PROVISION ISR
Now you can see!

v1.4.5 User Manual

(For supporting NVRs)

Notes

- Please read this user manual carefully to ensure that you use the device correctly and safely.
- There may be incorrect info or printing errors in this manual. Updates and corrections will be made into the future versions of this manual. The content of this manual is subject to change without notice.
- The device should be operated using only the power source indicated on the marking label. The power voltage must be verified before use.
- 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 device.
- Perform a safe power off before disconnecting from power. Otherwise, HDD damage and configuration loss might occur
- This device is for indoor use only. Do not expose it to rainy or moist environments. In case any solid or liquid get inside the device's case, 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 device is in use, the relevant contents of Microsoft, Apple and Google may be shown. The ownerships of trademarks, logos and other intellectual properties related to Microsoft, Apple and Google shall belong to the above-mentioned companies.
- This manual is suitable for all NVR models running Ossia OS. Clear markings will be made if some models do not support any of the features. All examples and pictures used in the manual are from one of the models for reference purpose.
- For devices with internal power supply, please make sure that the AC 220/110V input selector is set correctly

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1 Introduction

1.1 Summary

This series of devices running Ossia OS are designed to provide unconditional security for homes, offices, banks, schools, supermarkets, petrol service stations, residential quarters, factories, Etc. In can be accessed from local or remote locations.

The Ossia OS was designed specifically to answer the user's needs. It is based on the most advanced SOC technology and adopts a new and intuitive human GUI. This series of the devices is more powerful than any older device produced by Provision-ISR. It is easy to use while providing excellent image quality and system stability.

1.2 Features

Basic Functions

- Support live view, record and configuration of IP cameras
- All Ossia devices support the latest H.265 (HEVC) video coding stream and a mixture input of H.265 and H.264 IP cameras.
- Support standard ONVIF protocol*
- ONVIF Profile T/G Support
- Support dual stream recording of each camera
- Support IPC Quick add*
- Support batch or single configuration of IP cameras (OSD, video parameters, mask, motion, alarms, Etc.) *
- 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.
- Support a numerous web client's login at the same time (According to device's specs)
- Analytics support*

Live Preview Features:

- 4K×2K*/1920×1080/1280×1024 HDMI and 1920×1080/1280×1024 VGA high-definition synchronous display (This may vary according to your model. Please refer to your device technical specs for more information)
- Multi-screen modes such as 1/4/6/8/9/16/25/32 (depends on model)
- Auto adjustment of the camera's image display proportion
- IPC audio monitoring (can be enabled or disabled) *
- Manual snapshot of the previewed camera
- Customized setting the sequence pages
- Support saving of the display modes. The saved modes can be called directly
- One channel operation tool bar
- Camera group view and scheme view in sequence and quick sequence view
- Motion detection and video masking
- Full PTZ control including setting up the presets and cruises

- Direct mouse control over the PTZ cameras including movement, zoom and focus.
- Intuitive Digital-Zoom can be controlled directly from the mouse wheel
- Image adjustment (only available for some cameras)

HDD Support:

- 3U Case support up to 16 SATA HDDs
- 2U Case support up to 8 SATA HDDs
- 1.5U Case support up to 4 SATA HDDs
- 1U Case support up to 2 SATA HDDs
- Small 1U/MM Case support up to 1 SATA HDD
- Each SATA interface of the device supports the HDDs with max 8TB storage capacity (Except of MM models whish support up to 6TB only)
- Some models support record and backup to an e-SATA HDD

Disk Management:

- The HDDs can be grouped for configuration and management.
- Each camera can be added into different disk group with different storage capacity
- Some devices support RAID
- The system allows batch formatting of the HDDs

Record Configuration:

- Support main stream and sub-stream recording at the same time.
- Batch or single configuration of the record stream
- Manual and auto record modes
- Schedule recording, sensor alarm recording and motion detection recording
- Configure different record streams for schedule recording and event recording setting
- Support record duration setting and recycle recording
- Support pre-alarm recording and post alarm recording configuration for event recording
- Support situation dependent recording.

Playback:

- Time scale operation in quick playback. Also, the playback date and time can be set easily by scrolling the mouse wheel. The intervals of the time scale can be zoomed in/out.
- Record searching by Image-slice/time/event/tag
- Time image slice searching by month, by day, by hour and by minute and time. The slice is displayed by image thumbnail
- Up to 16 channels to be searched by time
- Event searching by manual/motion/sensor events
- Tag searching (for tags manually added by user)
- Instant playback of selected camera within the live preview interface
- Up to 16 synchronous playback channels (Depends on devices)

Record Backup

- Backup through USB (U-disk, mobile HDD) or e-SATA** interface
- Backup by time/event/image searching

- Customized backup selection while playing back
- Up to 10 backup tasks running in the background

Alarm Management:

- Alarm schedule setting
- Supports enabling or disabling of motion detection, external sensor alarm input and exception alarms including IP address conflict alarm, disk I/O error alarm, disk full alarm, no disk alarm, illegal access alarm, network disconnection alarm and IPC offline alarm.
- Configurable alarm trigger
- Alarms can trigger PTZ Operation, snapshots, pop-up videos and more.
- Event notification modes: Alarm-out, pop-up video, pop-up message box, buzzer and E-mail
- E-mail schedule support
- Snapped images can be attached to the e-mail when alarm triggered
- Alarm information status for alarm-in, alarm-out, motion detection and exception alarm
- Alarm can be triggered and cleared manually
- System auto reboot when HDD or I/O exception happens – in order to restart and recover the HDD

Network Functions:

- TCP/IP and PPPoE, DHCP, DNS, DDNS, UPnP, NTP, SMTP, RTSP protocols
- "Allow & Block" lists according to IP or MAC addresses
- Multiple browser support for Windows and Mac OS
- Remote configuration and maintenance including remote upgrading and remote system reboot
- Remote camera configuration of the device including video parameters, image quality, Etc.*
- Remote search, playback and backup.
- CMS or other management software can access the device and manage it.
- Support Cloud connection (NAT) and QR Code scanning by smart phones and tablets
- Support mobile surveillance by smart phones or tablets running iOS or Android OS
- Telnet function can be enabled or disabled by the user for remote maintenance

Other Functions:

- The device can be controlled and operated by the supplied mouse or remote controller
- Standard remote Mouse can be used (Not supplied)
- Quick device information view including basic details, camera status, alarm status, record status, network status, disk and backup status
- Support auto recognition of the display resolution

* For NVRs, Dynamic Hybrid and Hybrid DVRs only
**Supported models only

1.3 Front Panel Descriptions

The following descriptions are for reference only.

Type I (MM/Small 1U/1.5U Models):

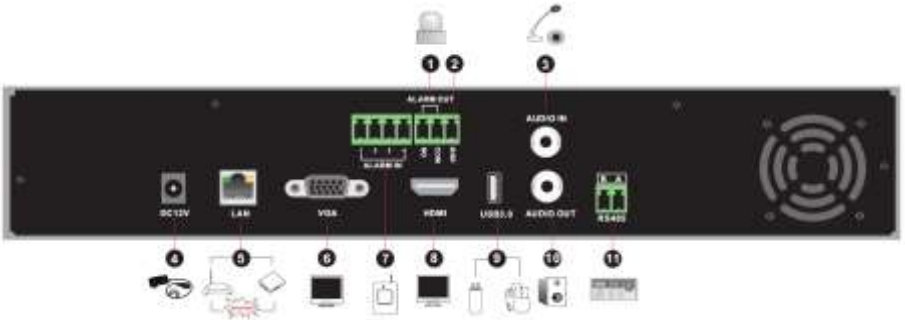
Name	Descriptions
REC	While recording, the light is blue
NET	When accessed by network the light is blue
PWR	When powered on, the light is blue

Type II (2U Models):

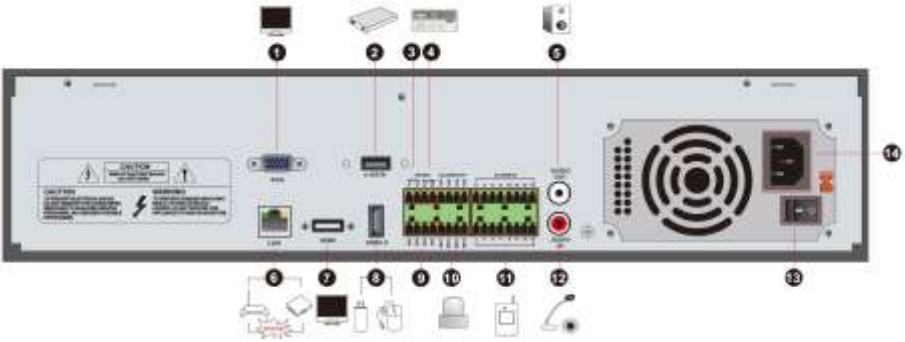
Name	Descriptions
Power	When powered on, the light is blue
HDD	The light turns blue when reading/writing HDD
Net	The light turns blue when the devices accesses the network
Backup	The light turns blue when backing up files and data
Play	The light turns blue when playing back video
REC	When recording, 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
INFO	Check the information of the device
BACKUP	Enter backup mode in live
SEARCH	Enter search mode in live
Exit	Exit the current interface
	Manual 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

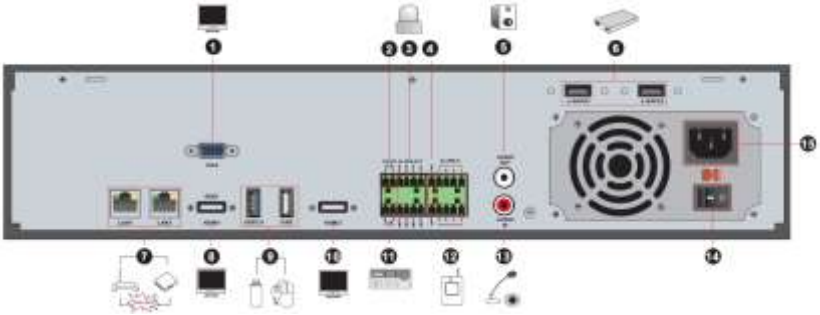
In this section we will introduce you to a few samples of rear panels. Of course, we cannot include all rear panels of all the available devices. Please take this manual as reference only.



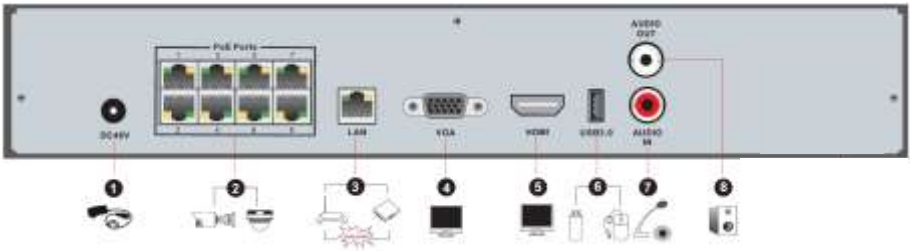
No.	Name	Descriptions
1	ALARM OUT	Relay output; connect to external devices
2	GND	Ground connection
3	AUDIO IN	Audio input
4	DC12V	DC12V power input
5	LAN	Network port
6	VGA	Connect to VGA monitor
7	ALARM IN	Alarm inputs for connecting sensors
8	HDMI	Connect to HD display
9	USB	Connect USB storage device or USB mouse. USB3.0 interfaces will be colored in blue.
10	AUDIO OUT	Audio output
11	RS485	Connect to keyboard. A is TX+; B is TX-



No.	Name	Descriptions
1	VGA	Connect to VGA monitor
2	e-SATA	Connect to HDD with e-SATA interface
3	RS485 Y/Z interface	Unavailable
4	RS485 A/B interface	Connect to keyboard. A is TX+; B is TX-
5	AUDIO OUT	Audio output
6	LAN	Network port
7	HDMI	Connect to HD display
8	USB	Connect USB storage device or USB mouse. USB3.0 interfaces will be colored in blue.
9	GND	Ground connection
10	ALARM OUT	Relay output; connect to external devices
11	ALARM IN	Alarm inputs for connecting sensors
12	AUDIO IN	Audio input
13	Power Switch	Press the switch to turn on/off the device
14	Power Supply	Power supply interface



No.	Name	Descriptions
1	VGA	Connect to monitor
2	RS485 Y/Z interface	Unavailable right now
3	ALARM OUT	Relay output; connect to external alarm
4	GND	Grounding
5	AUDIO OUT	Audio output; connect to sound box
6	e-SATA1/ e-SATA2	Connect to HDD with e-SATA interface
7	LAN1/LAN2	Network ports
8	HDMI1	Connect to 4K×2K high-definition display device
9	USB3.0/USB	USB3.0/2.0 interface, connect storage device or mouse
10	HDMI2	Connect to 1920×1080 high-definition display device
11	RS485 A/B interface	Connect to keyboard. A is TX+; B is TX-
12	ALARM IN	Alarm inputs for connecting sensors
13	AUDIO IN	Audio input
14	Power Switch	Press the switch to turn on/off the device
15	Power Supply	Power supply interface



No.	Name	Descriptions
1	Power Supply	DC48V power supply interface
2	PoE port	8 PoE network ports; connect to 8 PoE IP cameras
3	LAN	Network port
4	VGA	Connect to VGA monitor
5	HDMI	Connect to HD display (4K Ultra HD Supported)
6	USB3.0	USB3.0 interface, connect USB storage device or USB mouse
7	AUDIO IN	Audio input
8	AUDIO OUT	Audio output

1.5 Connections

- **Video Output Connections**

Video Output: Supports VGA/HDMI/CVBS/Spot video output (Depends on models). You can connect to monitor through these video output interfaces simultaneously or independently.

- **Audio Connections**

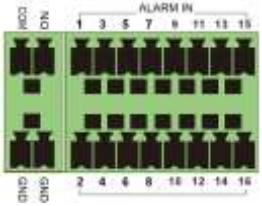
Audio Input: Connect to microphone, pickup, etc.
Audio Output: Connect to headphone, sound box or other audio output devices.

- **Alarm Connections**

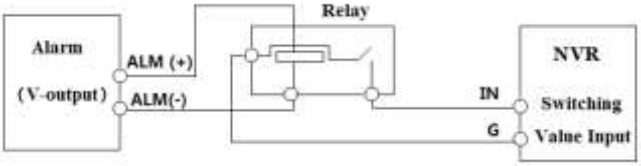
Only selected models support this function. See below 16 CH alarm inputs and 1 CH alarm output for example.

Alarm Input (Availability depends on model):

Alarm IN 1~16 are 16CH alarm input interfaces. There are no type requirements for sensors. NO type and NC type are both available and can be configured from the device interface.
The method to connect sensors to the device is as shown below:

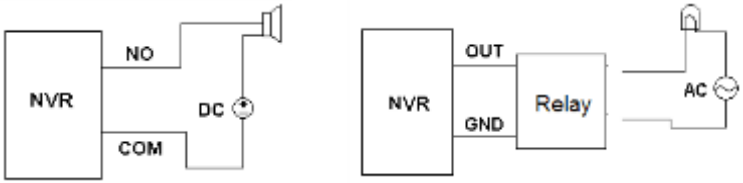


The alarm input is an open/close relay. If the input is not an open/close relay, please refer to the following connection diagram:



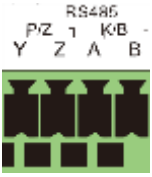
Alarm Output (Availability depends on model):

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 (Availability depends on model):

There are two types of RS485 interfaces:



(Type 1)

(Type 2)

Type 1: The P/Z is for PTZ cameras – Not applicable for NVR devices. The K/B interface is used to connect the C06 control keyboard.
Type 2: The RS485 interface is used to connect control keyboard and PTZ cameras (This connector cannot be used for PTZ control in NVR devices. A is TX+; B is TX-.

2 Basic Operations Guide

2.1 Startup & Shutdown

Please make sure all the connections are done properly before you power on the device. Proper startup and shutdown are crucial for prolonging the lifespan of the device.

2.1.1 Startup

① Connect the output display device to the VGA/HDMI interface of the device.
② Connect the USB mouse and network cable
③ Connect the power. The device will boot and the power LED would turn blue.
④ A Wizard window will pop up (you should select the display language the first time you use the device). Refer to 3.1 Startup Wizard for details.

2.1.2 Shutdown

You can power off the device by using the remote controller or USB 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 “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 “OK” button.
② Disconnect the power.

2.2 Remote Controller (Availability depends on model):

① Open the battery cover of the remote controller and insert two AAA size batteries.
② When placing the batteries. Please ensure the correct polarity (+ and -).
③ Replace the battery cover.

Key points to check in case the remote doesn't work.
1. Check batteries polarity.
2. Check if the batteries are not dead
3. Check IR controller sensor for any interference.

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:
Click on the P.T.Z button to enter the PTZ interface. Once in the PTZ interface, you can use preset, cruise, track, wiper or light button to enable the relevant function.

2.3 Mouse Control

➢ **Mouse control in Live Preview & Playback interface**

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

If the interfaces display in full screen, move the mouse to the bottom or to the right side of the interface to pop up the relevant tool bar. The tool bar 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 click the box. When required to input text the keyboard will pop up automatically.

Note: The mouse is the default controller for all operations unless mentioned otherwise.

2.4 Text-input Instruction

The system includes two input keyboard layouts as shown the above pictures. The left box is the number input keyboard and the right box is the general input keyboard which provides inputs of numbers, letters and punctuation characters as shown below

Button	Meaning	Button	Meaning
	Backspace key		Switch to punctuation characters
DEL	Delete Key		Enter key
	Switch key between upper and lower-case letters		Space key

2.5 Other Button Operations

Button	Meaning
	Show the menu list.
	Change the sequence order within the list.
	Change the camera display mode.
	Close the current interface.
Earliest	Go to the earliest date of camera recording.
Latest	Go to the latest date of camera recording.

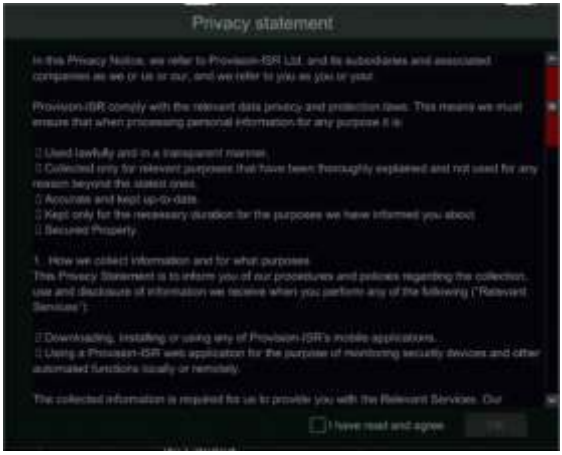
3 Wizard & Main Interface

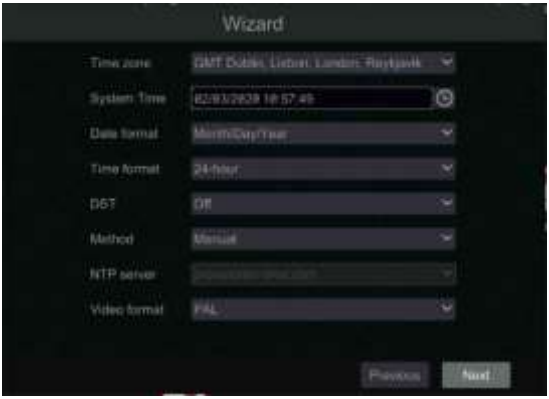
3.1 First Startup Wizard

The first startup wizard will only appear on the initial startup of the device, or after the device has been reset to factory default. It takes the user through all the initial mandatory step required to prepare the system for use.

The first step is to set the system language and locality of the system. The language selection will not affect any setting except of the system language. The Locality selection will automatically set the following: Video System (PAL/NTSC), Time-zone, Time keeping settings, IP/TCP, Ports, NAT and recording settings according to your local requirements.

The second step is to read and confirm Provision-ISR's user privacy statement. Please read it thoroughly as it states all the information shared with Provision-ISR when using each one of the offered services (NAT, DDNS, Push Notification Etc.)





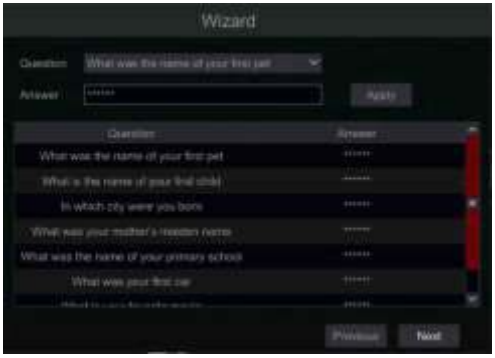
Next is the ***Date and Time Configuration***. The date and time of the system must be configured when you use the wizard for the first time. It is automatically configured based on the locality settings you set on the first stage, but you can now edit it if required. Set the time zone, system time, date format and time format. The DST will be enabled by default if the time zone selected includes DST. The "Method" line allows you to change from manual setting to NTP (Network Time Protocol) setting which will synchronize the time with the configured NTP server. The default NTP server is "provisionisr-time.com" but you can change it to any other NTP server as you wish. Here you can also set the Video Format to PAL/NTSC as required. Changing this setting will reboot the system at the end of the wizard. Click "Next" to continue.

Admin settings. Set your own admin password. The default username is ***admin*** and cannot be changed. There are no default settings and this step cannot be skipped. The initial settings require a minimum of 8-character password that includes at least one letter and one character.

In this step you can also set a "Pattern" password that could be used for login into the device. It is simpler and more fluid to use the pattern lock when using a mouse and screen only (without a keyboard). If you wish to use pattern lock, enable it and click "edit" to set it as follows:

Click "Next" to continue.

In the "Password Recovery" you **must** set at least one question and answer for password recovery. If you will ever forget the password – these questions will be used to restore the password to factory default. Please refer to Q4 in Appendix A FAQ for details.



Choose the question you wish to answer. Input the answer and click on "Apply". Only one question is required. **Forgetting this password will force you to contact the technical support in case the password will be lost or forgotten. There is no other way for the user to independently recover the admin password except of this method.**

Disk Settings. You can view the disk status, number, capacity and serial number. Click "Format" to format the disk. Click "Next" to continue.

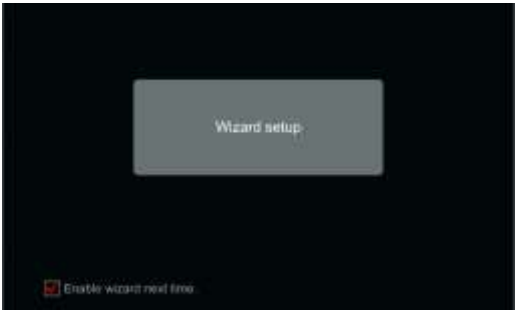
Notice: unformatted HDD will result in no records.

3.2 Standard Startup Wizard

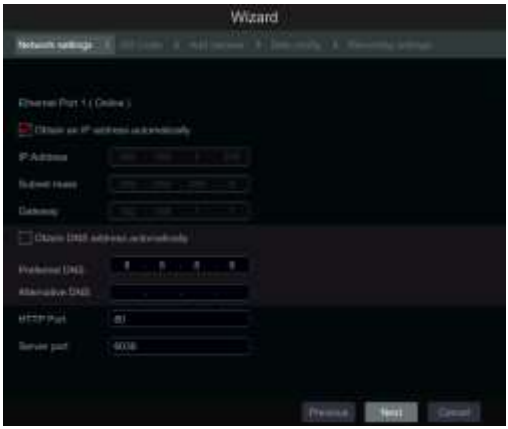
On each startup, the disk icons will be shown on the top of the interface. You can view the number and status of each disk quickly and conveniently through these icons

1) No disk
2) Unavailable disk
3) R/W available disk

You can quickly and easily configure the device using the setup wizard. The wizard can also be skipped and will be shown in the next startup unless the "Enable wizard next time" was unticked.



① ***Network Settings - general***. Check "Obtain an IP address automatically" and "Obtain DNS automatically" to get the IP address and DNS automatically (You must have a DHCP Service enabled in your network). Uncheck it in order to input it manually. Input the HTTP port, RTSP port and Server port (please see 11.1.2 Port Configuration for details). Click "Next" to continue.



Picture reference for DVR/Non-PoE NVR

Network setting – PoE NVRs:
If you use PoE NVR, the state of the internal ethernet port will be shown on the interface as seen on the picture below. Please refer to 11.1.1 TCP/IPv4 Configuration for detailed introduction of the internal ethernet port.

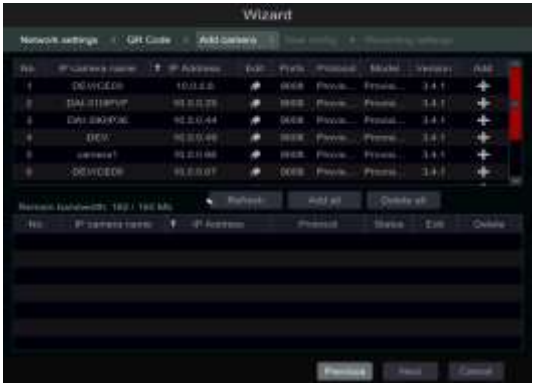
Picture reference for PoE NVR

Professional models with 2 Ethernet ports: Some devices support 2 ethernet ports. The ports can work in 2 ways – "Multiple Address Setting" which means that the device will get 2 IP addresses and both addresses are always active. The second option is "Network fault tolerance" which means that only the primary ethernet port is active at a given time. If the primary network develops a fault – the device will automatically switch to the secondary ethernet port. Please refer to 11.1.1 TCP/IPv4 Configuration for additional information.

For "Multiple Address Setting" you will need to set 2 different addresses (Static or DHCP) and one DNS address. You can set the default ethernet port for DNS routing.

For “Network fault tolerance” you will need to set a single address (Static or DHCP) and DNS address. The 2 networks should be in the same IP Segment. You can also set the primary ethernet card.

② ***Add Camera***. This section is available only in NVRs and Hybrid DVRs. It is applicable for IP cameras only. Connected analog cameras will be displayed automatically. Click “Refresh” to refresh the list of available IP cameras and click to add the checked 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.

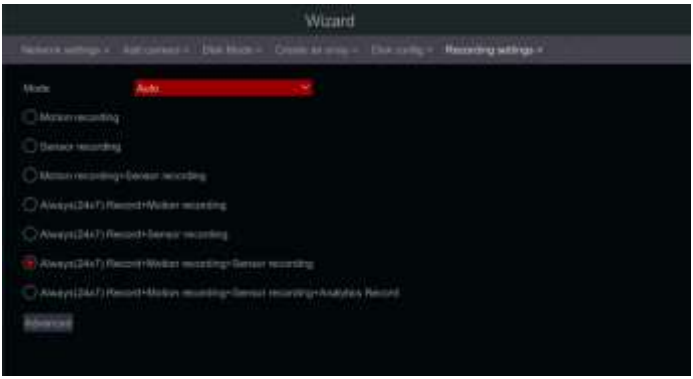


Click to edit the network parameters of the selected IP camera as shown on the left below. Input the new IP address, subnet mask and gateway. Fill the current username and password of the camera. Click “OK” to save the settings.

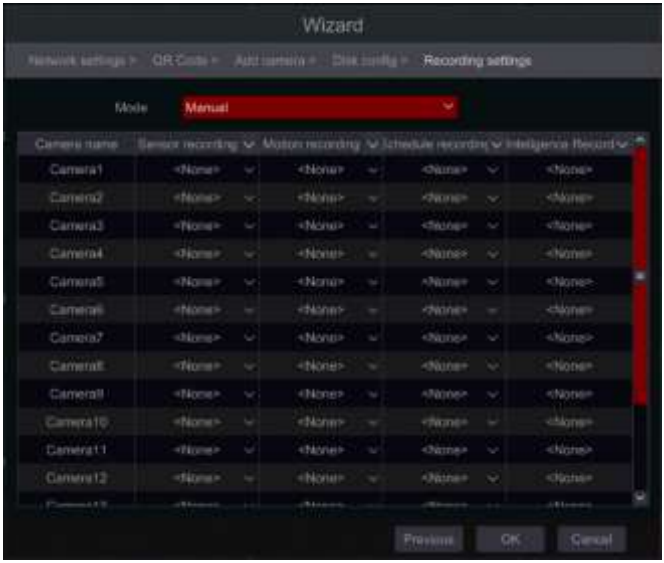
Click to edit the added camera as shown on the above right. Input the new camera name, IP address and port. Fill the current username and password of the camera. You can click “Test” to test the effectiveness of the filled information. Click “OK” to save the settings. You can change the IP camera name only when the camera is added and online. Click “Next” to continue.

③ ***Record Settings***. Two record modes are available: Auto and Manual. See 7.1.1 Mode Configuration for details.

Auto: Select the desired auto mode in the interface as shown below and click "OK" button to save the settings. You can use the "Advanced" button to create new combinations for recording.



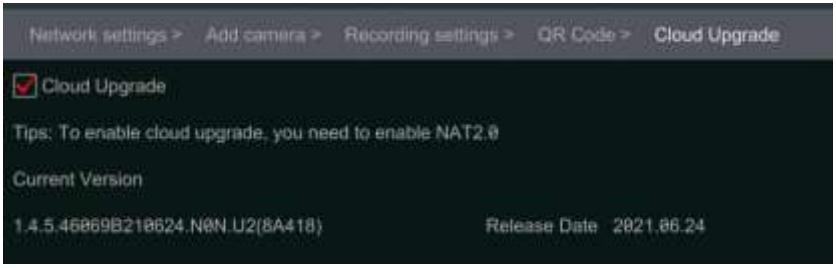
Manual: After switching to manual, set the schedule for "Sensor Record", "Motion Record" and "Schedule Record" of each camera. (You can choose all together by clicking on . Click "OK" to save the settings.



④ ***QR Code:*** v1.4.5 was designed to work with Provision Cam2 Mobile app v1.8.x. It is

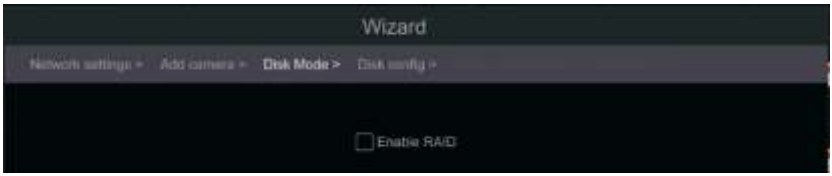
more reliable and more secure. You can enable the NAT service and scan the QR Code using the “Provision Cam 2” mobile application to quickly connect to the device. Please refer to 12.1 Mobile Surveillance for additional information. You can also use the dedicated QR codes to download the app from Google play and Apple App stores, by clicking on “click to download” and scanning the QR code applicable for your device.

⑤ ***Cloud Upgrade:*** Cloud upgrade allows the device to regularly check for updates and commence device update once there is an available update on the updater server. Enable this service if required.



⑥ ***Disk Settings.*** You can view the disk status, number, capacity and serial number. Click "Format" to format the disk. Click "Next" to continue.

Models Supporting RAID: These models will have another step – "Disk Mode". Here you will be able to enable RAID. After confirmation – The device will prompt for a reboot.

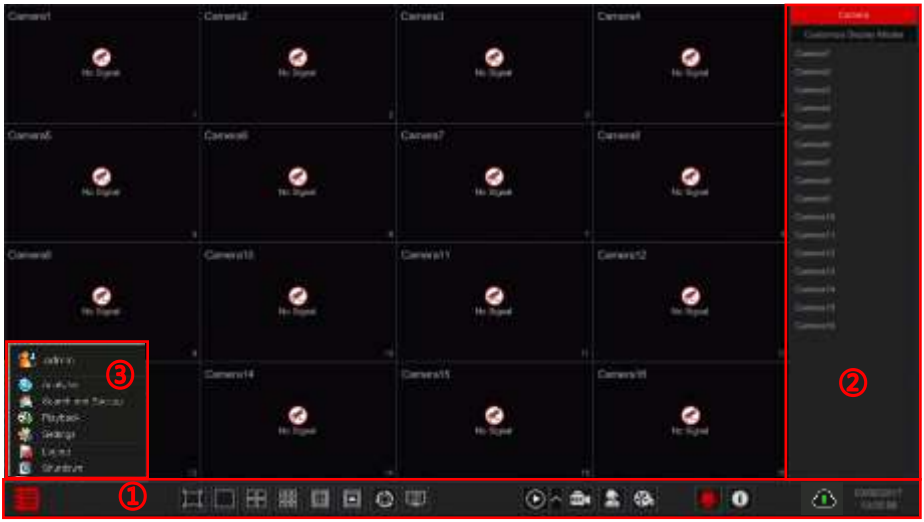


After the reboot, there will be a new step in the wizard – "Create an array"

Set the array as you wish and click "next" to continue. You can find further explanation about RAID in the appendix at the end of this manual.

3.3 Main Interface

3.3.1 Main Interface Introduction



Operations bar (①) icon description:

Button	Meaning
	Start button. Click it to pop up the menu (③).
	Full screen button. Click it to switch to full screen mode; click it again to exit the full screen mode.
	Screen split mode buttons.
	Dwell button (see 5.2.2 Quick Sequence View and 5.2.4 Scheme View in Sequence for details).
	Click it to enable OSD; click to disable OSD.
	Click to set the default playback time for in-channel instant playback (8.1 Instant Playback) and all channel playback (8.2 Playback Interface Introduction); click to activate quick playback for all channels – going back to the specified time. 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 manual record.
	Manual alarm button. Click it to manually trigger or clear the alarm-out
	Information button. Click it to view system information.
	Cloud update interface

Introduction of area ②:

A) Click "Camera" to view all the cameras available for display. Either select one window on the left side of the interface and double click on the camera name you wish to view in the selected window or drag a camera name from the right pane to the selected window on the left.

B) Click "In-Channel Sequence" to view all the configured "In-Channel Sequence" groups list; Select a group in the list to view all the cameras related to that group. (Refer to 4.2 Add/Edit In-Channel Sequence for detailed information). Either select one window on the left side of the interface and double click on the group you wish to view in the selected window or drag a group name from the right pane to the selected window on the left.

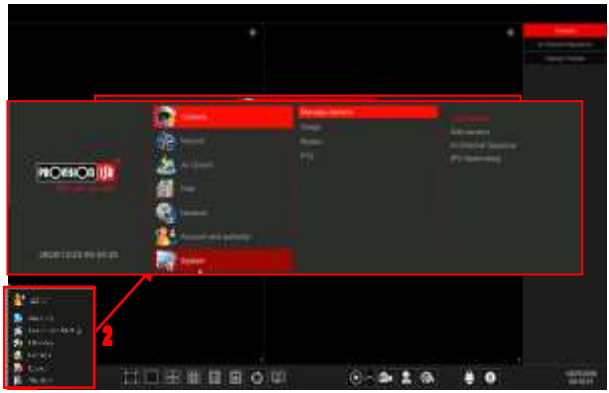
C) Click "Display Presets" to view your saved presets (refer to 5.2.1 Preview by Display Presets for detailed explanation of the display presets). Double click on the desired display preset from the list to activate it.

Introduction of area (③):

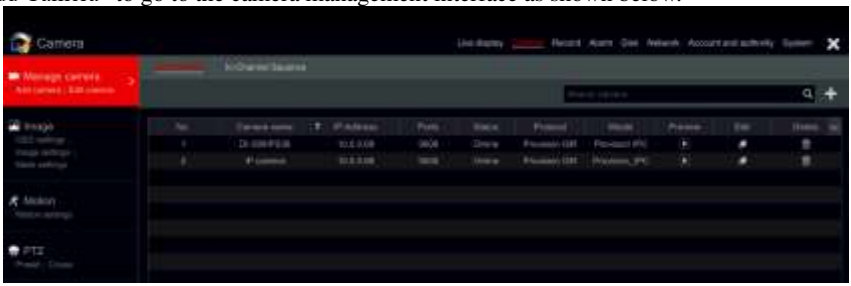
Icon / Button	Meaning
admin	Showing the current user name
Analytics	Advanced Analytics interface (Including DDA, Face Recognition and Smart Search). Applicable for v1.4 and up.
Search and Backup	Record search and backup interface, see 8.3 Record, Search, Playback & backup for details.
Playback	Playback interface. see 8.2 Playback Interface Introduction for details.
Settings	Setup panel, see 3.2.2 Setup Panel for details.
Logout	Log out of the system.
Shutdown	Perform "Logout", "Reboot" or "Shutdown"

3.3.2 Setup Panel

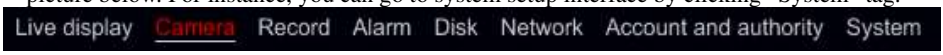
Click Start→Settings to pop up the setup panel as shown below. The setup panel includes seven categories. Each category contains sub-categories and sub-sub-category that will link you to the desired configuration interface.



Here we take ***Camera*** category as an example. The ***Camera*** Category provides the sub-categories "Manage camera", "Image", "Motion", "PTZ". Click ***Manage Camera*** and "Add Camera" to go to the camera management interface as shown below.



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



Main Functions

- **Camera**

Offers functions such as ***Camera Management*** (see Chapter 4 Camera Management for details), ***Image Settings*** (see 5.3 Preview Image Configuration for details), ***Motion*** (see 9.2.1 Motion Configuration for details) and ***PTZ*** (see Chapter 6 PTZ for details).

- **Record**

This category covers ***Encode Parameters*** and ***Record Schedules***. Please see Chapter 7 Record & Disk Management for details.

- **Disk**

Her you will find ***Disk Management***, ***Storage Mode*** and ***Disk Information***. Please see Chapter 7 Record & Disk Management for details.

- **Alarm**

Configure ***Sensor and Motion Alarm Handling*** and ***Alarm Out Settings***. Please see Chapter 9 Alarm Management for details.

- **Network**

This category contains ***TCP/IPv4***, ***DDNS***, ***Port***, ***E-mail*** and ***Network Status***. Please see 11.1 Network Configuration for details.

- **Account and Authority**

This category covers ***Account Management*** (see 10.1 Account Management for details) and ***Permission Management*** (see 10.3 Permission Management for details).

- **System**

The category shows ***Basic Configuration*** (see 11.2 Basic Configuration for details), ***Device Information*** (see 11.7 View System Information for details), ***Log Information*** (see 11.6 View Log for details) and ***Configuration File Import & Export*** (see 11.5 Backup and Restore for details).

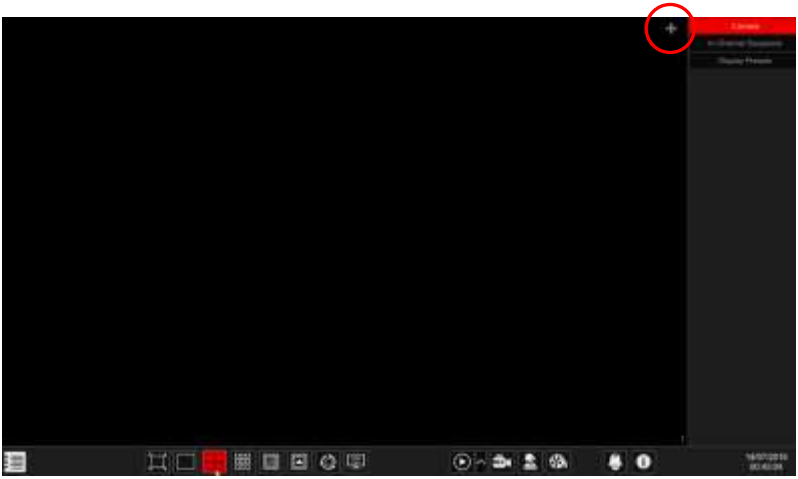
4 Camera Management

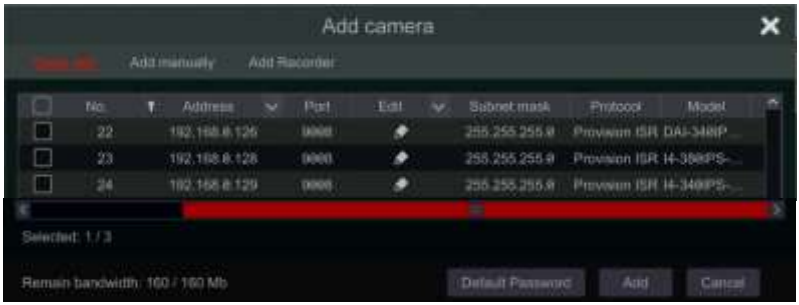
4.1 Add/Edit Camera

4.1.1 Add Camera

The device's network parameters should be configured before adding IP cameras (see 11.1.1 TCP/IPv4 Configuration for details).

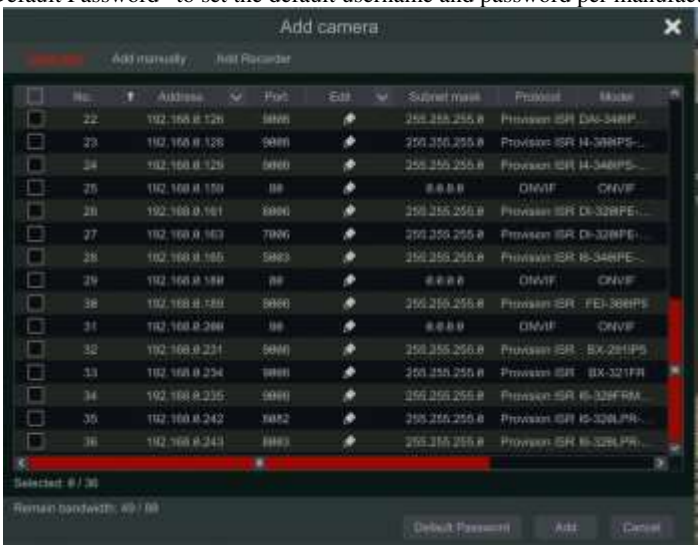
Referring to the pictures below, Click on ***Add Camera*** in the setup panel or in the top right corner of the preview window to pop up the "Add Camera" window as shown below. You can use the "quick add" interface to add an IP Camera or add it manually.





➢ **Quick Add**

Check mark the desired cameras and click "Add" to add cameras.
Click on "Default Password" to set the default username and password per manufacturer.

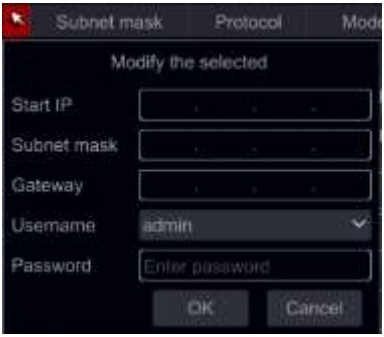


➢ **Editing IP Address of Specific Camera**

Must be done prior to adding the IPC. From the "Quick Add" interface, Click to edit the IP of a specific IP camera. Set the IP new IP address, subnet mask and default gateway. Input the IPC password and confirm. After a few seconds, the camera IP address will change.

➢ **Editing IP Address of Several Cameras**

Must be done prior to adding the IPC. From the "Quick Add" interface, Click next to the "Edit" tab and choose "Batch IP Settings". Choose the target cameras, set the first IP Address, Subnet Mask and Default Gateway and confirm. The IPC Addresses will be set in consecutive order. Make sure that all the target IP addresses are free (For example: If you configure 32 cameras and the starting IP is 192.168.1.1, then you need to make sure that all the addresses from 192.168.1.1 to 192.168.1.32 are free)



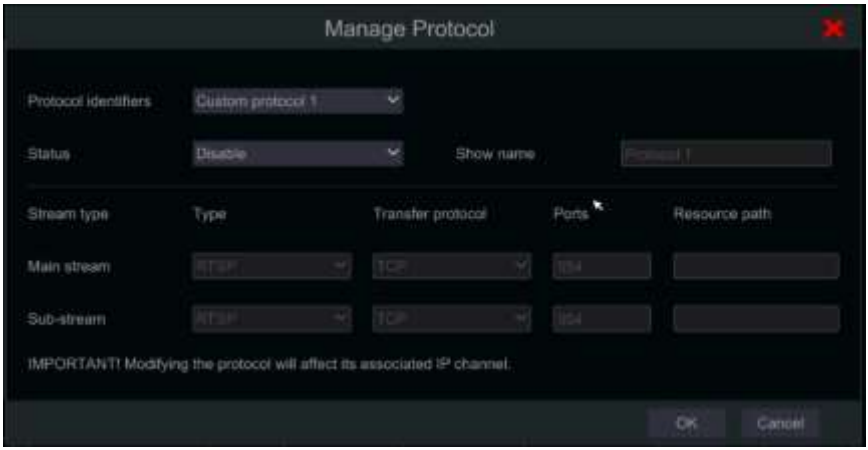
➢ **Add Manually**

IPv4/IPv6 Input: Input the IP address, port, username, password and protocol of the camera and click "Test" to confirm the settings are correct and that connection can be made with the camera.

Domain Input: If you are using DDNS to connect with the camera, click on the arrow next to the IP address to switch the connection mode from IP to domain.

Once finished, click the "Add" button.

Protocol / RTSP Input: The system has several built-in communication protocols with the camera (Provision-ISR, ONVIF, Hikvision, Dahua). If you wish to add a channel using RTSP, click on the drop-down menu arrow next to the chosen protocol (Default is "Provision-ISR") and choose "Manage Protocol". The following window will appear.



Set a name for the protocol, enable it and set the values as required (Both master-stream and sub-stream values must be entered). Click OK to continue.

Add Recorder

If you wish to view/record channels from another Provision-ISR device on the network you can use this option. Click on “Add Recorder”. The following window will appear.

The NVR will display automatically all the supported devices found on the LAN with its details. If you wish to add a channel from any of the displayed devices, double click on it and then double click on the channel you wish to add.

If you wish to add a channel from a recorder located on another network, click on “Add Manually” and input the IP address, port and login credentials for the device, then click on “Test Device” if the connection is well, you will get a list of available channels. Double click on the channel you wish to add.

Click to delete the camera. Click “Default Password” to set the default username and password per manufacturer.

4.1.2 Edit Camera’s General Parameters

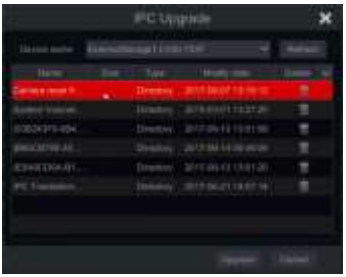
This can be done only when there are active video channels. You can use Preview button to trigger a live video stream from the camera in a pop-up window for easy identification.
Click “Edit Camera” in the setup panel to go to the edit interface.

Edit Camera’s name: Click to edit the camera’s name. Set the new name and confirm.

Change camera's password: Click on the button next to "Operation" and then choose "Modify IPC Password". In the opened window choose the desired cameras, input the new password and reenter it for confirmation.

Delete Cameras: Click on to delete the camera.

Update IPC Firmware: Click on to update the camera's firmware. After confirming the update, choose the cameras and firmware version from the opened window and confirm.



Note:

If a PoE NVR is used, the IP cameras (with PoE function) which connect directly to the PoE port of the NVR will be displayed automatically in the camera list. The IP camera which occupies the PoE port has a prefix shown before its camera name. The prefix consists of PoE plus PoE port number. Cameras connected to PoE ports cannot be deleted from the camera list.

- IP cameras that connect directly to the PoE port of the NVR using "Provision-ISR" private protocol will be shown automatically in the camera list.
- One of the two conditions must be met for an IP camera that connect directly to the PoE port of the NVR using "ONVIF" protocol to be shown automatically in the camera list.
  - ✓ The IP camera is in the same network segment with the NVR internal ethernet port.
  - ✓ The DHCP (Assigning IP Address automatically) of the IP camera is enabled.

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

4.2 "In-Channel Sequence"

In channel sequence will run a sequence of specified cameras within a single window while in split mode. It can also be used on full screen, but will be less effective.

Add "In-Channel Sequence"

Click "In-Channel Sequence" in the interface to go to the configuration area as shown below.

Click to pop up the window as shown below. Set the group name and dwell time (the dwell time of the camera group sequence view) in the window. Check the cameras and click "Add" to add group. Click to view the cameras in the group after adding group.

4.2.1 Edit In-Channel Sequence

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

4.3 IPC Networking

IPC networking will allow you to remotely configure IP cameras and basic network parameters of other devices. This is applicable only for devices running Ossia v1.1 and up. Below you will be able to learn about the different options of this feature.

4.3.1 IP Camera management

The IP Camera management is identical to the "Add/edit camera" Interface. You can set the IP parameters and the name of the camera through it. Please refer to section 4.2 Add/Edit Camera for more information.

4.3.2 Device Management

Here you will be able to remotely set the general network parameters of the device and configure the IPC cameras connected to the device. The following information is available: Device name, Device current IP Address, Cameras and availability.

Clicking on will open the device menu You wll have the following options:

- Edit IP – Set the device's IP address, subnet mask and gateway.
  Tick the devices you wish to configure and set the start IP address. The device will set automatically the rest of the IP address. Make sure that the whole segment is available before running this procedure.
  Set the subnet mask and gateway – this will be set for all devices.
  Set the username and password for the devices. If any of the devices have a different password, it should be set independently otherwise the procedure will fail.
  Click OK to start the process.

- Edit user – set the admin address for the specified device. This is only required if the device password is different than the default password (admin / 123456).
  Tick all the relevant devices and set the user name and password

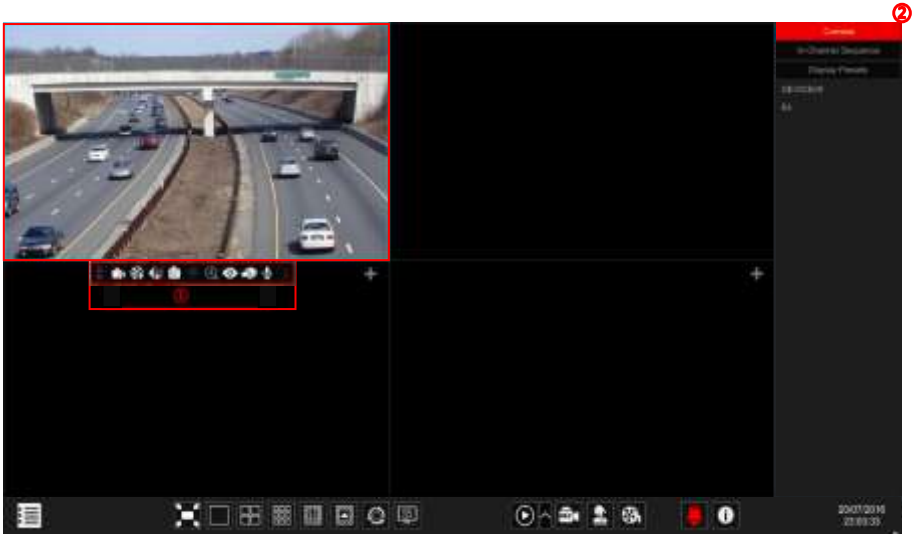
- Buzzer – the buzzer will help you identifying the device you wish to configure by activating the buzzer on the unit itself.
- Delete all – will delete all IP cameras set on the device.

Click on to open a list of all cameras connected to the device. Click on to hide it. Once the list is open, you can delete specific IP cameras by pointing on it and clicking on the icon that appears. To add a specific camera to the device, choose the device and add cameras from the IPC interface on the left. Make sure that you set the user credentials beforehand.

5 Live-view Introduction:

5.1 Live-View Interfaces:

You must have active video channels for this interface to be active (see 4.1.1 Add Camera for details). Refer to the inter face as shown below to learn about the live view interface.



Live view indicators (Will appear only when a channel is active)

Indicator	Meaning
	Active Motion detection
	Active Analytics detection
	POS Recording
	Motion Recording
	Schedule Recording
	Sensor Recording
	Manual Recording
	Analytics Recording

	Indicating that the channel support PTZ operations
	Indication that the audio stream for the channel is enabled
	“No Signal” for Analog Cameras. “Not Available” for IP Cameras

Click on the live-view window to show the channel tool bar as shown in area ① . Right click on the preview window to show the channel menu list. The tool bar and menu list are explained in the table below.

Button	Menu List	Meaning
	--	Move tool. Click and drag it to move the tool bar.
	Manual Record On	Start/Stop manual recording for the specific channel.
	Instant Playback	Start Instant playback for the specified channel. The playback will commence within the selected window. See 8.1 Instant Playback for details.
	Enable Audio + Volume Control	Enable/disable audio from the selected cannel (Requires camera/channel to support of this feature). Once enabled, a volume slider will appear to control the output volume.
	Snap	Take a snapshot and open a snapshot pop-up. Click “Save” in the window to save the image. Click “Export” to export the image.
	PTZ Control	Switch to the PTZ control interface. See Chapter 6 PTZ for details.
	Zoom In	Switch to the digital zoom interface. Digital Zoom can also be achieved by placing the mouse cursor on the required object and using the mouse scroll wheel to zoom in & out.
	Fish Eye	Open Fish-Eye display controls. Refer to 5.2 Fish-Eye Display
	--	Switch to the image adjustment interface. Refer to 5.3.4 Image Adjustment for details.
	--	Open audio out (Talk)
	Object Detection	**Supporting Devices Only** will display face+object detection. If the camera doesn’t support face detection, this icon will be grey.
--	**Camera Info**	View the camera information.

5.2 Fish-Eye Display:

Fish eye cameras are usually installed to cover large areas and provide a 360° view. In order to dewarp the image properly, you need to set the installation method and the view you wish to get. Click on the “Fish Eye” Icon to get the following pop up:

Choose the installation mode out of Ceiling, Wall and Desktop. Setting the installation mode wrong will result in wrong view of the video.

Now choose the display mode out of the following:

1) Fish-Eye: Normal view of the warped fish eye sphere view.
2) Panorama: A stretched view of the sphere removing all the black borders.
3) 360° view: See 2 180° views side by side

4) Fish-Eye + 3PTZ: Normal view of the warped fish eye sphere view + 3 Digital PTZ that can be dragged and moved using the mouse.

Note: Changing the Fish-Eye display mode doesn't affect the recording of the camera.

5.3 Live View Digital Zoom:

Digital Zoom can be achieved by one of two methods: The first and more intuitive one is the mouse scroll wheel. Just left click on the channel you wish to control, point the mouse cursor on the object you want to zoom on and scroll the mouse wheel up or down to zoom in or out.
The second method is by the digital zoom interface. The digital zoom interface is shown below. Press and drag the red box to select the zoom area. Click / to zoom the image. Click the camera selection box to select other cameras for amplification. Click "Back" to return to the live preview interface.

5.4 Live-View Modes:

5.4.1 Display Modes Tabs

The system offers several display modes. In the latest version, the only available tab is "Camera" by default. If you wish to edit the view option tabs, click on the "" button at the top right corner of the screen and choose which tabs you wish to activate/disactivate.

5.4.2 Customized Display Mode

Set different screen split modes and camera layouts as required and save the display to create a preset. Refer to the picture below. Double click on the display preset from the list to activate it. Customized display mode is also used to control the secondary monitor display (On supported devices)

➢ **Add Customized Display:**

Method One:

① Click "Customized Display Modes" in the main interface
② Set the screen split mode.
③ Add and organize the cameras as desired.
④ Click the "Save" button under the display presets list
⑤ Enter the display preset name in the popup window and click "OK" to save it.

Method Two:

① Click Start→Settings→System→Basic→Layout Settings
② Click to add a new layout.
③ Choose the screen split mode from the bottom.
④ Double click the camera or camera group in the list to add them to the selected window.
⑤ Click to save the defined output as a preset (refer to 5.2.4 Scheme View In Sequence for detailed configurations). The saved preset will be displayed in the display preset list in the live-view interface.

Using method two will affect the sequence settings – please refer to 5.3.2 Sequence for additional information.

➢ **Edit Customized Displays**

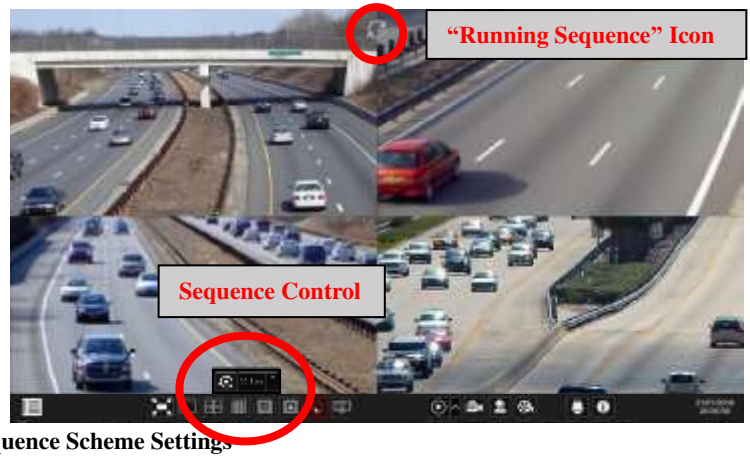
Click "Customized Display" tab in the live-view interface. Select the required display from the list. Click "Rename" to edit the display mode name; click "Delete" to delete the display mode.

➢ **Using Customized Displays with 2 Screens (Requires model supporting independent displays):**

Click "Customized Display" tab in the live-view interface. Right click on the required display from the list and choose "Send to Main Screen" or "Send to Secondary Screen".

5.4.3 Sequence

The sequence view will automatically switch between cameras in specified times.
If a customized scheme has not been created, it will keep the split layout and go through all of the available cameras. If the scheme has been created – the sequence will run through the created scheme. Controlling the sequence will be done from the sequence control icon as shown below.



➢ **Sequence Scheme Settings**

Click Start→Settings→System→Basic→Layout Settings to go to the interface as shown below. Area ① displays all the schemes; area shows the camera layout; area ③ displays all the cameras and groups; area ④ is the tool bar (: clear button; : favorite button, click it to save the layout as preset).

➢

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

➢ **Configure Scheme**

a) Select a scheme in area ① and the screen split mode button from area ④.
b) Drag cameras from the camera list to the desired window in area ②. The camera or group will be added into the selected window.
c) You can click the right-click on a camera and click "Clear" to remove a single camera or click to remove all the cameras.
d) Click "Apply" to save the settings.

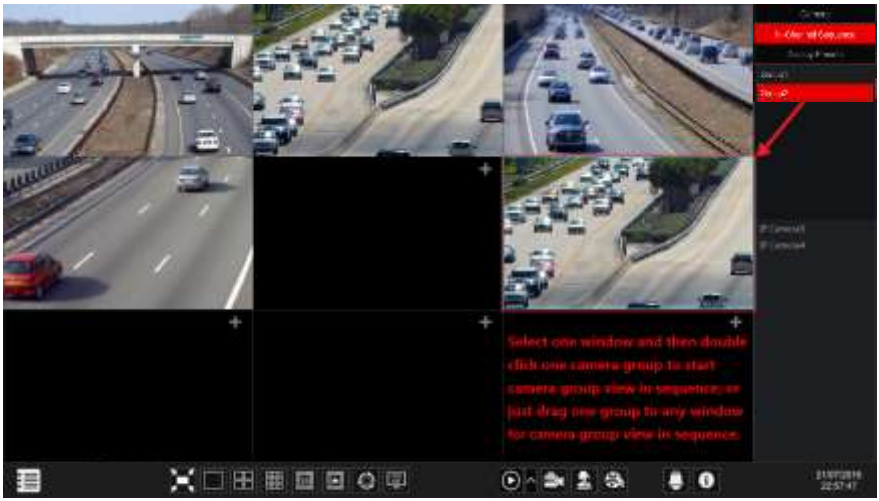
➢ **Start Sequence View**

Go to the live-view interface and click to pop up a little window. Set the dwell time for each window and click to start the sequence. Double click the sequence view interface to pause the view; double click again to restore the view. Click to stop the view.

5.4.4 In Channel Sequence.

You can start "In-Channel Sequence" only if a camera group was created. (See 4.2.1 Add "In-Channel Sequence" for details).

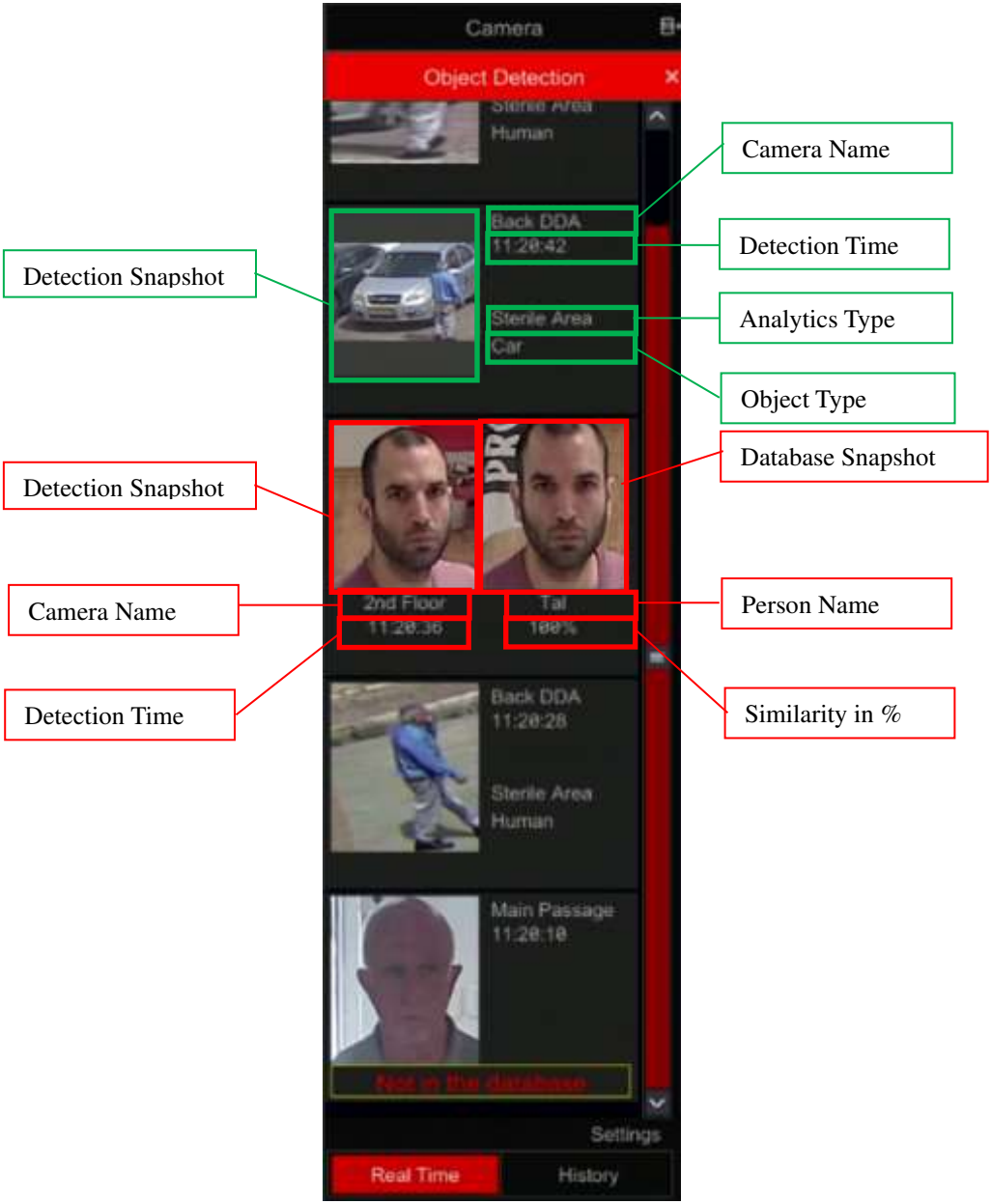
① Go to the live-view interface and select a camera window.



② Double click one the "In-channel Sequence" group on the right side of the interface. The cameras in the group will start sequencing one by one in the selected camera window.
③ You can also drag the group directly to any preview window.
④ Right click on the view window and click "Close Dwell" button to stop the sequence.

5.4.5 Object detection.

The Object detection tab will open the object detection **and** face recognition display for all face detection cameras configure d on the system. The pane and its controls are as follows (DDA Object detection marked in Green. Face Detection and Recognition marked in Red):



Controls and settings:

The object detection interface has 2 important settings that can be configured by clicking on "Settings" on the bottom right of the panel:

1) Object detection Display: Here you can choose which detections will be displayed (Face, Human, Vehicle). Moreover, for Face detection, you can choose whether to display Face Detection + Recognition (Meaning that unrecognized faces will be displayed as well), or only face recognition.

2) Video Overlay Settings: a cosmetic addition to see the object/face detection on the live image in real-time. Object Box shows the detection object with a rectangle in the chosen color around it. Detection area and objects show the detection ROI in white. It will color red once alarm is triggered by it. This setting has no effect on the detection capabilities and it will work with this option enables or disabled.

Face detection/recognition interface controls:

Button	Menu List Meaning
	Add to Database: Add a person to the database
	Search: Search for the person in the past day
	Instant Playback: Playback the detection moment
	General Info: Get the detection info

Object detection interface controls:

Button	Menu List Meaning
	Search: Search for similar objects in the past day
	Instant Playback: Playback the detection moment
	General Info: Get the detection info

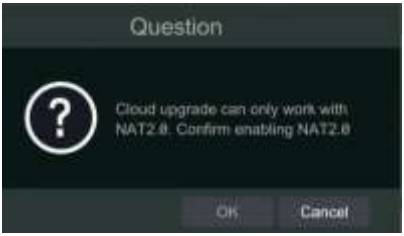
LPR interface controls:

Button	Menu List Meaning
	Add to Database: Add a license plate to the database
	Search: Search for the person in the past day
	Instant Playback: Playback the detection moment
	General Info: Get the detection info

5.5 Cloud Update:

Starting from v1.4.4, cloud update is available for the system. Click on the cloud icon ( ) to check the cloud update status. If the icon is marked with a red "No entry" sign ( ) it means that there is an error. This can be caused by 3 reasons:

1) The cloud update server cannot be reached (Network issue). Please check your network connection and try again.
2) The cloud update is disabled. Please enable it by clicking on the cloud icon and ticking "Cloud Upgrade".
3) NAT2.0 interface is disabled. When enabling the cloud update, the following Prompt will appear. Please confirm it by pressing on "OK"



5.6 Emergency Live-View:

In some cases, you will have to go back to the live-view interface as soon as possible. Doesn't matter where you are in the system or what you are currently doing. The "Emergency Live-View" was designed just for that.

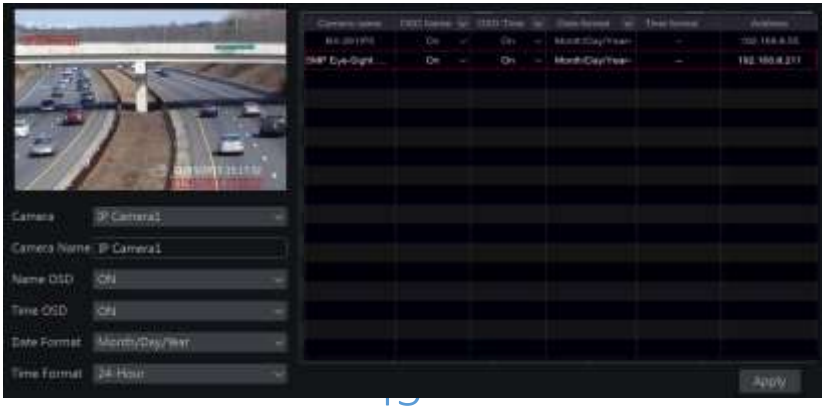
From any place in the system, click on the middle mouse button to activate the "Emergency Live-View". This will take you back to the last live view display you were viewing.

Please note: Using the "Emergency Live-View" during configuration will exit the configuration window and discard any unsaved changed you have made.

5.7 Image Configuration

5.7.1 OSD Settings

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



5.7.2 Image Settings (Setting Interface)

Click Start→Settings→Camera→Image→Image Settings.

Select the camera and set the image brightness, contrast, saturation and hue. For advanced settings you click on the arrow under the "Advanced" tab. Only cameras connected by "Provision-ISR" protocol will support advanced features.

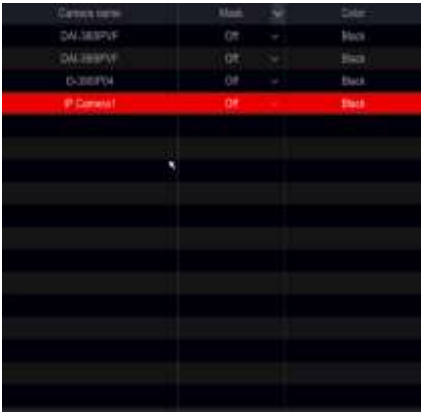
You can click "Default" button to restore the image settings to the default factory settings.

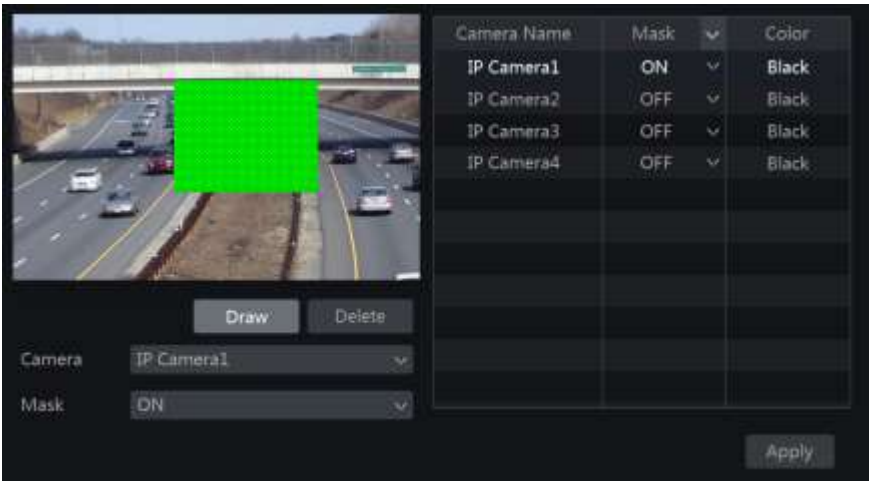
Note: Different IP Cameras will support different Image configuration features.

5.7.3 Mask Settings

Some areas of the image can be masked for privacy. Up to four mask areas can be set for each camera. (Only for Provision-ISR Cameras non-ONVIF cameras).

Click Start→Settings→Camera→Image→Mask Settings to open the interface as shown below. Select the camera and enable the mask. Click "Draw" button and drag the mouse on the image area to set the mask area; click "Delete" button to delete the mask areas; click "Apply" to save the settings.

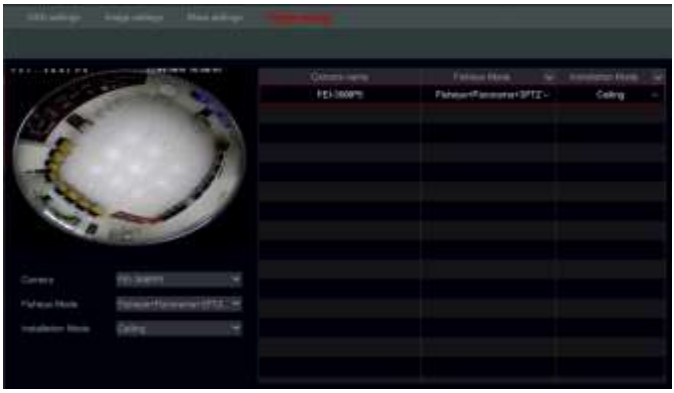




5.7.4 Fish-Eye

Fish-Eye Settings will allow you to set the installation way of the fish-eye camera in order to get the proper dewarping.

1) Click Start→ Settings→ Camera→Image→Fish Eye.



Here you can set the installation mode and your preferred view mode. Make sure that the installation mode is set properly for the image to be displayed correctly.

5.7.5 Image Adjustment (Live-View Interface)

Go to live-view interface. Choose the channel by clicking on the desired and click on button from the tool bar under the camera window to switch to the image adjustment interface.

➢ **Image Adjustment**

Drag the slider to set the image brightness, contrast, saturation and hue values. Check Sharpness, WDR and DNR to enable it and drag the slider to set their values. Click "Default" button to set these parameters to their default values.

The introductions of these parameters are as follows:

Parameter	Meaning
Brightness	Image brightness level
Contrast	The color difference between the brightest and darkest parts.
Saturation	The intensity of colors, expressed as the degree to which it differs from white.
Hue	Color levels of the image.
Sharpness	Relates to the sharpness level of the image and the image edges.
WDR	This refers to **Digital WDR.** For True-WDR (if supported the camera, please refer to "Backlight"
DNR	DNR (Digital Noise Reduction): decreases the noise levels and making the image smoother. Increasing the value will increase the noise reduction but it will reduce the image resolution and details.
Defog	Adding contrast and reducing the brightness of the camera to assist in foggy scenes
Backlight	Backlight, HLC and WDR (Wide Dynamic Range) function helps the camera provide clear images even under extreme light conditions. When there are both bright and dark areas in the field of view, WDR balances the brightness level of the whole image and provide clearer image. If enabled, there will be new control for the enhancement level
White Balance	Automatically adjust the color temperature according to the environment. Can also be set manually.
Anti-Flicker	Reducing flickering on the video
Exposure Mode	Settings the exposure of the camera. If "Manual" will be set, a new line will

Parameter	Meaning
	appear where the exposure value can be set.
Gain Limit	Set the Gain Limit of the camera
Corridor Mode	Set the corridor mode of the camera
Image Mirror	Mirror the video image right and left.
Image Flip	Flip the video image upside down.
High FPS Mode	Switch the camera to work in 50/60FPS instead of 25/30FPS (Comes on the account of True WDR + Maximum resolution of 2MP)
Smart IR	Enable Smart IR
Day/Night Mode	Set the camera to Day / Night / Auto mode
Sensitivity	Sensitivity for switching day/night modes
Delay Time	How many seconds to delay before switching to day/night
IR Mode	Set the IR Mode (Auto/On/Off)

Notes:

1) ***Different IP Cameras will support different Image configuration features.***
2) ***Some cameras have more than one settings page. You need to switch pages in the bottom of the image adjustment area.***

➢ **Lens Control:**

Select the camera and 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
− ←Zoom→ +	Click + / − to zoom in/out.
Focus Mode	If manual mode is selected, focus button, "One Key Focus" and "Day/night mode switch autofocus" will be available; If auto mode is selected, the time interval setup will be available.
− ←Focus→ +	Click + / − to increase/decrease the focal length.

Button/Parameter	Meaning
One key Focus	Instant Focus
Re-focus when camera switches between day/night	If checked, the lens will focus automatically when the camera switches between day/night modes.

Note: This function is only available for the models with motorized VF (MVF) lens.

6 PTZ

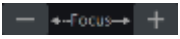
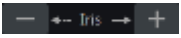
6.1 PTZ Control Interface:

The device supports full control over PT or PTZ cameras.

Click on the desired camera and on the icon from the channel tool bar. A Basic PTZ control will pop up. Using this interface, you can move the camera.

If you need the full PTZ interface, Wither click on the icon positioned on the top left of the PTZ mini menu, or right click on the camera and choose “PTZ Control”. The live view will switch to the PTZ control interface as shown below. You can select another IP dome or PTZ from the dropdown menu on the top right of the PTZ interface.

Introductions of the interface buttons:

Button	Meaning
	/ / / / / / / / to rotate the dome. Click to stop rotating the dome.
	/ to zoom in / out.
	/ to increase / decrease the focal length.
	/ to increase / decrease the aperture.
	Drag the slider to adjust the movement speed.
	/ to start / stop manual recording.
	/ to hide / show the analog joystick.
	Return to the live view interface.

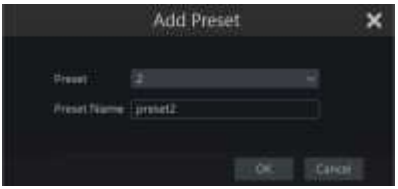
➢ **Analog Joystick Control**

1) The analog joystick on the left side of the interface provides quick PTZ control. The dome or PTZ will move when you drag the analog joystick. The further you drag the analog joystick from the middle of the image, the faster the dome or PTZ will move. The dome or PTZ will stop rotating when you release the analog joystick or move it to the middle.
2) Click and hold the left mouse button to zoom in
3) Click and hold the right mouse button to zoom out

6.2 Preset/Cruise (PTZ Live interface):

➢ **Preset Settings (PTZ Live interface)**

Presets can be used to save important locations and recalling it quickly when needed.
As default, the preset list is empty so you will have to add and configure the presets that are important to you.



1) Click “Preset” to go to preset operation tab and click “Add” button to pop up a setting window as shown below. Select the desired preset number and input the preset name. Click “OK” to save the settings.
2) Adjust the camera direction and click “Save Position” to save the current preset position on the selected preset. You can also go to preset setting interface for preset setting, see 6.2 Preset Setting for details.
3) Click in the preset list to call the preset; click “Delete” button to delete the selected preset.
4) You can add up to 255 presets for each supported camera.

➢ **Cruise Settings**

Cruises are built from a sequence of presets and are used for creating a specified patrol between presets for an endless duration (Cruise will run until you will stop it, or move the camera). Therefore, you must save the desired presets before creating a cruise.

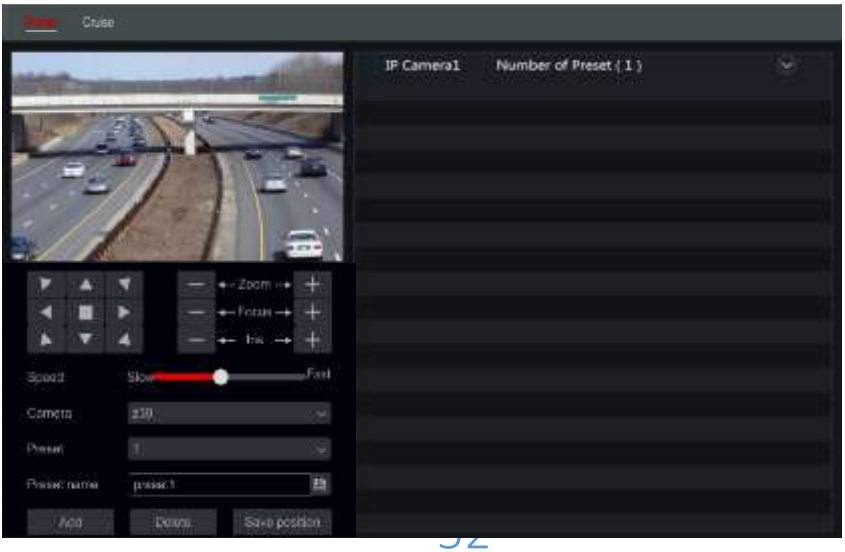
1) Click "Cruise" to go to cruise operation tab and click "Add" button to open the settings window as shown on the right.
2) Input the cruise name and click "Add preset" to pop up the "Add Preset" window as shown above on the right.
3) Select the preset name, dwell time and preset speed and click "OK".
4) In the "Add Cruise" window, you can click to redefine the checkpoint. Click to delete the preset.
5) Click "Add" button to save the cruise.
6) You can also go to cruise setting interface for cruise setting, see 6.3 Cruise Setting for details.
7) You can add 8 cruises for each dome at most.

In order to activate the cruise, click to start the cruise and click to stop the cruise. Any movement or other command sent to the camera from the PTZ interface will stop the cruise as well.

Click "Delete" button to delete the selected cruise.

6.3 Preset/Cruise (PTZ Configuration Menu):

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



➢ **Add preset**

Select the desired camera and click “Add” button to add preset; or click in the camera list on the right side of the interface to display the preset information of the camera and click to add preset. The operations of the “Add Preset” window are similar to that of the PTZ control interface; please see 6.1 PTZ Control Interface Introduction for details.

➢ **Edit preset**

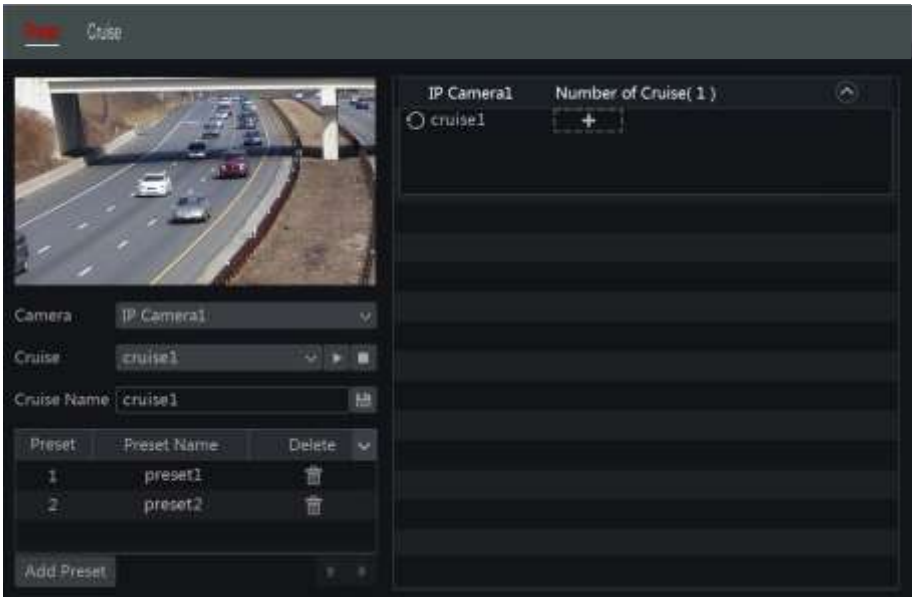
Select camera and preset. You can input the new name of the preset and click to save the new preset name. Adjust the rotating speed, position, zoom, focus and iris of the preset and click “Save Position” to save the preset.

➢ **Delete Preset**

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

➢ **Cruise Setting**

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



➢ **Add Cruise**

Click in the camera list on the right side of the interface to display the cruise information of the camera and click to add cruise. The operations of the “Add Cruise” window are similar to that of the PTZ control interface; please see 6.1 PTZ Control Interface Introduction for details.

➢ **Edit Cruise**

Select the camera and cruise in the "Cruise" interface. Input the new cruise name and click to save the cruise name. Click "Add Preset" to add preset to the cruise. Click to delete the preset from the cruise. Click a preset in the preset list and click to move the preset down the list and click to move the preset up the list. Click to start the cruise and click to stop it.

➢ **Delete Cruise**

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

6.4 Smart Tracking:

Smart Tracking allows the camera to track detected DDA object. There are several related configurations:

➢ **Tracking Priority:**

Once tracking is enabled, there are 2 options:

A) Manual Priority: Meaning that the operator can take control over the camera in any given moment and bypass the auto tracking algorithm, even during active tracking

B) PTZ Priority: Meaning that as long that auto tracking is enabled, the operator cannot control it. The auto tracking algorithm is the sole controller.

➢ **Still Time:**

Once enabled, the auto tracking will cease active tracking and return back to the hope position after the set duration. If disabled, the auto tracking will remain on the position of the static object until another object will enter the scene.

Only Z4, Z5, Z6 support Smart Tracking.

7 Record & Disk Management

7.1 Record Configuration:

7.1.1 Mode Configuration:

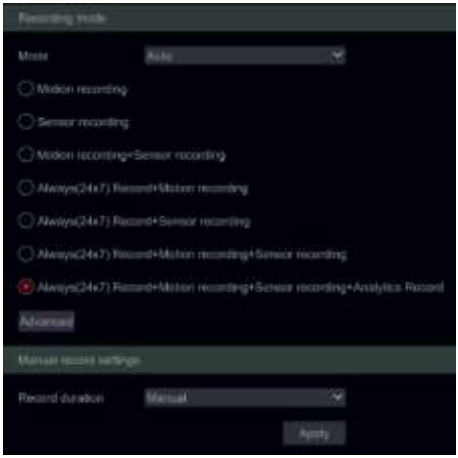
Please format the HDDs to enable recording *(refer to 7.5 Disk Management for details).*

The Ossia recording interface was redesigned to be clearer and easier to configure. It is based on statistics showing that most users configure the recording to work all year long in 24x7

schedule – the "Auto" mode is the best choice for these users. "Manual" mode is for users who wish to customize the recording/schedule configuration.

Click Start→Settings→Record→Mode Settings to go to the mode settings interface.

➢ **Auto Mode: The standard setting will include the following presets:**



Motion Record: Record will start upon *Motion Alarm* under 24x7 schedule for all channels.
Sensor Record: Record will start upon *Sensor Alarm* under 24x7 schedule for all sensors.
Motion Record + Sensor Record: Record will start upon *Motion or Sensor Alarms* under 24x7 schedule for all channels and sensors.
Always (24 x7) Record + Motion Record: All the channels will be recorded continuously. *Motion alarms* will be marked in the event list and trigger "Event Record".
Always (24 x7) Record + Sensor Record: All the channels will be recorded continuously. *Sensor alarms* will be marked in the event list and trigger "Event Record".
Always (24 x7) Record + Motion Record + Sensor Record: All the channels will be recorded continuously. *Motion and sensor alarms* will be marked in the event list and trigger "Event Record".
Always (24 x7) Record + Motion Record + Sensor Record + Analytics Record: All the channels will be recorded continuously. *Motion, sensor and analytics alarms* will be marked in the event list and trigger "Event Record".

If you wish to create a personalized combination, click on the "advanced button to open the advanced menu: The advanced menu allows you to create any combination you require (As long as it is not currently available in the standard menu). Tick the recording triggers you wish for the combination to have and click on "add" to continue. The new combination will be added as a new line to the standard menu. Only one customized combination can be used. If you wish to edit it, click on the advanced button once again and change the selected triggers.

Selecting one of the auto modes will pop up the stream settings window as shown below. Set the video encode type, resolution, FPS, bit-rate type, bitrate and audio for each of the camera and click "OK" to save the settings. It is recommended to follow the bit-rate recommended by the system in the "Bit-Rate Limit Recommended Range" Tab.

Important: In case you chose one of the continuous modes, make sure to configure both "Normal" and "Event" settings.

Video Encode: the available options are H.265 and H.264. H.265 must be supported by the device and IP camera for this encoding mode will be available.
GOP: Stands for "Group of Pictures" and required for efficient decoding. Keep as configured unless required otherwise.
Resolution: the higher the resolution, the bigger the image.
FPS: Higher frame rate delivers more fluency. However, more storage space will be required.
Bitrate Type: Choose between CBR (Constant Bit-Rate) and VBR (Variable Bit-Rate).
Bitrate: bitrate stands for the compression aggressiveness. The lower the bitrate, the higher the compression. High compression means lower bandwidth and storage space usage, but also decreasing the video quality.
Recommended Bitrate Range: The system will show a range of bitrates that balances between quality and bandwidth/storage consumption according to the configuration you set. It is recommended to follow this recommendation.
Audio: Select weather to record audio or not for the chosen channel.

- **Manual Mode**

If *manual mode* is selected, you will need to set the encode parameters and schedules for each of the cameras. See 7.2 Encode Parameters Setting and 7.3 Schedule Setting for details. Failing to do so will result in recording inconsistency or complete lack of recording.

Note: Only NVRs and Hybrid DVRs will have the "Analytics" Option.

7.1.2 Advanced Configuration

Click Start→Settings→Record→Advanced to go to the following interface. Enable or disable cycle and sub-stream recording, set the pre-alarm record time, post-alarm record time and expiration time of each camera and click "Apply" to save the settings.

Cycle recording: The recording will work in FIFO method – First in first out – meaning that the oldest recording will be overwritten by new recording once the HDD is full.

Dual Stream Recording: Enable/Disable the sub-stream recording of the device.

Important note: Disabling sub-stream recording will increase the duration of main stream recording but will dramatically reduce system performance and disable many features that rely on the sub-stream recording in order to work.

Pre-alarm Record Time: set the record time duration before the alarm event started.

Post-alarm Record Time: set the record time duration after the alarm event ended.

Expiration Time: set the expiration time for recorded video. Recordings will not be kept longer than the specified duration even if the HDD is not full. (v1.4 and higher allows independent setting for each channel)

7.2 Encode Parameters Setting

Click Start→Settings→Record→Encode Parameters to access the interface shown below. Set the video encode, resolution, FPS, bitrate type, bitrate and audio of main stream for each of the cameras.

Important: this interface offers both “Event Recording Stream” and “Normal Recording Stream” configurations. Make sure to configure both. You can set the record stream for each camera set all cameras together by clicking on . Click “Apply” to save the settings.

Click Start→Settings→Record→Stream Settings to go to “Sub-stream” interface. Set the sub-stream video encode type, resolution, FPS, Bitrate type and bitrate for each camera or for all cameras together by clicking on . Click “Apply” to save the settings.

7.3 Schedule Setting

7.3.1 Add Schedule

Click Start→Settings→Record→Recording Schedule→Edit Schedules (Available only in manual recording mode). The pre-set schedules are “24 x 7” (All week), “24 x 5” (Weekdays - Monday to Friday) and “24 x 2” (Weekends – Saturday & Sunday). “24 x 7” schedule cannot be deleted or modified while “24 x 5” and “24 x 2” can be edited or deleted. Click the schedule name to display the detailed schedule information on the left side of the interface. The lines on the left stand for the seven days of the week. Each line stands for the daily 24 hours. Red marks the active selection and grey marks inactive selection.

Click to add a new schedule or to edit an existing one. Refer to the picture below.

Input the schedule name, set the schedule times and click “Add” to save the schedule. You can set day schedule or week schedule. -Active duration button -Inactive duration button.

- **Set Single Day Schedule**

Click and drag the mouse cursor on the time scale of a specific day to mark the active duration. Click and drag the cursor on the time scale of a specific day to make a selected area inactive.

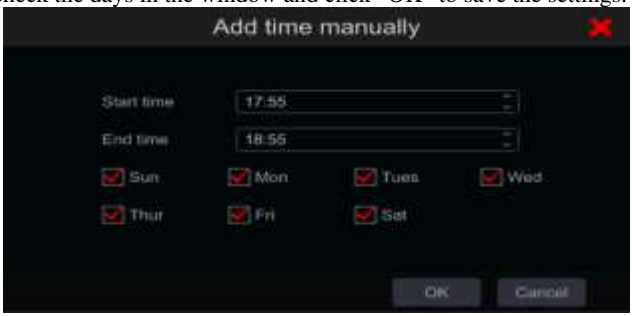
You can manually set the record start time and end time: select “Manual” from beneath the day bar and set the desired time. Click “Ok” to confirm.

Click "All" to set all day recording; click "Reverse" to swap the marked and unmarked areas; Click "Clear All" to clear all the selected area in a day.

After completing a setting for any day, you can click "Copy To" from beneath the day bar to copy the selected schedule to other days. Refer to the picture below. After clicking on "Copy To" from the source day, check the destination days in the window and click "OK" to save.

➢ **Set Multi-Day Schedule**

Use "Manual" beside to set the weekly schedule. Refer to the picture below. Set the start and end time, check the days in the window and click "OK" to save the settings.



Click "All" to set all week recording; click "Reverse" to swap the selected and unselected time in a week; click "Clear All" to clear all the selected area in a week.

7.3.2 Record Schedule Configuration

Click Start→Settings→Record→Recording Schedule→Schedule Configuration to go to the interface shown below. Define the schedule for sensor, motion, analytics, POS and normal recording. Click "None" in the drop-down menu to clear the selected schedule.

Click "Apply" to save the settings.

If any changes need to be made, go to the "Edit Schedules" interface and click to edit the schedule. The settings of "Edit Schedule" are similar to that of the "Add Schedule".

7.4 Record Mode

7.4.1 Manual Recording

Method One –Manual record for all channels: Click on the tool bar at the bottom of the live-view interface to enable manual recording for all cameras.

Method Two –Manual record for single channel: In the live-view interface – either right click on the desired camera and choose "Manual Record On" or left click on the desired camera window and click on the channel tool bar.

Note: Click Start→Settings→Record→Mode Settings and set the manual record duration in the referred menu. Click "Apply" to save the settings. Default settings is "Manual"

7.4.2 Scheduled Recording:

Scheduled Recording: the system will record automatically according to the schedule weather there is an additional alarm or not.

Set the record schedule of each camera - See 7.3 Schedule Setting for details.

7.4.3 Motion Based Recording:

The system will start recording based on motion alarms. You can use the default settings or create customized setting for each camera as follows:

① Set the motion alarm schedule for each camera. See 7.3 Schedule Setting for details.

② Enable the motion and set the motion area of each camera. See 9.2.1 Motion Configuration for details.

The camera will start motion-based recording as soon as the above settings are applied.

Enable Motion Icon: In some cases, the motion detection on the camera is disabled. In such a case, even with "Motion Recording" on, there will be no recording. Click on the "Motion On" icon ( ) in order for the system tto automatically go through all the cameras, enable motion detection, set the detection area to full scene and the detection schedule to 24x7.

7.4.4 Sensor Based Recording:

The system will start recording based on sensor alarms. Configure the recording parameters as follows:

① Set the sensor alarm schedule for each camera/alarm input. See 7.3 Schedule Setting for details.

② Set the NO/NC type of the sensor, enable the sensor alarm and check and configure the "Record". See 9.1 Sensor Alarm for details.

7.4.5 Analytics Based Recording:

The system will start recording based on analytics alarms. Configure the recording parameters as follows:

① Set the analytics alarm schedule for each camera. See 7.3 Schedule Setting for details.

② Set each one of the available analytics alarms and check and configure the “Record”. See 9.1 Sensor Alarm for details.

7.4.6 SOP Based Recording:

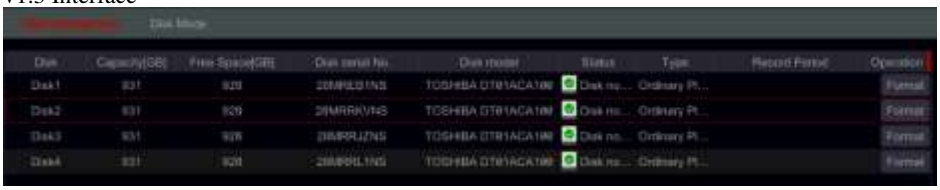
The system will start recording based on SOP events. SOP Recording enables 24x7 schedule recording automatically.

7.5 Disk Management:

Click Start→Settings→Disk→Disk Management. On this interface you can view the device’s disk numbers, status and recording dates stored on each drive. Click “Format” button to format the desired HDD or click on to format all drives together. This interface vary between 1.4 and 1.3 devices.

v1.4 Interface

v1.3 Interface

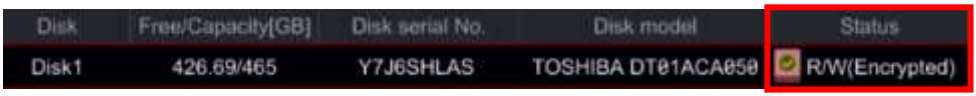


Note: 1. New HDD/s should be formatted before it can be used by the system.
2. If the HDD has been used in another device of the same model, please import the configuration file of the old device to the new device or format the HDD; if the models of the two devices are different, please format the HDD.

v1.4 Allows encryption of the HDDs. Encrypted HDD will require the encryption password if trying to access the recorded data using another recording device or by the RPAS PC player.

Click on “Encrypt Data” (Supported by v1.4 and up). Choose the HDDs you wish to encrypt and set an encryption password. Click on “Encrypt Data” to finish. You will have to enter the admin credentials

again to confirm your identity. After the process is done. The HDD will appear as “Encrypted”.

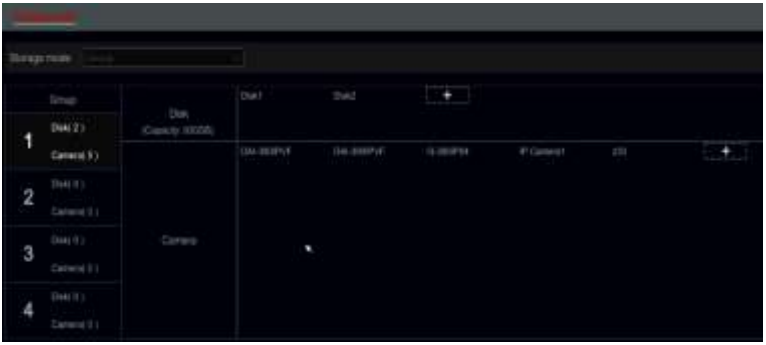


If you wish to decrypt the HDD, repeat the process. format the HDD.

Note: 1. Encrypting the HDD maintains the HDD data
2. Decrypting the HDD formats the HDD. All data will be erased.
3. The encryption password cannot be restored in any way or matter. Forgetting it will make the data unusable in case it will be required by any external source. In such a case, the HDD will have to be formatted to become useable again.

7.5.1 Storage Mode Configuration

Click Start→Settings→Disk→Storage Mode.



There are four available disk groups. By using disk group, you can allocate a specific camera to a specific disk (the recorded data from the grouped cameras will be stored in the disks allocated for that group).

Newly added disks and cameras will be joined into group one as default. The disks and cameras in the different groups can be deleted except of group one (select a disk group and click ⊗ on the top right corner of the added disk or camera to delete it from the group). The deleted disks and cameras will be moved into group one automatically.

Each group can receive disks and cameras from other groups. Each disk/camera can be allocated to one group only.

Edit Disk/Camera Groups:

Select a disk group and click + in the disk or camera row to pop up a window. Check the disks or cameras in the window and click “Add”.

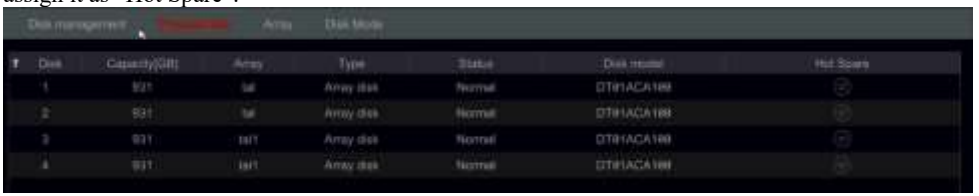
Important: Changing group allocation for a disk/camera will result in losing data of the changed disk/camera.

7.5.2 Disk Mode (Models supporting RAID only):

Disk mode allows you to enable RAID (If supported by the device). Once the RAID is enabled, the device will reboot and new options will be available.

7.5.3 Physical Disk (Models supporting RAID only):

This menu is available only if RAID is enabled. Here you will see all the disks and their current status. Before you can start recording, you will need to assign the disks to RAID groups or assign it as "Hot Spare".



- **Creating an array:**

In order to assign disks, click on "Create Array". The following window will appear.
Set a name to the new array and choose the array type. The available options are RAID0, RAID1, RAID5, RAID6, RAID10. (For more information about RAID types, please refer to appendix 2 at the end of the manual).
Choose the disks that you want the array to include (Note that different RAID types require different number of disks.
Click "Add" to finalize the process.

Notes:

1) All the data stored on the HDD will be deleted.
2) Up to 2 RAIDs can be configured.

- **Setting a "Hot Spare"**

In terms of RAID, "Hot Spare" is a backup disk that is ready for use in case that an active array disk has failed. In such case, the hot spare will replace the failed array disk automatically and rebuilt its data (a process that takes time). The "Hot spare" of the system is global meaning that it will be used for all RAIDs configured on the system.
In order to assign a disk to perform as "Hot Spare", click on the icon next to it and confirm the process. Repeat the process to change it back to normal state.

7.5.4 Array (Models supporting RAID only):

This menu is available only if RAID is enabled. Here you will see all the created RAID groups and their current status (Name, Capacity, Assigned Disks, Hot Spares, Status). Also, you will be able to delete the arrays and rebuilt it if required.

- **Rebuilding an array:**

In case one of the disks of the array failed – the array state will change to "downgraded" and the rebuild button will become active as follows.

Once the faulty disk was replaced with a new one, click on the "rebuild" to restore the array state to normal.

- **Deleting an array:**

If you wish to delete an array, click on the icon and confirm the process.

7.5.5 View Disk and S.M.A.R.T. Information:

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

8 Search, Playback & Backup

8.1 Instant Playback

Click on the channel tool bar at the bottom of the live-view camera window to play back the record (click on the general tool bar at the bottom of the live-view interface to set the default playback time). 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 set the instant playback time to play back the record.

8.2 Playback Interface Introduction

8.2.1 Standard Playback

Click on the general tool bar at the bottom of the live-view interface or click Start→Playback. (Click on the general tool bar at the bottom of the live-view interface to set the default playback time).

The interface will switch from live-view to playback and the cameras from the live-view will be played back automatically. You can add the playback cameras manually by clicking on in the playback window to open the “Add Camera” window. Mark the cameras you wish to add and click “Add”. The system supports a maximum of 16 synchronous playback cameras.

The buttons of the general tool bar (area ①) 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 split modes.
	"OSD ON/OFF" button. Click it to enable/disable the OSD
	Change the displaying cameras
	Stop button.
	Rewind button. Click it to play video backward.
	Play button. Click it to play video forward.
	Pause button.
	Decelerate button. Click it to decrease the playing speed.
	Acceleration button. Click it to increase the playing speed.
	Return to normal playback speed (x1)
	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.
	Enable/Disable Watermark appearance
	Enable/Disable POS data appearance
	Event list/tag button. Click it to view the event records 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 click the backup button to back up the record. (After marking the area for backup, you can also click on the right mouse button)
	View the backup status.
	Back button. Click it to return.

Introduction of area ②:

Button	Meaning
	Go to the Analytics search interface (Supporting Models only)
	Go to record search & backup interface; see 8.3 Record Search, Playback & Backup for details.
	Click it to go to live-view interface; see Chapter 5 Live Preview 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.
	Enable Audio	Click it to enable audio and listen to the camera's audio channel.
	Snap	Click it to take a snapshot. Not supported by "X" models when playback is paused.
	Zoom In	Click it to go to the digital zoom. The playback digital zoom interface is similar to live-view digital zoom interface. Click to pause the playback. When the record is paused while in forward playing mode, you can click to view the previous frame and click to view the next frame.
	Fish Eye	Click it to open controls for Fish-Eye cameras as described in the "Live-View" Chapter.
	Add Tag	Save a tag of the exact date and time you wish to save. You can use the tag later to go back quickly to the tagged point. When adding a new tag, the system will name it with the saved time automatically. You can change the name or edit it later.
	Switch Camera	Click it to switch the playback camera to a different camera that will playback the exact date and time. Click it and choose the new camera in the window. Click "OK" to change the camera.
	Close Camera	Click it to close the playback camera.

Introduction of area ④:

Button	Meaning
	Set/Change the playback date
	Set/Change the playback time
* *	Manual Record markings. Uncheck it to remove manual record display
* *	Sensor Alarm Record markings. Uncheck it to remove manual record display
* *	Analytics Alarm Record markings. Uncheck it to remove manual record display
* *	Motion Alarm Record markings. Uncheck it to remove manual record display
* *	Schedule Record markings. Uncheck it to remove manual record display
* *	POS Record markings. Uncheck it to remove manual record display

With the introduction of advanced analytics, you can now switch from "Standard" playback markers to "Analytics" Playback markers. Click on the menu marker ( ) to open the interface on the right. Choose between "Standard" and "analytics" and click OK to confirm. The new icons and color markers will be as follows:

Button	Meaning
* *	All pixel-based analytics
* *	Face Detection/Recognition
* *	LPR (License Plate Recognition)
* *	Line Crossing Analytics
* *	Sterile Area Analytics
* *	Other Analytic Types

** Playback must be stopped completely before these icons can be used. After stopping the playback use + icon to add the desired cameras for search/playback.

Introduction of the record time scale (area ⑤):

Button	Meaning
24	The time-scale default view is 24 hours. Click on this icon to return to 24 hours view
/	Zoom in/out within the playback time scale
▲	Move up the time scale (The mouse wheel can also be used)
▼	Move down the time scale (The mouse wheel can also be used)

The record time scale shows different record types with different colors. The green color stands for manual record, red color stands for sensor alarm record, yellow color stands for motion alarm record and blue color stands for schedule record. Click the time scale to set the playback exact location.

Drag the mouse cursor on the time scale to select the backup area and right click on the marked area or click to pop up a backup information window. Select the destination device, backup path and backup format and click “Backup” to start the backup process.

8.2.2 Smart Playback

Click on the smart playback icon to switch the playback interface from “Standard” to “Smart”. (Area ⑥):

Smart Playback allows you to perform simple analyzing of recorded video while playing it back, saving a lot of time and efforts. It only works on a single channel and cannot work on multiple channels simultaneously.

The Smart playback will display all the filtered results and play it as you wish.

We will only touch the differences between the “Standard” and “Smart”

8.2.2.1 Motion Based Smart Playback

The options in area ① covers Motions Detection Smart analytics as follows:

Button	Meaning
	Full screen motion search
	Square selection motion search
	Line Crossing (Bi-Directional)
	Polygon selection (up to 4 Corners)

8.2.2.2 Analytic Based Smart Playback

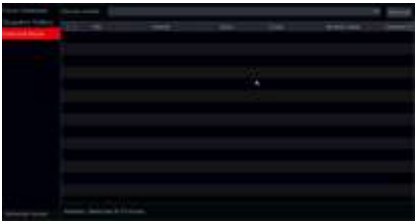
The system allows you to apply additional analytic filters such as face recognition or LPR to the smart search, click on the desired icon to open the filter interface.

Face Recognition Filter: In the following interface click on in order to activate the face filter and set the similarity value.

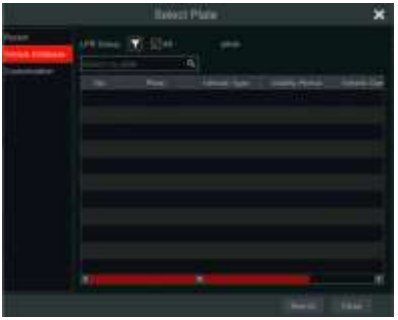
You can choose face/faces from the following options:

1) Face database – Search from faces already in the database.
   A) Here you can choose from the thumbnails or search by name. Click on "More" to narrow down groups or tick "All" to search/display within all groups.
   B) Tick the face/faces you wish to search for and click on Search by face/group as needed.
2) Snapshot Gallery – Search within snapshots taken by the system
   A. Set the time range for the face snapshot search. (Day to choose a day, Week to choose a week, Month to choose a month, customization to set a unique time range and Today to choose the date of today starting at midnight).
   B. Choose the camera/cameras that took the face snapshot. Click on "More" to choose specific cameras or tick "All" to choose all cameras.
   C. Choose whether you like to see recognized and unrecognized faces in the search.
   D. Tick the face/faces you wish to search for and click on Search by face/group as needed.

3) External Faces – Choose a picture file that contain a single face from a USB storage.
   A. Select the USB storage under the "Device Name"
   B. Select the relevant file (Must contain a single clear face).
   C. Click on Search face.



LPR Filter: In the following interface click on in order to activate the LPR filter.



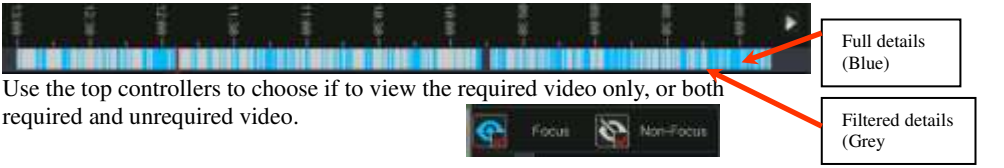
You can choose face/faces from the following options:

1) Vehicle database – Search from plates already in the database.

2) Customization – Input the license plate you wish to search for in a free text form:

Smart Search Settings: Click on the icon to open the settings menu: Here you can set if to skip unrequired video or play it.
You can set the playback speed for required video and unrequired video (if requested).

After applying smart playback filter you will see that the time bar will display the original time bar next to the filtered time bar as follows:



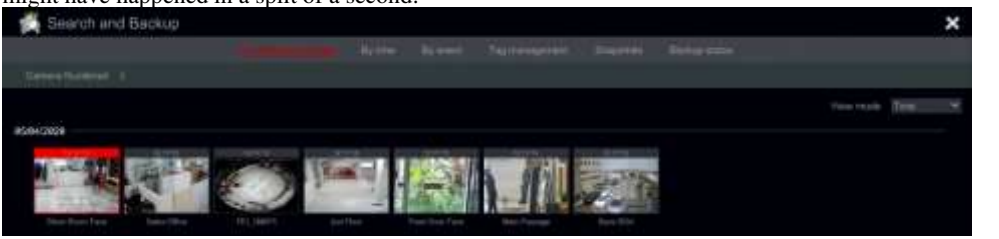
Use the top controllers to choose if to view the required video only, or both required and unrequired video.

8.3 Record Search, Playback & Backup

8.3.1 Search & Playback by Time-sliced Image

① Click Start→Search & Backup→By Time-sliced Image.

The "Time-Sliced Image" search is designed to quickly find a small change in the scene that might have happened in a split of a second.



There are two view modes: by time and by camera. In the time view mode, a maximum of 64 camera thumbnails can be showed. If the camera thumbnail number is greater than 64, the cameras will be listed by their camera name, and not as a 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 only the camera view mode will be available.

② Double click on the selected camera or select one camera and click the "Open" button. The camera will refine from "Day" view to "Hour" view. Repeat this stage to refine from "Hour" view to "Minute" View.

③ You can also click once on the thumbnail to commence playback on the left window. This will help you to confirm if you are in the right camera/time.

④ Once in "Minute" view, double clicking on any image thumbnail will open the full playback interface and commence playback for the selected camera at the specific time and date.

⑤ You can click once on the image box to play the record in the small playback box on the left side of the interface (If the thumbnail is blackened out – it means there is no record data available)

⑥ You can perform backup directly from this interface in two methods:

A. Left click and drag the mouse on the time scale to select the segment for playback and click "Backup" button to continue; select the device, backup path and backup format in the opened window and click "Backup" button to start the backup.

B. After choosing the channel, click on "Set Backup Time" and input the start and end times. Confirm by clicking on "OK" and start the backup process using the "Backup" button.

⑦ Click “Playback” button (Or double click on the thumbnail) to commence playback in the playback interface (refer to 8.2 Playback Interface Introduction for details). Click “Close” to close the interface.

Time Slice Mode Working method:

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 jump to the next/previous 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.

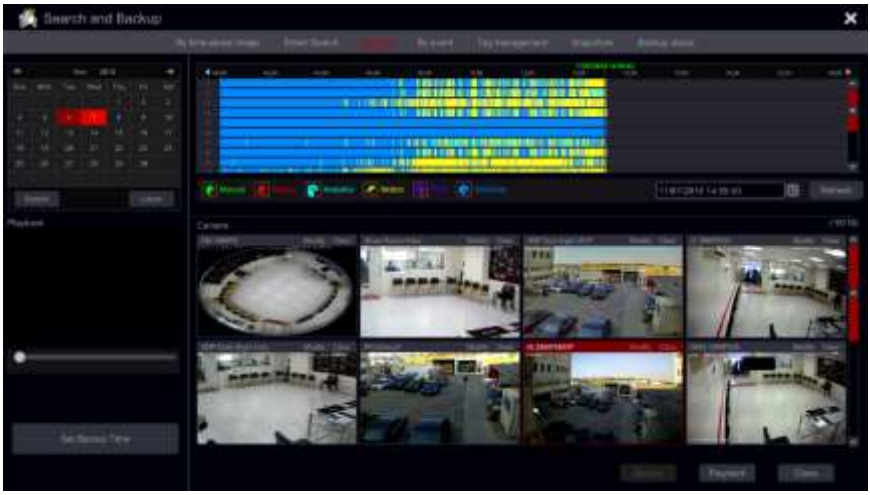
8.3.2 Search, Playback & Backup by Time:

① Click Start→Search & Backup→By Time.

② Click on the bottom of the interface to choose the cameras (A maximum of 16 cameras can be added). Click “Modify” on the top right corner of the camera window to change the camera or click “Clear” to remove the camera.

③ Single click on 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 Single click on the time bar to set the time for playback. The camera thumbnails will be updated automatically and show a snapshot from the chosen time.



⑤ You can perform backup directly from this interface. Left click and drag the mouse on the time scale to select the segment for playback and click “Backup” button to continue; select the device, backup path and backup format in the opened window and click “Backup” button to start the backup.

⑥ You can perform backup directly from this interface in two methods:

a) Left click and drag the mouse on the time scale to select the segment for playback and click “Backup” button to continue; select the device, backup path and backup format in the opened window and click “Backup” button to start the backup.

b) After choosing the channel, click on “Set Backup Time” and input the start and end times. Confirm by clicking on “OK” and start the backup process using the “Backup” button.

⑦ Click “Playback” button (Or double click on the thumbnail) to commence playback in the playback interface (refer to 8.2 Playback Interface Introduction for details). Click “Close” to close the interface.

8.3.3 Search, Backup & Playback by Event

① Click Start→Search & Backup→By Event.

② Mark the required event type in the interface (Manual, Sensor, Motion or Analytics).

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

④ Mark the desired cameras on the left side of the interface and click to search the database. The searched records will be displayed in the list.

⑤ Click in the list to playback the record in a popup window. You can also select one record data from the list and click "Backup" button instant backup.

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

8.3.4 Search & Playback by Tag

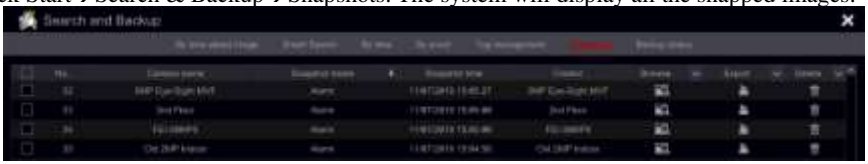
You have to save tags prior to using this interface. While playing back click on one of the camera windows to open the camera menu bar and click on .

Click Start→Search & Backup→Tag Management

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

8.3.5 Snapshots

Click Start→Search & Backup→Snapshots. The system will display all the snapped images.



Click to delete an image. Click to open the "Export" window. Select the device name and save path in the window and click "Save" button.

Click to open a view window. Click to export the image. Click to view the previous image or click to view the next image. Click to delete the image; click to play all the images automatically one by one.

8.3.6 Backup Procedures

The recorded data and the snapped pictures can be backed up locally to USB (U-disk or external USB HDD) or by e-SATA (only available in selected models) it can also be backed up through network (only to AVI format). The file system of the backup devices must be FAT32 format or it will not be useable by the system.

① Refer to any of the Search & Backup methods and use the applicable backup methods.

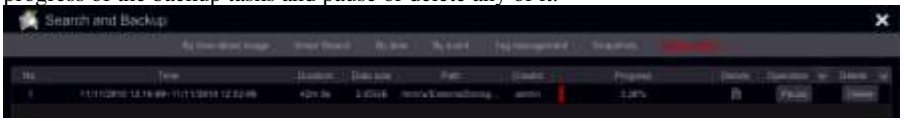
② Once selecting the backup duration, click "Backup" button to open the "Record Backup" window as shown below. Select the device name, backup format and path and click "Backup" button to start the backup.

Note: There are two backup formats available: AVI is a common video file that can be played by any video player. "Private" format can be played by "RPAS player" only. The RPAS player will be added to on the USB device automatically.

8.3.7 View Backup Status

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

This will show all the active backup procedures. From here you will be able to see the general progress of the backup tasks and pause or delete any of it.

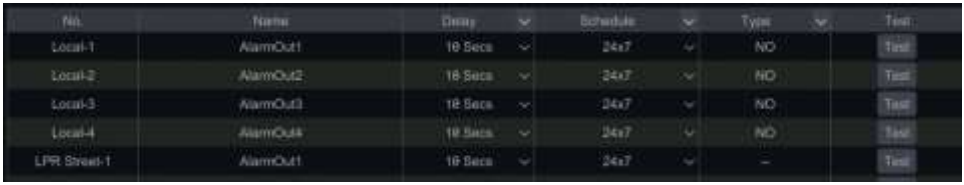


9 AI/Event Management

9.1 Event Notification

9.1.1 Alarm-out

Ossia devices will integrate with any device that has alarm output and display it on the alarm out list (together with any integral alarm outputs available on the device itself).



① Click Start→Settings→Alarm→Alarm Out to access the following interface.

② Set the delay time and the schedule of each alarm-out. You access the "Edit Schedules" interface from here (see 7.3.1 Add Schedule for details).

③ Set the alarm out NO/NC. (Cannot be mixed)

④ Click "Apply" to save the settings. You can click "Test" to test the alarm output.

9.1.2 E-mail

Click Start→Settings→AI/Event→Event Notification→E-mail to go to the e-mail configuration interface. See 11.1.4 E-mail Configuration for details.

9.1.3 Display

Click Start→Settings→ AI/Event →Event Notification→Display to set the duration of the pop-up video and pop-up message box. Click "Apply" to save the settings.

9.1.4 Buzzer

Click Start→Settings→ AI/Event →Event Notification→Buzzer to set the holding time of the buzzer and click "Apply" to save the setting. You can click "Test" to test the buzzer.

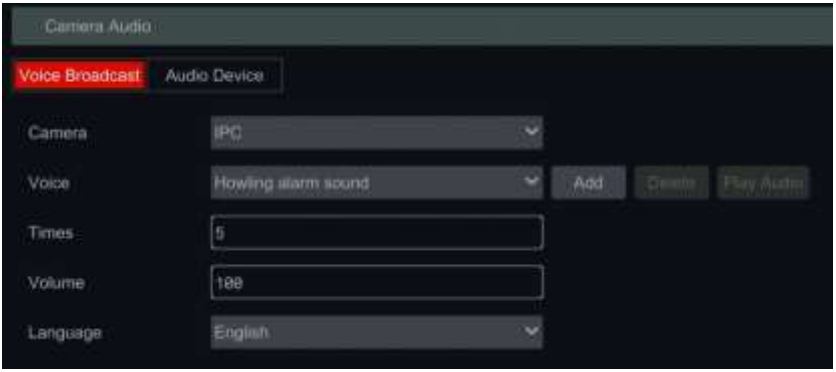
9.1.5 Push Message

Click Start→Settings→ AI/Event →Event Notification→Push Message. Enable the push message service and wait for the Push server status to change from "Disabled" to xxx.xxx.xxx.xxx:xxxx (Online). The IP Address of the Push server might vary according to your location and the availability of the server. All of the Push notification configuration will be done on your mobile phone through the "Provision Cam2" App. You can also set the "Push Schedule" which will define the days and times that push notifications will be sent by the device to the mobile app.

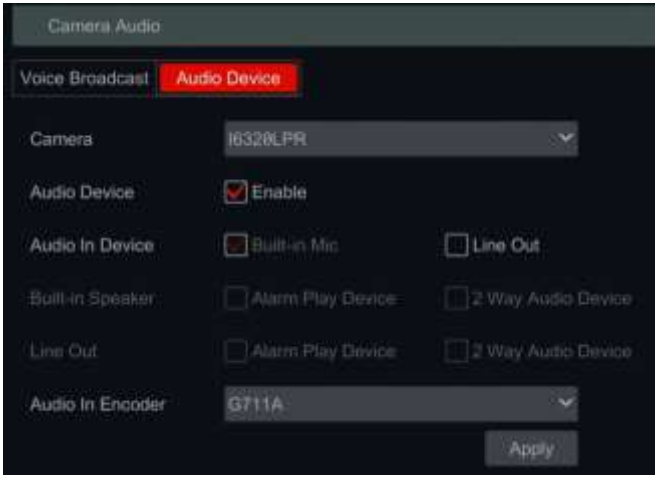
9.1.6 Audio Message

Click Start→Settings→ AI/Event →Event Notification→Audio.
The Audio Divides into 2 section. The top section is related to IPC and the bottom is related to the NVR.

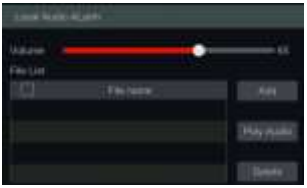
We will start with the IPC (Camera Audio). In this section you have “Voice Broadcast” which relates to future cameras with built-in speaker (Smart Sight PA Series). Here you will be able to set the sounds being triggered from the speaker as well as its volume and duration.



Next to it we have “Audio Device”. This is all the configuration of the device audio in. (Specker / Microphone).



Below we have the “Local audio alarm” which refers to the NVR. From this interface you can add,play and delete audio files which will be used as audio triggers by the NVR.



9.1.7 Light

Click Start→Settings→ AI/Event →Event Notification→Light.
The light section relates to future cameras with built-in strobe light (Smart Sight PA Series). Here you will be able to set the strobe light features.

9.2 AI Event

Analytics are applicable only when supported by the IPC.

① Click Start→Settings→AI/Event→**Desired Analytics** to access the interface.

② There are several types of Analytics alarms. You will need to configure the ones that applies to your needs. Select the camera, and choose the type of analytics you wish to set.

Note: Camera Tampering can be enabled in all conditions, but only one of other advanced analytics can be enabled in a given time.

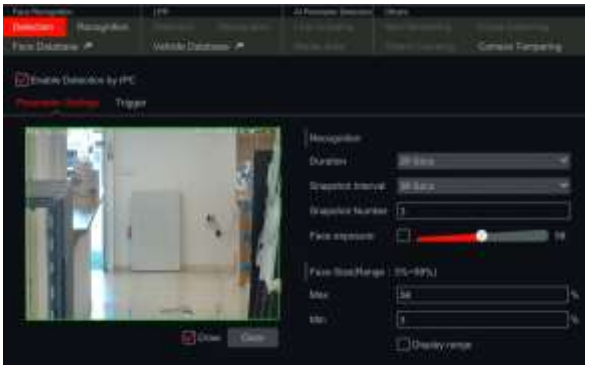
9.2.1 Face Recognition (Applicable devices only)

Detection: The system will trigger an alarm upon a **detection** of any face by the face detection cameras. Please note that the alarm is not related to recognition, but to detection.

① Click Start→Settings→AI/Event→Face Recognition→ Detection to open the interface shown below.

② Choose the camera you wish to configure from the top of the interface. Note that only cameras supporting the chosen analytics will appear.

③ The camera will open in the Detection parameter settings page.

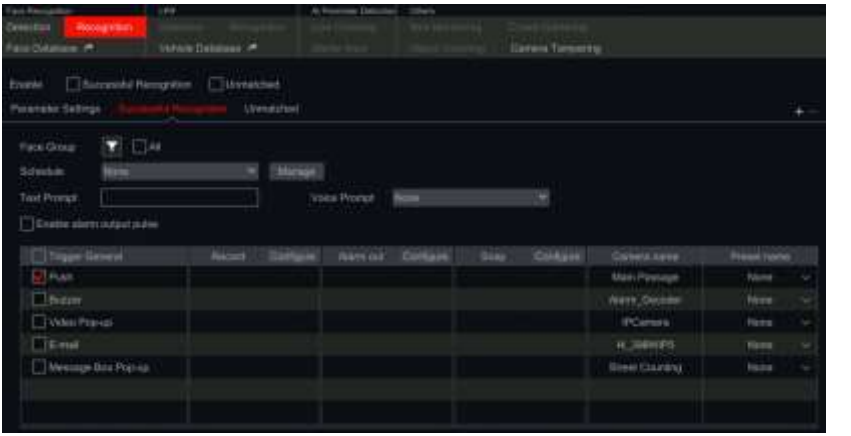


④ In the “Parameter Settings” mark the detection area and configure the face detection parameters.
Enabling “Face Exposure” will give more weight to the exposure calculation where faces are detected.
Face sized outside limit range will be ignored.
⑤ Click on “Trigger” to set the **face detection triggers** and configure the response for detection.
The supported system responses are “Push”, “Record”, “Alarm-out” and “Preset”, “Snapshot”, “Buzzer”, “Pop-up Video”, “Pop up message” and “Send E-Mail”.

Recognition: Face recognition cannot work without enabling and properly configuring the face detection. (Without detection there cannot be any recognition). Therefore, the recognition includes triggers only.

① Click Start→Settings→AI/Event→Face Recognition→Recognition to open the interface.
② Choose the camera you wish to configure from the top of the interface. Note that only cameras supporting the chosen analytics will appear.

③ Enable the types of triggers you wish to activate:
   a) Successful recognition: Trigger response to a recognized person (You can set different triggers to differed groups)
   b) Unmatched: triggers for all unsuccessful recognitions
④ For successful recognition, choose the group related to the trigger by clicking on the filter button ( ) or choose all by ticking “All”.
⑤ Set the schedule for the trigger.
⑥ For unmatched, there is no group relation. Set the schedule for the trigger.
Set the desired system triggers. The supported system responses are “Push”, “Record”, “Alarm-out” and “Preset”, “Snapshot”, “Buzzer”, “Pop-up Video”, “Pop up message” and “Send E-Mail”.
You can also set a text/voice prompt that will be attached to the recognition.
Enabling “Enable alarm output pulse” will trigger 2 alarm outputs within a few seconds (As required by some alarm systems for verification).

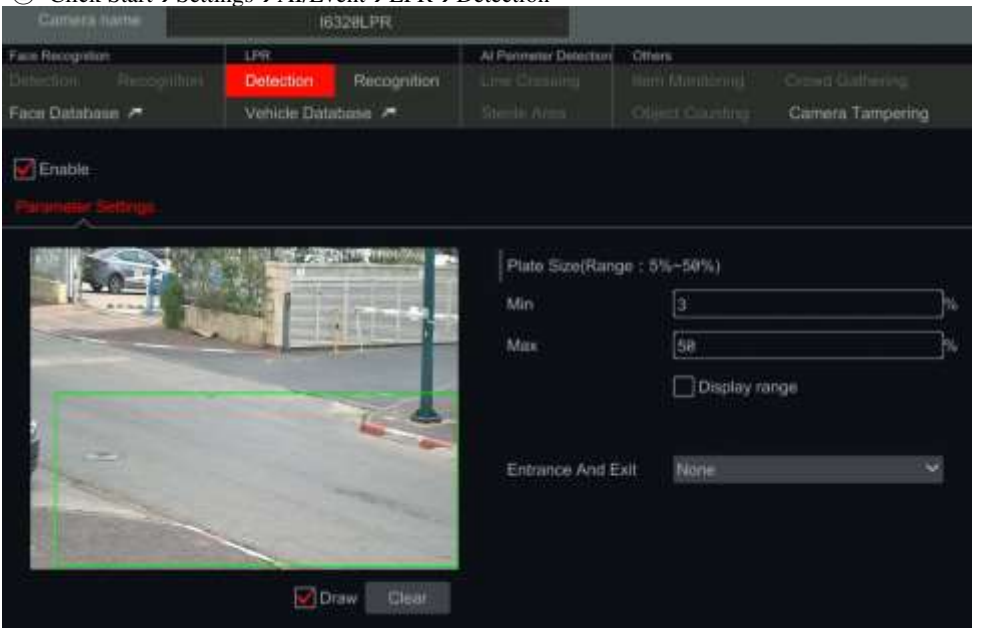


You can add/remove triggers groups based on different groups by clicking on the + − icons

9.2.2 LPR (License Plate Recognition – For LPR Cameras only)

LPR detects vehicles in the frame, reads its license plate and recognizes it. It can trigger based on successful/unsuccessful detections.

① Click Start→Settings→AI/Event→LPR→Detection



② Choose the camera you wish to configure from the top of the interface. Note that only cameras supporting the chosen analytics will appear.

③ Mark the detection area and configure the LPR parameters.

Set the direction of driving (Or set to “None”)

License plates sizes outside limit range will be ignored.

Recognition: LPR recognition cannot work without enabling and properly configuring the LPR detection. (Without detection there cannot be any recognition). Therefore, the recognition includes triggers only.

⑦ Click Start→Settings→AI/Event→LPR→Recognition to open the interface.

⑧ Choose the camera you wish to configure from the top of the interface. Note that only cameras supporting the chosen analytics will appear.

⑨ Enable the types of triggers you wish to activate:

a) Successful recognition: Trigger response to a recognized person (You can set different triggers to differed groups)

b) Unrecognized Plate: triggers for all unsuccessful recognitions

⑩ For successful recognition, choose the group related to the trigger by clicking on the filter button ( ) or choose all by ticking “All”.

⑪ Set the schedule for the trigger.

⑫ For unmatched, there is no group relation. Set the schedule for the trigger.

Set the desired system triggers. The supported system responses are “Push”, “Record”, “Alarm-out” and “Preset”, “Snapshot”, “Buzzer”, “Pop-up Video”, “Pop up message” and “Send E-Mail”.

You can also set a text/voice prompt that will be attached to the recognition.

Enabling “Enable alarm output pulse” will trigger 2 alarm outputs within a few seconds (As required by some alarm systems for verification).

9.2.3 AI Perimeter Detection:

AI Perimeter detection includes 2 types of analytics Line Crossing and Sterile Area.

For DDA Analytic Cameras, it relates for AI DDA Analytics

For Pixel-Based Analytics Cameras, it relates for Pixel Based Analytics.

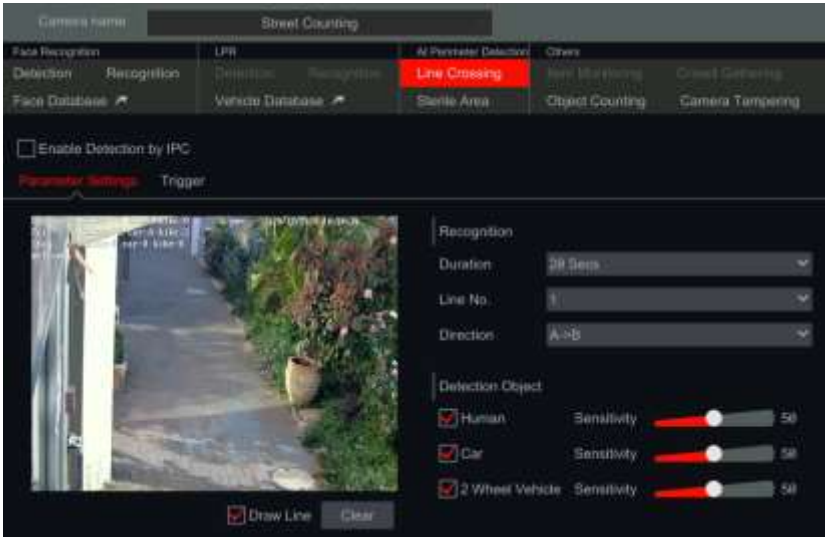
Line Crossing Configuration

DDA Line crossing will detect configured objects (Humans / 4 Wheel vehicles / 2 Wheel Vehicles) that cross a specified line. Line crossing can work in 3 ways:

1) Left to Right (A→B)

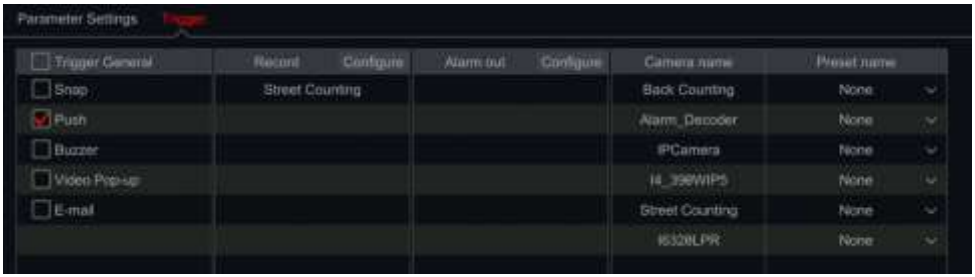
2) Right to Left (B→A)
3) Any side to the other side (A←→B)

① Click Start→Settings→AI/Event→AI Perimeter Detection→Line Crossing to access the following interface.



② Choose the camera you wish to configure from the top of the interface. Note that only cameras supporting the chosen analytics will appear.

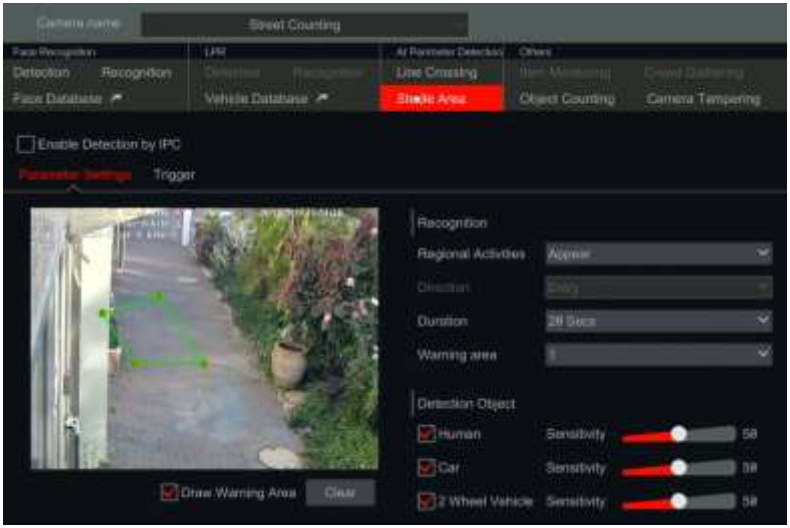
③ Enable/Disable the alarm.
④ Set the Duration for detection (5sec-2mins)
⑤ Set the alert line. Up to 4 lines can be configured.
⑥ On the left side of the interface tick “Draw line” and create line by clicking and dragging the mouse cursor on the image.
⑦ Set the detection direction as specified on the line.
⑧ Choose which objects should be detected, and its detection sensitivity.
⑨ If you need to set additional lines, switch to line 2-4 and repeat stages 5-7
⑩ Switch to the “Trigger” Interface and set the required triggers for line crossing. The supported system responses are “Push”, “Record”, “Alarm-out” and “Preset”, “Snapshot”, “Buzzer”, “Pop-up Video”, “Pop up message” and “Send E-Mail”.



Sterile Area Configuration

DDA Sterile area is an area which needs to be clear from configured objects (Humans / 4 Wheel vehicles / 2 Wheel Vehicles). Any configured object that will enter to the sterile area will trigger an alarm

① Click Start→Settings→AI/Event→ AI Perimeter Detection →Sterile Area (Must be supported by the device) to access the following interface.



② Choose the camera you wish to configure from the top of the interface. Note that only cameras supporting the chosen analytics will appear.

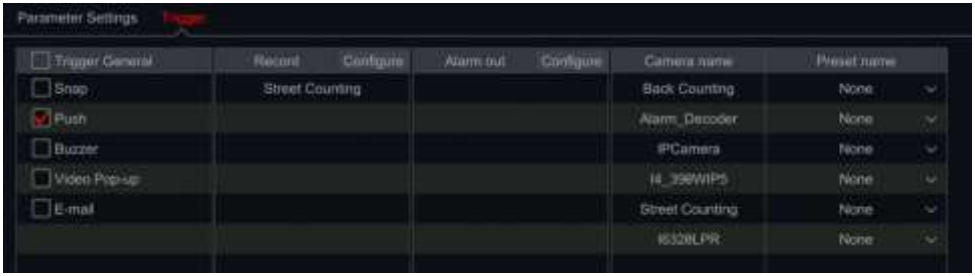
③ Enable/Disable the alarm.

④ Set the alarm type:

a) Appear – the object will trigger an alarm wherever located in the sterile area.

b) Cross – the object will trigger an alarm only when crossing the line. You can choose if the direction of crossing will be “Entry” (From outside to inside) or “Exit” (From inside to outside).

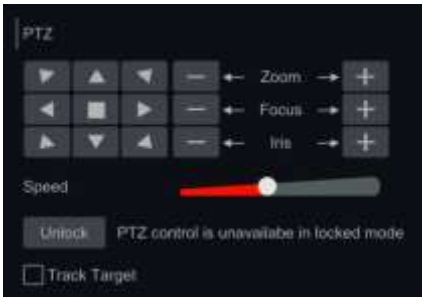
⑤ Set the Duration for detection (5sec-2mins)
⑥ Set the warning area. Up to 4 areas can be configured.
⑦ On the left side of the interface tick “Draw warning area” and create a polygon by clicking on the corners of the area you wish to mark.
⑧ Choose which objects should be detected, and its detection sensitivity.
⑨ If you need to set additional areas, switch to area 2-4 and repeat stages 3-6
⑩ Switch to the “Trigger” Interface and set the required triggers for line crossing. The supported system responses are “Push”, “Record”, “Alarm-out” and “Preset”, “Snapshot”, “Buzzer”, “Pop-up Video”, “Pop up message” and “Send E-Mail”.



9.2.4 Target Track:

The Z4/Z5/Z6 series support object tracking based on DDA Analytics (Line Crossing / Sterile Area).
To configure it, follow the following steps:

1) Move the camera to the desired monitoring location using the PTZ controls.
2) Click on “Set Home”. This will set the home position of the camera. The camera will return to this location when the object is lost or when the object became static.
3) Enable “Target Track”



Note: *If the “Home” position is set, and the “Auto Tracking Priority” is set to “PTZ Priority” the camera will become unresponsive. It is normal. If you want to gain control over the camera, either “Unset Home” or set the “Auto Tracking Priority” to “Manual”*

9.2.5 Others:

“Others” include all the rest of the analytics including all the old “Pixel Based” Analytics

Item Monitoring Configuration

Object monitoring will check that no items were left behind in a specified area (Left Object) or check that a monitored item was not taken (Missing Object). It is based on “Pixel Change”

① Click Start→Settings→AI/Event→Others→Object monitoring (Must be supported by the IP Camera) to access the following interface.
② Choose the camera.
③ Enable/Disable the alarm.
④ Set the Duration for detection (5sec-2mins)
⑤ Choose the type of detection:
   a) Missing object will monitor a specific object to prevent it from being taken.
   b) Left object will monitor an area to prevent from items to be left over.
⑥ Set the warning area. Up to 4 areas can be configured.
⑦ On the left side of the interface tick “Draw warning area” and create a polygon by clicking on the corners of the area you wish to mark. If you chose “missing object” then the polygon should be marked around a specific object. If you chose “left object” then the polygon should be marked around the monitored area.
⑧ Set the area’s name.
⑨ If you need to set additional areas, switch to area 2-4 and repeat stages 3-8

Camera Tampering Configuration

Camera tampering will check that the camera hasn’t been tampered in a way that will prevent it from providing a decent video image. The monitoring is divided into 3:

1) Camera Shifting: In case the camera was shifted and it does not point at the area that was set during the installation.
2) Lens Tampering: In case the Zoom/Focus of the lens was tampered and the image became blurry.
3) Camera Masking: In case that the camera was covered or blocked by a foreign object that blocks the majority of its view.

① Click Start→Settings→AI/Event→Others→Camera Tampering (Must be supported by the IP Camera) to access the following interface.

② Choose the camera.
③ Set the Duration for detection (5sec-2mins)
④ Enable/Disable the required alarms.
⑤ Set the sensitivity.
⑥ If you need to set additional camera repeat stages 2-5
⑦ Switch to the "Trigger" Interface and set the required triggers for line crossing. The supported system responses are "Push", "Record", "Alarm-out" and "Preset", "Snapshot", "Buzzer", "Pop-up Video", "Pop up message" and "Send E-Mail".

9.3 Databases

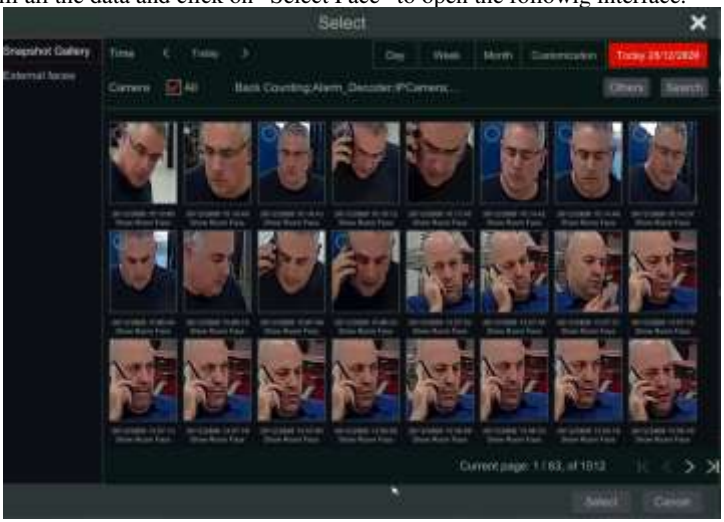
In This section you will be able to create, edit and manage your face database.

① By default, the databases are completely empty. You should create groups before you can add new objects to the databases (Faces or LPR)
② You can create new groups by clicking on "Add Group". You can configure "Permitted" time for members of customized groups.
③ Click on to edit a group name and on to delete a group (The default groups cannot be deleted).
④ Click on to open a group.

9.3.1 Face Database

Adding a new person to the database:

① Click on "Add" to add a new person. The following interface will open.
② Fill all the data and click on "Select Face" to open the followig interface.



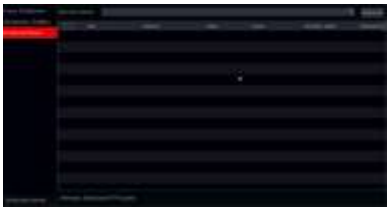
③ Choose the source of the face snapshot. Snapshot Gallery – Search within snapshots taken

by the system or External Faces – Choose a picture file that contain a single face from a USB storage.

④ If you chose "Snapshot Gallery" the following interface will open:

A. Set the time range for the face snapshot search. (Day to choose a day, Week to choose a week, Month to choose a month, customization to set a unique time range and Today to choose the date of today starting at midnight).
B. Choose the camera/cameras that took the face snapshot. Click on "More" to choose specific cameras or tick "All" to choose all cameras.
C. Click on "Search"
D. Choose the face you wish to input to the database. Click on "OK"
E. Fill the rest of the details in the form. (Only the name is mandatory. All the other fields are optional)

⑤ External Faces – Choose a picture file that contain a single face from a USB storage.



A. Select the USB storage under the "Device Name"
B. Select the relevant file (Must contain a single clear face).
C. Click on Select face.

Note: *that for good recognition results, the face must be well lit, looking straight to the camera with as many visible face features as possible (Eyes, pupils, ears, nose, mouth etc.)*

Modifying a person in the database:

① Click on to open a group.
② Select a person and click on "Modify"
③ The person's card will open. You will be able to edit any of the details and change the assigned group of the person.

Deleting a person from the database:

① Click on to open a group.
② Select a person and click on "Delete"
③ The system will prompt for deletion.

Clicking on "Clear All" will delete all the people in the specified group.

9.3.2 LPR Database

Adding a new Licesne Plate to the database:

① Click on “Add” to add a new person. The following interface will open.
② Fill all the data and click on “Ok”.

Modifying a License Plate in the database:

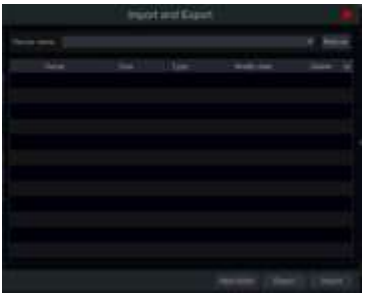
④ Click on to open a group.
⑤ Select a plate and click on “Modify”
⑥ The LPR card will open. You will be able to edit any of the details and change the assigned group of the plate.

Deleting a License Plate from the database:

④ Click on to open a group.
⑤ Select a plate and click on “Delete”
⑥ The system will prompt for deletion.

Clicking on “Clear All” will delete all the plates in the specified group.

Exporting databases:



① Click on Export and Import to open the following interface.
② Click on “Export” to export the database. Set the database name and target location.
③ Set a password
④ The database will be encrypted and exported to the target location.

Importing databases:

① Click on Export and Import to open the following interface.
② Choose the database file and click on “Import”
③ Inpit the database password to initialize the import procedure
④ The database will be created on the device. The device will reboot automatically at the end of this procedure.

Note: *The Face database is stored on the HDD. The LPR database is stored on the flash memory. Formatting the HDD will delete the database as well. Importing a database will automatically overwrite the existing database.*

9.4 General Event Alarms

9.4.1 Motion Alarm

Motion Alarm: when motion appears in the specified area, it will trigger the motion alarm. Remember that the motion alarm is based on VMD which translates pixel color changes as motion, therefore might trigger false alarms.

You should enable and configure the motion detection for each of the cameras first and set the alarm handling to complete the motion alarm configuration.

9.4.2 Motion Configuration

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

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

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).

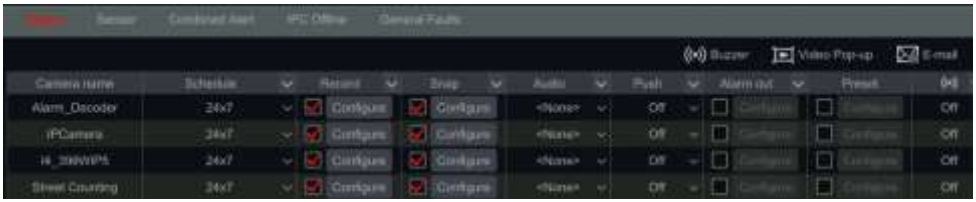
Duration: it refers to the interval time between two motion detections. For instance, if the duration time is set to 10 seconds, once the system detects a motion, it will trigger the alarm and disregard all other motions for 10 seconds (specific to camera). If there is another motion detected during this period, it will be considered as continuous movement, otherwise it will be considered as a single motion.

③ To select the area of interest, click and drag the mouse cursor on camera image from the top left to the bottom right. You can set more than one motion area. Click “All” to set the whole camera image as the motion detection area. Click “Reverse” to swap the selected area and the unselected area. Click “Clear” to clear all the motion areas. To delete a specified area click and drag the mouse cursor on the camera image from the bottom right to the top left.

④ Click “Apply” to save the settings. Click “Processing Mode” to go to the alarm handling configuration interface of the motion alarm.

9.4.3 Motion Alarm Handling Configuration

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



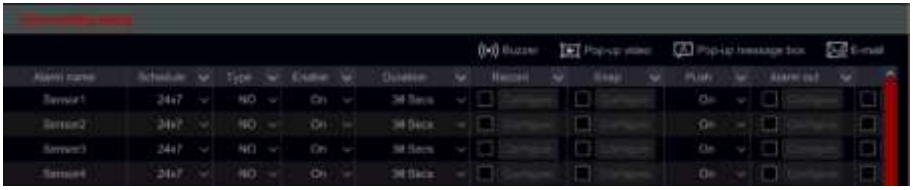
② Mark the and configure the desired response for motion alarm out of “Record”, “Snap”, “Push”, “Alarm-out” and “Preset”, and enable/disable “Buzzer”, “Pop-up Video”, “Pop-up Message Box”, “Audio” and “E-mail”. The alarm handling setting of motion alarm is similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).

③ Click “Apply” to save the settings. You can click “Motion Settings” to return to the motion configuration interface.

9.4.4 Sensor

To fully configure the sensor alarm settings, you should enable the sensor alarm and set up the alarm handling for each camera/channel.

① Click Start→Settings→AI/Event→General Event → Sensor Alarm to access the following interface.



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

③ Enable the sensor alarm for the desired cameras/channels.

④ Mark the and configure the desired response for sensor alarm out of “Record”, “Snap”,„” Push Notification”, “Alarm-out” and “Preset”, and enable/disable “Buzzer”, “Pop-up Video”, “Pop-up Message Box” and “E-mail”.

⑤ Click “Apply” to save the settings.

The configuration steps for the alarm responses are as follows:

Record: once enabling “record” a “Trigger Record” window will pop up (you can also click “Configure” button to open the window manually). Select camera/s on the left side and click to set the camera as a triggered camera. Select a triggered camera from the right side and click to remove the triggered camera. Click “OK” button to save the settings. The

triggered camera/s will commence recording in case of a sensor alarm.

Snap: once enabling "Snap" a "Trigger Snapshot" window will pop up (you can also click "Configure" button to open the window manually). Select camera/s on the left side and click to set the camera as a triggered camera. Select a triggered camera from the right side and click to remove the triggered camera. Click "OK" button to save the settings. The triggered camera/s will take a snapshot in case of a sensor alarm.

Push: Tick if you wish to get push notifications for the selected input.

Alarm-out: once enabling "Alarm-Out" a "Trigger alarm-out" window will pop up (you can also click "Configure" button to open the window manually). Select alarm/s on the left side and click to set the alarm as a triggered alarm. Select a triggered alarm from the right side and click to remove the triggered alarm. Click "OK" button to save the settings. The triggered alarm will commence in case of a sensor alarm. You need to set the delay time and the schedule of the alarm outputs. See 9.4.1 Alarm-out for details.

Preset: once enabling "Preset" a "Trigger Preset" window will pop up. Configure the triggered preset of each PTZ camera. To add presets, please see 6.2 Preset Setting.

Buzzer: if enabled, the system will buzz using the internal buzzer when the sensor alarm is triggered. To set the delay time of the buzzer, please see 9.4.4 Buzzer.

Pop-up Video: once enabling "Pop-up Video" a "Set Camera" window will pop up. Select a camera from the list as the triggered channel. Click "OK" button to save the settings. The triggered camera will open in a single channel live-view in case of sensor alarm. To set the duration time of the video pop up, please see 9.4.3 Display.

Pop-up Message Box: if enabled, the system will pop up the corresponding alarm message box automatically when a sensor alarm is triggered. To set the duration time of the message box, please see 9.4.3 Display.

E-mail: if enabled, the system will send an e-mail when a sensor alarm is triggered. Before you enable the email, please configure the e-mail addresses first (see 11.1.4 E-mail Configuration).

9.4.5 Combines Alert

Combined alert allows you to trigger an alarm only when a combination of 2 different alerts takes place.

① Click Start→Settings→AI/Event→General Event → Combined Alert to access the following interface (Originally containing 16 customized combinations)

② Click on “Configure” for the desired line. The following interface will open.
Here you can set a combination of 2 out of 5: Motion, Sensor, Face Recognition, Sterile Area, and Line Crossing. After choosing the combination you desire, set the cameras that originate the original single alarm.
You need to make sure the the analytic is active on the selected camera.

③ Set a firendly name for you to identify this combination by clicking on the alarm name editing it.
④ Set the combined alarm triggers.

Note: You cannot create a combination of 2 analytics. Just analytics with sensor/motion.

9.4.6 IPC Offline Settings

① Click Start→Settings→Alarm→General Faults→IPC Offline Settings to open the interface shown below.

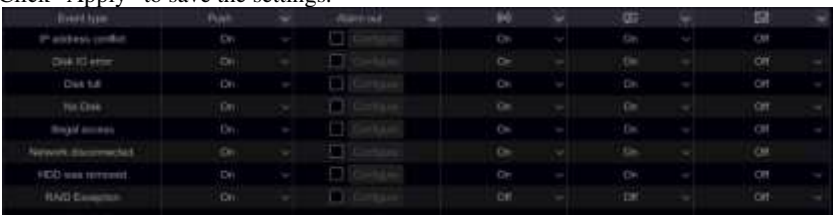
② Mark the and configure the desired response for IPC Offline Alarm out of “Push”, “Record”, “Snap”, “Alarm-out” and “Preset”, and enable/disable “Buzzer”, “Pop-up Video”, “Pop-up Message Box” and “E-mail”. The IPC Offline Settings are similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).
③ Click “Apply” to save the settings.

9.4.7 General Fault Handling Settings

The system monitors its general health and the general condition of the HDD and network connection. The available alarms in this sector are: IP address conflict, Disk I/O error, Disk full, No disk, Illegal access, Network disconnected, HDD removed. (Fault list can vary according to your device model and features).
① Click Start→Settings→Alarm→General Faults Handling Settings
② Mark the and configure the desired response for General fault alarms out of “Push” for push notification, “Alarm-out” for I/O output. Enable/disable “Buzzer”, “Pop-up Message

Box" and "E-mail".

③ Click "Apply" to save the settings.



9.5 Manual Alarm

Click on the general tool bar at the bottom of the live-view interface to open the window as shown below. Click "Trigger" to start alarm. Click "Clear" to stop alarm. (The device must support alarms or have IPC which support alarm out connected to it in order to support this feature). If you wish for the alarm to be cleared automatically, set the delay timer according to your needs. "Manual" settings mean that the alarm will stay active until you will clear it.

9.6 View Alert Status

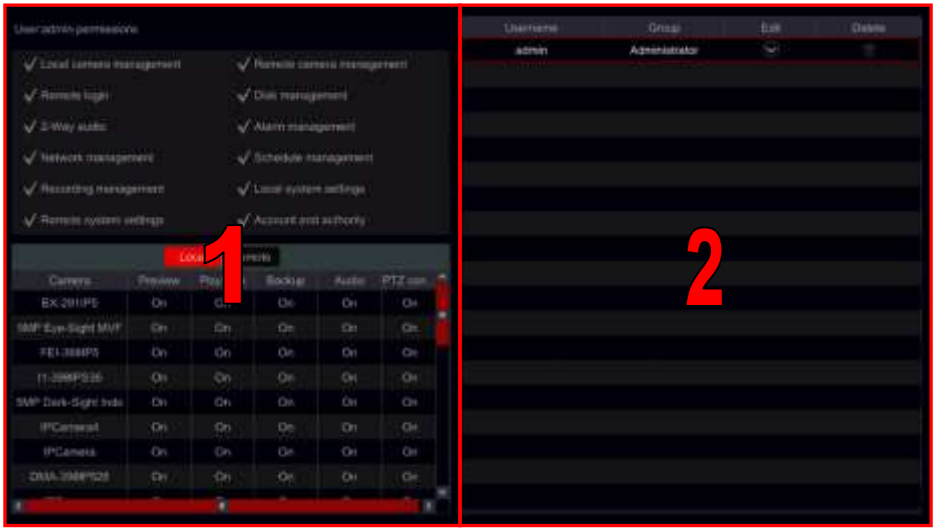
Click Start→Settings→Alarm→Alarm Status or click on the general tool bar at the bottom of the live-view interface and click "Alarm Status".

Click "Clear" button to stop the buzzer if the buzzer is on. Click to view detailed information as shown below.

If the exception information is more than one page, you can input the number in the box and click to jump to the specified page. Click / to view the exception alarm information in the previous/next pages. Click to play the alarm record (if available).

10 Account & Permission Management

10.1 Account Management



Click Start→Settings→Account and Authority→Account→Edit User

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

There are three default permission groups (“Administrator”, “Advanced” and “Ordinary”) available when adding accounts. You can manually add new permission group (see 10.3.1 Add Permission Group for details).

The user ***admin*** has all system permissions and it can manage the device’s accounts. Group “Administrator” owns all the permissions displayed in area ① and its permissions can never be changed or edited while the permissions of “Advanced” and “Ordinary” can be changed.

10.1.1 Add User

① Click Start → Settings → Account and Authority → Account → Add User or click + beside the search box.

② Set the username, password and permission group. Try to choose a complicated password that will be hard to guess. It is optional to set the e-mail address and pattern lock. You can also set if the user is allowed to change his password. Click “Add” to confirm and add the user.

10.1.2 Edit User

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

- **Edit Security Question**

You can set password security question only for ***admin***. Click "Edit Security Question" and set questions and answers in the opened window. If you forget the password, please refer to Q4 in Appendix A FAQ.

- **Modify Password**

Only the password of ***admin*** can be modified. Click "Modify Password". Input the current password and set new password. Click "OK" to save the settings.

- **Recover Password**

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

- **Edit User**

Click "Edit User" to open the window as shown below. If ***admin*** is edited, its permission control is closed and permission group cannot be changed. 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 the administrator permission group has) and set their permission groups. Click "OK" to save the settings.

10.2 User Login & Logout

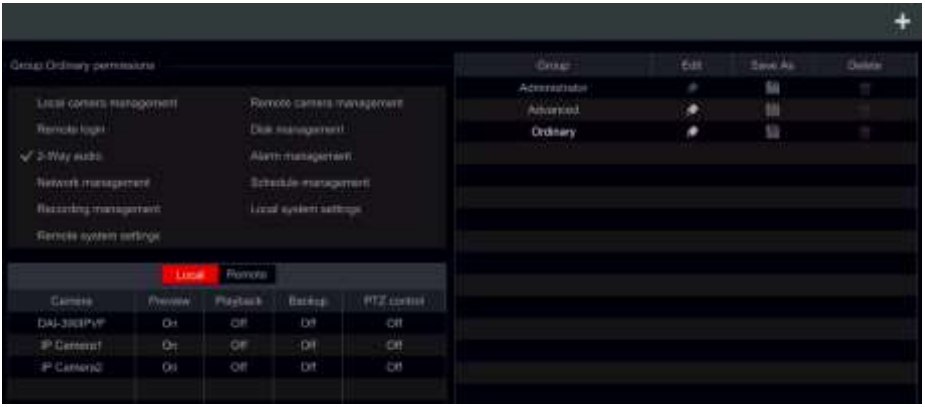
Login: Click Start→Login or directly click the live-view interface, then input the username and the password. Click "Login" button to log in the system. If "Auto Login" is marked – the system will not ask for password again until logout.

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

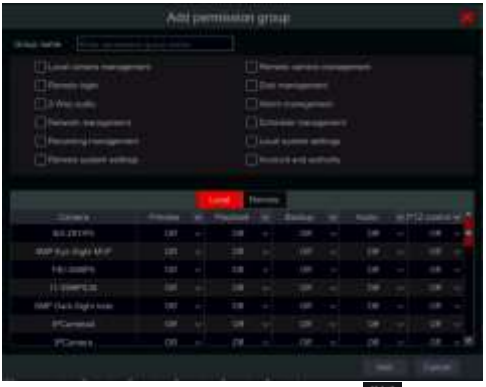
10.3 Permission Management

10.3.1 Add Permission Group

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



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



10.3.2 Edit Permission Group

Go to “Edit Permission Group” interface and 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 10.3.1 Add Permission Group). Click to save the group as another group. Click to delete the permission group. The three default permission groups (“Administrator”, “Advanced” and “Ordinary”) cannot be deleted.

10.4 Security

10.4.1 Block and Allow Lists

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

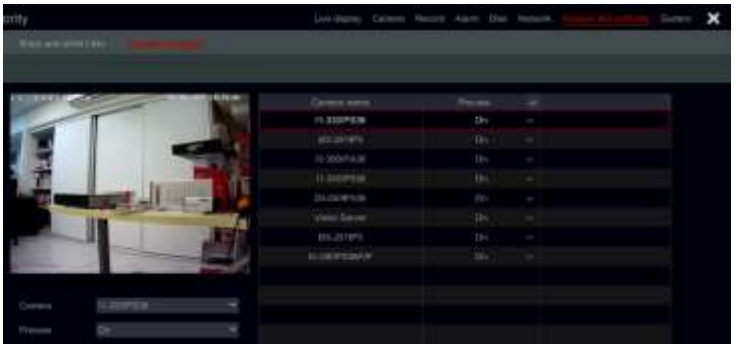
② Check “Enable” and choose “Enable Allow List” or “Enable Block List” (the PC client of which the IP address is in the allow list can access device remotely while the PC client in the block list cannot).

③ Add IP/IP segment/MAC. Click “Add IP” or “Add MAC” button and 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 click “OK” button. In the above interface, click to edit IP/IP segment/MAC, click to delete it. Click “Apply” to save the settings.

10.4.2 Preview on Logout

Preview on logout configuration will set which channels will be available for view while no user is logged into the system only channels marked as “on” will be available. The default setting is “on” for all channels. To configure:

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



② Choose which channels can be viewed and which are not when all local users are logged out.

10.5 Network Security

The network security feature adds a layer of security against MiTM cyber attacks (Man in the middle) which means that the hacker can see any data being sent and received by the NVR. The most common method of applying MiTM attack is by impersonating the hacker computer to the router by changing the NVR/Router ARP Tables which stores all the LAN IPs and their corresponding MAC Addresses. The IP will not change, but the MAC address will change. After the ARP poisoning was done, the NVR will send data to the hacker instead of to the Router.

The Network Security feature protects the NVR by securing its ARP value for the router.

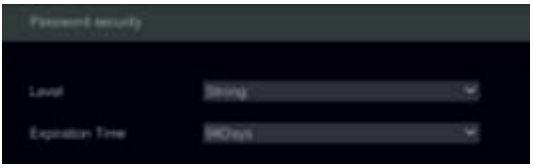
① Click Start→Settings→Account and Authority→Security→Network Security to go to the following interface.

② Click on “ARP Guard” to activate it
③ The gateway is set automatically by the Network IPv4 setting.
④ There are 2 options to set the router’s MAC address: Automatically and Manually.
   a) Automatically: If you are sure that no MiTM attack is taking place, you can use the “Auto Gateway MAC” option. The NVR will copy the MAC address from its ARP table to the interface.
   b) Manually: You can check and confirm the MAC address of the router by yourself and then input it to the interface by clicking on the icon under “Gateway MAC”
⑤ Click on “Enable Defence” and “Apply” to finish the process.

Note: After enabling network security the NVR will only communicate through the provided MAC address, meaning that any change of the network/router will require updating this setting.

10.6 Password Security

Password security can force the user to change the password after given time and also can force the user to choose a password with defined strength

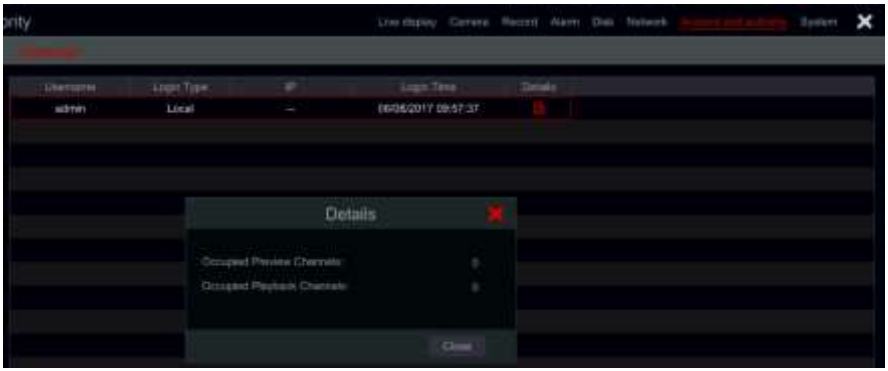


① Click Start→Settings→Account and Authority→Security→Password Security to go to the following interface.
② Set the password level as follows:
   a) Weak: Any password will be allowed
   b) Medium: Password must be minimum 8 characters long and include at least 1 letter and 1 number
   c) Strong: Password must be minimum 8 characters long and include at least 1 letter , 1 capital letter and 1 number
   d) Stronger: Password must be minimum 8 characters long and include at least 1 letter , 1 capital letter, one special character and 1 number.
③ Choose Expiration time out of: Never / 30 Days / 60 Days / 90 Days.

10.7 User Status:

10.7.1 Online Users

① Click Start→Settings→Account and Authority→User Status to go to the following interface.
② In the list you will find all the users who are currently connected to the system including their IP addresses and the number of live/playback channels they occupy
③ Click on to see detailed information about the channel usage by the selected user.



11 Device Management

11.1 Network Configuration

11.1.1 TCP/ IPv4/6 Configuration

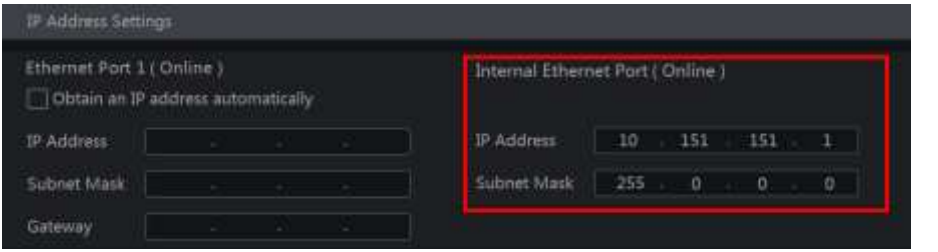
- **IP Address Settings**

Click Start→Settings→Network→TCP/ IPv4/6 to go to the following interface. Mark "Obtain an IP address automatically" and "Obtain DNS automatically" to get the IP address and DNS automatically, or input the IP address, subnet mask, gateway, preferred DNS and alternate DNS manually. Click "Apply" to save the settings. If your network support IPv6 you can set it here as well. The default setting is "Obtain an IPv6 address automatically"

Internal Ethernet Port Introduction:

If you use the PoE NVR, the network state of the internal ethernet ports will be shown on the interface. Refer to the picture below.

The internal ethernet port connects all the PoE ports with the NVR system. The PoE ports are available when the state is online. If it is offline, the NVR PoE ports will be unavailable. The IP address and subnet mask of the internal ethernet port can be changed in this interface (not recommended).



➢ **PPPoE Settings**

In the above interface, mark "Enable" in "PPPoE Settings" and input the username and password. Click "Apply" to save the settings.

11.1.2 Port Configuration

Click Start→Settings→Network→Port. Input the HTTP, HTTPS, Server, RTSP and POS ports of the device and click "Apply" to save the settings.

HTTP Port: the default HTTP port of the device is 80. The port number can be changed. The port is mainly used for direct IE and mobile application remote access via static IP or DDNS. To access the device through IE, input the IP address plus HTTP port in the address bar for example: http://192.168.11.61:81. (If the HTTP port is 80 – there is no need to input it)

HTTPS Port: The default is 443 and must be enabled from this interface in order to use it. HTTPS will allow you to create an encrypted communication between the device and any web browser connected to it. Once enabled, you will be able to access the device using HTTPS address. For example: https://192.168.11.61. If you don't change the default port (443) there is no need to input it in the address line.

Server Port: the default server port of the device is 6036 and it can be changed as required. The port is mainly used in network video management system like CMS.

POS Port: POS (Point Of Sale) is used to connect cash registered to the device in order to compare the cash register output with the video recordings. The default port is 9036.

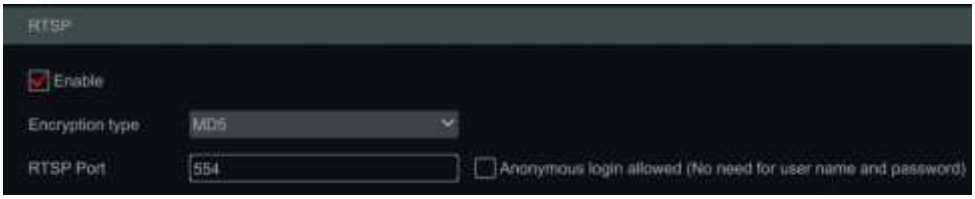
Note: The HTTP / HTTPS ports and server port of the device should be mapped to the router before you access the device via WAN.

11.1.3 API Server

The API Server serves as an additional layer of protection for the end user. While disabled, All API/SDK connections to the system will be rejected.
Once enabled, you can choose your working mode: Base64/MD5.

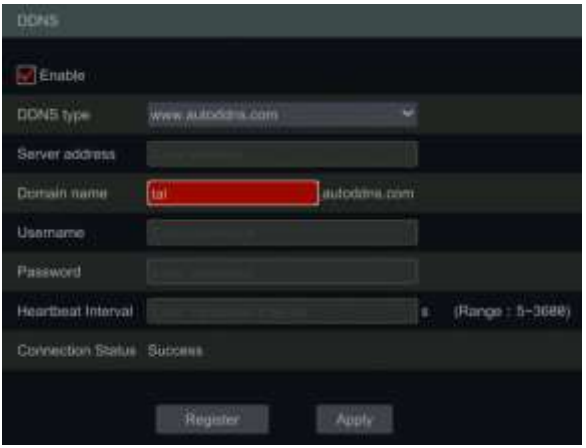
11.1.4 RTSP

RTSP (Real-Time Stream Protocol) can be used to retrieve the video stream from the device by any media player which supports the RTSP. You can view the live stream synchronously. The default RTSP port is 554. It can be changed as required. Here you can also tick “Anonymous login allowed” to allow unauthenticated RTSP connections.



11.1.5 DDNS Configuration

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



Mark “Enable” and select the DDNS type. We advise on using www.autoddns.com which is free and simple to use. This manual is based on autoddns selection:

① Input the desired “Domain Name”.

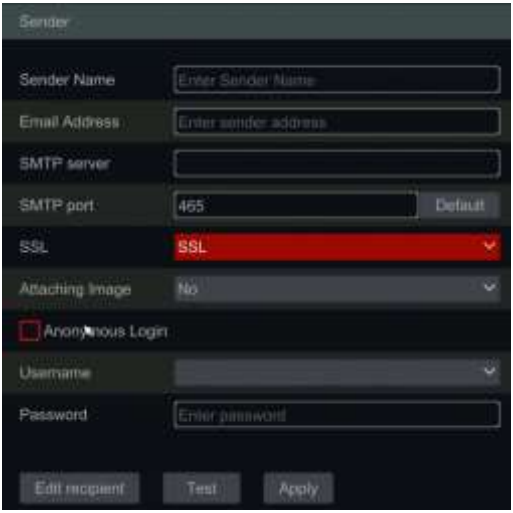
② Click ***Register*** button and wait for the prompt. If successful, continue to the next step. If not, try another domain name and repeat.

③ After you successfully set your domain name, map the HTTP and Server ports on your router.

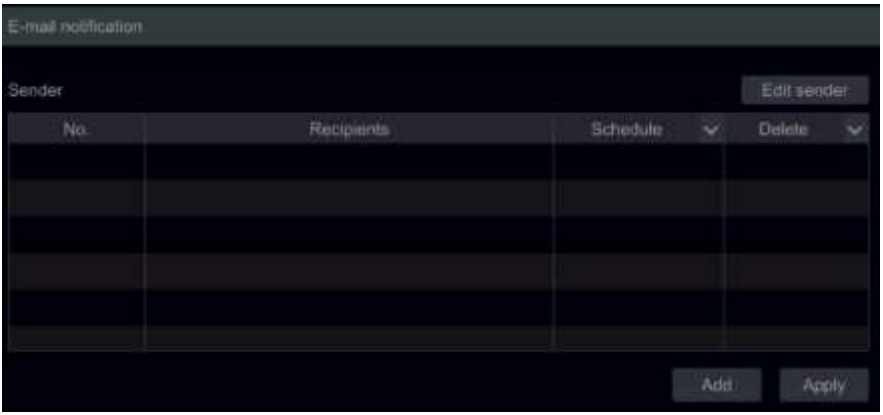
④ Browse to the DDNS domain you have set (for example: ***http://tal.autoddns.com:8081***)

11.1.6 E-mail Configuration

Click Start→Settings→Network→E-mail. Input the sender's e-mail address, name, password, SMTP server and SMTP port (you can click "Default" to reset the SMTP port to the default value) and enable/disable the SSL and "attaching image". Click "Test". Input the e-mail address of the recipient in the window and click "OK" button. The e-mail address of the sender will send an e-mail to the recipient. If the e-mail was sent successfully, it indicates that the e-mail address of the sender is configured correctly. Click "Apply" to save the settings.



Click "Edit Recipient" to open the following interface.



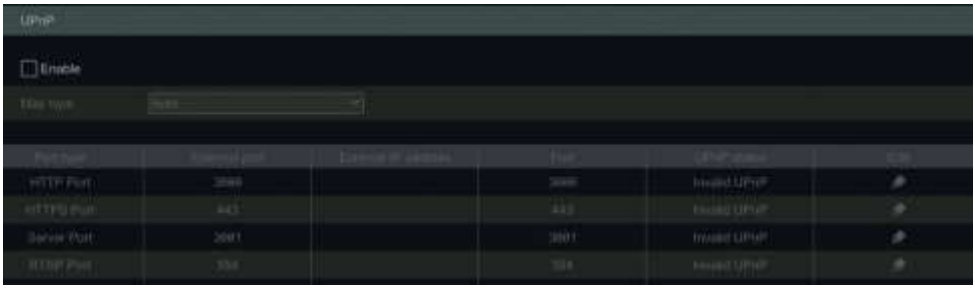
Click "Add" and input the recipient's e-mail address in the opened window. Set the schedule rule which you want to apply for the recipient and click "Add" to confirm. Click to delete a recipient from the list. Click "Apply" to save the settings. Click "Edit Sender" to go to the e-mail configuration interface of the sender.

11.1.7 UPnP Configuration

By using UPnP you can access the device through IE client 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 device's IP address, subnet mask and gateway and set the corresponding in the router interface.
④ Mark "Enable" and click "Apply" button.



Click "Refresh" button to refresh the UPnP status. If the UPnP status is still "Invalid UPnP" after refreshing, the port number is probably wrong. Please change the mapping type to "Manual" and 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 device. Input the external IP address plus port in the IE address bar to access the device.

11.1.8 NAT Configuration

NAT allows you to connect to the device using the P2P cloud platform. After enabling it, all you will have to do is to scan the QR code using the mobile app in order to remotely connect to your device.

Click Start→Settings→Network→NAT. Mark "Enable" and click "Apply" to save the settings.
NAT1.0 is the basic NAT (Which is still in use for old integrations)
NAT2.0 is the advanced NAT which offers more features in the web-client and allows cloud updates.

When using Provision Cam2 mobile app version >1.8 you have two options to add the device to the app by P2P:

1) The "old" method, by scanning the QR code and inputting the username/password. This method is considered less secure since anyone can perform this process (assuming that he has a username and password).
2) The "new" method – by adding the device to your account in the app. Scan the QR code from the App. This process will bind the device to the owner, making it unavailable to any other user **unless** the owner will share the device with them.

When using the new method, the first pairing of the camera will not require any password. If you want the app to use a password, please enable "Dynamic Code" and set your own 4 digit pin code which will be required when adding the camera to the app.

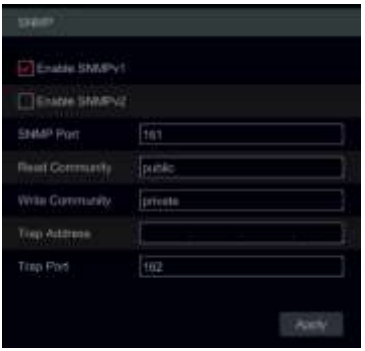
11.1.9 FTP Configuration

FTP allows you to **backup** recording to an FTP server based on set rules. The data is uploaded to the FTP from the HDD and cannot replace the HDD or perform as a "fail safe" to the HDD.

① Click Start→Settings→Network→FTP.
② Enable the FPT in order to activate the interface.
③ Input the FTP server address and port (default port is 21)
④ Input the login credentials for the server.
⑤ Set the maximum file size (in MB)
⑥ Set the remote directory path on the FTP
⑦ Choose which alarms will trigger the device to upload information to the FTP server and set the stream type (Main/Sub) and if to include snapshot.

⑧ Once done, click test. The system will confirm the connectivity and read/write permission on the FTP platform based on the given credentials.
⑨ If Test was successful, click "OK" to save.
⑩ If the test failed, repeat this process from stage 3 to 6.

11.1.10 SNMP Configuration



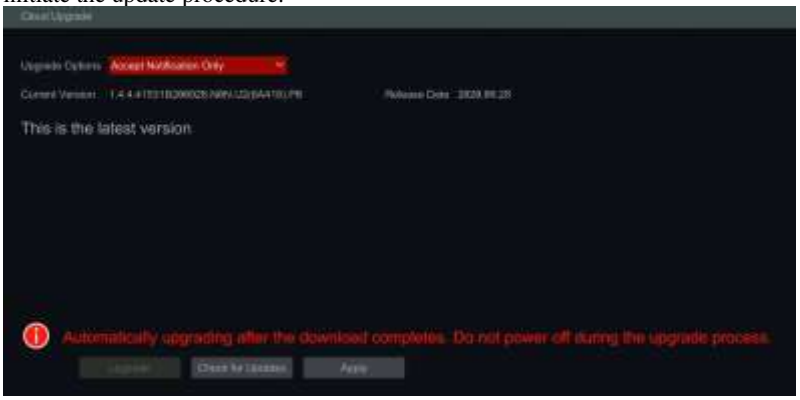
Simple Network Management Protocol (SNMP) is an Internet Standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behavior.

① Click Start→Settings→Network→SNMP

② Set all information required for SNMP. This information should be provided by the site IT manager, or configured on the supported device (Managed Switch/Router Etc.)

11.1.11 Cloud Upgrade

Click Start→Settings→Network→Cloud Upgrade. Upgrade options allows you to receive notification upon detection of new FW. From here you can also check for updates manually and initiate the update procedure.



11.2 Network Stream

11.2.1 Network Stream Settings

Click Start→Settings→Network Stream→Network Stream Settings to go to the following interface.

From here you can set your network stream (Network Sub-Stream).

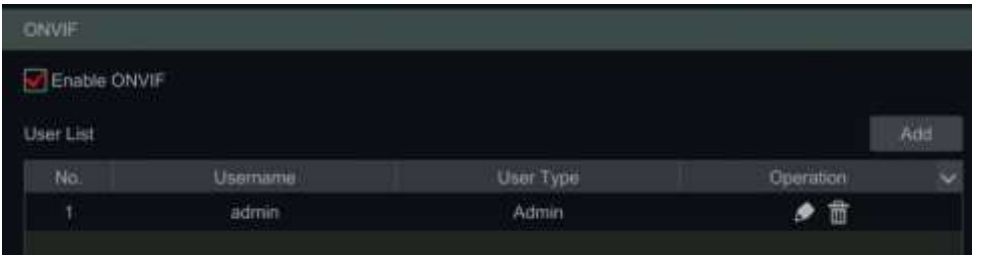
Note: Network Sub-Stream is not Record Sub-Stream. Please do not confuse between the two.

11.3 Integration

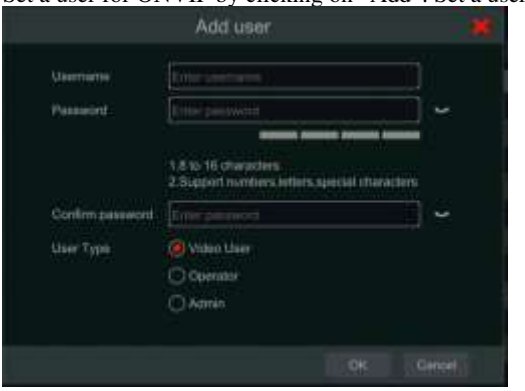
11.3.1 ONVIF

ONVIF allows you to connect to the NVR using 3rd party VMS software that support adding recording devices by ONVIF standard.

Click Start→Settings→Network→Integration→ONVIF to open the following interface



1) Enable ONVIF if required
2) Set a user for ONVIF by clicking on "Add". Set a user name, password and user type.

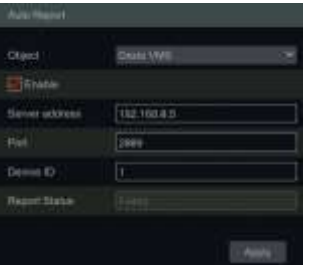


3) Click "Apply" to confirm the setting.

11.3.2 Auto-Report Configuration

Auto Report allows the device to automatically report to the Ossia VMS software without port forwarding or static IP. Please refer to the Ossia VMS user manual for more information.

Click Start→Settings→Network→Auto Report.



11.4 Network Status

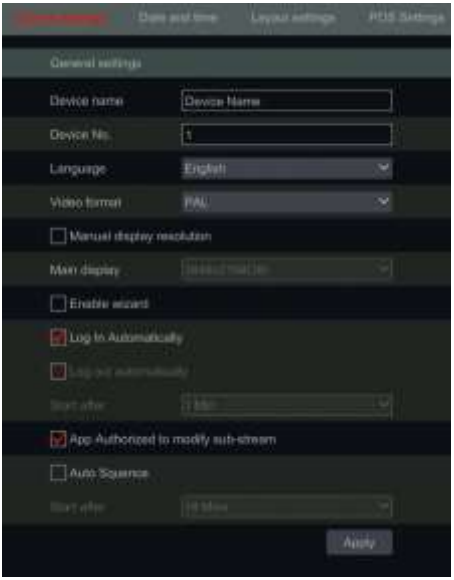
11.4.1 View Network Status

Click Start→Settings→Network→Network Status to view the network status / or click on the general tool bar at the bottom of the live-view interface and switch to "Network Status" to view network status.

11.5 Basic Configuration

11.5.1 General Settings

Click Start→Settings→System→Basic→General Settings to go to the following interface. Set the device name, device No., language, video format and resolution. Enable or disable the configuration wizard, "Log In Automatically" or "Log Out Automatically" (if marked, you can set the wait time before log out). Click "Apply" to save the settings.



Device Name: The name of the device. It may display on the client end or CMS and help the user to easily recognize the device.

Device No.: An address number used for controlling the device using C06 Controller (Joystick)

Language: Language Selection

Video Format: Two modes: PAL and NTSC. Select the video format according to the region / cameras.

Manual Display Resolution: Allowing the user to manually change the main display resolution.

Main Display: The device will automatically set the resolution when you turn on the device for the first time. If only VGA monitor is connected, the resolution will be set automatically to 1280x1024. If and HDMI monitor is connected, the resolution will be set automatically to 1920x1080. If both VGA and HDMI Monitors are connected, the HDMI will be the primary monitor and the resolution will be set to 1920x1080. In such case, you will have to reduce the resolution manually in case that the VGA monitor is not working well. Once the resolution has been set manually, the auto-configuration is disabled.

Secondary Output (Devices with 2 HDMI outputs only): Set the output for the secondary video output.

Enable Wizard: Enabling the configuration wizard to pop-up on each startup of the system.

Log in Automatically: The system will not request a login password until you will manually log out.

Log Out Automatically: The system will log out the system after the configured time duration.

App Authorized to modify Sub-Stream: The system will prevent from "Provision Cam2" mobile app from making any changes to the main/sub stream resolutions. This will result in better performance on CMS and 3rd party applications on the expense of lower performance from the App side.

Auto Sequence + Wait Time: Start sequence when the system is not in use (mouse not moving) for a defined time.

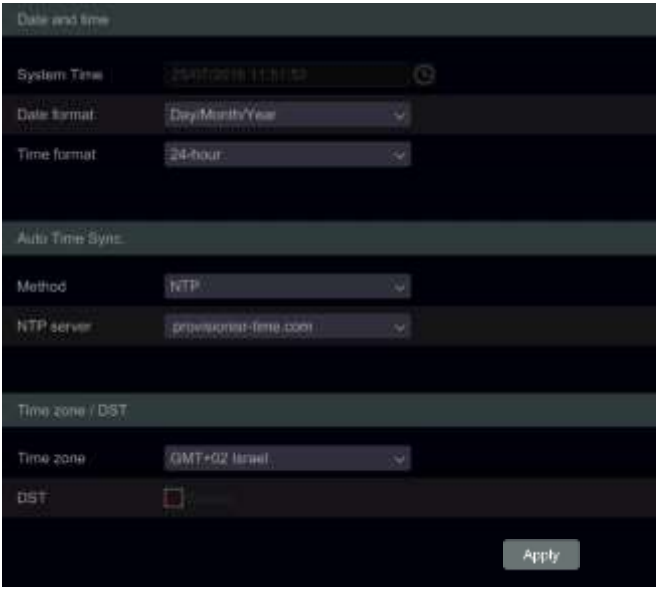
11.5.2 Date and Time Configuration

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 device. If the selected time zone includes DST, the DST of the time zone will be marked 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 "Auto Time Sync." option and click after the "System Time" option to set the system time.

NTP: select "NTP" in the "Auto Time Sync." option and input the NTP server. (The default is www.provisionisr-time.com)



11.5.3 Layout settings:

Click Start→Settings→System→Basic→layout settings to go to the interface as shown below.
The layout setting appearance and configuration options will be different depending on your device model. There are 3 options.

1) NVR/PoE NVR – you will have only "Main Display" option. Here you will be able to set the layout for sequence as described in section 5.3.2 Sequence or set your custmized display modes as described in section 5.3.1 Display Presets.
2) Professional devices with 2 HDMI Outputs: In addition to the described above, you will also find here Secondary display. From here you will be able to set the layout for the second HDMI output. The secondary display does not show the main interface.

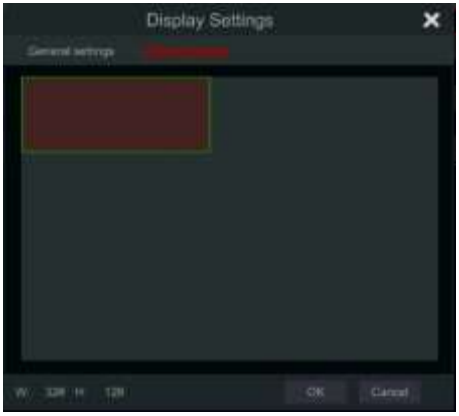
Area ① displays all the schemes; area ② shows the camera layout; area ③ displays all the cameras and groups; area ④ is the tool bar (: clear button; : favorite button, click it to save the layout as preset – only available for main display).

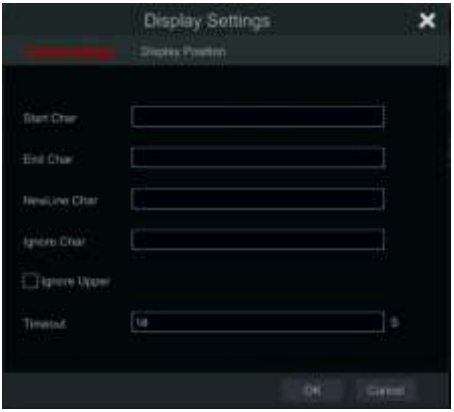
11.5.4 POS settings:

Click Start→Settings→System→Basic→POS to go to the interface as shown below.
POS is used to integrate between the recorded video and the information coming from a supporting cash register. This section allows you to configure the POS and link it to the proper video channel. Up to 4 POS can be configured.

1) Enable the required POS channel.

2) Set the Connection Type
3) Set the connection settings as follows:
    a. POS IP: The IP of the required cash register.
    b. If you wish, you can set filters for ports and destinations.
4) Set the POS protocol as required.
5) Set the display settings as follows:
    a. Set the start and end characters
    b. Set the new line character.
    c. Set “ignore” character.
    d. Set connection timeout (Default is 10 seconds)
6) Switch to the “Display Position” Tab and set the required position for the text form the POS.

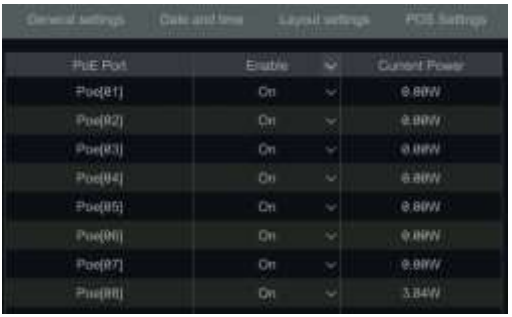




7) If you wish for the POS to trigger a camera record, tick that option and set the camera(s) you wish to record.
8) Set the manufacturer of the POS.

11.5.5 PoE Power Management:

Click Start→Settings→System→Basic→PoE Power Management. From this interface you can view the status of the PoE power bank as well as each PoE port and the current power output provided through it. If required, you can also disable the PoE port (Preventing only power output – the link will remain active).



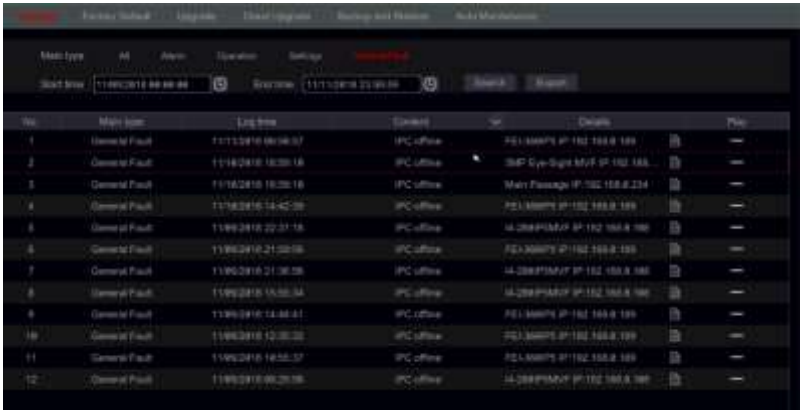
11.5.6 OSD Settings:

Click Start→Settings→System→Basic→OSD Settings. This interface allows you to enable/disable the channel's name and icons on the live view interface.

11.6 Maintenance:

11.6.1 View Log

Click Start→Settings→System→ View Log. Select the log type, click to set start time and end time and click "Search" button. The searched log files will be displayed as a list.



Choose the log file from the list and click "Export" button to export the log file.

Click on the "Content" title bar to create filters within the log entries. Click to play a video log if available.

11.6.2 Factory Default

Click Start→Settings→System→Maintenance→Factory Default. Now you have the option to choose between different types of factory default:

1) If you wish to keep the network settings, tick the "Reset all but Network Configuration" marker.
2) "Restore default parameters (Reboot)" will perform a full restore that will keep the device logs intact. Once complete the device will reboot
3) "Restore factory settings (shutdown)" will perform a full restore, clear the device logs completely and shutdown the device.

11.6.3 Device Software Upgrade

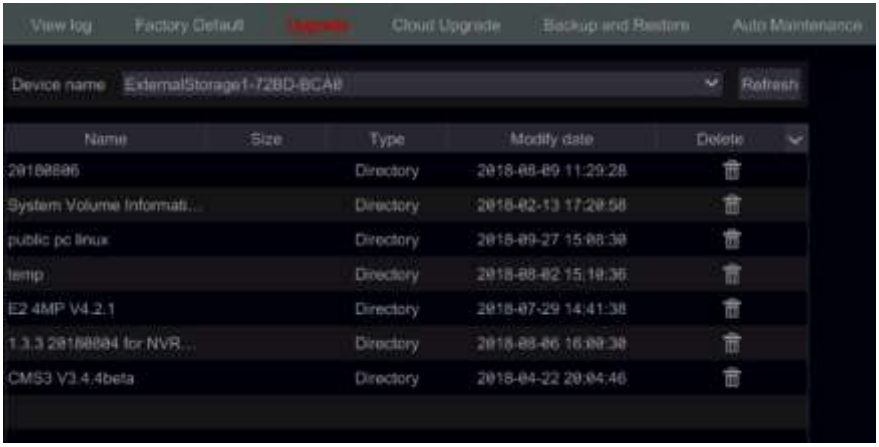
Before upgrading, download the correct update file from Provision-ISR's website.

Click Start→Settings→System→ Maintenance →Upgrade.

The upgrade steps are as follows:

① Copy the upgrade software into the USB storage device.
② Insert the USB storage device into the USB slot of the device.
③ Select the USB device under the "Device Name" option and go to the path where the

upgrade software exists. Select the upgrade software and click “Upgrade”. The system will automatically restart during the upgrade process. Do not power off the device during upgrading.



Notes:

1) *The file system format of the USB device used for upgrading, backing up and restoring must be FAT32.*
2) *This method of update will restore all settings to factory default unless stated otherwise.*

11.6.4 Backup and Restore

You can back up the configuration file of the device by exporting the file to other storage devices; you can recover the configuration to other device which from the same model as the origin device importing the configuration file to other devices.

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

- **Backup**

Select the USB device under “Device Name”, then go to the path where you want to store the configuration backup file and click “Backup”. Click “OK” to confirm.

- **Recover**

Select the USB device under “Device Name” option. Find the configuration backup file and click “Recover”. Click “OK” to confirm.

11.6.5 Auto Maintenance:

You can set an interval of days/times for auto maintenance. This will reboot the device at the configured time to ensure that the memory, buffers and cache memory are always cleared.

Click Start→Settings→System→ Auto Maintenance. Tick “Enable”, set the days interval and the point of time during that day. It is highly advisable to choose a time where there is less chance for an incident to occur. During the auto maintenance procedure, the device will reboot so recording will not be available.

Click “Apply” – the next reboot date and time will appear in the interface.

11.6.6 View System Information

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

12 Remote Surveillance

12.1 Mobile Client Monitoring (Cloud Account - Based on Provision Cam2 App >v1.8)

① If you are intending to use Provision-ISR cloud (P2P) service, make sure to enable NAT in the device. Refer to *NAT Configuration* for details.

② Download and install the mobile app "Provision Cam2" (Available for iOS & Android).

③ We highly advice on creating an account. The account will allow you save all the devices on the cloud encrypted and will also allow you to use an encrypted addition of devices to the account. The benefits of using an account:

a) Ability to add devices in Encrypted mode to the cloud

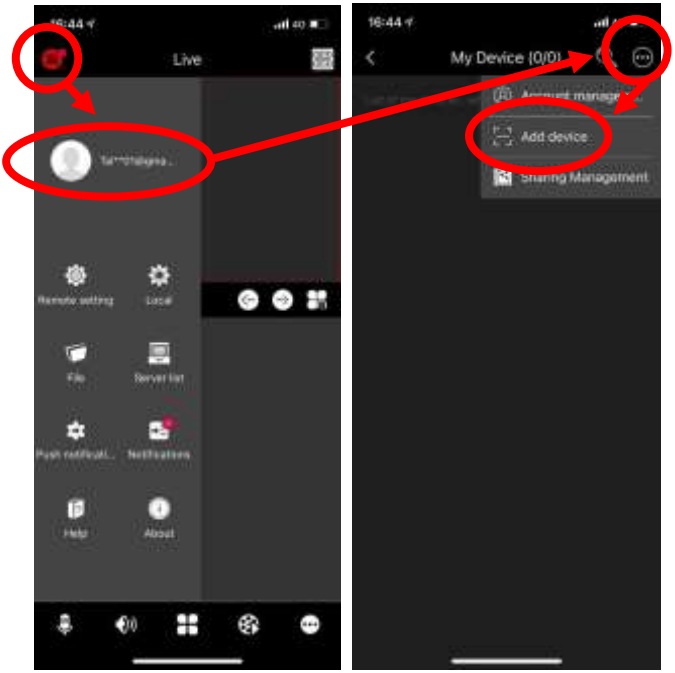
b) Gain full control over your devices (Once bound, the device cannot be connected again unless the admin permits it.

c) Back up your local device list to the cloud

④ Click on "Register". Input a valid Email and Password.

⑤ Input the verification code received on the Email you have entered.

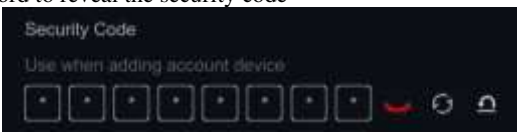
⑥ Run the mobile app, go to the menu→Account name→Account Menu→Add device



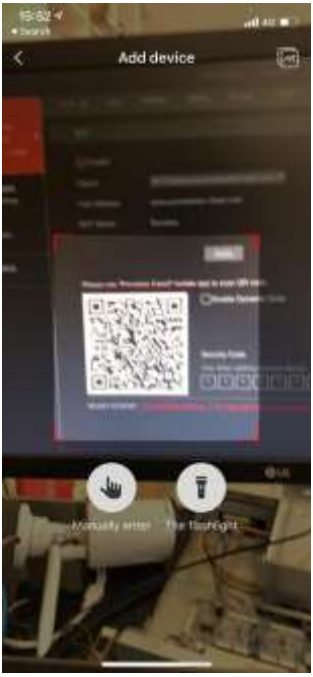
⑦ Scan the QR code from the NVR Network→NAT menu

⑧ Click on the Closed Eye icon on the NVR NAT Security Code Menu and input the

username and password to reveal the security code



⑨ Input the security code from the NVR to the APP.



⑩ Input the security code from the NVR to the APP.

12.2 Mobile Client Monitoring (Local Based on Provision Cam2 App >v1.8)

You can keep connecting to your recording device using the old method:

① If you are intending to use Provision-ISR cloud (P2P) service, make sure to enable NAT in the device. Refer to *NAT Configuration* for details.

② Download and install the mobile app “Provision Cam2” (Available for iOS & Android).

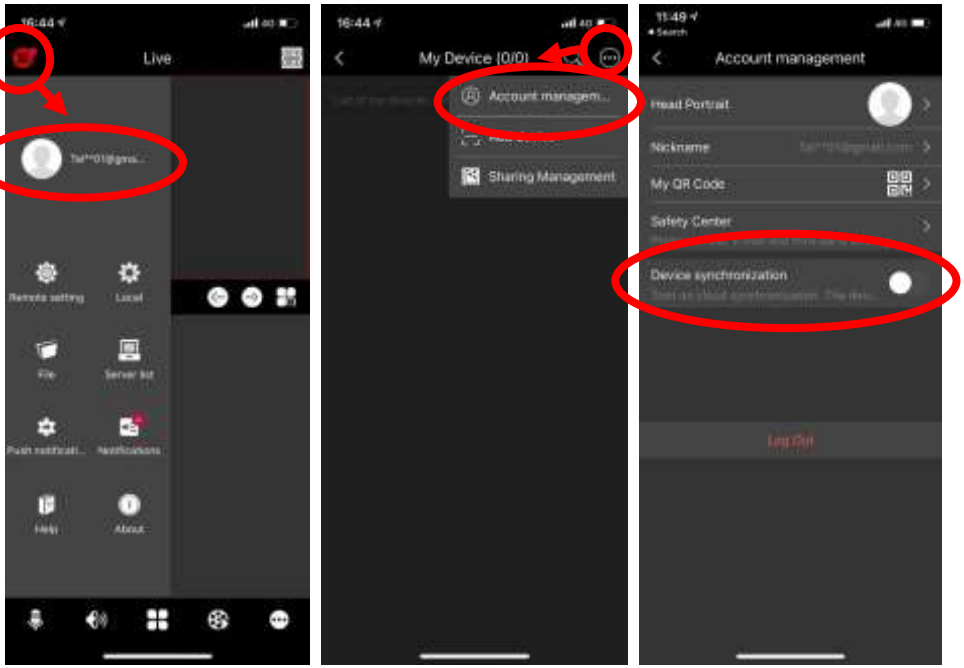
③ Run the mobile app, go to the “Add Device” interface and click to scan the QR Code from the device (Go to Start→Settings→System→Information→Basic to view the QR Code of the device).

④ After scanning the QR Code successfully, input the login credentials (username & password) to log into the device.

12.3 Saving Device list to Cloud (Cloud Account - Based on Provision Cam2 App >v1.8)

If you have an old device list on your device and you have a registered account, you can store the device list on your account over the cloud.

① Register / Log into your account using Provision Cam2 (See section 12.1 for the registration process)
② Go to the menu→Account name→Account Menu→Account Management
③ Turn on “Device Synchronization”.



12.4 Web IP/DDNS 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.

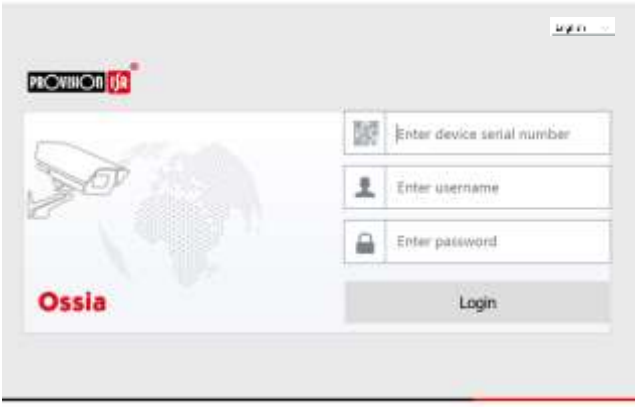
② Open your preferred internet browser and input the IP/DDNS address of the device in the browser address bar. You can change the display language on the top right corner of the login interface. Input the username and password of the device in the interface and click "Login" to go to the live preview interface.

Notes: 1. Please make sure that the IP address of both the device and the computer are in the same local network segment. For example, supposing that the IP address of the computer is 192.168.1.YYY, the IP address of the device shall be set to 192.168.1.XXX.
2. If the HTTP port of the device is different than 80, you need to input the IP address plus the port number in the browser's address bar when accessing the device over network. For example, the HTTP port is 81. You should enter http://192.168.1.42:81 in the IE address bar.

12.5 Web NAT/P2P Access

➢ **NAT Access**

① Set the network of the device. Please refer to *TCP / IP Configuration* for details.
② Enable NAT. Please refer to *NAT Configuration* for details.
③ Open your preferred internet browser (The browser must support NPAPI plugins) and input the NAT server address ***www.provisionisr-cloud.com*** in the address bar and press enter. If it is the first time you connect via P2P then download the plugin, close your browser and install it on your system.



Input the serial number (click on the tool bar at the bottom of the live preview interface to see the serial number of the device), user name (the user name of the device, ***admin*** by default) and password (the password of the device, ***123456*** by default), select the display language on the top right corner of the interface and click "Login" button to go to the web client interface.

➢ **Router Access**

① Click Start→Settings→Network→TCP/IPv4. Set the IP address, subnet mask, gateway, preferred DNS and alternate DNS of the device.
② Set the HTTP port (it is advised to modify the HTTP port since the default HTTP port 80 might be occupied) and enable UPnP function in both the device 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 device to the router. Port mapping settings may be different in different routers, so please refer to the user manual of your router for details.

③ Get the WAN IP address of the device from the router. Open internet browser on a computer and input the WAN IP address plus HTTP port like http://116.30.18.215:100 in the browser's address bar. Press enter to go to the login interface. Input the username and password of the device in the interface and click "Login".

Note: If the WAN IP address is dynamic, it is necessary for you to use the domain name to access the device. Click Start→Settings→Network→DDNS to set DDNS (see 11.1.3 DDNS Configuration for details). By using DDNS function you can use the domain name plus HTTP port to gain remote access to the device remotely

12.6 HTML Plug-in Free Web-Client

Starting v1.4.5, any major web-browser (I.E Chrome, Firefox, Safari, Edge, Etc.) can be used to monitor video and configure the device.

Note: HTML Plug-in free can play up to 4 channels of live view/playback regardless of the device model.

12.7 Plug-in Based Web-Client

On the first connection via any of the supported web-browsers, you will have to install the web client. Upon connection, you will be prompt to install the web-client.

1) Click on the marked area to download the installation file.
2) It is highly advisable to close all of the open intenet browsers and tabs before running thr installation file.
3) Run the installation file and open the web browser again
4) If pormpted, allow the internet browser to activate the plug in.

12.8 Web Remote Control

In this section we will go through the capabilities and features of the web-client. Most of the capabilities are identical to the local interface. There are some differences between HTML and Plug-in based browsing.

admin: the logged user name.

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

Modify Password: click to change the password of the current user. Input the current password and set a new password in the popup window. Click "OK" button to save the new password.

Local Settings (Only available on Web-Client Based): click to change the local settings. Set the snapshot number, path and record path as shown below. Click "Apply" button to save the settings.

12.8.1 Remote Live-View

Click "Live Display" in the remote interface. The live-view interface is divided to four areas as marked in the following pictures.

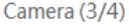
HTML Based Web-Client

- **Start Preview**

Select a window in the preview area and click one of the online cameras on the left panel to start live-view of the camera in the selected window. You can click in the general tool bar to fill all the video windows with live video cameras (with the order of cameras appearing on the left side).

➢ **Left Panel Introduction**

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

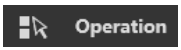
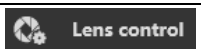
Web-Client Version	HTTP Version	Meaning
		to view the added cameras. You can view the number of the added cameras and the online cameras. For instance,  means that 3 cameras are online out of total of 4 added cameras. You can input the camera name in the search box and click to search the camera. Click to refresh the camera list.
		View the created in-channel groups. The upper area of the left panel displays all the groups and the lower area displays the cameras in the group.
		View and apply customized display views created on the local interface

➢ **Tool Bar Introduction**

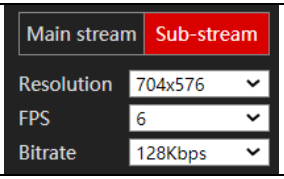
Web-Client Version	HTTP Version	Meaning
	N/A	Screen split mode button.
N/A		Change the display mode to 1/4ch
		Click to disable the OSD. Click to enable OSD.
		Full screen mode. When in full screen right click to exit back to normal mode.
	N/A	Select “All Main Stream” or “All Sub Stream” to set the stream of all the cameras together.
		Manual alarm button. Click it to open the selection window. From there manually trigger and clear the alarm-out.
		Fill all windows with live view cameras
		Close all the viewed cameras.
		Start local recording. Click to stop recording.
	N/A	Enable audio out to the device.

➢ **Right Panel Introduction**

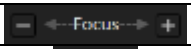
Click ‹ on the right panel to show the panel and › to hide the panel.
It contains 5 menus (Depending on HTTP/Web-Client) as follows:

Web-Client Version	HTTP Version	Meaning
		Operations menu: Perform basic operations, switch between main/sub-stream and control the sub-stream
		Lens Control Menu: Control MVF lens cameras
		View and apply customized display views created on the local interface
	N/A	Fish-Eye dewarping
N/A		AI analytics and object detection

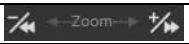
Operation panel introduction:

Web-Client Version	HTTP Version	Meaning
		Save local snapshot.
	N/A	Start local recording in the viewed resolution; click again to stop recording.
	N/A	Start 2 Way Audio
		Digital zoom the image. While zoomed in, left click and drag the mouse on the image to scroll within the image.
		Digital zoom out.
		Close the viewed camera.
		Start Manual remote recording (On the recording device)
		Original video proportions
		Enable audio. Once enabled, drag the slider bar to adjust the volume.
		Manually set the camera's live-view and local record stream to main stream (For manual record);
		Manually set the camera's live-view and local record stream to sub-stream (For manual record). While in sub-stream you can quickly set the resolution, FPS and bitrate and click "Apply" to save the settings.

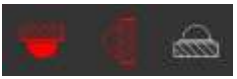
Lens Control panel introduction:

Button	Meaning
	Zoom In/Out
	Manual Focus
	One Key Focus
	Refocus when switching between day/night

PTZ panel introduction:

Button	Meaning
	Click / / / / / / / / to rotate the dome; click to stop rotating the dome.
	Drag the slider to adjust the movement speed.
	Zoom in/out camera image.
	Increase/ decrease the focal length.
	Open/Close iris.
	View the preset list. Click the call button in the list to call the preset.
	View the cruise list. Click the call/stop buttons in the list to start or stop the cruise.

Fish-Eye panel introduction (Available only on Plug-in based web-Interface):

Button	Meaning
	Set the installation mode of the camera (Ceiling, Wall, Desktop)
	Set the required dewarp mode for the camera video.

Remote Playback

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

① Choose the record event types and target cameras on the left panel.

② Set the search date/time on the calendar beside the time scale.

③ Click to search for record data.

④ Click or directly click on the time scale to play the record.

The working method for the playback time scale is similar to that of the device’s local interface. Please refer to 8.2 Playback Interface Introduction for details.

Introduction of playback control buttons:

Button	Meaning
	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.
	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.
	Mark backup start time. Click the time scale and click on it to mark the start time.
	Mark backup end time. Click the time scale and click on it to mark the end time.
	Commence backup.
	View backup tasks status.
	Event list button. Click to view the record events in a list.

12.8.2 Remote Backup

Click “Backup” in the remote interface. You can back up records by event or by time.

- **By Event**

Mark the record type on the left side of the interface. Click to set the start time and end time; mark the desired cameras and click on the right side to search the record (the searched data will be displayed in a list); Mark the record data you wish to backup and click the “Backup” button.

- **By Time**

Click to set the start and end times on the left side of the interface; choose the desired cameras and click on the right side to commence backup.

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

12.8.3 Remote Configuration

Click “Function Panel” in the remote interface and configure the camera, record, alarm, disk, network, account and authority and system of the device remotely. All of these settings are identical to the device local interface. See the configuration chapters of the device local interface for details.

Appendix A: FAQ

Q1. Why can't I find the HDD?

a. Please confirm that the power and SATA cables are connected firmly to the HDD.
b. Make sure that you use the power adaptor supplied with the device.
c. Make sure the HDD/s are compatible with the device. See Appendix C: Compatible Device List for details.
d. The HDD might have a technical fault. Try to replace the HDD and try again.

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

a. If you have problems with IP Cameras:
   a) Check that the resolutions and coding of the cameras are supported by the device.
   b) Check that the network cables of the IP camera and device are both connected properly.
   c) Check that the network parameters of the device and camera are set correctly and that both the device and the cameras are on the same network segment.
   d) Try connecting to the IPC directly from a PC to confirm it is working properly.
   e) Please make sure the network and the switch both works normally.
b. If you have problems with analog cameras:
   a) Check that the camera is powered up and working.
   b) Confirm that the device and camera are both working on the same video system (PAL/NTSC)
   c) Confirm that the camera's resolution and technology are supported by the device.
   d) Confirm that the camera is working using a technician monitor.

Q3. There is no image on the screen after boot-up.

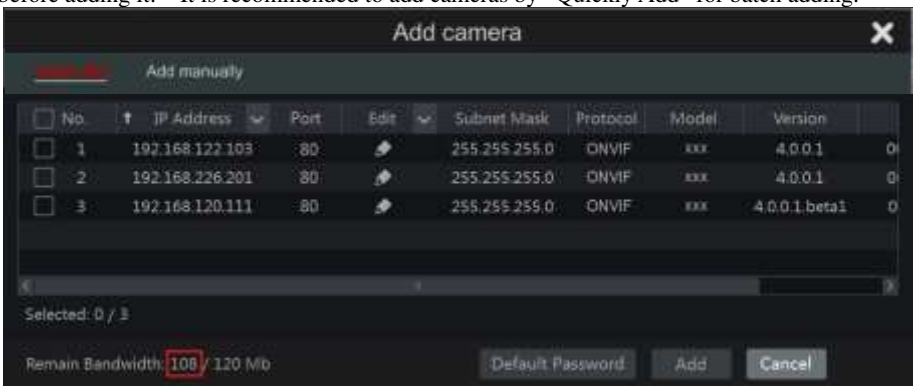
a. Please make sure the screen, HDMI or VGA cables are good and well connected.
b. Try clicking and holding the right mouse button for 6 seconds, then release it.
c. Please make sure the screen supports the minimum resolution of 1280*1024, 1920*1080 or 3840*2160 (4K*2K). Please change a screen to any screen supporting 1280*1024, 1920*1080 or 3840*2160 resolution and reboot the device.

Q4. Forget the password?

a. In case you forgot the password of the administrator ***admin*** can be reset through "Security Question" feature.
Click "Edit Security Question" button in the login window and enter the corresponding answer of the selected question in the popup window, the password of ***admin*** will be reset to ***123456*** by default. If you forget the answer of the question or you didn't configure it, please contact Provision-ISR's technical support for assistance.
b. The passwords of other users can be reset by the super administrator ***admin***, please refer to 10.1.2 Edit User for details.

Q5. The device refuses to add cameras while it still has available channels?

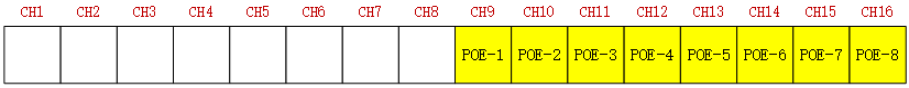
The device is limited by both number of channels and bandwidth. You can see the bandwidth status on the bottom left of the "add camera" interface. In case you reach the bandwidth limit while you still have available channels – you will need to reduce the bit-rate of the camera before adding it. It is recommended to add cameras by "Quickly Add" for batch adding.



Q6. The IP cameras connected to the NVR's PoE port cannot be displayed automatically in the camera list, why?

a. Please check whether the channel assigned to the PoE port is occupied by another IP camera that was added through network.

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

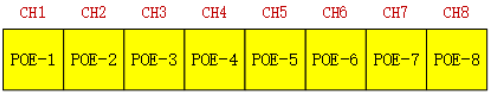


When you add IP cameras through network, the IP cameras will occupy the channels from CH1, CH2, CH3, CH4 and so forth. If you directly connect the IP cameras to the PoE ports of the NVR, the IP cameras will occupy the resource from CH9 to CH16 according to the number of the PoE port each IP camera is connecting to.

Supposing that 12 CH IP cameras have been added to the NVR 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 because it is conflicting with the manually added cameras; if you wish to connect it to PoE1, PoE2, PoE3 or PoE4, you should first delete the IP camera which occupies the PoE port resource and reconnect it to the PoE port.

- Take the 8 CH NVR 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.



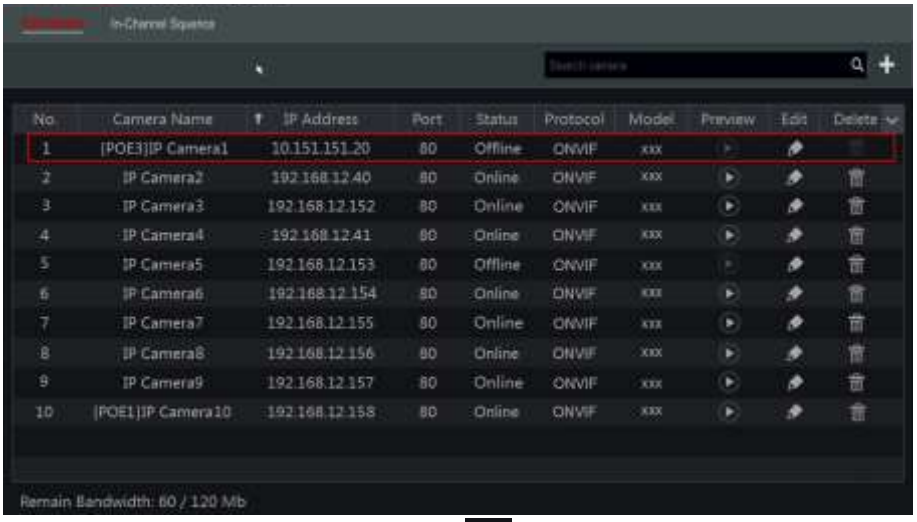
b. Please make sure that the internal ethernet port and the IP camera are in the same network segment.

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 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.

Q7. The IP camera connected to the PoE port of the NVR through ONVIF protocol. It 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 (input the correct username and password of the IP camera in the popup window and click "OK" button).



② Go to the live preview interface and 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 are formatted.

b. Confirm that the record schedule has not been set in manual record mode. Please refer to 7.3.2 Record Schedule Configuration for details.

c. Confirm that the HDD is not full and that "Recycle Record" is enabled. Check the HDD information from Disk Management and if required, please enable the recycle function (please see 7.1.2 Advanced Configuration for details).

d. There is no disk assigned to a group but there are cameras in that group. Please add at least one disk to the group. Refer to 7.5.1 Storage Mode Configuration for details.

e. The HDD might have a technical fault. Try to replace the HDD and try again.

Q9. I fail to access the device remotely through web-browser.

a. Please make sure that you use supported web-browser (browsers supporting NPAPI plug-ins are supported)

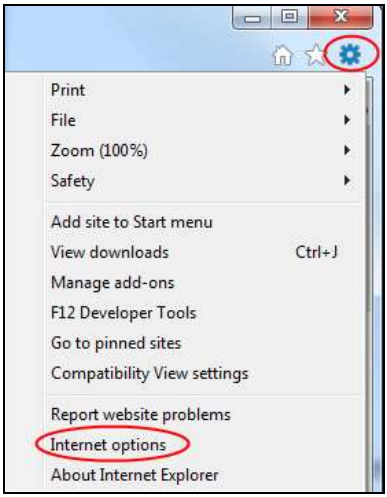
b. Please check whether the PC has an enabled firewall or antivirus software. If so, try to disable it and try to access the device again.

c. The Allow & block lists might be active in "Account and Authority" setting. The PC you are using may be in the block list or out of the allow list and cannot access the device remotely.

Q10. ActiveX control cannot be downloaded.

a. IE browser blocks ActiveX controls. Please fix it by following 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 Click "OK" to finish setup.

b. Other plug-ins or anti-virus may block the ActiveX. If the problem persists, please try to disable it.

Fig 10-1

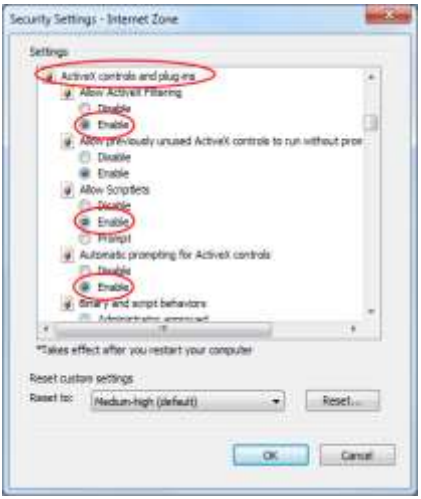


Fig 10-2

Q11. How to play the backup file?

a. If you made the backup by AVI format – it can be played in all common media players.

- If you made the backup by private format, the device will create a RPAS package along with the backup data. Extract the "RPAS.zip" and click "RPAS.exe" to set up RPAS. After the setup is completed, open the RPAS player and click "Open Folder" button 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 on the device. Please see 7.1.1 Mode Configuration and 7.2 Encode Parameters Setting for details.***

b. Record backed up through can only be backed up using AVI format.

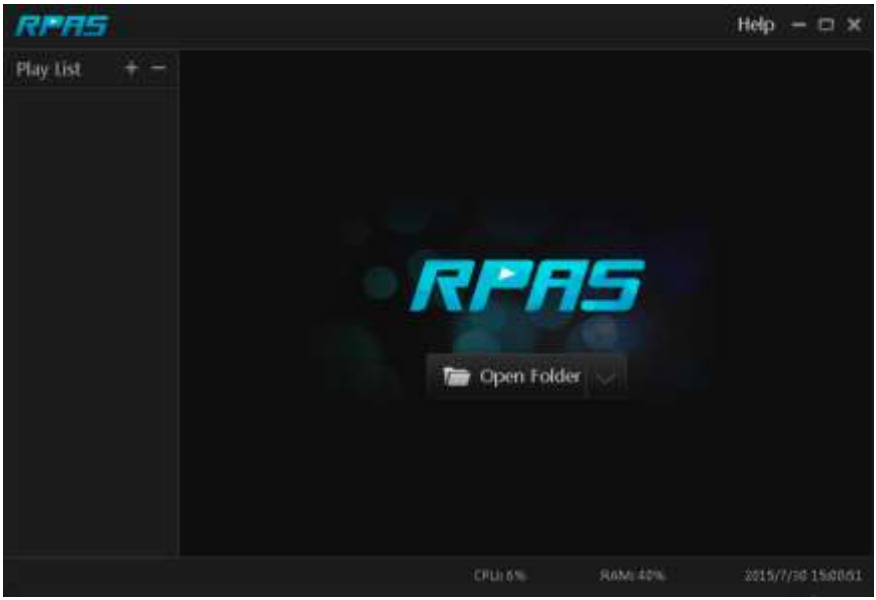


Fig 11-1

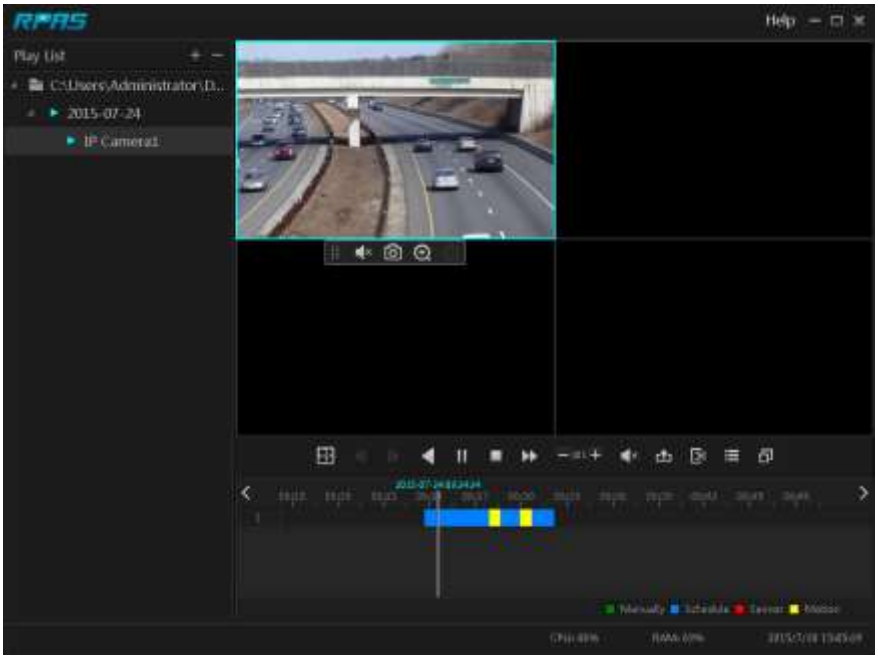


Fig 11-2

Appendix B: Calculate Recording Capacity

The recording capacity is mainly up to the record resolution, record stream and bitrate. Different image quality parameters will take different disk capacities 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/Hour)	Used Space (MB/Day)
10240	4500	108000
8192	3600	86400
6144	2700	64800
4096	1800	43200
3072	1350	32400
2048	900	21600
1024	450	10800
768	337.5	8100
512	225	5400
384	168.75	4050
256	112.5	2700

The table below shows the recording capacity requirements for record storage of 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 device recording 24 hours per day and the record stores for 30 days. The device 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%)).

Appendix C: RAID Types.

RAID0: Splits data evenly across two or more disks, without parity information, redundancy, or fault tolerance.

- Minimum Disks: 2
- Data Striping
- No storage "loss"
- No Redundancy.

RAID1: Mirrors data between 2 disks, creating 50% fault tolerance.

- 2 Disks Exactly
- Data Mirroring
- 50% Storage "Loss" for RAID capability.
- 1 out of the 2 disks can be damaged without loss of information.

RAID 5: $\frac{1}{n}$ of each data packet is stored on the reserved disk (n=number of disks)

- Minimum Disks: 3
- Data Stripping with Parity
- 1 Disk Storage "Loss".
- 1 Disk Failure Support.

RAID 6: $\frac{2}{n}$ of each data packet is stored on the reserved disk (n=number of disks)

- Minimum Disks: 4
- Data Stripping with Parity
- 2 Disk Storage "Loss".
- 2 Disk Failure Support.

RAID10: a combination of RAID0 and RAID1 (Data Stripping + Mirroring)

Features:

- Minimum Disks: 4 (Even Number)
- Data Stripping with Mirroring
- 50% Storage Usage.

In case there is a hot swap configured, it will automatically take place of a faulty disk in case of a fault.

For RAID to work properly - All disks must be in the same capacity.