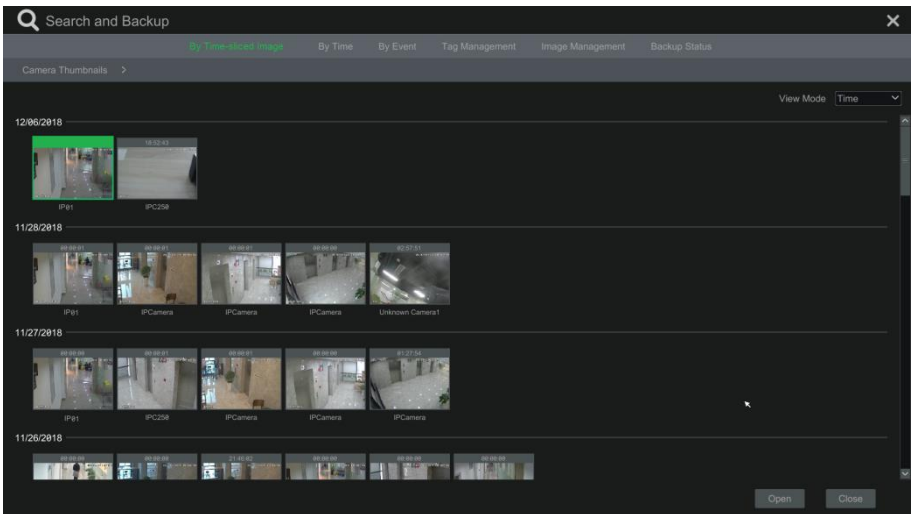


8.4 Recording Search, Playback & Backup

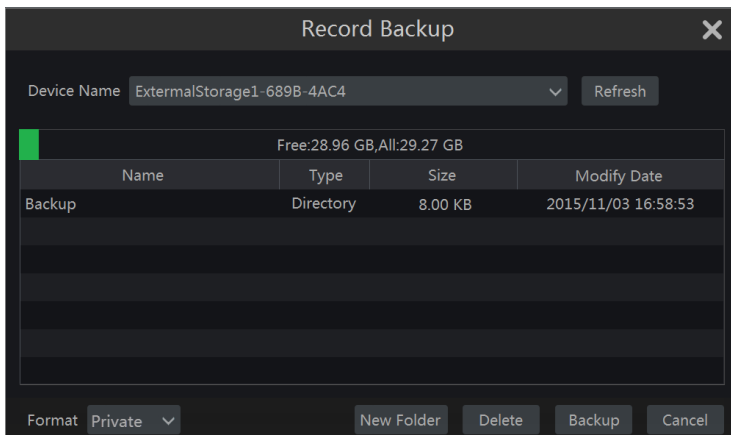
Recording data and snapped pictures can be backed up via network, USB (U disk or USB mobile HDD) or e-SATA (only available for some models). The filing system for the backup devices should be FAT32 format.

8.4.1 Search, Playback & Backup by Time-sliced Image

① Click Start→Search and Backup→By Time-sliced Image. There are two viewing modes: by time and by camera. In time view mode, a maximum of 64 camera thumbnails can be shown. If the number of camera thumbnails is greater than 64, the cameras will be listed directly by their camera name, not the thumbnail. A maximum of 196 camera names can be listed. If the number of camera names is greater than 196, time view mode will be disabled and only camera view mode will be available.

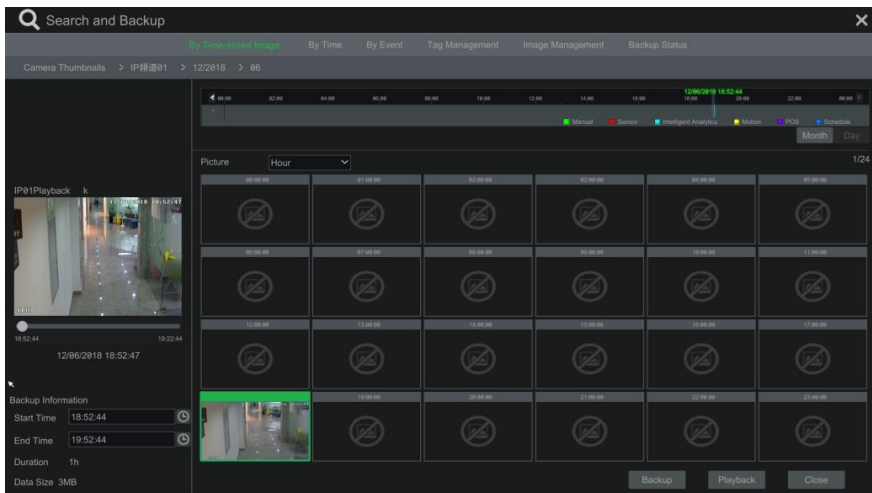


- ② Select one camera in the interface and then click the “Open” button.
- ③ Click the image box to play the recording in the small playback box on the left side of the interface (the box with an image inside indicates that recording data exists).
- ④ Refer to the picture below. Drag the colour blocks on the time scale to select the recording data and then click the “Backup” button to make the “Record Backup” window pop up as shown below. Select the device name, backup format and path and then click the “Backup” button to start the backup.




Note: if you back up the recording in private format, the system will backup a player on the USB device automatically. The private format recording can be played by this player only.

- ⑤ Click “Playback” to play the recording in the playback interface. Click “Close” to close the interface.





Time Slice mode selection

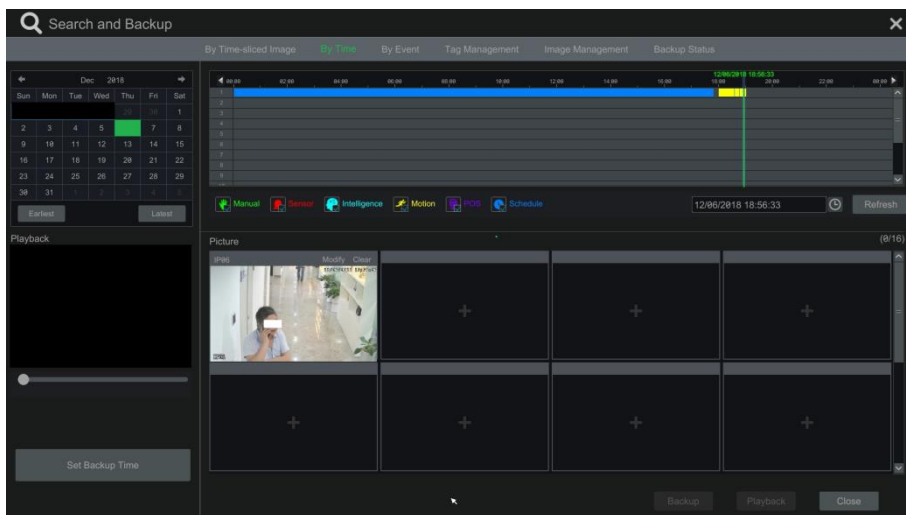
Method one. Click the “Year”, “Month” or “Day” button under the recording time scale to select the time slice mode. In “Day” mode, click ◀ / ▶ on the left/right side of the time scale to view the recording for the previous/next day. Click “Minute” in the “Picture” option under the time scale to select “Minute” mode (in “Minute” mode, click the time scale to change the time of the 60 display windows) or click “Hour” to select “Hour” mode.

Method two. Click  beside “Camera Thumbnail” in the top left-hand corner of the interface to select the time slice mode.

Method three. Right-click the mouse on any area of the time-sliced interface to go back to the upper level of the interface.

8.4.2 Search, Playback & Backup by Time

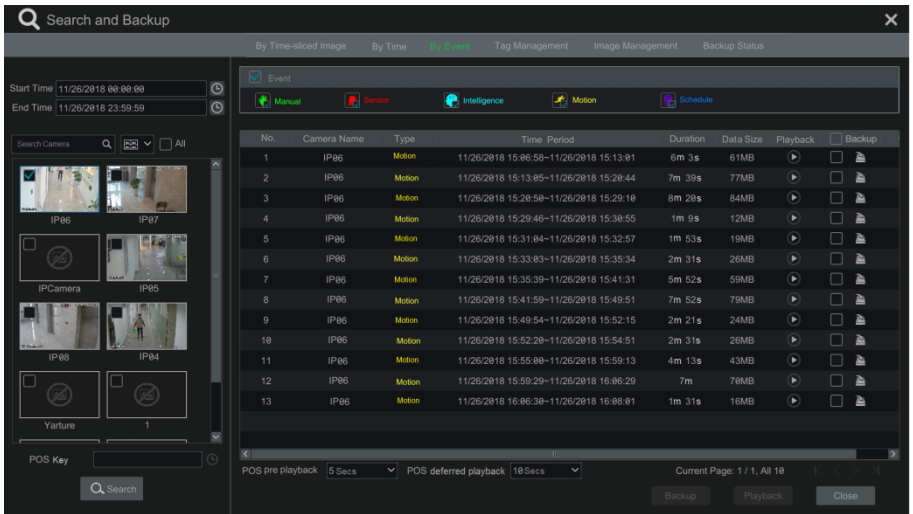
- ① Click Start→Search and Backup→By Time to go to the “By Time” tab as shown below.
- ② Click  on the bottom of the interface to add the camera. A maximum of 16 cameras can be added for playback. Click “Modify” in the top right-hand corner of the camera window to change the camera and click “Clear” to remove the camera.
- ③ Click the camera window to play the recording in the small playback box on the left side of the interface. You can set the date in the top left-hand corner of the interface, tick the event type and click the time scale or click  under the time scale to set the time. The camera window will play the recording according to the time and event type you set.
- ④ Drag the colour blocks on the time scale to select the recording data (or click “Set Backup Time” in the bottom left-hand corner of the interface to set the backup start time and end time) and then click “Backup” for recording backup. Click “Playback” to play the recording in the playback interface.







8.4.3 Search, Playback & Backup by Event


Some models may support searching by POS event.

- ① Click Start→Search and Backup→By Event to go to the “By Event” tab as shown below.

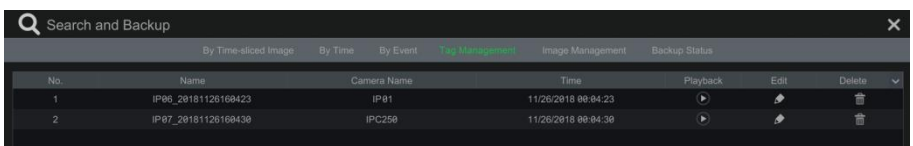





- ② Tick the event type in the interface.
- ③ Click  to set the start time and end time in the top left-hand corner of the interface.
- ④ Tick the cameras on the left side of the interface or tick "All" to select all the cameras and then click  to search the recordings. The searched recordings will be displayed in the list.
- ⑤ Click  in the list to play back the recording in the pop-up window. Click  to back up data for one recording or tick multiple recording data in the list and then click "Backup" for batch recording backup.
- ⑥ Select one recording data entry in the list and then click "Playback" to play the recording in the playback interface.

8.4.4 Search & Playback by Tag

Only by adding the tags can you play the recording by tag search. Click Start→Playback to go to the playback interface and then click  on the bottom of the camera window to add a tag when you want to mark the playback time point for the selected camera.

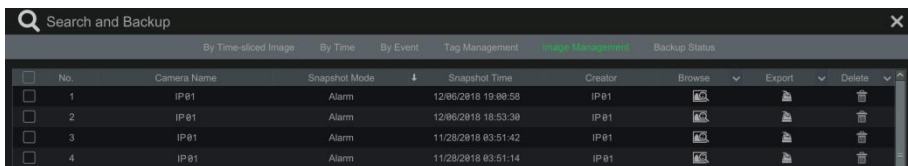
Click Start→Search and Backup→Tag Management to go to the "Tag Management" tab.

















Click  in the interface to play the recording. Click  to edit the tag name. Click  to delete the tag.







8.4.5 Image Management

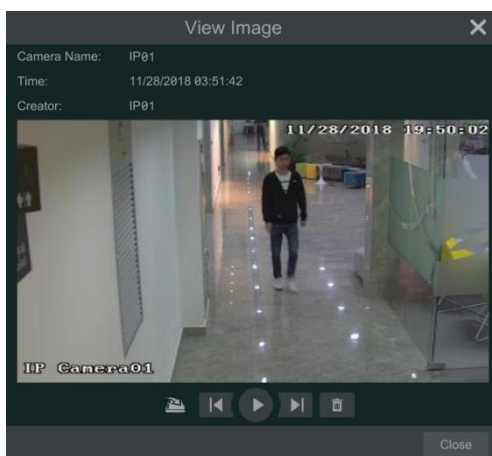
Click Start→Search and Backup→Image Management to go to the “Image Management” tab. The system will display all the snapped images in the list.




No.	Camera Name	Snapshot Mode	Snapshot Time	Creator	Browse	Export	Delete
1	IP01	Alarm	12/06/2018 19:00:58	IP01			
2	IP01	Alarm	12/06/2018 18:53:38	IP01			
3	IP01	Alarm	11/28/2018 03:51:42	IP01			
4	IP01	Alarm	11/28/2018 03:51:14	IP01			

Click  to delete the image. Click  to make the “Export” window pop up. Select the device name and save path and then click the “Save” button.

Click  to make the “View Image” window pop up. Click  to export the image. Click  to view the previous image. Click  to view the next image. Click  to delete the image. Click  to play all the images.



8.4.6 View Backup status

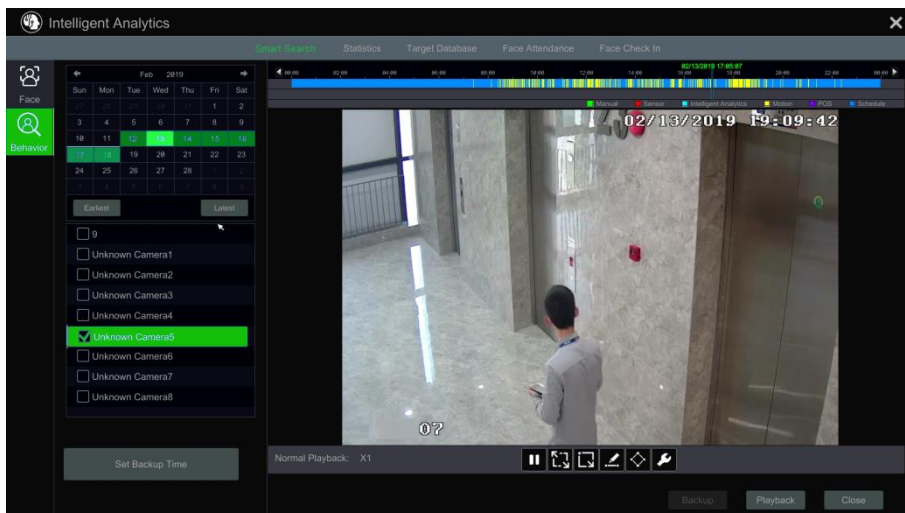
Click Start→Search and Backup→Backup Status or click  on the toolbar at the bottom of the playback interface to view the backup status.

8.4.7 Smart Behaviour Search

① Click Start→Intelligent Analytics→Smart Search to go to the “Smart Search” tab as shown below.

Behaviour Detection: when you select smart playback mode, the system will analyse the video including motion detection, tripwire and intrusion detection.

- ② Click “Behavior”. Set the search time period and you will search the channel which has the intelligence detection recording.
- ③ Tick the channel and select smart playback.
- ④ Select the channel and then set the backup time to backup.



: Smart playback settings button. Click it to set the intrusion percentage.



: Full screen motion button.



: Motion button.



: Draw line button. You can search the recording for crossing the line after drawing the line.



: Draw quadrilateral. You can search the recording in this quadrilateral area after drawing it.

9 Alarm Management

9.1 Sensor Alarm

To complete the entire sensor alarm settings, you should enable the sensor alarm for each camera and then set up alarm handling for each camera.



- ① Click Start→Settings→Alarm→Sensor Alarm to go to the following interface.

No.	Alarm Name	Schedule	Type	Enable	Duration	Record	Snapshot	Push	Alarm-out	Alarm-in
Local-1	Sensor1	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
Local-2	Sensor2	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
Local-3	Sensor3	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
Local-4	Sensor4	24x7	NO	ON	30 Secs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ON	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Local-5	Sensor5	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
Local-6	Sensor6	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
Local-7	Sensor7	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
Local-8	Sensor8	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
TB-1	Sensor1	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
New Add.	Sensor1	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
IPC-1	Sensor1	24x7	NO	ON	30 Secs	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>

- ② Select the alarm type (NO or NC) according to the sensor trigger type.
- ③ Enable the sensor alarm for each camera.
- ④ Tick “Duration”, “Record”, “Snapshot”, “Push”, “Alarm-out” and “Preset” and enable or disable the “Buzzer”, “Pop-up Video”, “Pop-up Message Box” and “E-mail” as required.
- ⑤ Click “Apply” to save the settings.

The configuration steps for the above-mentioned alarm linkages are as follows.

Duration: refers to the interval time between adjacent motion detections. For instance, if the duration time is set to 10 seconds, once the system detects a motion, it will proceed to alarm and will not detect any other motion (specific to camera) for 10 seconds. If another motion is detected during this period, it will be considered as continuous movement; otherwise it will be considered as a single motion.

Record: tick it and the “Trigger Record” window will pop up automatically (you can also click the “Configure” button to make the window pop up). Select a camera on the left side and then click  to set the camera as the trigger camera. Select the trigger camera on the right side and then click  to cancel the trigger camera. Click “OK” to save the settings. The trigger cameras will record automatically when the sensor alarm is triggered.

Snapshot: tick it and the “Trigger Snapshot” window will pop up automatically. Configure the trigger camera in the window. The trigger cameras will snap automatically when the sensor alarm is triggered.

Push: tick it and choose ON or OFF. If it is ON, the system will send messages when the sensor alarm is triggered.

Alarm-out: tick it and the “Trigger Alarm-out” window will pop up automatically. Configure the trigger alarm-out in the window. The system will trigger the alarm-out automatically when the sensor alarm is triggered. You need to set the delay time and the schedule for the alarm outputs.

Preset: tick it and the “Trigger Preset” window will pop up automatically. Configure the trigger preset for each camera.

Buzzer: if enabled, the system will begin to sound when the sensor alarm is triggered.

Pop-up Video: after camera setting, the system will show the corresponding video pop-up automatically when the sensor alarm is triggered.

Pop-up Message Box: if enabled, the system will show the corresponding alarm message pop-up box automatically when the sensor alarm is triggered.

E-mail: if enabled, the system will send an email when the sensor alarm is triggered. Before you enable email, please configure the recipient’s email address first.

9.2 Motion Alarm

Motion Alarm: when the motion object appears in the specified area, it will trigger the alarm. You should enable the motion of each camera first and then set the alarm handling of the camera to complete full configuration of the motion alarm.

9.2.1 Motion configuration

- ① Click Start→Settings→Camera→Motion to go to the following interface.



Camera Name	Motion	Sensitivity	Duration
giardino	OFF	4	20 Secs
giardino	OFF	4	20 Secs
ingresso	ON	4	20 Secs
10	OFF	4	20 Secs
parcheggio	OFF	4	20 Secs
serie Advance	OFF	4	20 Secs
IPC	OFF	4	20 Secs
ptz	OFF	4	20 Secs
IPC	OFF	5	20 Secs
parcheggio	OFF	4	20 Secs

Processing Mode Apply

- ② Select the camera, enable the motion and set the sensitivity and duration.

Sensitivity: the higher the value is, the more sensitive it is to motion. You should adjust the value according to the conditions, as the sensitivity is influenced by colour and time (day or night).

Duration: refers to the interval time between adjacent motion detections. For instance, if the duration time is set to 10 seconds, once the system detects a motion, it will proceed to alarm and will not detect any other motion (specific to camera) for 10 seconds. If another motion is detected during this period, it will be considered as continuous movement; otherwise it will be considered as a single motion.

- ③ Drag the camera image to set the motion area. You can set more than one motion area. Click “All” to set the whole camera image as the motion area. Click “Reverse” to swap the motion area and the non-motion area. Click “Clear” to clear all the motion areas.
- ④ Click “Apply” to save the settings. Click “Processing Mode” to go to the alarm handling configuration interface.

9.2.2 Motion Alarm Handling Configuration

- ① Click Start→Settings→Alarm→Motion Alarm to go to the following interface.

[illegible]

- ② Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting for the motion alarm is similar to that of the sensor alarm.
- ③ Click “Apply” to save the settings. You can click “Motion Settings” to go to the motion configuration interface.

9.3 Combination Alarm

- ① Click Start→Settings→Alarm →Combination Alarm to go to the following interface.
- ② Customise the combination alarm. Set the alarm name and click “Configure” under the Combined Alarm Configuration item. Then select the alarm type and alarm source. Finally, click “OK” to save the settings.

- ③ Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting for a combination alarm is similar to that of the sensor alarm.
- ④ Click “Apply” to save the settings.

Alarm Handling Settings

☒ Buzzer
 ☒ Pop-up Video
 ☒ Pop-up Message Box
 ☒ E-mail

Alarm Name	Combined Alarm Configu...	Record	Snapshot	Push	Alarm-out	Preset
Customized Alarm0	<input checked="" type="checkbox"/> Configure	<input checked="" type="checkbox"/> Configure	<input checked="" type="checkbox"/> Configure	ON	<input checked="" type="checkbox"/> Configure	<input checked="" type="checkbox"/> Configure
Customized Alarm1	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm2	Combined Alarm Configuration			ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm3				ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm4				ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm5				ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm6				ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm7				ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm8				ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm9				ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm10				ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm11				ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm12	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm13	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm14	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure
Customized Alarm15	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure	ON	<input type="checkbox"/> Configure	<input type="checkbox"/> Configure

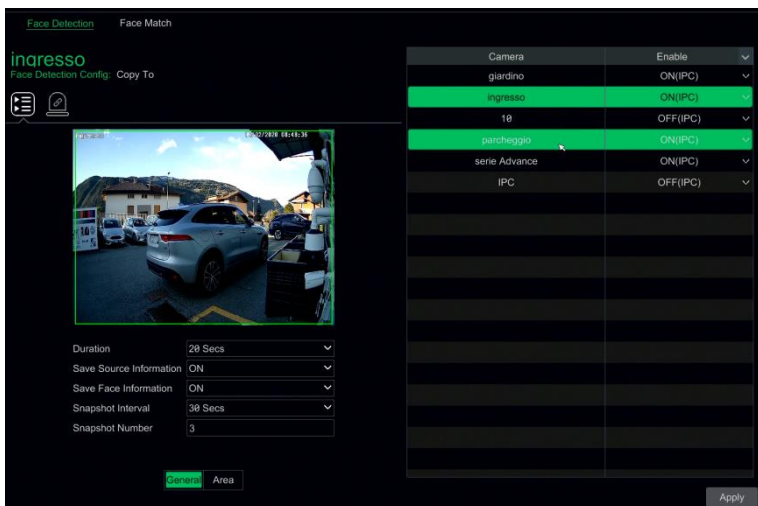
Apply


9.4 Smart Event

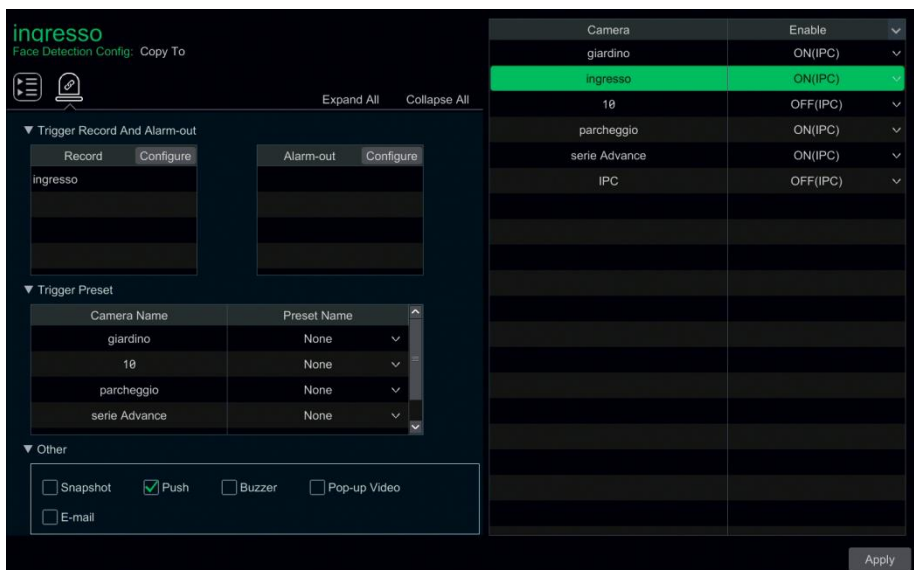
9.4.1 Face Detection

Face Detection: alarms will be triggered if target people intrude into the pre-defined alarm areas.

- ① Click Start→Settings→Alarm→ Smart Event →Face Detection to go to the following interface.



- ② Select the camera, enable face detection and set the duration.
If the added cameras are face detection cameras, ON or OFF can be selected.
- ③ Enable save source information and save face information.
- ④ Select the alarm area. Draw the alarm area. Click “Area” and then drag the mouse to draw a detection area. Click “Clear” to delete the alarm area.
- ⑤ Click “Apply” to save the settings.
- ⑥ Click  to go to the alarm handling configuration interface.



Enable or disable “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting for the face detection alarm is the same as the sensor alarm.
Click “Apply” to save the settings.


9.4.2 Face Match

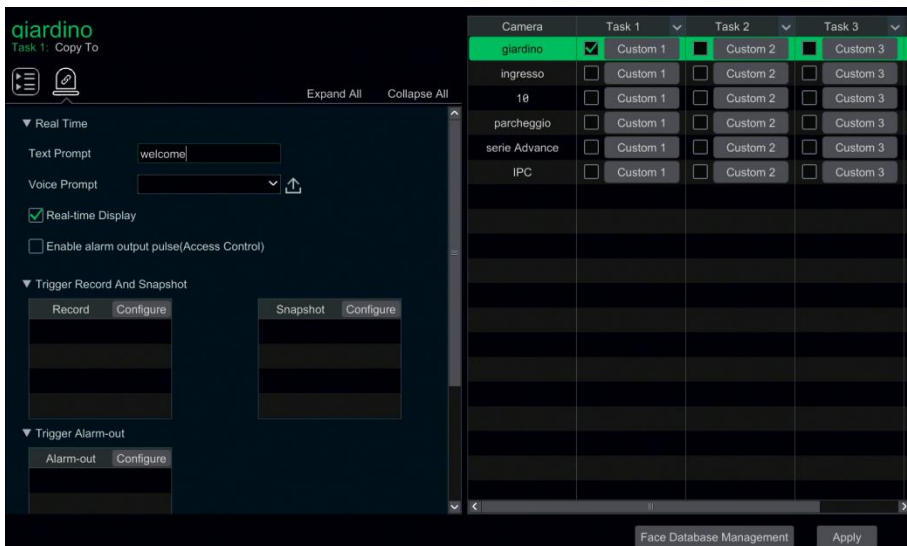
This function is only available for models with face recognition function.


① Click Start→Settings→Alarm→ Face Match to go to the following interface.

Camera	Task 1	Task 2	Task 3
giardino	<input checked="" type="checkbox"/> Custom 1	<input type="checkbox"/> Custom 2	<input type="checkbox"/> Custom 3
ingresso	<input type="checkbox"/> Custom 1	<input type="checkbox"/> Custom 2	<input type="checkbox"/> Custom 3
10	<input type="checkbox"/> Custom 1	<input type="checkbox"/> Custom 2	<input type="checkbox"/> Custom 3
parcheggio	<input type="checkbox"/> Custom 1	<input type="checkbox"/> Custom 2	<input type="checkbox"/> Custom 3
serie Advance	<input type="checkbox"/> Custom 1	<input type="checkbox"/> Custom 2	<input type="checkbox"/> Custom 3
IPC	<input type="checkbox"/> Custom 1	<input type="checkbox"/> Custom 2	<input type="checkbox"/> Custom 3

② Select the camera, enable it and click “Custom” under Task to set the general configuration for face match.

- Enable Custom and select the schedule.
- Select the groups and set their similarity.
- Click “Copy To” to copy all settings to other cameras
- Choose the Specification Type: Allow List or Block List
- Click  (trigger mode)



- Set the text and voice prompts for successful matches and failed matches as needed. Click  to upload the audio.
- Enable alarm output as needed.
- Set the alarm linkage items after a successful match. In this interface, “Snapshot”, “Push”, “Alarm-out”, “Buzzer”, “Pop-up Video” “Pop-up Message Box” and “E-mail” can be configured or enabled. The alarm linkage settings are the same as for the sensor alarm.

9.4.3 Crowd Density Detection

Only certain versions may support this function.

Crowd Density Configuration.

Alarms will be triggered if the crowd density exceeds the set threshold value in the pre-defined area.

① Click Start→Settings→Alarm→ Smart Event →Crowd Density to go to the following interface.

Crowd Density Config

Copy To

Expand All

Collapse All

▼ Trigger Record And Alarm-out

RecordConfigure

ptz

Alarm-outConfigure

▼ Trigger Preset

Camera Name	Preset Name	
giardino	None	▼
1θ	None	▼
parcheggio	None	▼
serie Advance	None	▼

▼ Other

☐ Snapshot☒ Push☐ Buzzer☐ Pop-up Video
☐ E-mail

CameraEnable

ptzON

Apply

Click “Apply” to save the settings. You can click “Crowd Density Config” to go to the crowd density detection configuration interface.

Only certain versions may support this function.

Alarms will be triggered if someone enters the detection area.

78

Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting for people intrusion detection alarm is similar to that of the sensor alarm.
Click “Apply” to save the settings.

9.4.5 People Counting

Only certain versions may support this function.

People Counting Configuration

This function is used to calculate the number of people entering or exiting the detection area by detecting, tracking and counting the head shapes of people.

① Click Start→Settings→Alarm→ Smart Event →People Counting to go to the following interface.


② Select the camera, enable people counting detection and set the duration, sensitivity, statistical cycle, enter threshold, departure threshold and retention threshold.

Statistical cycle: All, Daily, Weekly or Monthly.

Reset: the current people counting number will be cleared and the statistical cycle will restart on clicking the “Reset” button.

③ Set the alarm area and entrance direction. Click “Draw Area” and drag the mouse to draw a rectangular area. Drag the four corners of the rectangle to adjust its size and drag the lines of the rectangle to change its position. Untick “Draw Area” if you finish the drawing. Click “Clear” to clear the area.

④ Click “Apply” to save the settings.

⑤ Click  to go to the alarm handling configuration interface.

9.4.6 Object Detection

Object Detection Configuration

① Click Start→Settings→Alarm→ Smart Event →Object Detection to go to the following interface.

② Select the camera, enable object detection and set the duration and detect type. There are two detect types: Abandoned object or Missing object.

Abandoned object: alarms will be triggered if there are articles left in the pre-defined detection area.

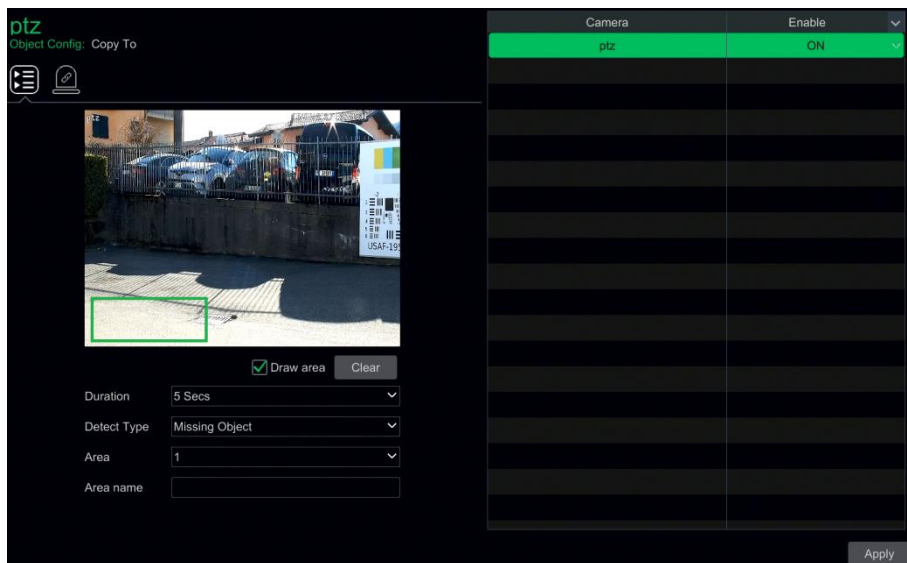
Missing object: alarms will be triggered if articles are removed from the pre-defined detection area.

③ Select the alarm area. A maximum of 4 alarm areas can be set.

④ Draw the alarm area for object detection. Refer to the interface as shown above. Tick “Draw Area” and then click around the area you want to set as the alarm area in the image (the alarm area should be a closed area). Untick “Draw Area” if you finish the drawing. Click “Clear” to delete the alarm area.

- Click “Apply” to save the settings.

⑥ Click to go to the alarm handling configuration interface for object detection.

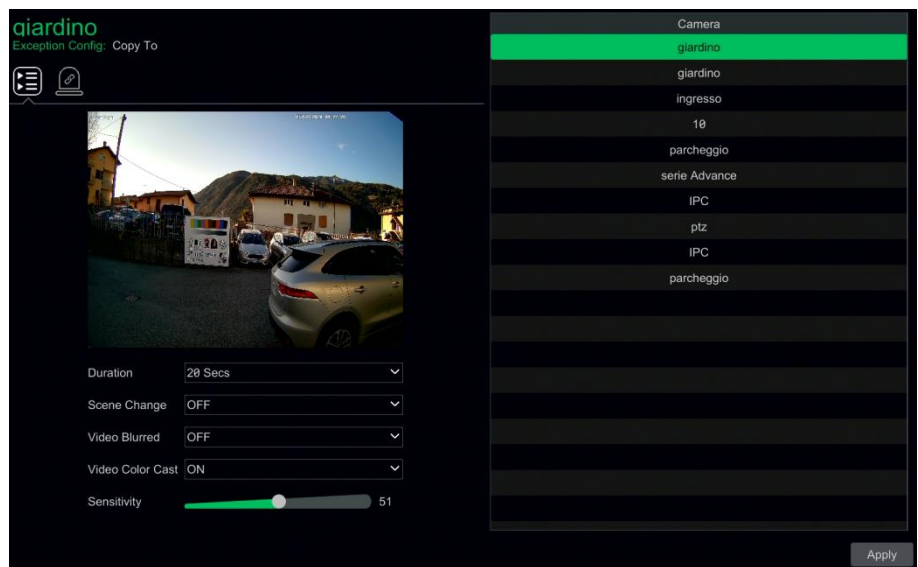


[illegible]

9.4.7 Exception

Exception Configuration

① Click Start→Settings→Camera→ Smart Event →Exception to go to the following interface.



② Select the camera and enable the relevant detection as needed.


Scene Change: alarms will be triggered if the scene changes.

Video Blurred: alarms will be triggered if the scene becomes blurry.

Video Color Cast: alarms will be triggered if the scene becomes obscured.

③ Set the sensitivity for exception detection.

④ Click “Apply” to save the settings.

⑤ Click  to go to the alarm handling configuration interface.

Exception Alarm Handling Configuration

giardino

Exception Config: Copy To

Expand All

Collapse All

▼ Trigger Record And Alarm-out

Record

giardino

Configure

Alarm-out

Configure

▼ Trigger Preset

Camera Name	Preset Name	
giardino	None	▼
10	None	▼
parccheggio	None	▼
serie Advance	None	▼

▼ Other

☐ Snapshot

☒ Push

☐ Buzzer

☐ Pop-up Video

☐ E-mail

Camera

giardino

giardino

ingresso

10

parccheggio

serie Advance

IPC

ptz

IPC

parccheggio

Apply

Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting for the exception detection alarm is similar to that of the sensor alarm.

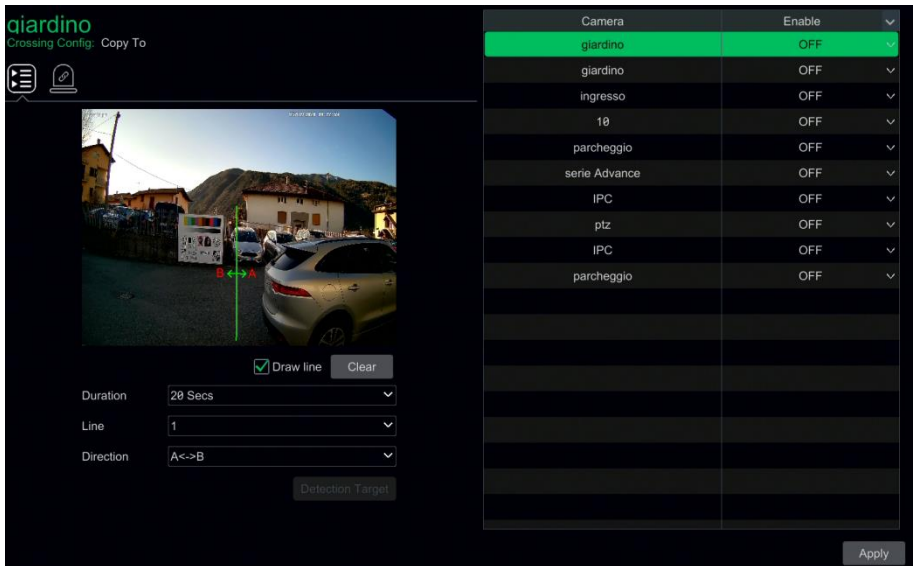
Click “Apply” to save the settings.

9.4.8 Tripwire

Tripwire/Line Crossing Configuration

Alarms will be triggered if someone or something crosses the pre-defined alarm line.

① Click Start→Settings→Alarm→ Smart Event →Tripwire to go to the following interface.



② Select the camera, enable line crossing detection and set the duration.

③ Select the direction.

Direction: A<->B, A->B or A<-B, this is the crossing direction of the intruder who crosses the alert line.


A<->B: the alarm triggers when the intruder crosses the alert line from B to A or from A to B.

A->B: the alarm triggers when the intruder crosses the alert line from A to B.

A<-B: the alarm triggers when the intruder crosses the alert line from B to A.

④ Draw line. Refer to the interface as shown above. Tick “Draw line” and then drag the mouse in the image to draw an alert line. Untick “Draw line” if you finish the drawing. Click “Clear” to delete the alert line.

⑤ Click “Apply” to save the settings.

⑥ Click  to go to the alarm handling configuration interface for line crossing detection.

Tripwire Alarm Handling Configuration

giardino

Crossing Config: Copy To

Trigger Record And Alarm-out

Record

giardino

Configure

Alarm-out

Configure

Trigger Preset

Camera Name	Preset Name
giardino	None
10	None
parcheggio	None
serie Advance	None

Other

☐ Snapshot

☒ Push

☐ Buzzer

☐ Pop-up Video

☐ E-mail

Camera	Enable
giardino	OFF
giardino	OFF
ingresso	OFF
10	OFF
parcheggio	OFF
serie Advance	OFF
IPC	OFF
ptz	OFF
IPC	OFF
parcheggio	OFF


Apply

- ① Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting for the line crossing alarm is similar to that of the sensor alarm.
- ② Click “Apply” to save the settings.


9.4.9 Intrusion Detection

Intrusion Configuration

Alarms will be triggered if someone or something intrudes into the pre-defined area.

- ① Click Start→Settings→Alarm→ Smart Event →Intrusion Detection to go to the following interface.
- ② Select the camera, enable intrusion detection and set the duration.
- ③ Select the alarm area. Up to 4 alarm areas can be set up.
- ④ Draw the alarm area for intrusion detection. Refer to the interface as shown below. Tick “Draw Area” and then click around the area you want to set (the alarm area should be a closed area). Untick “Draw Area” if you finish the drawing. Click “Clear” to delete the alarm area.
- ⑤ Click “Apply” to save the settings.
- ⑥ Click  to go to the alarm handling configuration interface for intrusion detection.

giardino
Intrusion Config: Copy To



☒ Draw area Clear

Duration 20 Secs

Area 1

Detection Target

Camera	Enable
giardino	ON
giardino	OFF
ingresso	OFF
10	OFF
parcheggio	OFF
serie Advance	OFF
IPC	OFF
ptz	OFF
IPC	OFF
parcheggio	OFF

Apply

Intrusion Detection Alarm Handling Configuration

[illegible]

Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting for the intrusion detection alarm is similar to that of the sensor alarm.

- ① Click “Apply” to save the settings.

- ② Set the delay time and the schedule for each alarm-out. You can click “Edit Schedules” to edit the schedules.
- ③ Click “Apply” to save the settings. You can click “Test” to test the alarm output.

9.6.2 E-mail

Click Start→Settings→Alarm→Event Notification→E-mail to go to the email configuration interface. Set the email address of the recipients.

9.6.3 Display

Click Start→Settings→Alarm→Event Notification→Display to go to the display configuration interface. Set the duration time of the pop-up video and the pop-up message box. If your device supports two outputs, please set the pop-up video output as required. After that, click “Apply” to save the settings.

Pop-up Video

Duration 10 Secs ▼

Pop-up Message Box

☐ Don't show later

Duration 10 Secs ▼

Apply

9.6.4 Buzzer

Click Start→Settings→Alarm→Event Notification→Buzzer to go to the buzzer configuration interface. Set the delay time for the buzzer and then click “Apply” to save the setting. You can click “Test” to test the buzzer.

Buzzer

Delay 5 Secs ▼

Test Apply

9.6.5 Push Message

Click Start→Settings→Alarm→Event Notification→Push Message to go to the interface as shown below. Tick “Enable” and then click “Apply” to save the settings. If the Push Server is online, it will push messages to the mobile clients.

Push Message

☒ Enable

Push Schedule

24x7

Push Server Status:Disable


Test

Apply

9.6.6 Alarm Server

Go to Alarm→Alarm Server to go to the Alarm Server interface.
Enable the alarm server and enter the server address and port of the alarm server.
Then select a protocol. If “Send Heartbeat” is enabled, set the interval times. After that,
test the alarm server. Having tested successfully, please click “Apply”. When an alarm
occurs, the device will transfer the alarm event to the alarm server.


9.7 Manual Alarm

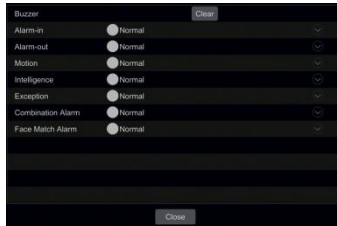
Click  on the toolbar at the bottom of the live preview interface to make a window pop up. Click “Trigger” to start the alarm. Click “Clear” to stop the alarm.


AlarmOut Name	Status	Trigger	Clear
AlarmOut1	Normal	Trigger	Clear
AlarmOut2	Normal	Trigger	Clear
AlarmOut3	Normal	Trigger	Clear
AlarmOut4	Normal	Trigger	Clear
16_AJsmOut1	Normal	Trigger	Clear
serie Advance_AJsmOut1	Normal	Trigger	Clear
IPC_AJsmOut1	Normal	Trigger	Clear




Close

9.8 View Alarm Status

Click Start→Settings→Alarm→Alarm Status or click  on the toolbar at the bottom of the live preview interface to view the alarm status.



Click “Clear” to stop the buzzer when the buzzer alarm occurs. Click  to view detailed information.



If the exception information is more than one page, you can enter the number in the box and then click  to jump to the specified page. Click  /  to view the exception alarm information on the previous/next page.

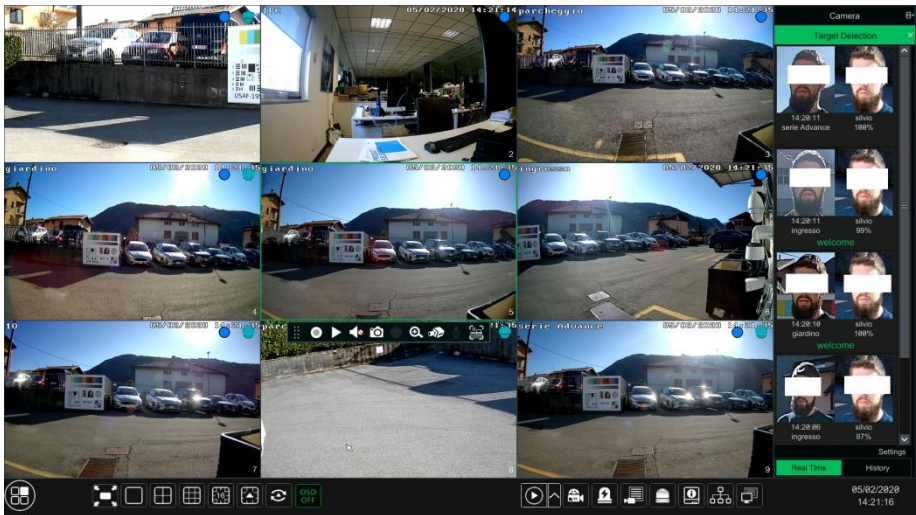
10 Face Recognition




Only the face recognition NVR supports the following functions.

10.1 Face Match View

The setting steps are as follows:


- ① Enable the face detection function.
- ② Enable the face match function and set the alarm linkage items.
- ③ Go to the live view interface and click on a face detection channel. This will bring up a toolbar under the channel. Then click  to go to the target detection interface for this channel. In this interface, you can switch the channel in the top right-hand corner. You can also click  in the top right-hand corner of the live view interface and then choose the target detection tab to go to the multi-channel interface as shown below.



For unknown faces, you can select this face and click  under the captured face to register this face (see the following picture); click  to quickly go to the smart face search interface where you can search matching face information; click  to quickly go to the smart face playback interface; click  to view snapshot details.

Register

Snap Picture



Name

Sex

Birthday

Native Place

ID Type

ID Number

Mobile

No.

Group

Male

05/02/2020

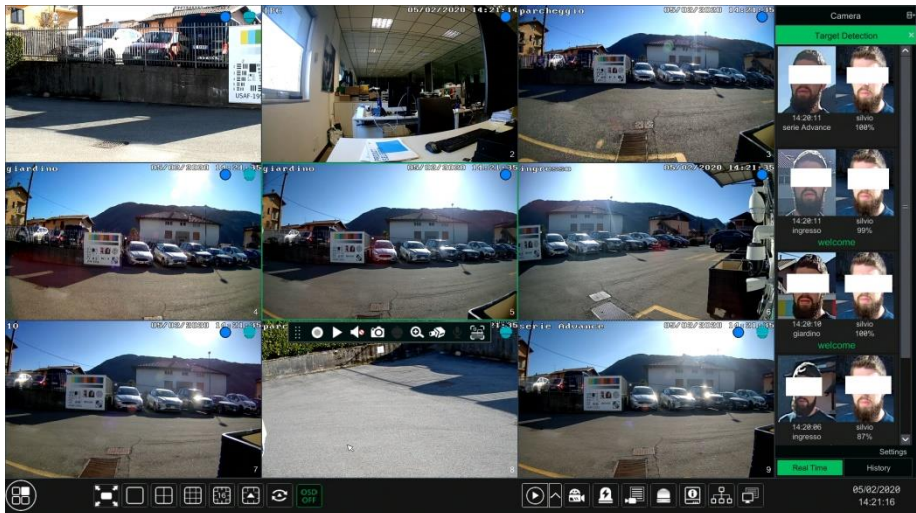
ID Card

comelit

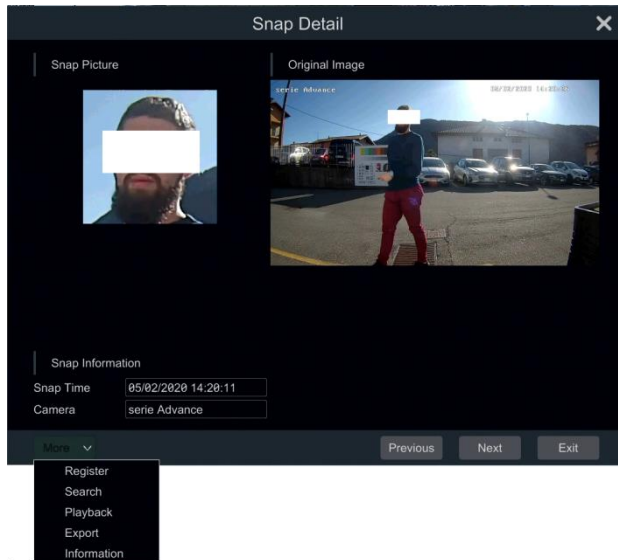
OK

Cancel

Before registering target face pictures, please add groups for them in advance.
After the face pictures are registered, the system will compare them automatically next time the corresponding faces are captured. Refer to the following picture.



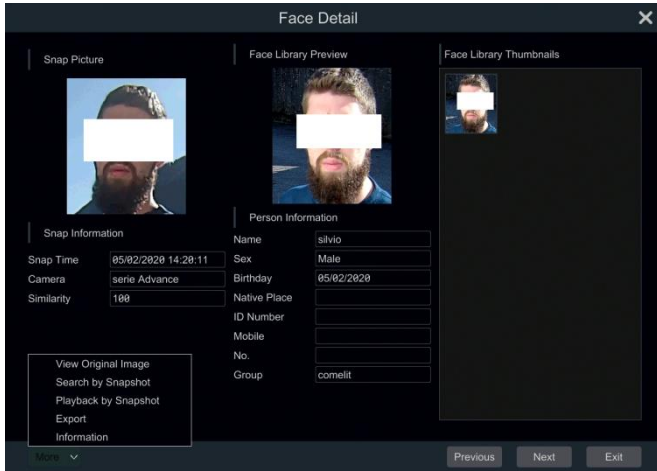
Double-click the face picture to see the snapshot details as shown below.



In this interface, detailed snapshot information can be shown, such as snapshot picture, original image, snapshot time, camera, face ID and so on. Click “more” to display a dropdown list. Click “Register” to register the current snapshot. Click “Search” to go to the face search interface. Click “Playback” to go to the playback interface. Click “Export” to export details of this snapshot.

In the face match interface, click “Settings” to make the relevant window pop up.

If “Target box” is clicked, you will see the face outlined with a little red box. When the captured face pictures are successfully recognised, click the picture on the right to make a face detail window pop up as shown below. In this window, you can see the captured face picture, the matched picture from the face library and the relevant information. You also can view the original image, search image by snapshot, playback by snapshot and export face details by clicking the “More” button.



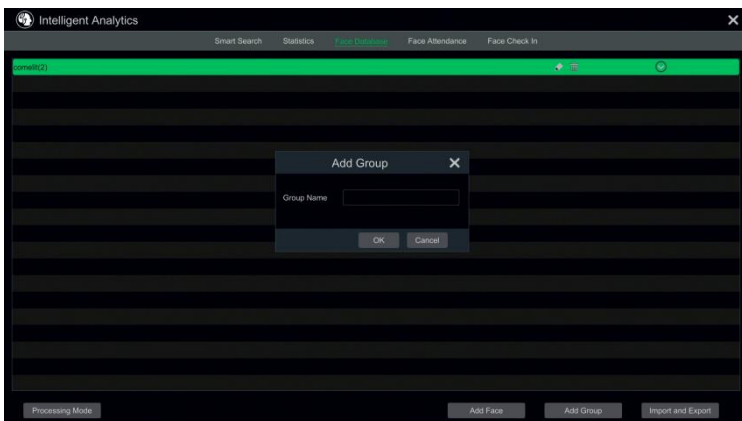
Additionally, you can view the historical captured face pictures and face match information in the face match interface by clicking the “History” tab. Besides registering face pictures in the live view interface, you can also add target face pictures in the target database interface.

10.2 Target Database Settings

Before face comparison, you need to create face groups in the target database interface and add face pictures for each group.

- **Target Database Management**

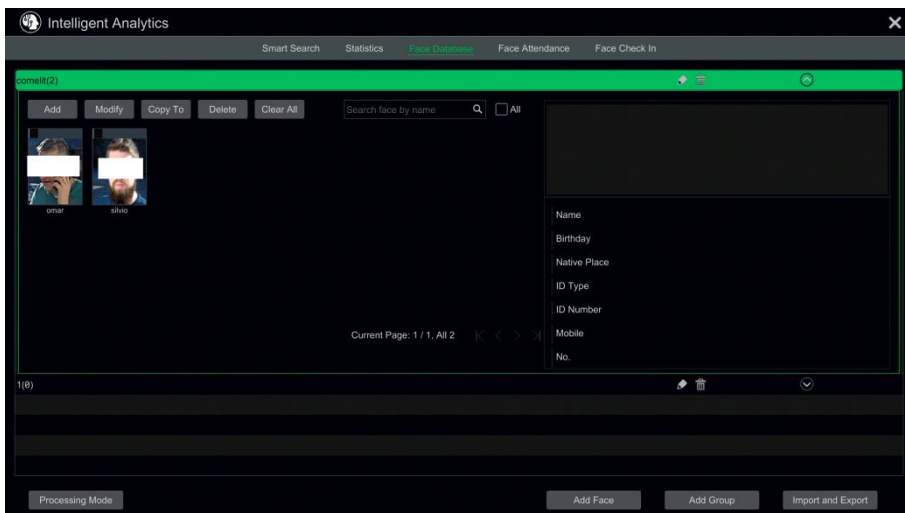
Click Start→Intelligent Analytics→Face Database to go to the following interface.



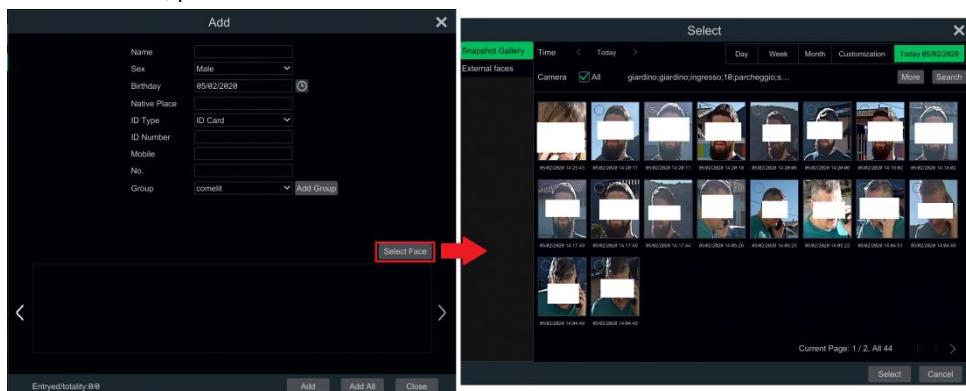
The first time, you can click “+” or “Add Group” to add groups.

To add targets for each group:

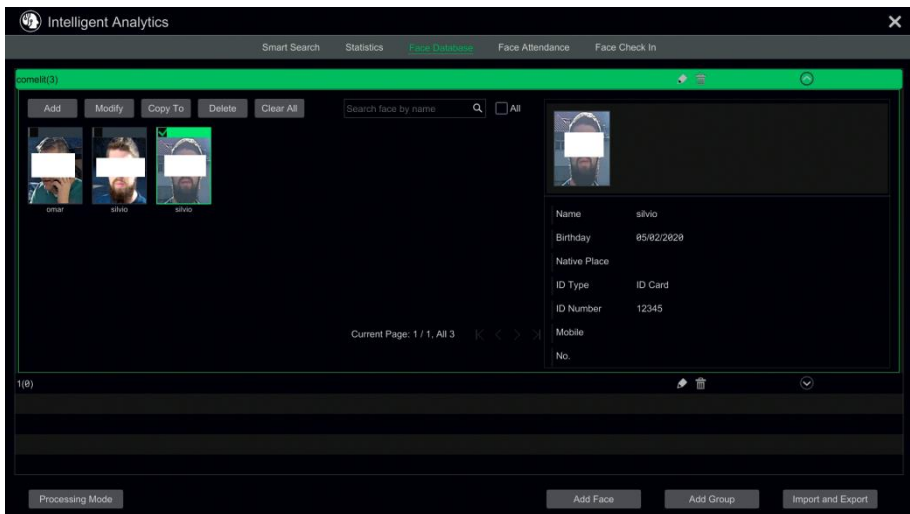
- ① Select a list and then click  to expand the list as shown below.



- ② Click “Add” and then click “Select Face” to add face images. You can add faces from the snapshot gallery or external faces. Here we take adding faces from the snapshot gallery as an example. Select the search time or define the search time yourself and then click “Search” to search for target faces. Next, select the desired faces and click “Select”. After that, add the corresponding information, such as name, gender, birthday, ID number, phone number and so on.



You can choose a single face picture and then click “Select” to register. Having saved the target image, click the image and then the detailed information will be listed.



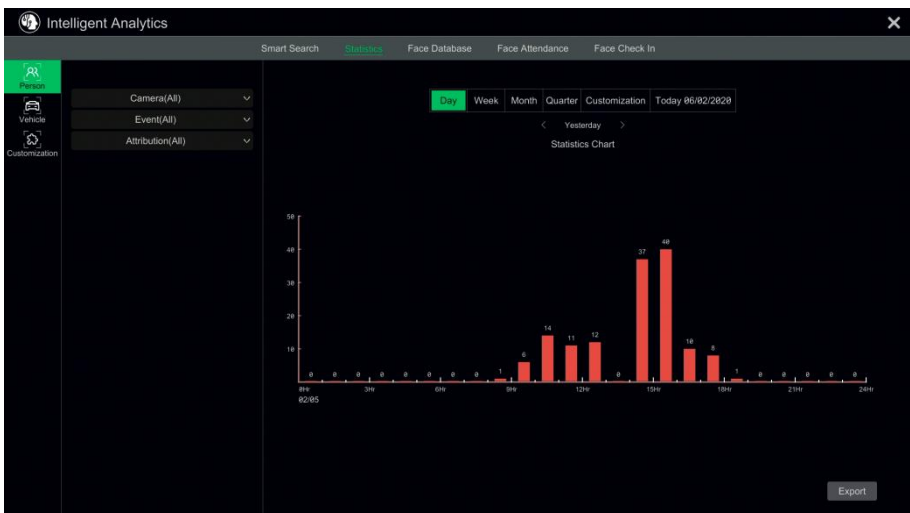
You can quickly copy a face picture to other groups by clicking “Copy To”.

- Import and Export Target Database

Insert your mobile storage device into the USB interface of the NVR and then click “Import and Export” to import or export the target database settings.

10.3 View Statistical Information

① Click Start→ Intelligent Analytics→Statistics to go to the following interface.

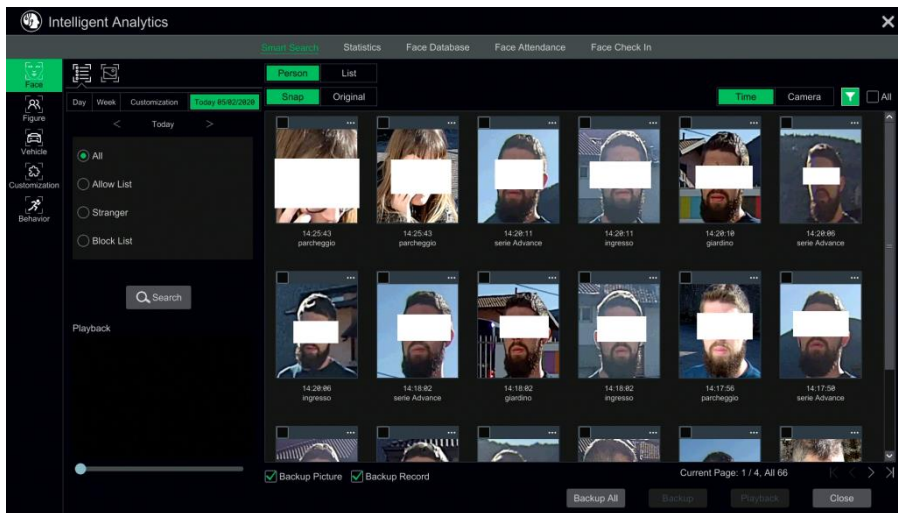



② Select a group, camera and time to view the statistical information.

10.4 Face Smart Search

10.4.1 Face Search

① Click Start→ Intelligent Analytics →Smart Search→Face to go to the following interface.



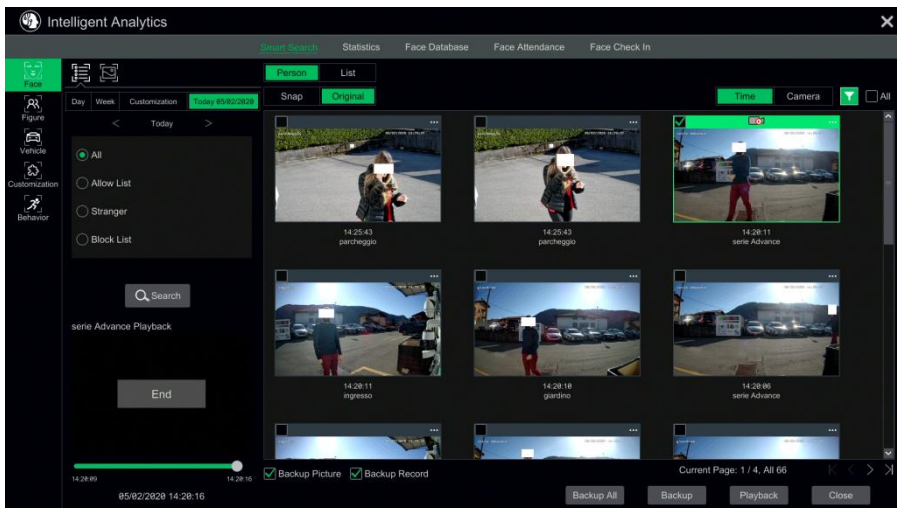
② Click  to choose face detection cameras.



③ Select groups. All, Allow List, Stranger or Block List can be selected.

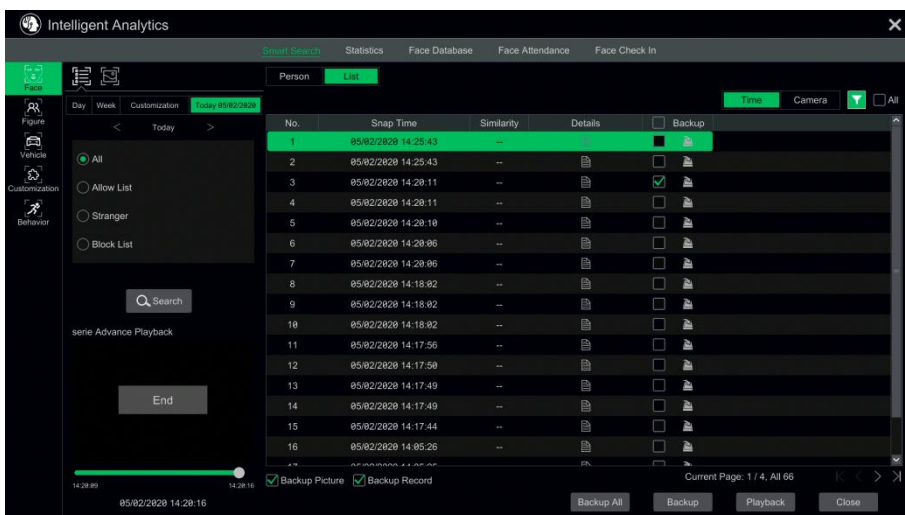
④ Click “Search” to search face pictures. You can view face pictures by time or by channel.

⑤ Click the searched face picture to play in the small playback window; select a face picture and click “Backup” to export it.

Click “Original” to see the original image as shown below.




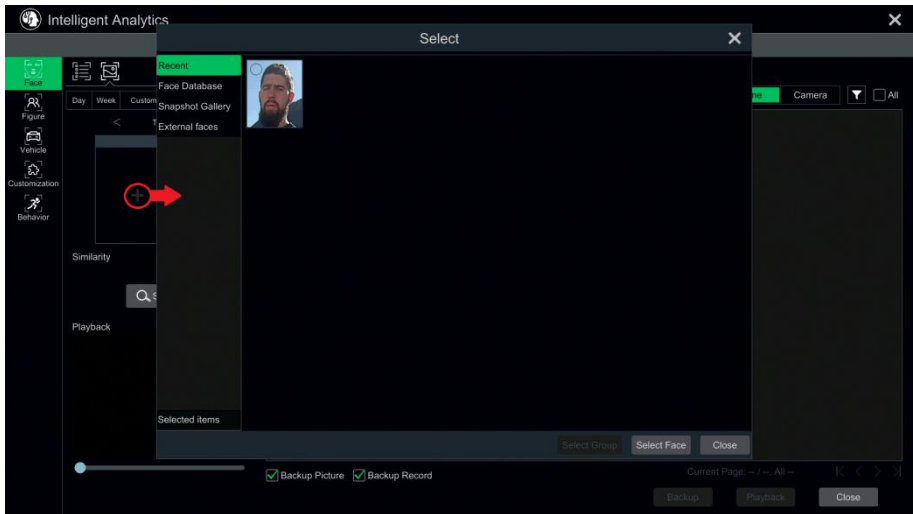
Click “List” to view the snapshot information list. Click  to view detailed information; click  to back up the image.



10.4.2 Image search by Image

In the face picture search interface, click  to go to the following interface.

① Click  to add the target face which can be searched and added from recent, target database, snapshot gallery and external faces. A single face picture or multiple face pictures can be added and searched. (Take a single face picture, for example)



To add a target face from Recent:

- a. Choose the face.
- b. Click “Select Face”.

To add a target face from the Face Database:

- a. Click “More” to choose groups.
- b. Select a target face and click “Select Face”.

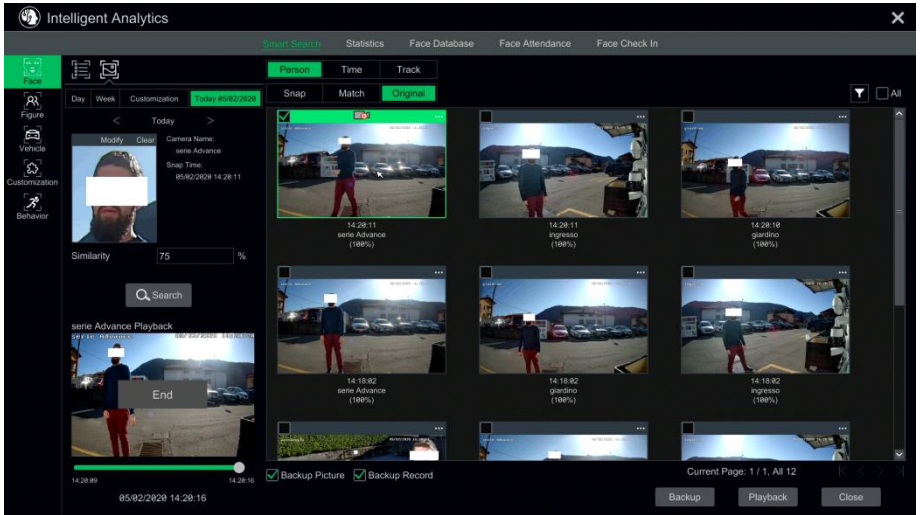
To add a target face from the Snapshot Gallery:

- a. Select a time, camera and filter condition.
- b. Click “Settings” to set similarity and select groups.
- c. Click “Search”.
- d. Tick a face and click “Select Face”.

To add a target face from External faces:

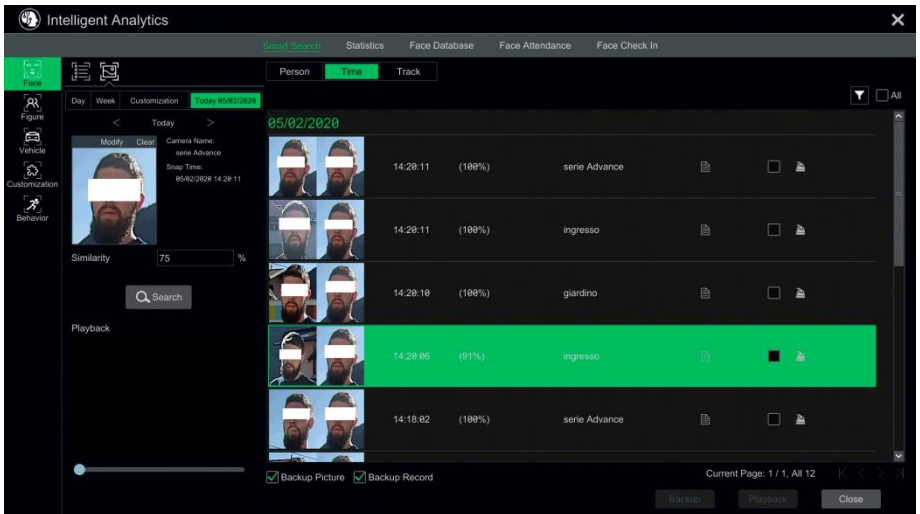
- a. Save the target face to the mobile storage device and then insert this device into the USB interface of the NVR.
- b. Select “External Faces” to import the face into this interface.

- ② Set the similarity and then click “Search”.
 - ③ Click the searched image to play recordings in the small window.
 - ④ Select the searched image and click “Backup Picture” and/or “Backup Record”.
- Then click “Backup” to build backups for pictures or recordings.



● View Image by Time

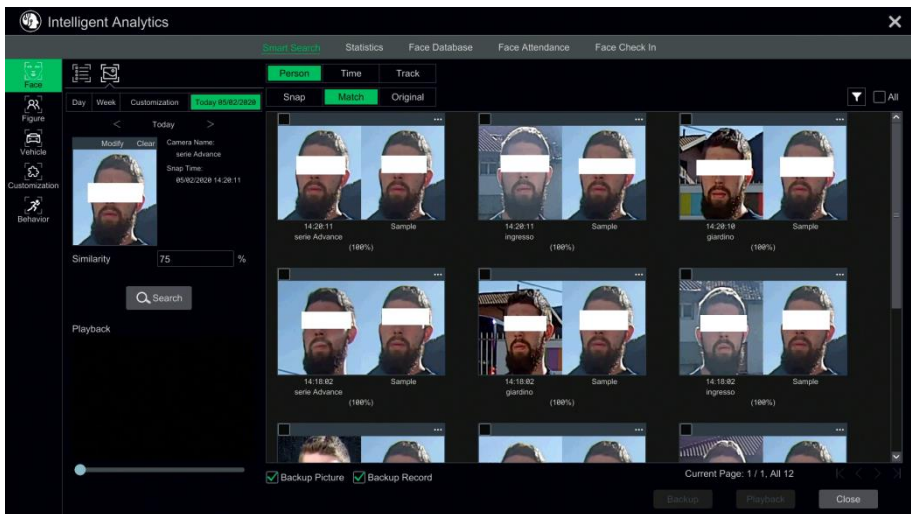
Click the “Time” tab to view images by time as shown below.



Click the searched image to play. Click  to view detailed information for the compared target face.

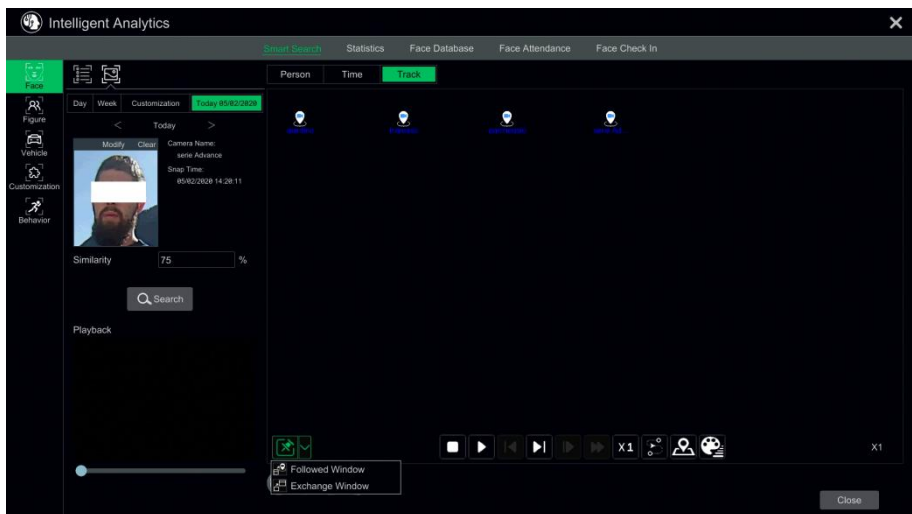
● View Match Images

Click the “Match” tab to view match images as shown below.








10.4.3 Track Playback

Select “Track” to go to the following interface.




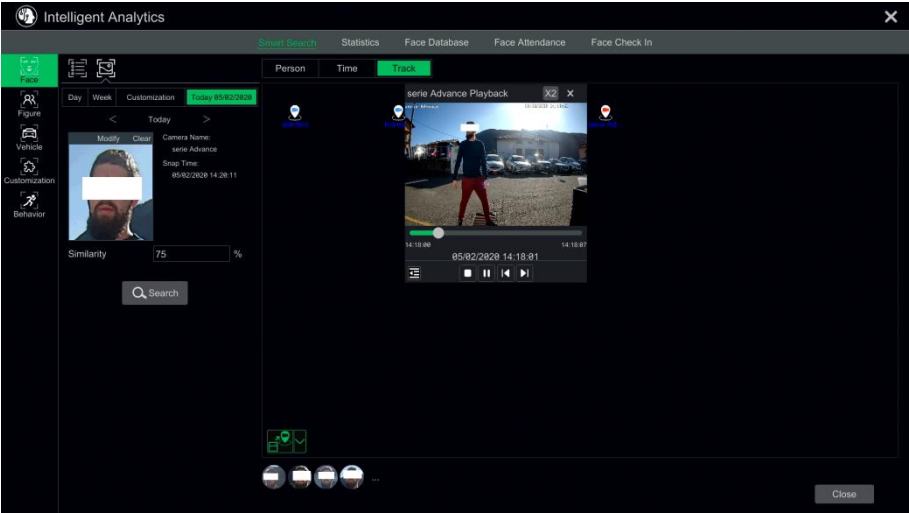
Description of buttons on the track interface



	Fixed Window		Frame
	Followed Window		Fast Forward (x2; x4)
	Exchange Window		Normal Speed
	Stop		Start/Stop Track

	Play		Edit Map
	Previous		Edit Colour
	Next		


Click on the camera name and an event list appears. Click one item to play the recording.

Click the  button beside the fixed window icon to show the “Followed Window” and “Exchange Window” icons. The small playback window will float on the map window if you click “Followed Window” as shown below.



Click  to switch play speed. 1x and 2x can be switched. Click  to view the event list. Click one item to play this event.

Click “Exchange Window” to switch the position of the map window and the playback window.

Click the  button to go to the following interface.




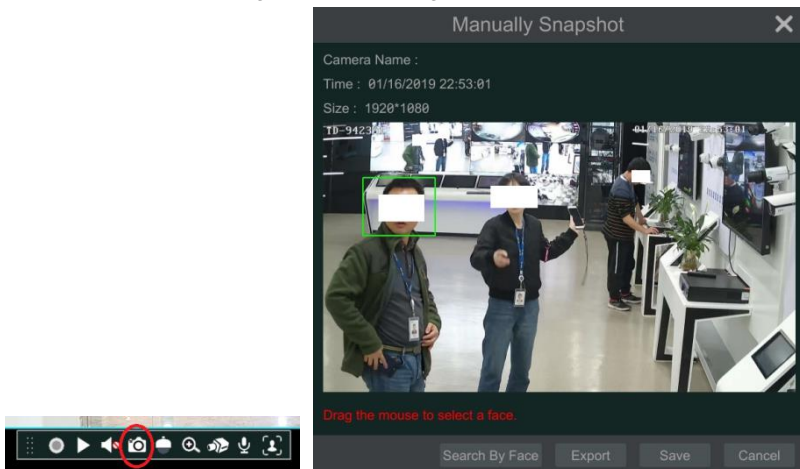
Click “Load Map” to add a map. Then drag the camera names on the map to change their locations. Choose a colour on the left-hand colour list to set your favourite colour for camera names.

Load Map: ① Save the map to the USB storage device and then insert the USB storage device into the NVR. ② Click “Load Map” button to upload the map.

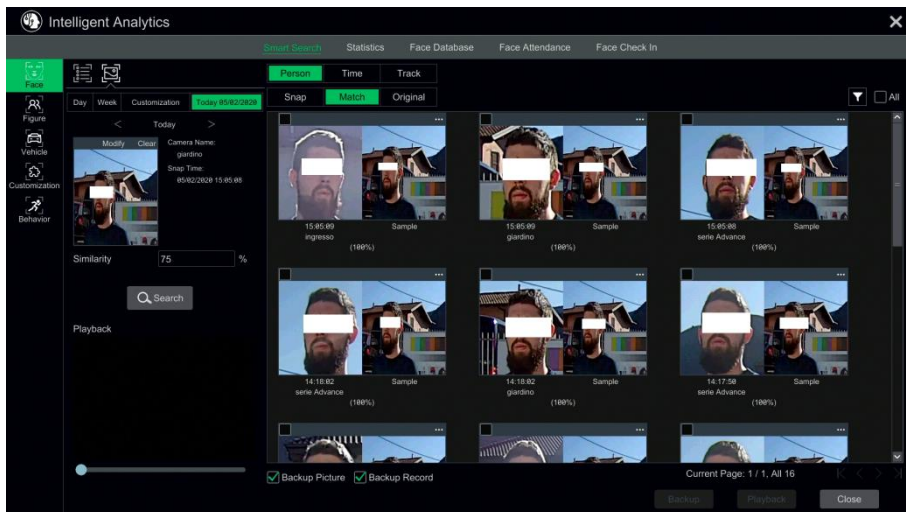
Click the colour box under "Name Color" to change the camera name and track line colours and to set the line width.

10.4.4 Face Search by Snapshot

In the live or playback interface, select a face detection camera and then click  on the toolbar. This will bring up the following window.




Drag the mouse to select a face and then click “Search by Face” to go to the following interface.



The system will automatically search the matched faces and give the similarity rating.

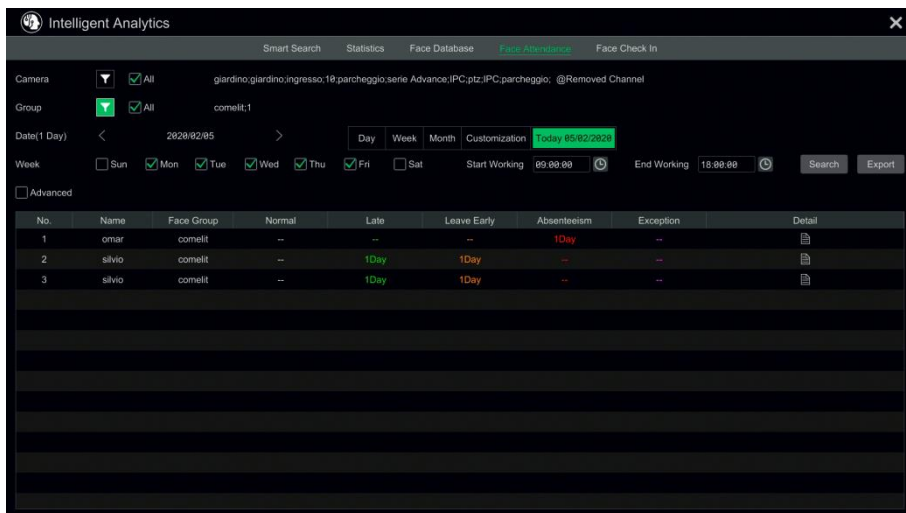
10.5 Smart Playback by Face Search

- ① Go to Start→Playback. Select “Smart Playback” and then click  to set the face smart playback parameters.
- ② Tick “Enable face playback” and then click OK.
- ③ Set the similarity. The higher the sensitivity value is, the lower the searching accuracy is, and vice-versa.
- ④ Select targets. You can select targets from recent, face database, snapshot gallery or external faces.
- ⑤ Click “Search by Face”.

Move the cursor to the time block where the recording exists and click to play those recordings.

10.6 Face Attendance

Click Start→Intelligent Analytics→Face Attendance to go to the following interface.



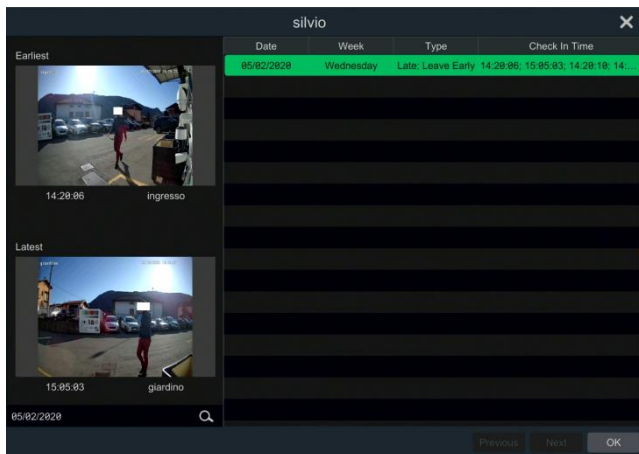
To search attendance information:

- ① Click by Camera and Group to choose the desired cameras and groups.
- ② Set the attendance date. You can choose Day, Week, Month or Customization of the time period.
- ③ Set the start time and the end time.
- ④ Click “Search” to view the attendance status.

If you need to know a specific person’s attendance status, you can click “Advanced” and then enter the name and choose the type.


Click “Export” to export the searched attendance information.

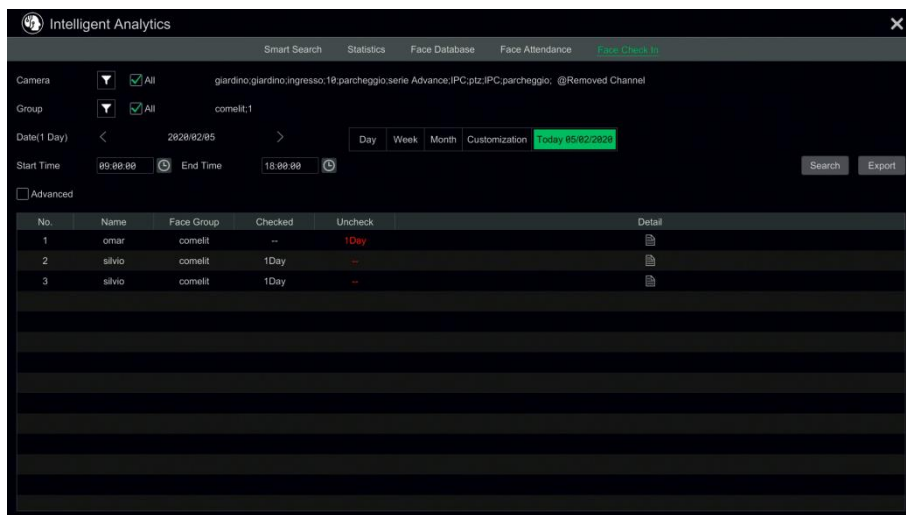
Click to view the detailed attendance information. In this interface, click to go to the face search interface.



10.7 Face Check-In

Click Start→Intelligent Analytics→Face Attendance to go to the following interface.
The search steps for face check-in are as follows.

- ① Click  by Camera and Group to choose the desired cameras and groups.
- ② Set the check-in date. You can choose Day, Week, Month or Customization of the time period.
- ③ Set the start time and the end time.
- ④ Click “Search” to view the check-in status.




If you want to know the detailed check-in information for someone, please click “Advanced” and then enter the name and choose the type to search.



silvio

Earliest




14.20.06

Ingresso

Date	Week	Type	Check In Time
05/02/2020	Wednesday	Late: Leave Early	14:20:06, 15:05:03, 14:29:19, 14:29:19

Latest



15.05.03

giardino

05/02/2020
🔍

Previous
Next
OK

Add User

Username:

Password:

Confirm Password:

☐ Display Password

☒ Allow Modify Password



Pattern Lock: ☐ Enable

E-mail:

Group:

② Set the username, password and group. Users can also set the pattern lock here. The email address is optional. Click “Add” to add the user.

11.1.2 Edit User

Click Start→Settings→Account and Authority→Account→Edit User and then click  in the user list or double-click the user to edit the user information. Click  to delete the user (the user **admin** cannot be deleted).

Username	Group	Edit	Delete
admin	Administrator		
<input type="button" value="Modify Password"/> <input type="button" value="Modify Pattern Lock"/> <input type="button" value="Edit User"/> <input type="button" value="Edit Security Question"/>			
1	Administrator		
<input type="button" value="Edit User"/> <input type="button" value="Recover Password"/>			

➤ Edit Security Question

You can set password security only for **admin**. Click “Edit Security Question” and then set questions and answers in the pop-up window. If you forget the password for **admin**, please refer to Q4 in [Appendix A FAQ](#) for details. The passwords of other users can be recovered by **admin** or the users that have “Account and Authority” permission.

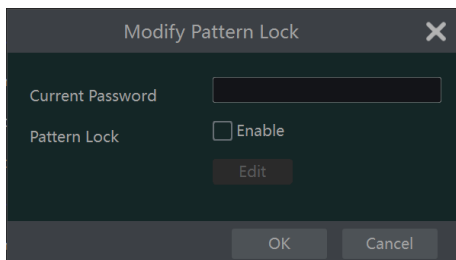
➤ Modify Password

Only the password for **admin** can be changed. Click “Modify Password” to make a window pop up. Enter the current password and then set a new password. Click “OK” to save the settings.

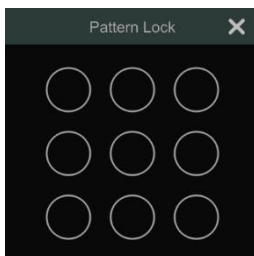
➤ **Modify Pattern Lock**

Some models may not support this function.

Click “Modify Pattern Lock” to make a window pop up.



Enter the current password and then tick “Enable” to set the pattern lock.

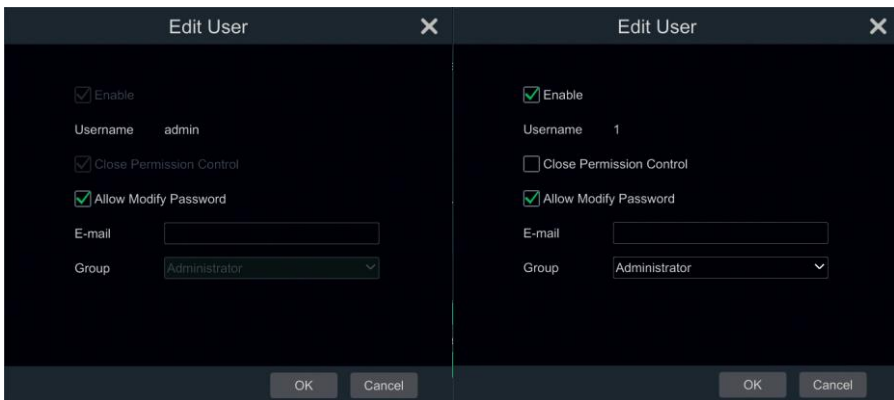


➤ **Recover Password**

Click “Recover Password” to reset the password to **admin**.

➤ **Edit User**

Click “Edit User” to make the window pop up as shown below. The **admin** is enabled, their permission control is closed and the permission group cannot be changed by default. You can enable or disable other users (if disabled, the user will be invalid), open or close their permission control (if closed, the user will receive all the permissions which **admin** has) and set their permission groups. Click “OK” to save the settings.



11.2 User Login & Logout

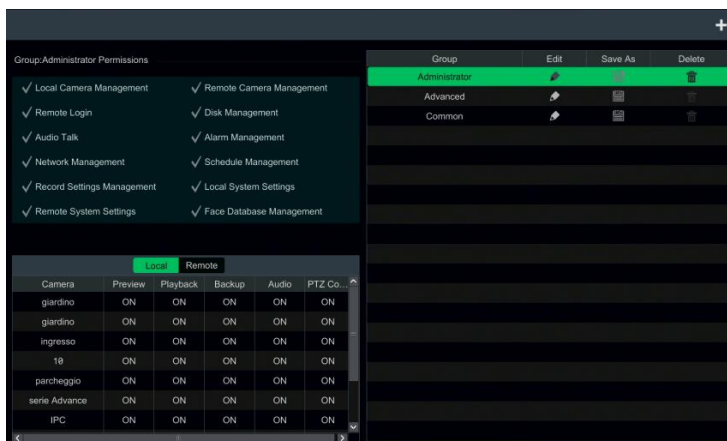
Login. Click Start→Login or directly click the preview interface and then select a username and enter the password in the pop-up window. Click the “Login” button to log in to the system.


Logout. Click Start→Logout or click Start→Shutdown to make the “Shutdown” window pop up. Select “Logout” in the window and then click “OK” to log out of the system.



11.3 Permission Management

11.3.1 Add Permission Group

Click Start→Settings→Account and Authority→Account→Edit Permission Group to go to the interface as shown below.



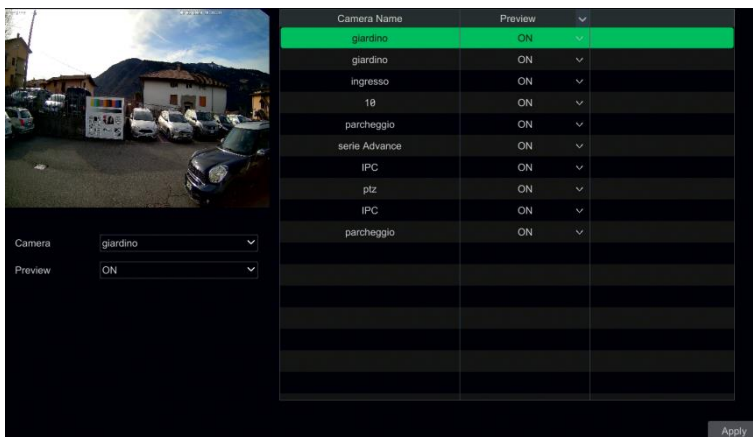
Click  to add a permission group. Set the group name, tick the permissions as required and then set the “Local” and “Remote” permissions. Click “Add” to save the settings.

- ② Tick “Enable” and then choose “Enable Allow List (white list)” or “Enable Block List (black list)” (the PC client with an IP address in the white list can access the NVR remotely, while the PC client in the black list cannot).
- ③ Add IP/IP segment/MAC. Click “Add IP” or “Add MAC” and then tick “Enable” in the pop-up window. Enter the IP/IP segment/MAC address and then click “OK”. In the above interface, click  to edit the IP/IP segment/MAC address, click  to delete it. Click “Apply” to save the settings.

11.5 Preview On Logout

Click Start→Settings→Account and Authority→Security→Preview on Logout to go to the following interface.

Set a camera and then enable or disable preview permission on logout. If a camera’s preview permission on logout is “ON”, you can view the live image from the camera when the system is logged out.



11.6 Network Security

Click Start→Settings→Account and Authority→Security→Network Security to go to the following interface. You can enable ARP Guard.



ARP Guard: Address Resolution Protocol Guard. This function can protect the LAN from ARP attacks and make the network run stably. If it is enabled, you can enable auto gateway MAC or manually set gateway MAC. Additionally, "Detection Defense" also can be enabled as required.

11.7 Password Security


Click Start→Settings→Account and Authority→Security→Password Security to go to the following interface.



The screenshot shows a dark-themed window titled "Password security". Inside, there are two settings: "Level" is set to "Weak" and "Expiration Time" is set to "Never Expire". Both settings are displayed in a light-colored box with a downward arrow on the right. At the bottom right of the window is a button labeled "Apply".

In this interface, you can set the level and expiration time of the password.

11.8 View Online User

Click Start→Settings→Account and Authority→User Status to view the online user information (you can view the online username, login type, IP address and login time). Click  to make a window pop up showing the preview occupied channel number and playback occupied channel number).

12 Device Management

12.1 Network Configuration

12.1.1 TCP/IP Configuration

Click Start→Settings→Network→TCP/IP to go to the following interface. Tick “Obtain an IPv4 address automatically”, “Obtain an IPv6 address automatically” and “Obtain DNS automatically” to get the network addresses automatically, or manually enter the network addresses. You can modify the MTU value according to the network condition (MTU, Maximum Transmission Unit, can be changed according to the network condition for higher network transmission efficiency). Click “Apply” to save the settings.

IP Address Settings

Ethernet Port 1 (Online) Internal Ethernet Port (Online)

☒ Obtain an IPv4 address automatically

Address: 172 25 158 95

Subnet Mask: 255 255 255 0

Gateway: 172 25 158 250

MTU: 1500

☒ Obtain an IPv6 address automatically

Address:

Mask Length:

Gateway:

☒ Obtain DNS automatically

Preferred DNS:

Alternate DNS:

Apply

Note:

- Internal Ethernet Port

If you use the NVR with the PoE network ports, click “Internal Ethernet Port” to go to the following interface.

The internal Ethernet port is the port used to connect all the PoE ports to the NVR system. The PoE ports are available if the internal Ethernet port is online. The network addresses for the internal Ethernet port can be changed to ensure the port is in the same network segment as the IP cameras which are directly connected to the PoE ports on the NVR (**changing the network addresses for the internal Ethernet port is not recommended**).

Mode. Non-long line mode or long line mode. Non-long line mode is the default setting. If the transmission performance of your network cables connected to the PoE ports and IPC is not as expected or if these network cables are very long, you can choose long line mode.

IP Address Settings

Ethernet Port 1 (Online) Internal Ethernet Port (Online)

Address	10 . 151 . 151 . 1	Address	fe80::fff:10:151:151:1
Subnet Mask	255 . 255 . 255 . 0	Mask Length	64
Mode	Non-long line mode		

☒ Obtain DNS automatically

Preferred DNS

Alternate DNS

Apply

● Multiple Ethernet Ports Setting

If the NVR has two or more network ports, you can select the network work pattern as required.

TOE. This is a technology for improving the network transmission speed. If TOE is enabled, it will be high speed mode. Then multiple address setting or network fault tolerance can be chosen and configured. If TOE is not enabled, it will be compatible mode. Then the network fault tolerance cannot be selected and set up.

Network Fault Tolerance

The two network ports will be bound to one IP address if you select the “Network Fault Tolerance” pattern. There are many advantages to this work pattern: 1. increase the bandwidth; 2. form a network redundant array to share the load. When a failure occurs on one network port, the other port will take over the entire load immediately. The takeover process is seamless and the network service will not be interrupted.

Refer to the figure as shown below. If “Network Fault Tolerance” is selected, tick “Obtain an IPv4 address automatically”, “Obtain an IPv6 address automatically” and “Obtain DNS automatically” to get the network addresses automatically, or manually enter the network addresses. Select one Ethernet port as primary and then click “Apply” to save the settings.

IP Address Settings

☒ TOE Enable (Modifying toe statue need to reboot)

Work Pattern: **Network Fault Tolerance** (Modifying work pattern need to reboot)

☒ Obtain an IPv4 address automatically

Address: 19 19 9 36

Subnet Mask: 255 255 248 0

Gateway: 19 19 0 1

MTU: 1500

☒ Obtain an IPv6 address automatically

Address:

Mask Length:

Gateway:

Primary Card: Ethernet Port 1

Ethernet Port 1 (Online)

MAC Address: 00 10 AE 8D 8E 45

Ethernet Port 2 (Offline)

MAC Address: 00 10 AE 00 00 00

☒ Obtain DNS automatically

Preferred DNS:

Alternate DNS:

Apply

Multiple Address Setting:

If “Multiple Address Setting” is selected, the IP addresses of the two Ethernet ports should be set respectively. Refer to the picture as shown below.

Tick “Obtain an IPv4 address automatically”, “Obtain an IPv6 address automatically” and “Obtain DNS automatically” to get the network addresses automatically, or manually enter the network addresses. Select one Ethernet port as the default route and then click “Apply” to save the settings.

IP Address Settings

☐ TOE Enable (Modifying toe statue need to reboot)

Work Pattern: Multiple Address Setting (Modifying work pattern need to reboot)

Ethernet Port 1 (Online) Ethernet Port 2 (Offline)

☒ Obtain an IPv4 address automatically

Address: 19 19 9 36

Subnet Mask: 255 255 248 0

Gateway: 19 19 0 1

MTU: 1500

☒ Obtain an IPv6 address automatically

Address:

Mask Length:

Gateway:

☒ Obtain DNS automatically

Preferred DNS:

Alternate DNS:

Default Route: Ethernet Port 1

Apply

12.1.2 Port configuration

Click Start→Settings→Network→Port to go to the interface as shown below. Enter the HTTP port, HTTPS port, server port and POS port of the NVR and then click “Apply” to save the settings. You can also enable and set an RTSP port (please tick “Anonymous” as required).

Port	
HTTP Port	80
HTTPS Port	443 <input type="checkbox"/> Enable
Server Port	6036
POS Port	9036

API Server	
<input type="checkbox"/> Enable	
Authentication	Digest
Username	admin
Password	•••••
RTSP Port	554 <input type="checkbox"/> Anonymous
Apply	

HTTP Port: the **default** HTTP port of the NVR is **80**. The port number can be changed to others, such as 81. The port is mainly used for web client access. If you want to access the NVR through a web browser, you should enter the IP address plus HTTP port in the address bar of the web browser, e.g. http://192.168.1.111:81.

HTTPS Port: the **default** HTTPS port of the NVR is **443**.

HTTPS provides website authentication and protects user privacy.

To use it:

① Enter the IP address plus HTTP port in the address bar of the web browser. Then enter a username and password to login. Click Function Panel→Network→HTTPS to go to the following interface.

Function Panel > Https

☐ Enable

Certificate installation

Certificate installation

- ☒ Create a private certificate
- ☐ Signed certificate already available. Install directly
- ☐ Create a certificate request

Create a private certificate

② Install a certificate.

* You can create a private certificate here. Click the “Create” button to create a private certificate. Enter the country (only two letters available), domain (NVR IP address/domain), validity date, password, province/state, region and so on. Then click “OK” to save the settings.

* If there is a signed certificate, click “Browse” to select it and then click “Install” to install it.

* Click “Create a certificate request” to enter the following interface.

☐ Enable

Installation type

- ☐ Have signed certificate, install directly
- ☐ Create a private certificate
- ☒ Create a certificate request

Create a certificate request

Click “Create” to create the certificate request. Then download the certificate request and submit it to the trusted certificate authority for signing. After receiving the signed certificate, import the certificate to the device.

☐ Enable

Certificate installation

Certificate installation

- ☐ Create a private certificate
- ☐ Signed certificate already available. Install directly
- ☒ Create a certificate request

Create a certificate request No files

Certificate request download

Certificate request deletion

Install the generated certificate

③ After the certificate has been installed, enable this function and apply it. The camera can then be accessed by entering https://IP: https port via the web browser (e.g. https://192.168.1.111:443).

Server Port: the **default** server port of the NVR is **6036**. The server port number can be changed as required. The port is mainly used for the network video management system.

POS Port: the **default** POS port of the NVR is **9036**.

Note: the HTTP port and server port of the NVR should be mapped to the router before you access the NVR via WAN

API Server: You can log in to the media player which supports RTSP protocol by means of a username and password. Moreover, third parties can further develop this function through the API service.

Authentication: Basic authentication or Digest authentication.

Username: admin (cannot be modified)

Password: set as required.

Tips: the username and password for the API Server cannot be used to log in to the NVR. The API server password must be different from the “admin” password used to log in to the NVR.

RTSP Port: RTSP real-time stream protocol can be used to control the transmission of real-time data. A media player (such as VLC player) which supports RTSP can be used to view live images. The **default** RTSP port is **554** and it can be changed.

The address format is: rtsp://IP address:554/chID=1&streamType=main (main stream) or rtsp://IP address:554/chID=1&streamType=sub (sub stream). chID is the channel ID.

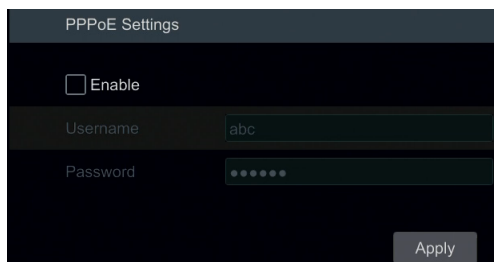
Examples: ① Enable RTSP and “Anonymous”. Then open the VLC player and enter the address (for example: rtsp://192.168.1.111:554/chID=1&streamType=main) in the network address bar of the VLC player. Then you can view the video for channel 1.

② Enable RTSP and open the VLC player. After that, enter the address (for example: rtsp://192.168.1.111:554/chID=1&streamType=sub) in the network address bar of the VLC player. Then a login box will pop up. Enter the username and password, which should be as the same as the username and password for the API server. Then you can view the video for channel 1.

Note: only certain versions may support the API server function.

12.1.3 PPPoE configuration

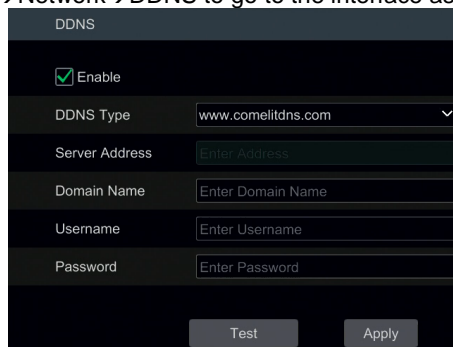
Click Start→Settings→Network→PPPoE to go to the interface as shown below. Tick “Enable” in “PPPoE Settings” and then enter the username and password obtained from the dealer. Click “Apply” to save the settings.



12.1.4 DDNS configuration

The DDNS is used to control the dynamic IP address via domain name. You can access the NVR easily if the DDNS is enabled and configured.

Click Start→Settings→Network→DDNS to go to the interface as shown below.



Tick “Enable” and then select the DDNS type. Enter the server address, domain name, username and password according to the selected DDNS type. Click “Test” to test the effectiveness of the entered information. Click “Apply” to save the settings.

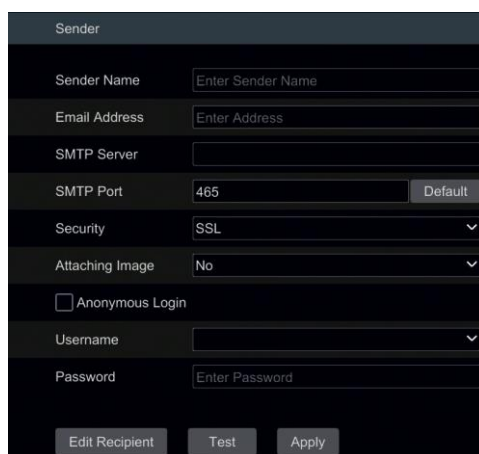
You will have to enter the server address and domain name if certain DDNS types are selected. Go to the relative DNS website to register a domain name and then enter the registered domain information here.

Take www.comelitdns.com for example.

Enter www.comelitdns.com in the IE address bar to visit its website. Choose your language and then click the “Register product” button.

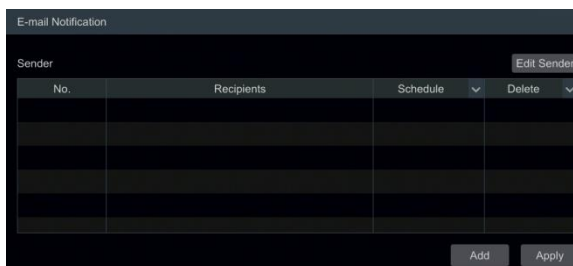
12.1.5 E-mail configuration



Click Start→Settings→Network→E-mail to go to the following interface.



Enter the sender's name, email address, SMTP server and SMTP port (you can click "Default" to reset the SMTP port to the default value) and then enable or disable the SSL and Attaching Image. Select the username (the username list will be updated automatically according to the email address you enter) and enter the password of the sender and then click "Apply" to save the settings (you don't have to enter the username and password if "Anonymous Login" is enabled). Click "Test" to make a window pop up. Enter the email address of the recipient in the window and then click "OK". The email address of the sender will send an email to the recipient. If the email is sent successfully, it indicates that the email address of the sender is configured correctly.

Click "Edit Recipient" to go to the following interface.




Click "Add", enter the recipient's email address and select the schedule (if a schedule is selected, the system will send the alarm email and the recipient will receive it only in the selected schedule time) in the pop-up window. Click "Add" in the window to add the recipient. You can also change the recipient's receiving schedule by clicking  in the "Schedule" column. Click  to delete the recipient in the list. Click "Apply" to save the settings. Click "Edit Sender" to go to the email configuration interface for the sender.

12.1.6 UPnP Configuration

UPnP offers access to the NVR through a web client in the WAN via router without port mapping.

- ① Click Start→Settings→Network→UPnP to go to the following interface.
- ② Make sure the router supports the UPnP function and that UPnP is enabled on the router.
- ③ Set the NVR IP address, subnet mask and gateway, etc. corresponding to the router.
- ④ Tick "Enable" in the interface as shown below and then click "Apply".

Click the "Refresh" button to refresh the UPnP status. If the UPnP status is "Invalid UPnP" it has been refreshed few times, the port number may be wrong. Please change the mapping type to "Manual" and then click  to change the port until the UPnP status turns to "Valid UPnP". Refer to the following picture. You can view the external IP

address of the NVR. Enter the external IP address plus port in the address bar to access the NVR, e.g. http://183.17.254.19:81.

Port Type	External Port	External IP Address	Port	UPnP Status	Edit
HTTP Port	80		80	Invalid UPnP	
HTTPS Port	443		443	Invalid UPnP	
Server Port	6036		6036	Invalid UPnP	
RTSP Port	554		554	Invalid UPnP	

12.1.7 802.1X

If enabled, the NVR data will be protected. When the NVR is connected to the network protected by IEEE 802.1X, user authentication is required.

To use this function, the NVR should be connected to a switch supporting 802.1x protocol. The switch can be considered as an authentication system to identify the device in a local network.

Protocol type and EAPOL version: please use the default settings.

Username and Password: the username and password must be the same as the username and password applied for and registered in the authentication server.

12.1.8 P2P configuration

Click Start→Settings→Network→P2P to go to the interface for P2P configuration. Tick “Enable”. Click “Apply” to save the settings.

You can scan the QRCode through the mobile client installed on the mobile phone or tablet PC to log in to the mobile client instantly.

12.1.9 FTP Configuration

Some models may not support this function.

Click Start→Settings→Network→FTP to go to the interface for FTP configuration. Tick “Enable” and enter the server name, port, username and password, max file size and remote directory.

12.1.10 Platform Access

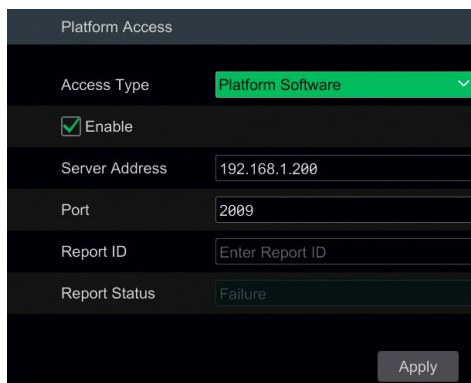
Some models may not support this function.

This function is used to connect Comelit Advance VMS. The setting steps are as follows:

Click Start→Settings→Network→Platform Access to go to the interface.

Platform Access

- ① Set “Access Type” as “Platform Software” and select “Enable” as shown below.
- ② Tick the IP address and port for the transfer media server in the Comelit Advance VMS. The **default** server **port** for auto report is **2009**. If it is changed, please go to the transfer media interface to check.
- ③ Enable auto report in the software when adding a new device. Then define the device ID yourself and complete the remaining information for the device in the Comelit Advance VMS.
- ④ Enter the above-mentioned server address, port and report ID in the server interface. Then click “Apply” to save the settings. Now the system will automatically connect this device.

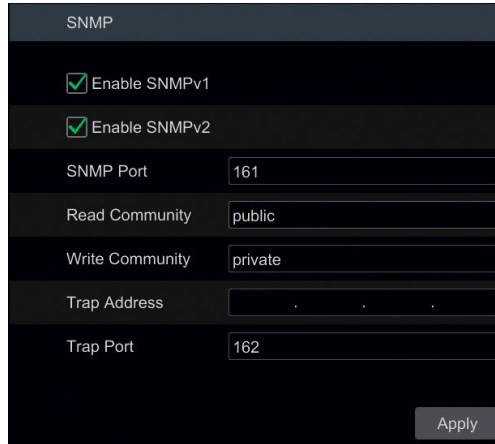


The screenshot shows the 'Platform Access' configuration window. It has a dark theme. At the top, the title 'Platform Access' is in a light blue bar. Below it, there are several rows of settings. 'Access Type' is a dropdown menu with 'Platform Software' selected and highlighted in green. Below that is a checkbox labeled 'Enable' which is checked. Then there are three text input fields: 'Server Address' with '192.168.1.200', 'Port' with '2009', and 'Report ID' with 'Enter Report ID'. Below these is a 'Report Status' field showing 'Failure'. At the bottom right, there is a grey 'Apply' button.

Platform Access	
Access Type	Platform Software
<input checked="" type="checkbox"/> Enable	
Server Address	192.168.1.200
Port	2009
Report ID	Enter Report ID
Report Status	Failure
Apply	

12.1.11 SNMP

- ① Click Start→Settings→Network→SNMP to go to the interface for SNMP configuration.



The image shows a configuration window titled "SNMP". It contains several settings:

- ☒ Enable SNMPv1
- ☒ Enable SNMPv2
- SNMP Port: 161
- Read Community: public
- Write Community: private
- Trap Address: (empty field)
- Trap Port: 162
- An "Apply" button is located at the bottom right.

- ② Tick SNMPv1 or SNMPv2 to enable this function.
- ③ Set the SNMP port.
- ④ Set the trap address and trap port.
- ⑤ Click "Apply" to save the settings.

Trap Address: IP address for SNMP host.

Trap Port: port for SNMP host.

Tips: before setting the SNMP, please download the SNMP software and manage it to receive device information via SNMP port. By setting the trap address, the device is allowed to send the alarm event and exception message to the monitoring centre.

12.1.12 View Network Status

Click Start→Settings→Network→Network Status to view the network status or click  on the toolbar at the bottom of the live preview interface to view network status.

12.2 Basic Configuration

12.2.1 General settings

Click Start→Settings→System→Basic→General Settings to go to the following interface. Set the device name, device no., language, video format and main output. Enable or disable wizard, "Log In Automatically", "Log Out Automatically" (if ticked, you can set the wait time), "App Live Self-adaption" and "Dwell Automatically" (if ticked, you can set the wait time). Click "Apply" to save the settings.

General Settings	
Device Name	<input type="text" value="Device Name"/>
Device No.	<input type="text" value="1"/>
Language	<input type="text" value="English"/>
Video Format	<input type="text" value="PAL"/>
<input type="checkbox"/> Fixed display resolution	
Main Output	<input type="text" value="1920x1080"/>
<input checked="" type="checkbox"/> Enable Wizard	
<input type="checkbox"/> Log In Automatically	
<input type="checkbox"/> Log Out Automatically	
Wait Time	<input type="text" value="1 Min"/>
<input checked="" type="checkbox"/> App Live Self-adaption	
<input type="checkbox"/> Dwell Automatically	
Wait Time	<input type="text" value="10 Mins"/>
<input type="button" value="Apply"/>	

Device Name: name of the device. It may be displayed on the client or software to help the user recognise the device remotely.

Video Format: PAL or NTSC. Select the video format according to the camera.

Dwell Automatically: tick and set the “wait time”. The system will switch images automatically if it is not operated for the time you set.


Note: You can set the resolution for the main output and secondary output respectively if the NVR has two outputs.

12.2.2 Date and Time settings

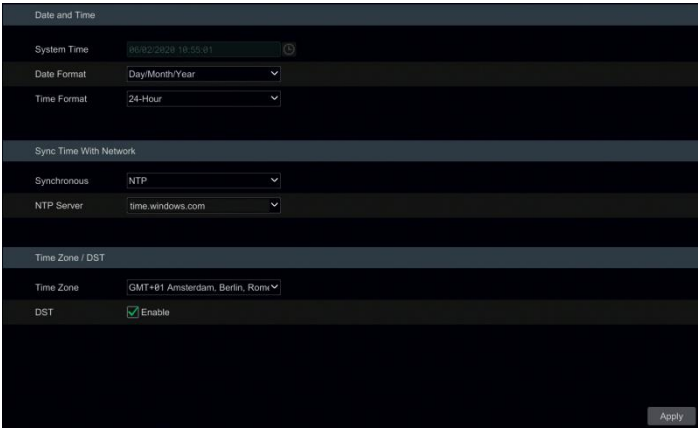
Click Start→Settings→System→Basic→Date and Time to go to the interface as shown below.

Set the system time, date format, time format and time zone of the NVR. If the selected time zone includes DST (BST), the time zone DST (BST) will be ticked by default. Click “Apply” to save the settings.

You can manually set the system time or synchronise the system time with the network through NTP.

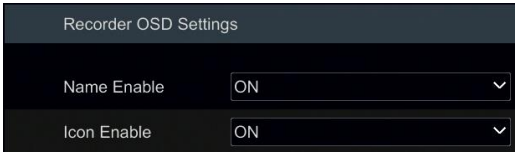
Manual: select “Manual” in the “Synchronous” option and then click  after the “System Time” option to set the system time.

NTP: select “NTP” in the “Synchronous” option and then enter the NTP server.



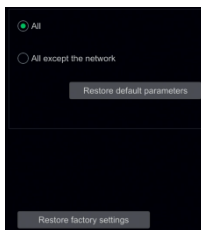
12.2.3 Recorder OSD settings

Click Start→Settings→System→Basic→Recorder OSD Settings to go to the following interface. The OSD name and icon can be enabled here.



12.3 Factory Default

Click Start→Settings→System→Maintenance→Factory Default to go to the following interface. Please choose the item as required.



Note: resetting to the factory default settings will not change the time zone.

12.4 Device Software Upgrade

● Upgrade

You can click Start→Settings→System→Information→Basic to view the MCU, kernel version, firmware version and so on. Before upgrading, please get the upgrade file.

The upgrade steps are as follows:

- ① Copy the upgrade software (.tar) to the USB storage device.
- ② Insert the USB storage device into the USB interface of the NVR.
- ③ Click Start→Settings→System→Maintenance→Upgrade to go to the “Upgrade” interface. Select the USB device in the “Device Name” option and go to the path where the upgrade software is located. Select the upgrade software and then click “Upgrade”. The system may automatically restart during upgrading. Please wait for a while and do not power off the NVR during upgrading.

Note: The file system of the USB mobile device used for upgrading, backing up and restoring should be in FAT32 format.

12.5 Backup and Restore

You can back up the configuration file for the NVR by exporting the file to other storage devices. You can restore the configuration to other NVRs of the same model as the NVR by importing the configuration file.

Insert the USB storage device into the USB interface of the NVR and then click Start→Settings→System→Maintenance→Backup and Restore to go to the interface.

● Backup

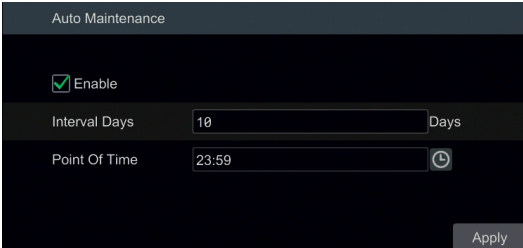
Select the USB device in the “Device Name” option, go to the path where you want to store the configuration backup file and then click “Backup”. Click “OK” in the pop-up window.

- **Recover**

Select the USB device in the “Device Name” option, find the configuration backup file and then click “Recover”. Click “OK” in the pop-up window.

12.6 Restart Automatically

You can set the automatic restart time for the NVR. Click Start→Settings→System→Maintenance→Auto Maintenance to go to the interface as shown below. Enable auto maintenance, set the interval days and point of time and then click “Apply” to save the settings. The NVR will restart automatically at the appointed time every X interval days.



Auto Maintenance


☒ Enable

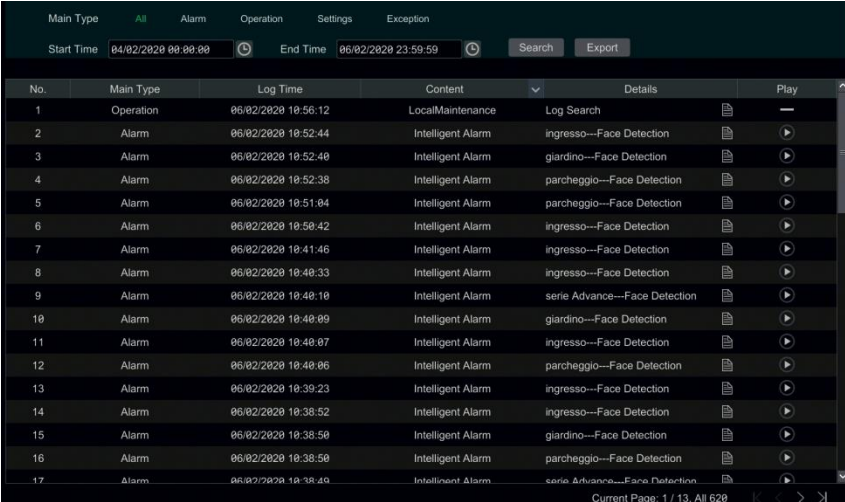
Interval Days: 10 Days


















Point Of Time: 23:59

Apply



12.7 View Log

Click Start→Settings→System→Maintenance→View Log to go to the log view interface. Select the log main type, click  to set the start time and end time and then click “Search”. The searched log files will be displayed in the list.



Main Type: All Alarm Operation Settings Exception					
Start Time: 04/02/2020 00:00:00 End Time: 06/02/2020 23:59:59 Search Export					
No.	Main Type	Log Time	Content	Details	Play
1	Operation	06/02/2020 10:56:12	LocalMaintenance	Log Search	
2	Alarm	06/02/2020 10:52:44	Intelligent Alarm	ingresso—Face Detection	
3	Alarm	06/02/2020 10:52:40	Intelligent Alarm	giardino—Face Detection	
4	Alarm	06/02/2020 10:52:38	Intelligent Alarm	parcheggio—Face Detection	
5	Alarm	06/02/2020 10:51:04	Intelligent Alarm	parcheggio—Face Detection	
6	Alarm	06/02/2020 10:50:42	Intelligent Alarm	ingresso—Face Detection	
7	Alarm	06/02/2020 10:41:46	Intelligent Alarm	ingresso—Face Detection	
8	Alarm	06/02/2020 10:40:33	Intelligent Alarm	ingresso—Face Detection	
9	Alarm	06/02/2020 10:40:10	Intelligent Alarm	serie Advance—Face Detection	
10	Alarm	06/02/2020 10:40:09	Intelligent Alarm	giardino—Face Detection	
11	Alarm	06/02/2020 10:40:07	Intelligent Alarm	ingresso—Face Detection	
12	Alarm	06/02/2020 10:40:06	Intelligent Alarm	parcheggio—Face Detection	
13	Alarm	06/02/2020 10:39:23	Intelligent Alarm	ingresso—Face Detection	
14	Alarm	06/02/2020 10:38:52	Intelligent Alarm	ingresso—Face Detection	
15	Alarm	06/02/2020 10:38:50	Intelligent Alarm	giardino—Face Detection	
16	Alarm	06/02/2020 10:38:50	Intelligent Alarm	parcheggio—Face Detection	
17	Alarm	06/02/2020 10:38:49	Intelligent Alarm	serie Advance—Face Detection	

Current Page: 1 / 13, All 620

Choose the log file from the list and then click the “Export” button to export the log file. Click  on the “Content” title bar to make a menu list pop up. Tick contents in the menu list and the log list will show the ticked log content only. Click  to play the video log.

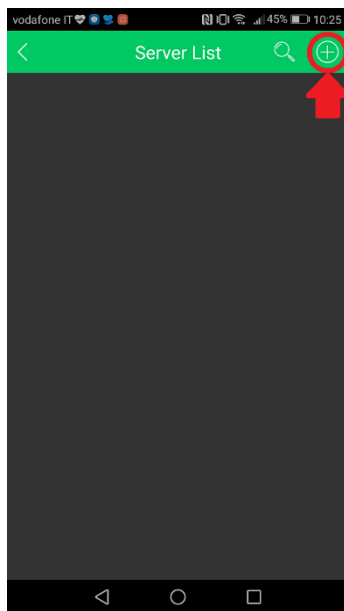
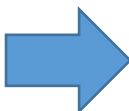
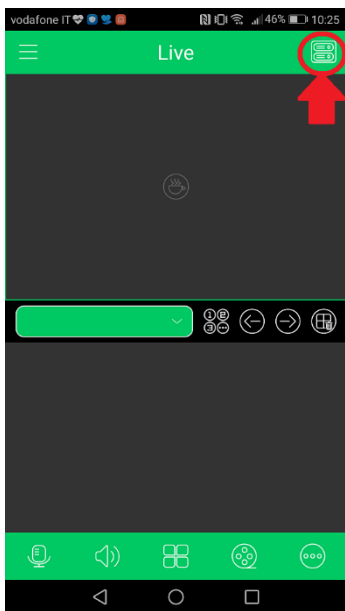
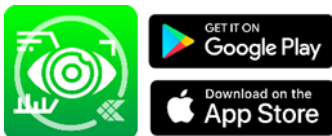
12.8 View System Information

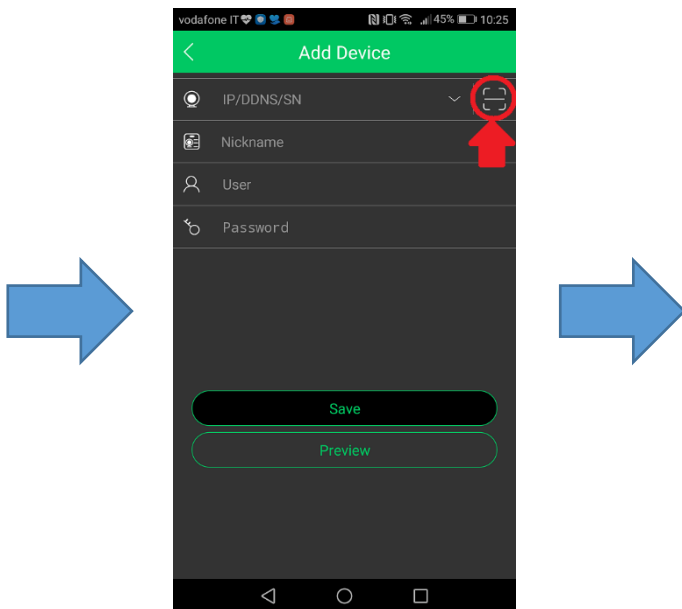
Click Start→Settings→System→Information and then click the corresponding menu to view the “Basic”, “Camera Status”, “Alarm Status”, “Record Status”, “Network Status” and “Disk” information for the system.

13 Remote Surveillance

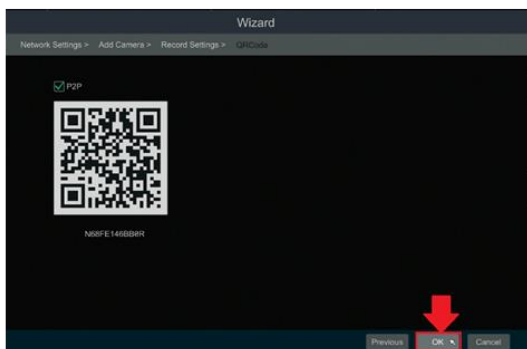
13.1 Mobile Client Surveillance

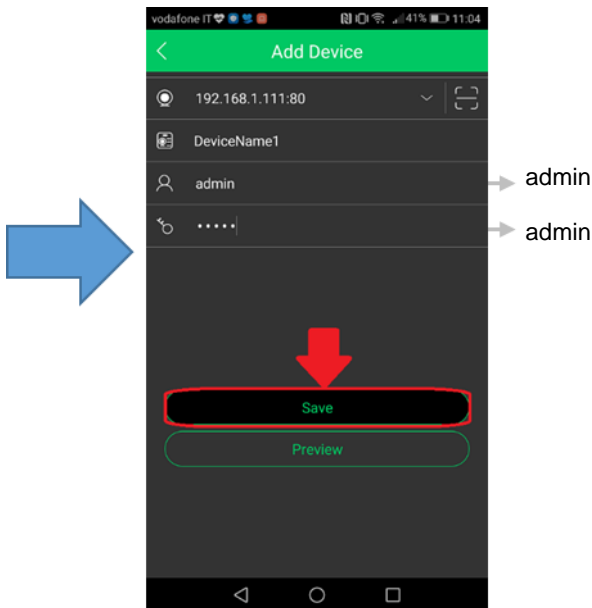
- ① Enable P2P on the NVR.
- ② Download and install the “Comelit Advance” app on the mobile device with Android or iOS system.
- ③ Run the mobile client.





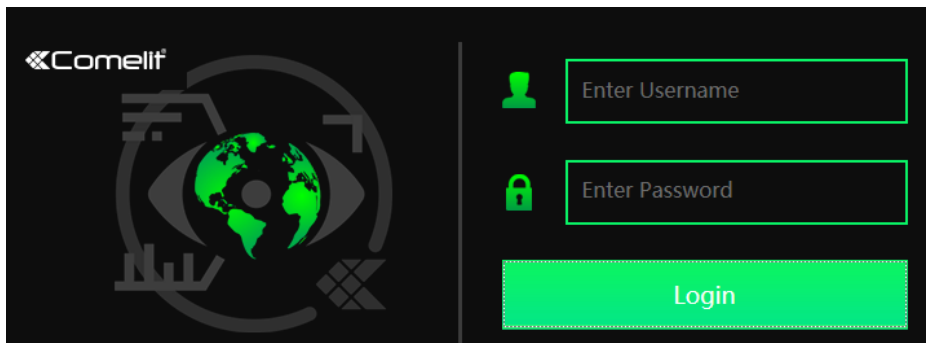
NVR menu. Settings → Network → P2P





13.2 Web LAN access

- ① Click Start→Settings→Network→TCP/IP to go to the “TCP/IP” interface. Set the IP address, subnet mask, gateway, preferred DNS and alternate DNS for the NVR.
- ② Open a web browser on your computer, enter the IP address of the NVR in the address bar and then press enter to go to the login interface as shown below. You can change the display language in the top right-hand corner of the login interface. Enter the username and password for the NVR in the interface and then click “Login” to go to the live preview interface.



- Notes:** 1. Please make sure that the IP address of the NVR and the computer are both in the same local network segment.
2. If the HTTP port of the NVR is not 80, you need to enter the IP address plus port number in the address bar when accessing the NVR over the network. For example, if the HTTP port is 81, you should enter `http://192.168.1.111:81` in the address bar.

13.3 Web WAN access

➤ PPPoE Access

- ① Click Start→Settings→Network→PPPoE to go to the “PPPoE” interface. Tick “Enable” in “PPPoE settings” and then enter the username and password you get from your ISP. Click “Apply” to save the settings.
- ② Click Start→Settings→Network→Network Status to view the IP address of the NVR.
- ③ Open a web browser on your computer, enter the IP address of the NVR in the address bar and then press enter to go to the login interface. Enter the username and password for the NVR in the interface and then click “Login” to go to the live preview interface.

➤ Router Access

- ① Click Start→Settings→Network→TCP/IP to go to the “TCP/IP” interface. Set the IP address, subnet mask, gateway, preferred DNS and alternate DNS for the NVR.
- ② Set the HTTP port (we suggest you change the HTTP port because the default HTTP port 80 might already be occupied) and enable the UPnP function on both the NVR and the router. If the UPnP function is not available on the router, you need to forward the LAN IP address, HTTP port and server port of the NVR to the router. Port mapping settings may be different in different routers, so please refer to the user manual of the router for details.
- ③ Get the WAN IP address of the NVR from the router. Open a web browser on your computer, enter the WAN IP address plus HTTP port, e.g. `http://116.30.18.215:100` in the address bar and then press enter to go to the login interface. Enter the username and password for the NVR in the interface and then click “Login” to go to the live preview interface.

Note: If the WAN IP address is a dynamic IP address, use the domain name to access the NVR. Click Start→Settings→Network→DDNS to set the DDNS. By using the DDNS function you can use the domain name plus HTTP port to access the NVR via internet.

13.4 Web Remote Control

The supported browser for remote access is Internet Explorer.

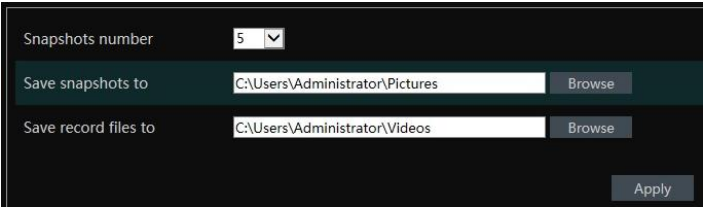
When you access the NVR through a web client for the first time, you need to download and install the relative components for normal preview and playback. Please refer to the remote interface tips for details. The buttons and icons in the top right-hand corner of the remote interface are introduced as follows:

admin: the current login username.

Logout: click to logout and return to the login interface.

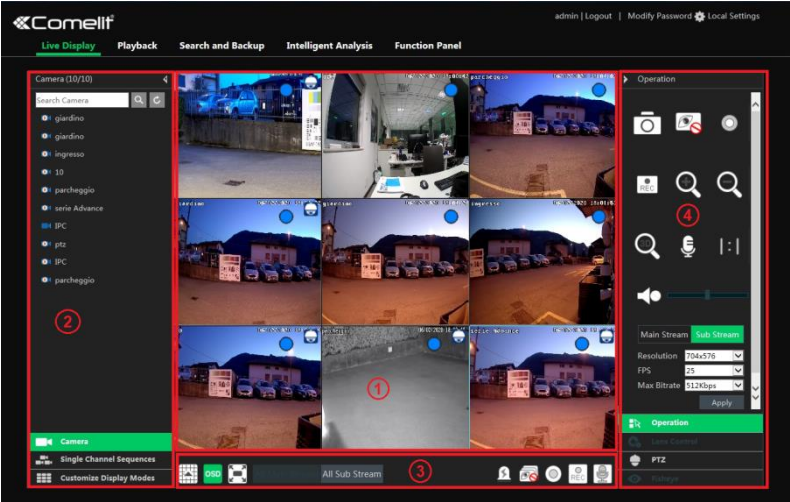
Modify Password: click it to change the password of the user currently logged in. Enter the current password and then set a new password in the pop-up window. Click “OK” to save the new password.

Local Settings: click to change the local settings. Set the snapshot number and click “Browse” to set the snapshot path and recording path as shown below. Click “Apply” to save the settings.




13.4.1 Remote preview



Click “Live Display” in the remote interface to go to the preview interface. The preview interface consists of the four areas marked in the following picture.






➤ Area 1

Select a window in the preview area and then click one online camera on the left panel to preview the camera in the window. You can click  in the toolbar to preview all the cameras.


➤ Area 2

Click  on the left panel to hide the panel and click  to show the panel. You can view all the added cameras and groups on the left panel.


● View Camera

Click  to view the cameras. You can view the number of all the added cameras and online cameras. For instance, the left number 10 in **Camera (10/10)** stands for the number of online cameras, the right number 10 stands for the total of all added cameras. Enter the camera name in the search box and then click  to search the camera. Click  to refresh the camera list.




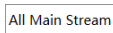








● View group


Click  **Single Channel Sequences** to view the groups. The top of the left panel displays all the groups and the bottom displays all the cameras in the group.

● View scheme







Click  **Customize Display Modes** to view the scheme. All schemes can be shown in the left panel. Double-click the scheme name to bring it up quickly.



➤ Area 3 - Toolbar Introduction

Button	Description
	Screen mode button.
	Click it to enable/disable the OSD.
	Click it to show full screen. Right-click on the full screen to exit full screen.
 	Click "All Main Stream" or "All Sub Stream" to set the stream for all the cameras.
	Manual alarm button. Click it to make a window pop up and then trigger and clear the alarm-out in the window manually.
	Click it to preview all the cameras.
	Click it to close all the preview cameras.
	Click it to start recording for all cameras to computer. Click  to stop recording.
	Click it to start recording for all cameras to the NVR. Click  to stop recording.











Button	Description
	Click it to enable conversation with the NVR.

➤ Area 4












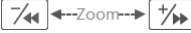


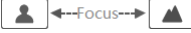


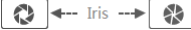


Click  on the right panel to show the panel and click  to hide the panel. Click  at the bottom of the panel to go to the “PTZ” panel. Click  to go to the “Operation” panel. Click  to go to the “Lens Control” panel. Click  to go to the “Fisheye” panel.



Click one camera window in the preview area and then click  to set the camera's live preview and recording stream to main stream in manual record mode. Click  to set the camera's live preview and recording stream to sub stream. In sub stream tab, set the resolution, FPS and bitrate and then click “Apply” to save the settings.

Operation panel introduction:

Button	Description
	Click it to make a snapshot.
	Click it to start recording to computer.
	Click it to start recording to the NVR.
	Click it to zoom in to the camera image and then drag the mouse over the camera image to view the hidden area.
	Click it to zoom out of the of the camera image.
	Click it to start two-way conversation.
	The 3D zoom in function is designed for PTZ. Click it and then drag the image to zoom into or zoom out of the image. Click the image on different areas to view the dome image omni-directionally.
	Click it to close the preview camera.
	Click it to display original size.
	Click it to enable audio and then drag the slider bar to adjust the volume. You can listen to the camera audio by enabling audio.

PTZ panel introduction:



Button	Description
	Click  /  /  /  /  /  /  /  to rotate the dome; click  to stop rotating the dome.
	Drag the slider to adjust the rotating speed of the dome.
	Click  /  to zoom in to/out of the camera image.
	Click  /  to increase/decrease the focal length.
	Click  /  to increase/decrease the iris of the dome.

Button	Description
	Click it to view the preset list and then click the button in the list to recall the preset.
	Click it to view the cruise (tour) list and then click the corresponding buttons in the list to start or stop cruising.

13.4.2 Remote Playback

















Click “Playback” in the remote interface to go to the playback interface.

① Tick the recording event types and cameras on the left panel. Set the recording date on the calendar beside the time scale.

② Click  Search to search the recording data and then click  Play or directly click the time scale to play the recording.

Playback time scale operation is similar to that of the time scale in the main NVR program.


Introduction to playback control buttons:


Button	Description
	Stop button.
	Rewind button. Click to play video backwards.
	Playback button.
	Pause button.
	Click to decrease the playing speed.
	Click to increase the playing speed.
	Previous frame button. It works only when forwards playing is paused in single screen mode.
	Next frame button. It works only when forwards playing is paused in single screen mode.
	Click  to skip backwards 30s and click  to skip forward 30s.
	Backup start time button. Click the time scale and then click it to set the backup start time.
	Backup end time button. Click the time scale and then click it to set the backup end time.
	Backup button.
	Backup tasks button. Click it to view the backup status.
	Event list button. Click it to view the event recording of the manual/schedule/sensor/motion.

13.4.3 Remote Search and Backup

Click “Search and Backup” in the remote interface to go to the backup interface. You can back up the recording by event or by time.

➤ By Event

Tick the recording type on the left side of the interface and then click  to set the

start time and end time; tick the cameras and then click  on the right side to search the recording (the searched recording data will be displayed in the list). Tick the recording data in the list and then click “Backup” to backup the recording.

➤ By Time







Click  to set the start time and end time on the left side of the interface. Tick the cameras and then click  on the right side to back up the recording.

Image Management: Click “Image Management” to go to the image management interface. The system will display all the captured images automatically in the list. Click  to delete the image. Click  to make the “Export” window pop up. Click  to make the “View Image” window pop up. Click  to export the image.

View Backup Status: Click “Backup Status” to view the backup status. Click “Pause” to pause, click “Resume” to continue the backup, click “Delete” to delete the task.

13.4.4 Intelligent Analysis

This function is only available for models with face recognition function.

Click “Intelligent Analysis” in the remote interface to configure smart search, statistics, target database, face attendance and face check in. All of these settings are similar to those for the NVR. See the NVR configurations for details.

13.4.5 Remote configuration

Click “Function Panel” in the remote interface and then configure the camera, recording, alarm, disk, network, account and authority and system for the NVR remotely. All of these settings are similar to those for the NVR. See the NVR configurations for details.

Appendix A - FAQ

Q1. Why can't I find the HDD?

- a. Please check the power and SATA data cables for the HDD to make sure they are well connected.
- b. For some NVRs with the 1U or small 1U case, the power of the adapter may be not enough to run them. Please use the power adapter supplied with the NVR.
- c. Please make sure that the HDDs are compatible with the NVR. See [Appendix C - Compatible Device List](#) for details.
- d. The HDD could have gone wrong.

Q2. Why is there no image output in some or all of the camera windows?

- a. Please make sure that the camera resolutions are supported by the NVR.
- b. Please make sure that the network cables for the IP camera and NVR are both connected properly and the network parameters are set correctly.
- c. Please make sure that the network and the switch are both working normally.

Q3. The screen has no output after booting the NVR normally

- a. Please make sure that the screen cables (HDMI or VGA) are in good condition and well connected.
- b. Please make sure that the screen supports the resolution of 1280x1024, 1920x1080 or 3840x2160 (4Kx2K). The NVR cannot self-adapt to the screen if the resolution is lower than 1280x1024 and the screen will remind you that the screen resolution is not supported by the NVR or just show no display. Please change the screen resolution before booting the NVR.

Q4. Forgot password

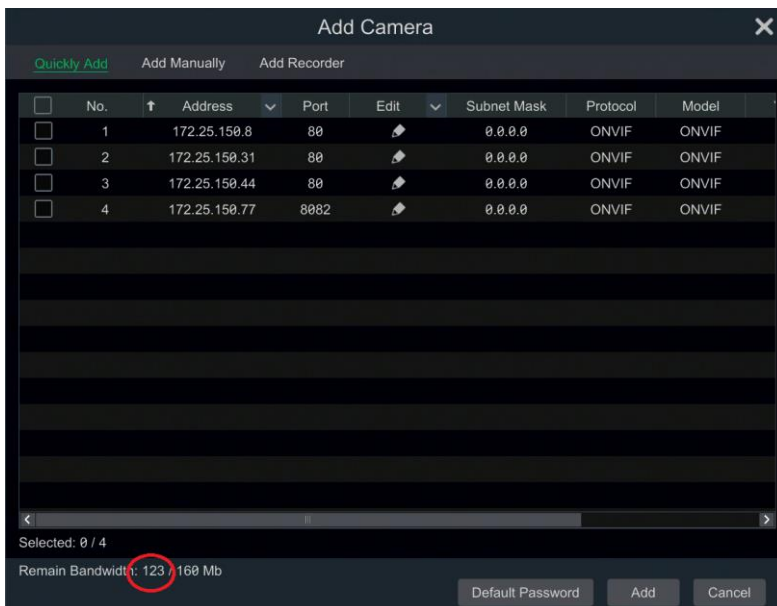
- a. The password for **admin** can be reset through the "Edit Security Question" function.

Click "Edit Security Question" in the login window and then enter the corresponding answer to the selected question in the pop-up window; the password for **admin** will be reset to **admin** by default. If you have forgotten the answer to the question, please contact your dealer for help.

- b. The passwords for other users can be reset by **admin**.

Q5. The NVR cannot add up to the maximum number of IP cameras

Take the 16-channel NVR as an example. Some 16-channel NVRs support a maximum of 120Mbps bandwidth input (please check your device). Refer to the picture below. The remaining bandwidth should be larger than the bandwidth of the IP camera you want to add, or you will not be able to add the IP camera. You should lower the bitrate for the added cameras to free up the bandwidth. We recommend adding cameras via "Quickly Add" for batch adding.



Q6. The IP camera connected to the PoE port of the NVR cannot be displayed automatically in the camera list

a. Please check if the resource of the PoE port is occupied by another IP camera that has been added through the network.

- Take the 16-channel NVR with 8 PoE ports as an example. The resource distribution of the 16 IP cameras is shown in the picture below.

CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8	CH9	CH10	CH11	CH12	CH13	CH14	CH15	CH16
								POE-1	POE-2	POE-3	POE-4	POE-5	POE-6	POE-7	POE-8

When you add IP cameras through the network, the IP cameras will occupy the channels from CH1, CH2, CH3, CH4... in sequence. If you directly connect the IP cameras to the PoE ports of the NVR, the IP cameras will occupy the resource from CH9 to CH16 according to the number of the PoE port each IP camera is connected to. Supposing that 12 CH IP cameras have been added to the NVR through the network and no IP camera has been directly connected to the PoE port. The 12 CH IP cameras occupy the 8 network resources from CH1 to CH8 and 4 PoE resources from CH9 to CH12 which are supposed to be occupied by connecting the IP cameras directly. In this situation, if you directly connect one IP camera to PoE5, PoE6, PoE7 or PoE8, the IP camera will be displayed in the camera list automatically. If you connect it to PoE1, PoE2, PoE3 or PoE4, it won't be displayed in the camera list by showing resource conflict. If you just need to connect it to PoE1, PoE2, PoE3 or PoE4, you should first delete the IP camera occupying the PoE port resource and then reconnect it to the PoE port.

- Take the 8-channel NVR with 8 PoE ports as another example. The resource distribution of the 8 IP cameras is shown in the picture below and the adding rules for the IP cameras are similar to the rules mentioned above. Please see above for details.

CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
POE-1	POE-2	POE-3	POE-4	POE-5	POE-6	POE-7	POE-8


b. Please make sure that the internal Ethernet port and the IP camera which directly connects to the PoE port through ONVIF protocol are in the same network segment. The internal Ethernet port and the IP camera which directly connects to the PoE port through ONVIF protocol should be in the same network segment or you will not be able to add the IP camera. Log in to the IP camera web client and then enable DHCP (obtain an IP address automatically) or manually change the IP address of the IP camera to make sure it is in the same network segment as the internal Ethernet port.

c. Check if the number of added IP cameras is at its maximum.


If the number of added IP cameras is at its maximum, the system will show you the message that the IP camera number is beyond the maximum when you directly connect another IP camera to the available PoE port and thus you will not be able to add the IP camera.

Q7. The IP camera directly connects to the PoE port of the NVR through ONVIF protocol is shown in the camera list, but there is no image output

Please make sure that the username and password for the IP camera are correct. The IP camera username and password can be changed in the two ways mentioned below.

① Click “Edit Camera” in the Camera module on the setup panel to go to the interface as shown below. Click  to change the username and password for the IP camera (enter the correct username and password for the IP camera in the pop-up window and then click “OK”).

Edit Camera										
Edit Camera Group										
IP Planning										
Search Camera										
Add Camera										
No.	Camera Name	Address	Port	Status	Protocol	Model	Preview	Edit	Upgrade	Version
1	giardino	172.25.159.284	9000	Online	ONVIF	IPTCAMA802A				4.2.1.0
2	giardino	172.25.159.286	9000	Online	Comelit	IPTCAMA82FA				5.0.1.0
3	ingresso	172.25.159.287	9000	Online	Comelit	IPBCAMA82FA				5.0.1.0
5	10	172.25.159.210	9000	Online	Comelit	IPKCAMA84ZA				5.0.1.0
6	parccheggio	172.25.159.212	9000	Online	Comelit	IPTCAMA82ZA				5.0.1.0
7	serie Advance	172.25.159.213	9000	Online	Comelit	IPKCAMA82ZA				5.0.1.0
8	IPC	172.25.159.214	9000	Online	Comelit	IPTCAMA82FA				5.0.1.0
9	ptz	172.25.159.281	9000	Online	Comelit	IPPTZAR223BA				4.2.1.0
14	IPC	172.25.159.62	9000	Online	Comelit	WICAMA82FA				4.2.1.0
16	parccheggio	172.25.159.283	9000	Online	Comelit	IPBCAMA80FA				4.2.1.0
IP Camera Max Number: 16										
Remain Bandwidth: 123 / 168 Mb										

② Go to the live preview interface and then click  in the preview window for the IP camera to edit the IP camera username and password.

Q8. The system cannot record

- a. Make sure the HDD was formatted prior to use.
- b. The recording schedule has not been set in manual record mode.
- c. The HDD is full and thus the NVR is not able to record. Check the HDD information from Disk Management and if required, please enable the recycle function.
- d. There is no disk but there are cameras in the disk group, so please add at least one disk to the group.
- e. The HDD could have gone wrong. Please replace it with another one.

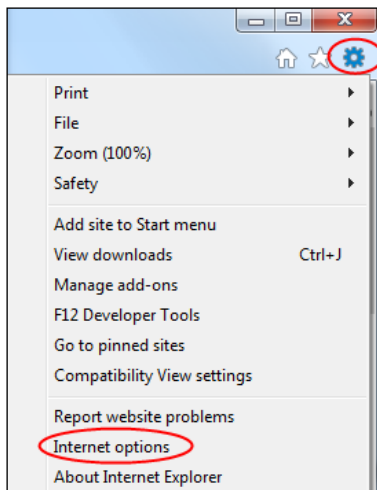
Q9. Failure to access the NVR remotely through Internet Explorer

- a. Please make sure you are using Internet Explorer version 8 or higher.
- b. Please check if the PC has a firewall enabled or antivirus software installed. Please try to access the NVR again after disabling the firewall and stopping the antivirus software.
- c. An allow & block list may have been set in Account and Authority settings. A PC with an IP address in the black list or outside the white list cannot access the NVR remotely.

Q10. ActiveX control cannot be downloaded

- a. The Internet Explorer browser blocks ActiveX control. Please complete setup as per the steps mentioned below.

① Open IE browser. Click  → Internet Options.



- ② Select Security→Custom Level. Refer to Fig. 1.
- ③ Enable all the sub options under “ActiveX controls and plug-ins”. Refer to Fig. 2.
- ④ Then click “OK” to finish the setup.

b. Other plug-ins or antivirus software may block ActiveX. Please disable them or implement the required settings.

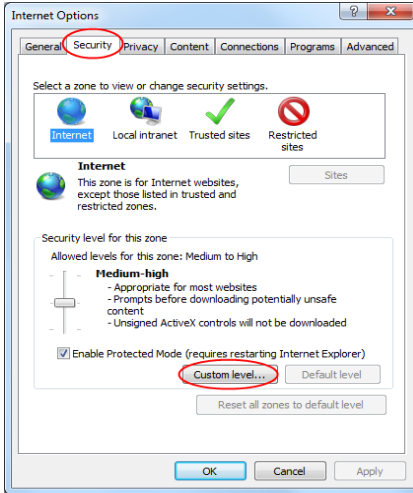


Fig. 1

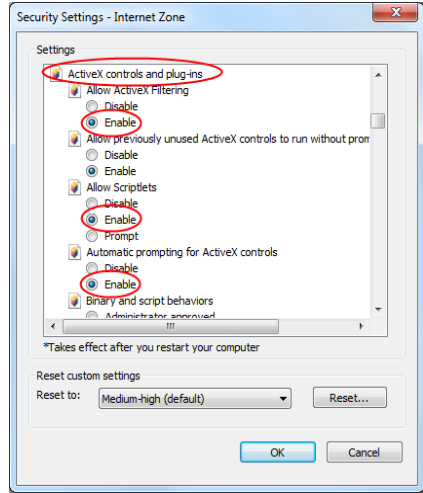



Fig. 2

Q11. How to play the backup file

a. Recorded video backed up by NVR: insert the USB device where the recorded video backup file is saved to the USB interface of the PC and then open the USB device path. The recorded video can be backed up in private format and AVI format via NVR.

- If you select private format when backing up recorded video via NVR, a compression package will be backed up to the USB device automatically, along with the recorded video data. Uncompress the “.zip” and then click “AdvancePlayer.exe” to set it up. After setup is complete, open Advance Player and then click “Open Folder” in the middle of the interface to select the recording data.

Select a camera in the resource tree on the left side of the interface to play the camera recording. Click  on the toolbar under the camera image to enable audio.

Note: the recording will not have audio output if you disable the audio when recording via NVR.

- If you select AVI format when backing up recorded video via NVR, the recorded video backup data can be played by the video player which supports this format.

b. Recorded video backed up through the web. The recorded video can only be backed up with AVI format through the web. The recorded video can be backed up to PC and played by the video player which supports this format.

Appendix B - Calculate Recording Capacity

The recording capacity is related to the recording resolution, recording stream and bitrate. Different image quality parameters determine different disk capacity occupation in the same time frames. The bigger the recording resolution, recording stream and recording bitrate is, the more disk capacity is taken up in the same amount of time. The calculation for recording capacity is shown as below.

Recording Capacity(MB) = Bitrate (Kbps) ÷ 1024 ÷ 8 × 3600 × Recording hours per day × Recording Storage Days × channel numbers

3600 means record for an hour (1TB=1024GB, 1GB=1024MB, 1MB=1024KB, 1Byte=8bit).

Recording Bitrate (Kbps)	Used Space (MB/Hour)	Used Space (MB/Day)
10240	4500	108000
8192	3600	86400
6144	2700	64800
4096	1800	43200
3072	1350	32400
2048	900	21600
1024	450	10800
768	337.5	8100
512	225	5400
384	168.75	4050
256	112.5	2700

The table below shows the recording capacity requirements for recording storage in 30 days.

Recording Bitrate (Kbps)	Recording Capacity (TB)					
	1CH	4CH	8CH	16CH	32CH	64CH
10240	3.09	12.36	24.72	49.44	98.88	197.76
8192	2.48	9.89	19.78	39.56	79.11	158.21
6144	1.86	7.42	14.84	29.67	59.33	118.66
4096	1.24	4.95	9.89	19.78	39.56	79.11
3072	0.93	3.71	7.42	14.84	29.67	59.33
2048	0.62	2.48	4.95	9.89	19.78	39.56
1024	0.31	1.24	2.48	4.95	9.89	19.78
768	0.24	0.93	1.86	3.71	7.42	14.84
512	0.16	0.62	1.24	2.48	4.95	9.89
384	0.12	0.47	0.93	1.86	3.71	7.42
256	0.08	0.31	0.62	1.24	2.48	4.95

For instance, take a 32-channel NVR that is recording 24 hours a day and the recording is stored for 30 days. The NVR adopts dual stream recording. The main stream is 4096Kbps and the sub stream is 1024Kbps, then the total recording space is 49.45TB (39.56TB + 9.89TB).

Considering that the disk loss is about 10% for the format, the required disk capacity will be 55TB (49.45TB ÷ (1-10%)).

Appendix C - Compatible Device List

Compatible HDD list

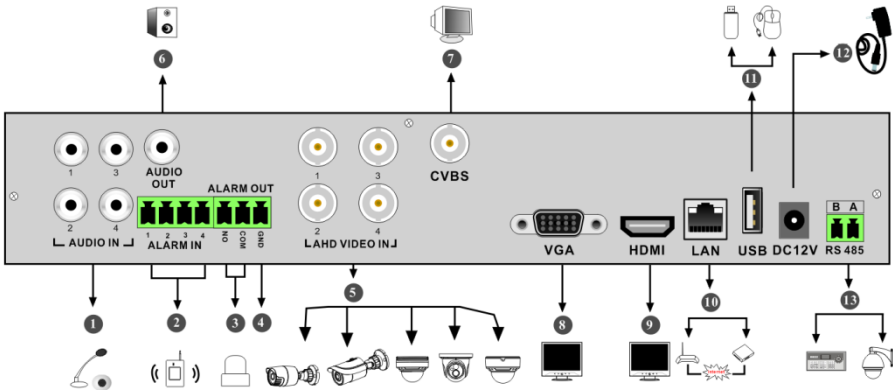
Brand and Series		Capacity
Seagate	Barracuda Series	500GB /1TB /2TB /3TB
	SV35 Series (recommended)	1TB /2TB /3TB
	Surveillance HDD Series (recommended)	1TB /2TB /3TB /4TB /6TB
Western Digital	Blue Series	500GB /1TB
	Green Series	2TB /3TB /4TB
	Purple Series (recommended)	1TB /2TB /3TB /4TB /6TB

Compatible USB mobile device

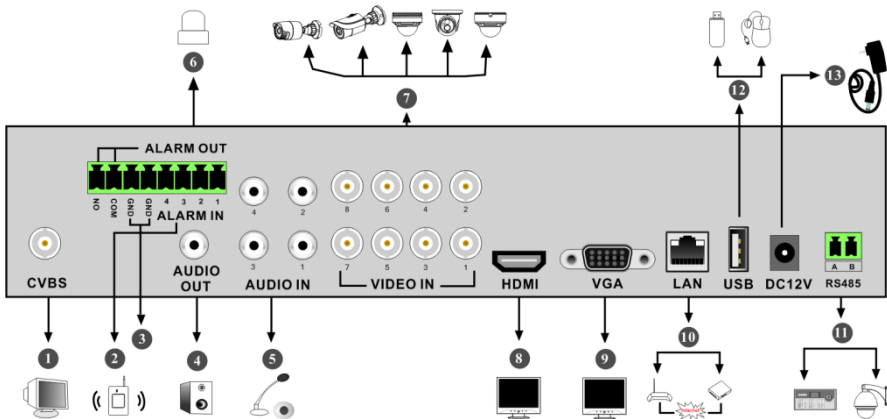
Brand	Capacity
SSK	2GB
Netac	4GB
Kingston	2GB/8GB/16GB/32GB
Aigo	2GB
Smatter vider	1GB
SanDisk	4GB/8GB/16GB/32GB

Appendix D – AHDVR Rear Panels

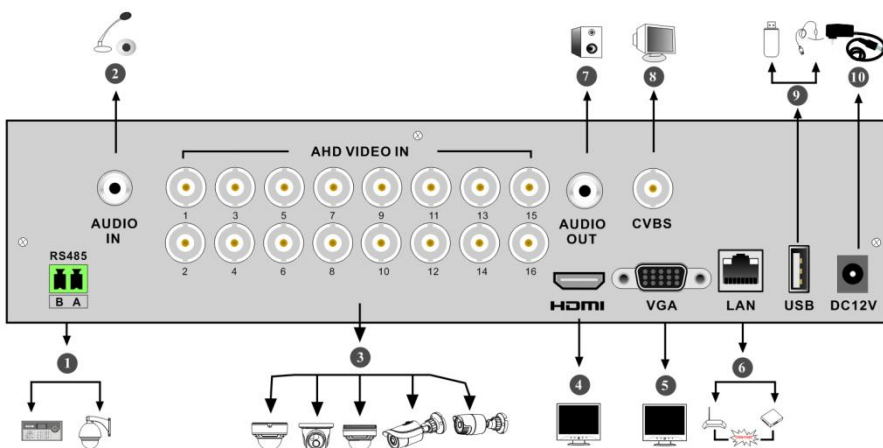
Here we only take a part of real panels as an example. The interfaces and interface locations are only for reference. Please check the real device.



No.	Name	Description
1	AUDIO IN	Audio input
2	ALARM IN	Alarm inputs for connecting sensors
3	ALARM OUT	Relay output for connecting external alarms
4	GND	Ground
5	AHD VIDEO IN	4-channel AHD video inputs
6	AUDIO OUT	Audio output
7	CVBS	CVBS video output; connect to monitor
8	VGA	Connect to monitor
9	HDMI	Connect to high definition monitor
10	LAN	Network port
11	USB	Connector for USB storage devices or USB mouse
12	DC12V	12VDC power input
13	RS485	Connector for keypads or speed domes. A is TX+; B is TX-



No.	Name	Description
1	CVBS	CVBS video output; connect to monitor
2	ALARM IN	Alarm inputs for connecting sensors
3	GND	Ground
4	AUDIO OUT	Audio output
5	AUDIO IN	Audio input
6	ALARM OUT	Relay output for connecting external alarms
7	VIDEO IN	8-channel video inputs
8	HDMI	Connect to high definition monitor
9	VGA	Connect to monitor
10	LAN	Network port
11	RS485	Connectors for keypads or speed domes. A is TX+; B is TX-
12	USB	Connector for USB storage devices or USB mouse
13	DC12V	12VDC power input



No.	Name	Description
1	RS485	Connectors for keypads or speed domes. A is TX+; B is TX-
2	AUDIO IN	Audio input
3	AHD VIDEO IN	16-channel AHD video inputs
4	HDMI	Connect to high definition monitor
5	VGA	Connect to monitor
6	LAN	Network port
7	AUDIO OUT	Audio output
8	CVBS	CVBS video output; connect to monitor
9	USB	Connect USB storage devices or USB mouse
10	DC12V	12VDC power input

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