N8NRT
User Manual

Please read this manual carefully before operating the unit and keep it for further 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 places or printing errors in this manual. The updates will be added into the new version of this manual. The contents of this manual are subject to change without notice.
- This device should be operated only from the type of power source indicated on the marking label. The voltage of the power must be verified before using the same. Kindly remove the cables from the power source if the device is not to be 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 ensure proper ventilation around the machine.
- Do not power off the device at normal recording condition.
- This machine is for indoor use only. Do not expose the machine in rain or moist environment. In case any solid or liquid get inside the machine's case, please turn off the device immediately and get it checked by a qualified technician.
- Do not try to repair the device by yourself without technical aid or approval.
- When this product is in use, the relevant contents of Microsoft, Apple and Google will be involved in. The pictures and screenshots in this manual are only used to explain the usage of our product. The ownerships of trademarks, logos and other intellectual properties related to Microsoft, Apple and Google shall belong to the above-mentioned companies.
- It is recommended to back up and clear the personal data stored in the device before the device is returned to us for repair or replacement except those data that are essential for purposes of repair or replacement. The device will be restored to the default factory settings and all personal data will be cleared 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 is suitable for many models. All examples and pictures used in the manual are from one of the models for reference purpose.
- The local language versions of this manual will be provided to users in the corresponding regions and countries.

Disclaimer

- With regard to the product with internet access, the use of product shall be wholly at your own risks. Our company shall be irresponsible for abnormal operation, privacy leakage or other damages resulting from cyber attack, hacker attack, virus inspection, or other internet security risks; however, our company will provide timely technical support if necessary.
- Surveillance laws vary from country to country. Check all laws in your local region before using this product for surveillance purposes. We shall not take the responsibility for any consequences resulting from illegal operations.

- The storage period of the personal data depends on the capacity of the storage devices the users use and all data stored in the device shall be handled by themselves. Our company shall not be responsible for the data loss.

Cybersecurity Recommendations

- Change passwords and use strong passwords. At least 8 characters or a combination of characters, numbers, and upper and lower case letters should be used in your password.
- The system will automatically check the latest firmware version once a day. Once the latest version is checked, you'd better update it to ensure the system is current with the latest security patches and fixes.
- Regularly change the passwords of your devices to ensure that only authorized users can access the system.
- Change default ports (like HTTP, data port) to reduce the risk of outsiders being able to access.
- It is recommended to set the firewall of your router. But note that some important ports cannot be closed (like 80, 443, 6036).

Regulatory Information

FCC Information

1. FCC compliance

The products have be tested and found in compliance with the council FCC rules and regulations part 15 subpart B. These limits are designed to provide reasonable protection against harmful interference. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. The user will be required to correct the interface at his own expense in case the harmful interference occurs.

2. FCC conditions:

Operation of this product is subject the following two conditions: (1) this device may not cause harmful interface, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Information

CE The products have been manufactured to comply with the following directives.

EMC Directive 2014/30/EU

RoHS

The products have designed and manufactured in accordance with Directive EU RoHS Directive 2011/65/EU and its amendment Directive EU 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

2012/19/EU (WEEE directive): The Directive on waste electrical and electronic equipment (WEEE Directive). To improve the environmental management of WEEE, the improvement of collection, treatment and recycling of electronics at the end of their life is essential. Therefore, the product marked with this symbol must be disposed of in a responsible manner.

Directive 94/62/EC: The Directive aims at the management of packaging and packaging waste and environmental protection. The packaging and packaging waste of the product in this manual refers to must be disposed of at designated collection points for proper recycling and environmental protection.

REACH(EC1907/2006): REACH concerns the Registration, Evaluation, Authorization and Restriction of Chemicals, which aims to ensure a high level of protection of human health and the environment through better and earlier identification of the intrinsic properties of chemical substances. The product in this manual refers to conforms to the rules and regulations of REACH. For more information of REACH, please refer to DG GROWTH or ECHA websites.

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1 Introduction

1.1 Summary

The smart management terminal (SMT) series is specially designed and developed for AI application management, like body temperature measurement management, time attendance, access control, etc. It supports real-time face capture display, temperature display and alarm out, statistics, video preview, search and playback.

1.2 Features

- **Basic Functions**

- Support network device access including facial panel, AI camera, IP camera, attendance terminal, etc.
- Support the H.265 and H.264 IP cameras
- Support standard ONVIF protocol
- Support dual stream recording of each camera
- Support IP cameras to be added quickly or manually
- Support collective or individual configuration of the cameras' OSD, video parameters, motion and so on
- Support a maximum of 8 user permission groups including Administrator, Advanced and Ordinary which are the default permission groups of the system
- Support a maximum of 16 users to be created, multiple web clients login by using one username at the same time and the user's permission control to be enabled or disabled
- Support a maximum of 10 web clients login at the same time

- **Live View**

- Support 4K×2K/1920×1080/1280×1024 HDMI and 1920×1080/1280×10 24 VGA high definition synchronous display(depending on models)
- Support multi-screen modes such as 1/4/6/8/9/13/16 (depending on models)
- Real-time display of all abnormal data, including abnormal temperature, mask off, block list, etc.
- Real-time face capture view, face match view, body temperature view.
- Real-time personal information display, including name, area, temperature, mask on/off, company, etc.
- Support auto adjustment of the camera's image display proportion
- Support audio monitoring of the camera to be enabled or disabled
- Support manual snapshot of the preview camera
- Support quick tool bar operation of the preview window
- Support motion detection
- Support image and lens adjustment (only available for some cameras)
- Support quick camera adding in the camera window of the live preview interface
- Support precise face recognition with masks

- **AI Functions**

- Statistics of abnormal temperature and non-mask detection in recent 24 hours or 7 days
- Statistics of the people information, including staff, allow list, block list, VIP, stranger and staff counts
- Support adding 20,000 face pictures
- Support face attendance
- Support face greeting via Web client
- Support abnormal temperature alarm
- Support non-mask detection alarm

Disk Management

- A maximum of 1 SATA HDD
- Each SATA interface of the SMT supports the HDDs with max 10TB storage capacity
- Support disk group configuration and management and each camera can be added into different disk groups with different storage capacity
- Support disk information and disk working status viewing
- Support batch formatting of the disks

Record Configuration

- 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 schedule recording and event recording setting with different record streams
- Support record schedule setting and recycle recording
- Support pre recording and delay recording configuration of the event recording

Record Playback

- Support time scale operation in quick playback and the playback date and time can be set randomly by scrolling the mouse; the time interval of the time scale can be zoomed
- Support pass-through records search by mask status, by normal/over temperature or by event (stranger/allow list/ block list/VIP)
- Support record search by time slice/time/event/tag
- Support time view and camera view in searching by time slice mode
- Support time slice search by month, by day, by hour and by minute and time slice to be displayed with camera thumbnail
- Support a maximum of 8 cameras to be searched by time
- Support event search by manual/motion/sensor/intelligent events
- Support tag search by the manual added tags
- Support instant playback of the selected camera in the live preview interface
- Support a maximum of 8 synchronous playback cameras
- Support acceleration(maximum 32 times of the normal speed), deceleration (minimum 1/32 times of the normal speed) and 30s' addition or reduction to current playing time

Record Backup

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

Alarm Management

- Support alarm schedule setting
- Support enabling or disabling of the motion detection, external sensor alarm input, combination alarm and exception alarms including IP address conflict alarm, disk IO error alarm, disk full alarm, no disk alarm, illegal access alarm, network disconnection alarm, IPC offline alarm and so on, alarm linkage configuration supportable
- Support IPC offline alarm linkage configuration of snap, pop-up video, etc.
- Support event notification modes of alarm-out, pop-up video, pop-up message box, buzzer, e-mail and so on
- The snapped images can be attached into the e-mail when alarm linkage is triggered
- Support alarm status view of alarm-in, alarm-out, motion detection and exception alarm
- Support alarm to be triggered and cleared manually
- Support system auto reboot when exception happens

Network Functions

- Support TCP/IP and PPPoE, DHCP, DNS, DDNS, UPnP, NTP, SMTP protocol and so on
- Support allow and block list function and the IP address/IP segment/MAC address can be allowed or blocked.
- Support multiple browsers including IE8/9/10/11, Firefox, Opera, Chrome (available only for the versions lower than 45) and Safari in MAC system
- Support remote preview, configuration, import and export of the SMT parameters and other system maintenance operations including remote upgrading and system restart
- Support remote camera configuration of the SMT including video parameters, image quality and so on
- Support remote search, playback and backup of the SMT
- Support manual alarm to be triggered and cleared remotely
- The auto-focusing camera can be adjusted through web client (support zoom in/out, but one key focus is not currently supported)
- Support NVMS or other platform management software to access the SMT and manage it
- Support NAT function and QRCode scanning by mobile phones and tablets
- Support mobile surveillance by phones or tablets with iOS or Android OS
- Support SMT to be accessed remotely through telnet and the telnet function can be enabled or disabled
- If one camera recording is enabled or disabled manually through web client, it will be simultaneously enabled or disabled in the SMT

Other Functions

- The SMT can be controlled and operated by the buttons on the front panel, the remote controller and the mouse
- Setting interfaces can be switched to one another conveniently by clicking the main menus

on the top of the setting interfaces

- Support SMT information viewing including basic, camera status, alarm status, record status, network status, disk and backup status
- Support factory restoring, import and export of the system configuration, log view and export and local upgrading by USB mobile device
- Support auto recognition of the displayer's resolution
- You can click the right mouse button at any interface to go back to the upper interface
- You can click the middle mouse button at any interface to go to the live view interface
- The display language and video format of the SMT will not be changed and the system logs will be reserved if you reset the SMT to factory default
- Press and hold the right mouse button for 5 seconds in any interface to switch the output to VGA and the SMT will display the video at the lowest resolution which the SMT supports

1.3 Front Panel Descriptions

The following descriptions are for reference only.

Type I:

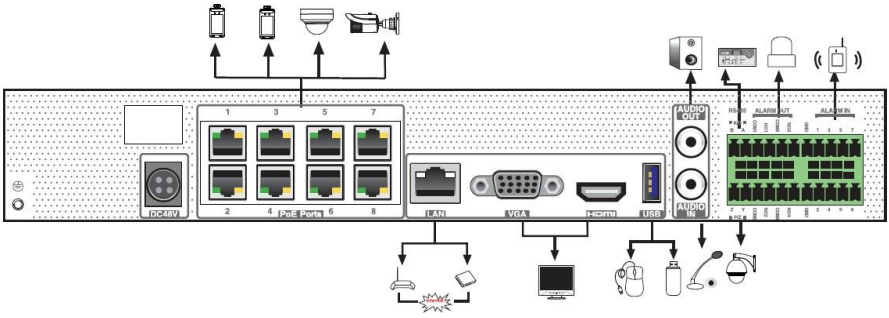
Name	Descriptions
REC	When recording, the light is blue
Net	When access to network , the light is blue
Power	Power indicator, when connection , the light is blue
Fn	No function temporarily

Type II:

Name	Descriptions
Power	Power Indicator, when connected, the light is blue
HDD	The light turns blue when reading/writing HDD
Net	The light turns blue when it is able to access the network
Backup	The light turns blue when backing up files and data
Play	The light turns blue when playing video
REC	Power Indicator, when connected, the light is blue
AUDIO /+	1. Adjust audio 2. Increase the value in setup
P.T.Z / -	1. Enter PTZ mode 2. Decrease the value in setup
MENU	Enter Menu in live
INFO	Check the information of the device
BACKUP	Enter backup mode in live
SEARCH	Enter search mode in live
Exit	Exit the current interface

Name	Descriptions
	Manually record
	Play/Pause
	Speed down
	Speed up
1-9	Input digital number and select camera
0/--	Input number 0, the number above 10
Direction Key	Change direction
Multi-Screen Switch	Change the screen mode
Enter	Confirm selection
USB	To connect external USB device like USB mouse or USB flash

1.4 Rear Panel Descriptions



No.	Name	Descriptions
1	Power Supply	DC48V power supply interface
2	PoE ports	8 PoE network ports; connect to 8 PoE IP cameras/panel

No.	Name	Descriptions
3	LAN	Network port
4	VGA	Connect to monitor
5	HDMI	Connect to 1920×1080 high definition display device
6	USB	USB3.0 interface, connect USB storage device or USB mouse
7	AUDIO IN	Audio input; connect to audio input device, like microphone, pickup, etc
8	AUDIO OUT	Audio output; connect to sound box
9	RS485 A/B interface	Connect to a keyboard. A is TX+; B is TX-
10	RS485 Y/Z interface	Connectors for speed dome. Y is TX+, Z is TX- (This interface of some models is unavailable.)
11	ALARM OUT	Relay output; connect to external alarm
12	ALARM IN	Alarm inputs for connecting sensors
13	GND	Grounding

1.5 Connections

- **Video Connections**

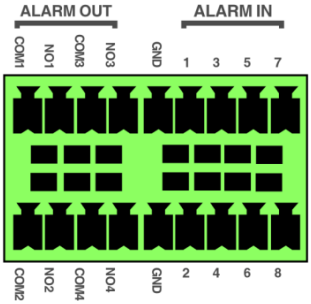
Video Output: Supports VGA/HDMI video output. You can connect to monitor through these video output interfaces simultaneously or independently.

- **Audio Connections**

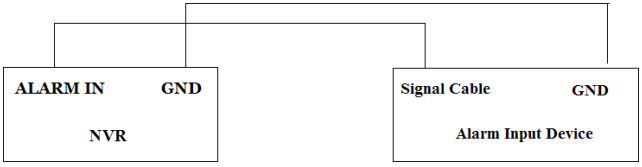
Audio Input: Connect to microphone, pickup, etc.
Audio Output: Connect to headphone, sound box or other audio output devices.

- **Alarm Connections**

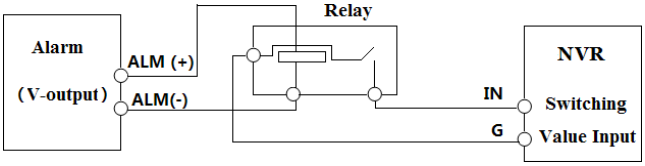
Some models may not support this function. Take 8CH alarm inputs and 4CH alarm output for example.



Alarm Input:
Alarm IN 1~8 are 8 CH alarm input interfaces. There are no type requirements for sensors. NO type and NC type are both available.
The way to connect sensor and the device is as shown below:



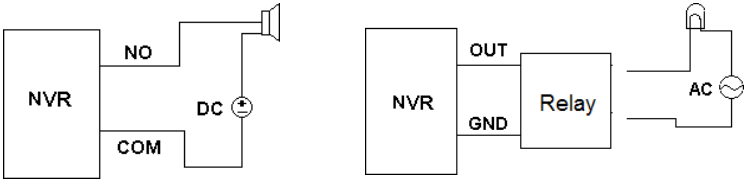
The alarm input is an open/closed relay. If the input is not an open/closed relay, please refer to the following connection diagram:



Alarm Output:

The way to connect alarm output device:

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



- **RS485 Connection**

The P/Z interfaces are unavailable temporarily. K/B interfaces are used to connect keyboard.

2 Basic Operation Guide

2.1 Startup & Shutdown

Please make sure all the connections are done properly before you power on the unit. Proper startup and shutdown are crucial to extending the life of your device.

2.1.1 Startup

① Connect the output display device to the VGA/HDMI interface of the SMT.

② Connect with the mouse and power. The device will boot and the power LED would 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 N8NRT). Refer to 3.1 Startup Wizard for details.

2.1.2 Shutdown

You can power off the device by using remote controller or mouse.

By remote controller:

① Press the Power button. This will take you to a shutdown window. The unit will power off after a while by clicking the "OK" button.

② Disconnect the power.

By mouse:

① Click Start→Shutdown to pop up the Shutdown window. Select "Shutdown" in the window. The unit will power off after a while by clicking the "OK" button.

② Disconnect the power.

2.2 Remote Controller

① It uses two AAA size batteries.

② Open the battery cover of the remote controller.

③ Place batteries. Please take care the polarity (+ and -).

④ Replace the battery cover.

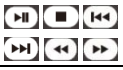
Key points to check in case the remote doesn't work.

1. Check batteries polarity.
2. Check the remaining charge in the batteries.
3. Check IR controller sensor for any masking.

If it still doesn't work, please change a new remote controller to try, or contact your dealers. You can just turn the IR sensor of the remote controller towards the IR receiver of the SMT to control it when you are controlling multiple devices by remote controller.

There are two kinds of remote controller. The interface of remote controller is shown as below.

REC
1
2
3
4
5
6
7
8
9
-/--
0
Fn 1
Multi
Next
SEQ
Audio
SPOT
ENTER
Menu
Exit
IRIS+
P.T.Z
IRIS-
Focus
Zoom
Preset
Cruise
Wiper
Light
Track
Clear
Fn 2
INFO
Snap
Search
Cut
Backup
Zoom
PIP

Button	Function
Power Button	Switch off—to stop the device
Record Button	To start recording
-/-- /0-9	Input number or choose camera
Fn1 Button	Unavailable temporarily
Multi Button	To choose multi screen display mode
Next Button	To switch the live image
SEQ	To go to sequence view mode
Audio	To enable audio output in live mode
Switch	No function temporarily
Direction button	To move cursor in setup or pan/title PTZ
Enter Button	To confirm the choice or setup
Menu Button	To go to menu
Exit Button	To exit the current interface
Focus/IRIS/Zoom/PTZ	To control PTZ camera
Preset Button	To enter into preset setting in PTZ mode
Cruise Button	To go to cruise setting in PTZ mode
Track Button	No track function temporarily
Wiper Button	No function temporarily
Light Button	No function temporarily
Clear Button	No function temporarily
Fn2 Button	No function temporarily
Info Button	Get information about the device
	To control playback. Play(Pause)/Stop/Previous Frame/Next Frame/Speed Down/Speed Up
Snap Button	To take snapshots manually
Search Button	To go to search mode
Cut Button	No function temporarily
Backup Button	To go to backup mode
Zoom Button	To zoom in the images
PIP Button	No function temporarily

Note:

You shall press P.T.Z button to enter PTZ setting mode, choose a channel and press P.T.Z button again to hide the P.T.Z control panel. Then you can press preset, cruise, track, wiper or light button to enable the relevant function.

REC
Search
MENU
Exit
ENTER
ZOOM
PIP
Multi
Next
SEQ
INFO

Button	Function
REC	Record manually
Search	To enter search mode
MENU	To enter menu
Exit	To exit the current interface
ENTER	To confirm the choice or setup
Direction button	To move cursor in setup
ZOOM	To zoom in
PIP	No function temporarily
	To control playback. Play(Pause)/Next Frame/Speed Up/Stop/Previous Frame/Speed Down
Multi	To choose multi screen display mode
Next	To switch the live image
SEQ	To go to sequence view mode
INFO	Get information about the device

2.3 Mouse Control

- **Mouse control in Live Display & 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 pop up a tool bar. The tool bar will disappear automatically after you move the mouse away from it for some time; move the mouse to the right side of the interface to pop up a panel and the panel will disappear automatically after you move the

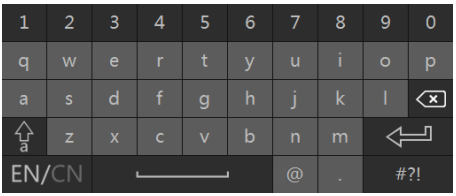
mouse away from it.

- **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: Mouse is the default tool for all operations unless an exception as indicated.

2.4 Text-input Instruction



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 which provides inputs of numbers, letters and punctuation characters. The introductions of keys on the input boxes are shown below.

Button	Meaning	Button	Meaning
	Backspace key	#?!	Switch key of punctuation character
DEL	Delete Key		Enter key
	Switch key between upper and lower letter		Space key
EN/CN	Switch key of language		

2.5 Common Button Operation

Button	Meaning
	Click it to show the menu list.
	Click it to change the sequence of the list.
	Click it to change the camera displaying mode.
	Click it to close the current interface.
Earliest	Click it to go to the earliest date of camera recording.
Latest	Click it to go to the latest date of camera recording.

3 Wizard & Main Interface

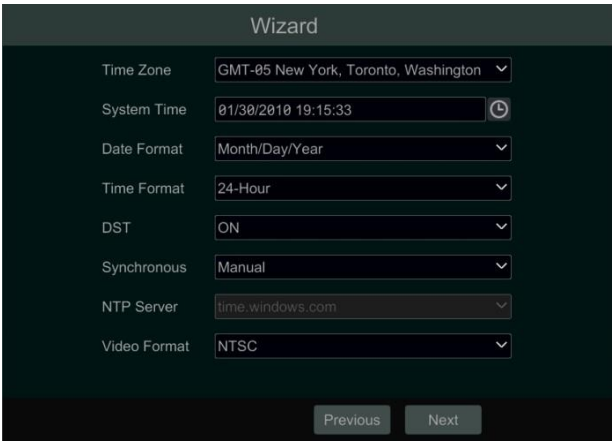
3.1 Startup Wizard

The disk icons will be shown on the top of the startup interface. You can view the number and status of each disk quickly and conveniently through these icons (: no disk; : unavailable disk; : RW available disk).

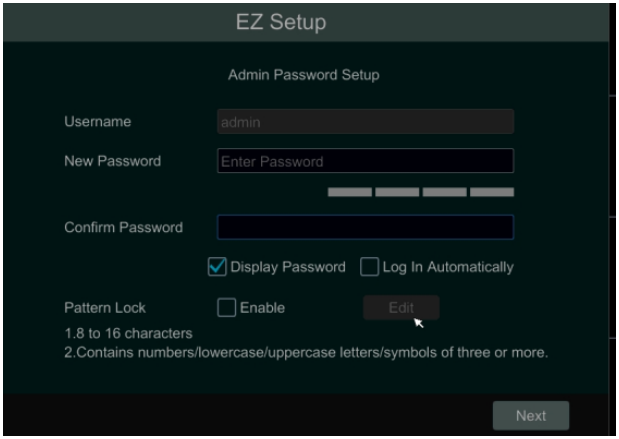
You can quickly configure the NVR by wizard setup to make the NVR work normally. You must configure the wizard if you start the DVR for the first time (or click "Skip" to cancel the wizard next time). Maybe different versions have different wizard steps. The following wizard steps are for reference only.

① Choose the language and locality as needed if it is the first time for you to use the wizard and then read the privacy statement, checkmark "I have read and agree" and click "OK".

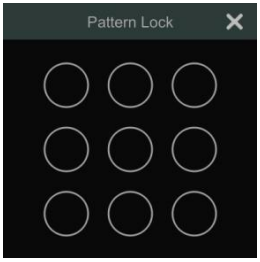
② ***Date and Time Configuration***. The date and time of the system need to be set up if you use the wizard for the first time. Refer to the following figure. Set the time zone, system time, date format, time format and video format. The DST will be enabled by default if the time zone selected includes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



③ ***System Login***. Set your own password or use the default when you use the wizard for the first time (the default username of the system is ***admin***); select the login username and enter the corresponding password next time.



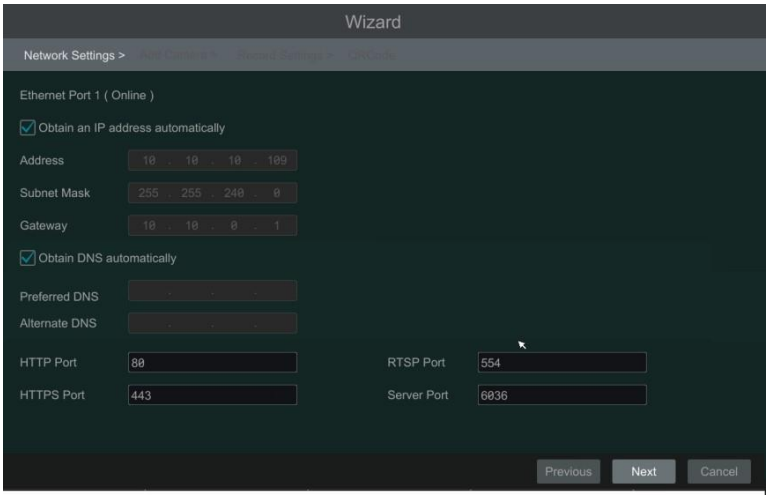
Enable pattern lock and click “Edit” to set the pattern lock.



Click “Next” to set questions and answers for password security of admin. If you forget the password, please refer to Q4 in Appendix A FAQ for details.
Click “Next” to continue.

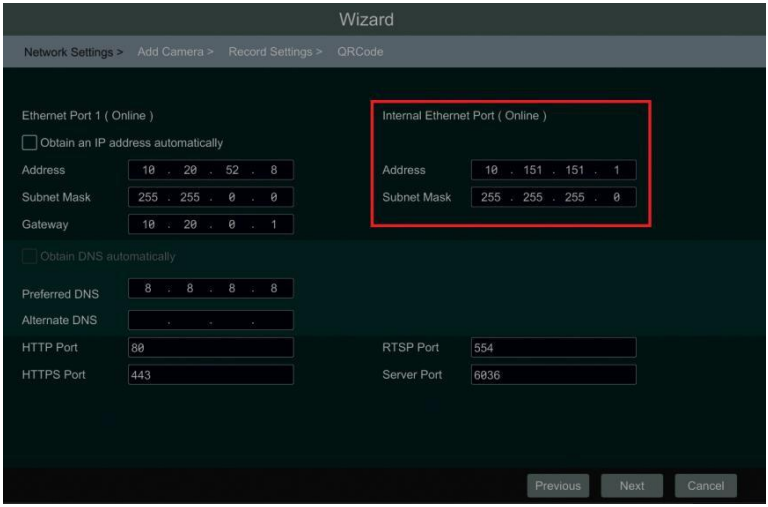
④ ***Disk Settings.*** You can view the disk number, disk capacity of the SMT and serial number, R&W status of the disk. Click “Format” to format the disk. Click “Next” to continue. Then click “Wizard Setup”.

⑤ ***Network Settings***. Check “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 port, RTSP port and Server port (please see 13.1.2 Port Configuration for details). Click “Next” to continue.



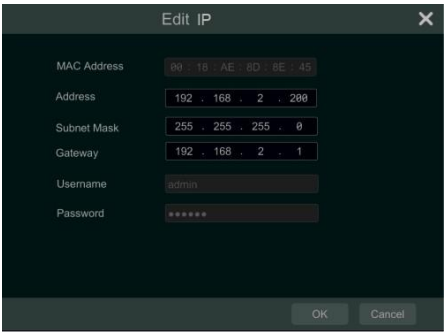
Note:

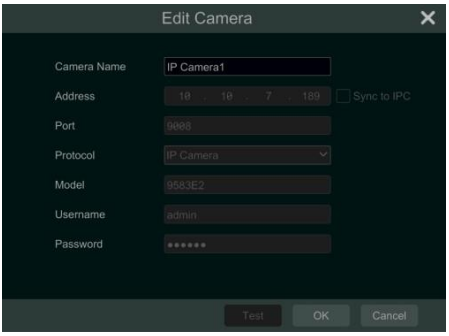
➢ If you use the SMT with the PoE network ports, the online state of the internal Ethernet port will be shown on the interface. Refer to the picture below. Please refer to 13.1.1 TCP/IP Configuration for detail introduction of the internal Ethernet port.



⑥ ***Add Camera***. Click “Refresh” to refresh the list of online IP cameras which are in the same local network with SMT and then click to add the searched camera. 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 searched IP camera as shown on the below left. Enter the new IP address, subnet mask, gateway, username and the password of the camera. Click "OK" to save the settings.

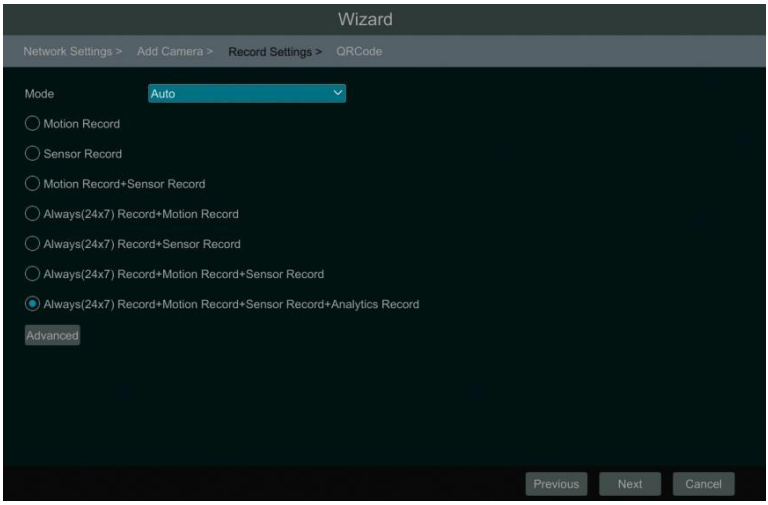




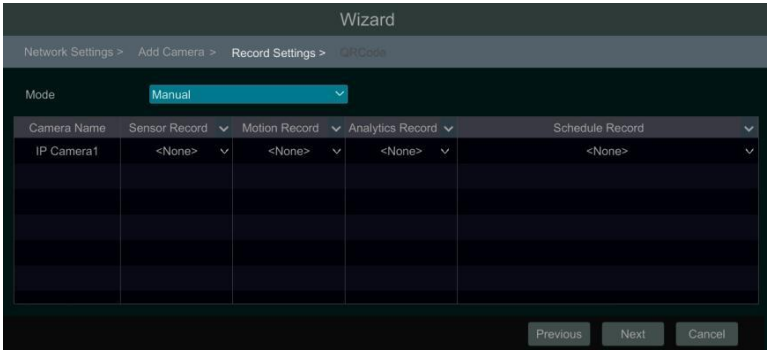
Click to edit the added camera as shown on the above right. Enter the new camera name, IP address, port, username and the password of the camera. You can check "Sync to IPC" to modify the IP address of the IPC via different network segments for being in the same network segment with the SMT. Then click "Test" to test the connection. Click "OK" to save the settings. You can change the IP camera name only when the added camera is online. Click "Next" to continue.

⑦ ***Record Settings***. Two record modes are available: auto and manual.

Auto: Select one auto mode in the interface as shown below and then click the "Next" to save the settings. Click "Advanced" to self-define record mode. See 9.1.1 Mode Configuration for details.



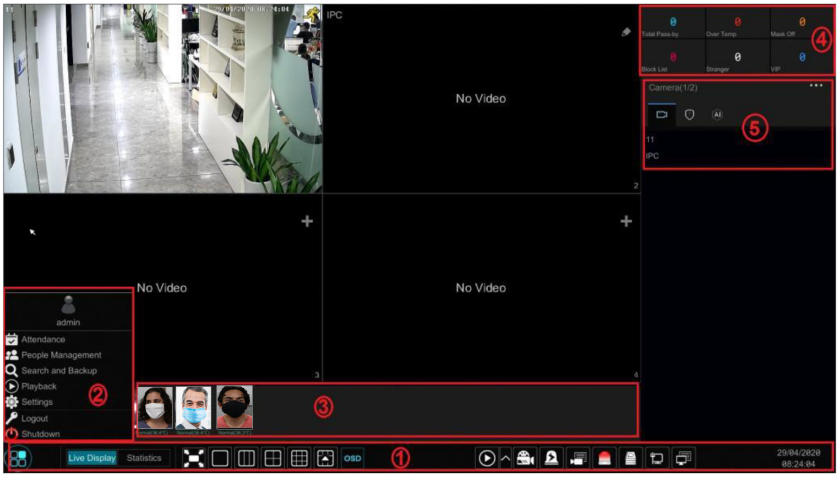
Manual: Set the "Sensor Record", "Motion Record" and "Schedule Record" of each camera. Click "OK" to save the settings. See 9.1.1 Mode Configuration for details.



⑧ ***QRCode.*** Enable the NAT function in the interface or set it in the network configuration after exiting the wizard (please refer to 13.1.8 NAT Configuration for details). You can scan the QRCode through mobile client which is installed in the mobile phone or tablet PC to log in the mobile client instantly. Please refer to 14.1 Mobile Client Surveillance for details. Click"OK" to save the settings.

3.2 Main Interface

3.2.1 Main Interface Introduction

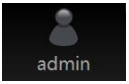
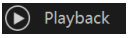
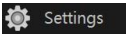
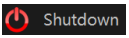


The buttons in area ① are introduced in the table below.

Button	Meaning
	Start button. Click it to pop up area ③.
Live Display	Click it to display the live image.
Statistics	Click it to enter the statistics interface, including over temperature statistics, non-mask detection statistics, attendance statistics, personal records and statistics.
	Full screen button. Click it to show full screen; click it again to exit the full screen.
	Screen mode button.
	Click it to enable OSD; click again to disable OSD.
	Click to set the default playback time before starting instant playback (10.1 Instant Playback) or going to the playback interface for playback operations (10.2 Playback Interface Introduction); click to go to the playback interface. For instance, if you choose “5 minutes ago” as the default playback time, you can playback the record from the past five minutes.
	Manual record button. Click it to enable/disable record.
	Manual alarm button. Click it to trigger or clear the alarm-out manually in the popup window.
	Record status button. Click it to view the record status.
	Alarm status button. Click it to view the alarm status.

Button	Meaning
	Disk status button. Click it to view the disk status.
	Network status button. Click it to view the network status.
	Information button. Click it to view system information.

Introduction of area②:

Icon / Button	Meaning
	It shows the current login user.
	Click it to go to the attendance configuration and search interface.
	Click it to go to the people management interface, see 6 People Management for details.
	Click it to go to record search and backup interface, see 10.3 Record Search, Playback & Backup for details.
	Click it to go to playback interface (click on the tool bar at the bottom of the live preview interface to set the default playback time), see 10.2 Playback Interface Introduction for details.
	Click it to pop up the setup panel, see 3.2.2 Setup Panel for details.
	Click it to log out the system.
	Click it and then select “Logout”, “Reboot” or “Shutdown” in the popup window.

Introduction of area ③/④/⑤:

Area ③ : Captured face picture display area. If the added device is a temperature measurement and face recognition terminal, the body temperature will be displayed under the captured face picture.

Area ④ : Real-time statistical information display area. The statistical information includes total pass-by counts, over temperature counts, mask off counts, block list counts, stranger counts and VIP counts

Area ⑤ : Camera list/real-time warning/intelligent detection display area.

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 ***Camera*** module as an example. The ***Camera*** module provides convenient links such as "Add Camera", "Edit Camera", "Image Settings" and "Motion". Click ***Camera*** to go to the camera management interface as shown below.

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

3.2.3 Main Functions

- **Camera**

The module covers the functions such as ***Camera Management*** (see Chapter 4 Camera Management for details), ***Image Settings*** (see 5.2 Preview Image Configuration for details) and ***Motion*** (see 11.4 Motion Configuration for details)

- **Record**

The module covers the functions such as ***Encode Parameters*** and ***Record Schedule*** and so on. Please see Chapter 9 Record & Disk Management for details.

- **AI/Event**

The module covers the functions such as ***Body Temperature Settings, Mask Settings, Combination Alarm, Exception, Sensor and Motion Alarm*** and ***Alarm Out Settings***. Please see Chapter 11 AI/Event Management for details.

- **Disk**

The module covers the functions such as ***Disk Management***, ***Storage Mode*** and ***Disk Information*** and so on. Please see Chapter 9 Record & Disk Management for details.

- **Network**

The module covers the functions such as ***TCP/IP***, ***DDNS***, ***Port***, ***E-mail*** and ***Network Status*** and so on. Please see 13.1 Network Configuration for details.

- **Account and Authority**

The module covers the functions such as ***Account Management*** (see 12.1 Account Management for details) and ***Permission Management*** (see 12.3 Permission Management for details) and so on.

- **System**

The module covers the functions such as ***Basic Configuration*** (see 13.2 Basic Configuration for details), ***Device Information*** (see 13.8 View System Information for details), ***Log Information*** (see 13.7 View Log for details) and ***Configuration File Import&Export*** (see 13.5 Backup and Restore for details) and so on.

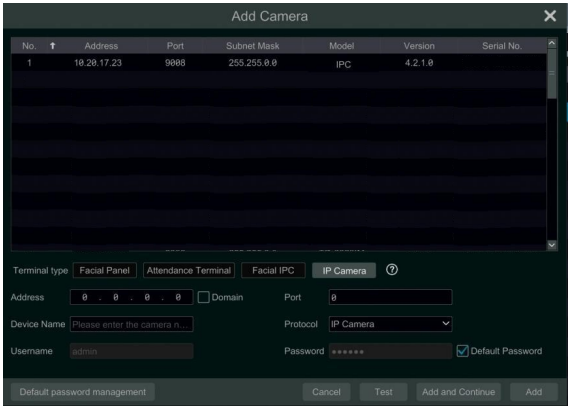
4 Camera Management

4.1 Add/Edit Camera

4.1.1 Add Camera

The network of the SMT should be set before adding IP camera (see 13.1.1 TCP/IP Configuration for details).

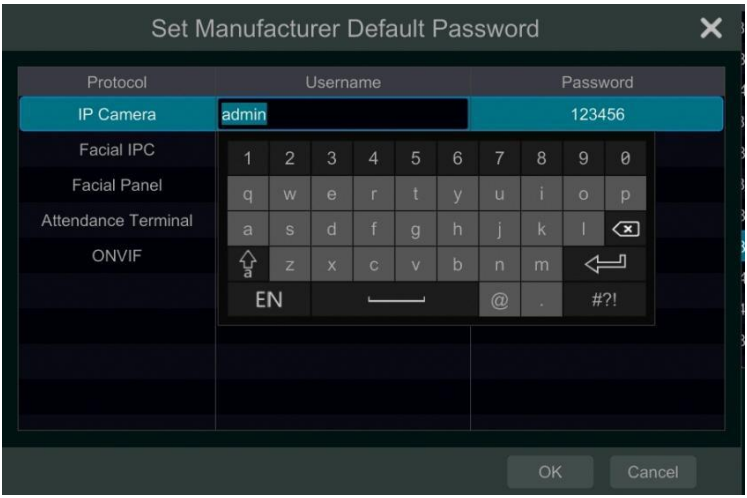
Refer to the pictures below. Click ***Add Camera*** in the setup panel or in the top right corner of the preview window to pop up the "Add Camera" window as shown below. You can quickly add or add the IP camera manually.



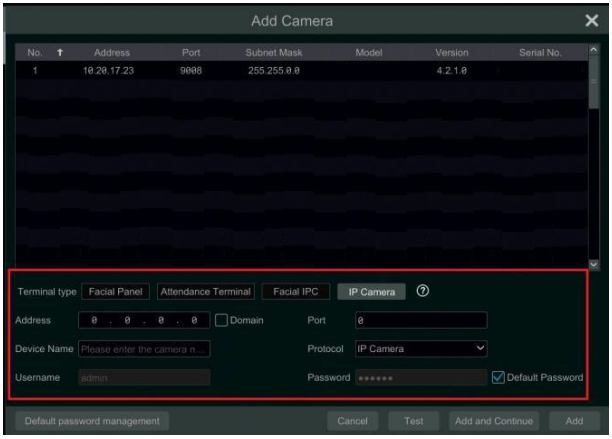
➢ **Quickly Add**

Select the cameras/panels and then click "Add" to add them. The system will automatically identify the terminal type. Of course, you can choose the terminal type manually for some panels or AI cameras. Then click "Add" to add cameras/panels. Uncheck "Default Password" and enter the username and password manually if they are not the default one.

Click "Default password management" to modify the default password of each cameras/panels.



- **Add Manually**

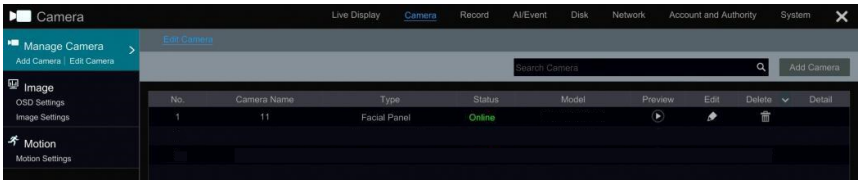


1. Select the terminal type according to the device you want to add.
IP Panel: four terminal types can be selectable. Facial panel or attendance terminal is suggested.
Facial IPC: The IPC which supports face recognition can choose this one.
2. Enter the IP address/domain, port, device name, username and password.
3. Click “Add” to add the camera/panel.

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 of the camera in the popup window. Click to edit the camera (see ***Add camera*** in 3.1 Startup Wizard for details). Click to delete the camera. Click in the "Operation" header line and then click "Modify IPC Password" to pop up a window(check the IPCs in the window, set the new password and then click "OK"; only the online IPCs' passwords can be modified and a batch of IPCs' passwords can be modified at the same time). Click to upgrade an online IPC (or click in the "Upgrade" header line and then click "IPC Batch Upgrade" to upgrade a batch of IPCs), select the device which stores the upgrade file in the "Device Name" item of the popup window and the upgrade file in the list(you should select the upgrade IPC model in the window if a batch of IPCs' passwords need to be modified) and then click "Upgrade" to start upgrading(the IPC will restart automatically after the upgrade is completed successfully).



Note:

If you use the SMT with the PoE network ports, the IP cameras/panels (with PoE function) which are directly connected to the PoE port of the SMT will be displayed automatically in the camera list. Refer to the picture below. The IP camera/panel 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.

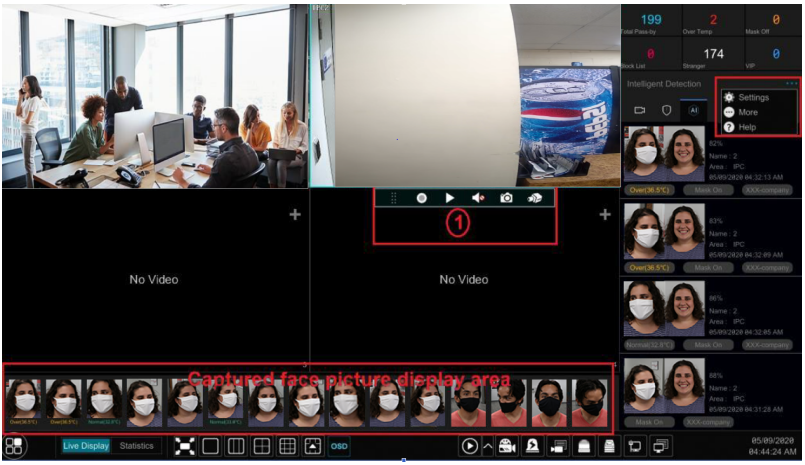
- The IP camera directly connected to the PoE port of the SMT through private protocol will be shown automatically in the camera list.
- One of the two conditions must be met if the IP camera/panel which is directly connected to the PoE port of the SMT through ONVIF protocol should be shown automatically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

If the IP camera which is connected to the PoE port cannot be displayed automatically in the camera list, please refer to Q6 in Appendix A FAQ for details.

5 Live View Introduction

5.1 Live View Interface Introduction

You should add IP cameras/panels 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 for camera window exchanging. Click OSD button and then you can view the record symbols. The record symbols with different colors in the live preview window refer to different record types when recording: green stands for manual record, red stands for sensor based record, yellow stands for motion based record, blue stands for schedule record and cyan stands for intelligence record.



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

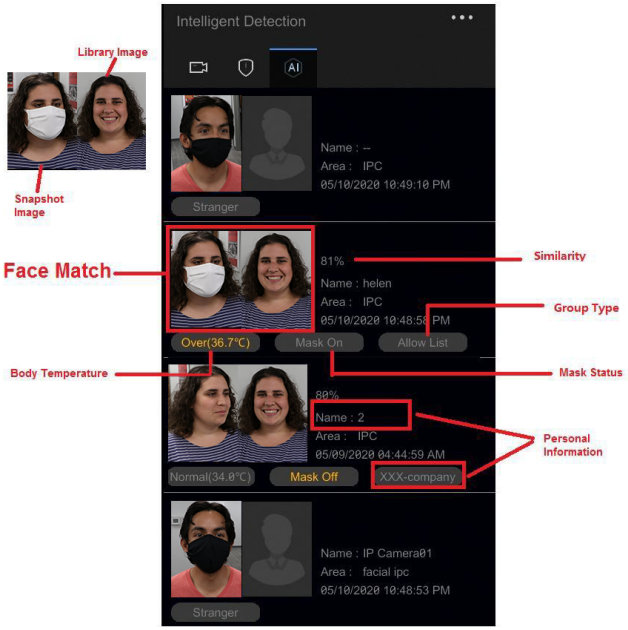
Button	Menu List	Meaning
	--	Move tool. Click it to move the tool bar anywhere.
	Manually Record On	Click it to start recording.
	Instant Playback	Click to playback the record; click "Instant Playback" to select or self-define the instant playback time. See 10.1 Instant Playback for details.
	Enable Audio	Click it to enable audio. You can listen to the camera audio by enabling audio.
--	**Original Proportions/ Overspread window**	Click it to select the display proportion of the window.

Button	Menu List	Meaning
	Snapshot	Click it to pop up the snap window. Click "Save" in the window to save the image. Click "Export" to export the image.
	Zoom In	Click it to go to single channel amplification interface.
	--	Click it to go to image adjustment interface. Refer to 5.2.3 Image Adjustment for details.
--	**Camera Info**	Click it to view the camera information.

Click to view the camera list.

- **Intelligent Detection**

Click to view intelligent detection results as shown below, including similarity, personal information, mask status, body temperature, the snapshot camera, etc.



Note:

1. Only the face match result of the camera/panel can be displayed on the smart management terminal. Please add face pictures to the face database first (See 6 People Management for details), or no result will be shown here.
2. To show the mask status here, the following requirements shall be satisfied.

a. The mask detection must be supported by the IP cameras/panels and this function shall be

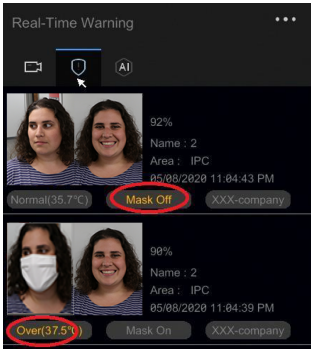
enabled in the IP cameras/panels.

b. The non-mask detection alarm of the SMT shall be enabled in advance (Click Start→Settings→AI/Event→Mask Settings to go to the mask settings interface and then enable it. See 11.2 Mask Settings for details).

3. The added IP cameras/panels must support temperature measurement, or the body temperature will not be shown here. Please click Start→Settings→AI/Event→Body Temperature Settings to go to the body temperature settings interface and then set the temperature threshold. See 11.1 Body Temperature Settings for details).

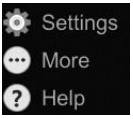
- **Real-time Warning**

Click to view the real-time warning records as shown below.



All exception events will be shown under this tab, such as mask off, over temperature or blacklist.

Click to display more menus.



Click “Settings” to choose “Current Cameras” or “All Cameras”.

If “Current Cameras” is selected, the real-time warning interface and intelligent detection interface in live view mode will only show the face match result of the current cameras.

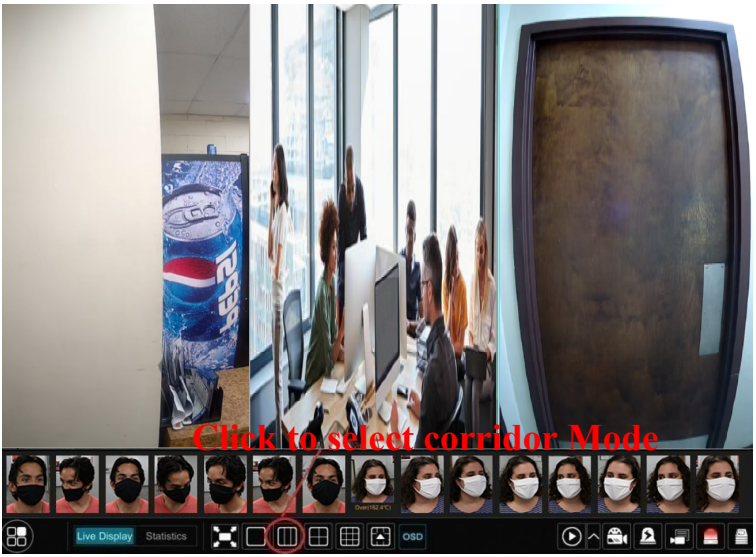
Click “More” to go to the “Pass-Through Records” interface.

- **Real-Time Statistics Display**

In the live display interface, you can directly view the real-time statistical information as shown below.

- **Corridor Pattern**

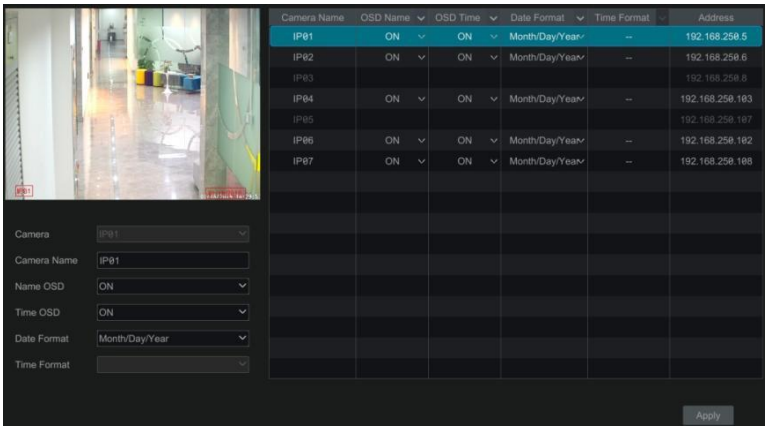
Select corridor pattern in display mode. You can change the direction of the video image by using this function. Please refer to User Manual of relevant camera.



5.2 Preview Image Configuration

5.2.1 OSD Settings

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

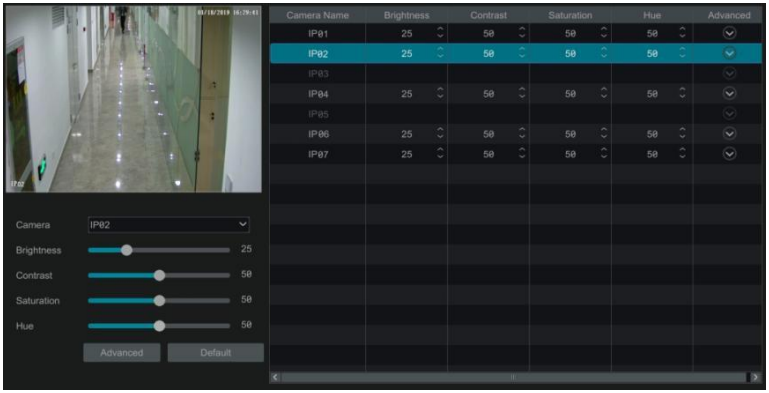


Select the camera, enter the camera name (or double click the camera name in the camera list to change the camera name), enable or disable the name and time OSDs (if enabled, drag the red name and time OSDs directly in the image view area to change the OSDs' display position) and select the date and time formats. Click "Apply" to save the settings.

5.2.2 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 of the camera. Click the "Advanced" button or in the camera list on the right side of the interface to pop up the "Image Adjust" interface and then set the relevant setting items. Please refer to 5.2.3 Image Adjustment for detailed introductions of these items.

You can click "Default" to restore the image settings to the default factory settings.



5.2.3 Image Adjustment

Go to live preview interface and then click button on the tool bar under the camera

window to go to the image adjustment interface.

➢ **Image Adjustment**

Select the camera and then click "Image Adjustment" to go to image adjustment tab. Refer to the above picture. Drag the slider to set the camera's brightness, contrast, saturation and hue value. Check sharpen, wide dynamic and denoise and then drag the slider to set the value. Click "Default" to set these parameters to default values.

The introductions of these parameters are as follows:

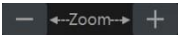
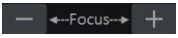
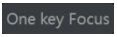
Parameter	Meaning
Brightness	It is the brightness level of the camera's image.
Contrast	It is the color difference between the brightest and darkest parts.
Saturation	It is the degree of color purity. The color is purer, the image is brighter.
Hue	It relates to the total color degree of the image.
Sharpen	It relates to the resolution level of the image plane and the sharpness level of the image edge.
Wide Dynamic	The wide dynamic range (WDR) function helps the camera provide clear images even under back light 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 provide 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	Adjust the color temperature according to the environment automatically.
BLC	HLC: lowers the brightness of the entire image by suppressing the brightness of the image's bright area and reducing the size of the halo area. BLC: If enabled, the auto exposure will activate according to the scene so that the object of the image in the darkest area will be seen clearly.

Parameter	Meaning
Corridor Pattern	0°, 90°, 180° or 270° can be selected. (Only some cameras support this pattern)
Image Mirror	Turn the current video image horizontally.
Image Flip	Turn the current video image vertically.
High FPS Mode	High frame rate mode, if is it enabled, the frame rate of the camera's main stream can be set to 1080P/720P @60fps/50fps. (Only some cameras support this mode)

- **Lens Control**

Select the camera and then click "Lens Control" to go to lens control tab. Click or to adjust the zoom and focus parameters of the camera's lens. Click "Save" to save the settings.

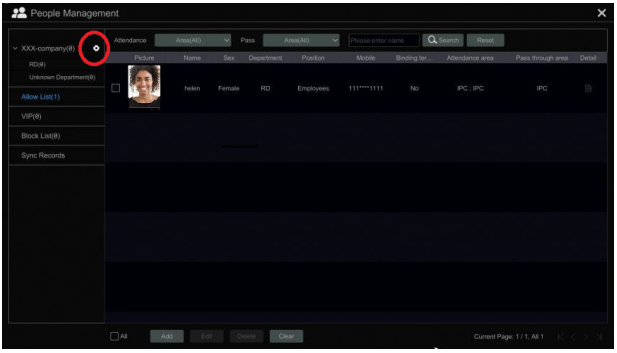
The introductions of these parameters and buttons are as follows.

Button/Parameter	Meaning
	Click / to zoom in/out the image.
Focus Mode	If manual mode is selected, focus button & "One Key Focus" & "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 focal length.
	Click it to focus instantly.
Day/night mode switch autofocus	If checked, the lens will focus automatically when the camera is switching day/night mode.
Time Interval	It is the time interval when 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 SMT is fixed, the lens control function is unavailable.

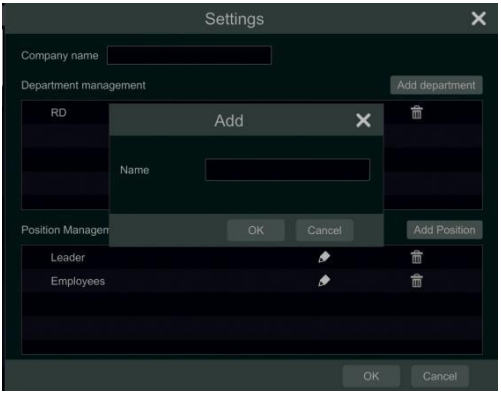
6 People Management

Click Start→People Management to go to the people management interface.
The first group is mainly used for attendance management. Please enter the company name, department and personal position as needed.



- **Add department and position**

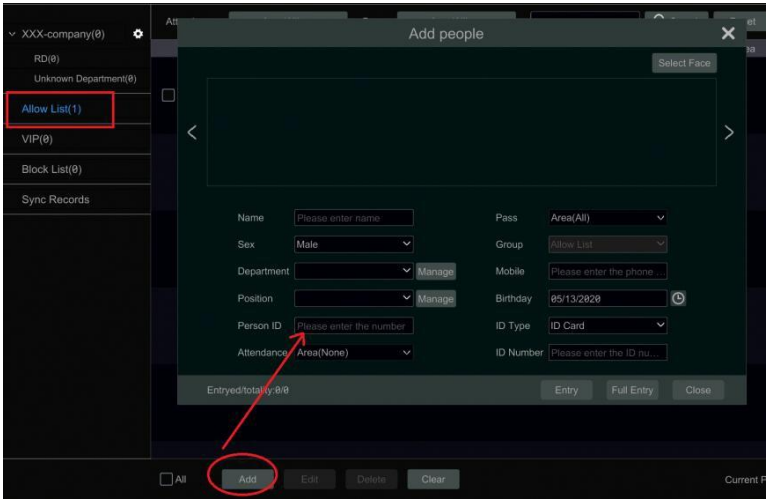
Click to pop up the following window.



In this interface, you can set the company name, add department and position.
Click “Add department” to add the department name. Click to modify the name.
Click “Add Position” to add the position name. Click to modify the name.
Then you can add people for each department.

- **Add people information for each group**

Allow list, VIP and block list are fixed groups. Their group name cannot be changed. Choose the group you want to add the people information. Then click “Add” to add the face picture and the relevant information.

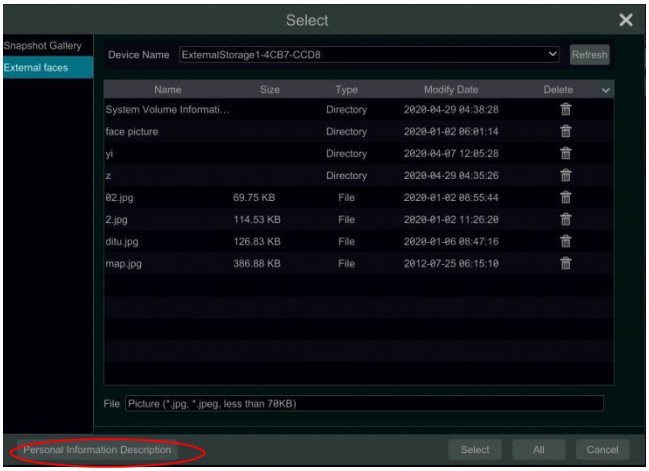


Click “Select face” to choose a face from snapshot gallery or external faces. Fill out other information (like attendance area, pass area) and then click “Entry”.
Attendance/Pass area: You can choose the device whose terminal/protocol type is facial panel or attendance terminal.

To add a face picture from snapshot gallery:

1. Select time and date and then click “More” to choose cameras.
2. Click “Search” to search the captured face pictures.
3. Select a picture and then click “Select” to add this face picture.

To add a face picture from external faces



1. Insert your mobile storage device into the SMT.
2. Select “External faces”.
3. Select the desired face picture and then click “Select” to add this face picture.

Multiple face pictures can be added from “External faces” too. Put pictures and the personal information file (.cvs/.txt) under the same directory of your mobile storage device. Select this directory and click “Full Entry” to add.

Please use Excel/WPS to edit the personal information according to the following sample and then save it as a CSV/TXT file.

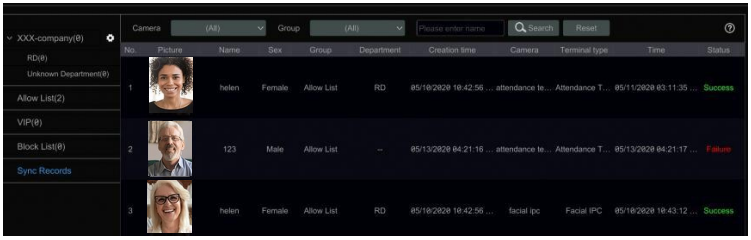
	A	B	C	D	E	F	G	H
1	(01)Name	(02)Sex	(03)Birthday	(04)ID Type	(05)ID Number	(08)Mobile	(12)Image name	(13)No.
2	Helen	1	2009/1/1	ID Card	12121211212	137xxxxxxxx	Helen.jpg	120
3	LT	0	2009/1/1	ID Card	334455662	136xxxxxxxx	LT.jpg	119

You can click “Personal Information Description” to view the detailed edition rules.
Note: Currently, only when the face picture is added to the face database and successfully matched by the IP Panel, can the Smart Management Terminal (SMT) show the temperature and picture of the person.

- **Personal information Search**

After you add the people information, you can enter the name of the person to search his/her information. You can also search the person by selecting attendance area and pass-through area. Click “Reset” to reset the search content.
If you want to change the information of the person, you can select it and then click “Edit” to change his/her information.

- **Sync Records**

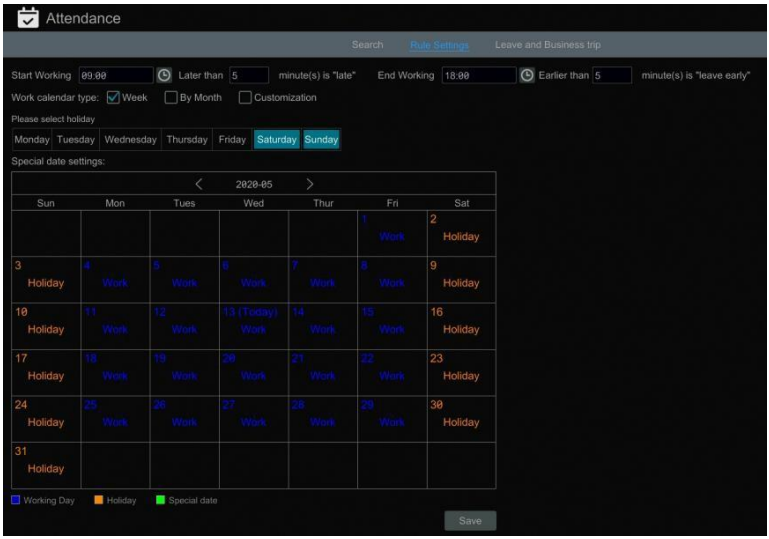


In this interface, you can view whether the added picture is synchronized to the face database of the camera/panel. Please click to view the detailed synchronization rules.

7 Attendance Management

7.1 Attendance Rule Settings

Click Start→Attendance→Rule Settings to go to the rule setting interface.



1. Set the working start and end time, “late” and “leave early” rules.
2. Select work calendar type and set the working day and holiday as needed.

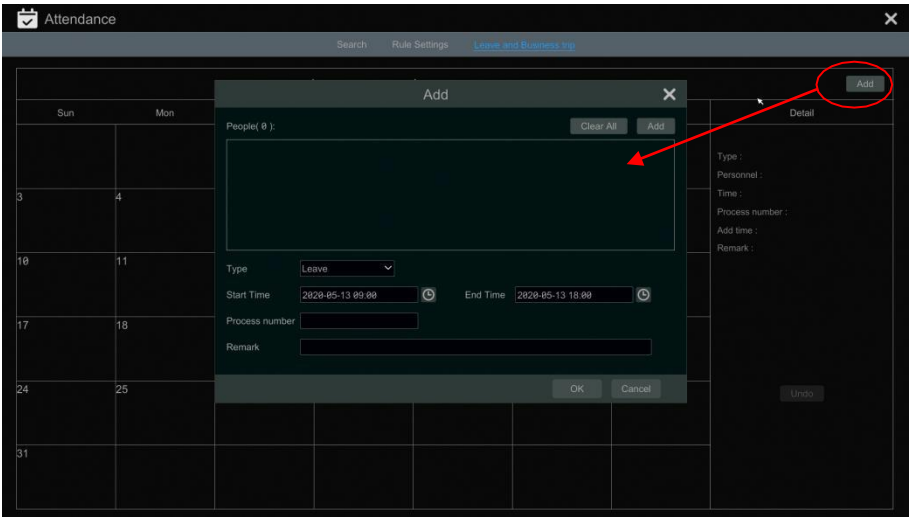
Special date settings (customization):

Click a date on the calendar to switch between working day and holiday. Then click “Save” to save the settings.

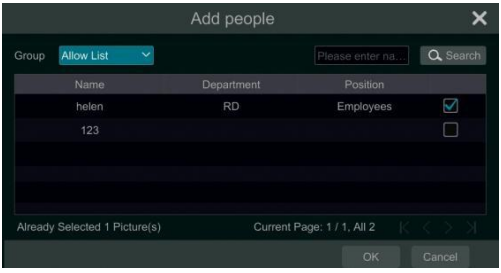
7.2 Leave and Business Trip Settings

Click Start→Attendance→Leave and Business Trip to go to the following interface.

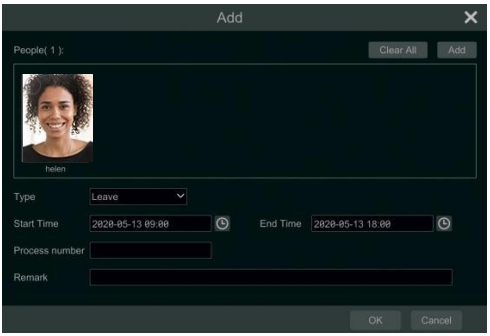
Click “Add” to add the leave and business trip record.



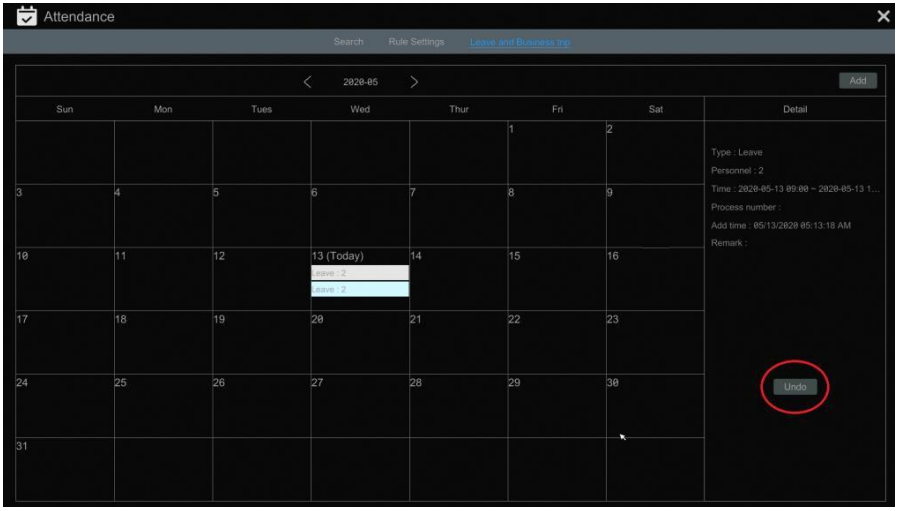
In the “Add” interface, click “Add” to add the person who wants to ask for leave or go on a business trip.



Select a group and then click “Search” to search the people. Of course, you can also search the person by entering his/her name. Then check the desired person and click “OK”.


Add
People(1):
Clear All
Add
helen
Type
Leave
Start Time
2020-05-13 09:00
End Time
2020-05-13 18:00
Process number
Remark
OK
Cancel

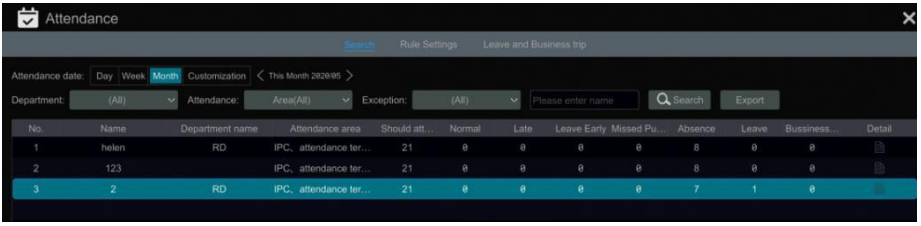
You can check multiple people at a time as needed.
Select the type, start and end time. Then enter the process number and remark as needed.
Finally, click “OK” to add the leave or business trip information of this person.



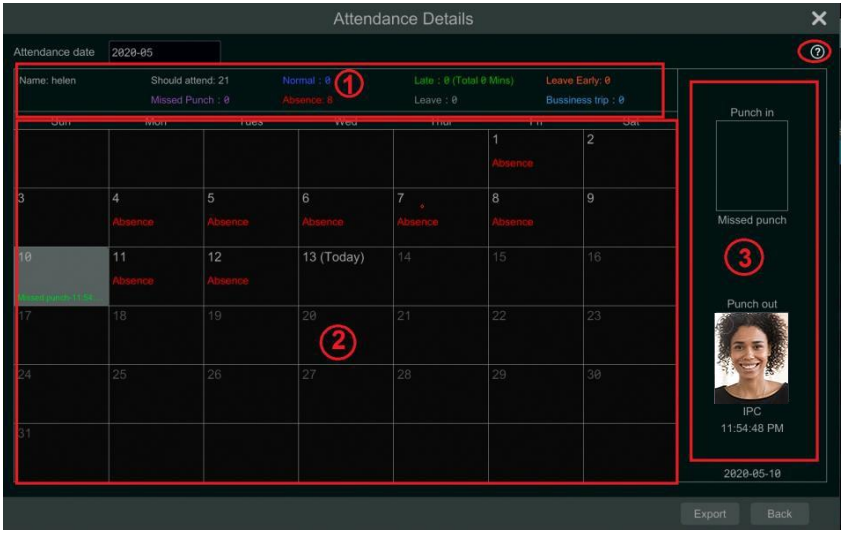
Then the leave/business trip information will be shown on the calendar. Click the leave or business trip tag to view its detailed information on the left. Click “Undo” to cancel this leave or business trip information and the tag will turn grey.

7.3 Attendance Search

Click Start→Attendance→Search to go to the following interface.



1. Select the attendance date or period as needed.
2. Select the department, attendance area and exception type, or enter the person’s name. Then click “Search”.
Exception: including late, leave early, missed punch, absence, business trip and leave.
The attendance file (.cvs) can be exported.
Select a person and then click to view the detailed attendance information of the person.

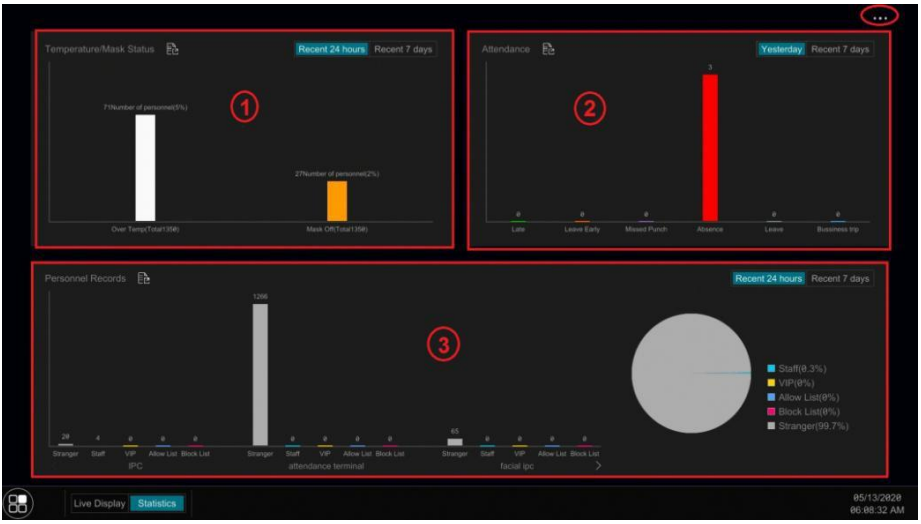


In the above interface, you can see the detailed attendance information of the selected person.
Attendance date: click to select the month you want to view.
Area ①: You can view the attendance statistical information.
Area ②: You can view the attendance information of each day.
Area ③: You can view the captured picture of punching in/out.
Click to view the attendance rule.
Click “Export” to export the specified person’s attendance information of the searched month.
Click “Back” to return to the attendance search interface.

8 Statistics

8.1 Real-Time Statistics

In the live display interface, click Statistics to go to the following interface.



In the above interface, you can view the bar graph and pie chart of the statistical information.

Area ①: You can view 24-hour/7-day statistical information about “over temperature” and “mask off” and total numbers of these two exception events.

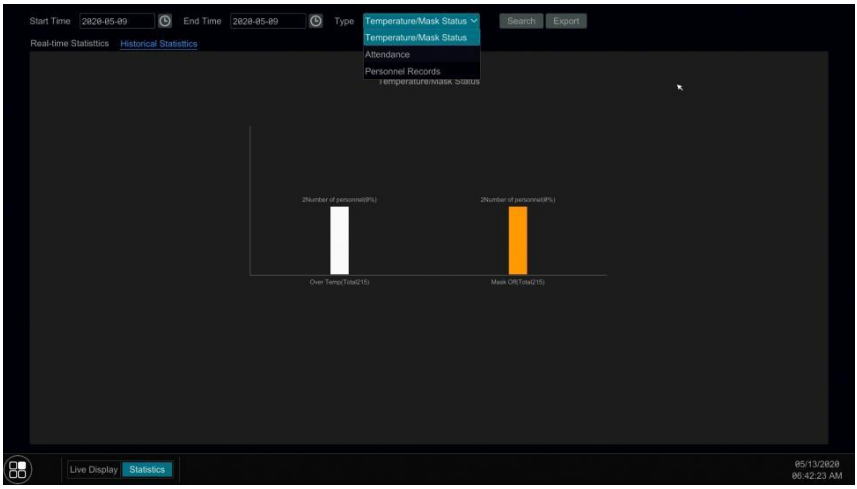
Area ②: You can view yesterday’s attendance information or attendance statistics in recent 7 days.

Area ③: You can view the statistical number and percentage of people from different groups, including stranger, staff, VIP, allow list and block list in recent 24 hours or in recent 7 days.

Click to export the statistical information.

8.2 Historical Statistics

Click ••• to enter the historical statistics interface.



Select the start time and end time

Select the statistical type. Three options: temperature/mask status, attendance, personnel records.

Click “Search” to view the statistics during the specified time.

Click “Export” to export the statistical data.

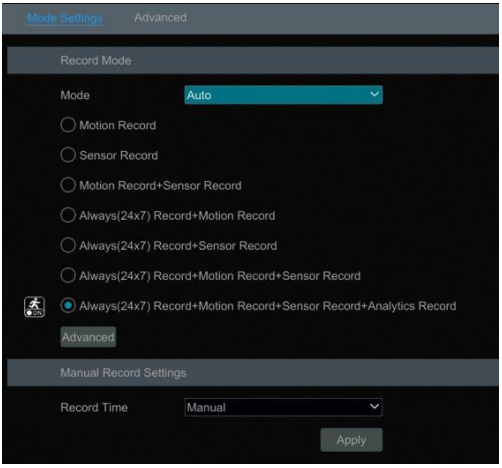
Click the “Real-time Statistics” tab to return to the statistics interface.

9 Record & Disk Management

9.1 Record Configuration

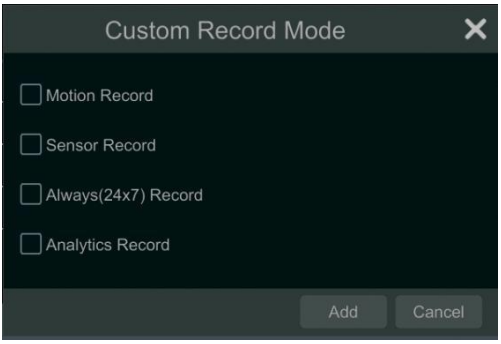
9.1.1 Mode Configuration

Please format the HDDs before recording (refer to 9.5.1 Disk Management for details). Click Start→Settings→Record→Mode Settings to go to the mode settings interface. You can set the record time under the "Manual Record Settings" and then click "Apply" to save the settings. There are two record modes: auto mode and manual mode.



- **Auto Mode**

Motion Record: Motion alarm record will be enabled when motion alarm happens.
Sensor Record: Sensor alarm record will be enabled when sensor alarm happens.
Motion Record+Sensor Record: Motion/sensor alarm record will be enabled when motion/sensor alarm happens.
Always(24 x7) Record+Motion Record: Normal record is enabled all the time; motion alarm record will be started when motion alarm happens.
Always(24 x7) Record+Sensor Record: Normal record is enabled all the time; sensor alarm record will be started when sensor alarm happens.
Always(24 x7) Record+Motion Record+Sensor Record: Normal record is enabled all the time; motion/sensor alarm record will be enabled when motion/sensor alarm happens.
Always(24 x7) Record+Motion Record+Sensor Record+Analytics Record: Normal record is enabled all the time; analytics record will be enabled when analytics alarm happens.
You can add more auto modes on analytics record. Click "Advanced" to pop up a window as shown below. Check the modes in the window and then click "Add" to show the modes in the record mode list (in the window, the checked modes can be shown in the record mode list while the unchecked modes cannot; you shall check "***Analytics Record***").



Select one auto mode to pop up the corresponding window. Set the encode, GOP, resolution, FPS, bitrate type, quality, max bitrate and audio of each camera and then click "OK" to save the settings. Please adjust the parameters according to the actual condition.

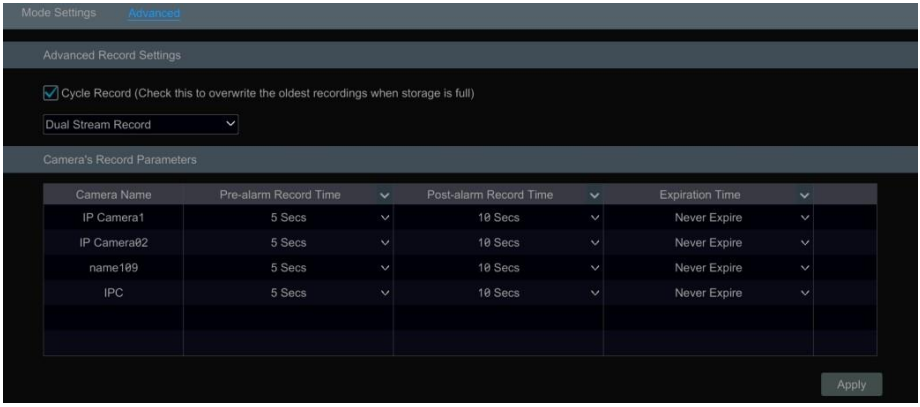
Video Encode: the available options will be H.265 and H.264 if the connected IP camera supports H.265, or the option will be H.264 only.
Resolution: the higher the resolution is, the clearer the image is.
FPS: the higher the frame rate is, the more fluency the video is. However, more storage room will be taken up.
Bitrate Type: CBR and VBR are optional. CBR means that no matter how much change is seen in the video scene, the compression bitrate will be kept constant. VBR means that the compression bitrate will be adjusted according scene changes. For example, for scenes that do not have much movement, the bitrate will be kept at a lower value. This will help to optimize the network bandwidth.
Quality: When VBR is selected, you need to choose image quality. The higher the image quality you choose, the more bitrate will be required.
Max Bitrate: 32Kbps ~10240Kbps are optional.
GOP: group of pictures.

- **Manual Mode**

If the manual mode is selected, you need to set the encode parameters and record schedules of each camera. See 9.2 Encode Parameters Settings and 9.3 Schedule Settings for details.

9.1.2 Advanced Configuration

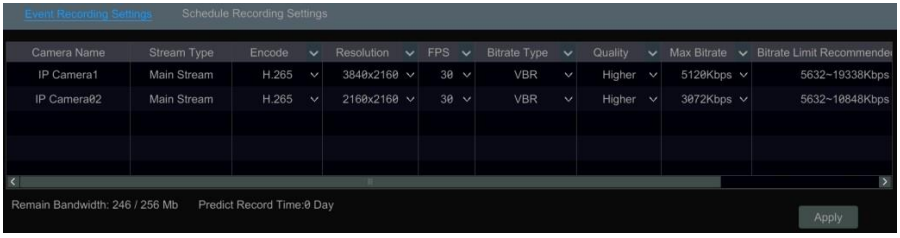
Click Start→Settings→Record→Advanced to go to the following interface. Enable or disable cycle record (cycle record: the earliest record data will be replaced by the latest when the disks are full). Choose the record stream. Set the pre-alarm record time, post-alarm record time and expiration time of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



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

9.2 Encode Parameters Settings

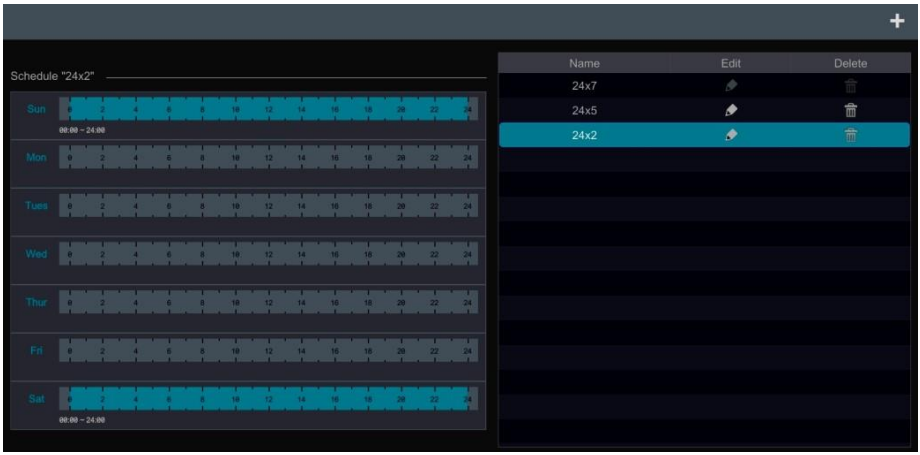
Click Start→Settings→Record→Encode Parameters to go to the interface as shown below. Set the encode, resolution, FPS, GOP, bitrate type, quality, max bitrate and audio of main stream for each camera in "Event Recording Settings" and "Schedule Recording Settings" interfaces. Click "Apply" to save the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



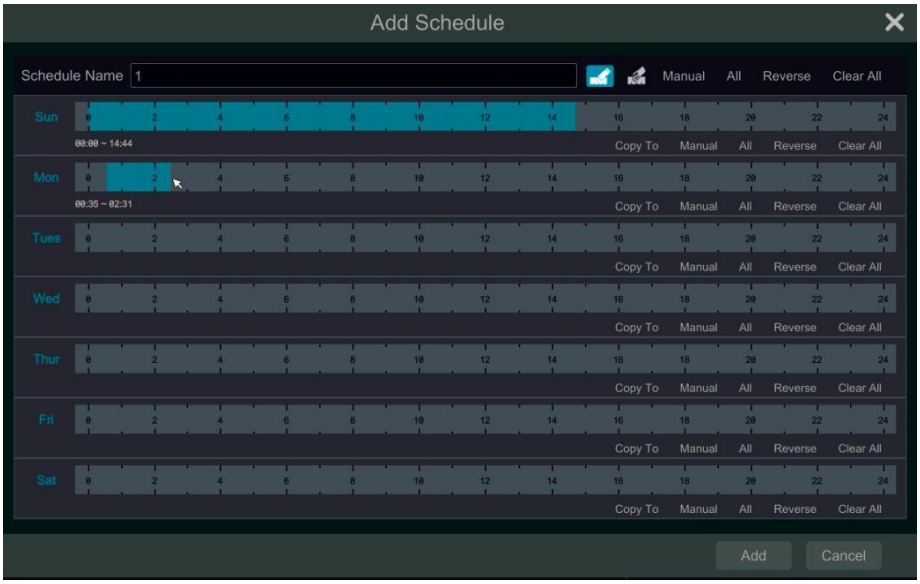
9.3 Schedule Settings

9.3.1 Add Schedule

When the record mode is set to “Manual”, you can click Start→Settings→Record→Record Schedule→Edit Schedules or click Start→Settings→Alarm→Event Notification→Edit Schedules to go to the interface as shown below (or click Start→Settings→AI/Event→Event Notification→Edit Schedule). “24×7”, “24×5” and “24×2” are the default schedules; you cannot edit or delete “24×7” while “24×5” and “24×2” can be edited and deleted. Click the schedule name to display the detailed schedule information on the left side of the interface. The seven rows stand for the seven days in a week and each row stands for 24 hours in a day. Blue stands for the selected time and gray stands for unselected time.



Click to add a new schedule. Refer to the picture below.

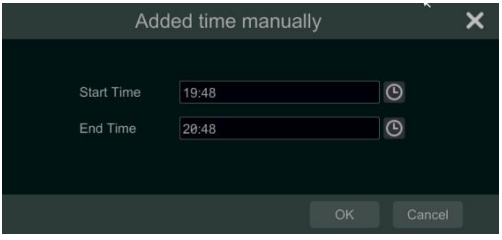


Set the schedule name and schedule time and then click "Add" to save the schedule. You can set day schedule or week schedule. : add button; : delete button.

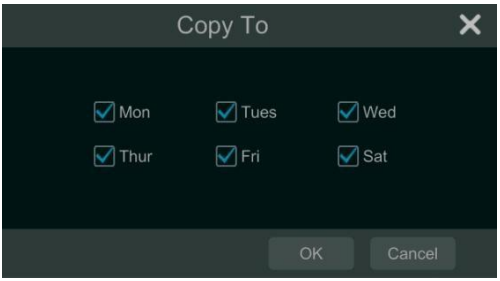
- **Set Day Schedule**

Click and then drag the cursor on the time scale to set record time; click and then drag the cursor on the time scale to delete the selected area.

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

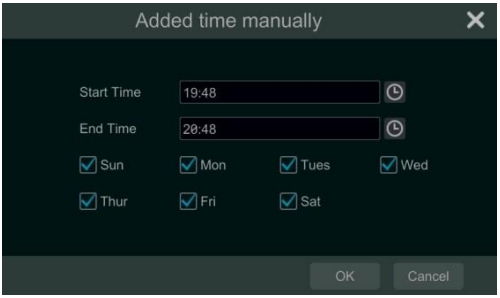


Click "All" to set all day recording; click "Reverse" to swap the selected and unselected time in a day; click "Clear All" to clear all the selected area in a day.
Click "Copy To" to copy the schedule of the day to other days. Refer to the picture below. Check the days in the window and then click "OK" 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, check 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.

9.3.2 Record Schedule Configuration

Click Start→Settings→Record→Record Schedule→Schedule Configuration to go to the interface as shown below. Only when the record mode is set to "Manual" mode, can this function be activated. Set the schedule of sensor record, motion record, timed record and analytics record. Click "None" in the drop-down menu to clear the schedule. Click "Apply" to save the settings.

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

9.4 Record Mode

9.4.1 Manual Recording

Method One: Click on the tool bar at the bottom of the live preview interface to enable recording of the camera.

Method Two: Go to live preview interface and then click the right-click menu “Manually Record On” in the camera window or click on the tool bar 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.

9.4.2 Timing Recording

Timing Recording: the system will record automatically according to the schedule.

Set the timing record schedule of each camera. See 9.3 Schedule Settings for details.

9.4.3 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 of each camera. See 9.3 Schedule Settings for details.

② Enable the motion and set the motion area of each camera. See 11.4.1 Motion Configuration for details.

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

9.4.4 Sensor Based Recording

① Set the sensor based recording schedule of each camera. See 9.3 Schedule Settings for details.

② Set the NO/NC type of the sensor, enable the sensor alarm and then check and configure the “Record”. See 11.3 Sensor Alarm for details.

9.4.5 Intelligence Recording

① Set the intelligence recording schedule of each IP camera. See 9.3 Schedule Settings for details.

② Enable and set the intelligence detection (over temperature, non-mask detection, etc.) See

11 AI/Event Management for details.

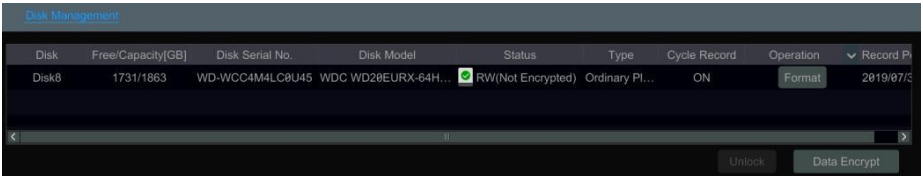
The camera will start intelligence recording once you finish the above settings. This function is only available for some devices.

9.5 Disk

9.5.1 Disk Management

- Disk Management

Click Start→Settings→Disk→Disk Management to go to disk management interface. You can view the SMT's disk number and disk status and so on in the interface. Click "Format" to format the HDD.



Data Encryption:

① Click "Data Encrypt".

② Enter the username and password used to log in the SMT. This username and password shall have the permission of disk management.

③ Check the disk you want to encrypt and then enter the password.

After you encrypt the data of a disk, this disk cannot be read by other SMTs unless it is unlocked.

Data Decryption:

① Click "Change Encrypt".

② Enter the username and password used to log in the SMT. This user shall have the permission of disk management.

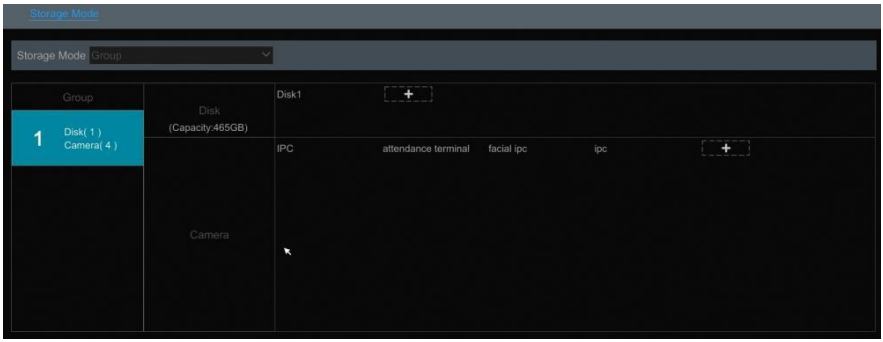
③ Check the disk you want to decrypt and then empty the password.

④ Click "Close Encrypt".

Unlock the disk: when one encrypted disk is transferred from another SMT to this SMT, it will be in locked status. Then you can select this locked disk and click "Unlock". After you enter the password of its data encryption, its status will be "Read Only". Now you can read the data of this disk but it cannot be written anything.

9.5.2 Storage Mode Configuration

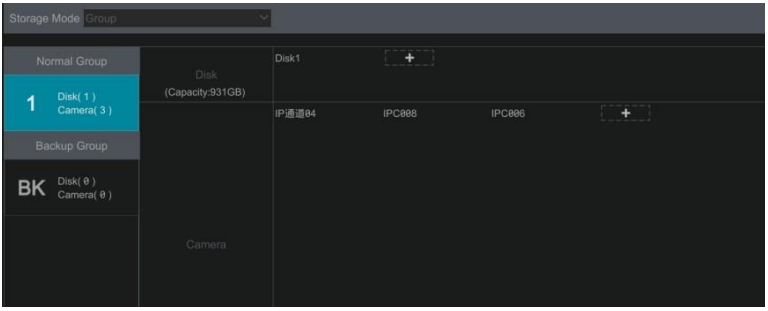
Click Start→Settings→Disk→Storage Mode to go to the interface as shown below.



There is one disk group.
The added cameras will be added into the group automatically.

Click + in the disk or camera row to pop up a window. Check the disks or cameras in the window and then click "Add".

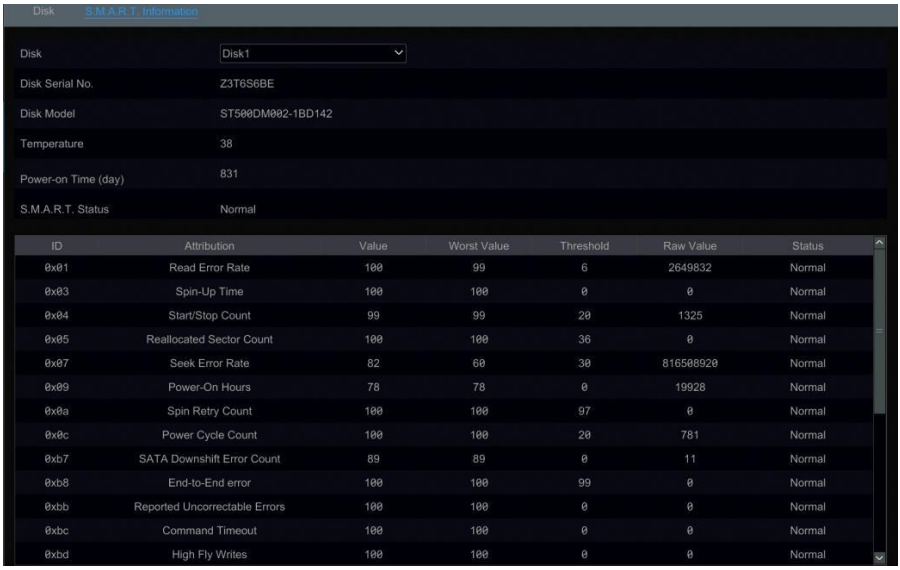
For the model with 2 HDD slots, BK group can be added as shown below.



Click + to add the backup HDD. After account verification, select a HDD and then this HDD will be removed from the normal group to the backup group. Simultaneously, it will be formatted. Please back up all data of this HDD in advance when you want to remove it to the backup group.
You can add cameras to this HDD. The added cameras can exist and be recorded both in one HDD of the normal group and the backup group.
Note: Each HDD only can exist in one group.

9.5.3 View Disk 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 working status of the HDD. Refer to the picture below.

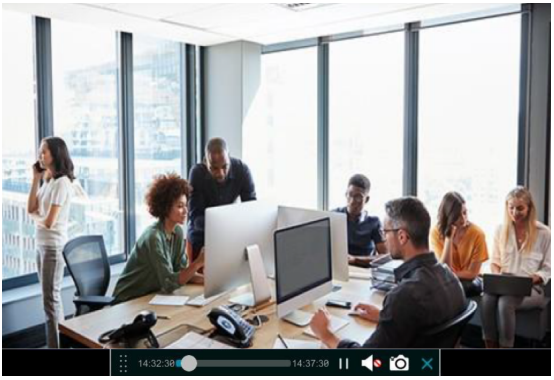


ID	Attribution	Value	Worst Value	Threshold	Raw Value	Status
0x01	Read Error Rate	100	99	6	2649832	Normal
0x03	Spin-Up Time	100	100	0	0	Normal
0x04	Start/Stop Count	99	99	20	1325	Normal
0x05	Reallocated Sector Count	100	100	36	0	Normal
0x07	Seek Error Rate	82	60	30	816508920	Normal
0x09	Power-On Hours	78	78	0	19928	Normal
0x0a	Spin Retry Count	100	100	97	0	Normal
0x0c	Power Cycle Count	100	100	20	781	Normal
0xb7	SATA Downshift Error Count	89	89	0	11	Normal
0xb8	End-to-End error	100	100	99	0	Normal
0xbb	Reported Uncorrectable Errors	100	100	0	0	Normal
0xbc	Command Timeout	100	100	0	0	Normal
0xbd	High Fly Writes	100	100	0	0	Normal

10 Playback & Backup

10.1 Instant Playback

Click on the tool bar at the bottom of the preview camera window to play back the record (click on the tool bar 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 click the right-click menu “Instant Playback” in the camera window and then set the instant playback time to play back the record.



10.2 Playback Interface Introduction

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

On the panel on the right you will see the channel number and the recorded data coded by color. 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.

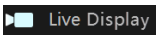
The added cameras will playback their records in the playback interface automatically. You can also add the playback camera manually. Click + in the playback window to pop up the "Add Camera" window. Check the cameras in the window and then click "Add" to add playback camera. The system supports a maximum of 16 synchronous playback cameras.

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

Button	Meaning
	Start button. Click it to pop up area ②.
	Full screen button. Click it to show full screen; click it again to exit the full screen.
	Screen mode button.
OSD	OSD ON button. Click it to enable OSD; click it again to disable OSD.
	Stop button.
	Rewind button. Click it to play video backward.
	Play button. Click it to play video forward.
	Pause button.
	Deceleration button. Click it to decrease the playing speed.

Button	Meaning
	Acceleration button. Click it to increase the playing speed.
	Previous frame button. It works only when the forward playing is paused in single screen mode.
	Next frame button. It works only when the forward playing is paused in single screen mode.
	Click to step backward 30s and click to step forward 30s.
	Event list/tag button. Click it to view the event record of manual/schedule/sensor/ motion and the tag information.
	Backup button. Drag the mouse on the time scale to select the time periods and cameras, and then click the button to back up the record.
	Backup status button. Click it to view the backup status.
	Back button. Click it to return.

Introduction of area ②:

Button	Meaning
	Click it to go to record search and backup interface; see 10.3 Record Search, Playback & Backup for details.
	Click it to go to live preview interface; see Chapter 5 Live View Introduction for details.

Click on the playback window to show the tool bar as shown in area ③; right click on the window to show the menu list. The tool bar and menu list are introduced in the table below.

Button	Menu List	Meaning
	--	Move tool. Click it to move the tool bar anywhere.
	Enable Audio	Click it to enable audio. You can listen to the camera audio by enabling audio.
	Snap	Click it to snap.
	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 record playing; click to play the record. When the record 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 tag. You can play back the record by searching the added tag. Click it and then enter the tag name in the popup window. Click “Add” to add tag.

	Switch Camera	Click it to switch the playback camera. Click it and then check the camera in the popup window. Click "OK" to change the camera.
	Close Camera	Click it to close the playback camera.

Introduction of area ④:

Click to set the date; click to set the time and then the playback camera will play the record from the time you set. You can check the record type as required for record playback; first you should click on the tool bar at the bottom of the interface to clear all the playback camera, then check the record type (: manual record; : sensor based record; : motion based record; : schedule record; : intelligence record) and finally click in the playback window to add camera for playback (the record time scale will show the record data of the checked record type only after the above operations).

Introduction of the record time scale (area ⑤):

A tool bar will appear after moving the mouse to the record time scale. Click / to zoom the timeline; click to recover the timeline to 24 hours' ratio. Drag the timeline or slide the scroll wheel of the mouse on the time scale to show the hidden time on the top or bottom of the timeline. You can also click to show the hidden time on the top of the timeline or click to show the hidden time on the bottom of the timeline. Drag the slider at the bottom of the time scale to show the hidden playback cameras.

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

Backup Introduction:

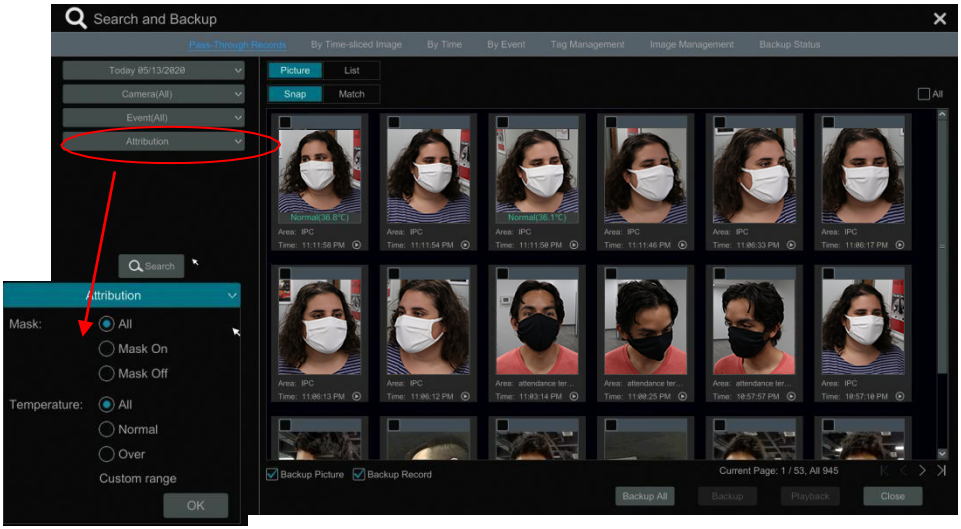
Insert the storage device into the device. Drag on the color block of the time scale to select the backup area and then right click the area or click to pop up a backup information window. Click the "Backup" button in the window to pop up the backup window. Select the device, backup path and backup format and then click the "Backup" button.

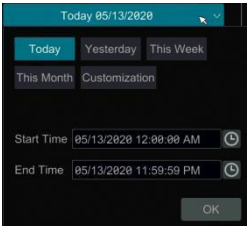
10.3 Record Search, Playback & Backup

The record data and the snapped pictures can be backed up through network, USB (U disk or USB mobile HDD). The file system of the backup devices should be FAT32 format.

10.3.1 Pass-Through Record Search

Click Start→Search and Backup→Pass-Through Records to go to the following interface.





① Select the search time. Click the "Today" tab to select the search time. Please choose the search time as needed. After you select the time and then click "OK" to confirm the time you set.

② Select the cameras you want to search.

③ Select the face recognition events. You can choose "All", "Stranger", "Block List", "Allow List" or "VIP".

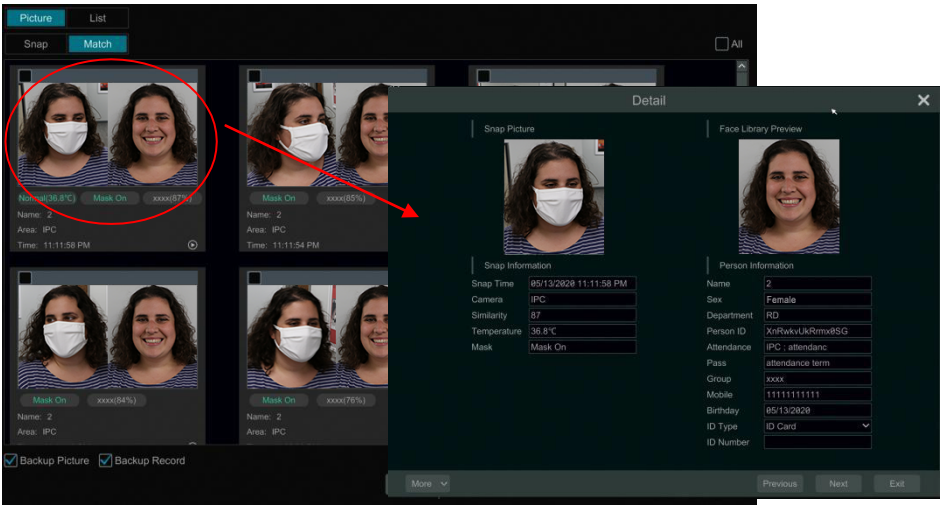
④ Select the attribution. Please select the mask status and temperature type as needed. Click "Custom Range" to set the temperature range you want to search.

⑤ Click "Search" to search the captured pictures.

In this interface, you can view the body temperature of the captured people and the snapshot camera and time. Click to play the record in the small playback window on the lower left corner of the interface.

Select the captured picture, check "Backup Picture" or "Backup Record" and then click "Backup" to back up the captured face picture or record. Select the picture and then click "Playback" to go to the playback interface quickly.

Click “Match” to view the face recognition and comparison details as shown below.



In the face match search interface, you can view the detail information of this captured person, including, the face match pictures, similarity, body temperature, mask status, name of the person, his/her company, etc.

Click the matched picture to pop up a detailed face match box as shown above.

The detailed snapshot information and personal information can be viewed from the detail face match box. Click “More” and then choose “Playback” to view the record quickly. Click “More” and then choose “Export” to back up the captured face picture.

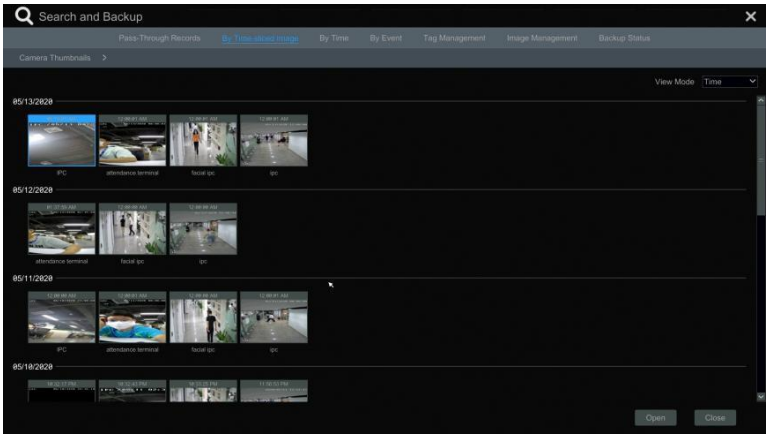
Click the “List” tab to view the snapshot information list as shown below

Picture
List
All
No. Name Snap Time Personnel T... Similarity Temperature Mask Area Details Backup
1 2 05/13/2020 11:11:58 PM xxxx 87% 36.8℃ Mask On IPC
2 2 05/13/2020 11:11:54 PM xxxx 85% -- Mask On IPC
3 2 05/13/2020 11:11:50 PM xxxx 83% 36.1℃ Mask On IPC
4 2 05/13/2020 11:11:46 PM xxxx 84% -- Mask On IPC
5 2 05/13/2020 11:06:33 PM xxxx 76% -- Mask On IPC
6 2 05/13/2020 11:06:17 PM xxxx 79% -- Mask On IPC
7 2 05/13/2020 11:06:13 PM xxxx 76% -- Mask On IPC
8 -- 05/13/2020 11:06:12 PM Stranger -- -- Mask On IPC
9 -- 05/13/2020 11:03:14 PM Stranger -- -- -- attendance termi...
10 -- 05/13/2020 11:00:25 PM Stranger -- -- -- attendance termi...
11 -- 05/13/2020 10:57:57 PM Stranger -- -- -- attendance termi...
12 -- 05/13/2020 10:57:10 PM Stranger -- -- Mask On IPC
13 -- 05/13/2020 10:57:10 PM Stranger -- -- -- attendance termi...
14 -- 05/13/2020 10:57:09 PM Stranger -- -- Mask On IPC
15 -- 05/13/2020 10:57:09 PM Stranger -- -- -- attendance termi...
16 -- 05/13/2020 10:57:05 PM Stranger -- -- Mask On IPC
Backup Picture
Backup Record
Current Page: 1 / 53, All 945
Backup All
Backup
Playback
Close

Click to view the detail face match information; click to back up the image.

10.3.2 Search, Playback & Backup by Time-sliced Image

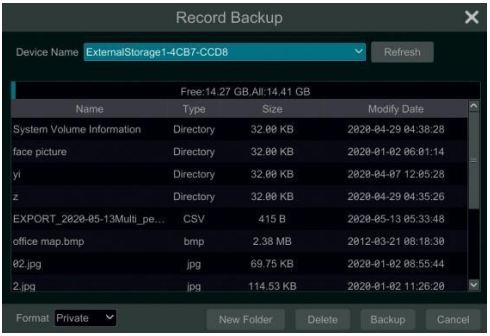
① Click Start→Search and Backup→By Time-sliced Image to go to "By Time-sliced Image" tab. There are two view modes: by time and by camera. In the time view mode, a maximum of 64 camera thumbnails can be shown. If the camera thumbnail number is more than 64, the cameras will be listed directly by their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



② Select one camera in the interface and then click the "Open" button.

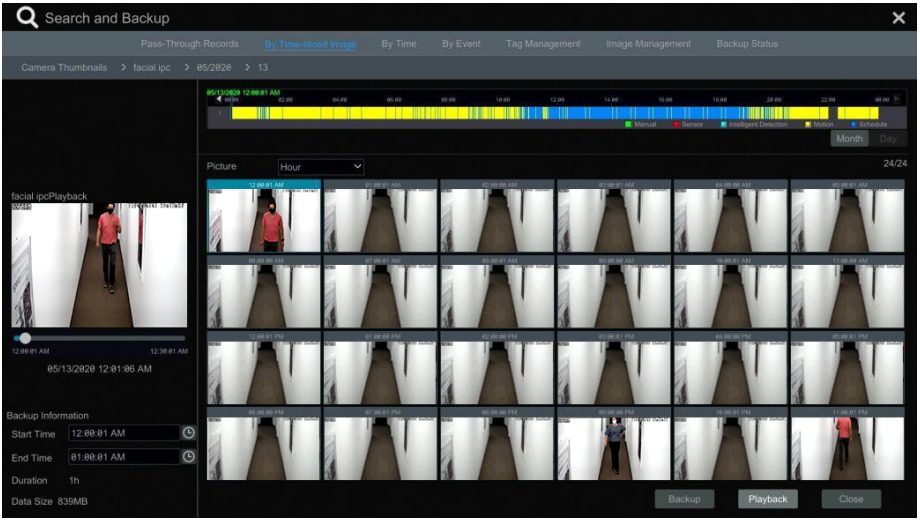
③ Click the image box to play the record in the small playback box on the left side of the interface (the box which has image inside indicates that the record data exist).

④ Refer to the picture below. Drag the color blocks on the time scale to select the record data and then click the "Backup" button to pop up the "Record Backup" window 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 record in private format, the system will back up a RPAS player to USB device automatically. The private format record can be played by RPAS player only.

⑤ Click "Playback" to play the record in the playback interface (refer to 10.2 Playback Interface Introduction for details). Click "Close" to close the interface.



Time Slice Mode Selecting:

Method One: Click "Year", "Month" or "Day" button under the record time scale to select the time slice mode. In "Day" mode, click / on the left/right side of the time scale to view the record of the last/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) and click "Hour" to select "Hour" mode.

Method Two: Click beside "Camera Thumbnail" on the left top 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 interface.

10.3.3 Search, Playback & Backup by Time

① Click Start→Search and Backup→By Time to go to "By Time" tab as shown below.

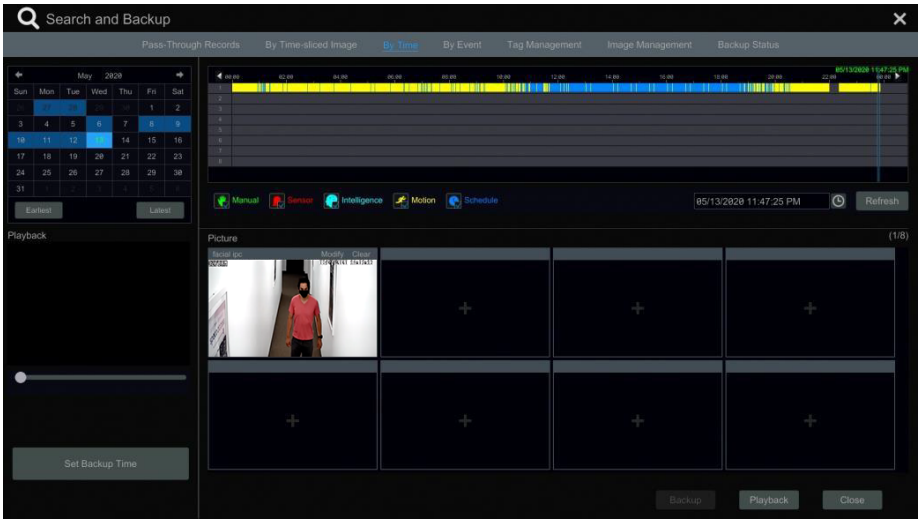
② Click on the bottom of the interface to add playback camera. A maximum of 16 cameras can be added for playback. Click "Modify" on the top right corner of the camera

window to change the camera and click “Clear” to remove the camera.

③ Click the camera window to play the record in the small playback box on the left side of

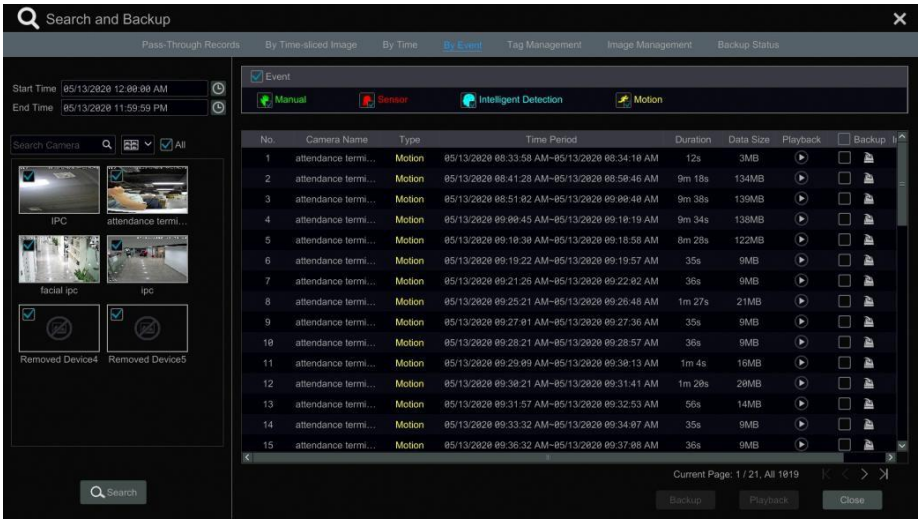
the interface. You can set the date on the top left of the interface, check the event type as required and click the time scale or click under the time scale to set the time. The camera window will play the record according to the time and event type you set.

④ Drag the color blocks on the time scale to select the record data (or click “Set Backup Time” on the bottom left corner of the interface to set the backup start time and end time) and then click “Backup” for record backup. Click “Playback” to play the record in the playback interface.



10.3.4 Search, Playback & Backup by Event

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



② Check the event type in the interface as required.

③ Click to set the start time and end time on the top left of the interface.

④ Check cameras on the left side of the interface or check "All" to select all the cameras and then click Search to search the record. The searched record will be displayed in the list.

⑤ Click in the list to play back the record in the popup window. Click to back up one record data or check multiple record data in the list and then click "Backup" for record batch backup.

⑥ Select one record data in the list and then click "Playback" to play the record in the playback interface.

10.3.5 Search & Playback by Tag

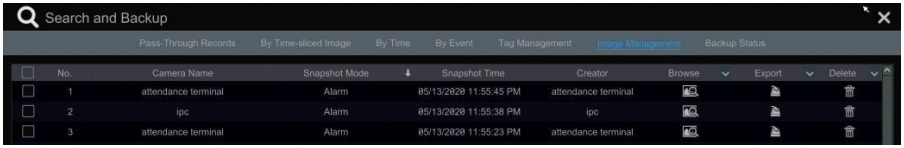
Only if you add the tags can you play the record by tag search. Click Start→Playback to go to the playback interface and then click on the bottom of the camera window to add tag when you want to mark the playback time point of the selected camera.

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

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

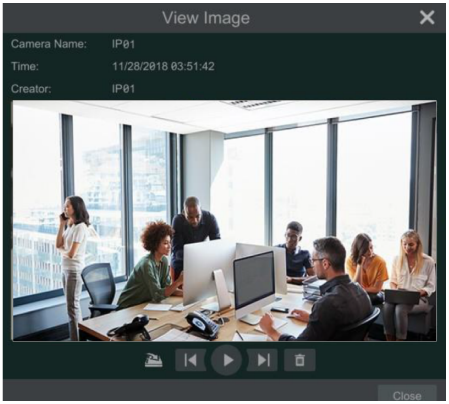
10.3.6 Image Management

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



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

Click to pop up the “View Image” window. 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.



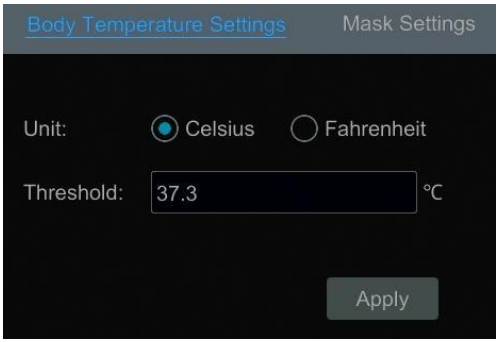
10.3.7 View Backup Status

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

11 AI/Event Management

11.1 Body Temperature Settings

Click Start→Settings→AI/Event→Temperature/Mask to go to the following interface.

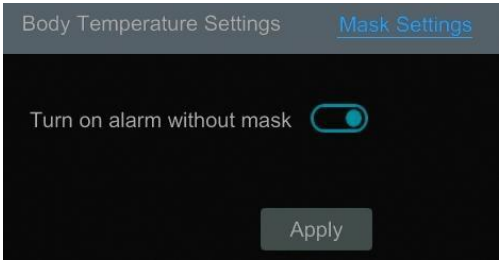


Please select Celsius or Fahrenheit temperature as needed.

Threshold: Please set the temperature threshold. If the body temperature measured exceeds this threshold, it will trigger alarm. Over temperature will be shown on the captured face picture and the alarm information will be shown under the real-time warning tab of the live display interface.

11.2 Mask Settings

Click Start→Settings→AI/Event→Temperature/Mask to go to the following interface.



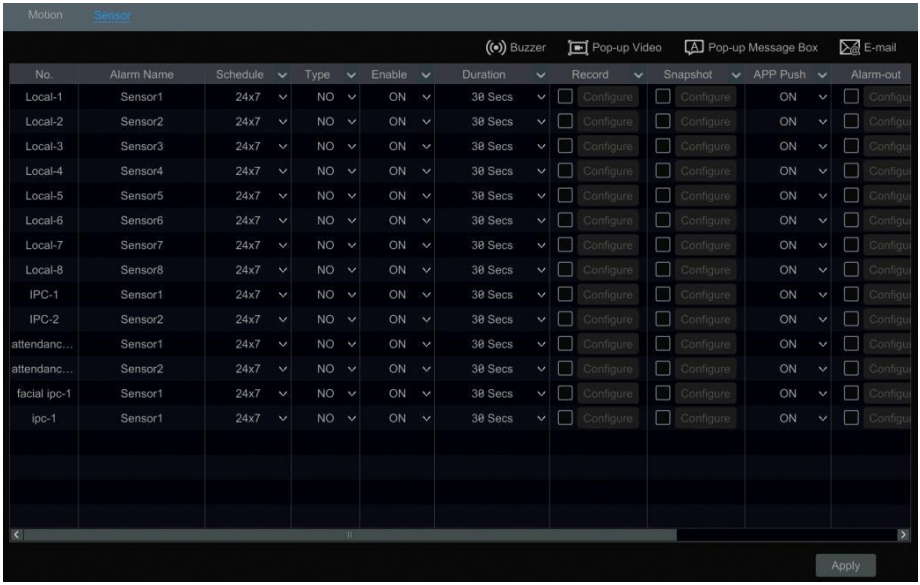
After turning on the button, the non-mask detection results of the IP panels/cameras will be received by the device and trigger an alarm. In live view mode, you will view the non-mask alarm information (“mask off”) displayed under the captured face picture in the intelligent detection interface and real-time warning interface.

Note: Before using this function, please ensure that mask detection is supported by the added IP panels/cameras and it has been enabled.

11.3 Sensor Alarm

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

① Click Start→Settings→ AI/Event →Sensor to go to the following interface.



② Select the alarm type (NO or NC) according to trigger type of the sensor.

③ Enable the sensor alarm of each camera and select the schedule.

④ Check the "Duration", "Record", "Snapshot", "Push", "Alarm-out" 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 of the above mentioned alarm linkages are as follows.

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

Record: check it and then the "Trigger Record" window will pop up automatically (you can also click the "Configure" button to pop up the window). Select camera on the left side and then click to set the camera as the trigger camera. Select 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: check it and then the "Trigger Snapshot" window will pop up automatically. Configure the trigger camera in the window. The trigger cameras will capture images

automatically when the sensor alarm is triggered.

APP Push: check it and choose ON or OFF. If it is ON, the alarm information will be sent to the mobile APP.

Alarm-out*:* check it and then 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 of the alarm outputs. See 11.7.1 Alarm-out for details.

Buzzer*:* if enabled, the system will begin to buzz when the sensor alarm is triggered. To set the delay time of the buzzer, please see 11.7.4 Buzzer for details.

Pop-up Video*:* After camera setting, the system will pop up the corresponding video automatically when the sensor alarm is triggered. To set the duration time of the video, please see 11.7.3 Display for details.

Pop-up Message Box: if enabled, the system will pop up the corresponding alarm message box automatically when the sensor alarm is triggered. To set the duration time of the message box, please see 11.7.3 Display for details.

E-mail*:* if enabled, the system will send an e-mail when the sensor alarm is triggered. Before you enable the email, please configure the recipient's e-mail address first (see 13.1.5 E-mail Configuration for details).

11.4 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 the whole configuration of the motion alarm.

11.4.1 Motion Configuration

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

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

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

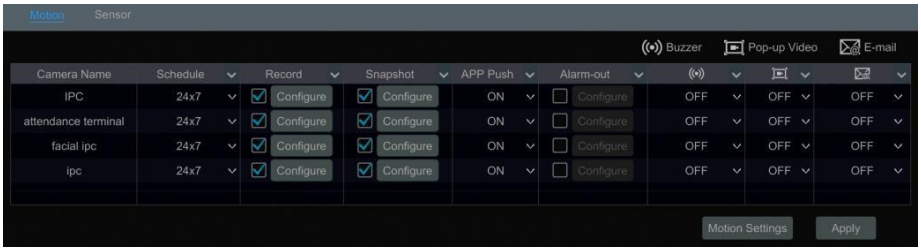
Duration: it refers to the interval time between the adjacent motion detections. For instance, if the duration time is set to 10 seconds, once the system detects a motion, it will go to alarm and would not detect any other motion (specific to camera) in 10 seconds. If there is another motion detected 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 of the motion alarm.

11.4.2 Motion Alarm Handling Configuration

① Click Start→Settings→ AI/Event →Motion Alarm to go to the following interface.



② Enable or disable "Record", "Snapshot", "APP Push", "Alarm-out", "Buzzer", "Pop-up Video" and "E-mail". The alarm handling setting of motion alarm is similar to that of the sensor alarm (see 11.3 Sensor Alarm for details).

③ Click "Apply" to save the settings. You can click "Motion Settings" to go to the motion configuration interface.

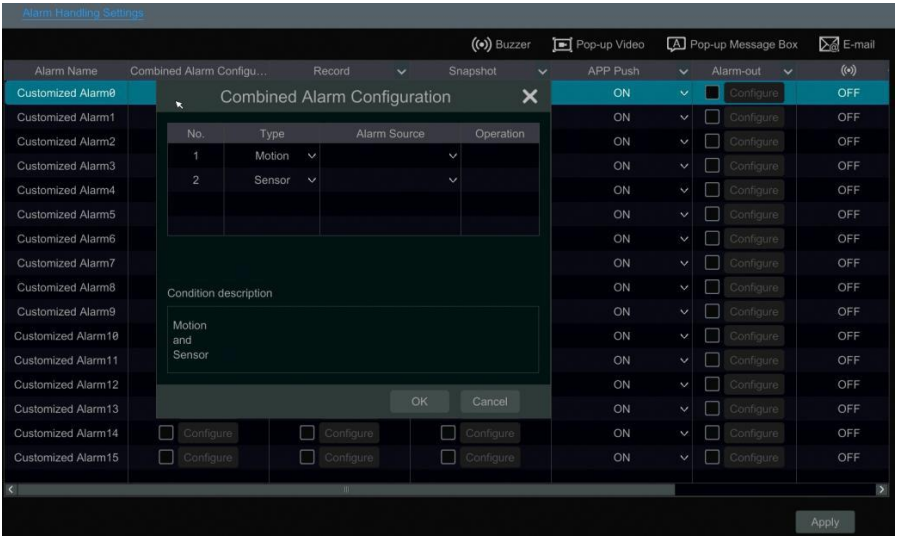
11.5 Combination Alarm

① Click Start→Settings→AI/Event→Combination Alarm to go to the following interface.

② Customize combination alarm. Set alarm name and click "Configure" under the Combined Alarm Configuration item. Then select alarm type and alarm source. Finally, click "OK" to save the settings.

③ Enable or disable "Record", "Snapshot", "APP Push", "Alarm-out", "Buzzer", "Pop-up Video" and "E-mail". The alarm handling setting of combination alarm is similar to that of the sensor alarm (see 11.3 Sensor Alarm for details).

④ Click "Apply" to save the settings.



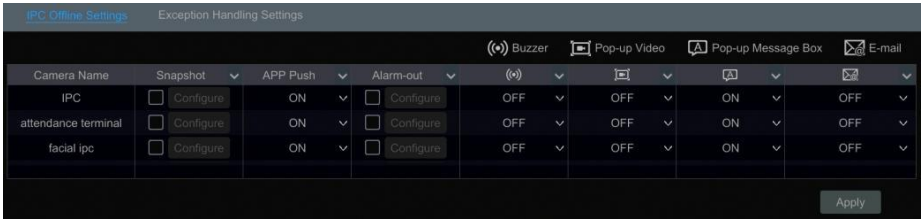
11.6 Exception Alarm

11.6.1 IPC Offline Settings

① Click Start→Settings→ AI/Event →Exception→IPC Offline Settings to go to the interface as shown below.

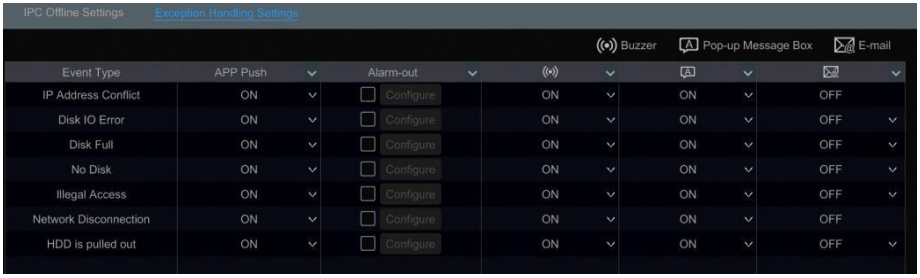
② Enable or disable “Snapshot”, “APP Push”, “Alarm-out”, “Buzzer”, “Pop-up Video”, “Pop-up Message Box” and “E-mail”. The IPC Offline Settings are similar to that of the sensor alarm (see 11.3 Sensor Alarm for details).

③ Click “Apply” to save the settings.



11.6.2 Exception Handling Settings

① Click Start→Settings→AI/Event→Exception→Exception Handling Settings to go to the interface as shown below.



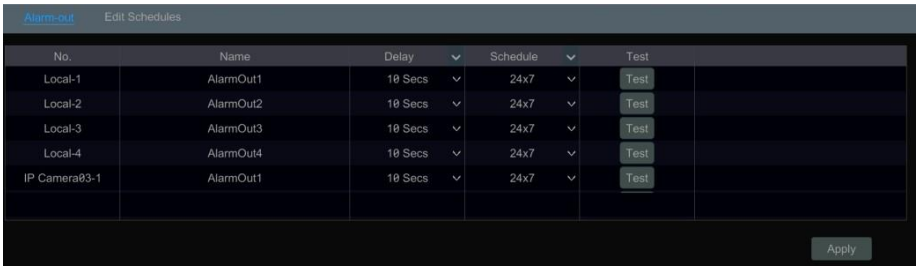
② Enable or disable “APP Push”, “Alarm-out”, “Buzzer”, “Pop-up Message Box” and “E-mail”. The exception handling settings are similar to that of the sensor alarm (see 11.3 Sensor Alarm for details).

③ Click “Apply” to save the settings.

11.7 Alarm Event Notification

11.7.1 Alarm-out

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



② Set the delay time and the schedule of each alarm-out. You can click "Edit Schedules" to edit the schedules (see 9.3.1 Add Schedule for details).

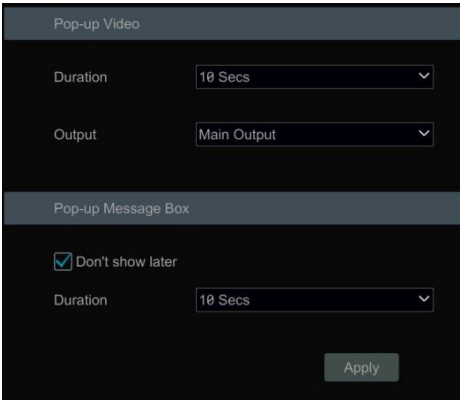
③ Click "Apply" to save the settings. You can click "Test" to test the alarm output.

11.7.2 E-mail

Click Start→Settings→Alarm→Event Notification→E-mail to go to the e-mail configuration interface. Set the e-mail address of the recipients. See 13.1.5 E-mail Configuration for details.

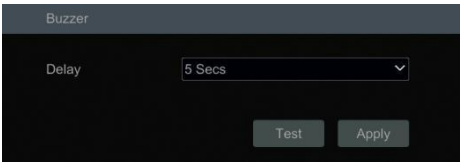
11.7.3 Display

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 you device support two outputs, please set the output of the pop-up video as needed. After that, click "Apply" to save the settings.



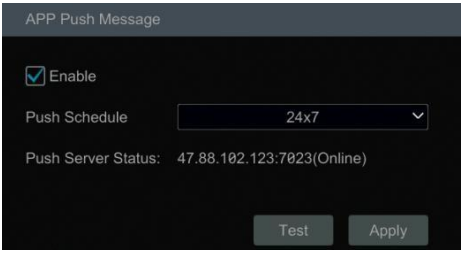
11.7.4 Buzzer

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



11.7.5 APP Push Message

Click Start→Settings→AI/Event→Event Notification→APP Push Message to go to the interface as shown below. Check "Enable" and then click "Apply" to save the settings. Click "Test" to test the push server connection status. If Push Server is online, it will push messages to the mobile APP.

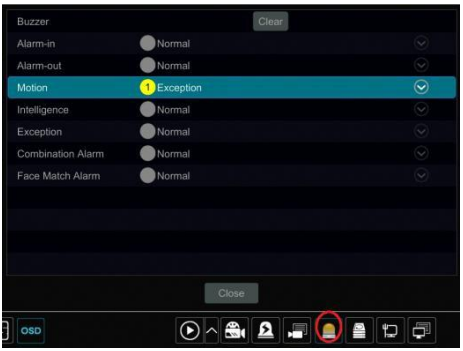


11.8 Manual Alarm

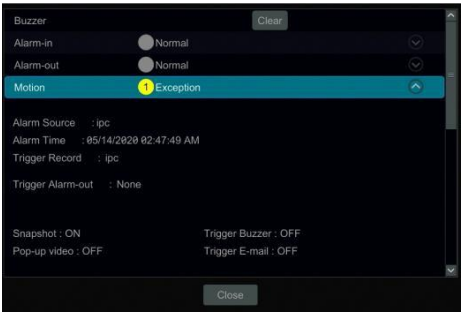
Click on the tool bar at the bottom of the live preview interface to pop up a window. Click "Trigger" to start alarm. Click "Clear" to stop alarm.

11.9 View Alarm Status

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



Click "Clear" to stop the buzzer when the buzzer alarm happens. Click to view the detail information as shown below.

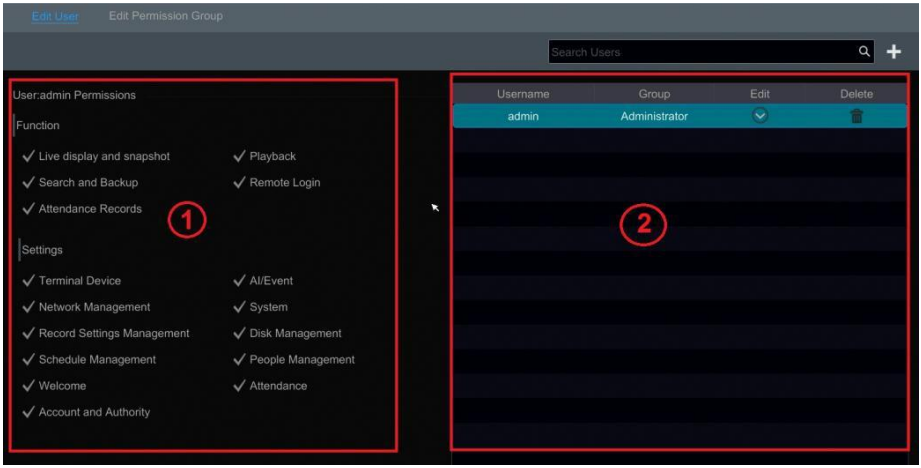


If the exception information is more than one page, you can enter the number in the box and then click to jump to the specified page. Click / to view the exception alarm information in the previous/next page.

12 Account & Permission Management

12.1 Account Management

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



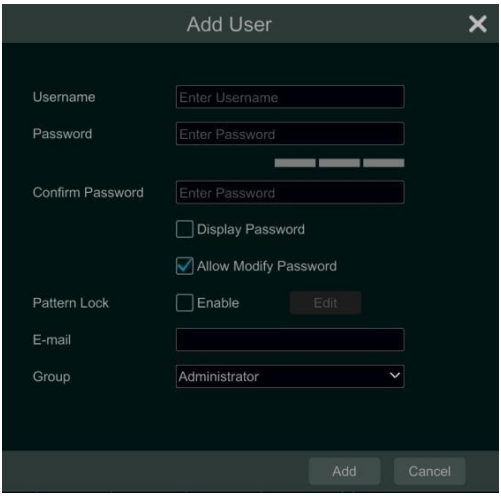
Area ① displays the user permissions. Area ② displays the user list. Click the user in the list to display its user permissions in area ①.

There are three default permission groups ("Administrator", "Advanced" and "Common") available when adding accounts. You can manually add new permission group (see 12.3.1 Add Permission Group for details).

Only ***admin*** and the users that have the "Account and Authority" permission can manage the system's accounts. Group "Administrator" owns all the permissions displayed in area ① except "Account and Authority" and its permissions cannot be changed while the permissions of "Advanced" and "Common" can be changed.

12.1.1 Add User

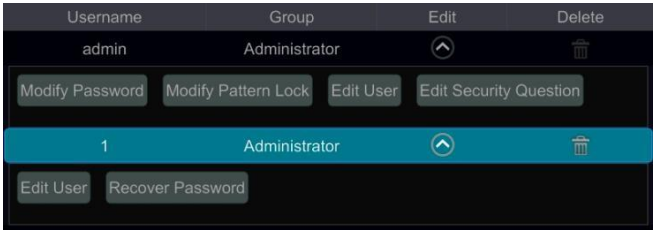
① Click Start→Settings→Account and Authority→Account→Add User or click + beside the search box to pop up the window as shown below.



② Set the username, password and group. User can also set the pattern lock here. The e-mail address and MAC address are optional (enter the MAC address after you check it). Click "Add" to add the user.

12.1.2 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).



➢ **Edit Security Question**

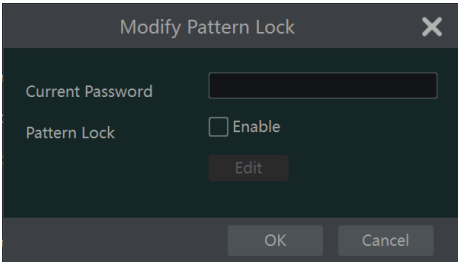
You can set password security only for ***admin***. Click "Edit Security Question" and then set questions and answers in the popup window. If you forget the password for ***admin***, please refer to Q4 in Appendix A FAQ for details. The passwords of other users can be recovered by ***admin*** or the users that have the "Account and Authority" permission.

➢ **Modify Password**

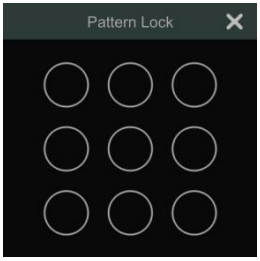
Only the password of ***admin*** can be modified. Click "Modify Password" to pop up a window. Enter the current password and then set new password. Click "OK" to save the settings.

➢ **Modify Pattern Lock**

Click "Modify Pattern Lock" to pop up a window.



Input current password and then check "Enable" to set pattern lock.

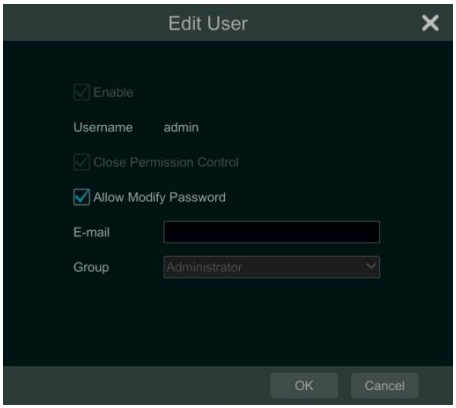


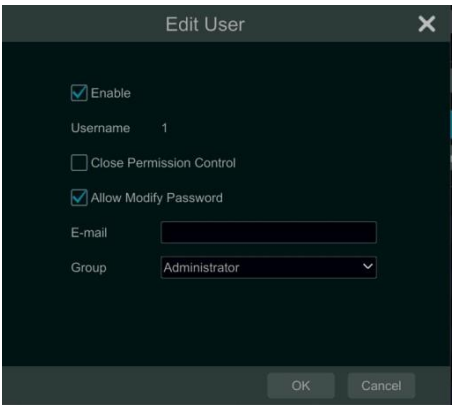
➢ **Recover Password**

Click "Recover Password" to reset the password to ***123456***.

➢ **Edit User**

Click "Edit User" to pop up the window as shown below. The ***admin*** is enabled, its permission control is closed and 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 get all the permissions which ***admin*** has) and set their permission groups. Click "OK" to save the settings.





12.2 User Login & Logout

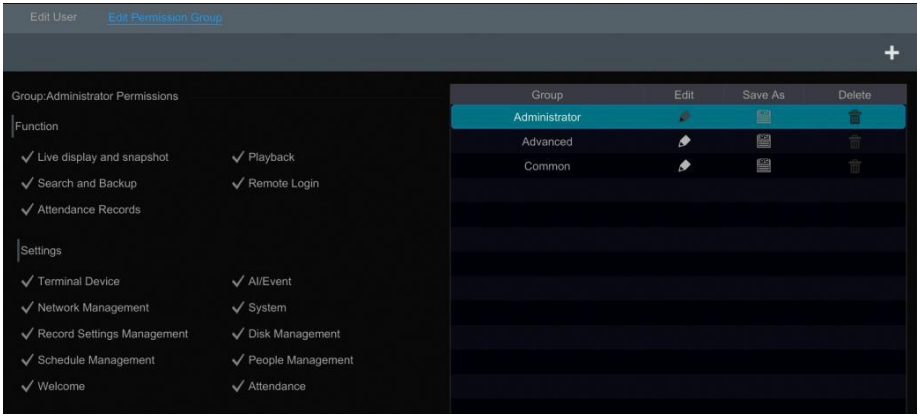
Login: Click Start→Login or directly click the preview interface and then select username and enter the password in the popup window. Click the "Login" button to log in the system.

Logout: Click Start→Logout or click Start→Shutdown to pop up the "Shutdown" window. Select "Logout" in the window and then click "OK" to log out the system.

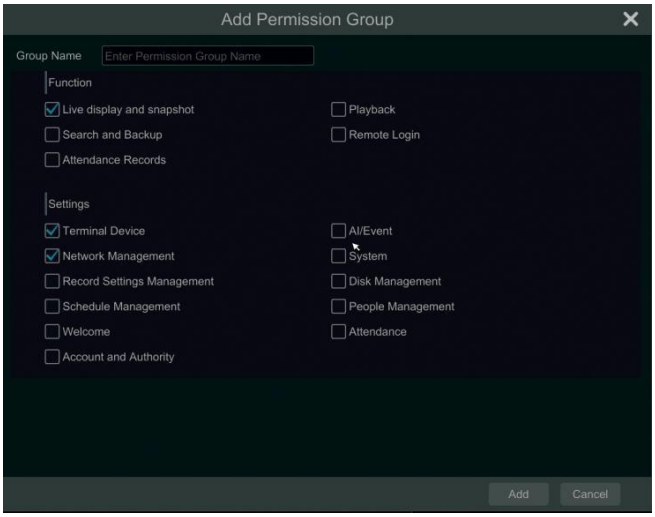
12.3 Permission Management

12.3.1 Add Permission Group

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



Click to add permission group. Set the group name and check the permissions as required. Click "Add" to save the settings.

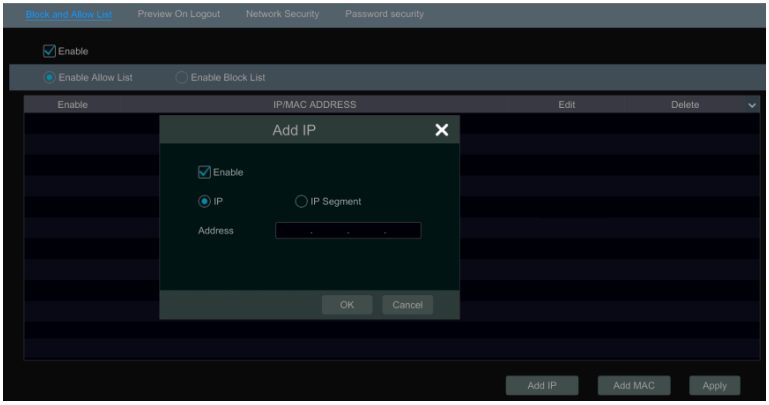


12.3.2 Edit Permission Group

Go to "Edit Permission Group" interface and then click in the group list to edit the permission group (the operations of the "Edit Permission Group" are similar to that of the "Add Permission Group", please see 12.3.1 Add Permission Group for details). Click to save the group as another group. Click to delete the permission group. The three default permission groups ("Administrator", "Advanced" and "Common") cannot be deleted.

12.4 Block and Allow List

① Click Start→Settings→Account and Authority→Security to go to the following interface.



② Check "Enable" and then choose "Enable Allow List (white list)" or "Enable Block List (black list)" (the PC client of which the IP address is in the white list can access SMT remotely

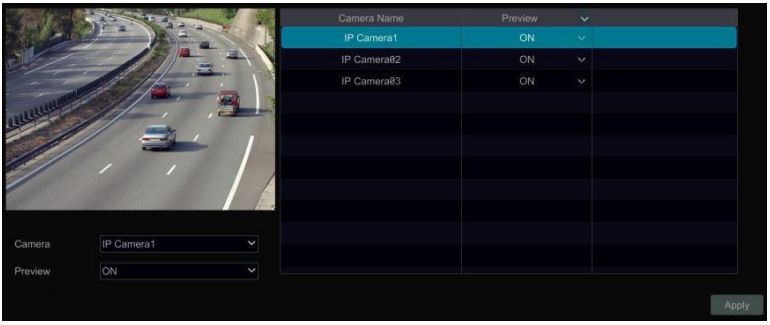
while the PC client in the black list cannot).

③ Add IP/IP segment/MAC. Click “Add IP” or “Add MAC” and then check “Enable” in the popup window (only if you check it can the IP/IP segment/MAC you add be effective). Enter the IP/IP segment/MAC and then click “OK”. In the above interface, click to edit IP/IP segment/MAC, click to delete it. Click “Apply” to save the settings.

12.5 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 the preview permission on logout as required. If a camera’s preview permission on logout is “ON”, you can view the live image of the camera when the system is logged out, or the live image of the camera cannot be seen when logged out.



12.6 Network Security

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

ARP Guard: Address Resolution Protocol Guard. This function can protect the LAN from APR attack 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 needed.

12.7 Password Security

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

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

12.8 View Online User

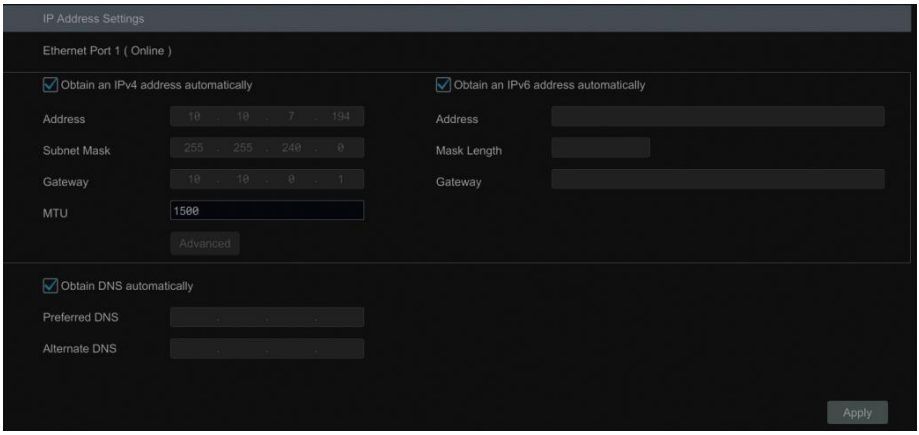
Click Start→Settings→Account and Authority→User Status to view the online user information (you can view the online user name, login type, IP address and login time; click to pop up a window showing the preview occupied channel number and playback occupied channel number).

13 Device Management

13.1 Network Configuration

13.1.1 TCP/IP Configuration

Click Start→Settings→Network→TCP/IP to go to the following interface. Check “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 modified according to network condition for higher network transmission efficiency). Click “Apply” to save the settings.



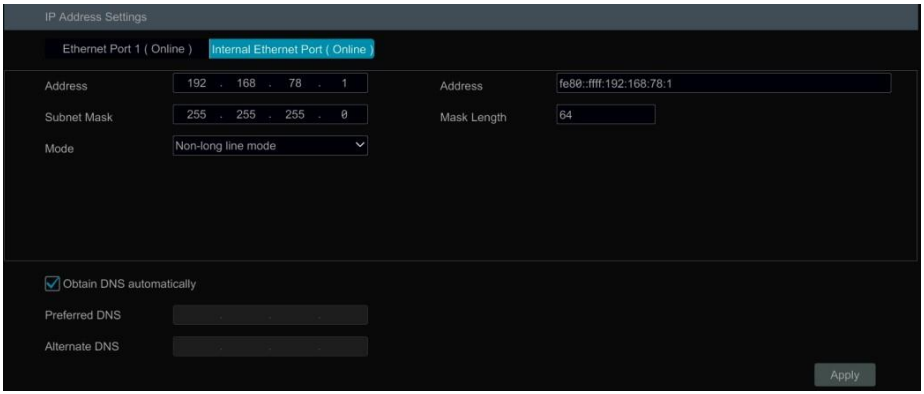
Note:

- **Internal Ethernet Port**

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

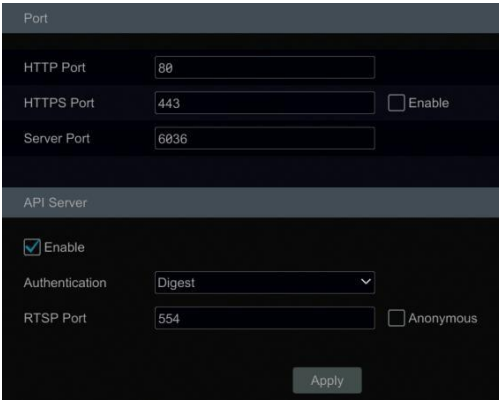
The internal Ethernet port is the port which is used to connect all the PoE ports with the SMT system. The PoE ports are available if the internal Ethernet port is online; if it is offline, all the PoE ports will be unavailable, may be the internal Ethernet port is broken. The network addresses of the internal Ethernet port can be changed to make the port in the same network segment with the IP cameras which are directly connected to the PoE ports of the SMT (it is not recommended to change the network addresses of the internal Ethernet port).

Mode: Non-long line mode or long line mode can be selectable. The non-line mode is the default setting. If the transmission performance of your network cables connected the PoE ports and IPC are not so good or these network cables are very long, you can choose long line mode.



13.1.2 Port Configuration

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



HTTP Port: the default HTTP port of the SMT is 80. The port number can be changed to others like 81. The port is mainly used to web client access. If you want to access the SMT through a web browser, you should enter IP address plus HTTP port in the address bar of the web browser like http://192.168.11.61:81.

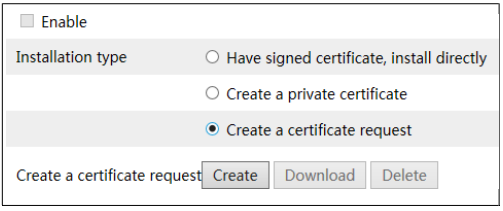
HTTPS Port: the default HTTPs port of the SMT is 443.

HTTPs provides authentication of the web site and protects user privacy. How to use it?

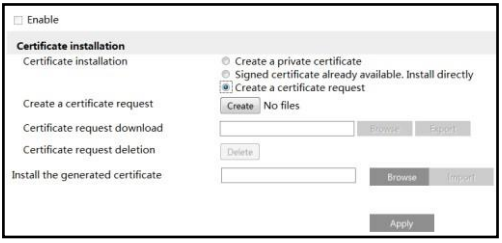
① Enter IP address plus HTTP port in the address bar of the web browser. Then enter username and password to log in. Click Functional Panel→Network→HTTPS to go to the following interface.

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 (SMT's 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.



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



③ After the certificate has been installed, enable this function and apply it. Then the camera can be accessed by entering https://IP: https port via the web browser (eg. https://192.168.1.201:443).

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

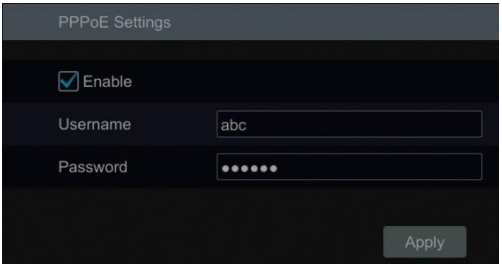
Note: The HTTP port and server port of the SMT should be mapped to the router before you access the SMT via WAN.

API Server: You can log in the media player which supports the RTSP protocol. Moreover, the third-party can further develop through API service.
Authentication: Basic authentication and digest authentication are optional.

RTSP Port: RTSP real-time stream protocol can be used to control the sending of real-time data. By media player (like VLC player) which supports the RTSP real-time stream protocol, you can view the live images synchronously. The default RTSP port is 554 and it can be changed as needed. (The address format: rtsp://IP address:554/chID=1&streamType=main or rtsp://IP address:554/chID=1&streamType=sub; main indicators main stream; sub indicators sub stream; chID indicators channel ID).
Example: Enable RTSP and "Anonymous". Then open the VLC player and enter the address (for example: rtsp://192.168.1.88:554/chID=1&streamType=main) in the network address bar of the VLC player. Then you can view the video of channel 1.

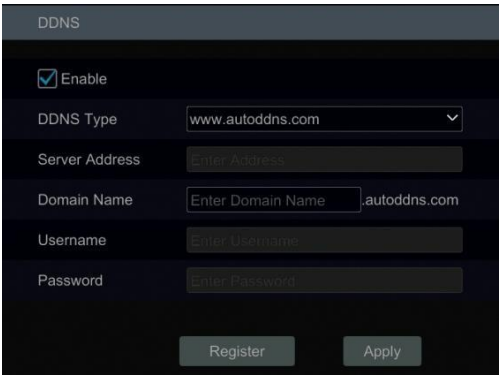
13.1.3 PPPoE Configuration

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



13.1.4 DDNS Configuration

The DDNS is used to control the dynamic IP address through domain name. You can access to the SMT easily if the DDNS is enabled and configured.
Click Start→Settings→Network→DDNS to go to the interface as shown below.

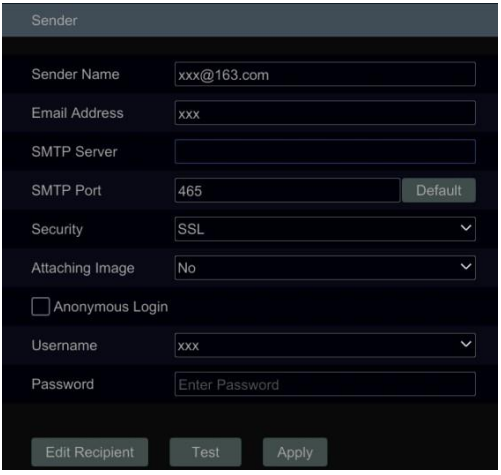


Check “Enable” and then select the DDNS type. Enter the server address, domain name, username and password according to the selected DDNS type. Click “Test” to test the effectiveness of the input information. If “www.autoddns.com” is selected, you need to enter the domain name only and then click “Register” to register the DDNS name. Click “Apply” to save the settings.

Then you can use you this domain name to access the device remotely.

13.1.5 E-mail Configuration

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



Enter the sender’s name, e-mail 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 pop up a window. Enter the e-mail address of the recipient in the window and then click "OK". The e-mail address of the sender will send an e-mail to the recipient. If the e-mail is sent successfully, it indicates that the e-mail address of the sender is configured correctly.

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

Click "Add" and then enter the recipient's e-mail 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 popup 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 e-mail configuration interface of the sender.

13.1.6 UPnP Configuration

By UPnP you can access the SMT through web client which is in WAN via router without port mapping.

① Click Start→Settings→Network→UPnP to go to the following interface.

② Make sure the router supports UPnP function and the UPnP is enabled in the router.

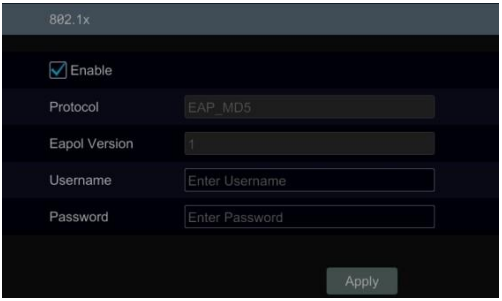
③ Set the SMT's IP address, subnet mask and gateway and so on corresponding to the router.

④ Check "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” after refreshing it a few times, the port number may be wrong. Please change the mapping type to “Manual” and then click to modify the port until the UPnP status turns to “Valid UPnP”. Refer to the following picture. You can view the external IP address of the SMT. Enter the external IP address plus port in the address bar to access the SMT such as http://183.17.254.19:81.

13.1.7 802.1X

If it is enabled, the SMT data can be protected. When the SMT is connected to the network protected by the IEEE 802.1X, user authentication is needed.



To use this function, the SMT shall 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. If the SMT connected to the network interface of the switch has passed the authentication of the switch, it can be accessed via the local network.

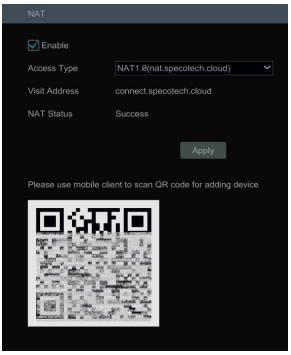
Protocol type and EAPOL version: Please use the default settings.

User name and password: The user name and password must be the same with the user name and password applied for and registered in the authentication server.

13.1.8 NAT Configuration

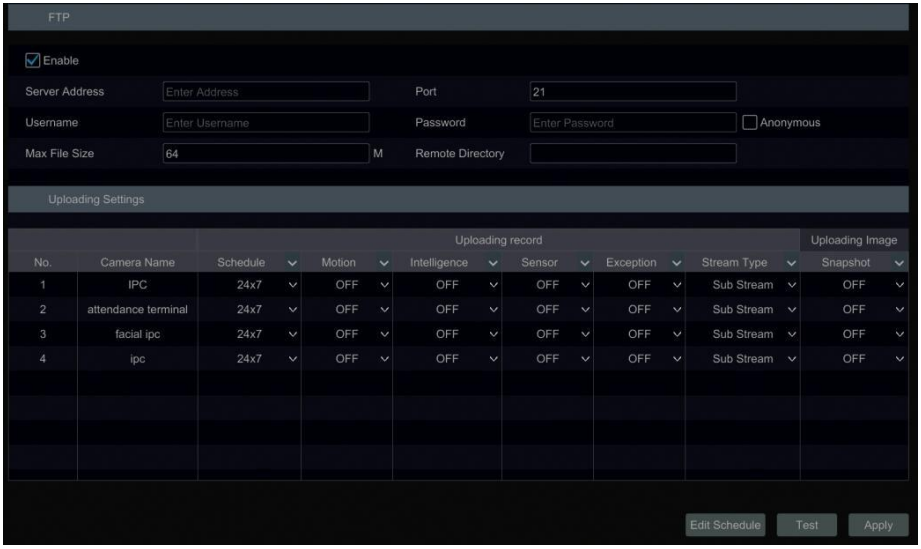
Click Start→Settings→Network→NAT to go to the interface for NAT configuration. Check “Enable” and then select the NAT server address. Click “Apply” to save the settings.

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



13.1.9 FTP Configuration

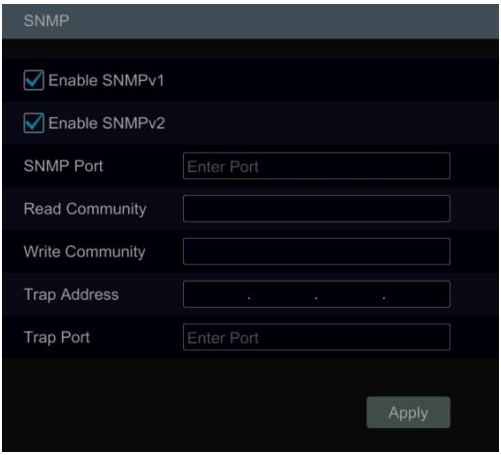
Click Start→Settings→Network→FTP to go to the interface for FTP configuration. Check "Enable" and enter the server name, port, username and password, max file size and remote directory.



Additionally, you also can choose the records and image to upload here.

13.1.10 SNMP

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



② Check SNMPv1or SNMPv2 to enable this function.
③ Set the port of the SNMP.
④ Set the trap address and the trap port.
⑤ Click "Apply" to save the settings.

Trap Address: The IP address of SNMP host.
Trap Port: The port of SNMP host.
Tips: Before setting the SNMP, please download the SNMP software and manage to receive the 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 center.

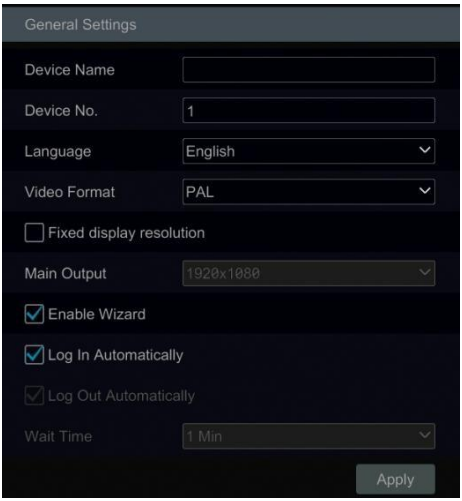
13.1.11 View Network Status

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

13.2 Basic Configuration

13.2.1 Common Configuration

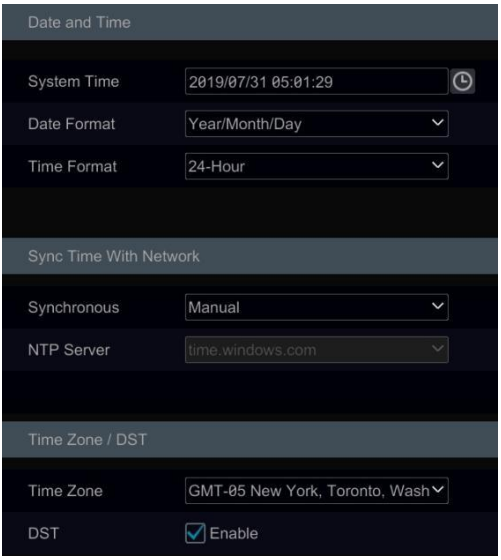
Click Start→Settings→System→Basic→General Settings to go to the following interface. Set the device name, device No., language, video format and main output. Enable or disable wizard, "Log In Automatically", "Log Out Automatically" (if checked, you can set the wait time), "App Live Self-Adaption" and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



Device Name: The name of the device. It may display on the client end or CMS that help user to recognize the device remotely.
Video Format: Two modes: PAL and NTSC. Select the video format according to the camera.
Main Output: Enable "Fixed display resolution" and then select the main output as needed.
Note: You can set the resolutions of the main output and secondary output respectively if the SMT has dual outputs. Refer to the picture as shown below.
Dwell Automatically: Switch automatically. Check it and set "wait time".The system will switch images automatically if it is not operated during the time you set.

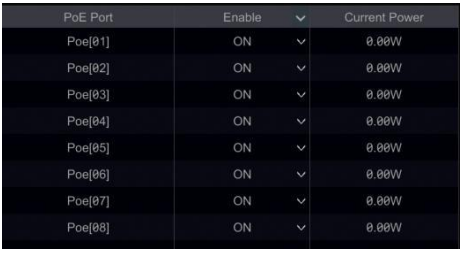
13.2.2 Date and Time Configuration

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 SMT. The default time zone is GMT+08 Beijing, Hong Kong, Shanghai, Taipei. If the selected time zone includes DST, the DST of the time zone will be checked by default. Click "Apply" to save the settings.
You can manually set the system time or synchronize system time with 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.



13.2.3 PoE Power Management

Click Start→Settings→System→Basic→PoE Power Management to go to the following interface. This function is only available for the POE device.



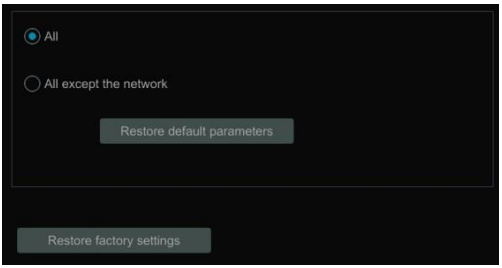
In this interface, you can view the the current power consumption of the added POE camera/panel. The PoE power supply of the PoE camera/panel can be enabled or disabled by selecting “ON” or “OFF” as needed.

13.2.4 Recorder OSD Settings

Click Start→Settings→System→Basic→Recorder OSD settings to go to recorder OSD setting interface. OSD name and icon can be enabled here.

13.3 Factory Default

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



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

13.4 Device Software Upgrade

- **Upgrade**

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

The upgrade steps are as follows:

① Copy the upgrade software (.tar) into the USB storage device.

② Insert the USB storage device into the USB interface of the SMT.

③ Click Start→Settings→System→Maintenance→Upgrade to go to "Upgrade" interface. Select the USB device in "Device Name" option and go to the path where the upgrade software exists. 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 SMT during upgrading.

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

13.5 Backup and Restore

You can back up the configuration file of the SMT by exporting the file to other storage devices; you can recover the configuration to other SMTs which are of the same model with the SMT by importing the configuration file to other SMTs for time saving.

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

- **Backup**

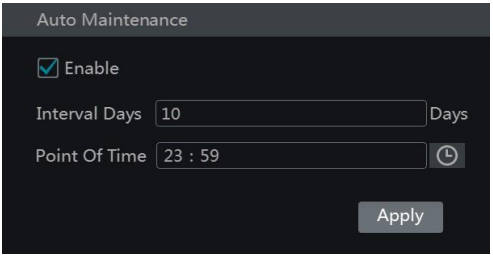
Select the USB device in "Device Name" option; go to the path where you want to store the configuration backup file and then click "Backup"; finally click "OK" in the popup window.

- **Recover**

Select the USB device in “Device Name” option; find the configuration backup file and then click “Recover”; finally click “OK” in the popup window.

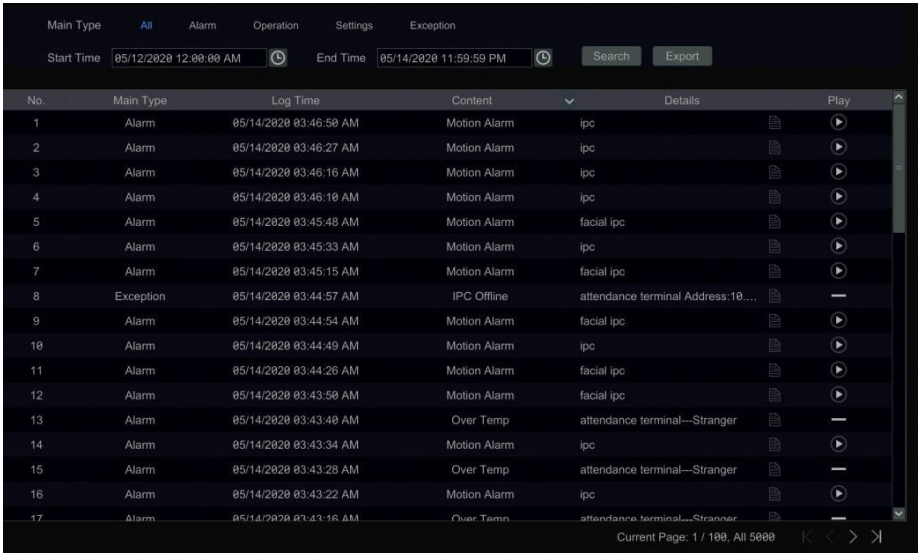
13.6 Restart Automatically

You can set the automatic restart time for the SMT to maintain it regularly. 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 SMT will restart automatically at the pointed time every interval days.



13.7 View Log

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



Choose the log file in the list and then click “Export” button to export the log file. Click

on the “Content” title bar to pop up a menu list. Check contents in the menu list and then the log list will show the checked log contents only. Click to play the video log.

13.8 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 of the system.

14 Remote Surveillance

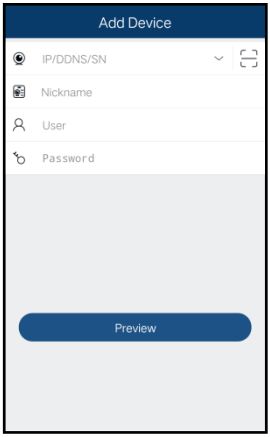
14.1 Mobile Client Surveillance

① Enable NAT in the SMT. Refer to 13.1.8 NAT Configuration for details.

② Download and install the mobile app “Speco Blue” into the mobile device with the Android or iOS system.

③ Run the mobile client, go to the “Add Device” interface and then click to scan the QRCode of the SMT (Click in the live display interface to view the QR code).

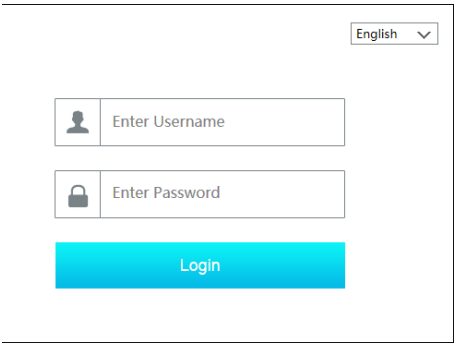
④ After scanning the QRCode successfully, enter the login password to log in mobile client.



14.2 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 of the SMT.

② Open a web browser on your computer, enter the IP address of the SMT in the address bar and then press enter to go to the login interface as shown below. You can change the display language on the top right corner of the login interface. Enter the username and password of the SMT 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 SMT and the computer are both in the same local network segment. For example, supposing that the IP address of the computer is 192.168.1.41, the IP address of the SMT shall be set to 192.168.1.XXX.
2. If the HTTP port of the SMT is not 80, but other number instead, you need to enter the IP address plus port number in the address bar when accessing the SMT over network. For example, the HTTP port is 81. You should enter http://192.168.1.42:81 in the address bar.

14.3 Web WAN Access

➢ **NAT Access**

① Set the network of the SMT. Please refer to 13.1.1 TCP/IP Configuration for details.

② Enable NAT and then set the NAT server address. Please refer to 13.1.8 NAT Configuration for details.

③ Open a web browser on your computer, enter the NAT server address ***connect.specotech.cloud*** in the address bar and then press enter to go to the interface as shown below (download and install the plug-in according to the tip if you access the SMT through NAT for the first time).

Enter the serial number (click on the tool bar at the bottom of the live preview interface to see the serial number of the SMT), user name (the user name of the SMT, ***admin*** by default) of the SMT, select the display language on the top right corner of the interface and then click "Login" to go to the web client interface.

- **PPPoE Access**

① Click Start→Settings→Network→PPPoE to go to the "PPPoE" interface. Check "Enable" in the "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 SMT.
③ Open a web browser on your computer, enter the IP address of the SMT like http://210.21.229.138 in the address bar and then press enter to go to the login interface. Enter the username and password of the SMT 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 of the SMT.
② Set the HTTP port (it is suggested to modify the HTTP port because the default HTTP port 80 might be taken up) and enable UPnP function in both the SMT and the router. If the UPnP function is not available in the router, you need to forward the LAN IP address, HTTP port and server port of the SMT 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 SMT from the router. Open a web browser on your computer, enter the WAN IP address plus HTTP port like 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 of the SMT 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, it is necessary for you to use the domain name to access the SMT. Click Start□Settings□Network□DDNS to set DDNS (see 13.1.4 DDNS Configuration for details). By using DDNS function you can use the domain name plus HTTP port like http://sunshine.dvrdydns.com:100 to access the SMT via internet.

14.4 Web Remote Control

The supported browsers for remote access are IE8/9/10/11, Firefox, Opera and Chrome (available only for the versions lower than 45) in Windows system and Safari in MAC system. When you access the SMT through web client for the first time, you need to download and install the relative components for normal preview and playback. Please refer to the tips in the

remote interfaces for details. The buttons and icons on the top right corner of the remote interface are introduced as follows.

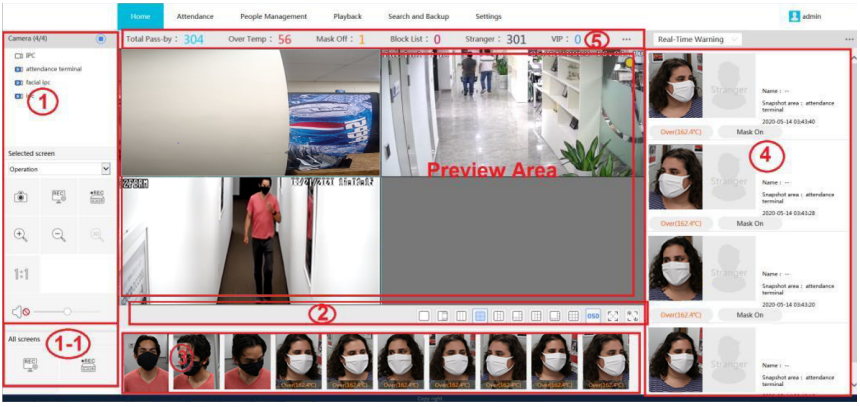
admin: the current login username.

Modify Password: click it to change the password of the current login user. Enter the current password and then set a new password in the popup window. Click "OK" to save the new password.

Logout: click it to log out and return to the login interface.

14.4.1 Live View via Web Client

Click "Live Display" in the remote interface to go to the preview interface.



➢ **Start Preview**

Select a window in the preview area and then click one online camera in Area ① to preview the camera in the window. You can click in Area ① to preview all the cameras.

Button Descriptions of Area ①

Button	Meaning
	Click it to take a snapshot.
	Click it to start record to computer
	Click it to start record to the HDDs of the SMT.
	Click it to zoom in the image of the camera and then drag the mouse on the camera image to view the hidden area.
	Click it to zoom out the image of the camera.

	The 3D zoom in function is designed for P.T.Z. Click it and then drag the image to zoom in or zoom out the image; click the image on different areas to view the image of the dome omni-directionally.

	Click it to close the preview of all cameras.
	Click it to close the preview of the 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.

Button Descriptions of Area ②

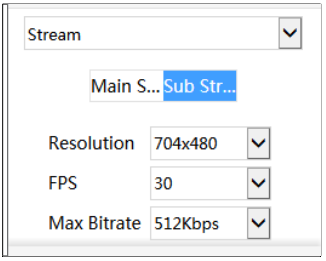
Button	Meaning
	Screen mode button.
OSD	Click it to disable OSD. Click it again to enable OSD.
	Click it to show fit correct scale
	Click it to show full screen.
All Main Stream All Sub Stream	Click “All Main Stream” or “All Sub Stream” to set the stream of all the cameras.

Button Descriptions of Area 1-1

Button	Meaning
REC	Click it to start record of all cameras to computer
REC	Click it to start record of all cameras to the HDDs of the SMT.

Stream Settings

In Area ①, click to select stream.



Click one camera window in the preview area and then click Main Stream to set the camera’s live preview stream and record stream to main stream in manual record mode; click Sub-stream to set the camera’s live preview stream and record stream to sub stream. In sub stream tab, set the

resolution, FPS and bitrate and then click “Apply” to save the settings.

Descriptions of Area ③:

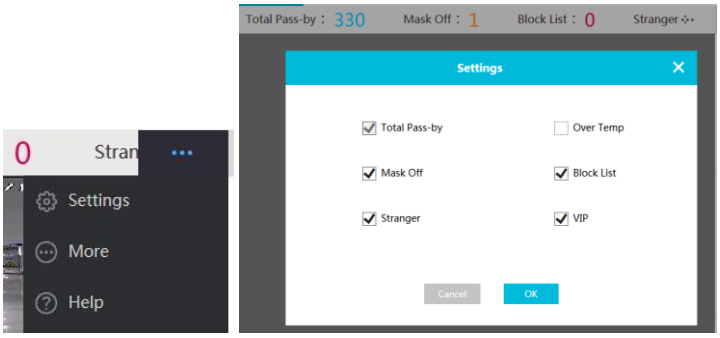
This area is the real-time captured picture display area.

Descriptions of Area ④:

This area is the intelligent detection and real-time warning display area. In this area, you can view the face match pictures, body temperature, mask status, the name of the captured person, snapshot area, snapshot time, etc.

Descriptions of Area ⑤:

This area is the statistical information display area.



Click ••• in this area to view more menus.
Click "Settings" to select the statistical display items in the live display interface.
Click "More" to go to the statistics interface. (See 8 Statistics for details).

14.4.2 People Management via Web Client

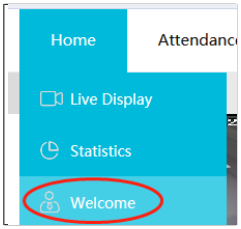
The settings of people management in the web client are the same as the people management setup of the device. Please refer to 6 People Management for more details.

14.4.3 Attendance Management via Web Client

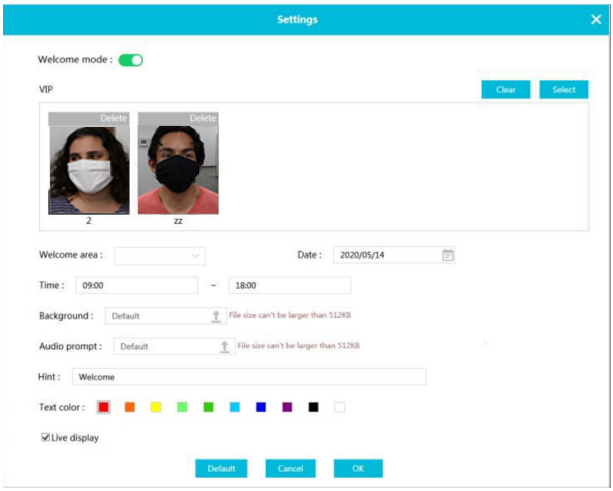
The settings of attendance management in the web client are the same as the attendance setup of the device. Please refer to 7 Attendance Management for more details.

14.4.4 Face Greeting

Click Home →Welcome to go to the face greeting interface.



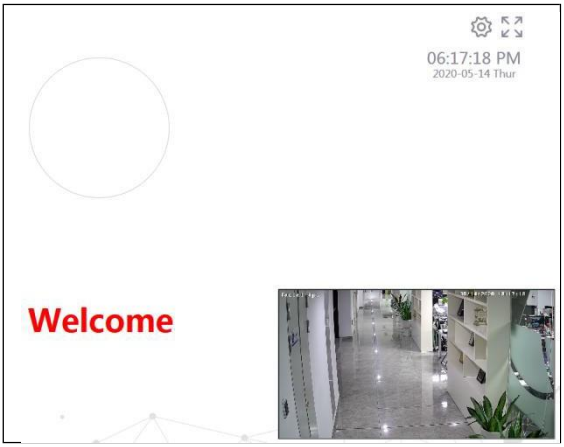
Click to enter the face greeting setting interface.



The setting steps are as follows:

1. Enable welcome mode.
2. Select people from VIP group. Click “Select” to select the people.
3. Select the welcome area, date and time.
4. Upload the background picture and audio prompt.
5. Set the text prompt and select the text color
6. Enable “Live display” as needed.
7. Click “OK” to save settings.

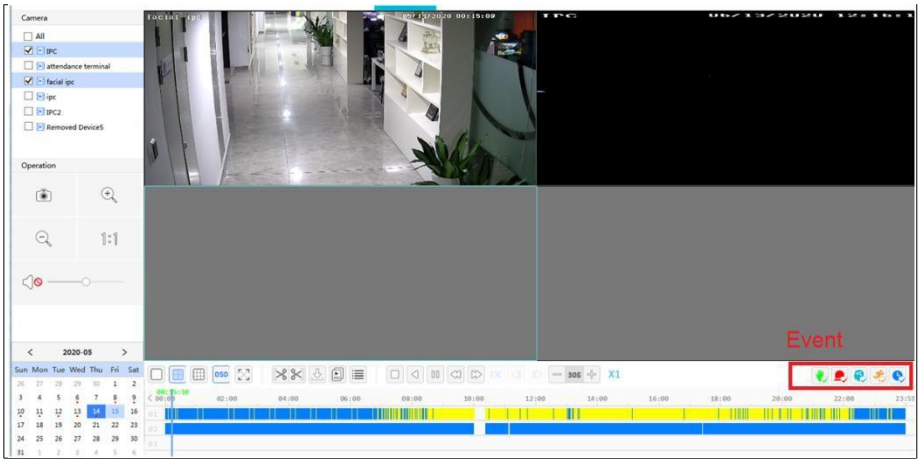
When the VIP guests arrive, the captured picture and the pre-defined welcome word will be displayed. The welcome voice will be broadcasted if you upload it in advance.



Click to display full screen.

14.4.5 Playback via Web Client

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



① Check camera and set the record date on the calendar beside the time scale.
② Select the event.
③ The record will automatically play on the window.
The operation of the playback time scale is similar to that of the time scale of the SMT. Please refer to 10.2 Playback Interface Introduction for details.

Introduction of playback control buttons:

Button	Meaning
	Screen display mode
	Click to disable OSD; click it again to enable OSD
	Full Screen
	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 record of manual/schedule/sensor/motion.
	Stop button.
	Rewind button. Click it to play video backward.
	Pause button.
	Play button. Click it to play video forward.
	Deceleration button. Click it to decrease the playing speed.
	Acceleration button. Click it to increase the playing speed.
	Previous frame button. It works only when the forward playing is paused in single screen mode.
	Next frame button. It works only when the forward playing is paused in single screen mode.
	Click to step backward 30s and click to step forward 30s.

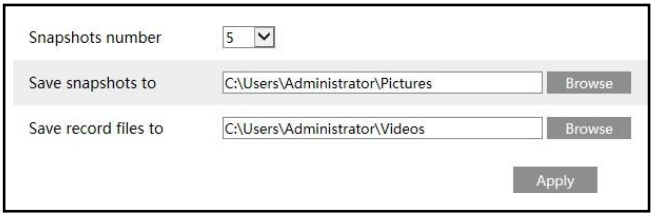
14.4.6 Search and Backup via Web Client

Click “Search and Backup” in the remote interface to go to the backup interface. Please refer to 10 Playback & Backup for details.

14.4.7 Settings via Web Client

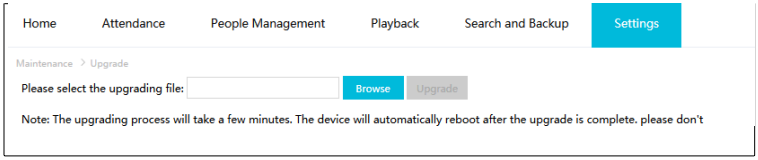
Click “Settings” in the live display interface and then configure the camera, record, alarm, disk, network, account and authority and system of the SMT remotely. All of these settings are similar to that of the SMT. See the configurations of the SMT for details.

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



14.4.8 Upgrade via Web Client

Click Settings→System→Maintenance→Upgrade.



Get the upgrade file from your supplier and then save it in your local PC. Click “Browse” to select your upgrade file and then click “Upgrade”. The upgrade requirement here is the same as the upgrade from the device.

Appendix A FAQ

Q1. Why can't I find the HDD?

a. Please check the power and SATA data cables of the HDD to make sure they are well connected.

b. For some SMTs with the 1U or small 1U case, the power of the adapter may be not enough for operating them. Please use the power adaptor supplied along with the SMT.

c. Please make sure the HDDs are compatible with the SMT. See Appendix C Compatible Device List for details.

d. The HDD could have gone bad.

Q2. Why are there no images output in some or all of the camera windows?

a. Please make sure the resolutions of the cameras are supported by the SMT.

b. Please make sure the network cables of the IP camera and SMT are both connected properly and the network parameters are set correctly.

c. Please make sure the network and the switch both work normally.

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

a. Please make sure the screen, HDMI or VGA cables are good and well connected.

b. Please make sure the screen supports the resolution of 1280*1024, 1920*1080 or 3840*2160 (4K*2K). The SMT cannot self-adapt to the screen of which the resolution is lower than 1280*1024, and then the screen will remind you that the screen resolution is not supported by the SMT or just have no display. Please change a screen at 1280*1024, 1920*1080 or 3840*2160 resolution before booting the SMT.

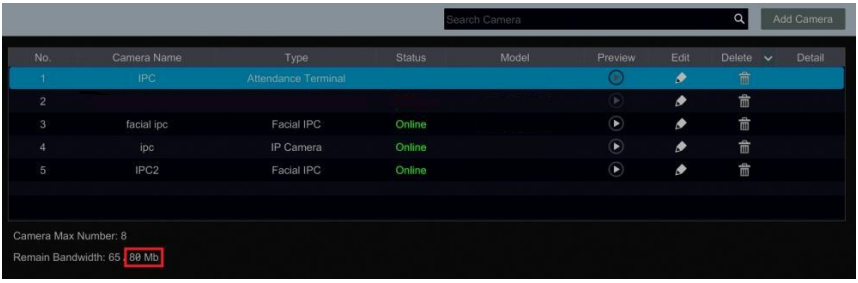
Q4. Forget the passwords?

a. The password for ***admin*** can be reset through "Edit Security Question" function.
Click "Edit Security Question" in the login window and then enter the corresponding answer of the selected question in the popup window, the password for ***admin*** will be reset to ***123456*** by default. If you forget the answer of the question, this way will be invalid, please contact your dealer for help.

b. The passwords of other users can be reset by ***admin***, please refer to 12.1.2 Edit User for details.

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

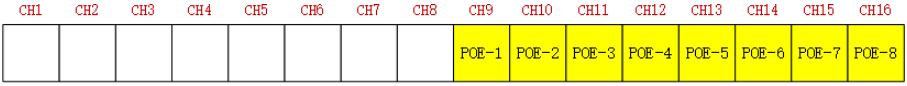
Take the 8 CH SMT as an example. Some 8CH SMT support a maximum of 80Mbps bandwidth input (the real product shall prevail). Refer to the picture below. The remaining bandwidth should be larger than the bandwidth of the IP camera you want to add, or you would fail to add the IP camera. You should lower the added cameras' bitrate to release the bandwidth. It is recommended to add cameras by "Quickly Add" for batch adding.



Q6. The IP camera which connects to the PoE port of the SMT cannot be displayed automatically in the camera list, why?

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

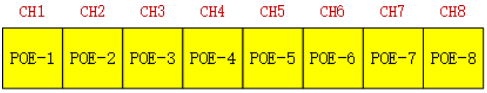
- Take the 16 CH SMT with 8 PoE ports as an example. The resource distribution of the 16 CH IP cameras is shown in the picture below.



When you add IP cameras through network, the IP cameras will occupy the resource from CH1, CH2, CH3, CH4… by the adding sequence; if you directly connect the IP cameras to the PoE ports of the SMT, the IP cameras will occupy the resource from CH9 to CH16 according to the number of the PoE port each IP camera is connecting to.

Supposing that 12 CH IP cameras have been added to the SMT through 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 which occupies the PoE port resource and then reconnect it to the PoE port.

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



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 fail to add the IP camera. Log in the IP camera's web client and then enable DHCP (obtain an IP address automatically); or manually change the IP address of the IP camera to make it in the same network segment with the internal Ethernet port.

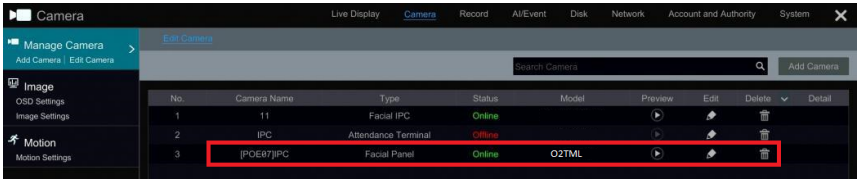
c. Check whether the number of the added IP camera is the maximum.

If the number of the added IP camera is the 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 fail to add the IP camera.

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

Please make sure the username and password of the IP camera are correct. The IP camera's username and password can be modified through the two ways mentioned as below.

① Click "Edit Camera" in the Camera module of the setup panel to go to the interface as shown below. Click to modify the username and password of the IP camera (enter the correct username and password of the IP camera in the popup window and then click "OK").



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

Q8. The system cannot record, why?

a. Make sure the HDD was formatted prior to use.

b. The record schedule has not been set in manual record mode. Please refer to 9.3.2 Record Schedule Configuration for details.

c. Maybe HDD is full and thus the SMT is not able to record. Check HDD information from Disk Management and if required, please enable the recycle function (please see 9.1.2 Advanced Configuration for details).

d. There is no disk but cameras in the disk group, so please add at least one disk to the group. Refer to 9.5.2 Storage Mode Configuration for details.

e. The HDD could have gone bad. Please change another one.

Q9. Fail to access the SMT remotely through IE.

a. Please make sure the IE version is IE8 or above.

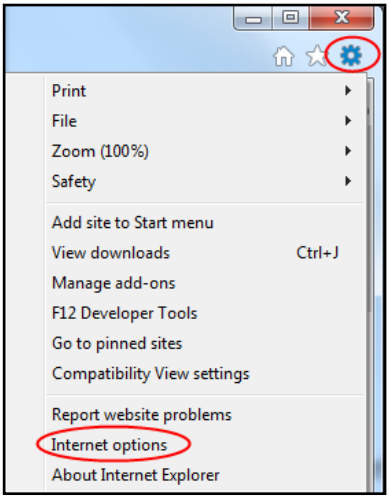
b. Please check whether the PC has enabled the firewall or installed the antivirus software. Please try to access the SMT again after you disable the firewall and stop the antivirus software.

c. Allow & block list may have been set in Account and Authority setting. The PC of which the IP address is in the black list or out of the white list cannot access the SMT remotely.

Q10. ActiveX control cannot be downloaded. What can I do?

a. IE browser blocks ActiveX control. Please do setup as per the steps mentioned below.

① Open IE browser. Click → Internet Options.



② Select Security→Custom Level. Refer to Fig 10-1.

③ Enable all the sub options under "ActiveX controls and plug-ins". Refer to Fig 10-2.

④ Then click "OK" to finish setup.

b. Other plug-ins or anti-virus may block ActiveX. Please disable or do the required settings.

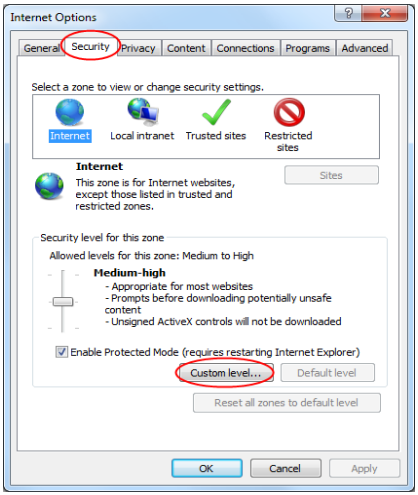


Fig 10-1

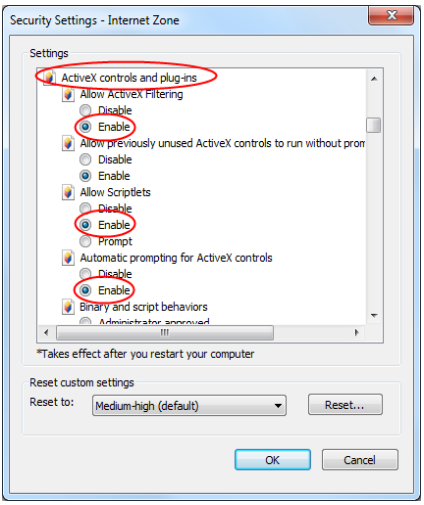


Fig 10-2

Q11. How to play the backup file?

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

- If you select the private format when backing up recorded video by SMT, a RPAS compression package will be backed up to the USB device automatically along with the recorded video data. Uncompress the "RPAS.zip" and then click "RPAS.exe" to set up RPAS. After the setup is completed, open RPAS player and then click "Open Folder" in the middle of the interface to select the record data. Refer to Fig 11-1.

Select camera in the resource tree on the left side of the interface to play the camera record. Click on the tool bar under the camera image to enable audio. Refer to Fig 11-2.

Note: The record will not have audio output if you disable the audio when recording by SMT. Please see 91.1 Mode Configuration and 9.2 Encode Parameters Setting for details.

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

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

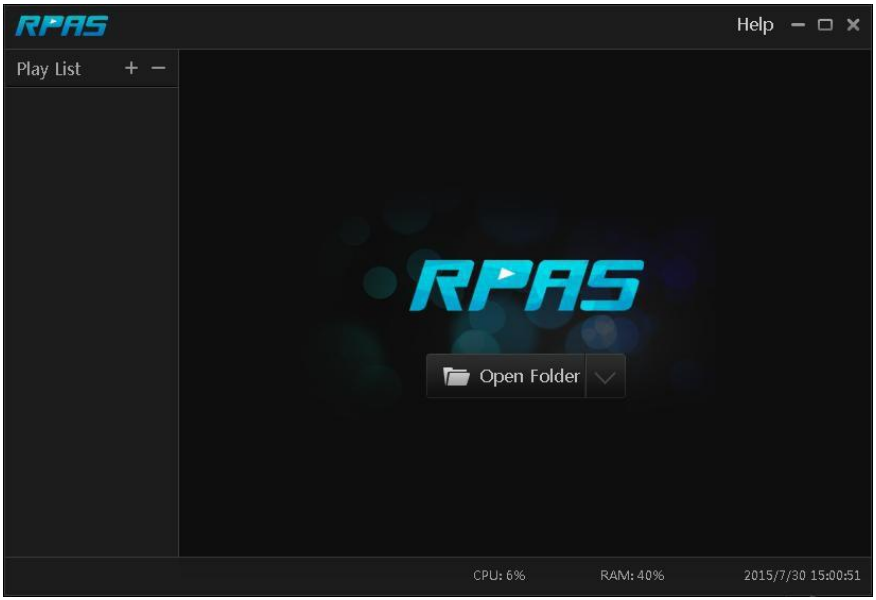


Fig 11-1

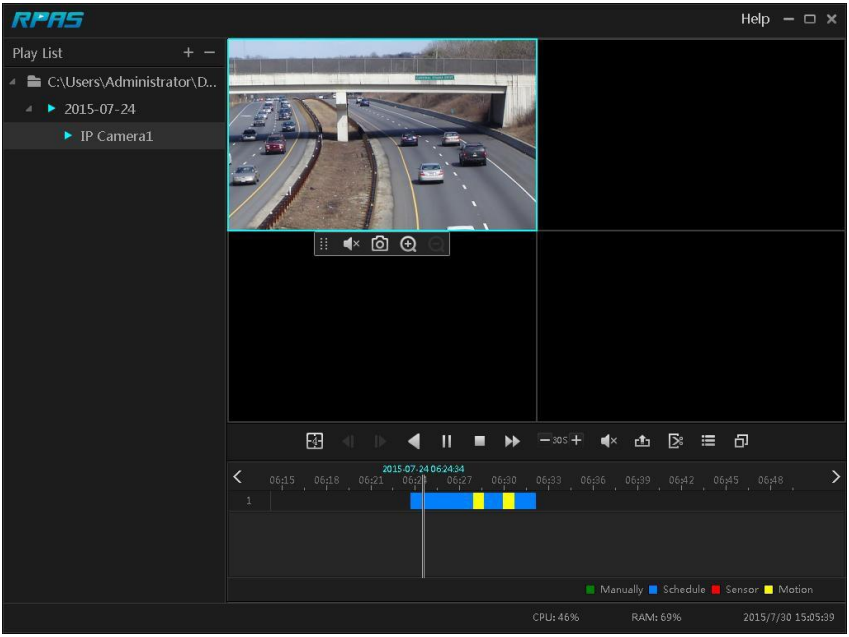


Fig 11-2

Appendix B Calculate Recording Capacity

The recording capacity is mainly up to the record resolution, record stream and bitrate. Different image quality parameters decide different disk capacity occupation in equal times. The bigger the record resolution, record stream and record bitrate is, the more disk capacity is taken up in equal times. The calculation format of recording capacity is shown as below.

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

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

Record Bitrate (Kbps)	Used Space (MB/H)	Used Space (MB/D)
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 record storage in 30 days.

Record 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, there is a 32CH SMT recording 24 hours per day and the record stores for 30 days. The SMT adopts dual stream recording. The main stream is 4096Kbps and the sub stream is 1024Kbps, then the total recording capacity is 49.45TB (39.56TB + 9.89TB).
Considering the format loss of the disk is about 10%, the required disk capacity will be 55TB (49.45TB ÷(1-10%)).