User Manual

Network Video Recorder

Embedded NVR

PC NVR

■ This user manual includes the product warranty. Please keep it well so that it does not get lost.

Ver 2.11

Overview

This user manual describes the basics for installing and operating the NVR.

Customers using the equipment for the first time are advised to familiarize themselves with the manual and use it as it contains the names of each part of the product, functions, installation methods, menus, and other information necessary for use.

■ Please note that we are not responsible for any damage resulting from the use of products other than those provided and guided by our company.
■ When opening the product case and using it for trouble or repair, please contact the place where you purchased the product to receive expert assistance.
■ Before using an additional HDD or connecting an external storage device to the product, please first check whether it is compatible with this product before using it.
■ Precautions in case of abnormal termination.
If the product is powered off or operates abnormally while in operation, damage to the HDD may occur. For safe use, please go to "SETUP – SYSTEM MANAGE – POWER MANAGE" and click the "SYSTEM SHUTDOWN" button to perform normal shutdown.

[REF] This manual may have some differences depending on NVR function changes (improvements).
Please note that product descriptions and screen capture images may vary depending on the channel.

The menu descriptions and screen images in this manual are written based on 64 channels.

The menu and screen images for each channel are basically the same, and some functions (elevator server integration, fire detection, flame detection, intelligent function, etc.) may not be included depending on the product specifications.

Please note that there is no difference between channels regarding product functions and operations other than the above.

Safety Instructions

This explanation is intended to ensure user safety and prevent property damage.
Please be sure to read and use it correctly.

Warning	
Be sure to turn off the power to this device before installation. Turn it off and do not use multiple power plugs plugged in at the same time. There is a risk of fire, electric shock, or injury.	Various cables, such as power and network cables, may be bent excessively, so keep a distance of at least 15 cm from the wall and at least 5 cm from the side. There is a risk of fire, electric shock, or injury.
The inside of this device is powered. Do not open the lid, disassemble, or repair the product on your own. There may be a risk of fire, electric shock, or injury.	Do not install in places subject to excessive moisture, dust, or heat. There is a risk of electric shock, fire, or injury.
Always keep the area where this device is installed clean and free of dust. Especially when cleaning the device, wipe it with a dry towel and do not use organic solvents. It may cause electric shock or malfunction of the device.	The input voltage for operating this device must be within the specified voltage, and the power outlet must be grounded. Do not use electrical appliances such as refrigerators or washing machines in the same power outlet. It may cause abnormal heat generation, fire, or electric shock.
If strange noises or odors occur, immediately unplug the power plug and contact the place of purchase or after-sales service center.	Never place coffee, water, or other liquids on top of this device. If liquid spills and enters the product, it may cause malfunction or fire.
If you use the overwrite function for recorded data, previously saved data will be erased, so check again before using.	The default initial administrator ID is “admin” and the password is “1234”. For safe use, be sure to change the default password before use.

Caution	
Avoid installation in places with strong magnetism or radio waves, or close to wireless devices such as radios or TVs. Install it away from locations subject to magnets, radio waves, or strong vibrations.	Do not place heavy objects on the top of the product. It may cause a malfunction.
Strong shock and vibration can cause device failure, so be careful when using it.	To ensure proper ventilation of the product, be careful not to allow objects to enter the openings. It may cause a malfunction.
Please check whether the power and recording indicators on the front of the product are continuously lit.	Install on a place with a flat and stable floor, and do not install the main unit vertically. It may cause a malfunction.
When the HDD that stores recorded data reaches the end of its lifespan, the stored video data may be damaged and cannot be recovered. If the recorded data does not play back smoothly, stops, or makes noise, the HDD has reached the end of its life. Please contact the place of purchase or an after-sales service center for a replacement.	Connect the power cord to a grounded outlet before use. It may cause fire or electric shock.
It is recommended to install it in a place with appropriate ambient temperature and humidity. Avoid installing in places with high temperatures (above 40℃) and high humidity.	

- Table of Contents -

Overview and Main Features **6**
Components 7
Front and Rear 8
Connecting Device 21
Connecting Network 29
Starting the System 35
Live **37**
Custom Layout 43
E-MAP 49
Setup **56**
System Setup/Information 56
Date/time/language 57
Account Setup (admin/user) 58
System Manage 58
Upgrade/Export, Power Management 60
Device setting **61**
Camera list, Camera registration(Add source) 61
Camera Detail list, Camera Setting (Camera Title) 68
Camera Setting (Camera Image) 69
Camera Setting (Camera Color) 70
Camera Setting (Motion/Privacy Mask) 71
Camera Setting (Abnormal Sound/Fire Detect) 72
Camera Setting (Abnormal Temperature) 73
Camera Setting (Fisheye) 74
PTZ Setting, Camera Switch 75
HDD / Storage Device 76
Monitor 77
Dual Monitor Setting 78
Recording **80**
Recording Setting 80
Schedule Recording 81
Holiday Setting 82
Preserve Data 83
Network **84**
IP Address Setting 84
Multiple IP Address Setting (DHCP, Internal DHCP), RTSP Setting 85
RTSP Setting, DDNS, E-mail 86
E-mail 87
Event **88**
Sensor 88
Sensor (Camera Sensor) 89
Camera Event (Motion Detection) 90
Camera Event (Abnormal Sound Detection) 91
Camera Event (Fire Detection) 92
Camera (Abnormal Temperature) 93
Camera Event (Intelligent) 94
Audio Output 95
Video Loss, System 96
Event Search 97
External Device (Emergency Call) 98
External Device (Elevator) 99
Playback **100**
Playback (Event) 103
Backup 104
Product Warranty **106**

Overview and Main Features

Overview

This product can record and playback video from network cameras and provides PC monitoring and mobile monitoring from remote location through network.

- UI configuration with user convenience (settings, real-time, playback, status, log, etc.)
- 4K monitor resolution output
- Simultaneous playback function for all channels (4 ~ 128 channels)
- Supports various recording modes (motion, event, emergency, continuous, schedule, etc.)
- Supports high-resolution cameras (up to 12M)
- H.265 compression method improves bandwidth and saves HDD storage space
- Improved live and network picture quality
- Camera auto-registration function
- Equipped with up to 12 HDDs (limited to some models)
- Convenient HDD install / removal method (HDD can be install / remove from the front of the main body) (limited to some models)
- Supports remote setup and remote upgrade

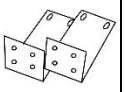
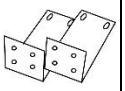
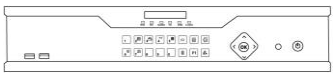
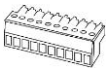
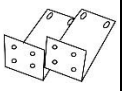
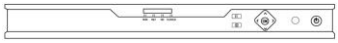
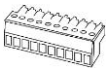
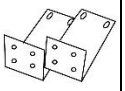
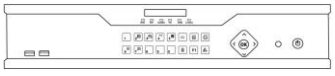
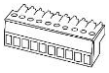
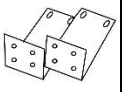
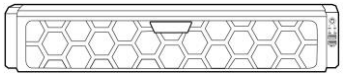
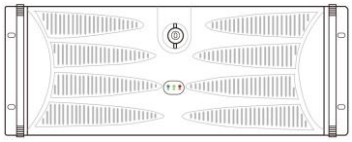
Main Features

- Integration with ANPR camera
- Integration with abnormal sound detection camera
- Integration with Fire detection / AI / Fisheye camera
- Emergency bell / Elevator server integration
- Event voice output
- User custom layout
- E-MAP
- MP4 backup

※ Please note that product specifications and supported functions may vary depending on the model.

Components

After purchasing the product, check whether the contents are present. If the contents are not available, please contact the place of purchase.

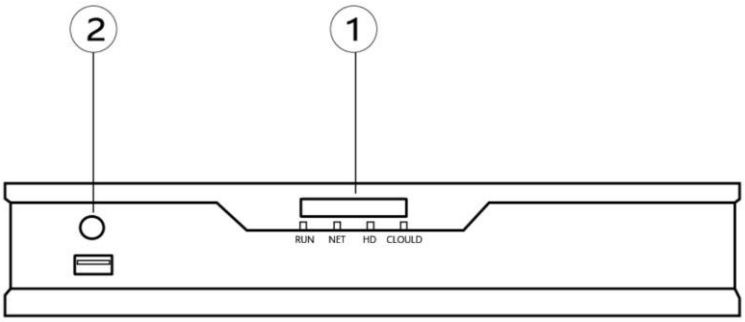
Product	Power cord	Adapter	HDD cable	HDD power cable	HDD mounting screw	Terminal block	Rack bracket	Mouse
 4CH						X		
 8CH		X				X		
 16CH		X						
 16CH (non-POE)								
 16/36/64 CH (308X Series)		X						
 16~128CH (512 Series)		X	X			X	X	
 PC NVR Series (16~128CH)		X				X	X	

※ Please note that some specifications may change depending on product standards.

Front and Rear

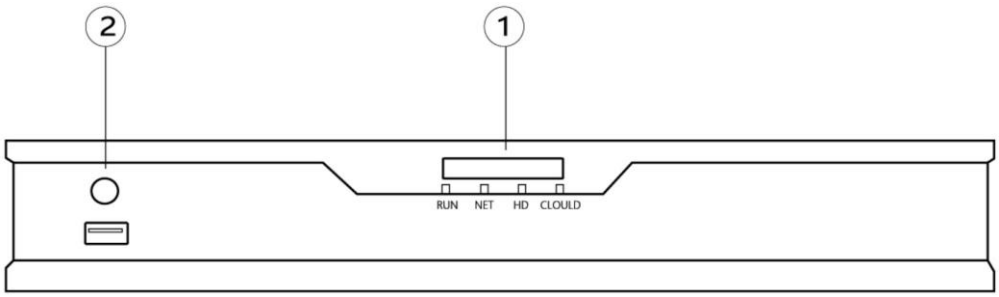
Front

4CH



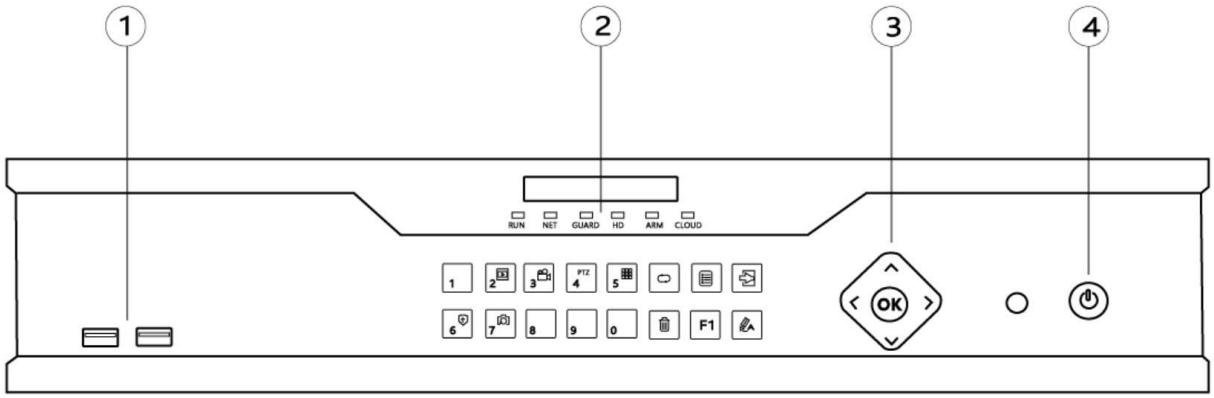
No.	Item	Description
①	LED lamp	RUN: Lights up when power is turned on.
		NET: Lights up when connected to network.
		HD: Lights up when saving HDD recording data.
		CLOUD: Lights up when connected to remote network (mobile, NVR Viewer etc.)
②	USB port	Connect USB device (memory stick, mouse etc.)

8CH



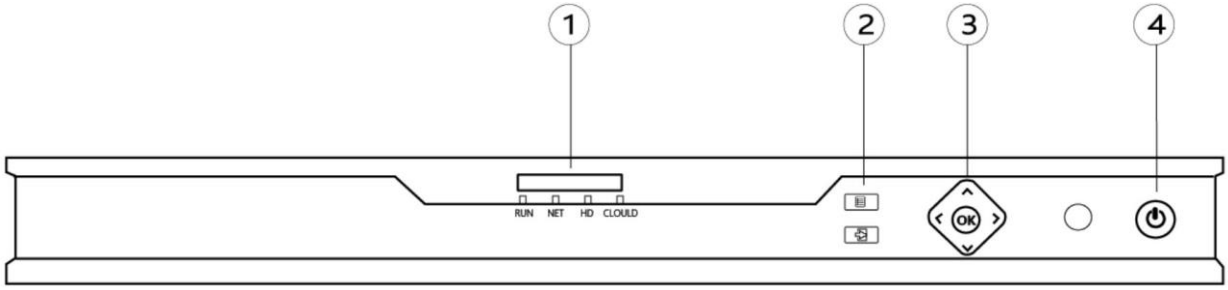
No.	Item	Description
①	LED lamp	RUN: Lights up when power is turned on.
		NET: Lights up when connected to network.
		HD: Lights up when saving HDD recording data.
		CLOUD: Lights up when connected to remote network (mobile, NVR Viewer etc.)
②	USB port	Connect USB device (memory stick, mouse etc.)

16CH



No.	Item	Description
①	USB port	Connect a USB device (memory stick, mouse etc.)
②	LED lamp	RUN: Lights up when power is turned on.
		NET: Lights up when connected to network.
		HD: Lights up when saving HDD recording data.
		ALM: Lights up when an alarm signal is output.
		CLOUD: Lights up when connected to remote network (mobile, NVR Viewer etc.)
	Numeric and Function button	Numeric buttons: Used for channel number and password input etc. Function buttons: Setup, Backup, emergency recording, split screen etc.
③	Direction and OK button	Direction buttons: move menu, OK button: select, run.
④	Power button	Power ON / OFF.

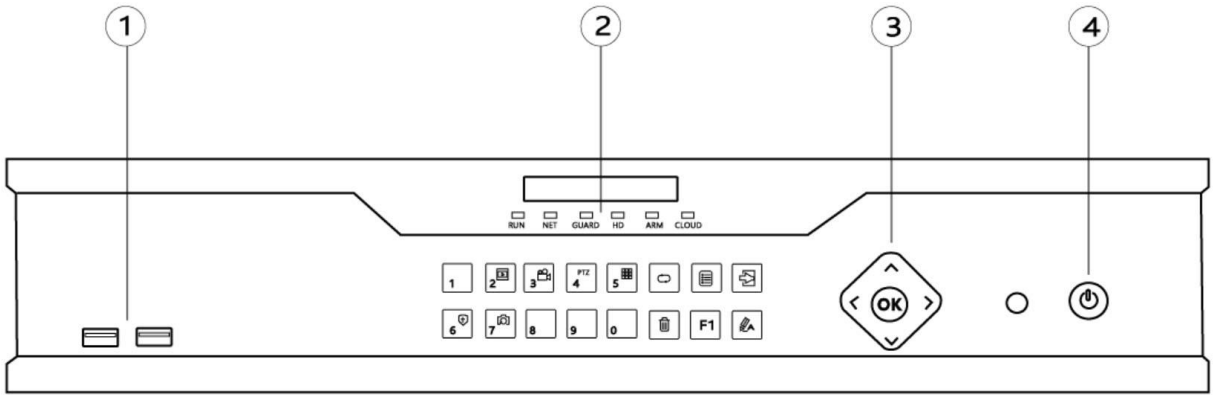
16CH (non-POE)



No.	Item	설명
①	LED lamp	RUN: Lights up when power is turned on.
		NET: Lights up when connected to network.
		HD: Lights up when saving HDD recording data.
		CLOUD: Lights up when connected to remote network (mobile, NVR Viewer etc.)
②	Function button	Menu and Exit.
③	Direction and OK button	Direction buttons: move menu, OK button: select, run.
④	Power button	Power ON / OFF.

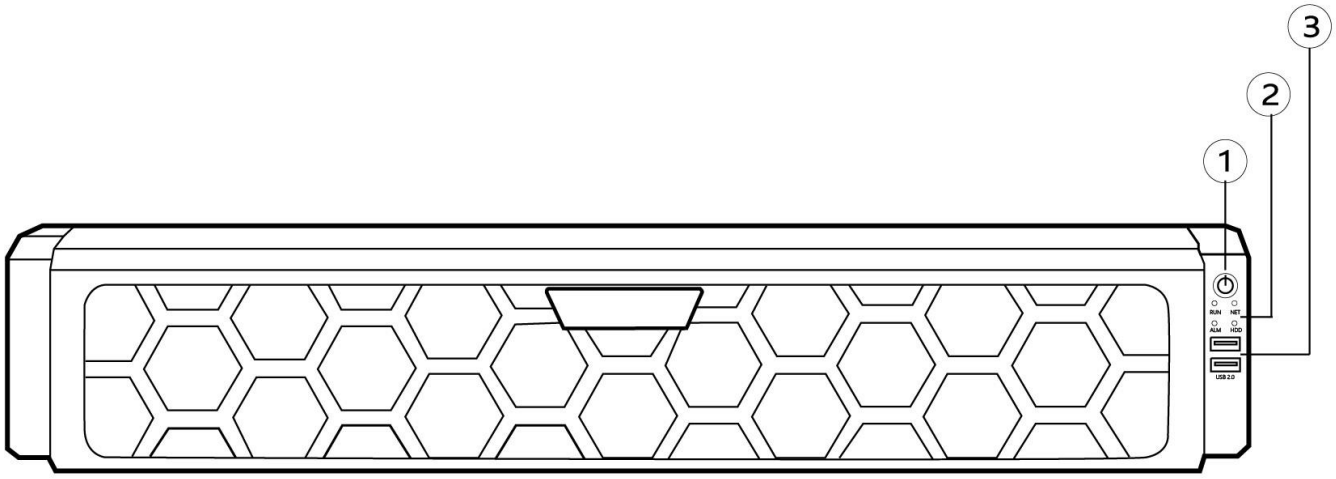
16/36/64CH

308X Series



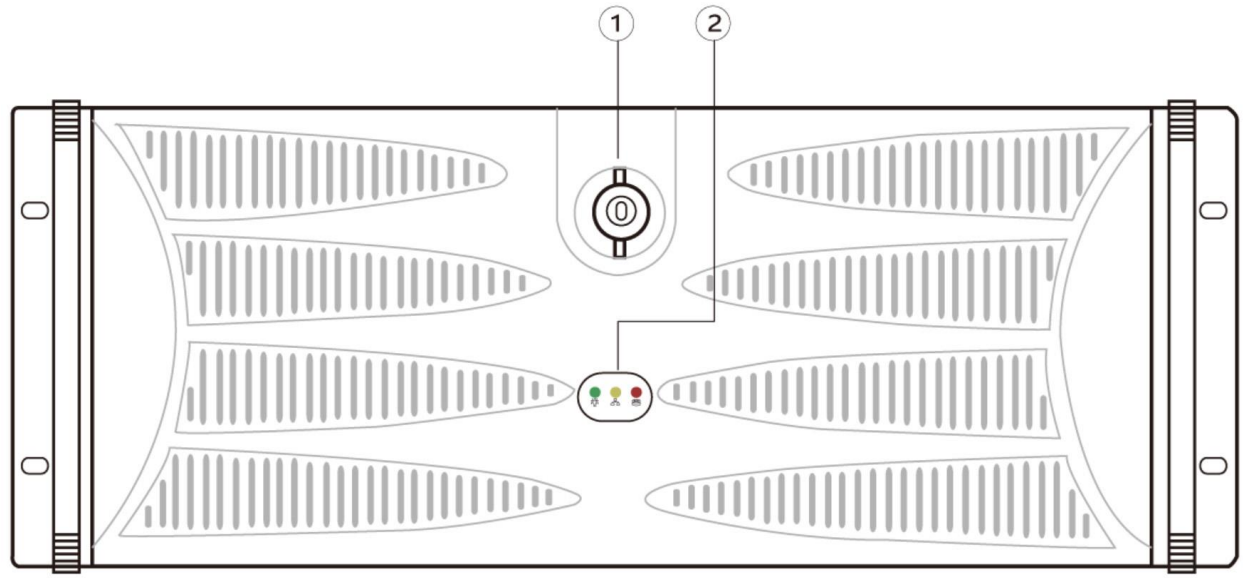
No.	Item	Description
①	USB port	Connect USB device (memory stick, mouse etc.)
②	LED lamp	RUN: Lights up when power is turned on.
		NET: Lights up when connected to network.
		HD: Lights up when saving HDD recording data.
		ALM: Lights up when an alarm signal is output.
		CLOUD: Lights up when connected to remote network (mobile, NVR Viewer etc.)
	Numeric and Function button	Numeric buttons: Used for channel number and password input etc. Function buttons: Setup, Backup, emergency recording, split screen etc.
③	Direction and OK button	Direction buttons: move menu, OK button: select, run.
④	Power button	Power ON / OFF.

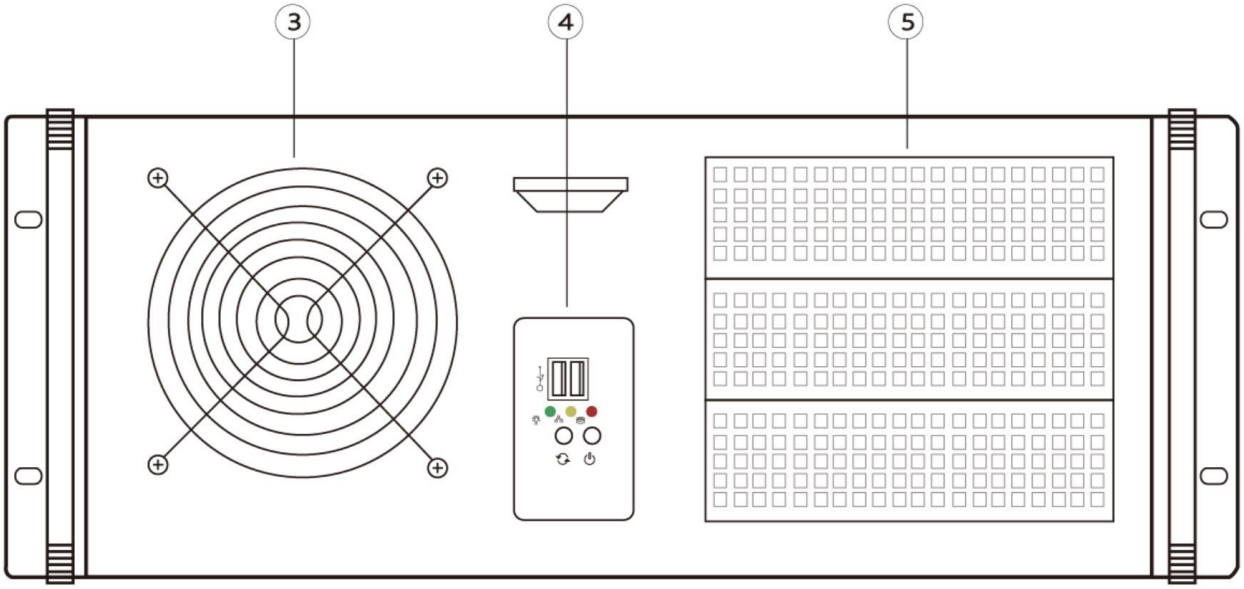
512 Series



No.	Item	Description	
①	Power button	Power ON / OFF.	
②	LED lamp	RUN: Lights up when power is turned on.	
		NET: Lights up when connected to network.	
		ALM: Lights up when an alarm signal is output.	
		HDD: Lights up when saving HDD recording data.	
③	USB port	Connect USB device (memory stick, mouse etc.)	

PC NVR Series

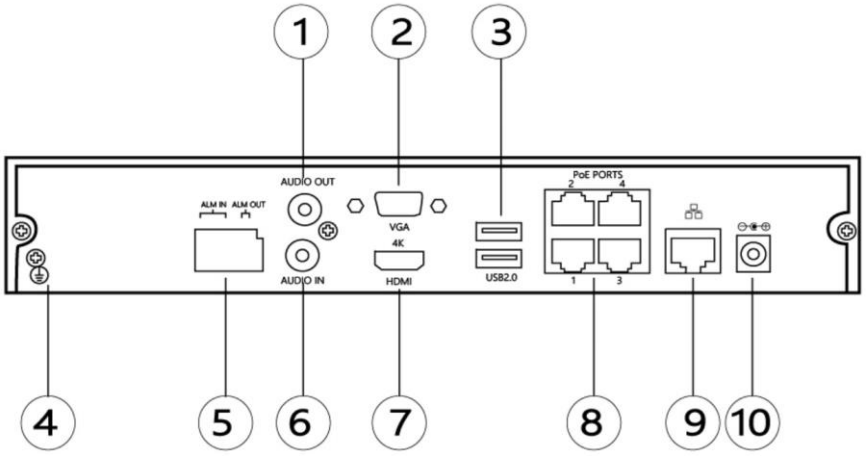




No.	Item	Description
①	Door Lock	Used to open and close the Front Door.
②	LED lamp	Power: Lights up when power is turned on.
		Network: Lights up when connected to network.
		HDD: Lights up when saving HDD recording data.
③	FAN	Ventilation hole of FAN.
④	USB port Power / Reset button	USB: Connect USB device (memory stick, mouse etc.)
		Power button: Power ON / OFF.
		Reset button: Used to restart NVR.
⑤	5.25" slot	Used when connecting 5.25" type device (CD/DVD-RW, etc.)

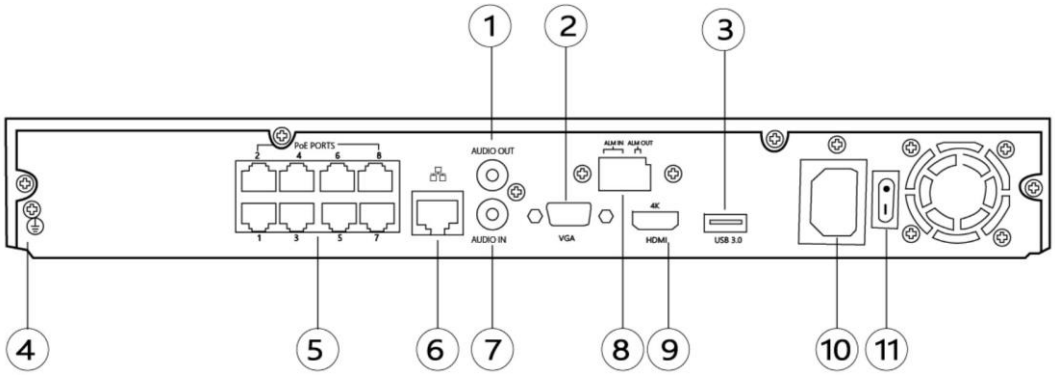
Rear

4CH



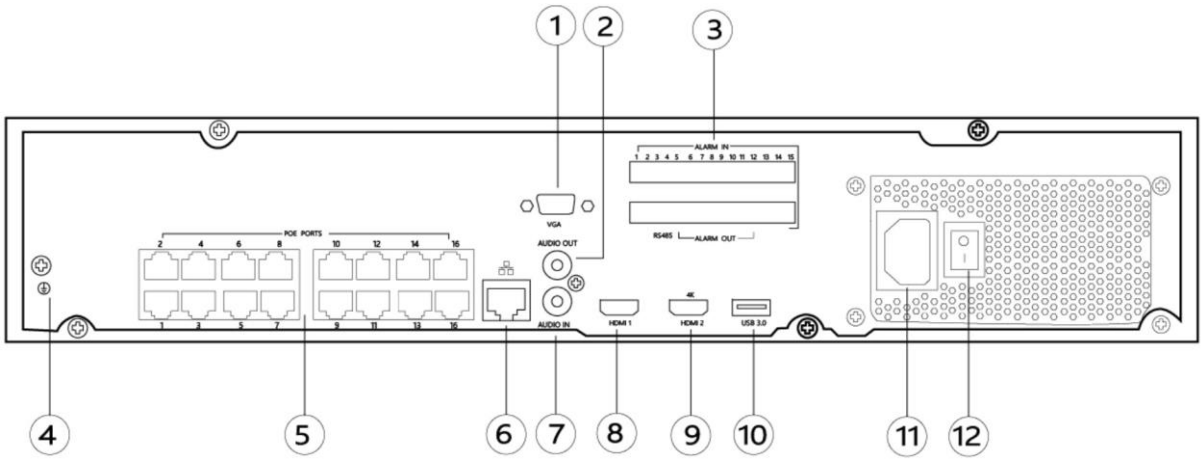
No.	Item	Description
①	AUDIO OUT	Audio output port.
②	VGA	Port to connect VGA monitor.
③	USB 2.0	Port to connect USB (2.0) device.
④	Grounding connection	Port to connect grounding cable.
⑤	ALARM IN ALARM OUT	ALARM IN: alarm input port. ALARM OUT: alarm output port.
⑥	AUDIO IN	Audio input port.
⑦	HDMI	Port to connect HDMI (4K) monitor.
⑧	POE PORT	Internal network connection port (IP camera and POE Switch).
⑨	NETWORK	External network connection port (IP camera and internet connection).
⑩	Adapter	Port to connect adapter power (48VDC/1.25A).

8CH



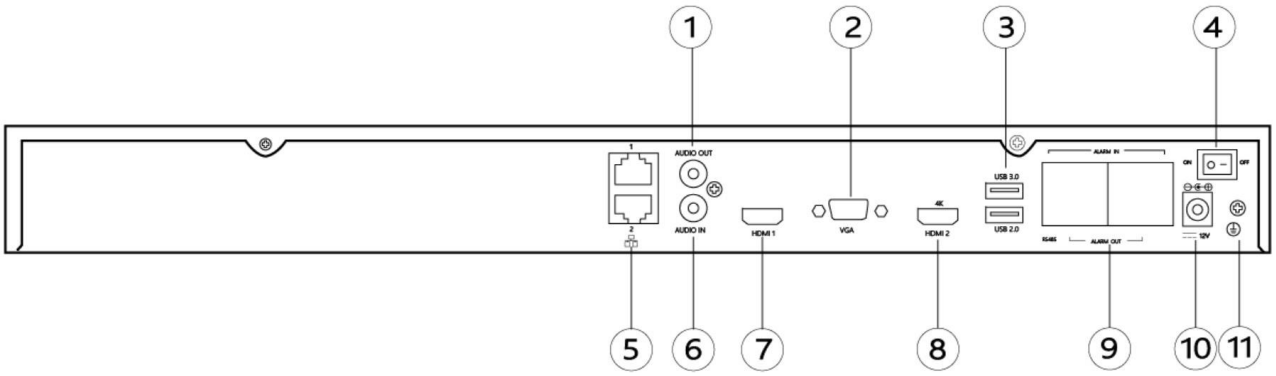
No.	Item	Description
①	AUDIO OUT	Audio output port.
②	VGA	Port to connect VGA monitor.
③	USB 3.0	Port to connect USB (3.0) device.
④	Grounding connection	Port to connect grounding cable.
⑤	POE PORT	Internal network connection port (IP camera and POE Switch).
⑥	NETWORK	External network connection port (IP camera and internet connection).
⑦	AUDIO IN	Audio input port.
⑧	ALARM IN ALARM OUT	ALARM IN: alarm input port. ALARM OUT: alarm output port.
⑨	HDMI	Port to connect HDMI (4K) monitor.
⑩	Power input	AC power input port.
⑪	POWER switch	Power ON / OFF switch.

16CH (POE)



No.	Item	Description
①	VGA	Port to connect VGA monitor.
②	AUDIO OUT	Audio output port.
③	ALARM IN ALARM OUT RS-485	ALARM IN: alarm input port. ALARM OUT: alarm output port. RS-485: port to connect PTZ camera.
④	Grounding connection	Port to connect grounding cable.
⑤	POE PORT	Internal network connection port (IP camera and POE Switch).
⑥	NETWORK	External network connection port (IP camera and internet connection).
⑦	AUDIO IN	Audio input port.
⑧	HDMI 1	Port to connect HDMI monitor.
⑨	HDMI 2	Port to connect HDMI (4K) monitor.
⑩	USB 3.0	Port to connect USB (3.0) device.
⑪	Power input	AC power input port.
⑫	POWER switch	Power ON / OFF switch.

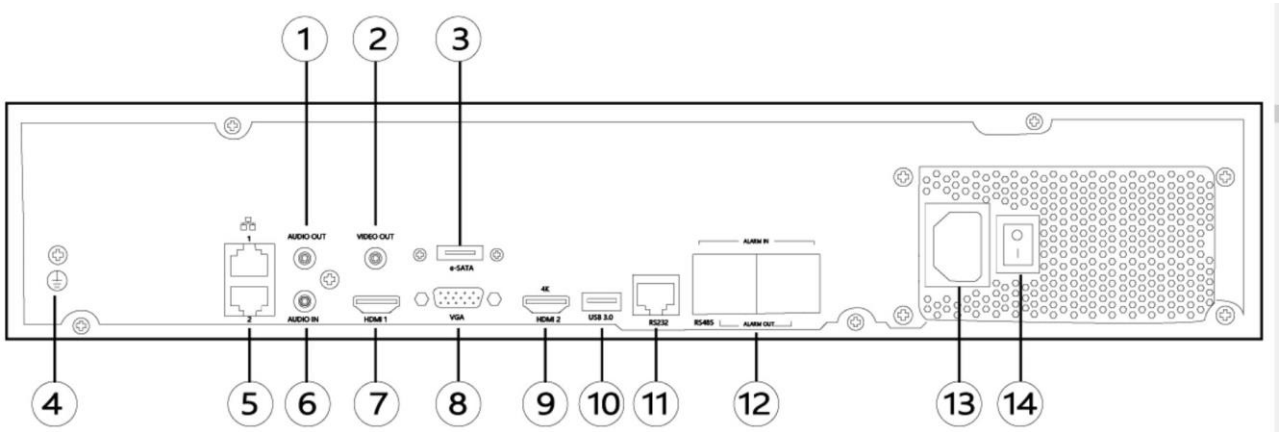
16CH (non-POE)



No.	Item	Description
①	AUDIO OUT	Audio output port.
②	VGA	Port to connect VGA monitor.
③	USB 2.0 / 3.0	Port to connect USB (2.0 / 3.0) device.
④	POWER switch	Power ON / OFF switch.
⑤	NETWORK	1: External network connection port (IP camera and internet connection). 2: Internal network connection port (IP camera and POE Switch).
⑥	AUDIO IN	Audio input port.
⑦	HDMI 1	Port to connect HDMI monitor.
⑧	HDMI 2	Port to connect HDMI (4K) monitor.
⑨	ALARM IN ALARM OUT RS-485	ALARM IN: alarm input port. ALARM OUT: alarm output port. RS-485: port to connect PTZ camera.
⑪	Adapt	Port to connect adapter power (12VDC/5A).
⑫	Grounding connection	Port to connect grounding cable.

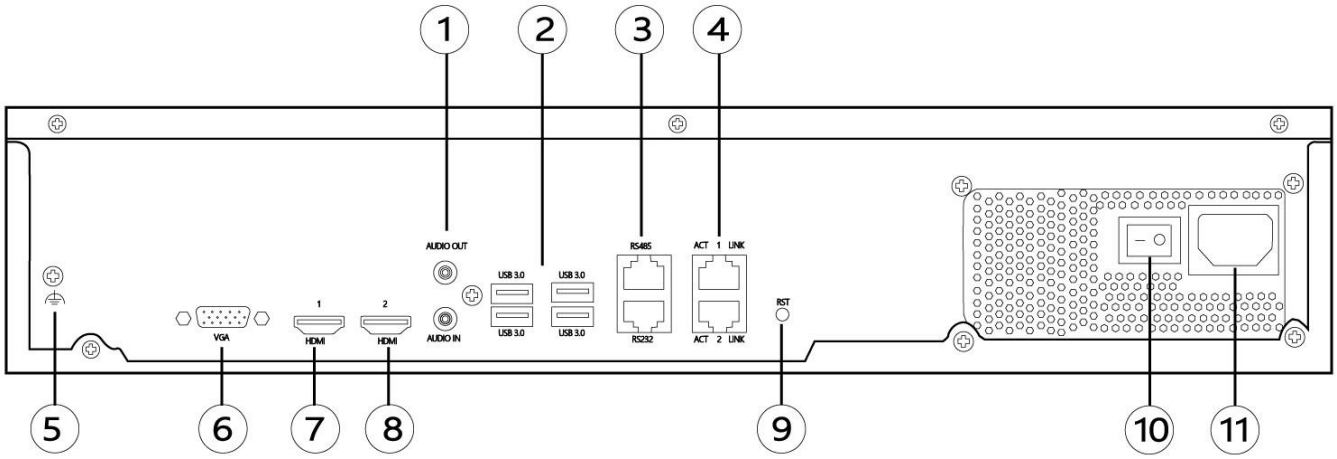
16/36/64CH

308X Series



No.	Item	Description
①	AUDIO OUT	Audio output port.
②	VIEO OUT	Composite video output port.
③	E-SATA	Port to connect E-SATA port.
④	Grounding connection	Port to connect grounding cable.
⑤	NETWORK	1: External network connection port (IP camera and internet connection). 2: Internal network connection port (IP camera and POE Switch).
⑥	AUDIO IN	Audio input port.
⑦	HDMI1	Port to connect HDMI monitor.
⑧	VGA	Port to connect VGA monitor.
⑨	HDMI2	Port to connect HDMI (4K) monitor.
⑩	USB 3.0	Port to connect USB (3.0) device.
⑪	RS-232	Port to connect to console.
⑫	ALARM IN ALARM OUT RS-485	ALARM IN: alarm input port. ALARM OUT: alarm output port. RS-485: port to connect PTZ camera.
⑬	Power input	AC power input port.
⑭	POWER switch	Power ON / OFF switch.

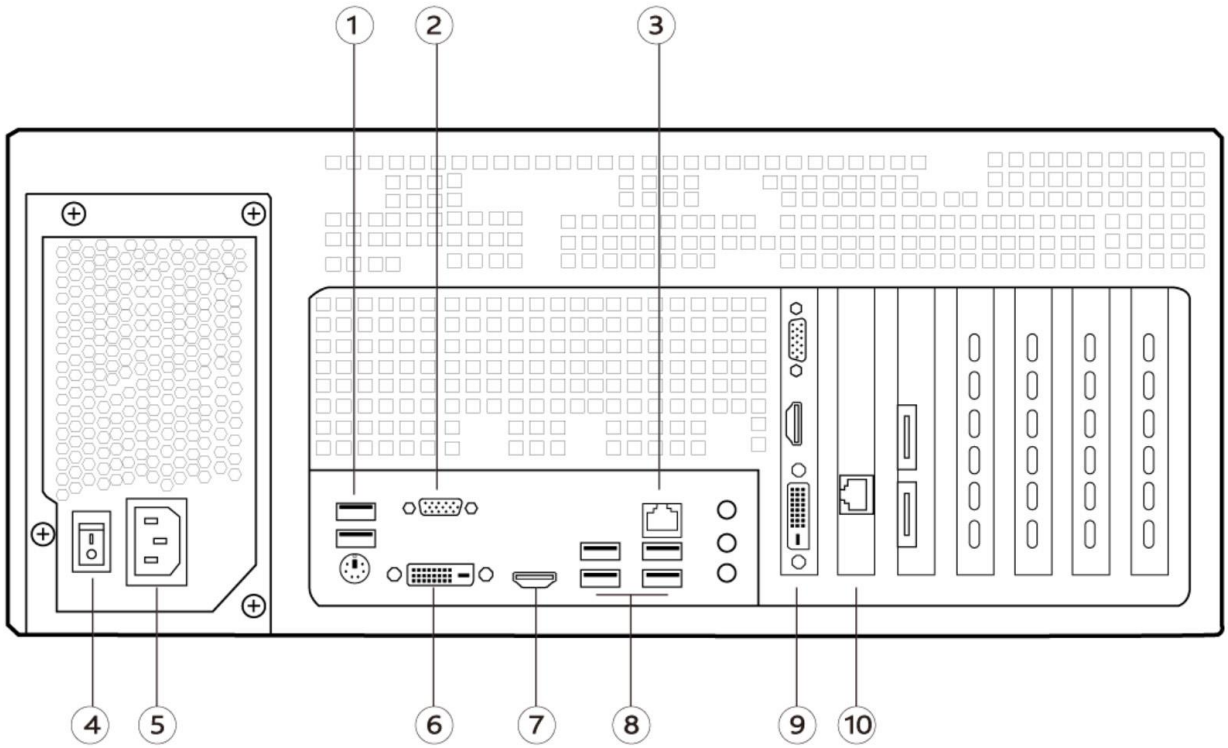
512 Series



No.	Item	Description
①	AUDIO IN/OUT	Audio input / output port.
②	USB 3.0	Port to connect USB (3.0) device.
③	RS485	Port to connect PTZ camera.
	RS232	Port to connect to console.
④	NETWORK	1: External network connection port (IP camera and internet connection). 2: Internal network connection port (IP camera and POE Switch).
⑤	Grounding connection	Port to connect grounding cable.
⑥	VGA	Port to connect VGA monitor.
⑦	HDMI1	Port to connect HDMI (4K) monitor.
⑧	HDMI2	Port to connect HDMI (4K) monitor.
⑨	RST	Reset button.
⑩	POWER switch	Power ON / OFF switch.
⑪	Power input	AC power input port.

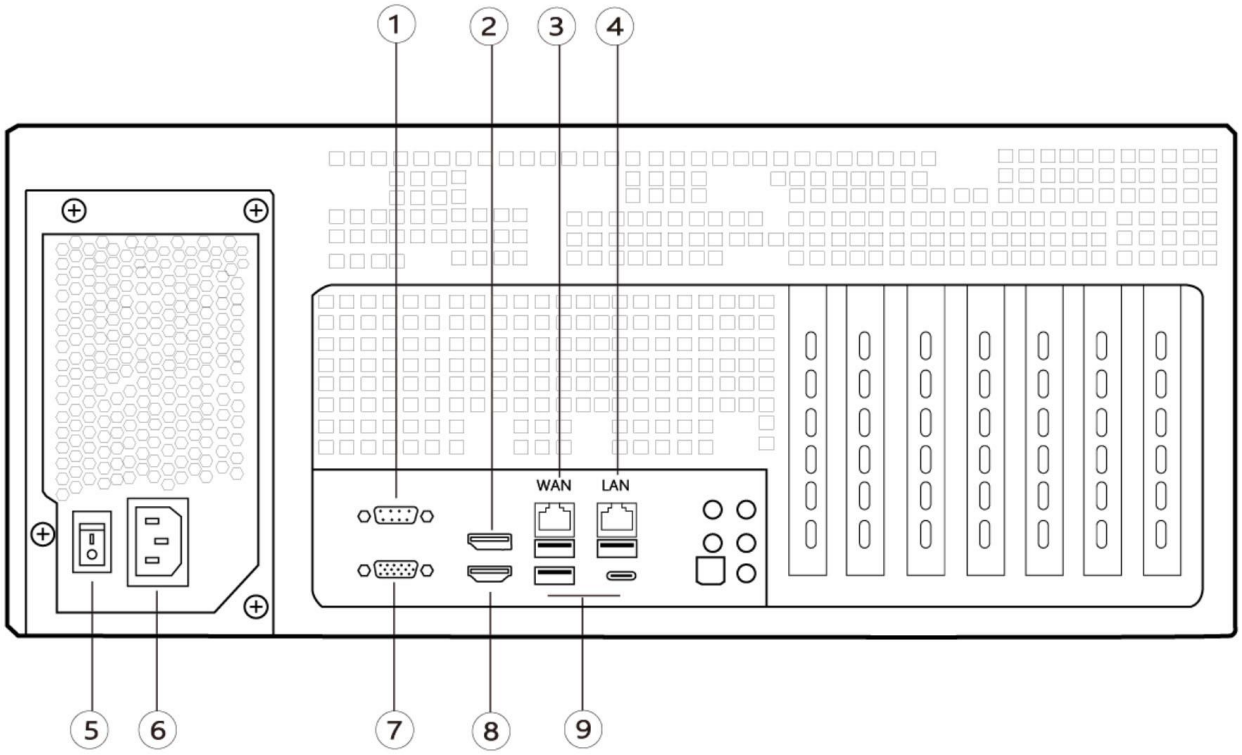
PC NVR Series

Type A



No.	Item	Description
①	USB 2.0	Port to connect USB (2.0) device.
②	VGA	Port to connect VGA monitor.
③	NETWORK	External network connection port (IP camera and internet connection).
④	POWER switch	Power ON / OFF switch.
⑤	Power input	AC power input port.
⑦	DVI	Port to connect DVI monitor.
⑦	HDMI	Port to connect HDMI monitor.
⑧	USB 3.0	Port to connect USB (3.0) device.
⑨	Graphic card	Port to connect VGA, HDMI, DVI monitor.
⑩	Network card	Internal network connection port (IP camera and POE Switch).

Type B

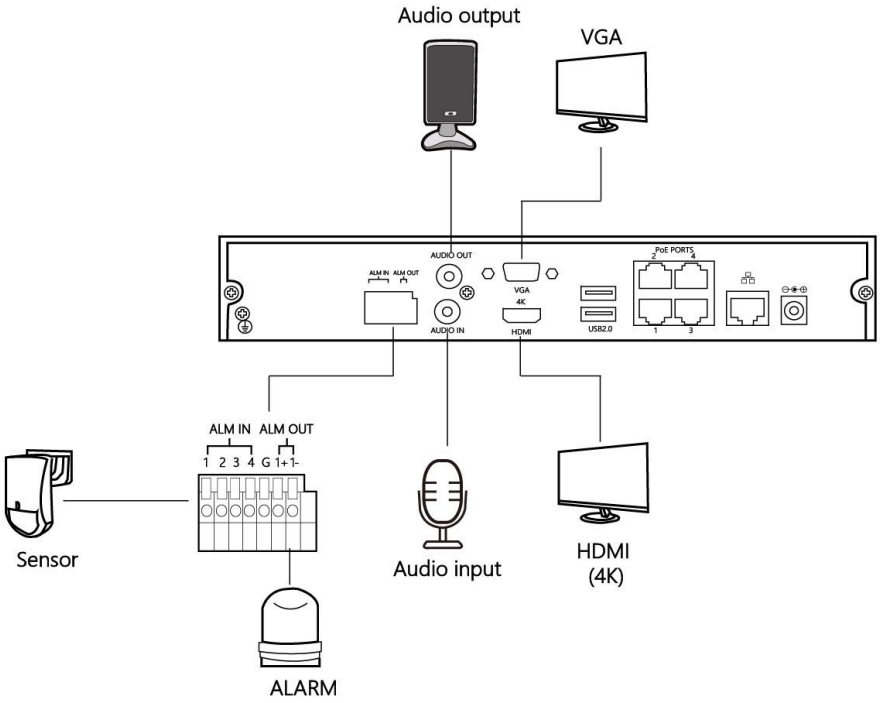


No.	Item	Description
①	Serial Port	Port to connect serial device.
②	Display Port	Port to connect display port monitor.
③	WAN	External network connection port (IP camera and internet connection).
④	LAN	Internal network connection port (IP camera and POE Switch).
⑤	POWER switch	Power ON / OFF switch.
⑥	Power input	AC power input port.
⑦	VGA	Port to connect VGA monitor.
⑧	HDMI	Port to connect HDMI monitor.
⑨	USB 3.0	Port to connect USB (3.0) device.

Connecting Device

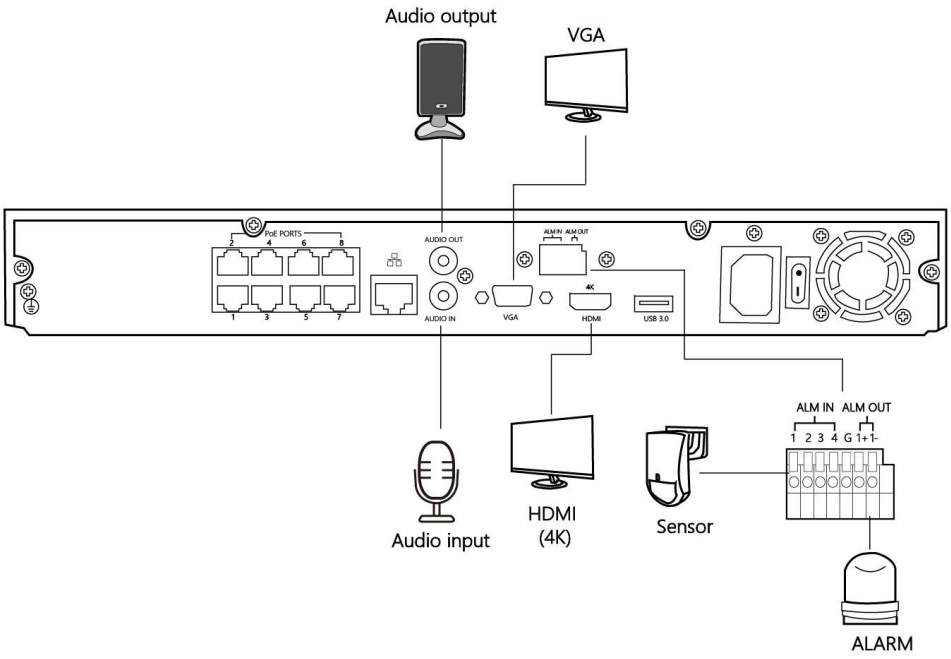
Connecting external device

4CH



- AUDIO IN: Audio input port (connect a mic.)
- AUDIO OUT: Audio output port (connect speaker.)
- VGA: VGA port (connect VGA monitor.)
- HDMI (4K): Connect HDMI monitor (Support up to 4K resolution.)
- ALARM IN: Sensor input port (connect various sensors, detectors, doors, etc.)
- ALARM OUT: Alarm output port (connect buzzers, lights, sirens, etc.)

8CH



- AUDIO IN: Audio input port (connect a mic.)
- AUDIO OUT: Audio output port (connect speaker.)
- VGA: VGA port (connect VGA monitor.)
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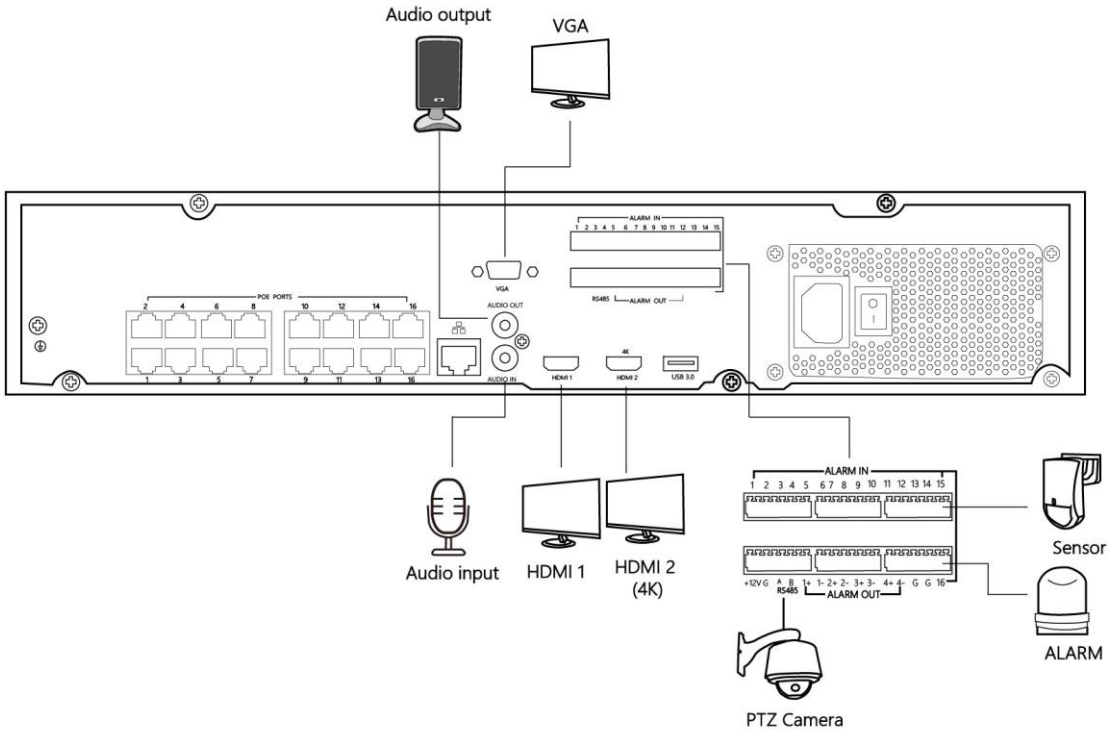
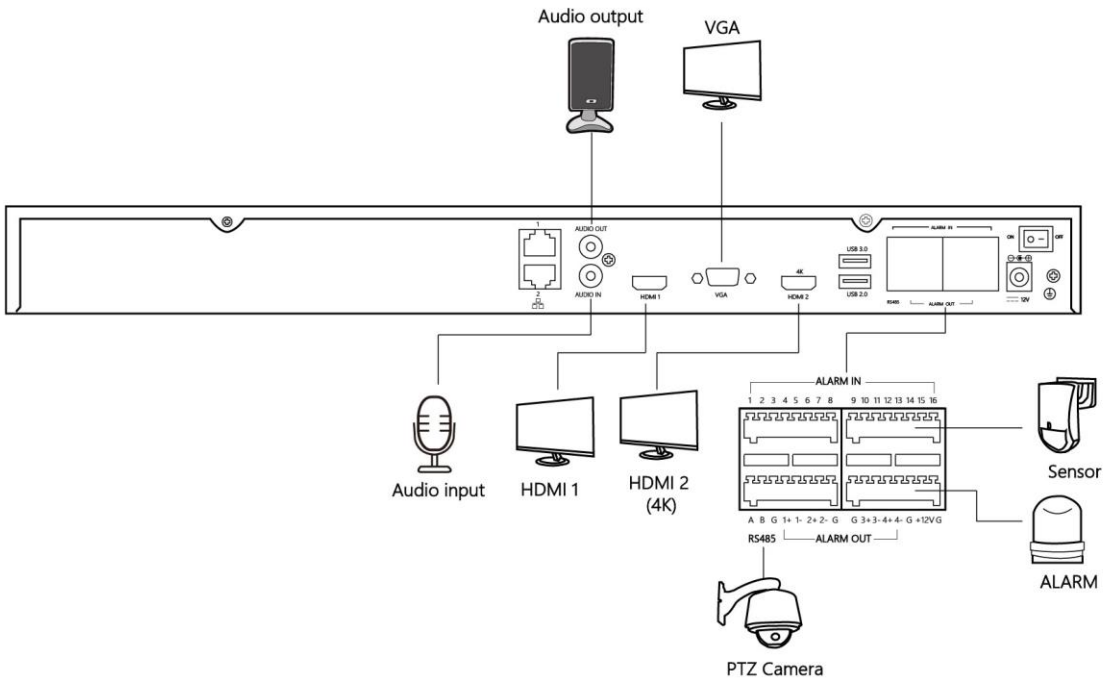
- ALARM IN: Sensor input port (connect various sensors, detectors, doors, etc.)
- ALARM OUT: Alarm output port (connect buzzers, lights, sirens, etc.)

16CH (POE)



- AUDIO IN: Audio input port (connect a mic.)
- AUDIO OUT: Audio output port (connect speaker).
- VGA: VGA port (connect VGA monitor).
- HDMI1: Connect HDMI monitor (Support up to FHD resolution.)
- HDMI2 (4K): Connect HDMI monitor (Support up to 4K resolution.)
- ALARM IN: Sensor input port (connect various sensors, detectors, doors, etc.)
- ALARM OUT: Alarm output port (connect buzzers, lights, sirens, etc.)
- RS-485: Connect when using PTZ camera or keyboard.

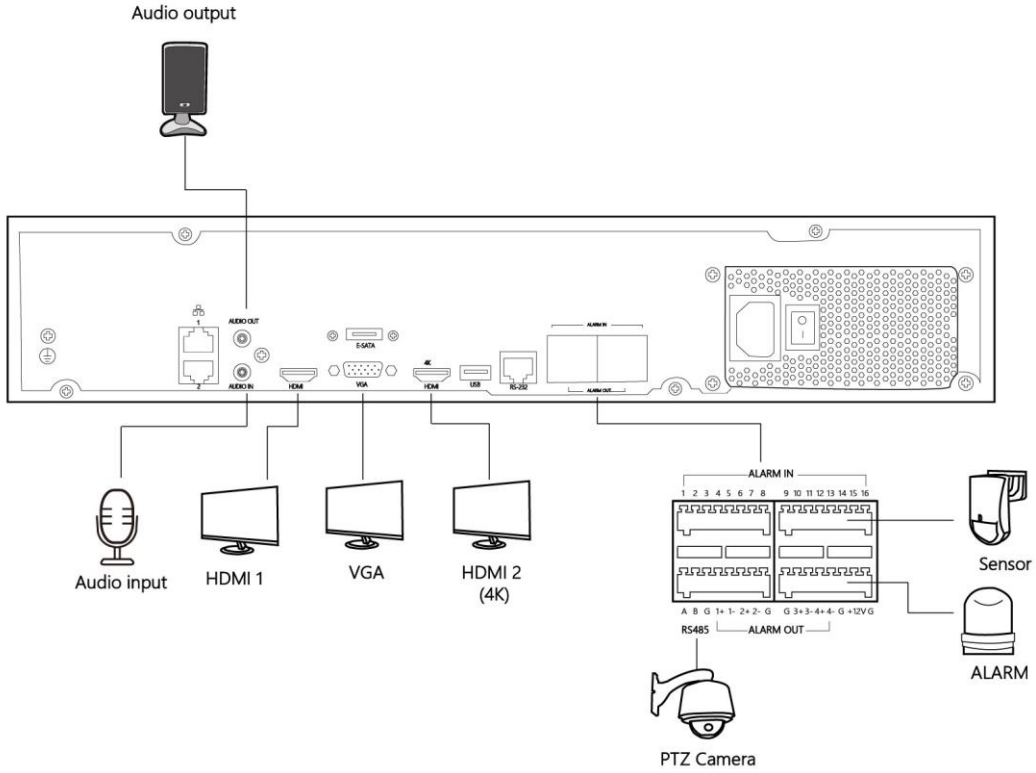
16CH (non-POE)



- AUDIO IN: Audio input port (connect a mic.)
- AUDIO OUT: Audio output port (connect speaker).
- VGA: VGA port (connect VGA monitor).
- HDMI1: Connect HDMI monitor (Support up to FHD resolution.)
- HDMI2 (4K): Connect HDMI monitor (Support up to 4K resolution.)
- ALARM IN: Sensor input port (connect various sensors, detectors, doors, etc.)
- ALARM OUT: Alarm output port (connect buzzers, lights, sirens, etc.)
- RS-485: Connect when using PTZ camera or keyboard.

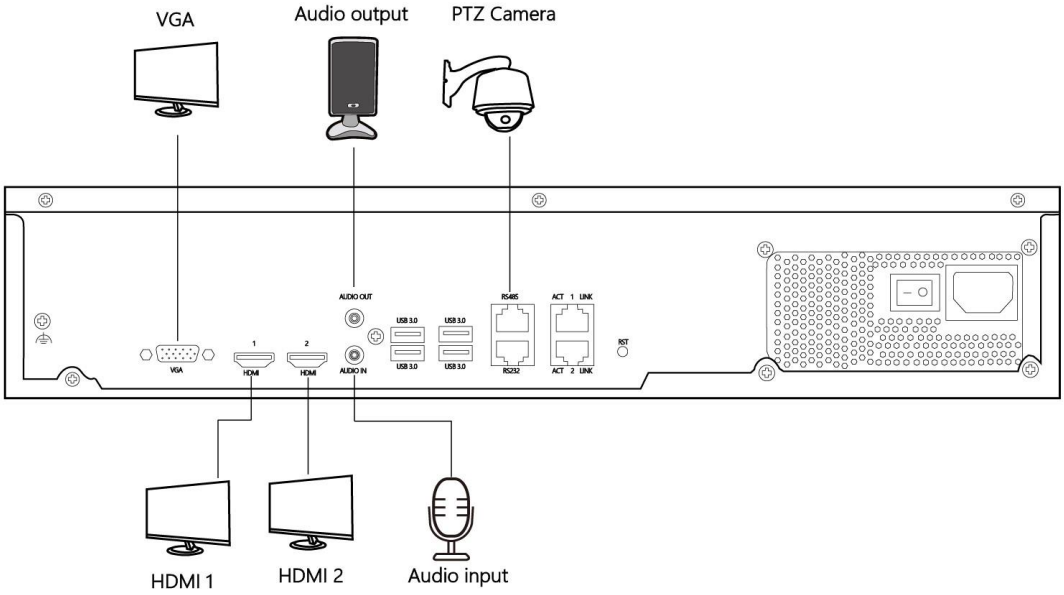
16/36/64CH

308X Series



- AUDIO IN: Audio input port (connect a mic.)
- AUDIO OUT: Audio output port (connect speaker).
- VGA: VGA port (connect VGA monitor).
- HDMI1: Connect HDMI monitor (Support up to FHD resolution.)
- HDMI2 (4K): Connect HDMI monitor (Support up to 4K resolution.)
- ALARM IN: Sensor input port (connect various sensors, detectors, doors, etc.)
- ALARM OUT: Alarm output port (connect buzzers, lights, sirens, etc.)
- RS-485: Connect when using PTZ camera or keyboard.

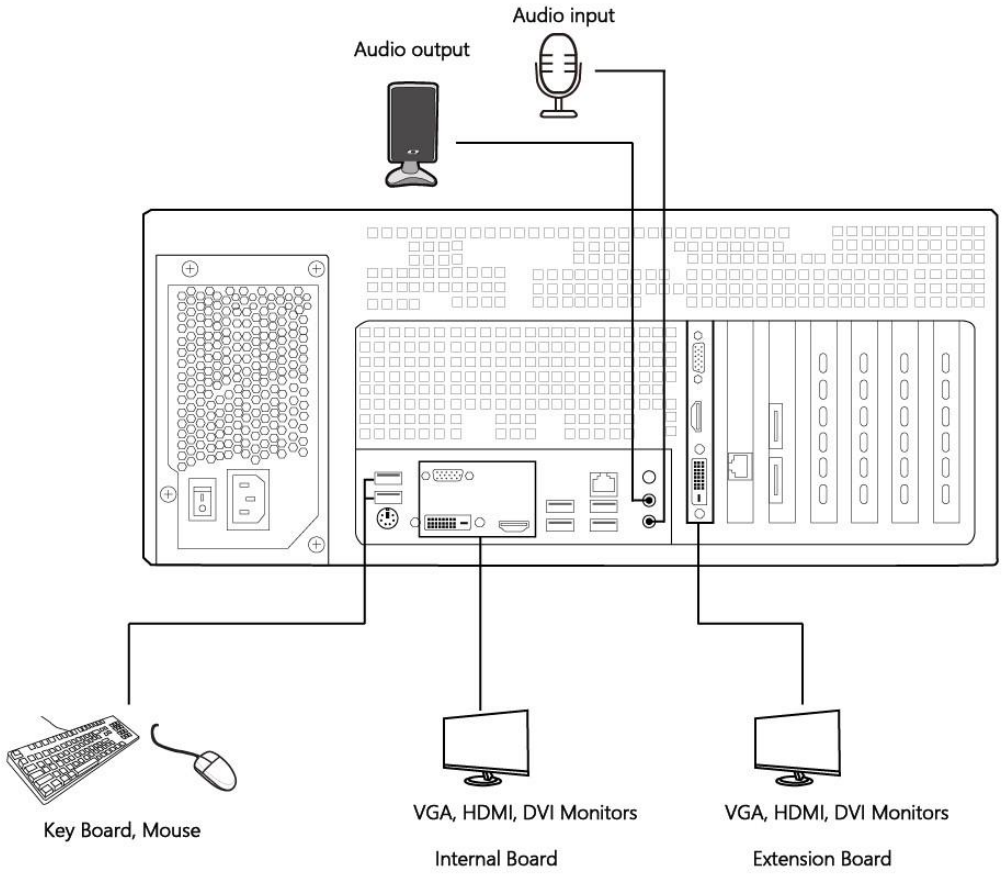
512 Series



- AUDIO IN: Audio input port (connect a mic.)
- AUDIO OUT: Audio output port (connect speaker).
- VGA: VGA port (connect VGA monitor).
- HDMI1: Connect HDMI monitor.
- HDMI2: Connect HDMI monitor.
- RS-485: Connect when using PTZ camera or keyboard.

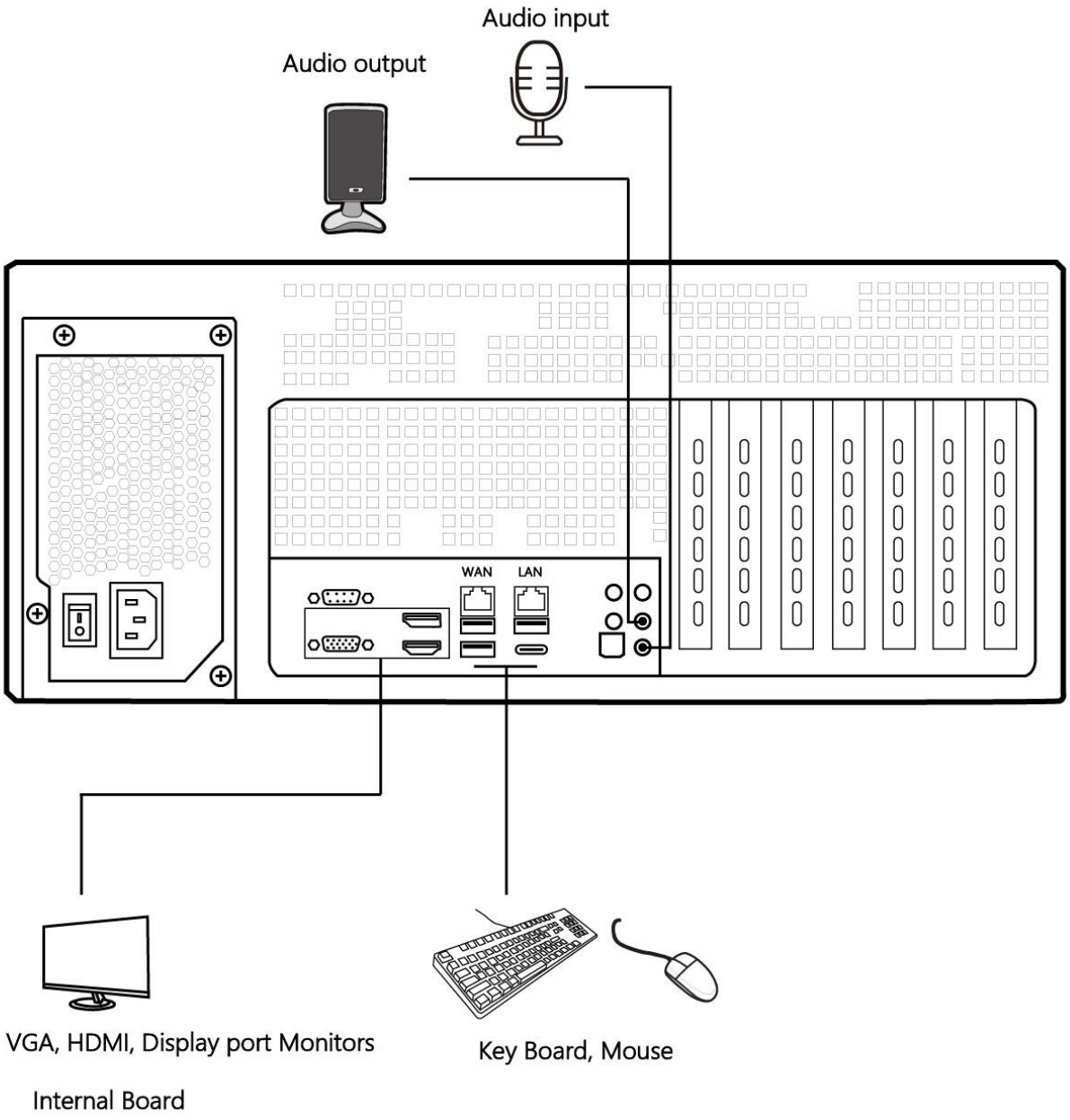
PC NVR Series

Type A



- AUDIO IN: Audio input port (connect a mic.)
- AUDIO OUT: Audio output port (connect speaker).
- USB port: connect keyboard, mouse.
- Main board (VGA, HDMI, DVI): Connect VGA, HDMI, DVI monitor.
- Graphic card (VGA, HDMI, DVI): Connect VGA, HDMI, DVI monitor.

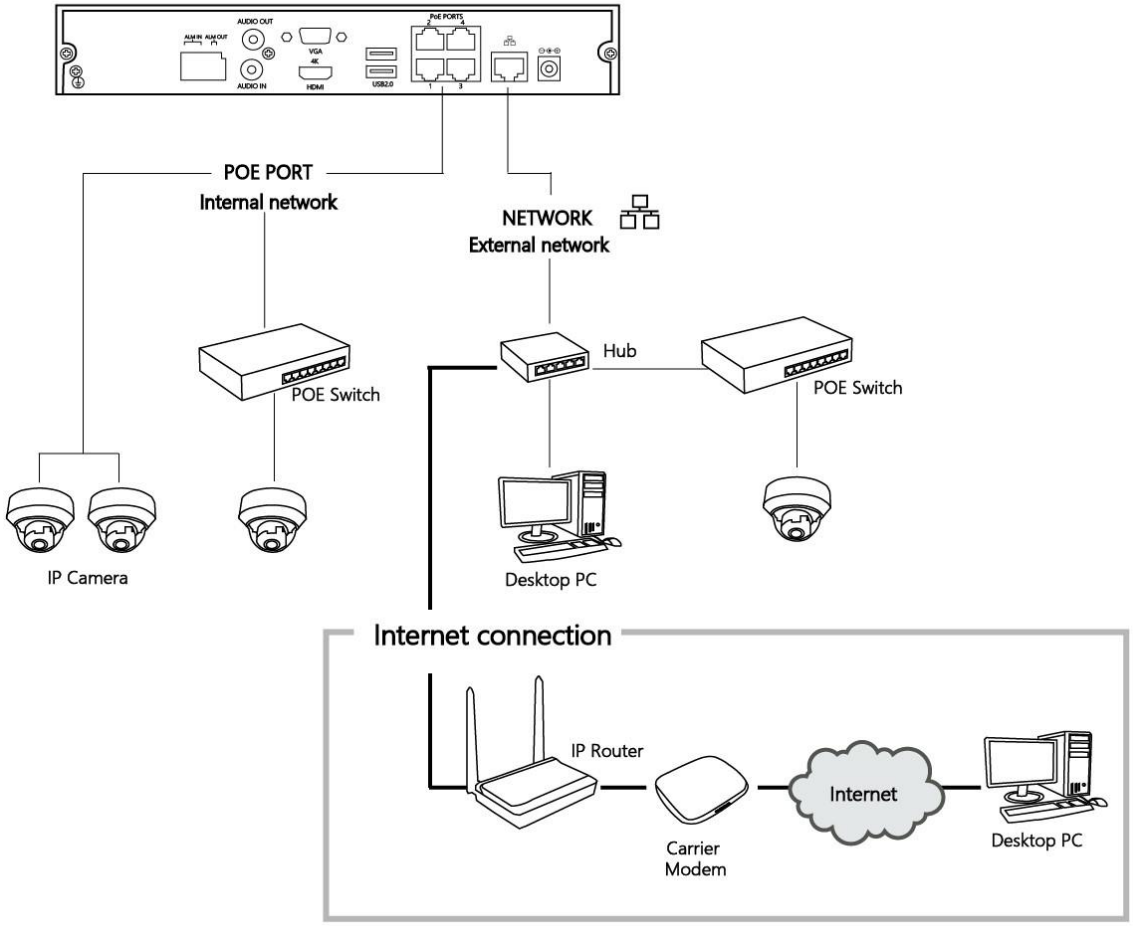
Type B



- AUDIO IN: Audio input port (connect a mic.)
- AUDIO OUT: Audio output port (connect speaker).
- USB port: connect keyboard, mouse.
- VGA, HDMI, Display port: connect VGA, HDMI, Display port monitor.

Connecting Network

4CH

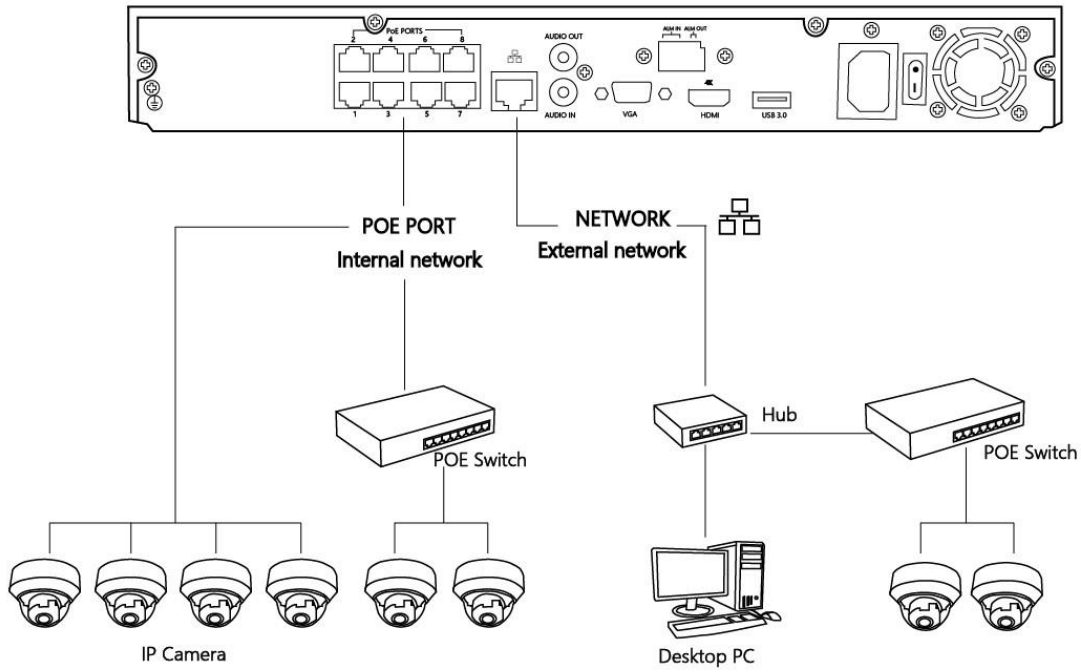


- POE PORT (internal network): connect IP camera, POE Switch.
- NETWORK (external network): connect IP camera, internet.

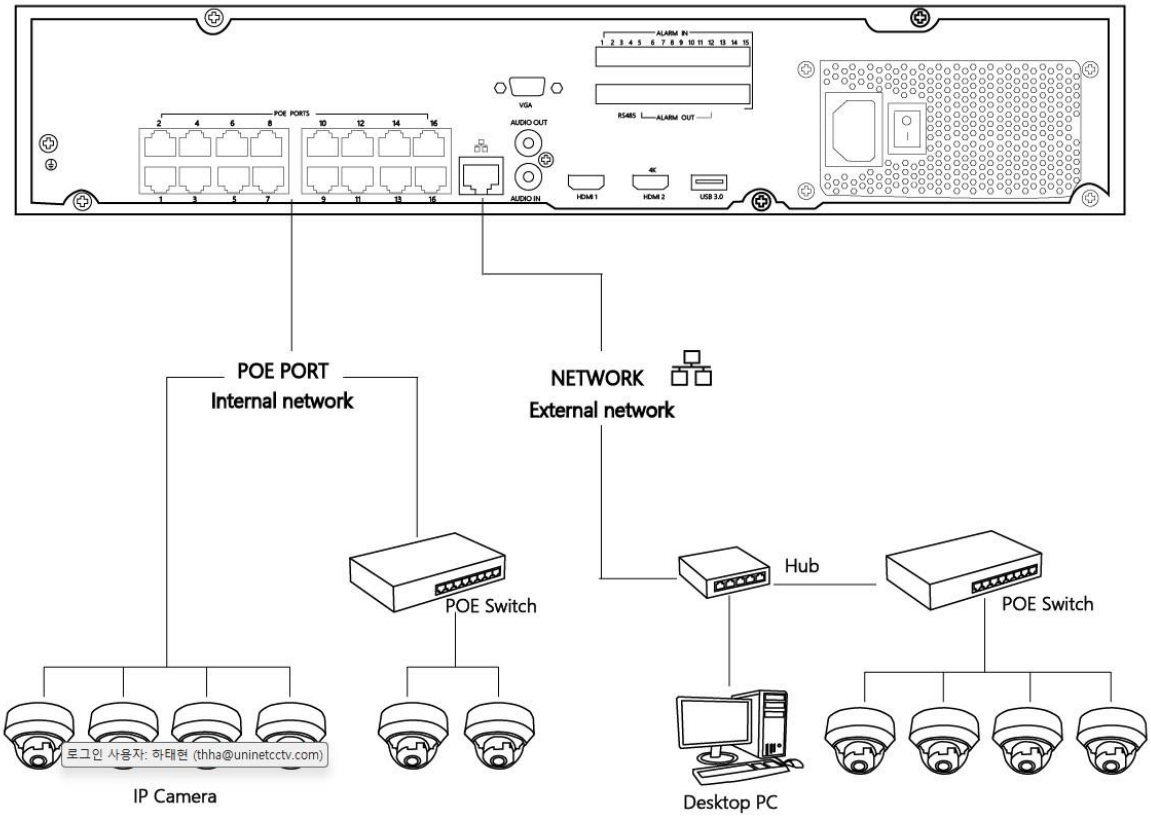
※ **Internet connection**: When connecting to Internet, connect as shown in the picture above.

NETWORK (external network) -> Hub -> IP Router -> Telecom modem

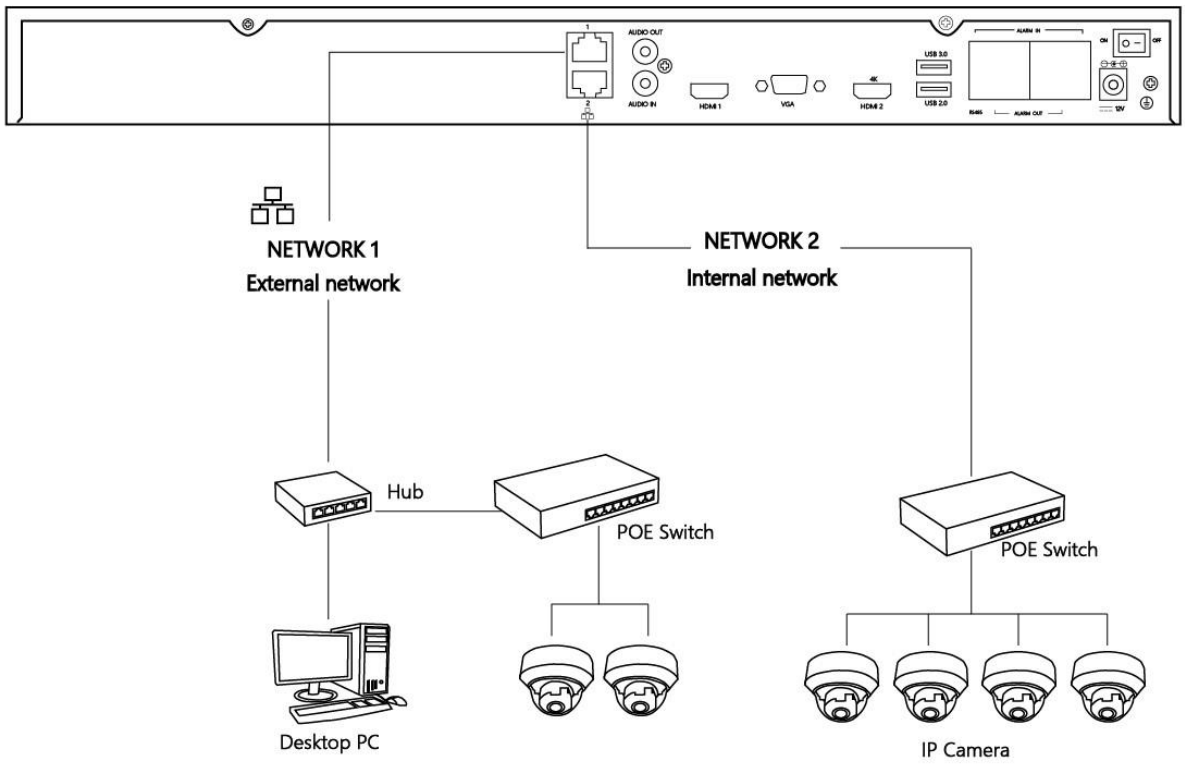
8CH


POE PORT
Internal network
NETWORK
External network
POE Switch
Hub
POE Switch
IP Camera
Desktop PC

16CH (POE)

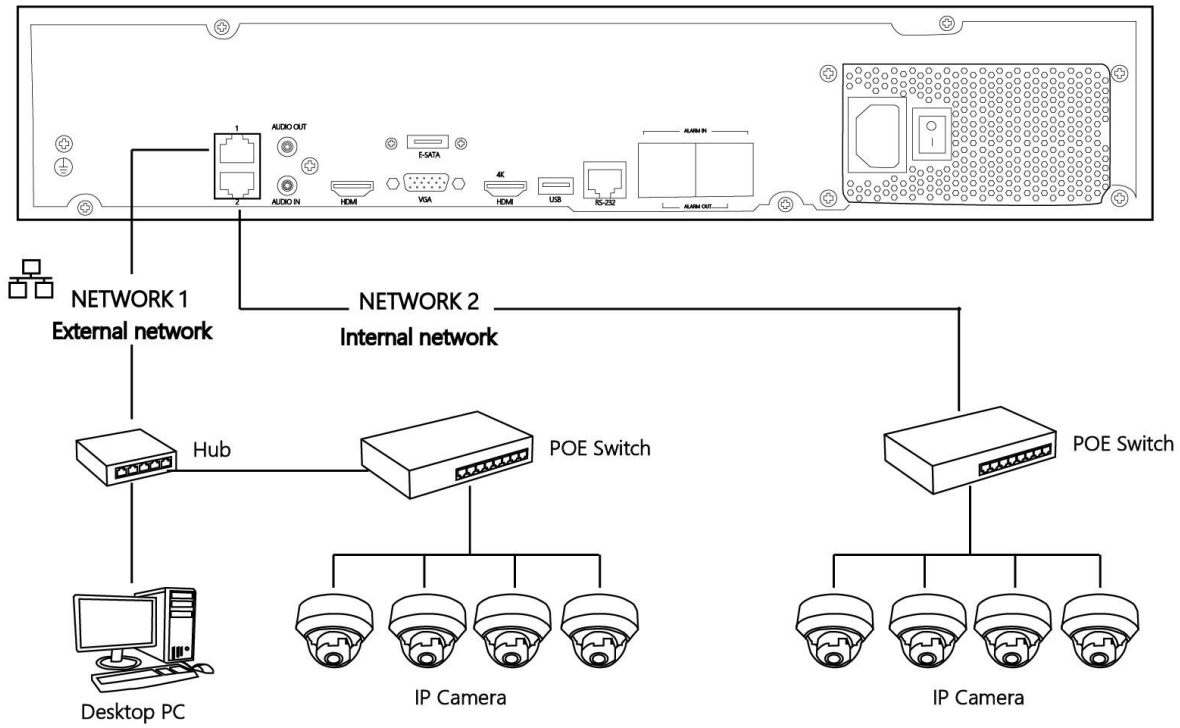

POE PORT
Internal network
NETWORK
External network
POE Switch
Hub
POE Switch
IP Camera
Desktop PC

16CH (non-POE)

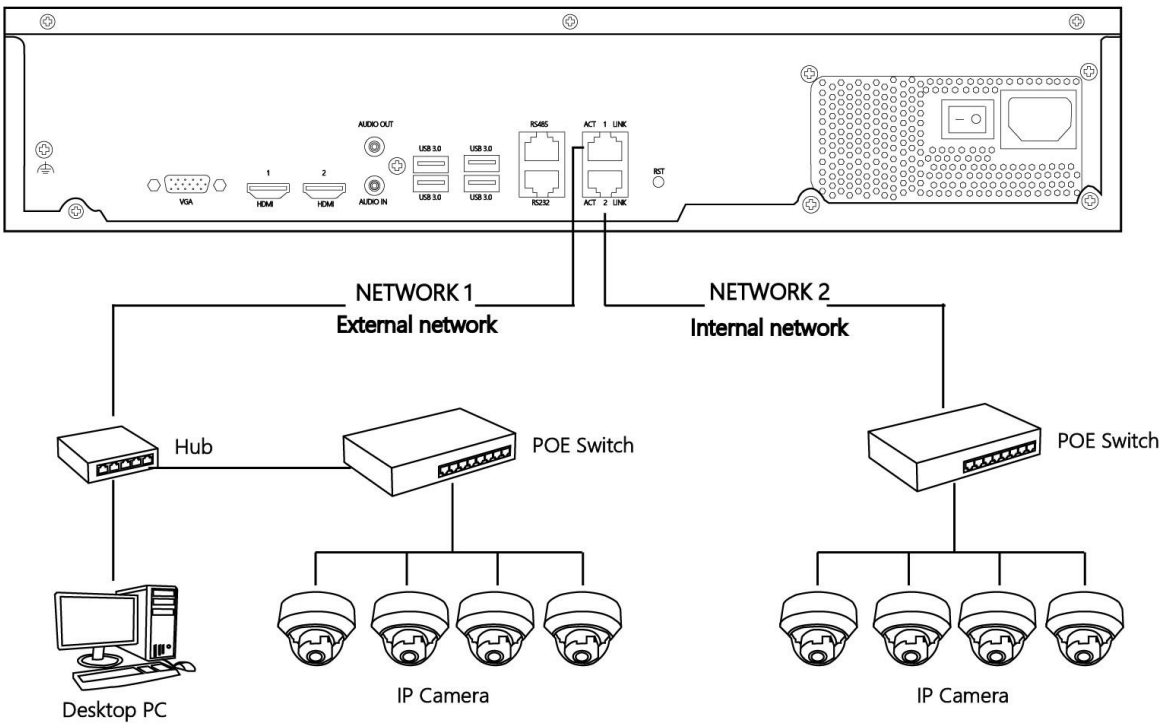

NETWORK 1
External network
NETWORK 2
Internal network
Hub
POE Switch
POE Switch
Desktop PC
IP Camera

16/32/64CH

308X Series

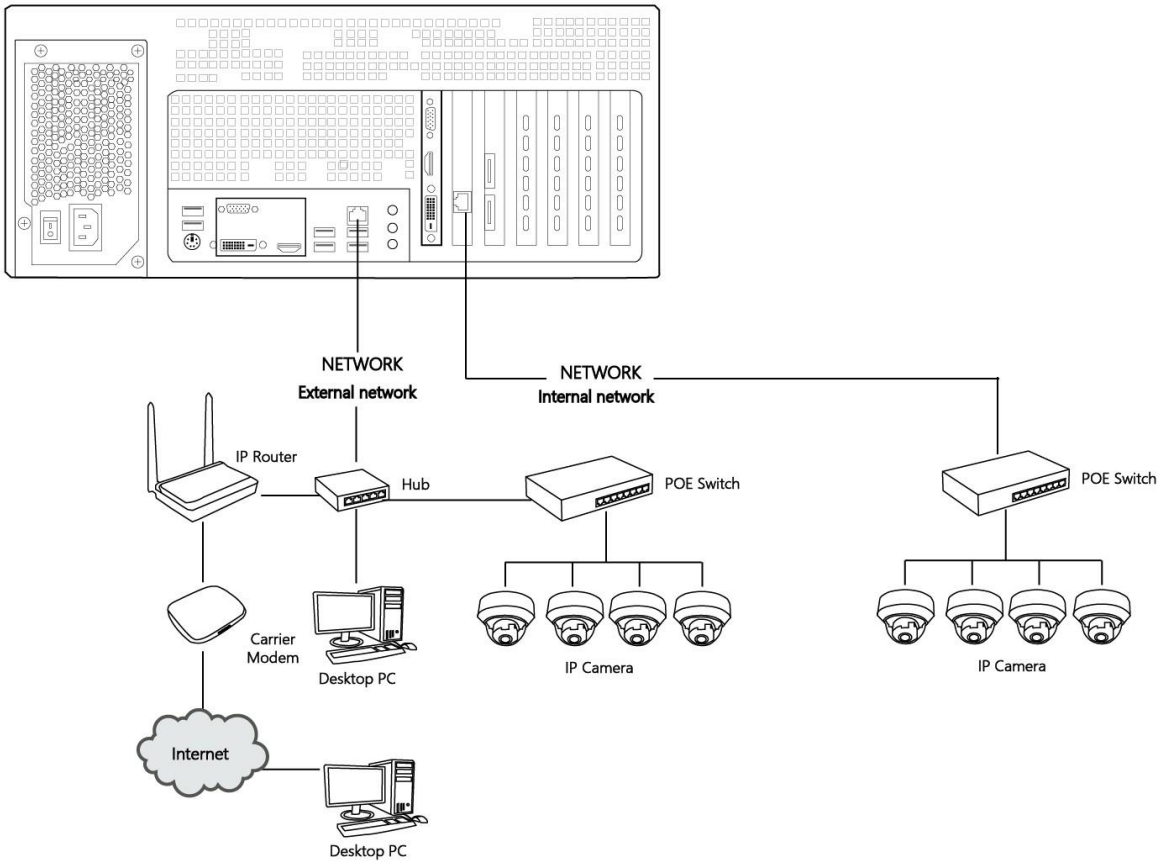


512 Series

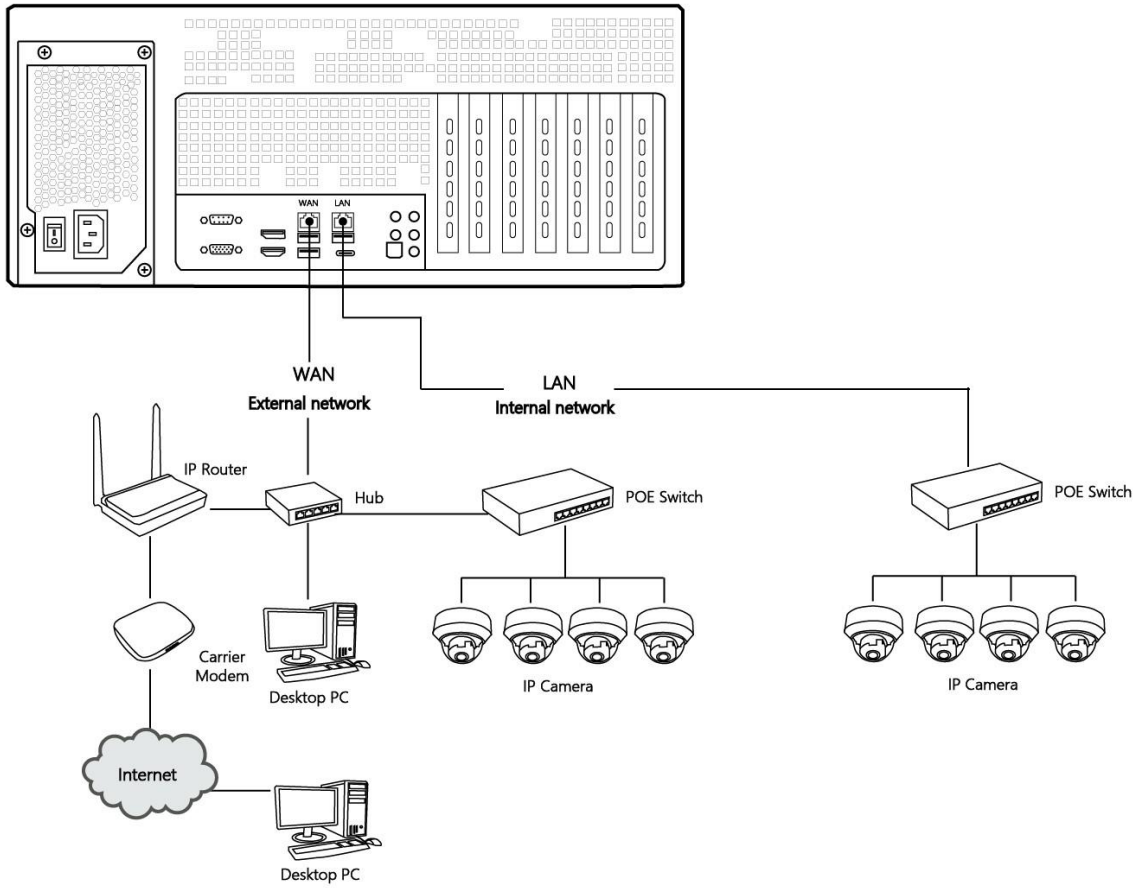


PC NVR Series

Type A



Type B


WAN
LAN
WAN
External network
LAN
Internal network
IP Router
Hub
POE Switch
POE Switch
Carrier
Modem
Desktop PC
IP Camera
IP Camera
Internet
Desktop PC

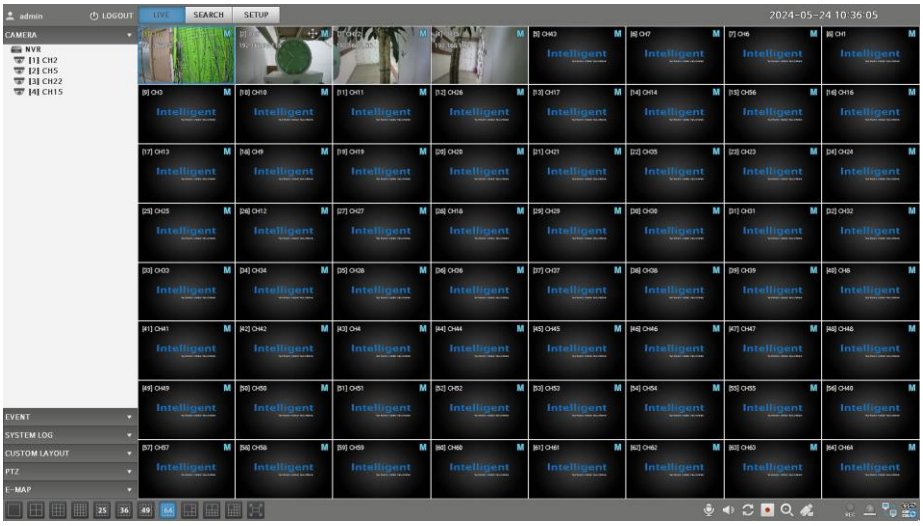
Starting the System

Start

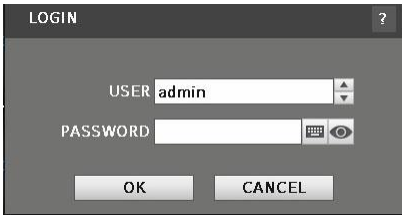
1. Connect power to back of the NVR first. (Power switch on the back is also turned ON.)
2. The NVR screen (booting logo) is displayed, and it boots.



3. When the NVR boots, live screen is displayed.
   When first booting, if IP camera is connected to internal network, the camera is automatically registered.
   Registered when camera auto-registration function is set to "Used" (setup -> system -> system manage -> auto register)

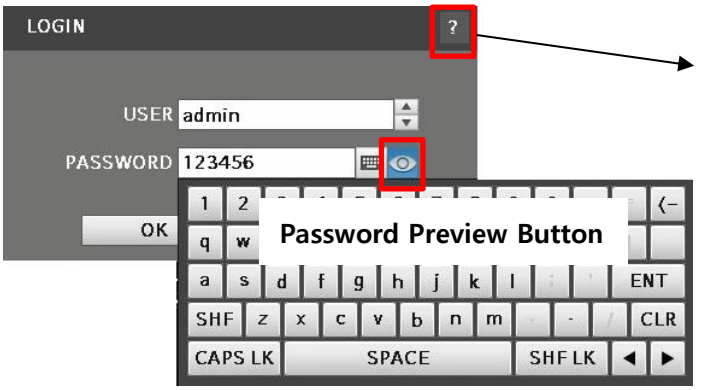


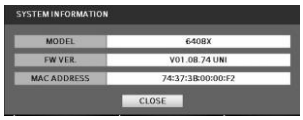
4. When logging in for the first time, the default ID is “admin” and the password is “123456”.
   (Be sure to change your password before using it.)



※ **Login window**

Below shows examples of using “Preview Password” and “Preview System Information” buttons in the login window.





Model name, firmware version, and MAC address preview button

Live

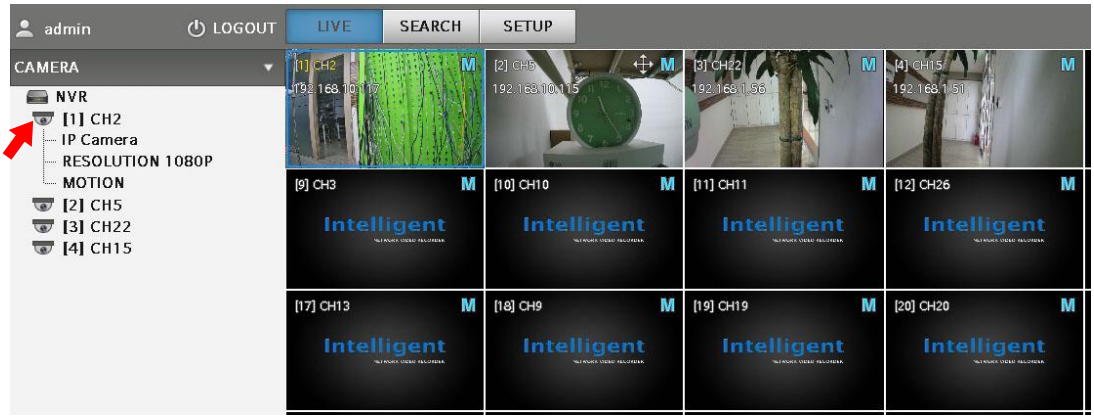


No.	Item		Description
①	Login/Logout	LOGOUT	Used when user logs in and logs out.
②	LIVE SEARCH SETUP	LIVE	Shows LIVE screen.
		SEARCH	Shows playback/search screen.
		SETUP	Shows settings (system, camera, network, event, etc.) screen.
③	Live screen OSD	[2] CH2	Shows channel number and name.
			Shows PTZ camera status
		E / M / C / S / MS	E: shows emergency recording status. M: shows motion recording status. C: Continuous recording. S: Event Recording. MS: Motion event recording.
④	Date / Time	2020-05-19 16:51:21	Shows date and time.

No.	Item		Description
⑤	CAMERA EVENT SYSTEM LOG CUSTOM LAYOUT PTZ E-MAP		Shows camera information (channel, resolution, recording frame, etc.)
			Shows events such as motion and video loss, etc.
			Shows system logs.
			Shows custom layout.
			Shows PTZ camera.
			Shows E-map.
⑥	Split screen		One screen is displayed.
			4-split screen is displayed.
			9-split screen is displayed.
			16-split screen is displayed.
			25-split screen is displayed.
			36-split screen is displayed.
			64-split screen is displayed.
			6-split screen is displayed.
			10-split screen is displayed.
			13-split screen is displayed.
			Full screen is displayed. (To switch to the previous mode in full screen, click right mouse button.)

No.	Item		Description
⑦	Audio input Audio output Sequential conversion Emergency recording Zoom in Backup		Operates when voice input (Uses two-way audio.)
			Voice output works.
			Sequential conversion works.
			Emergency recording works.
			Zoom function works.
			Backup to USB memory, USB storage device etc.
⑧	Recording Alarm Network HDD capacity		REC icon blinks when recording.
			The icon lights up when an alarm occurs.
			The icon lights up when connected to network.
			Shows HDD usage.

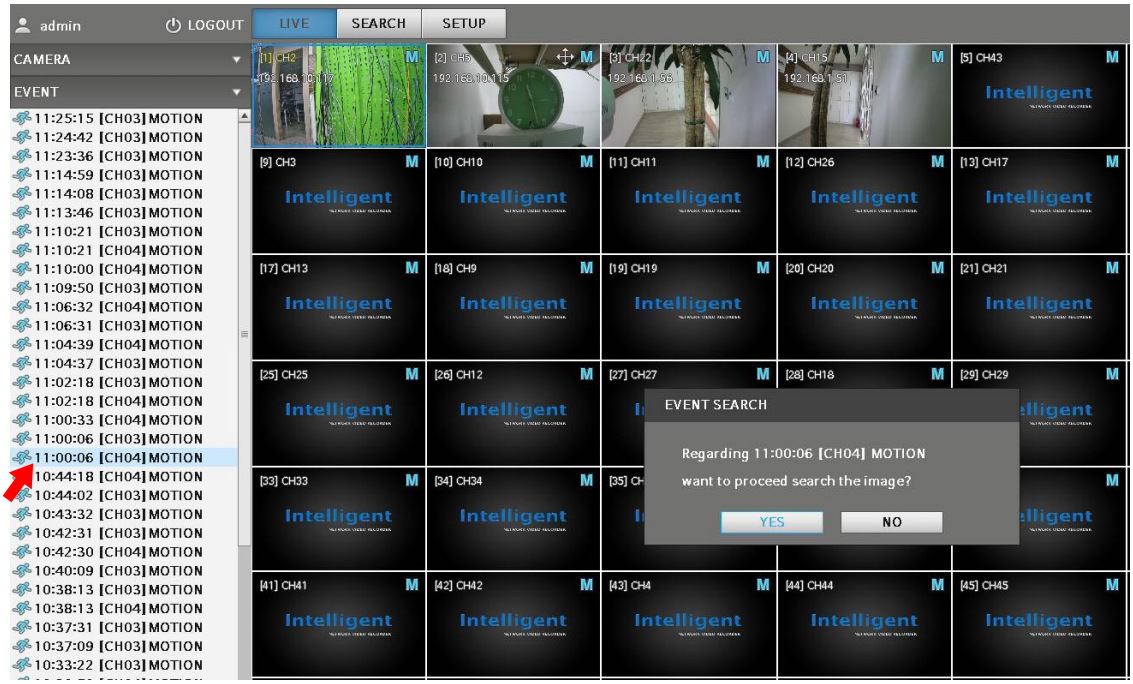
Live (Camera)



※ You can check [Camera information] in LIVE menu.

- Camera information: When you click “CAMERA” button, the camera information is displayed.
  Camera name, model name, resolution, recording mode, etc.

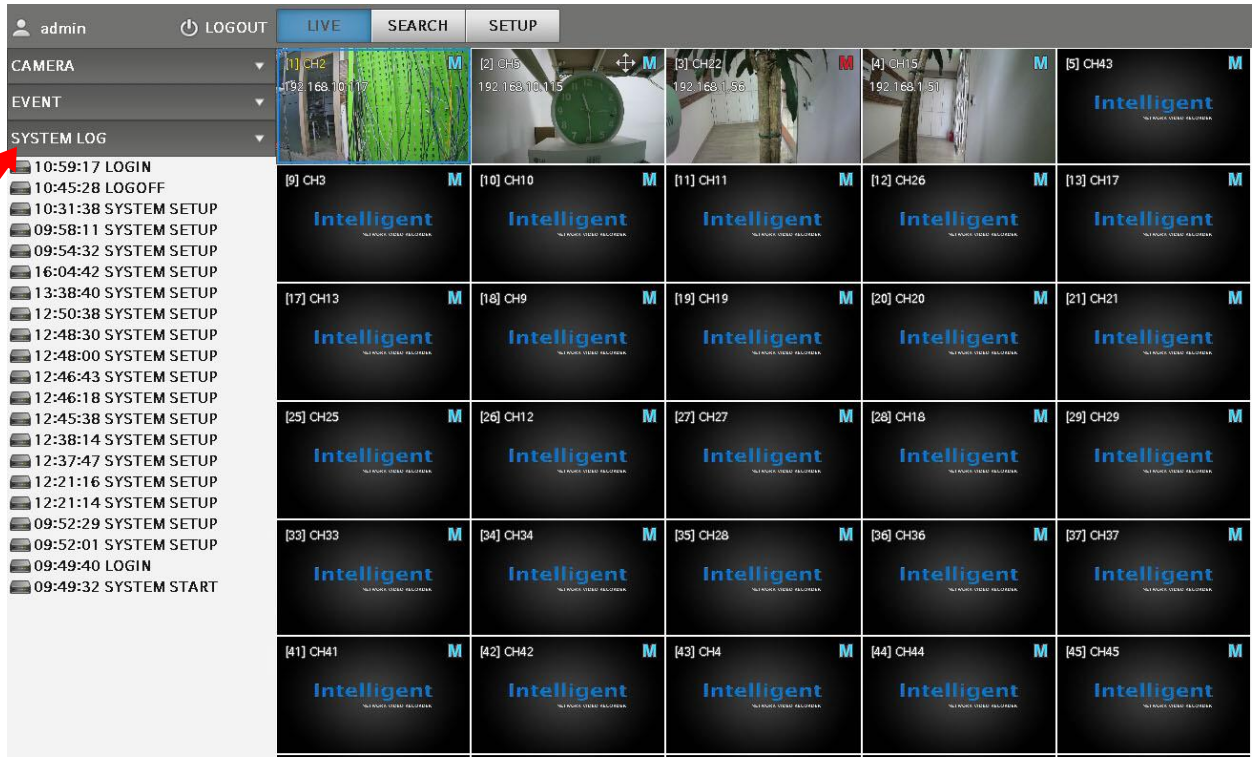
Live (Event)



※ You can playback [Event] from LIVE menu.

- Event playback: "" When you click on an event, the event window will be displayed.
- Even video playback: If you click the "YES" button, the event video will play.

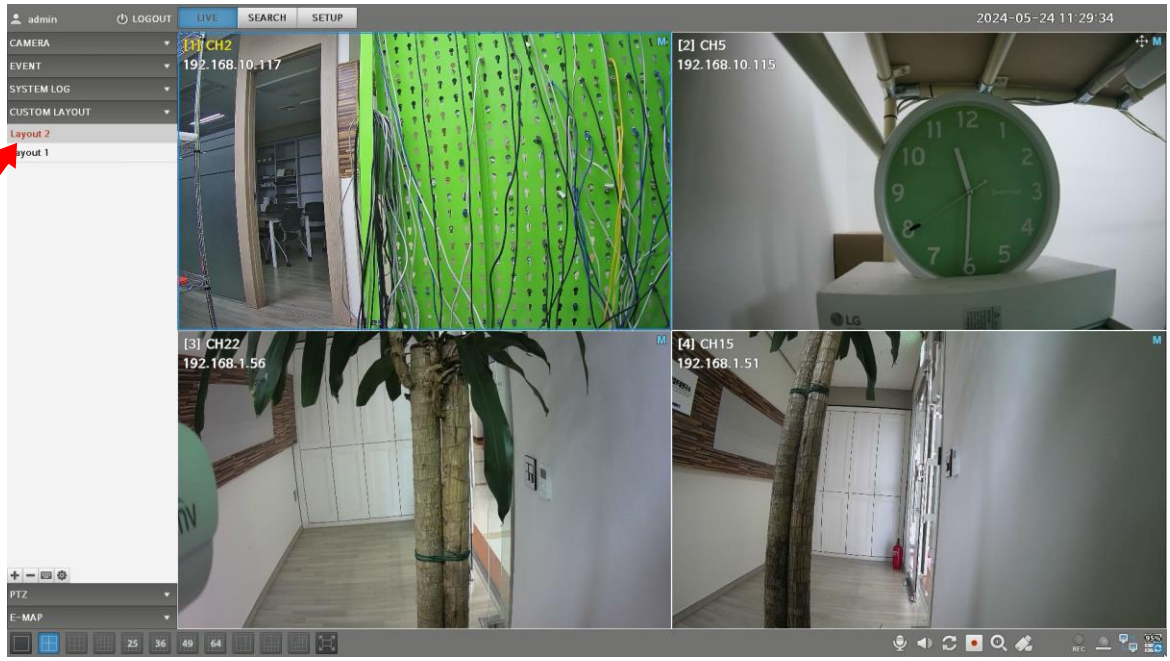
Live (System log)



※ You can check [SYSTEM LOG] in LIVE menu.

- Real-time log: Click the "SYSTEM LOG" tab to display log records.
  System startup, login, system settings, etc.
  (The log does not support playback, and only log records can be checked.)

Live (Custom layout)



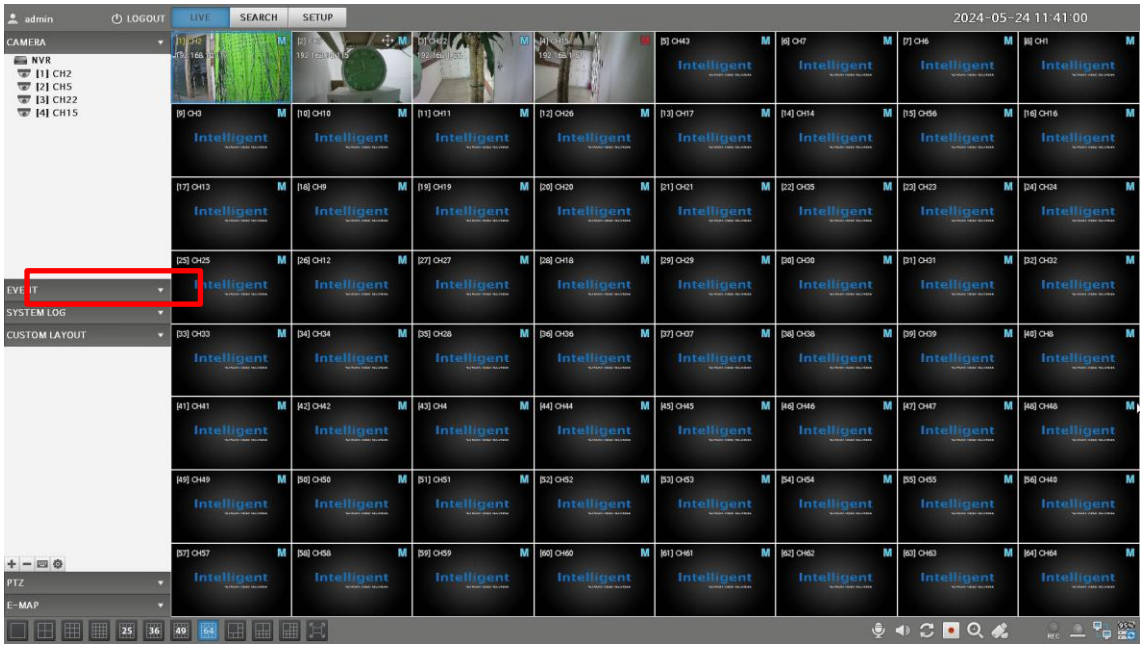
※ You can use it by setting [CUSTOM LAYOUT] in LIVE menu.

- Custom Layout: Saved Layout Click "Layout 2" to display the saved layout.

※ How to add Custom Layout

The “CUSTOM LAYOUT” function divides channels of the desired camera into layouts, making it easier to use them on the LIVE/PLAYBACK screen.

1. Click the “CUSTOM LAYOUT” tab.



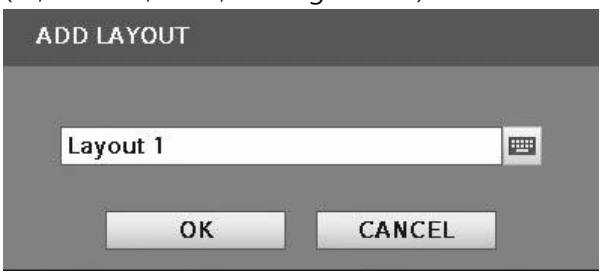
2. Layout button description (add/delete/rename/setting)

아이콘	명칭	설명
	Add	Add layout.
	Delete	Delete layout.
	Rename	Change layout name.
	Setting	Select/deselect the layout channel.

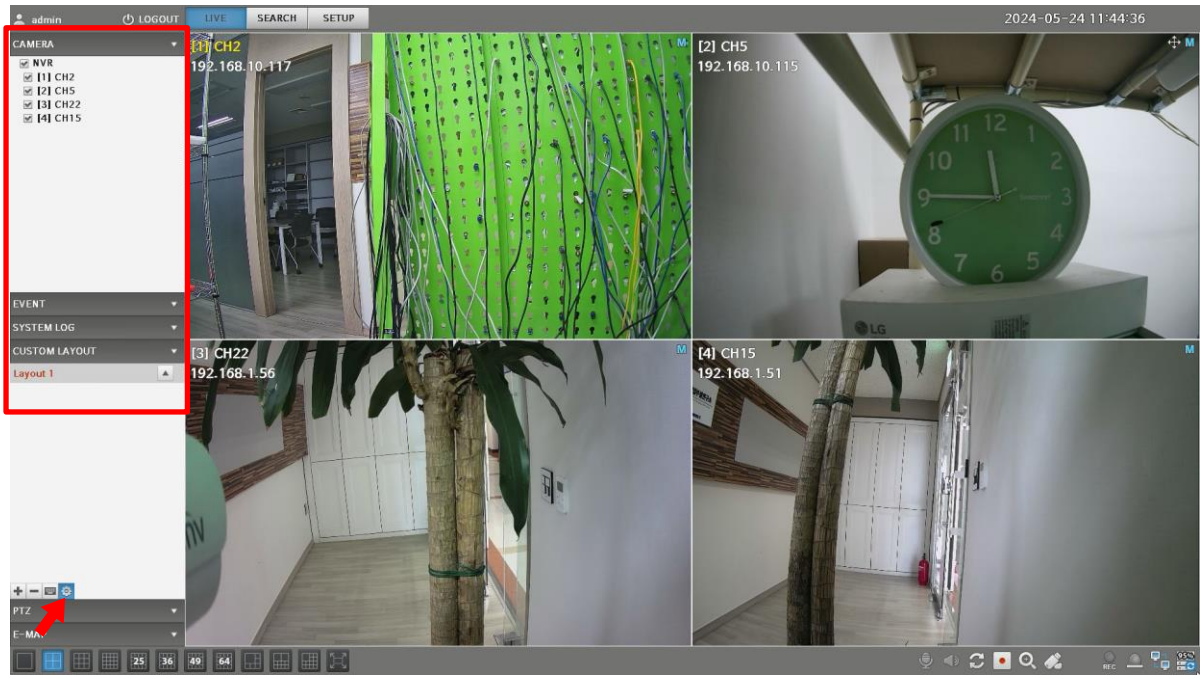
3. Add layout 

Enter layout name you want to use and click the "OK" button.

(ex, Elevator, Door, Parking lot etc.)



Select channel(s) to display in "Layout 1" and click setting button  to save the layout.

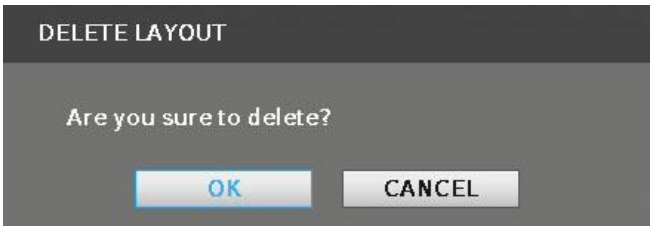


※ Note

If you want to change channel(s) saved in the layout, you can click setting button  to select/deselect the desired channel(s).

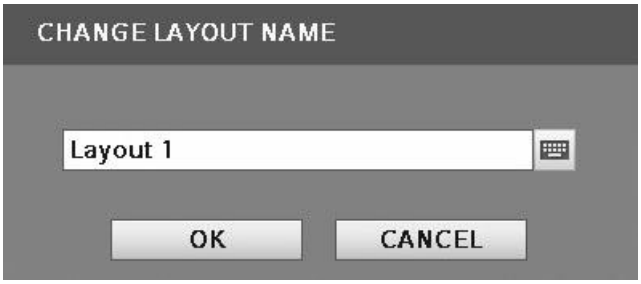
4. Delete Layout 

Click "OK" button when deleting layout.



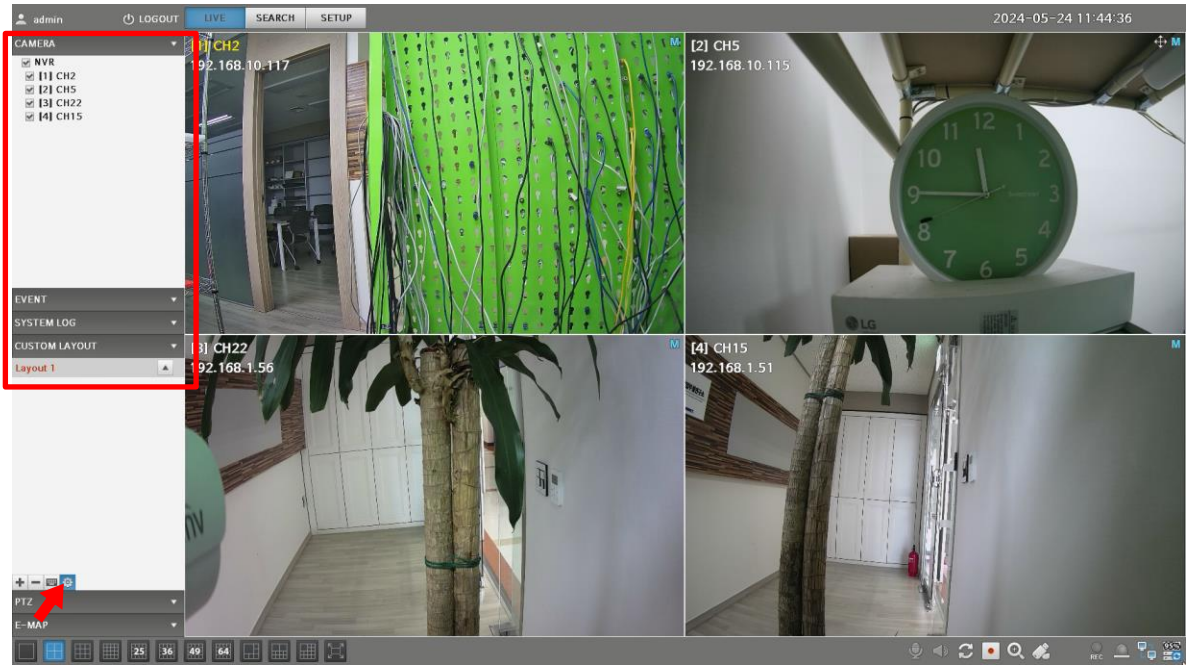
5. Rename layout 

Change name of layout and click "OK" button.



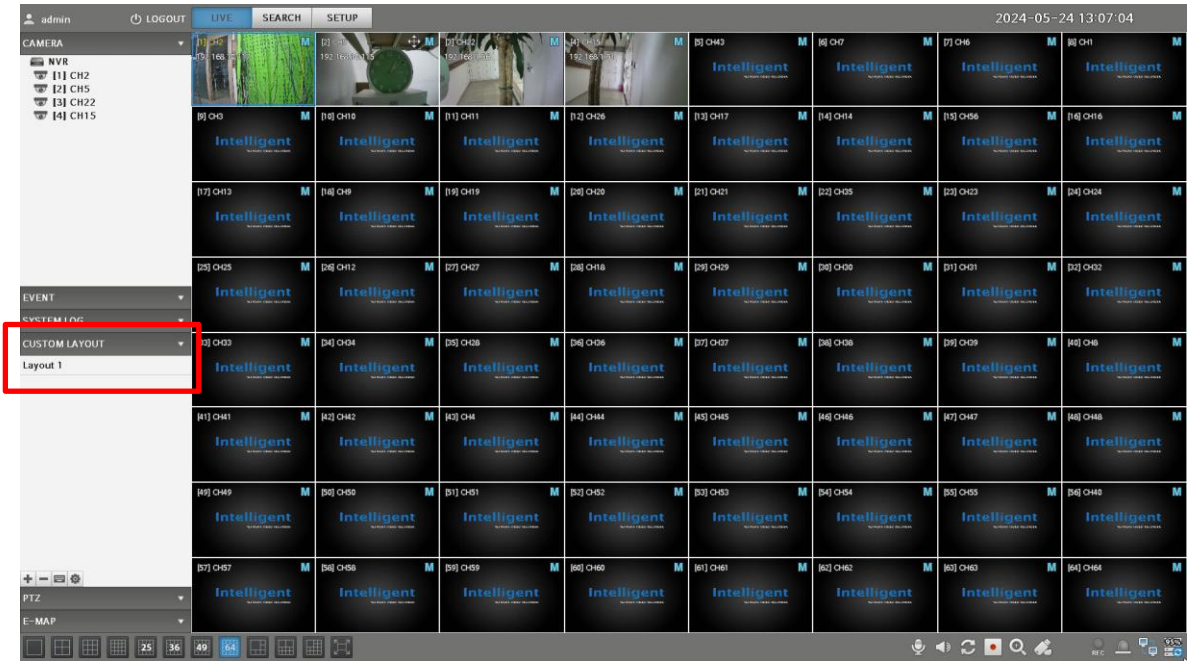
6. Layout setting 

Setting (select/deselect) channel(s) saved in layout and click setting button  again to complete setup.



Custom layout display screen (Live)

When no layout is selected, all channels are displayed as shown below.

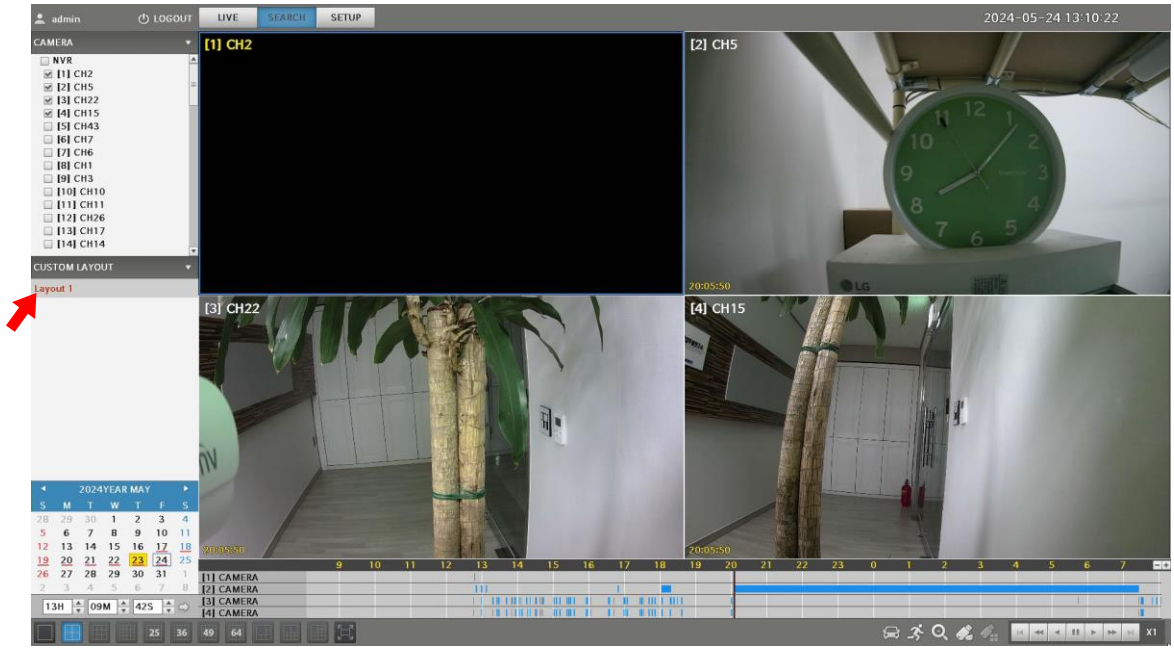


When a layout is selected, channels of the selected layout are displayed.



Custom layout display screen (Playback)

Only channels of selected layout are displayed on playback screen.



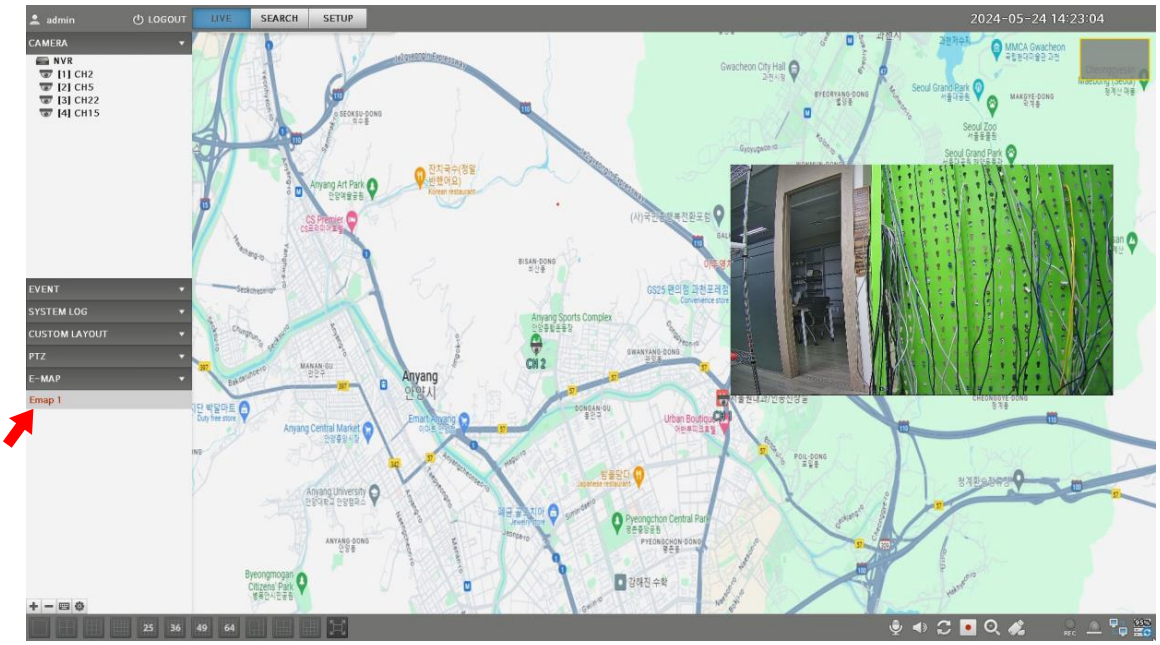
Live (PTZ)



※ You can operate [PTZ] from LIVE menu.

- PTZ: When you click "PTZ" tab, the PTZ operation menu is displayed.
  Up/down/left/right, zoom, focus, preset etc.

Live (E-MAP)



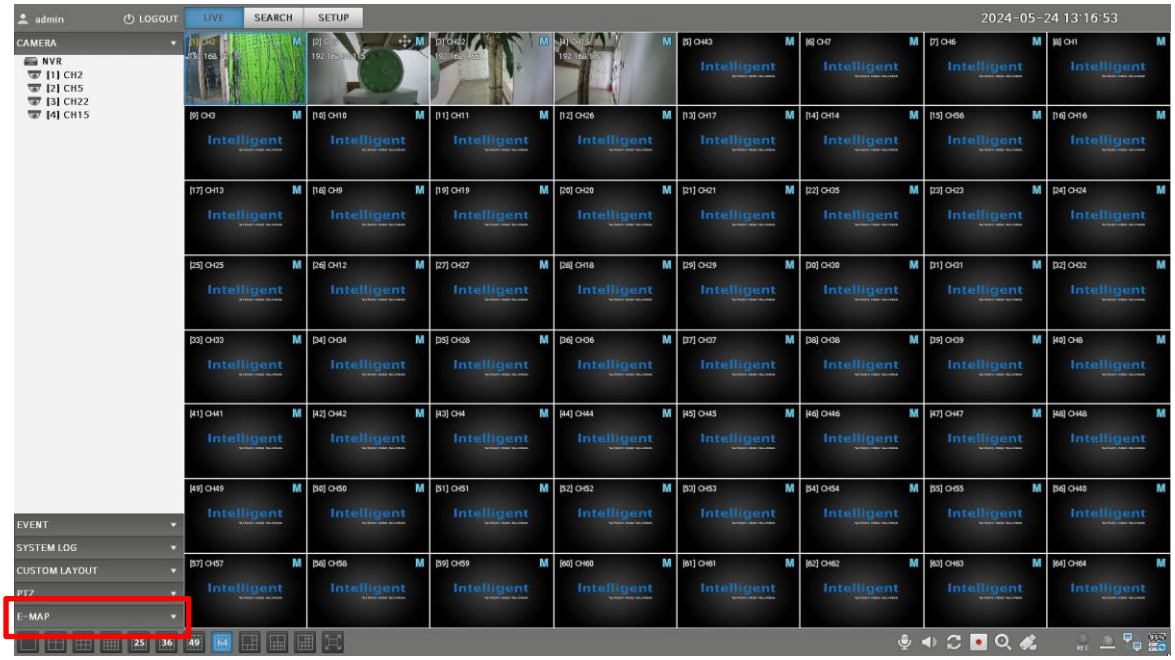
※ You can operate [E-MAP] from LIVE menu.

- E-MAP: E-MAP and camera images are displayed.
  When you click the camera icon set in E-MAP, video is displayed as above.

※ How to add E-MAP

"E-MAP" function allows convenient monitoring by laying out desired camera channel(s) on the corresponding MAP and displaying pop-up linkage. (motion, sensor, abnormal sound, fire detection, intelligence, emergency bell etc.)

1. Click "E-MAP" tab.



2. E-MAP button description (add/delete/rename/setting)

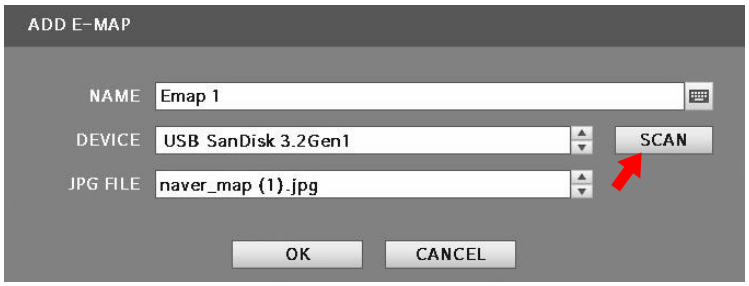
아이콘	명칭	설명
	Add	Add E-MAP.
	Delete	Delete E-MAP
	Rename	Rename name of E-MAP.
	Setting	Select/deselect E-MAP channel(s).

3. Add E-MAP 

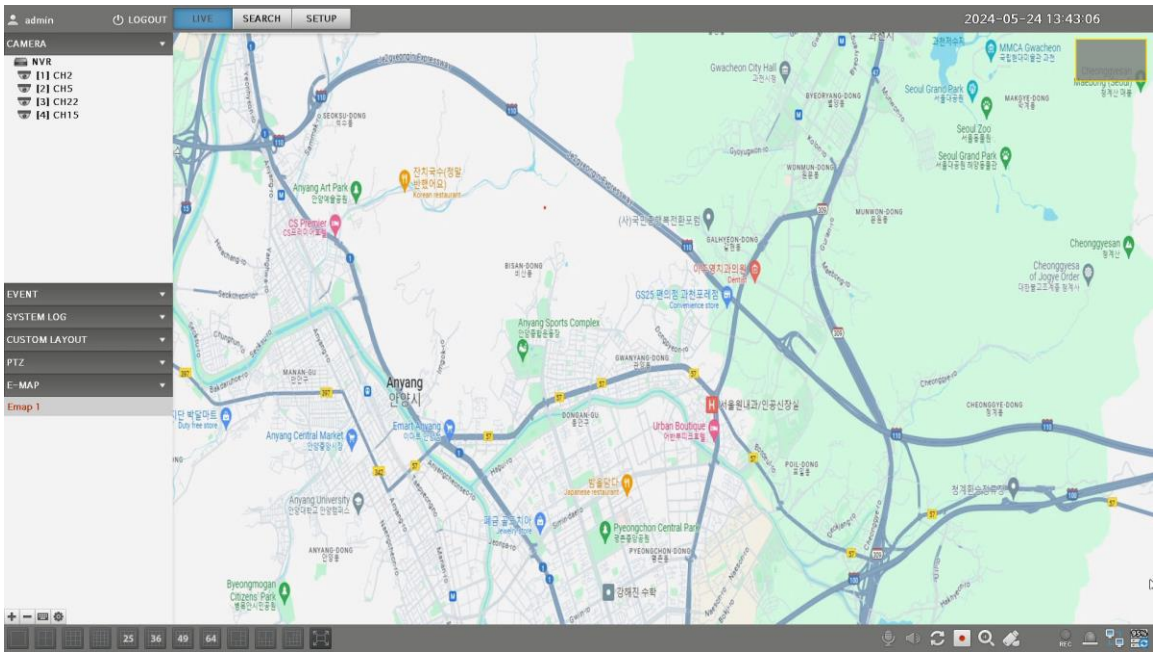
Enter name of E-MAP want to use.

Insert USB memory stick (including E-MAP file) into USB port of the NVR and click "OK" button.

※ E-MAP file format: extension (JPEG), resolution (1920 x 1080 or less)

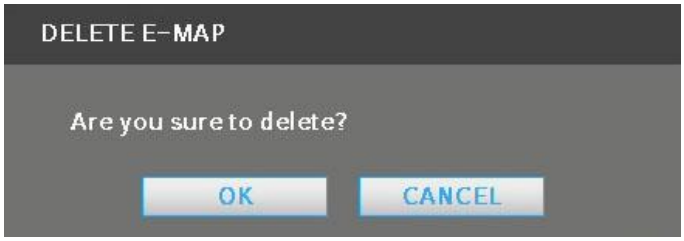


The image of "Emap 1" is displayed as follows.



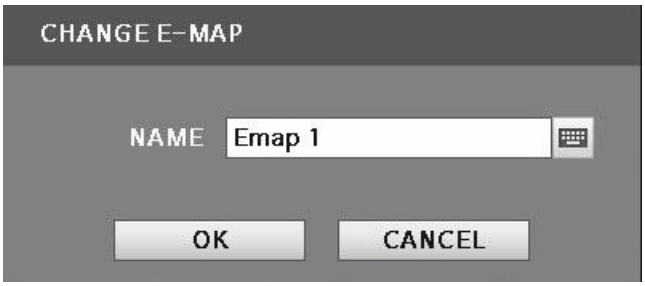
4. Delete E-MAP 

Click "OK" button when deleting E-MAP.



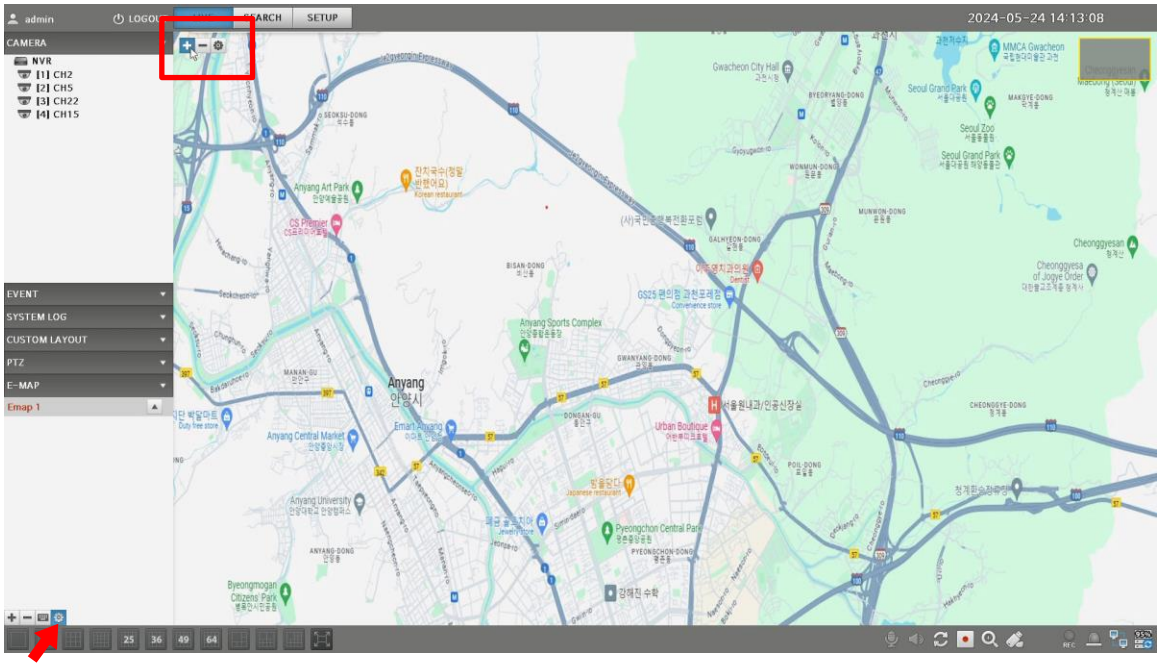
5. Rename E-MAP 

Change name of the E-MAP and click "OK" button.



6. E-MAP setting 

Click E-MAP setting button  and click  button to add camera(s).

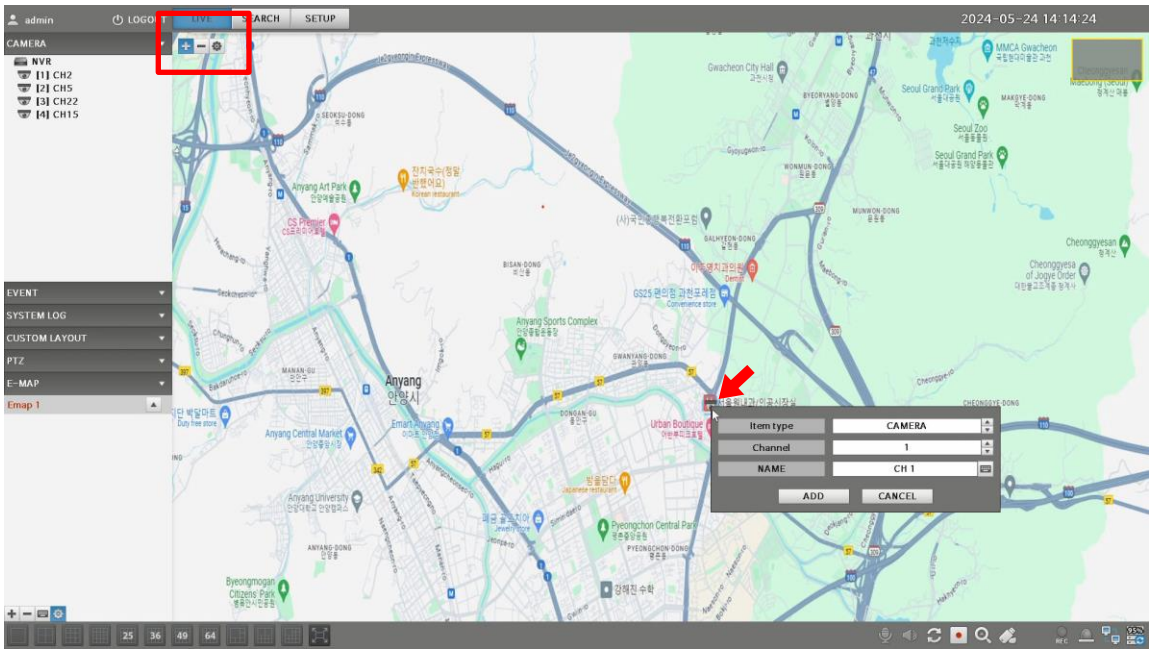


※ Note

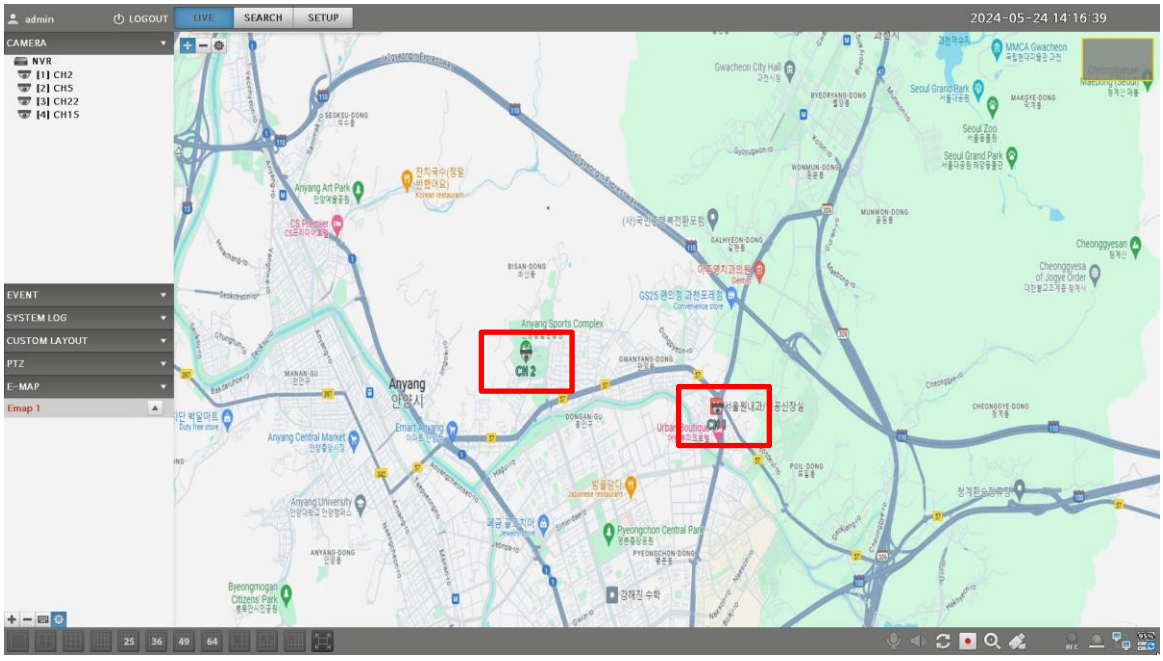
If you want to change camera displayed on E-MAP, you can add/delete/set the desired camera by clicking setting button .

7. Add Camera 

Select camera want to use in the E-MAP area and register it.

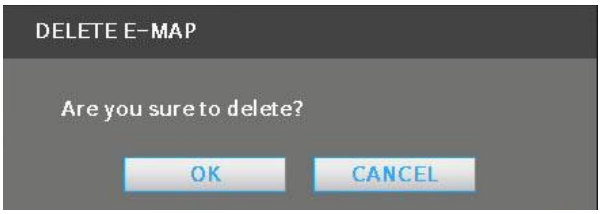


Two cameras registered in E-MAP shows below.



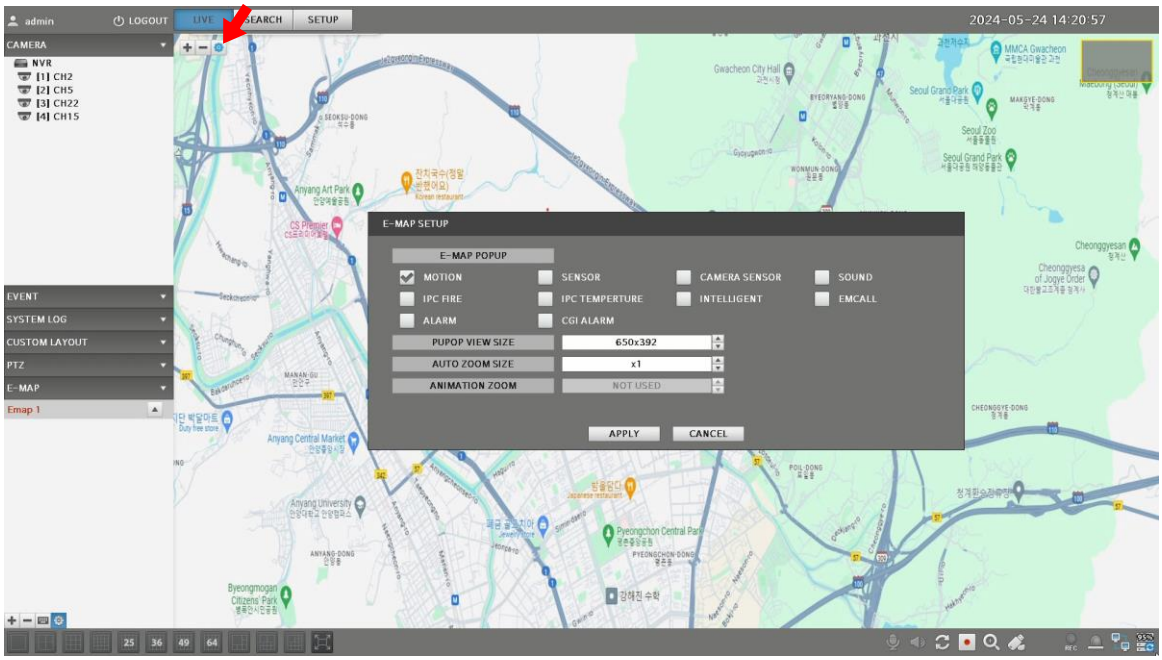
8. Delete Camera 

Click "OK" button when deleting a camera.



9. E-MAP pop-up settings

When click the button , "E-MAP SETUP" and other settings (pop-up video size, auto zoom ratio, animation zoom) can be set.

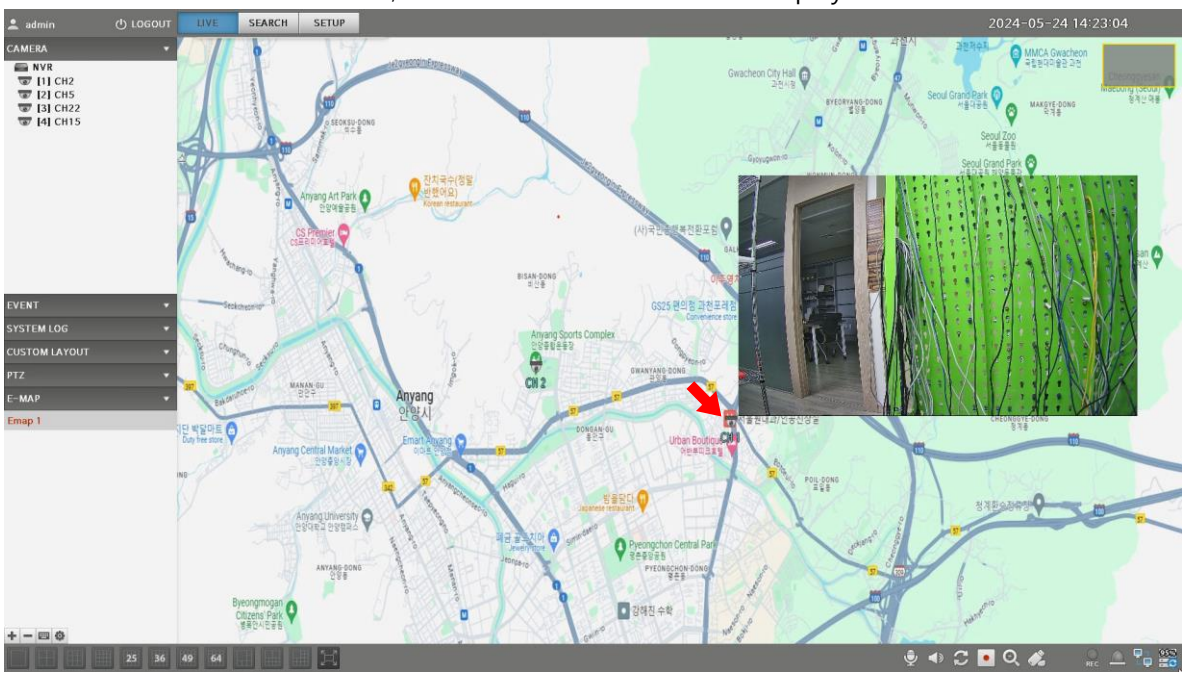


E-MAP pop-up settings

- Motion detection: When motion is detected, the camera channel pops up.
- Sensor detection: When a sensor is detected, the camera channel pops up.
- Camera sensor: When the camera sensor is detected, the channel pops up.
- Abnormal sound: When the camera detects an abnormal sound, the channel pops up.
- Fire detection: When a fire is detected by the camera, the channel pops up.
- Intelligent: When the camera's intelligence (people counting, face recognition, etc.) is detected, the channel pops up.
- Emergency bell: When an emergency bell is detected, the linked channel pops up.
- Pop-up video size: You can adjust the size of the pop-up video. (250x150 ~ 700x422)
- Auto zoom magnification: Adjustable from 1 to 16 magnification.
- Animation Zoom: Select whether to use animation zoom.

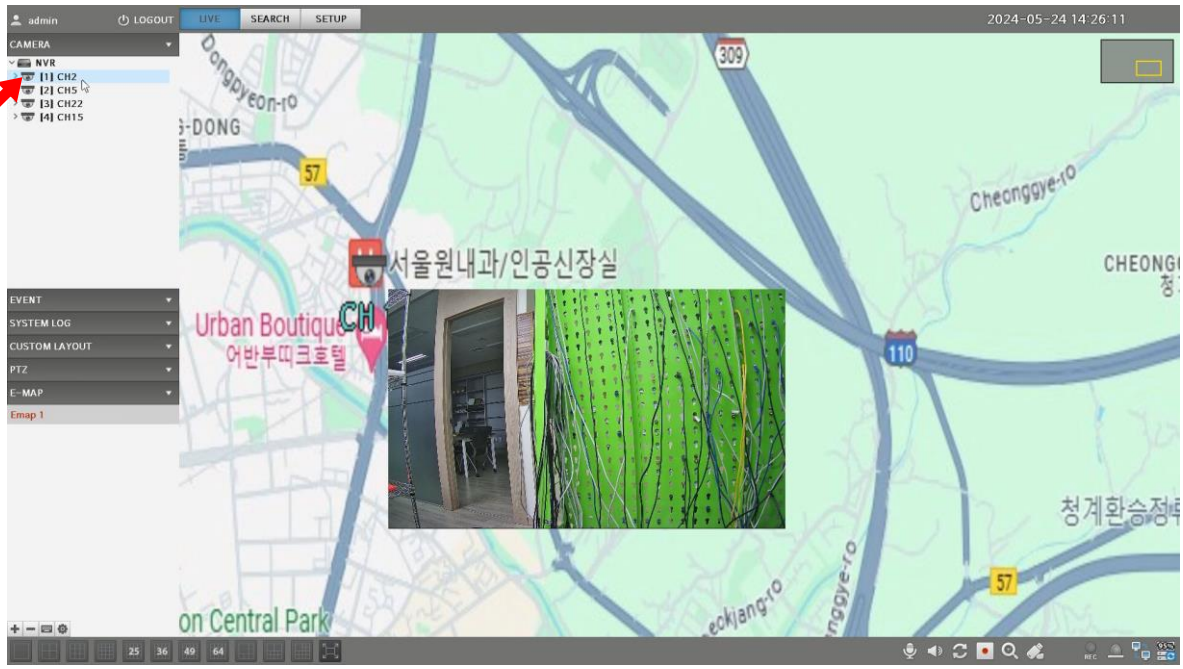
※ E-MAP camera video display

When click on E-MAP camera, the video for that channel is displayed..

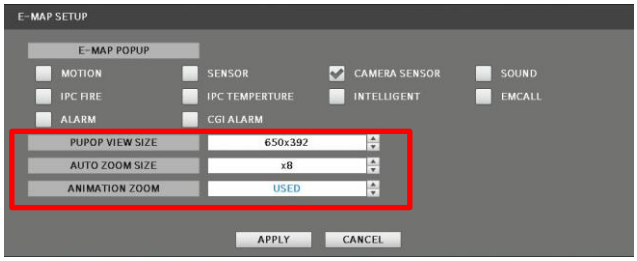


※ E-MAP animation zoom

When click on camera set in E-MAP, the animation zooms and the video of that channel is displayed.



To use the animated zoom feature, must set "ANIMATION ZOOM".



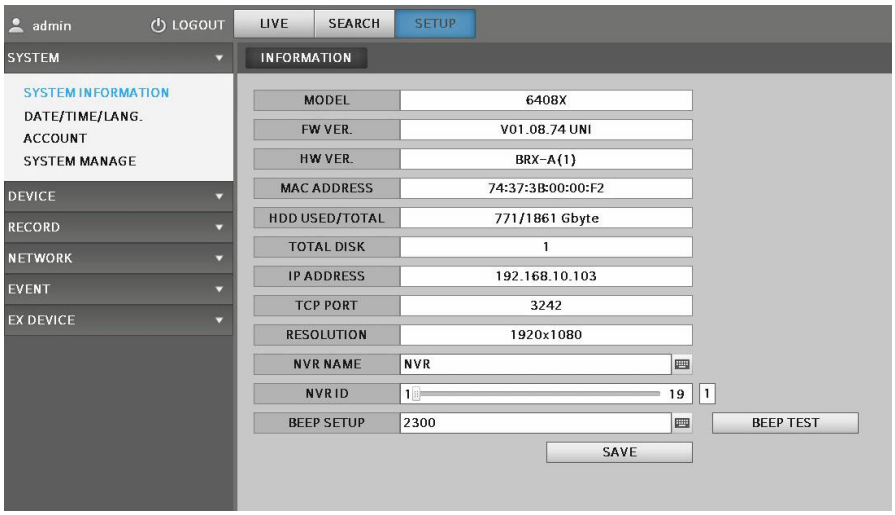
Setup

This is the system settings menu.

System setting, device setting, recording setting, network setting, event setting, and external device linking are possible.

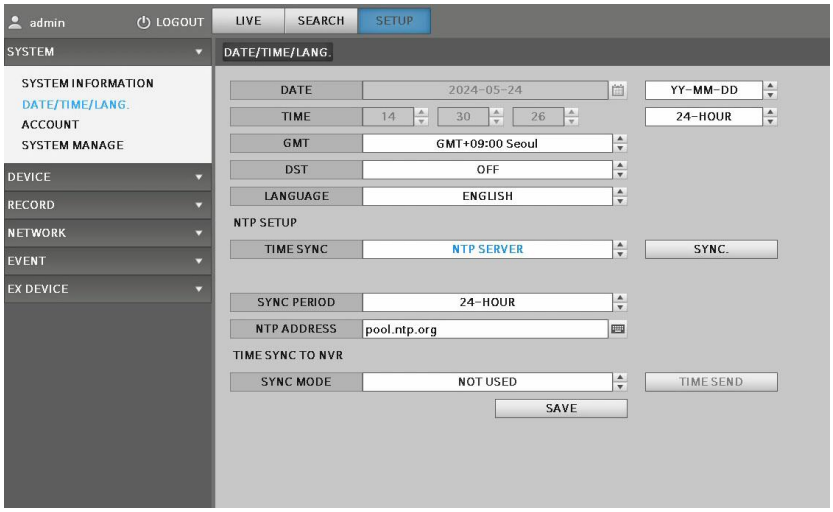
System Setting

System information



- Firmware version: Shows firmware version of the NVR.
- H/W version: Shows the Main Board hardware version.
- MAC address: Shows MAC address of the NVR.
- HDD capacity/usage: The left side shows current usage, and the right side shows total capacity.
- Number of HDD: Shows number of installed HDDs.
- IP Address: Shows IP address of the NVR.
- TCP Port: Shows NVR's network TCP IP port number and can be change.
- Resolution: Shows output resolution of the NVR.
- NVR Name: Shows name of the NVR and can be rename.
- NVR ID: NVR ID: Shows the NVR ID and can be change.
- Beep setup: Shows and allows you to change the system's beep setting.
- Save: Save the settings.

Date/Time/Language



- DATE: Change display method of the current date. (Year-Month-Day, Month-Day-Year, Day-Month-Year)
- TIME: Change NVR's current time display method. (12 hours, 24 hours)
- GMT: Shows standard time zone of the NVR. (change to suit the time zone of each country)
- DST: Set daylight saving time.
- LANGUAGE: Change display language of the UI. (Korean, English, Japanese, Chinese)

[NTP SETUP]

- TIME SYNC: Select time synchronization.
  - NTP SERVER: Synchronize time from the NTP server.
  - GPS: Synchronize time from GPS receiver.
    (Applies only when GPS receiver is mounted on the NVR)
  - NOT USED: Time synchronization is not reflected.
    If you want to synchronize manually, click "SYNC" button.
- SYNC PERIOD: Set time zone to automatically synchronize to the NTP server. (12, 24 hours)
- NTP ADDRESS: Set NTP server for synchronization. Default (pool.ntp.org)

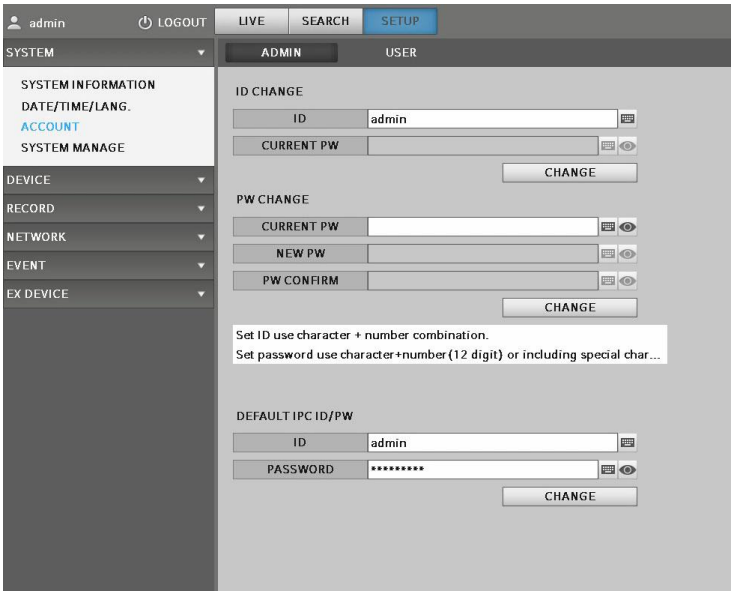
[TIME SYNC TO NVR]

- SYNC MODE: Select NTP SYNC mode.
  - SERVER: Currently set NVR operates as SERVER and synchronizes the time of other client NVRs. (Time synchronization settings must be set to "NTP server" or "GPS")

※ **Only one standard NVR must be set as "SERVER".**
If another NVR on the same network is set as a "SERVER," a synchronization error may occur, and the time may not be synchronized properly.

  - CLIENT: Set NVR operates as CLIENT and synchronizes the time with the SERVER. (All other NVRs except SERVER are set to "CLIENT")
  - NOT USED: NTP synchronization mode is not used.
- Save: Save the settings.

Account Setup (admin)

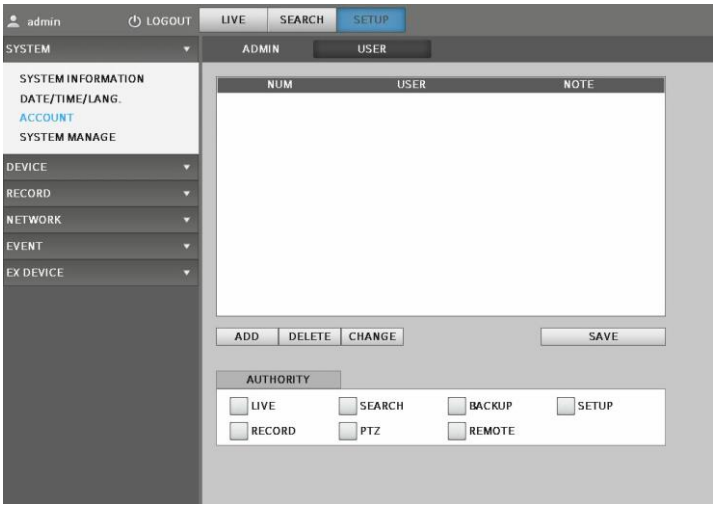


- ID CHANGE: Change admin ID.
- PW CHANGE: Enter current password. (to change ID, must enter the password.)
- CURRENT PW: Enter current password.
- NEW PW: Enter new password.
- PW CONFIRM: Enter new password again.

※ **DEFAULT IPC ID/PW**

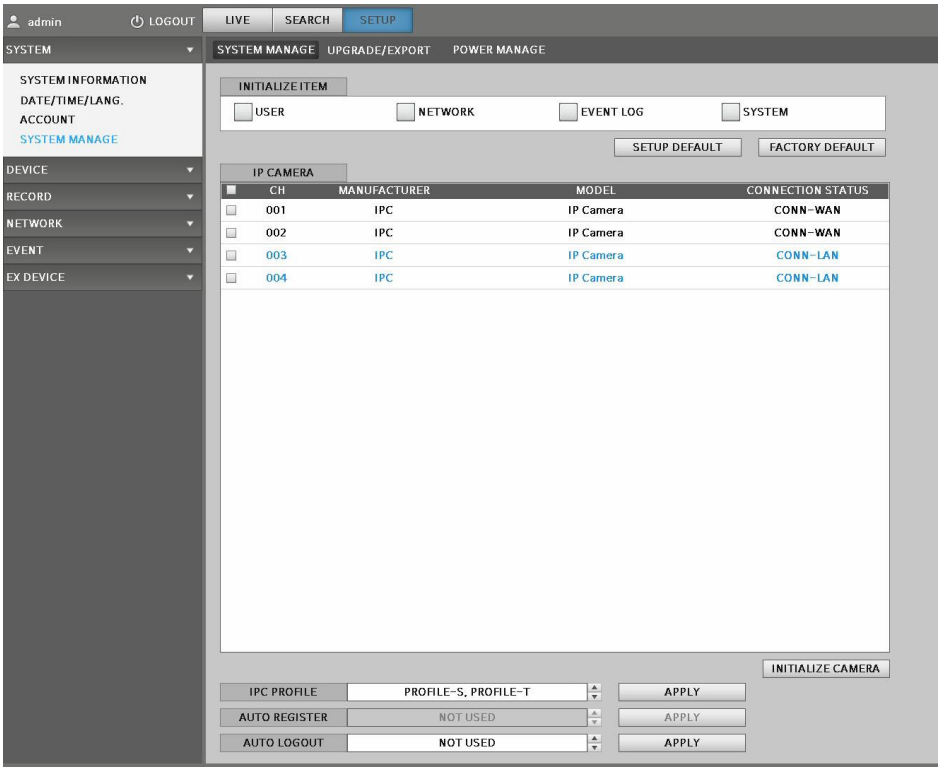
- ID: When registering camera, use the default ID value as reference.
- PASSWORD: When registering camera, use the default password value as reference.

Account Setup (user)



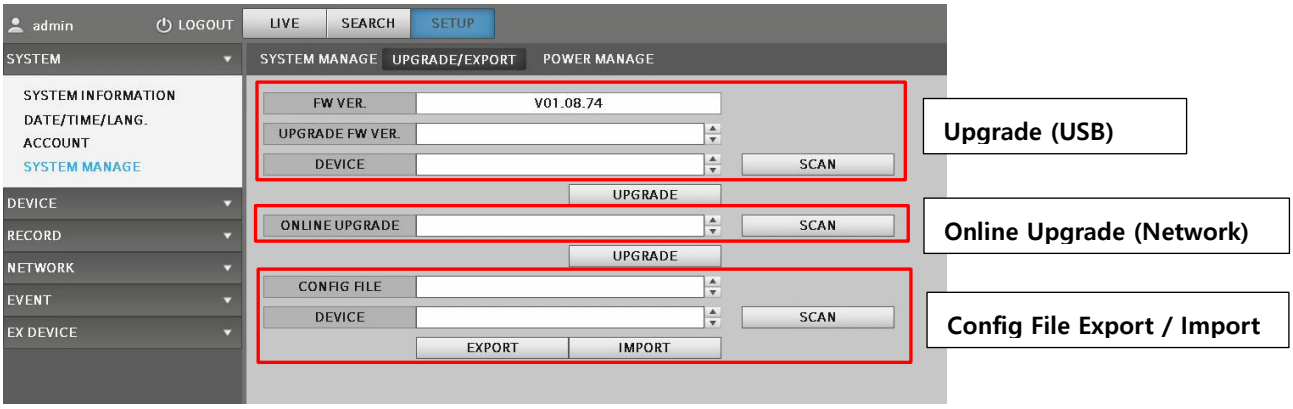
- ADD: Add new user ID. Select and add ID, password, description, and permission settings.
- DELETE: Delete user ID.
- CHANGE: Change registered ID, password, and authority.
- SAVE: Save the settings.
- AUTHORITY: Select and apply the authority settings for each user.

System Manage



- INITIALIZE ITEM: Select item want to initialize. (USER, NETWORK, EVENT LOG, SYSTEM)
  SETUP DEFAULT: Only some of existing settings (network, user account, recording settings, etc.) are initialized.
  FACTORY DEFAULT: Reset all settings to factory default.
- INITIALIZE CAMERA: Select IP camera and reset the settings.
- IPC PROFILE: Select profiles S or T.
- AUTO REGISTER: Camera(s) connected to internal network are registered through automatic registration function. (However, the camera(s) automatically registered only when auto-registration function is set to "USED".)
- AUTO LOGOUT: Automatically logs out after the set time has elapsed.
- APPLY: Save the settings.

Upgrade / Export



Upgrade (USB)

- Insert USB memory stick and click the "SCAN" button.
- FW VER.: Displays currently installed firmware version.
- UPGRADE FW VER.: Displays firmware version want to install.
- DEVICE: Displays information about discovered USB memory stick.
- UPGRADE: Click "UPGRADE" button to execute upgrade.
  (Do not disconnect USB memory stick until upgrade is complete.)

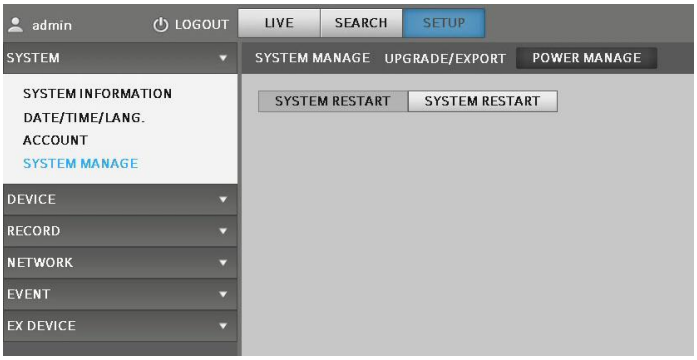
Online Upgrade (Network)

- NVR connected to network, click the "SCAN" button.
- FW VER.: Displays firmware version want to install.
- UPGRADE: Click "UPGRADE" button to execute online upgrade.

Config File Export / Import

- Insert USB memory stick and click the "SCAN" button.
- CONFIG FILE: Displays file name where settings are saved.
- DEVICE: Displays information about discovered USB memory stick.
- EXPORT: NVR settings are saved to USB memory stick.
- IMPORT: USB memory stick settings are saved to NVR.

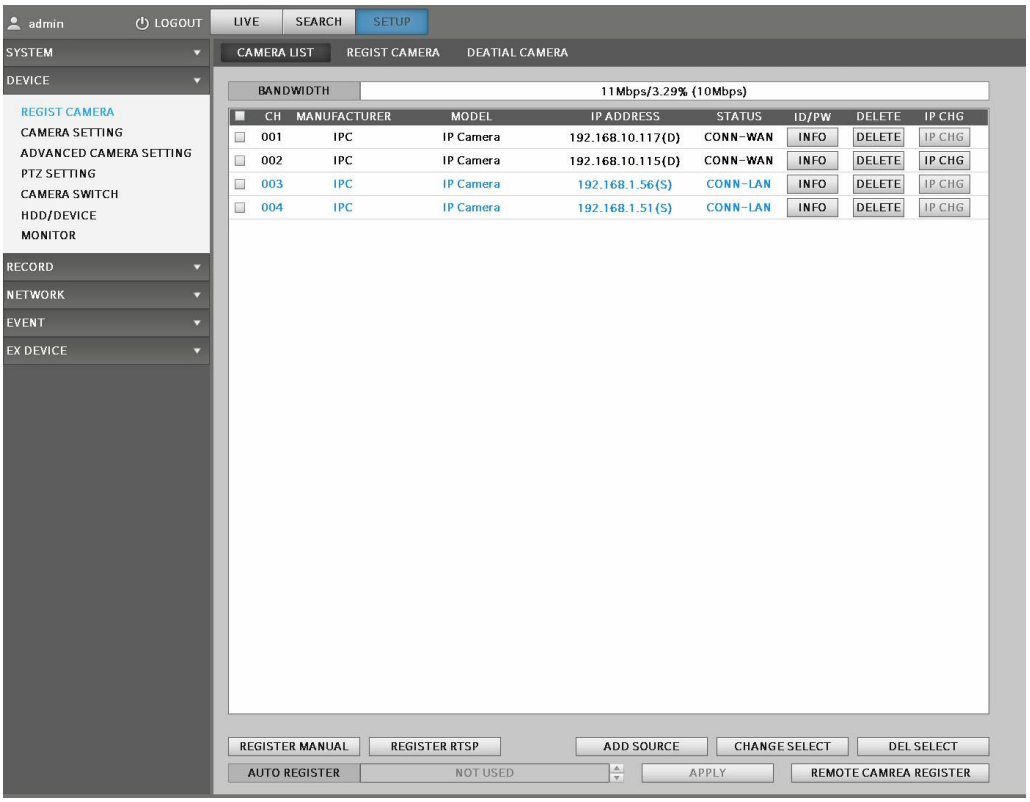
Power Management



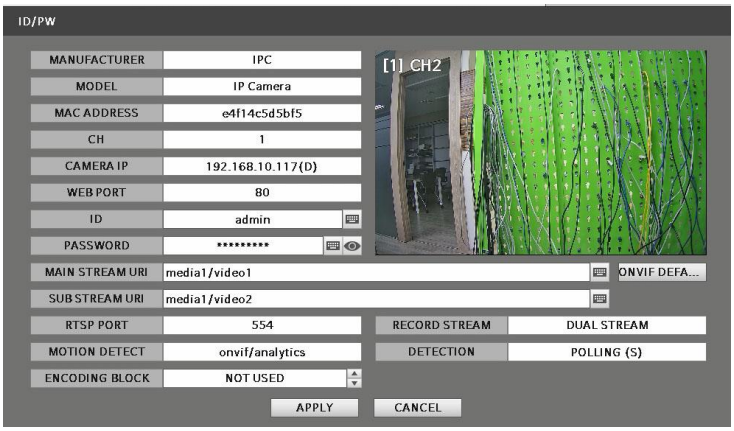
- SYSTEM RESTART: Stops recording currently in progress and restarts NVR safely.
  (Shutting down or restarting system, password window will pop up and must enter the "user password".)

Device Setting

Camera List

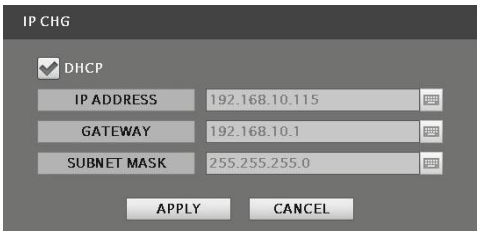


- CAMERA LIST: Displays list of currently registered cameras and can be change or delete. (Internal-Network: displayed in blue, External-Network: displayed in white)
- BANDWIDTH: Displays amount of data currently in use.
- INFO: Click “INFO” button, display detailed information about registered camera.



- ENCODING BLOCK: Select “TILE MODE” or “NOT USED”.
- APPLY: Save the settings.

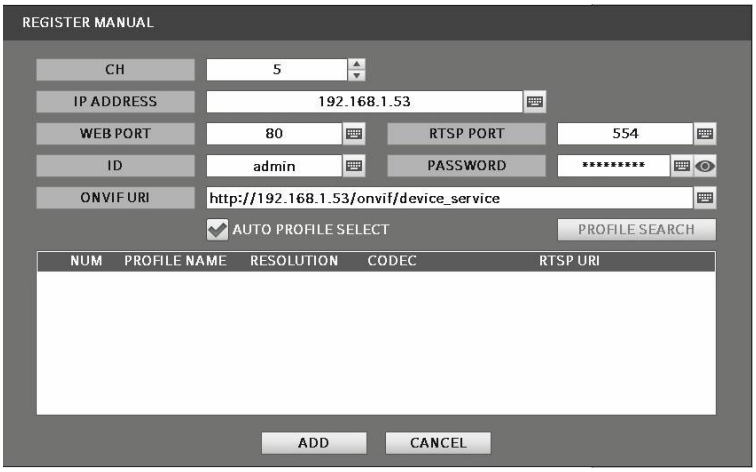
- IP CHG: Change IP address of camera.



- REGISTER MANUAL: Register camera manually.

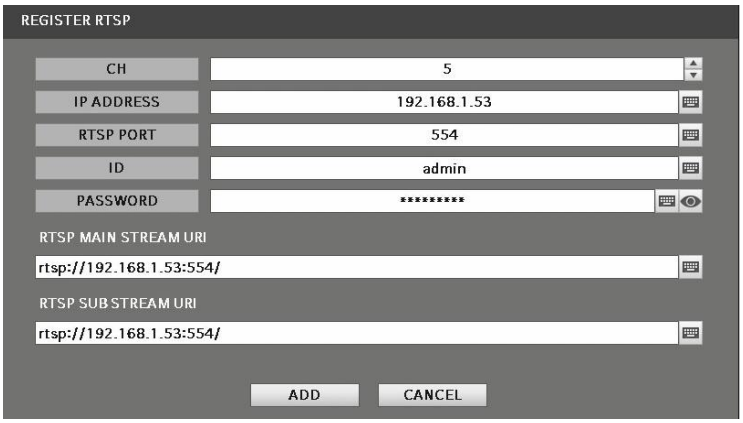
  Register by manually entering IP address, web port, ID, and password.

  IP Address: register and use IP address or DDNS address of the camera.



- REGISTER RTSP: Register camera with RTSP.

  Register by manually entering IP address, RTSP port ID, and password.



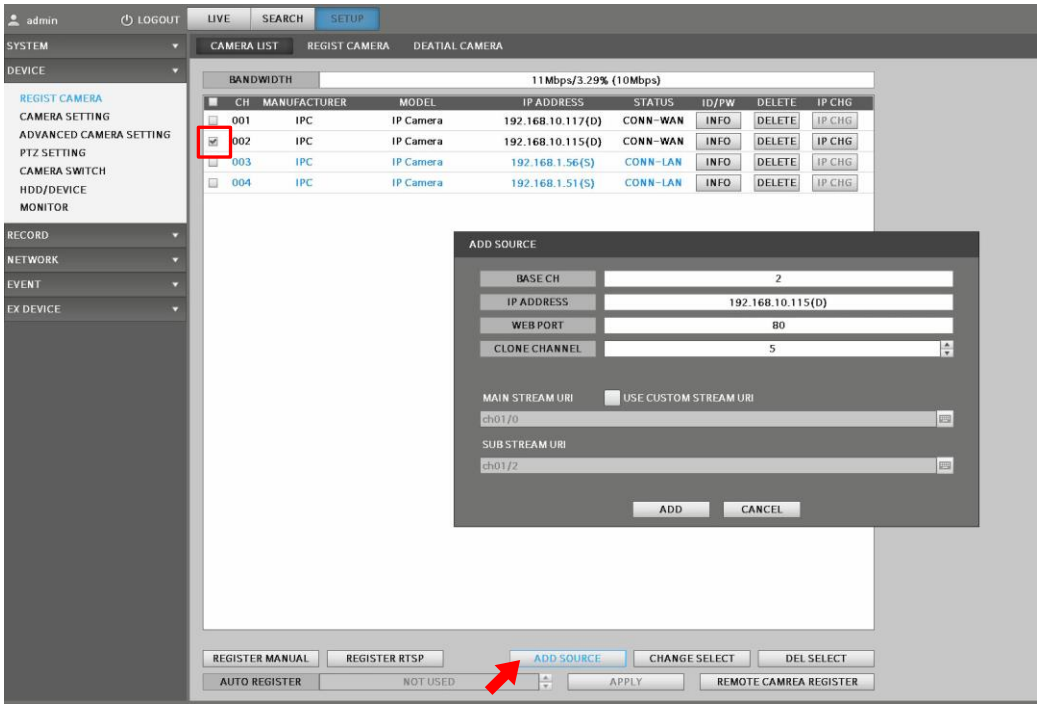
- CHANGE SELECT: Changes only selected camera.
- DEL SELECT: Deletes only selected camera.
- AUTO REGISTER: Auto-registration cameras connected to Internal-Network.
  (However, camera is automatically registered only when auto-registration function is set to "USED".)
- ADD SOURCE: Used to "clone" a registered camera or "add camera ID (CH)".

※ Add Source

Use when want to duplicate registered camera to another channel.

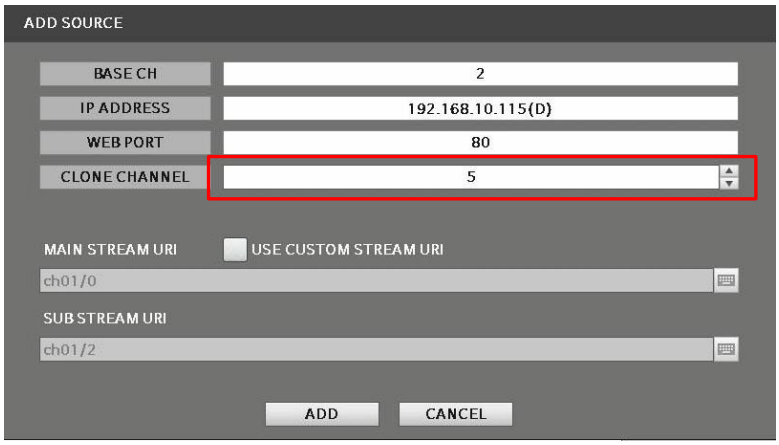
1. Select camera channel want to duplicate and click "ADD SOURCE" button.

   (Example of selecting channel 2)



2. Select channel want to duplicate. (example of selecting channel 5)

   Click "ADD" button, camera channel will be duplicated.

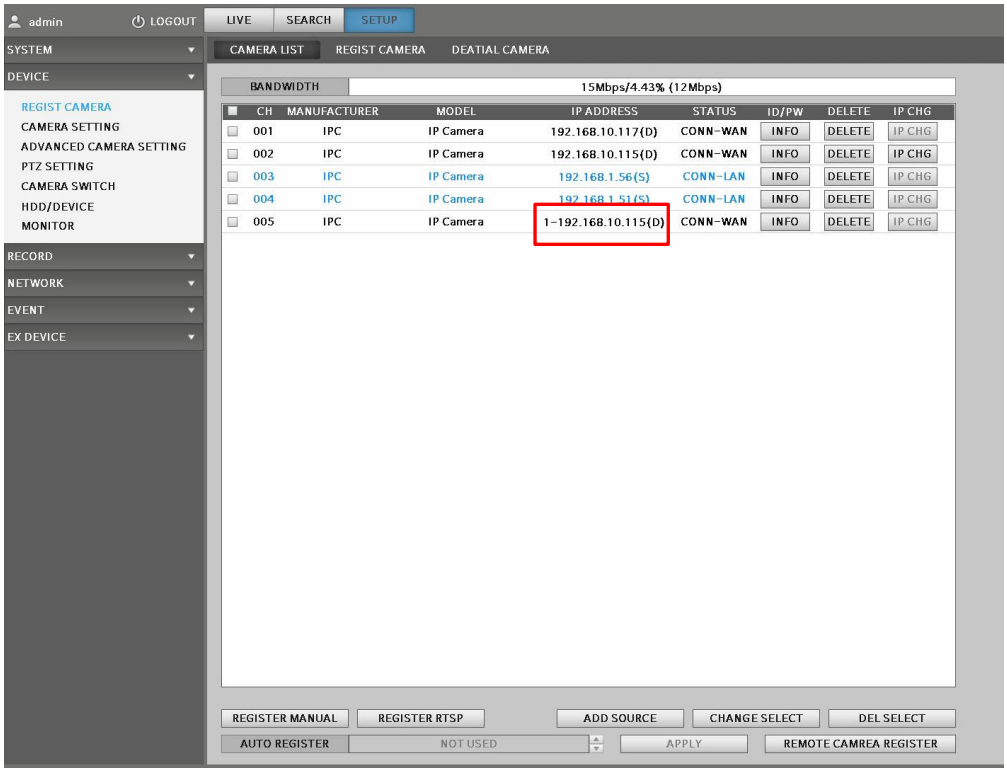


"USE CUSTOM STREAM URI"

Select when want to change RTSP address of main and sub stream.

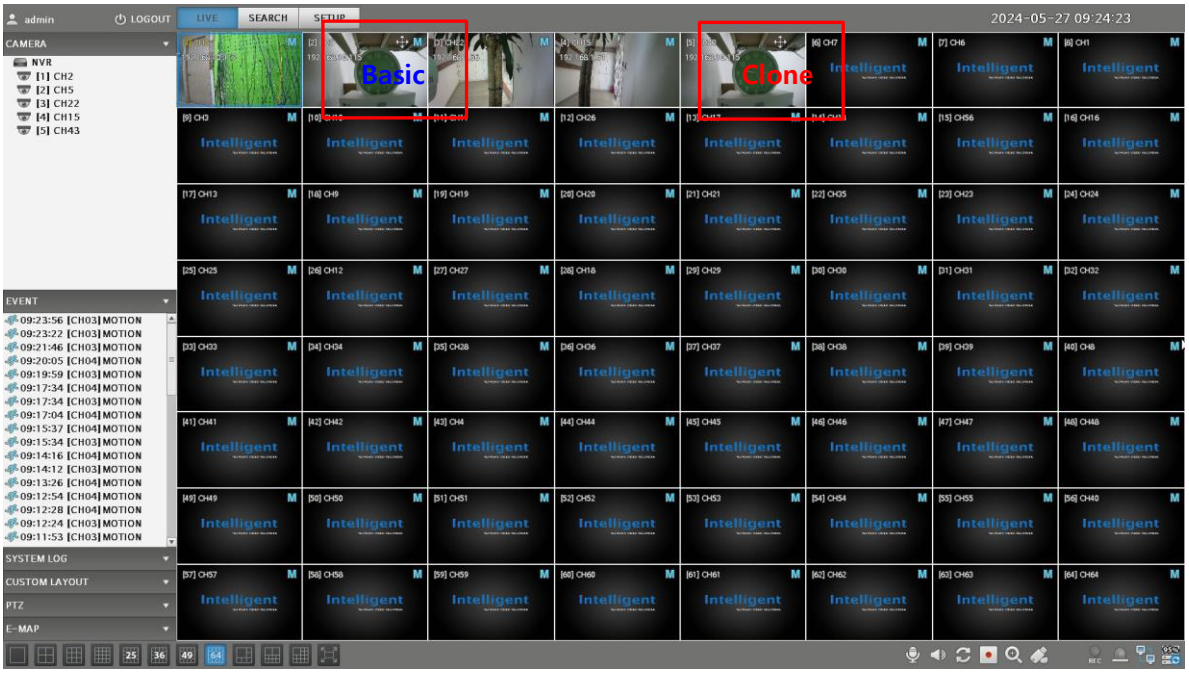
3. Duplicated channels will be displayed in camera list as shown below.

(Duplicate channels are displayed in the form “-1, -2, -3, -4…”)



As shown below, basic channel (No. 2) is duplicated and displayed as Channel No. 5.

Duplicated channel only displays live video, and by default, “recording settings” are not reflected.

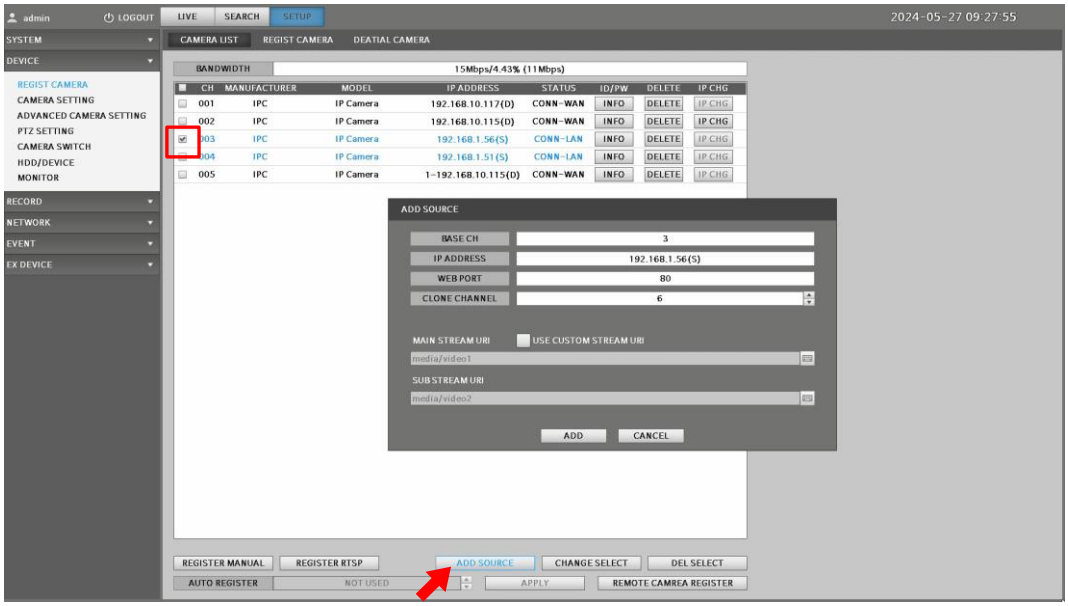


※ Add Camera ID (channel)

Register and use when camera supports multiple ID (channels)

(However, only cameras that support multiple channels can be set.)

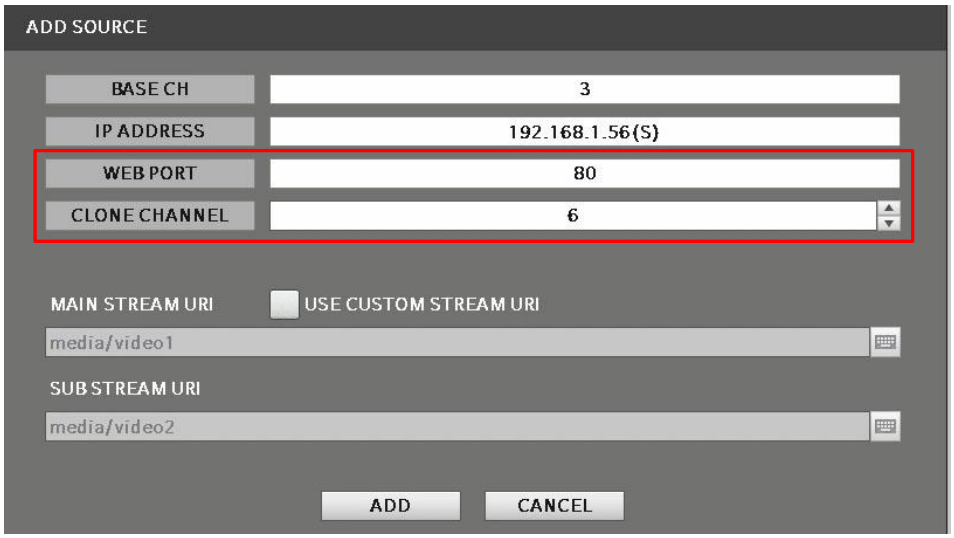
1. Select camera and click "ADD SOURCE" button.



2. Select channel want to add. (example of selecting channel 3)

Select source ID (channel). Selected camera can add up to 3 channels and displayed as source ID (4 channels displayed: "1, 2, 3").

Click "ADD" button, camera channel will be duplicated.

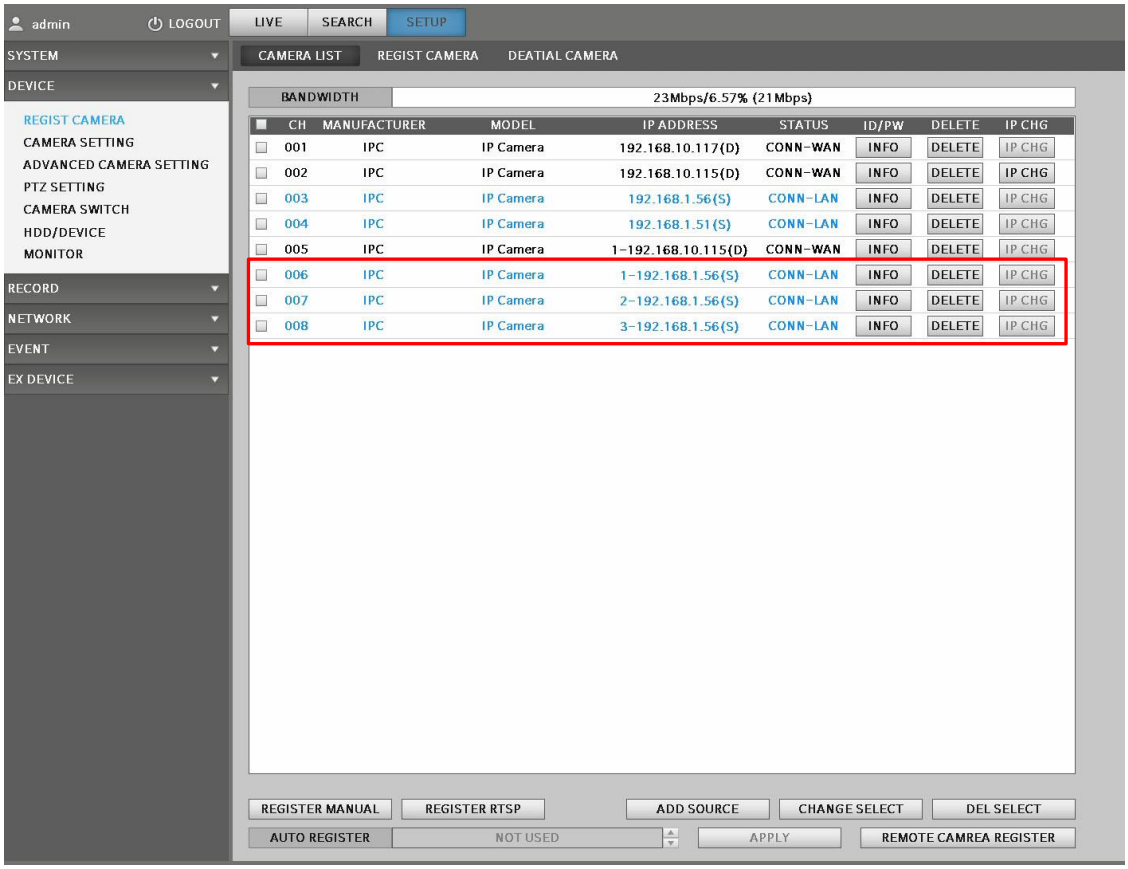


"USE CUSTOM STREAM URI"

Select when want to change RTSP address of main and sub stream.

3. Added channels will be displayed in camera list as shown below.

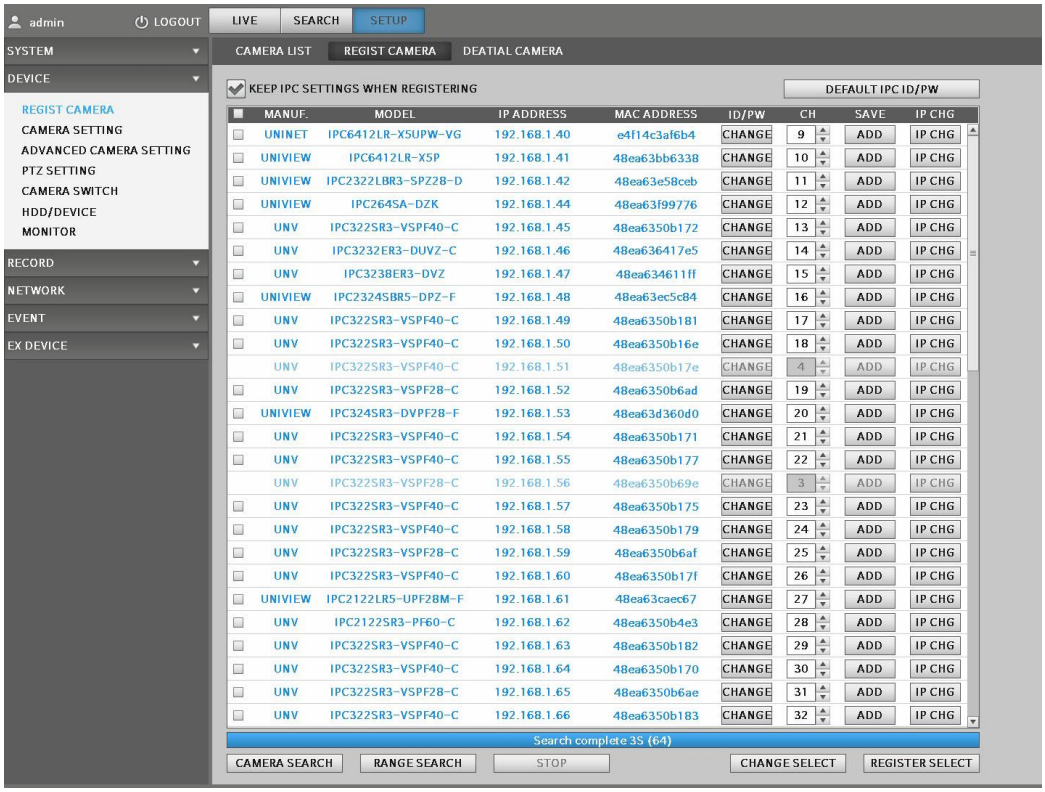
Three channels are added and registered. (Added channels are displayed in the form "-1, -2, -3")



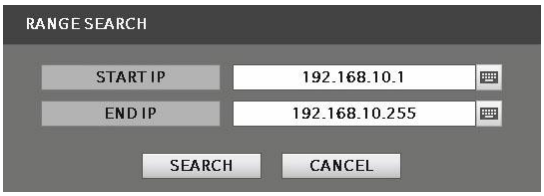
As shown below, three camera channels are displayed as added channel (6, 7, 8).



Camera Registration



- REGIST CAMERA: Register IP cameras connected to Internal-Network and External-Network.
- KEEP SETTINGS WHEN REGISTERING: When registering camera, existing camera settings are maintained and registered.
- CAMERA SEARCH: Search all cameras connected to Internal-Network and External-Network.
- RANGE SEARCH: Search by specifying range of IPs registered in Internal-Network and External-Network.

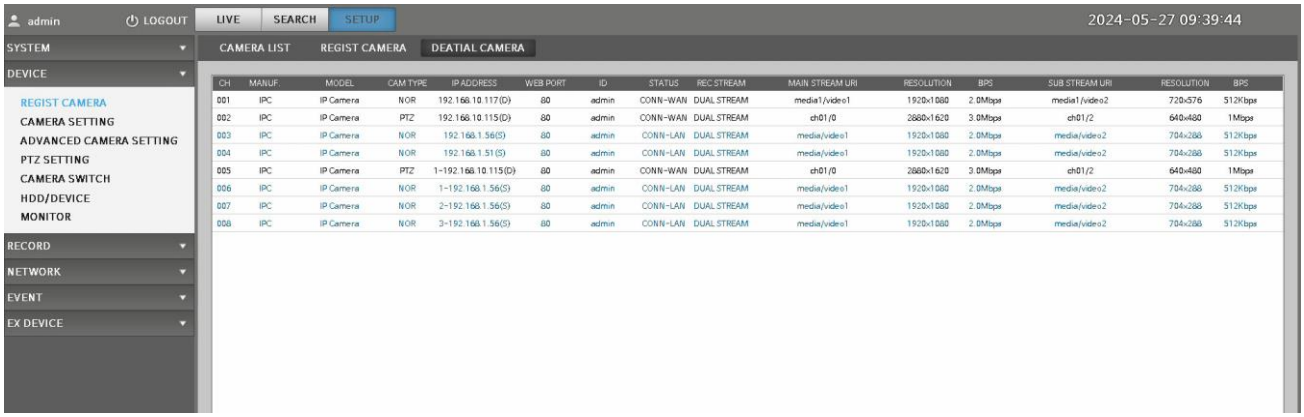


- CHANGE SELECT: Change only selected cameras.
- REGISTER SELECT: Registers only selected cameras.

[Note]

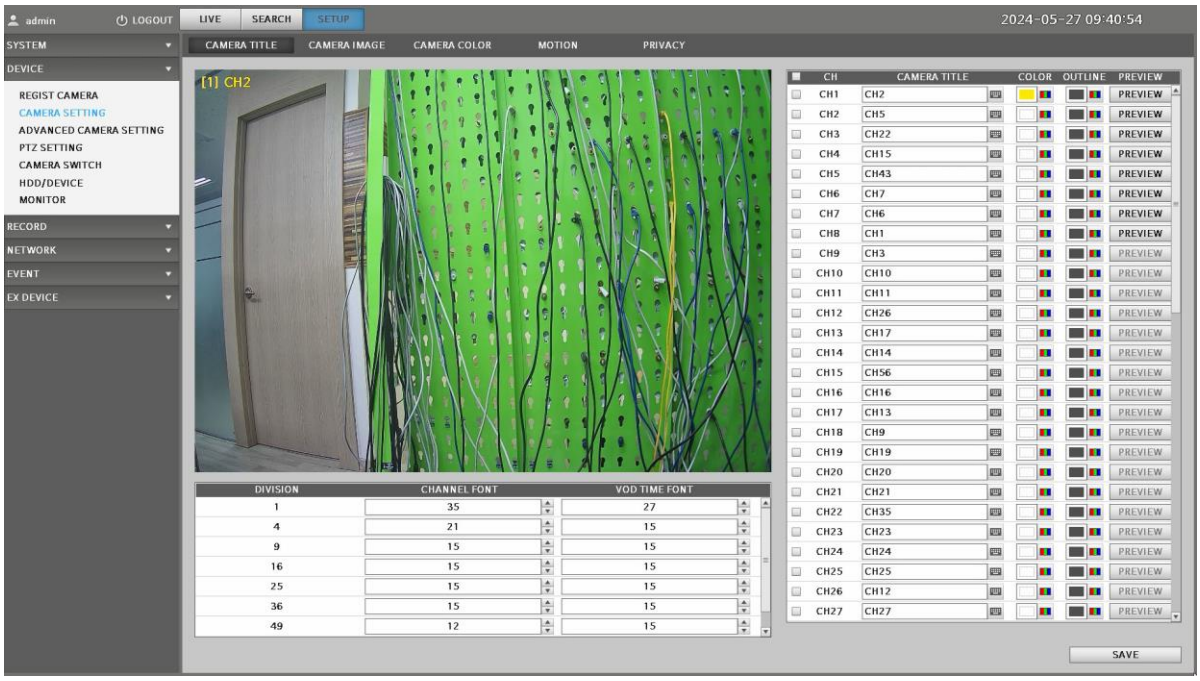
When registering IP camera, please check IP camera ID and PASSWORD information before registering.

Camera Detail List



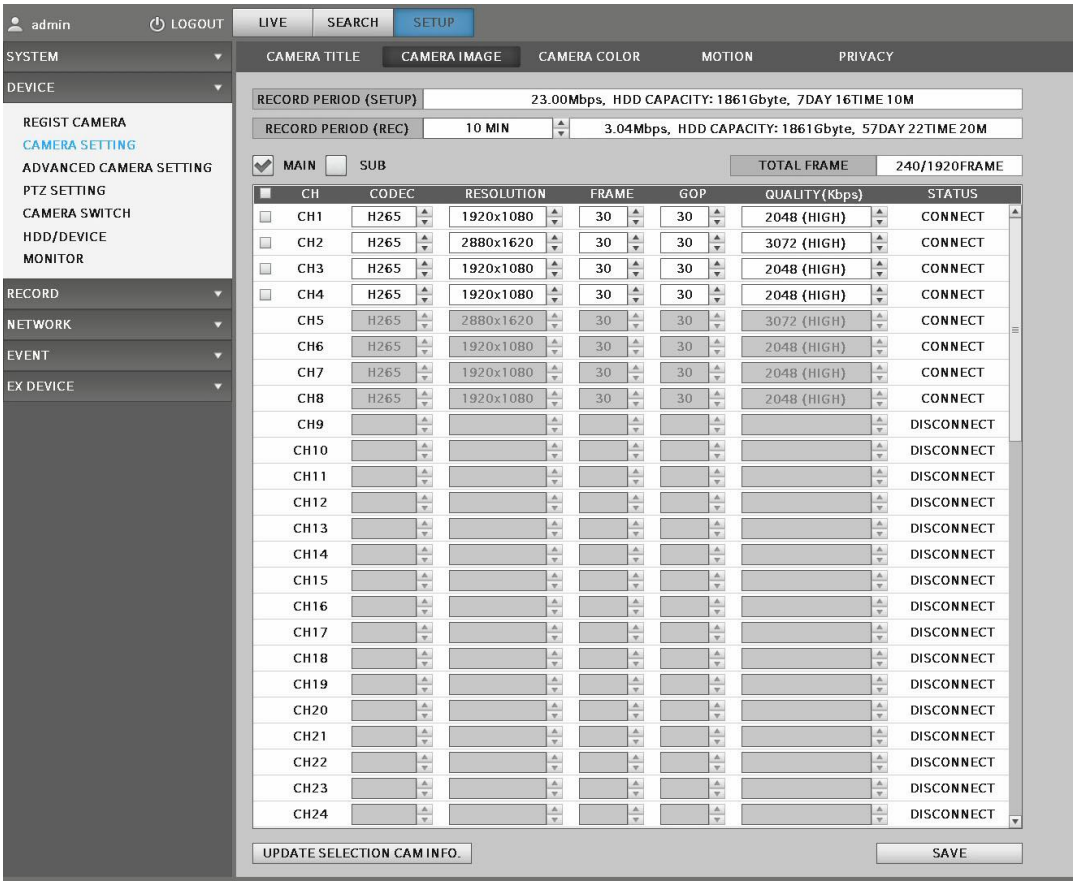
- Displays detailed information of currently registered camera.
  Channel, manufacturer, model name, camera type, IP address, web port, ID, status, recording stream, main-stream address, Resolution, main bitrate, sub-stream address, resolution, sub-bitrate etc.

Camera Setting (Camera Title)



- CAMERA TITLE: Change camera name.
- COLOR: Set color of camera name.
- OUTLINE: Set border color of camera name.
- PREVIEW: Click "PREVIEW" button, display video and camera name of channel.
- DIVISION: Display camera text and search time text in 1, 4, 9, 16, 25, 36, and 64 split screens.
- CHANNEL FONT: Set camera font size.
- VOD TIME FONT: Set font size for search time.
- SAVE: Saves the settings.

Camera Setting (Camera Image)



- RECORD PERIOD (SETUP): Display expected saving date based on current bandwidth and HDD capacity. (Storage period is reflected depending on codec, resolution, frame, and picture quality settings.)

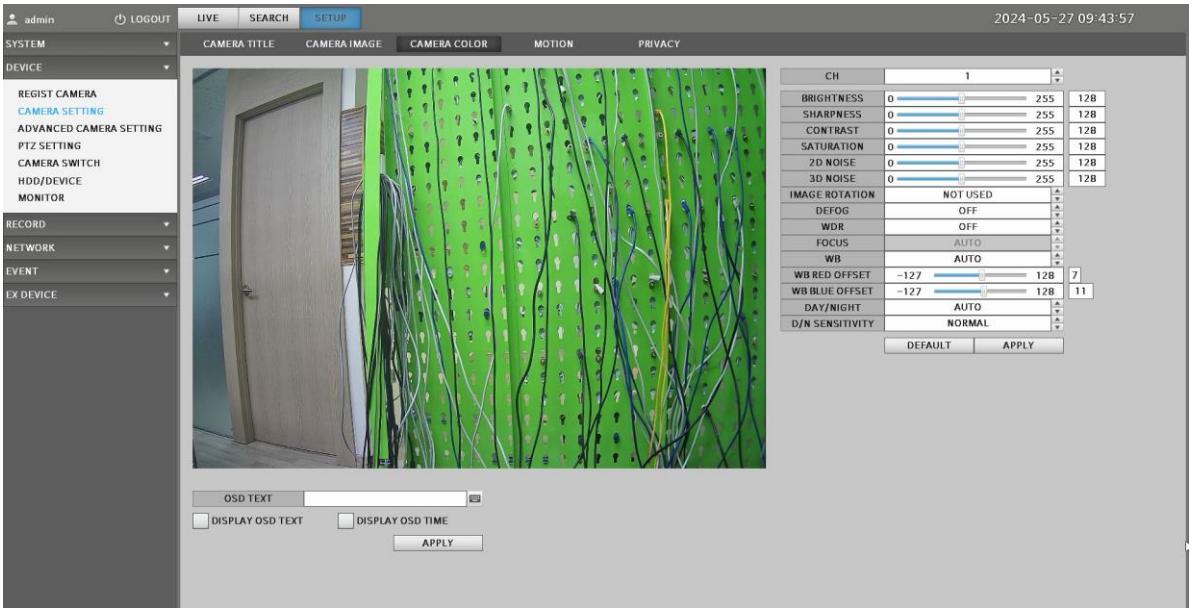
- RECORD PERIOD (REC): Calculate expected storage date based on most recent recording. (Displayed based on last 10 minutes, 1 hour, and 24 hours)

- MAIN: Set main frame of camera. (Codec, resolution, frame, quality, etc. can be changed.)

※ Select camera(s) want to change and scroll through change items with mouse wheel, displayed minimum / maximum values so can easily change the values.

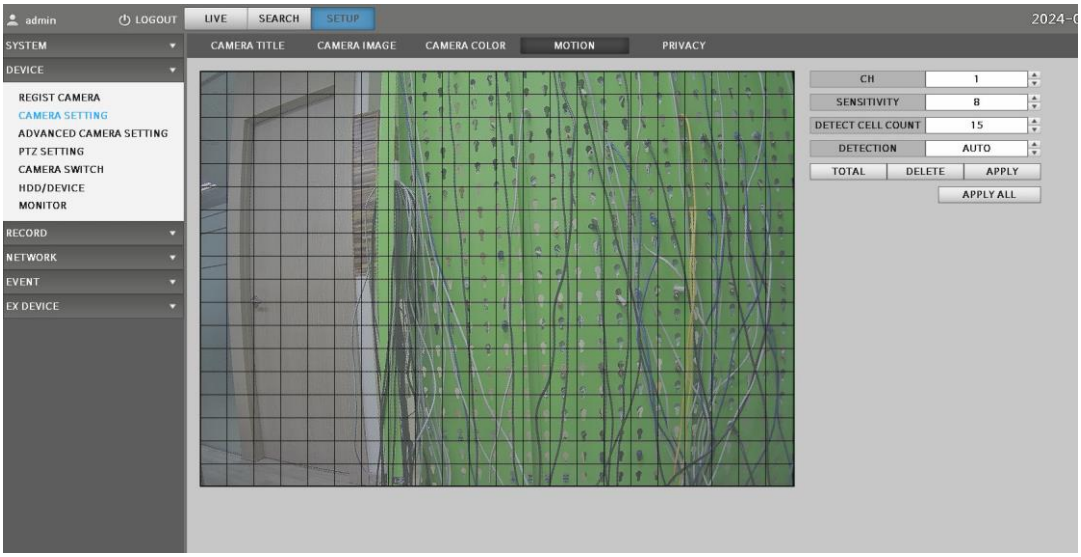
- SUB: Set camera subframe.
- FRAME: Display currently set frame number.
- GOP: Displays currently set GOP.
- SAVE: Saves the settings.

Camera Setting (Camera Color)



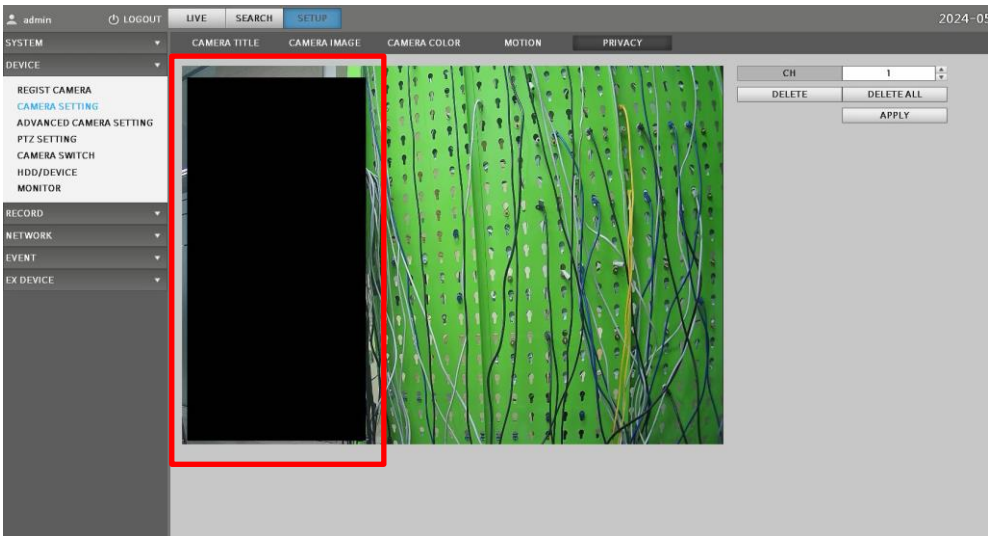
- CH: Select camera number want to change.
- BRIGHTNESS: Change camera brightness.
- SHARPNESS: Changes camera sharpness.
- CONTRAST: Change the camera contrast.
- SATURATION: Changes camera saturation.
- 2D NOISE: Change 2D noise value.
- 3D NOISE: Change 3D noise value.
- IMAGE ROTATION: Adjusts rotation of video.
- DEFOG: Changes defog correction value.
- WDR: Change WDR correction value.
- FOCUS: Change focus.
- WB: Adjust white balance value.
- WB RED OFFSET: Adjust white balance RED value.
- WB BLUE OFFSET: Adjust white balance BLUE value.
- DAY/NIGHT: Change Day/Night mode.
- D/N SENSITIVITY: Change sensitivity of Day/Night mode.
- DEFAULT: Click “DEFAULT” button, it changes to default value.
- APPLY: Save the settings.

Camera Setting (Motion)



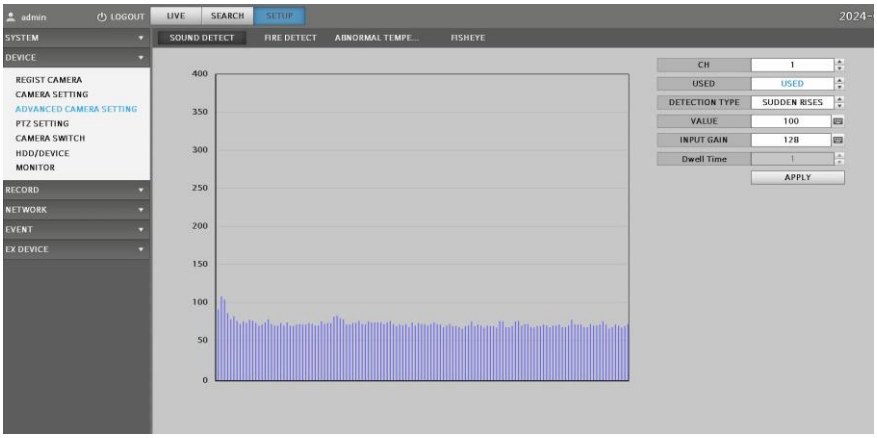
- Motion areas can be selected and deselected by dragging and clicking with left mouse button.
- CH: Select camera number want to change.
- SENSITIVITY: Change the sensitivity of motion.
  (It ranges from 1 to 10; higher value, higher sensitivity.)
- MOTION CELL COUNT: Set count of cells in motion detection area.
- DETECTION: Set by selecting AUTO, polling event, or meta stream.
- TOTAL: Applies all channels of camera.
- DELETE: Delete motion area.
- APPLY: Save the settings.

Camera Setting (Privacy Mask)



- Privacy mask areas can be selected and deselected by dragging and clicking with left mouse button.
- CH: Select camera number want to change.
- Privacy mask area: Set separate privacy mask areas (up to 4 areas can be set).
- DELETE: Delete privacy mask area.
- APPLY: Save the settings.

Camera Setting (Abnormal Sound Detect)



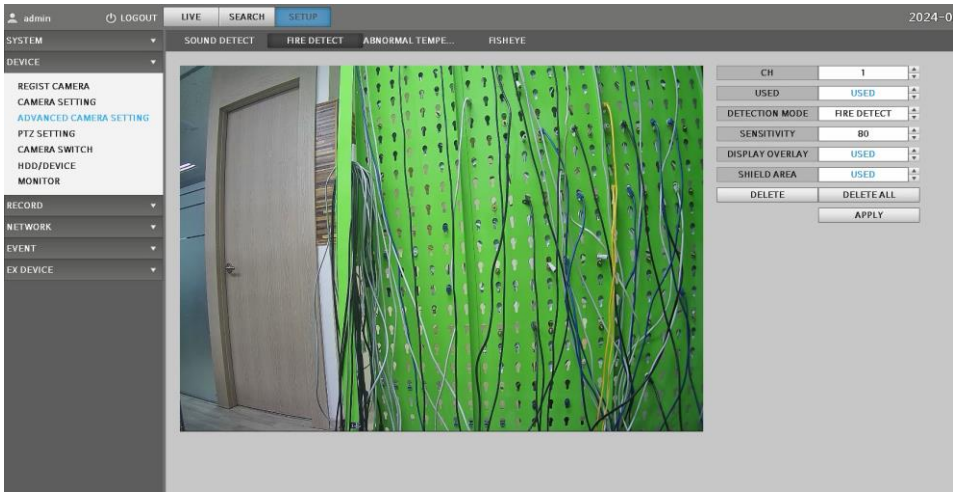
"SOUND DETECT" function outputs in conjunction with event (alarm output, channel pop-up, buzzer, etc.) when abnormal sound is detected. (Refer SETUP – EVENT – CAMERA EVENT – SOUND DETECT)

- CH: Select channel abnormal sound detection function is applied.
- USED: Set USED / NOT USED.
- DETECTION TYPE: Select detection mode want to use.
  (SUDDEN RISES, SUDDEN FALLING, SUDDEN CHANGE, THRESHOLD)
- VALUE: Configure settings according to detection mode.
- Dwell Time: Sets duration.

※ When set abnormal sound detection function, the audio sound level will be displayed in the form of above graph, so please refer to it for setting.

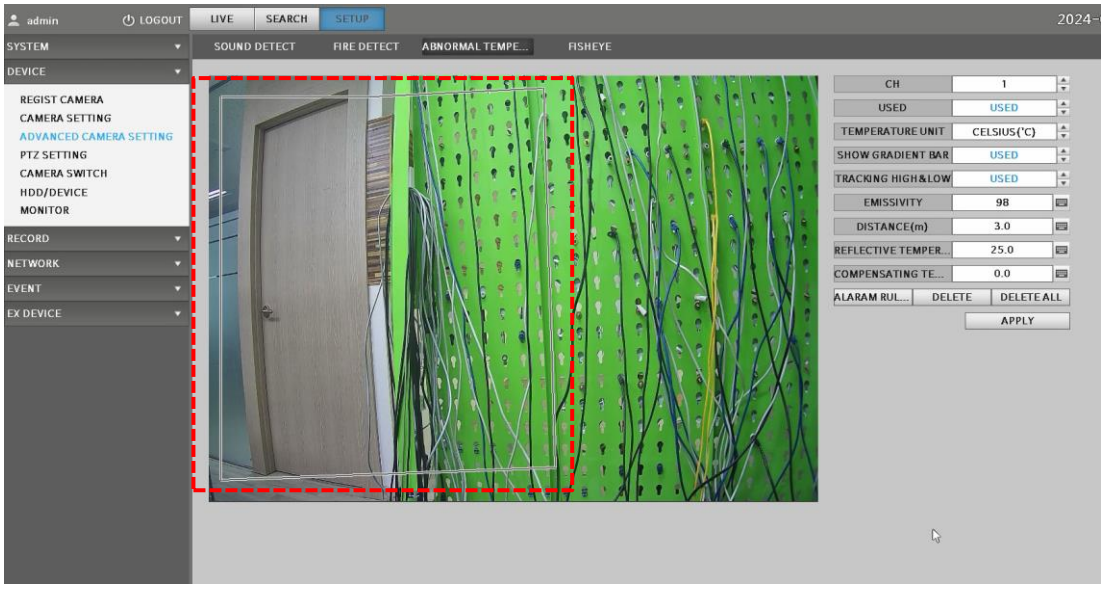
- APPLY: Save the settings.

Camera Setting (Fire Detect)

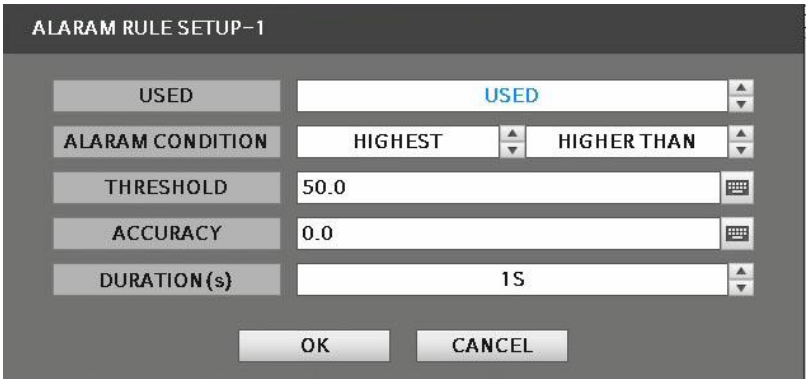


- CH: Select channel fire detection function is applied.
- DETECTION MODE: Select detection mode.
- SENSITIVITY: Select sensitivity.
- DISPLAY OVERLAY: Select whether to display detection area or not.
- SHIELD AREA: Select whether to display shield area or not.
- APPLY: Save the settings.

Camera Setting (Abnormal Temperature)



- CH: Select channel abnormal temperature detection function is applied.
- SHOW GRADIENT BAR: Select whether to display temperature bar.
- TRACKING HIGH & LOW: Select whether to track the highest and lowest temperatures.
- EMISSIVITY: Enter emissivity value.
- DISTANCE: Enter distance.
- REFLECTIVE TEMPERATURE: Enter reflected temperature.
- COMPENSATING TEMPERATURE: Enter compensation temperature.
- ALARM RULE SETUP: Select line set as temperature area and click button, displayed as shown below.



ALARM CONDITION: Select Highest, Lowest, Average Temperature, Temperature Difference, etc.
Select from Above, Below, Same as Reference Temperature, etc.

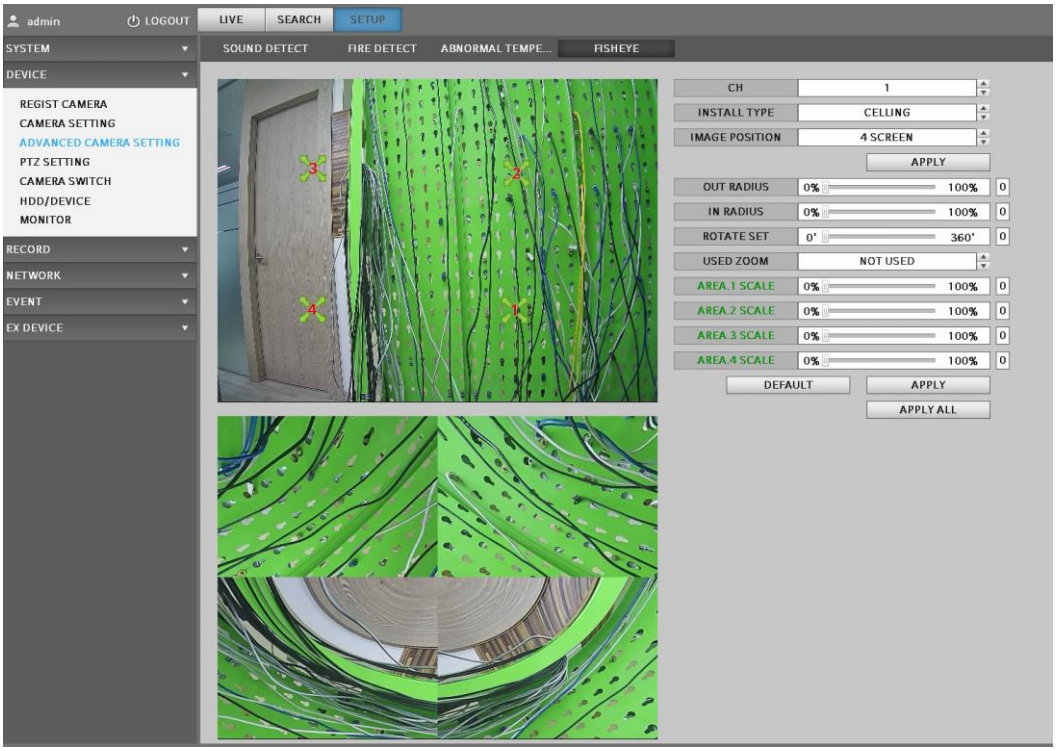
THRESHOLD: Enter threshold temperature value.

ACCURACY: Enter measurement accuracy value.

DURARION(s): Enter time want to measure.

- APPLY: Save the settings.

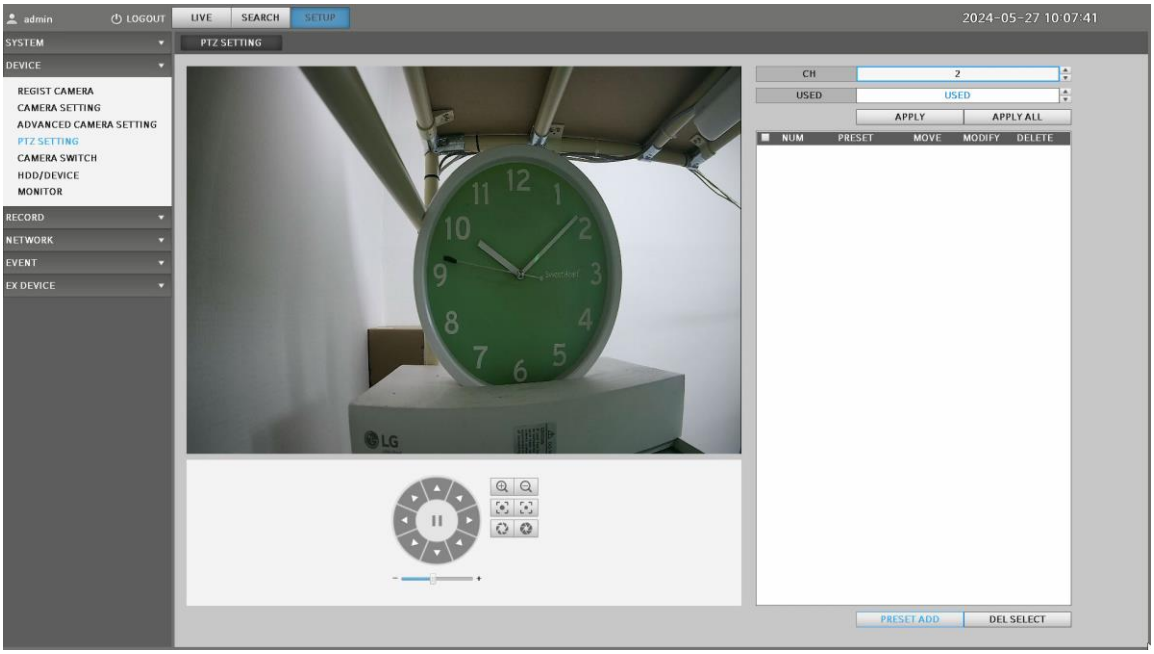
Camera Setting (Fisheye)



Set "Fisheye" function when want to set up a fisheye camera.

- CH: Select channel fisheye lens function is applied.
- INSTALL TYPE: Select the installation type (CEILING, FLOOR, WALL, etc.)
- IMAGE POSITION: Select image placement. (1 PANORAMA, 1 PANORAMA + 2 SCREEN, 1 ORIGINAL etc.)
- OUT RADIUS: Set outer radius area. (Reflected only in panorama mode)
- IN RADIUS: Set inner radius area. (Reflected only in panorama mode)
- ROTATE SET: Sets rotation angle. (Reflected only in panorama mode)
- USED ZOOM: Sets zoom screen. (Reflected only in screen mode)
- AREA 1/2/3/4 SCALE: "USED ZOOM" function must be activated to apply.
- APPLY: Save the settings.

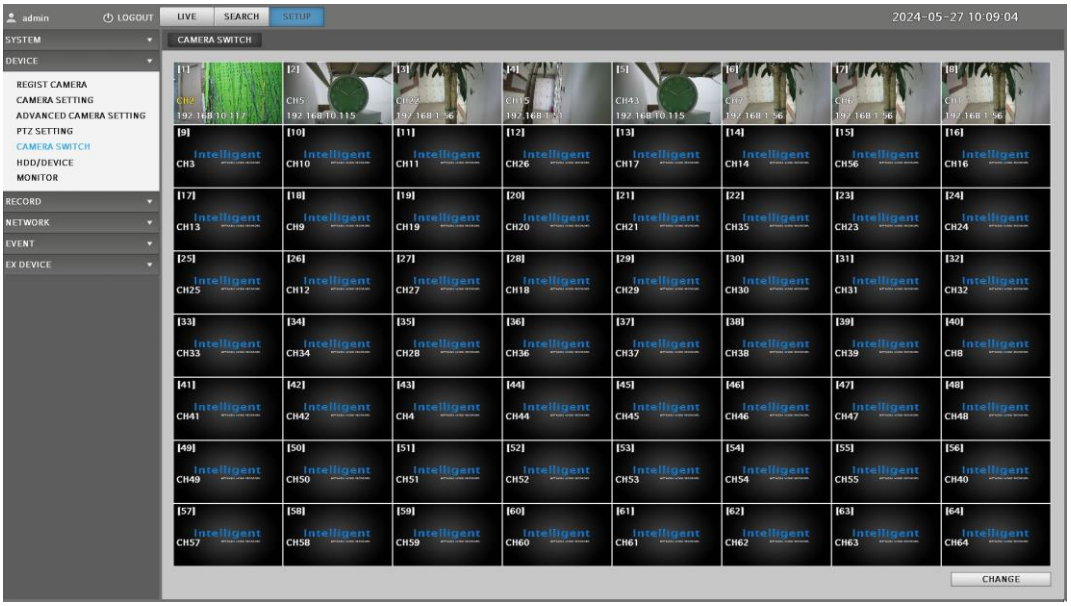
PTZ Setting



Setting up cameras with PTZ function.

- CH: Select camera number want to change.
- PRESET ADD: Add PTZ preset. Setting move, delete of preset are possible.
- DEL SELECT: Delete selected PTZ preset.
- APPLY: Save the settings.

Camera Switch



Allows to move position of registered camera.

Drag desired channel with mouse to change its location.

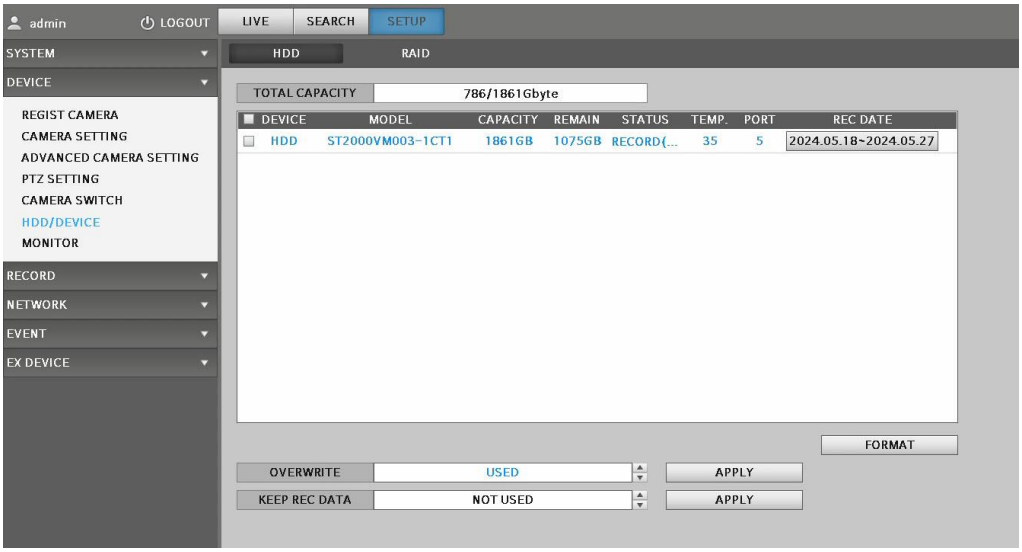
Ex) Displayed when channel 5 is moved to channel 1 (channel 1: 5 -> 1, channel 5: 1 -> 5).

[Note] Check channel name camera and IP information.

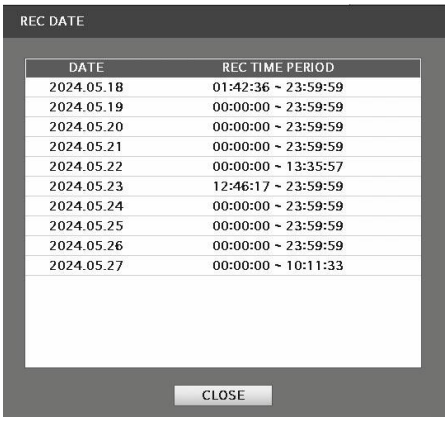
- CHANGE: Save changed channel information.

HDD / Storage Device

HDD Setting



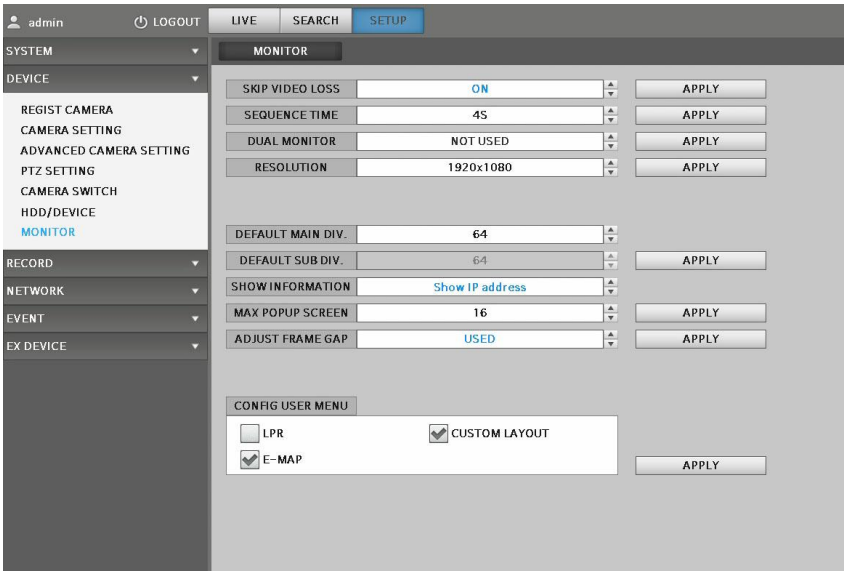
- TOTAL CAPACITY: Displays currently used capacity on left / Displays total capacity on right.
- FORMAT: Select HDD want to format and proceed format it.
- REC DATE: Display recording period of recorded on the HDD.



※ HDD currently recording is displayed in blue.

- OVERWRITE: **When recording data is full, this function erases first recorded data and stores new data sequentially (can be changed to USED / NOT USED).**
- KEEP REC DATA: Set the recording data retention period (1 to 365 days, NOT USED).
- APPLY: Save the settings.

Monitor



- SKIP VIDEO LOSS: Select whether to display non-input channels when switching sequentially.
  (ON: Not displayed, OFF: Displayed)
- SEQUENCE TIME: Set video retention time when switching sequentially.
- DUAL MONITOR: **Basically, HDMI 2 (4K) and HDMI 1 ports are set to dual monitor.**

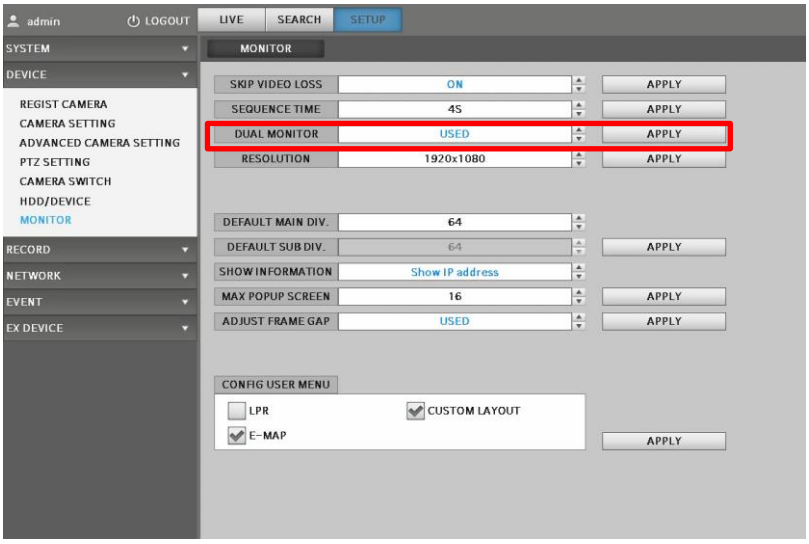
  ※ Dual monitor only supports below 1920 x 1080 resolution, and dual monitors are not supported when output at 4K resolution. When dual monitor is set to "NOT USED", HDMI 2 (4K), HDMI 1, and VGA are output simultaneously. (Excluding 4K resolution)
- RESOLUTION: Adjust resolution of monitor.
  Change resolution to 1280 x 720, 1280 x 1024, 1920 x 1080, 3840 x 2160.
  AUTO DETECT: Monitor resolution is automatically detected and applied.
  Enlarge UI Resolution: When using 3840 x 2160 resolution, UI size is enlarged and displayed.
- DEFAULT MAIN DIV: Display default split screen of the main monitor.
- DEFAULT SUB DIV: Display default split screen of the sub monitor.
- SHOW INFORMATION: Display IP address and detailed information on the screen.

Configure User Menu

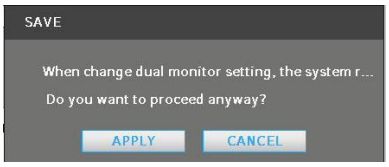
Select display menu configuration on left side of real-time screen.
Select whether to display "CUSTOM LAYOUT, E-MAP" menu.

- APPLY: Save the settings.

Dual Monitor Setting



- Select "USED" for dual monitor and click "APPLY" button.



- When click "APPLY" button, NVR will reboot, and monitor will be dual output settings.

※ Dual Monitor Screen Configuration

Item		HDMI 2(4K)	HDMI 1	VGA
Monitor Configuration		**Main Monitor**	**Sub Monitor**	Output same as HDMI 2
Resolution		1280 x 720 1280 x 1024 1920 x 1080	1280 x 720 1280 x 1024 1920 x 1080	
Screen Configuration	Live	1, 4, 9, 16, 25, 32, 6, 10, 13, Full Screen	1, 4, 9, 16, 25, 32, 6, 10, 13, Full Screen	
	Playback	1, 4, 9, 16, 25, 36, 64, 6, 10, 13, 전체화면	Output Booting Logo	
	Setup	Setting Screen	Output Booting Logo	
Split Screen Output	1 Div.	1CH	2CH	
	4 Div.	1~4CH	5~8CH	
	9 Div.	1~9CH	10~18CH	
	16 Div.	1~16CH	17~32CH	
	25 Div.	1~25CH	26~50CH	
	32 Div.	1~32CH	33~64CH	
	6 Div.	1~6CH	7~12CH	
	10 Div.	1~10CH	11~20CH	
	13 Div.	1~13CH	14~26CH	
	Full Screen	Full Screen Output of the channel(s)		

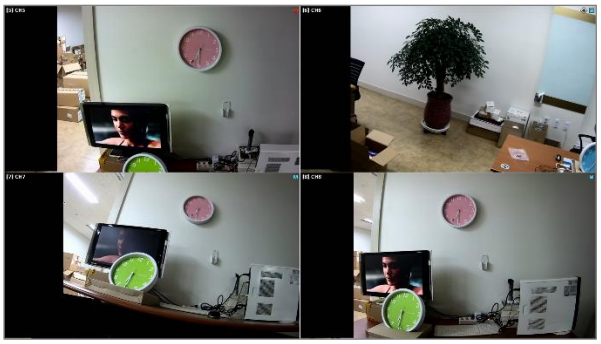
Dual Monitor Screen Output

After setting up dual monitor, can easily operate screen by moving main and sub screen with mouse.

4 Division (Main Screen)



(Sub Screen)



36 Division (Main Screen)

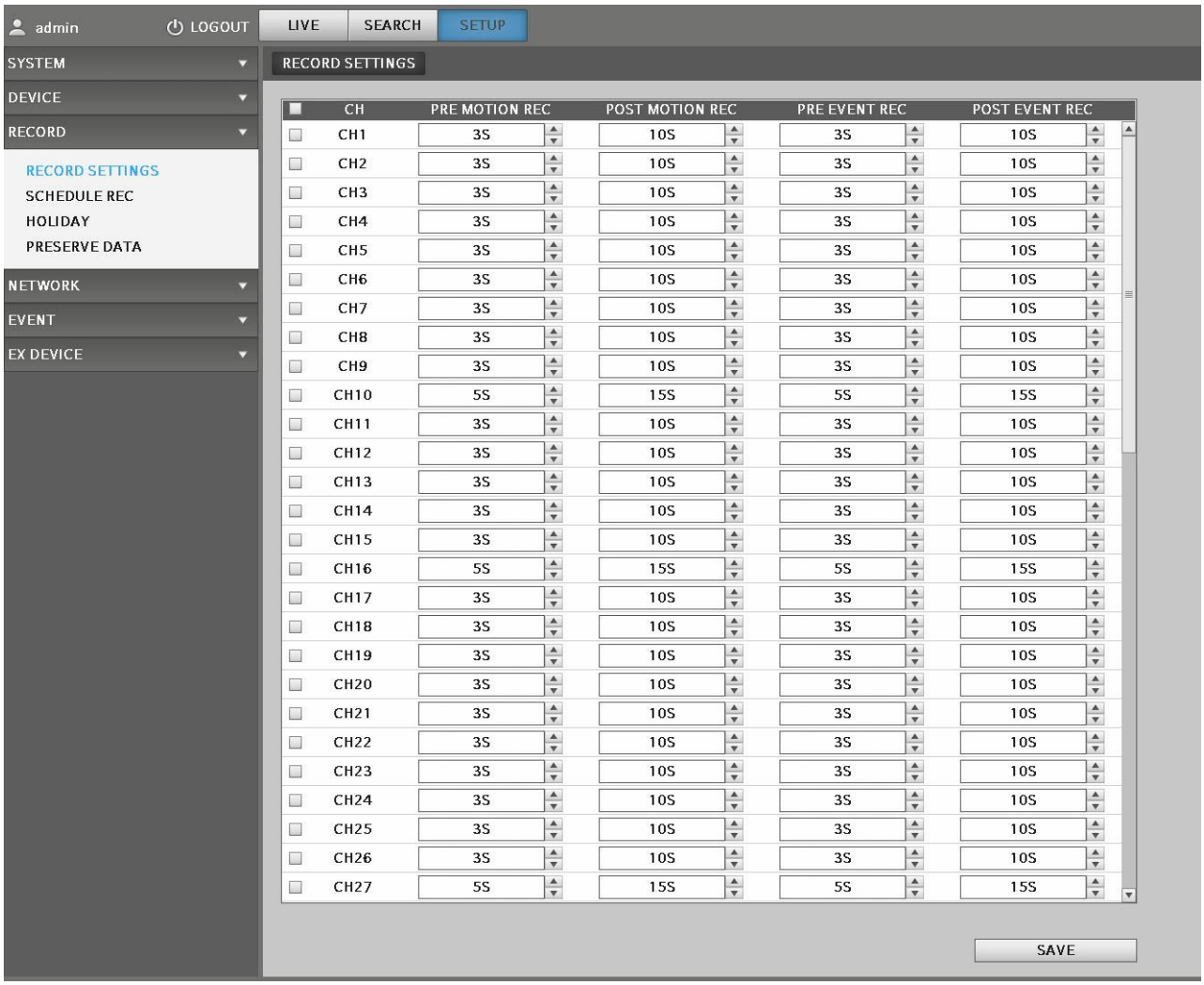


(Sub Screen)



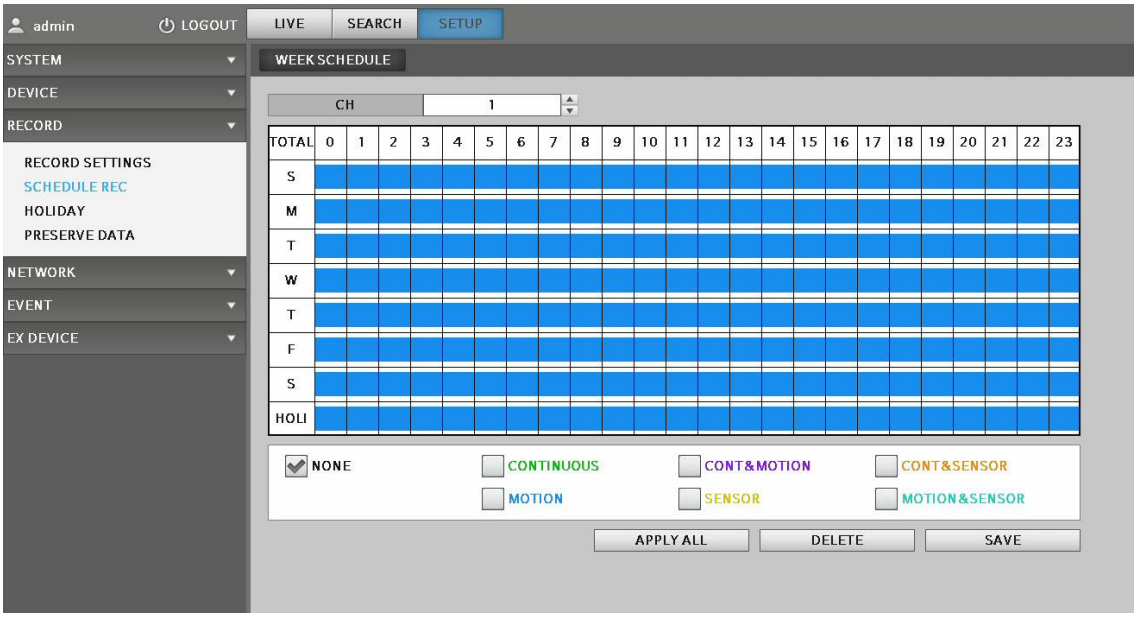
Recording

Recording Setting



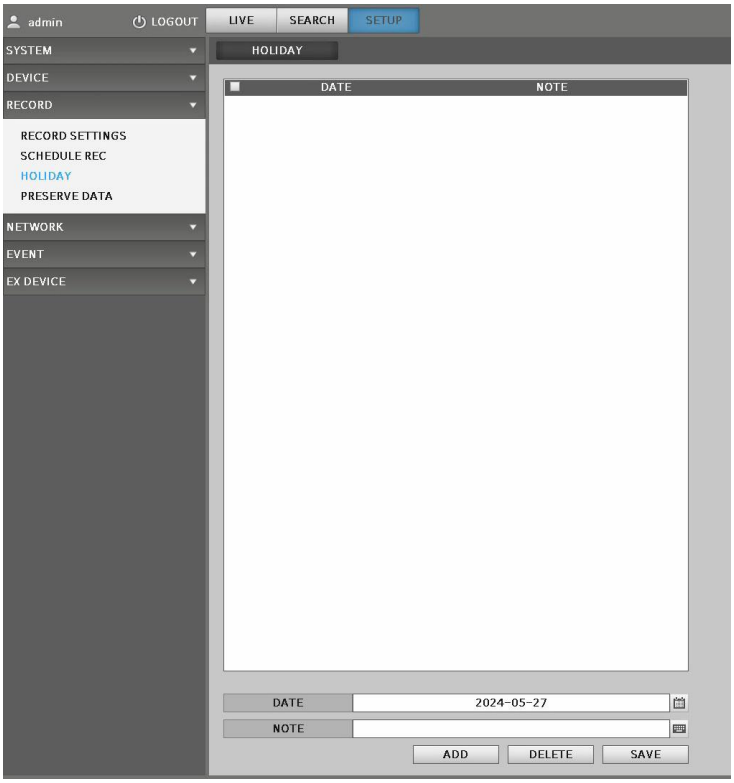
- PRE MOTION REC: When recording motion, set motion detection pre-recording time (1 to 3 seconds).
- POST MOTION REC: When recording motion, set recording time after motion detection. (10~60 seconds)
- PRE EVENT REC: When recording event, set pre-recording time before event occurs. (1~3 seconds)
- POST EVENT REC: When recording event, set recording time after event occurs. (10~60 seconds)
- SAVE: Save the settings.

Schedule Recording



- CH: Select channel want to set up scheduled recording.
- HOLIDAY: Select recording setting for date saved as a holiday.
- NONE: Select "NONE" and select relevant day and time, recording will stop.
  Drag with mouse to select relevant day and time.
  Entire area setting: Click "TOTAL" in the upper corner to set entire area.
- CONTINEOUS: Set continuous recording.
- CONT & MOTION: Set continuous + motion recording.
- CONT & SENSOR: Set continuous + sensor recording.
- MOTION: Set motion recording.
- SENSOR: Set sensor recording.
- MOTION & SENSOR: Set motion and sensor recording.
- APPLY ALL: Apply equally to all channels.
- DELETE: Delete stored setting.
- SAVE: Save the settings.

Holiday Setting



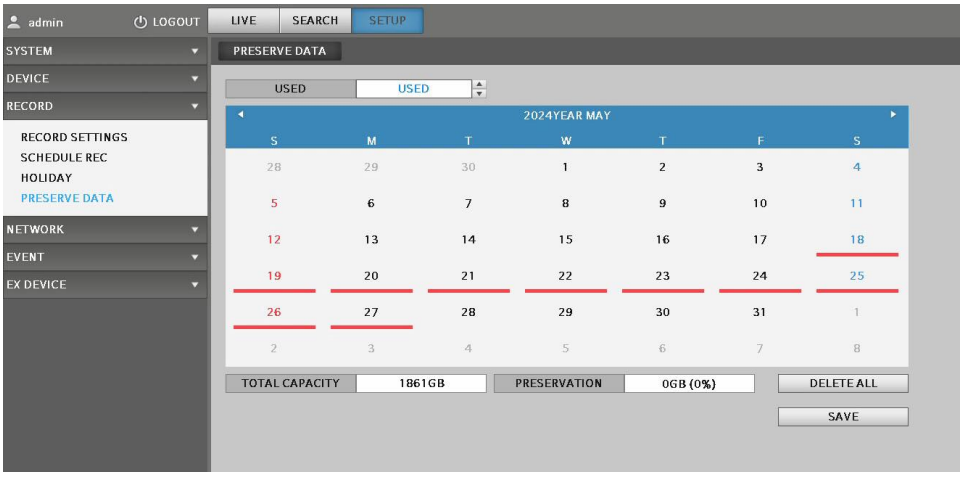
- DATE: Select date to set for holiday recording.

  Recording mode is applied to the registered holiday setting date according to the value set for holiday in scheduled recording.
- NOTE: Description of what to set as holiday recording.
- ADD: Add date set for holiday recording.
- DELETE: Delete date set for holiday recording.
- SAVE: Save the settings.

Preserve Data

Preserve data function is used when you want to preserve a specific date of recorded data saved on the HDD.

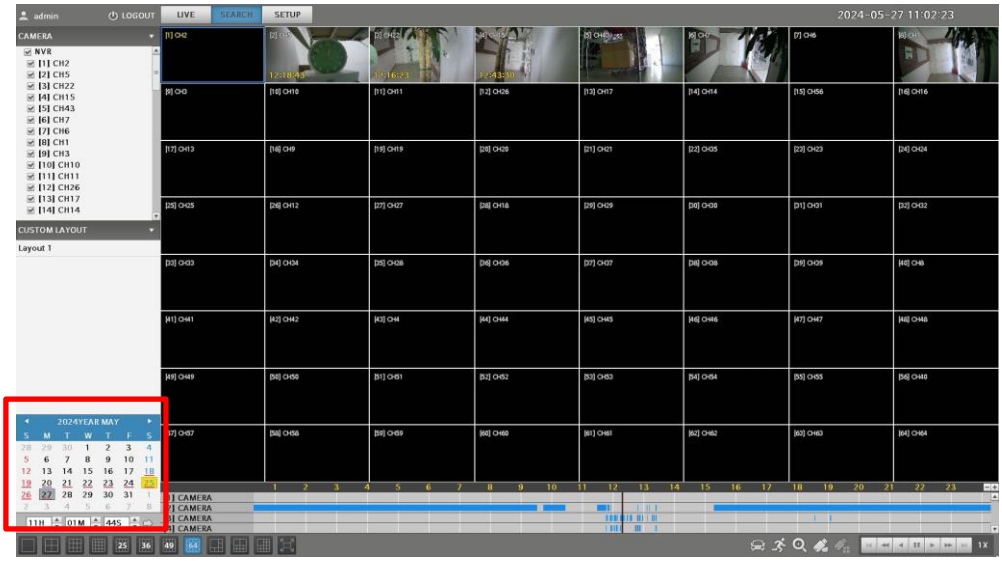
※ Please use caution when using Preserve data by specifying multiple dates as the storage period of recorded data may be reduced.



- USED: Select whether to use Preserve date function.
- Select Date: Select date want to preserve data.
- TOTAL CAPACITY: Displays total capacity of HDD.
- PREVATION: Display HDD capacity of Preserve data.
- DELETE ALL: All Preserve data dates are deleted.
- SAVE: Save the settings.



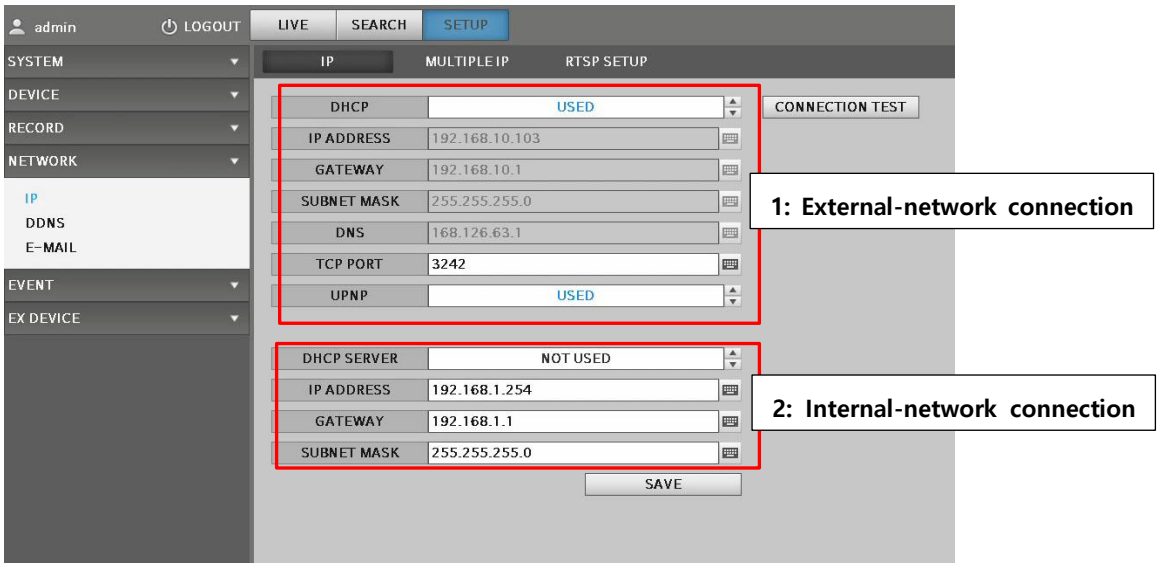
Enter password and click "OK" button to complete the setup.



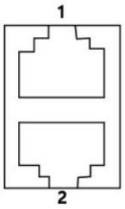
When playback, dates set as "Preserve data" are displayed in gray.

Network

IP Address Setting



NVR rear Network Port



1: External-network connection Port
2: Internal-network connection Port

[External-network connection port]

- DHCP: Select whether to use DHCP or not.
- CONNECTION TEST: Test to check whether the IP address is connected properly.
- IP ADDRESS: Enter the IP address want to use. (DHCP: When set to NOT USED)
- GATEWAY: Enter the gateway want to use. (DHCP: When set to NOT USED)
- SUBNET MASK: Enter the Subnet Mask wat to use. (DHCP: When set to NOT USED)
- DNS: Enter DNS Server want to use. (DHCP: When set to NOT USED)
- TCP PORT: Enter TCP Port number wat to use.
- UPNP: Select whether to use the UPNP function.

※ Caution: For routers that do not support UPNP, must set the TCP port of the NVR IP address to port forwarding (refer to the router settings).

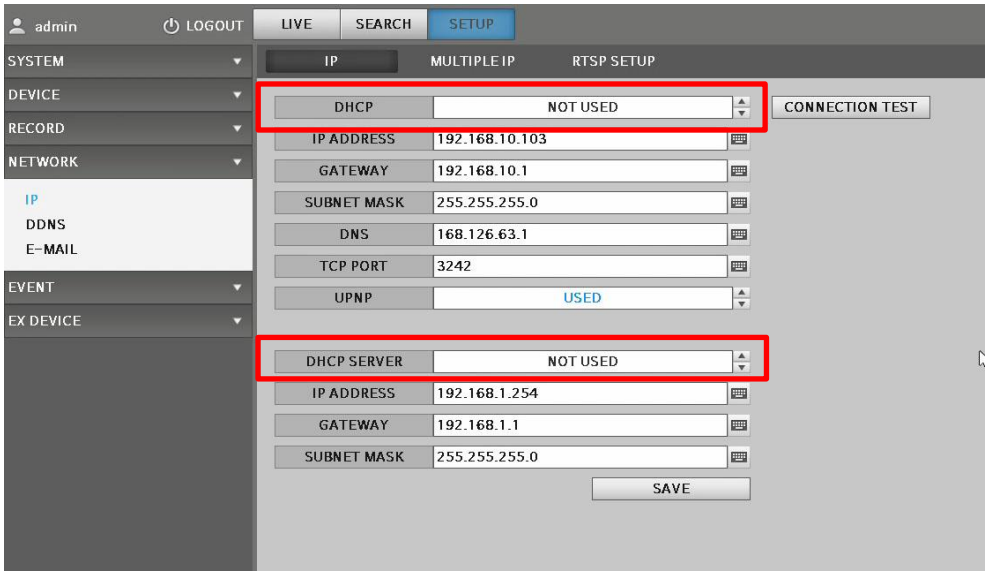
[Internal-network connection Port]

- DHCP SERVER: Select whether to use DHCP or not.
- IP ADDRESS: Enter the IP address want to use. (DHCP: When set to NOT USED)
- GATEWAY: Enter the gateway want to use. (DHCP: When set to NOT USED)
- SUBNET MASK: Enter the Subnet Mask wat to use. (DHCP: When set to NOT USED)
- SAVE: Save the settings.

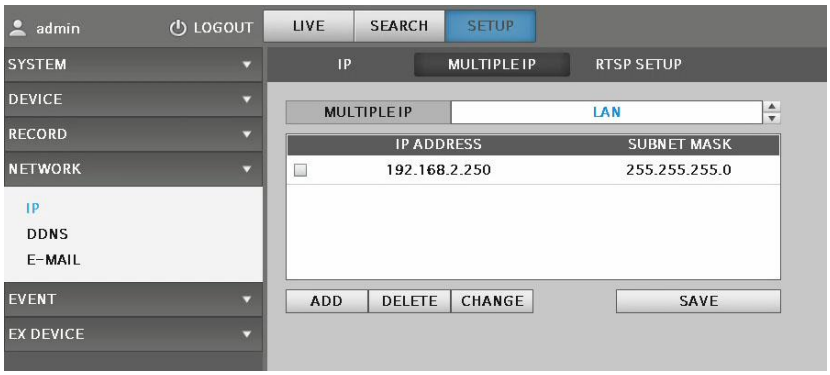
Multiple IP Address Setting (DHCP, Internal DHCP Setting)

To use Multiple IP, DHCP and internal DHCP server must be set to "NOT USED."

(DHCP "NOT USED", internal DHCP server "NOT USED" setting)



Multiple IP Address Setting

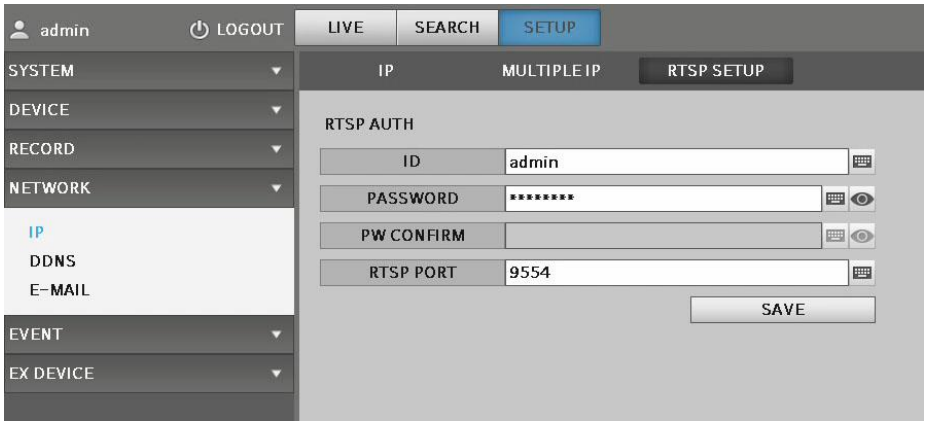


- Multiple IP address setting: Select Internal-network / External-network / NOT USED.
  (Select the network want to use and save.)

※ Caution: Multiple IP cannot use external and internal networks at the same time.
(Can only be used on the external or internal network.)

- ADD: Set the multiple IP address want to use.
- DELETE: Delete registered multiple IP address.
- CHANGE: Change registered multiple IP address.
- SAVE: Save the settings.

RTSP Setting



Connect to NVR and monitor video through media player that supports RTSP service.
When connecting to PC, can run VLC player and access the address below.

rtsp://user:password@IP address:RTST port number/camera main stream (mainlive) or sub stream (sublive) +channel number(01~128 channel)

Example: rtsp://admin:rtsp1234@192.168.0.154:9554/mainlive01

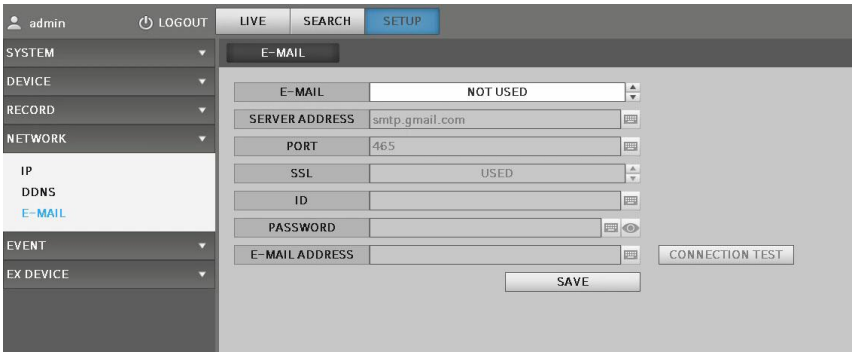
- ID: admin
- PASSWORD: The default is “rtsp1234”.
- PW CONFIRM: Re-enter the password want to use.
- RTSP PORT: Enter the RTSP port want to use.
- SAVE: Save the settings.

DDNS



- DDNS: Select whether to use a DDNS server.
- DDNS SERVER: DDNS server address.
- UPDATE: Test to check whether normally reflected on the DDNS server.
- SAVE: Save the settings.

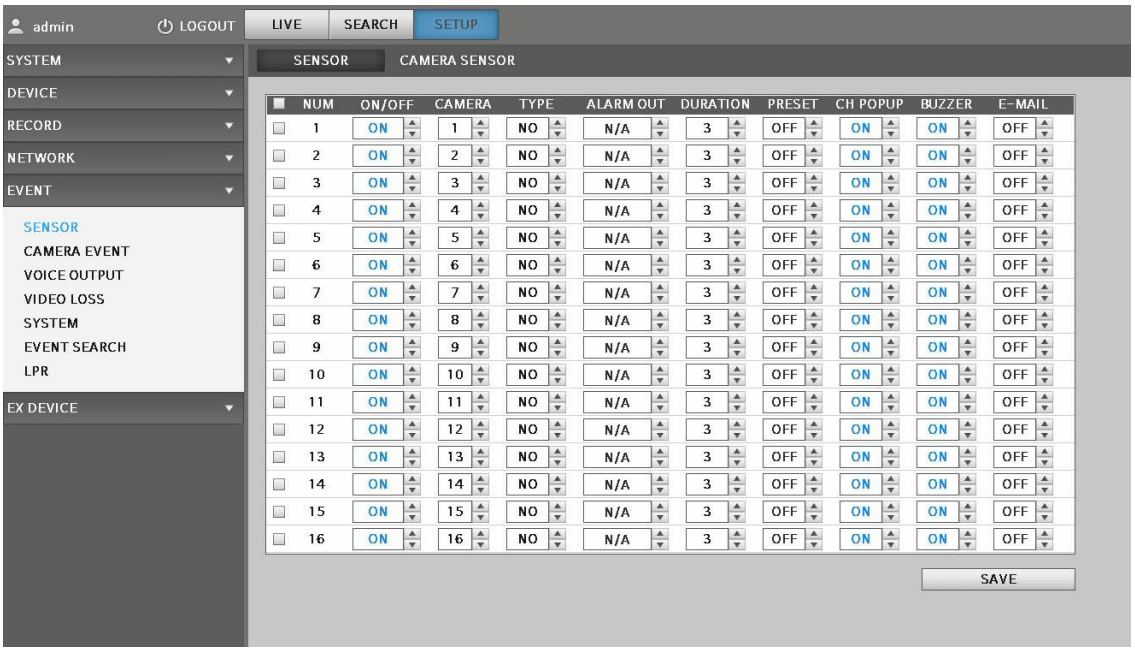
E-mail



- E-MAIL: Select whether to use email or not.
- SERVER ADDRESS: Enter the mail server address want to use.
- PORT: Enter the port of the mail server.
- SSL: Select whether to use it or not.
- ID: Enter the user ID of email server.
- PASSWORD: Enter the user password of email server.
- E-MAIL ADDRESS: Enter the email address.
- SAVE: Save the settings.

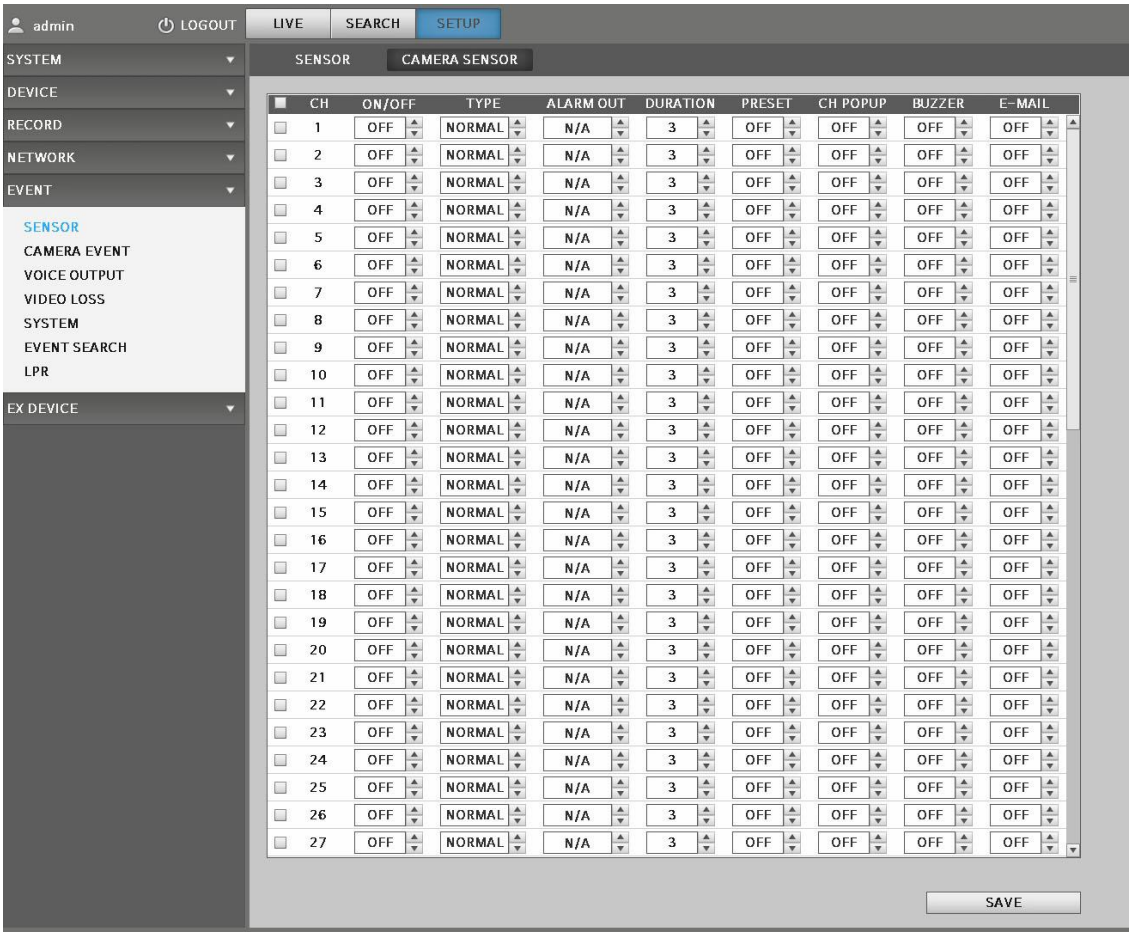
Event

Sensor



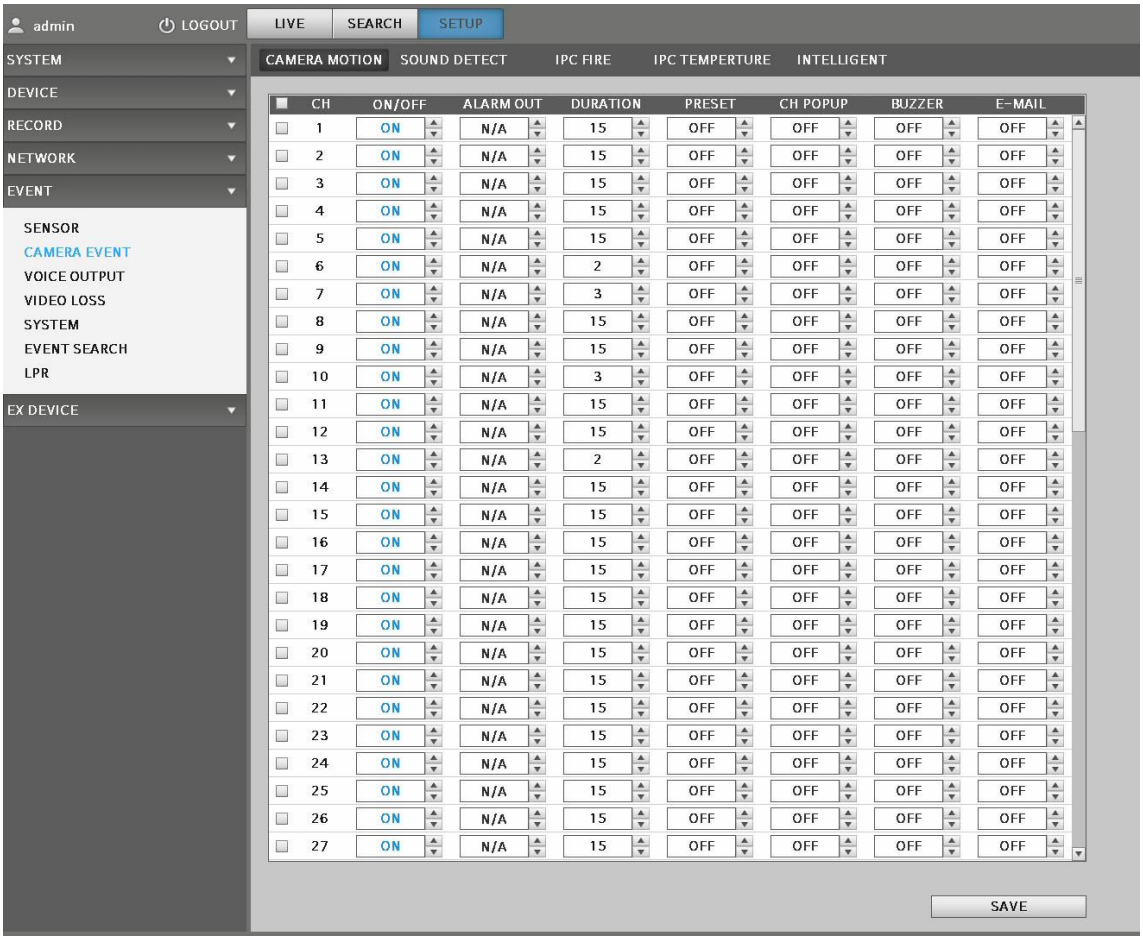
- SENSOR: Displays the sensor number.
- ON/OFF: Select on/off behavior for sensor event.
- CAMERA: Select camera number.
- TYPE: Select alarm type of sensor (NO/NC).
- ALARM OUT: Select whether to use alarm output.
- DURATION: Select the alarm output time (1 to 60 seconds).
- PRESET: Select preset channel.
- CH POP-UP: Select whether to pop-up for the channel.
- BUZZER: Select whether to use the buzzer.
- E-MAIL: Select whether to use email.
- SAVE: Save the settings.

Sensor (Camera Sensor)



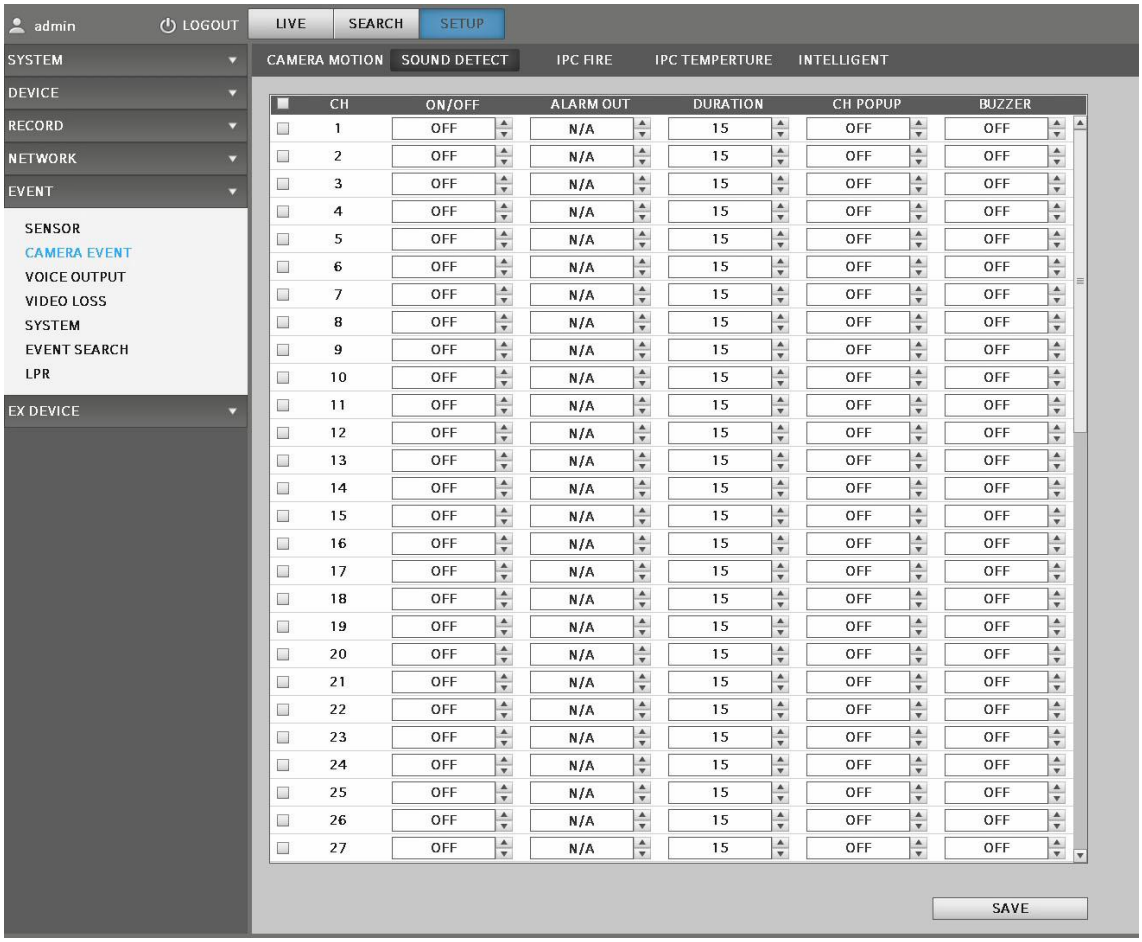
- CH: Displays the channel number.
- ON/OFF: Select on/off behavior for sensor event.
- TYPE: Select alarm type of sensor (NORMAL/EMCALL)
- ALARM OUT: Select whether to use alarm output.
- DURATION: Select the alarm output time (1 to 60 seconds).
- PRESET: Select preset channel.
- CH POP-UP: Select whether to pop-up for the channel.
- BUZZER: Select whether to use the buzzer.
- E-MAIL: Select whether to use email.
- SAVE: Save the settings.

Camera Event (Motion Detection)



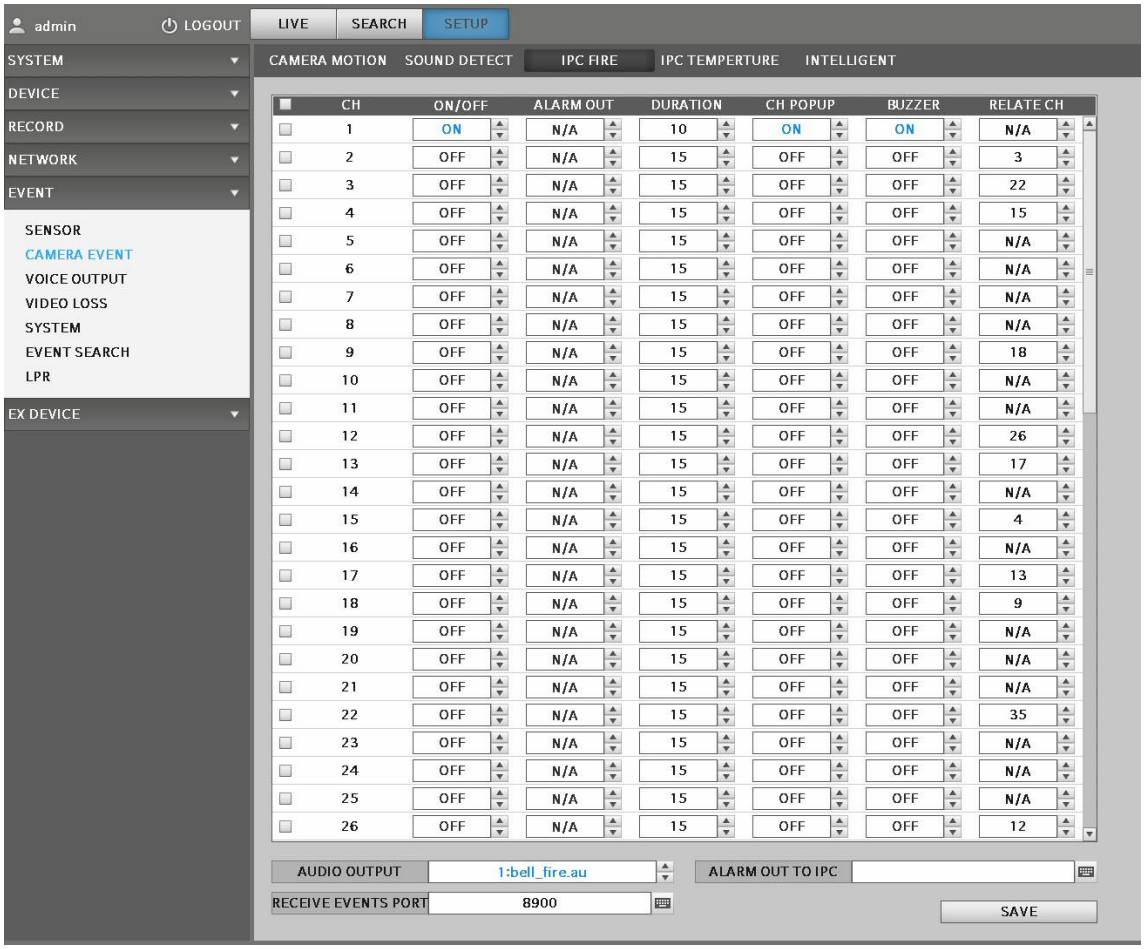
- CH: Displays the channel number.
- ON/OFF: Select on/off behavior for motion event.
- ALARM OUT: Select whether to use alarm output.
- DURATION: Select the alarm output time (1 to 60 seconds).
- PRESET: Select preset channel.
- CH POP-UP: Select whether to pop-up for the channel.
- BUZZER: Select whether to use the buzzer.
- E-MAIL: Select whether to use email.
- SAVE: Save the settings.

Camera Event (Abnormal Sound Detection)



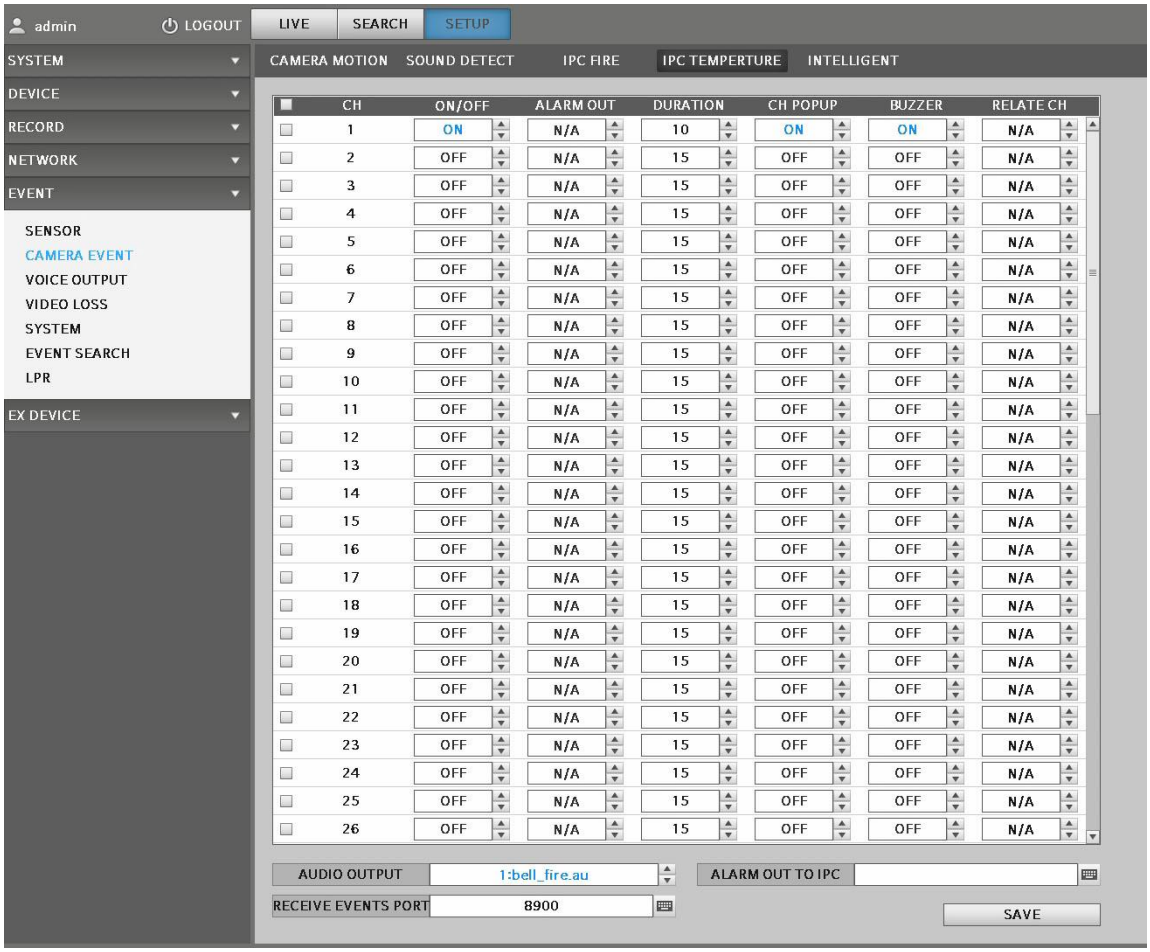
- CH: Displays the channel number.
- ON/OFF: Select on/off behavior for abnormal sound detection event.
- ALARM OUT: Select whether to use alarm output.
- DURATION: Select the alarm output time (1 to 60 seconds).
- CH POP-UP: Select whether to pop-up for the channel.
- BUZZER: Select whether to use the buzzer.
- SAVE: Save the settings.

Camera Event (Fire Detection)



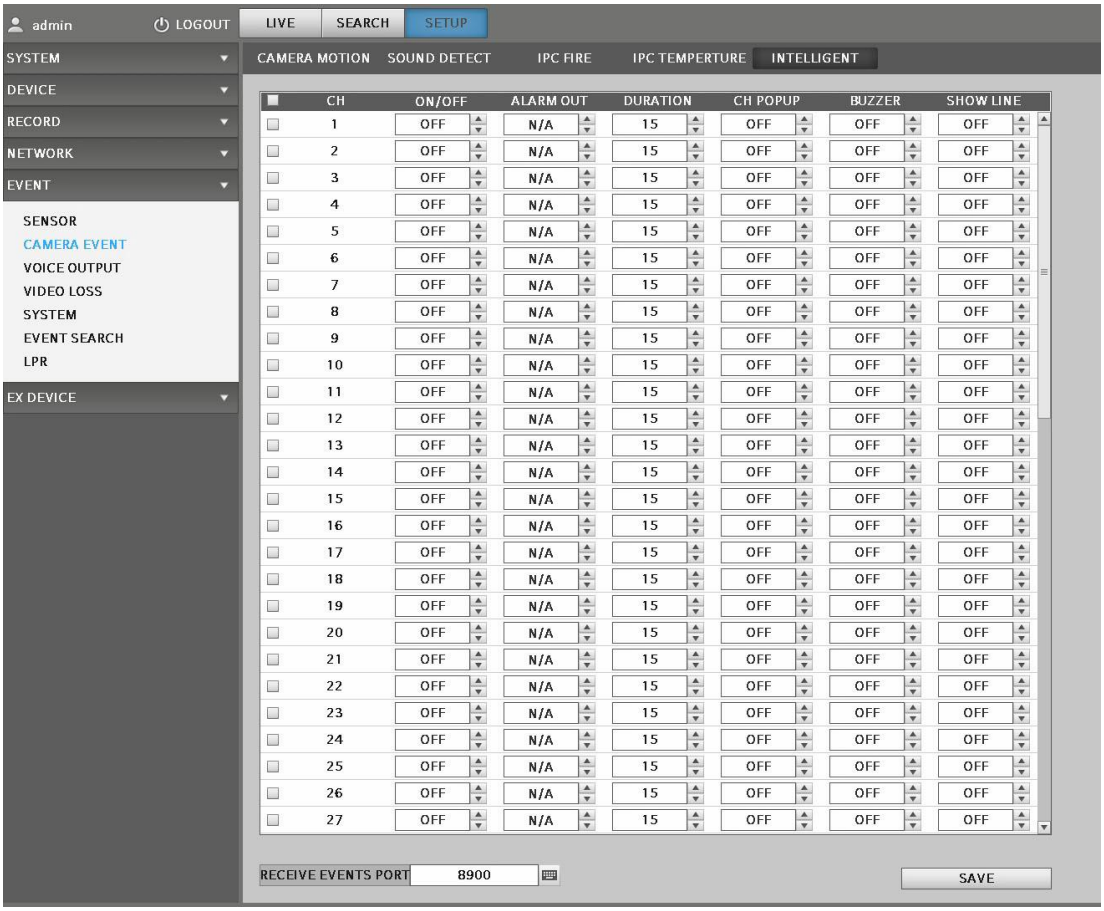
- CH: Displays the channel number.
- ON/OFF: Select on/off behavior for fire detection event.
- ALARM OUT: Select whether to use alarm output.
- DURATION: Select the alarm output time (1 to 60 seconds).
- CH POP-UP: Select whether to pop-up for the channel.
- BUZZER: Select whether to use the buzzer.
- RELATE CH: When event pops up, select channel to be linked. (N/A: Popup for the corresponding channel)
- AUDIO OUTPUT: Audio file set in "VOICE OUTPUT" menu is output to speaker.
  (Please refer to page 95 Voice Output Settings.)
- RECEIVE EVENTS PORT: Port number of server where the event is received.
- ALARM OUT TO IPC: When event occurs, camera alarm is output simultaneously.
  Set camera number as in the example. Ex) 1,3,4,9
- SAVE: Save the settings.

Camera Event (Abnormal Temperature)



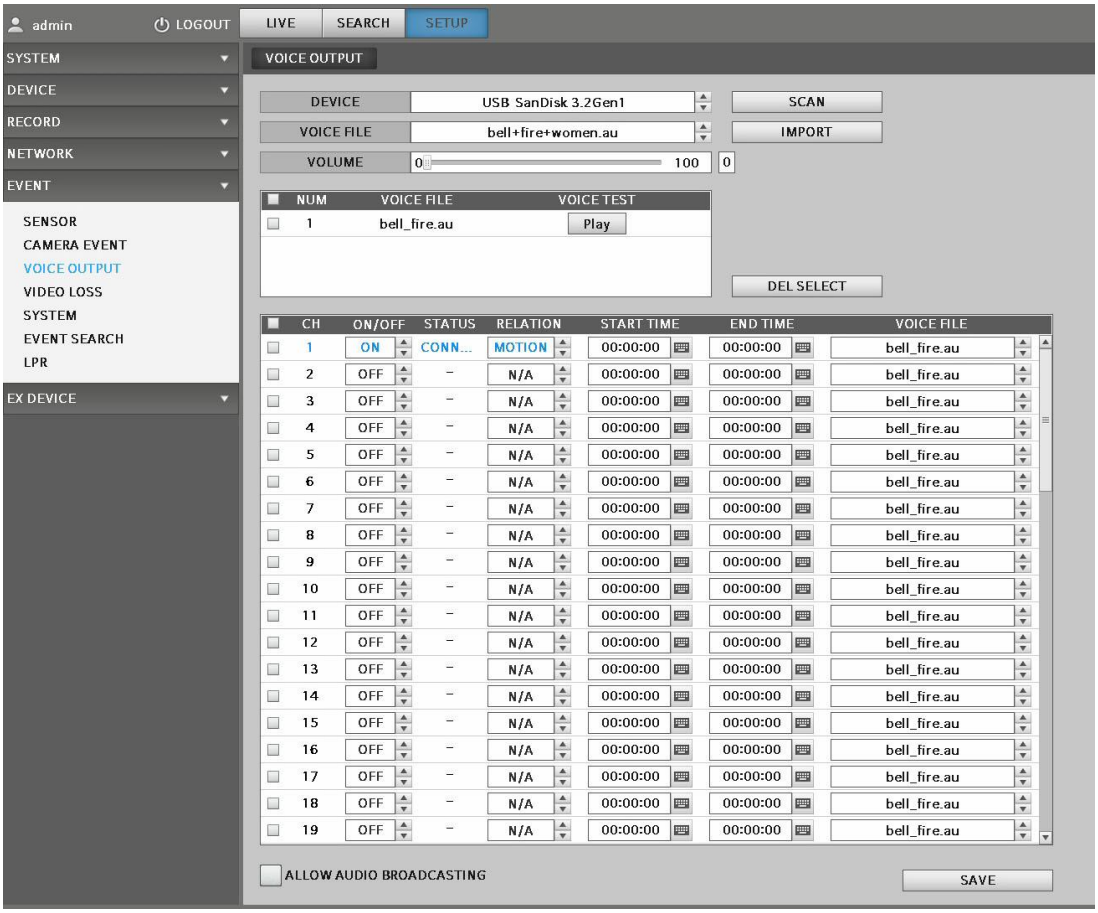
- CH: Displays the channel number.
- ON/OFF: Select on/off behavior for abnormal temperature event.
- ALARM OUT: Select whether to use alarm output.
- DURATION: Select the alarm output time (1 to 60 seconds).
- CH POP-UP: Select whether to pop-up for the channel.
- BUZZER: Select whether to use the buzzer.
- RELATE CH: When event pops up, select channel to be linked. (N/A: Popup for the corresponding channel)
- AUDIO OUTPUT: Audio file set in "VOICE OUTPUT" menu is output to speaker.
  (Please refer to page 95 Voice Output Settings.)
- RECEIVE EVENTS PORT: Port number of server where the event is received.
- ALARM OUT TO IPC: When event occurs, camera alarm is output simultaneously.
  Set camera number as in the example. Ex) 1,3,4,9
- SAVE: Save the settings.

Camera Event (Intelligent)



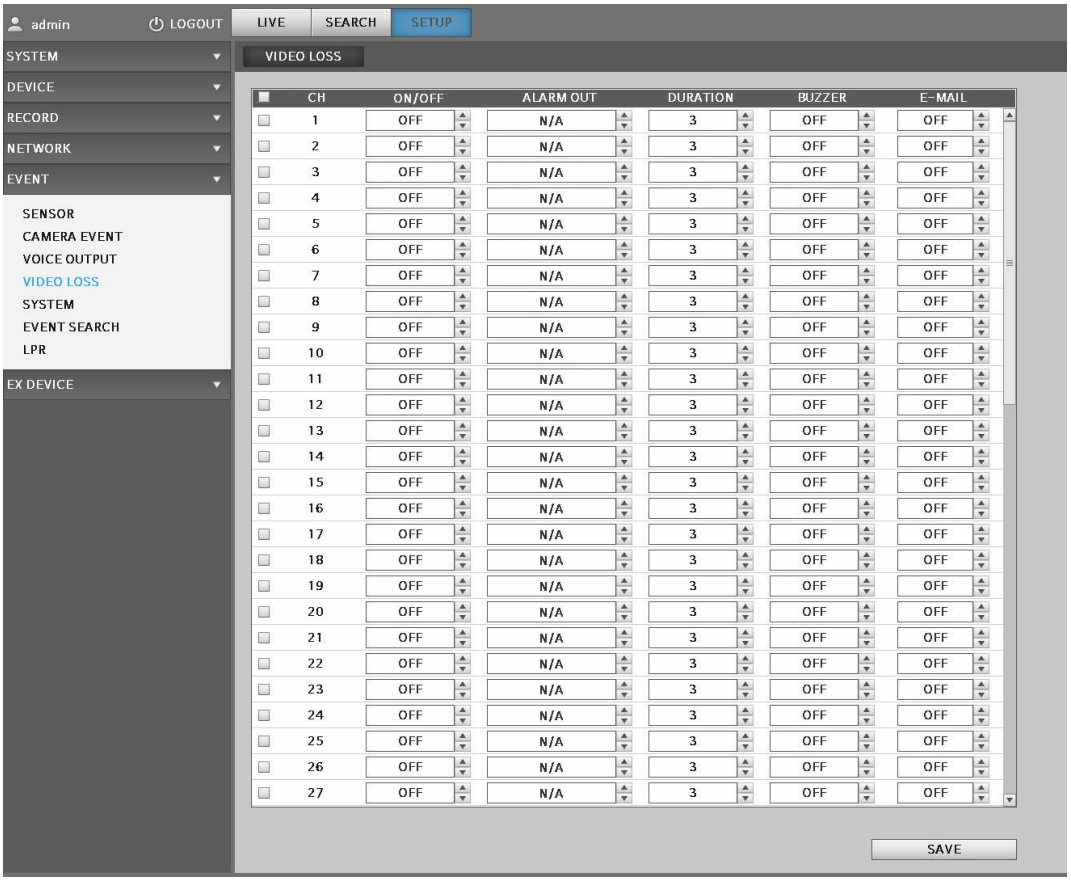
- CH: Displays the channel number.
- ON/OFF: Select on/off behavior for intelligent abnormal temperature event
- ALARM OUT: Select whether to use alarm output.
- DURATION: Select the alarm output time (1 to 60 seconds).
- CH POP-UP: Select whether to pop-up for the channel.
- BUZZER: Select whether to use the buzzer.
- SHOW LINE: Select whether to display lines on the screen (OFF, ON)
- RECEIVE EVENTS PORT: Port number of server where the event is received.
- SAVE: Save the settings.

Voice Output



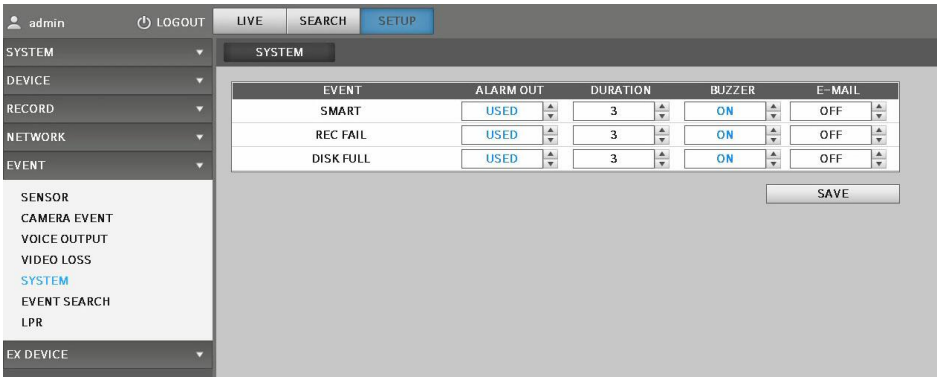
- DEVICE: Insert USB memory stick containing voice file and select "SCAN".
- VOICE FILE: Displayed voice file saved in the voice USB memory stick and select "IMPORT".
  Display voice file (ex, wtc_man_001.au).
  Click the "PLAY" button to play the audio file, and if you want to delete the file, click the "DEL SELECT" button to delete it.
- VOLUME: Set volume (0~100)
- CH: Displays the channel number.
- ON/OFF: Select on/off behavior for audio output.
- RELATION: Select "N/A" or "MOTION".
- START TIME: Enter the start time of audio output event.
- END TIME: Enter the end time of audio output event.
- VOICE FILE: Select the voice file want to use.
- ALLOW AUDIO BROADCASTING: Set whether to allow simultaneous broadcasting.
- SAVE: Save the settings.

Video Loss



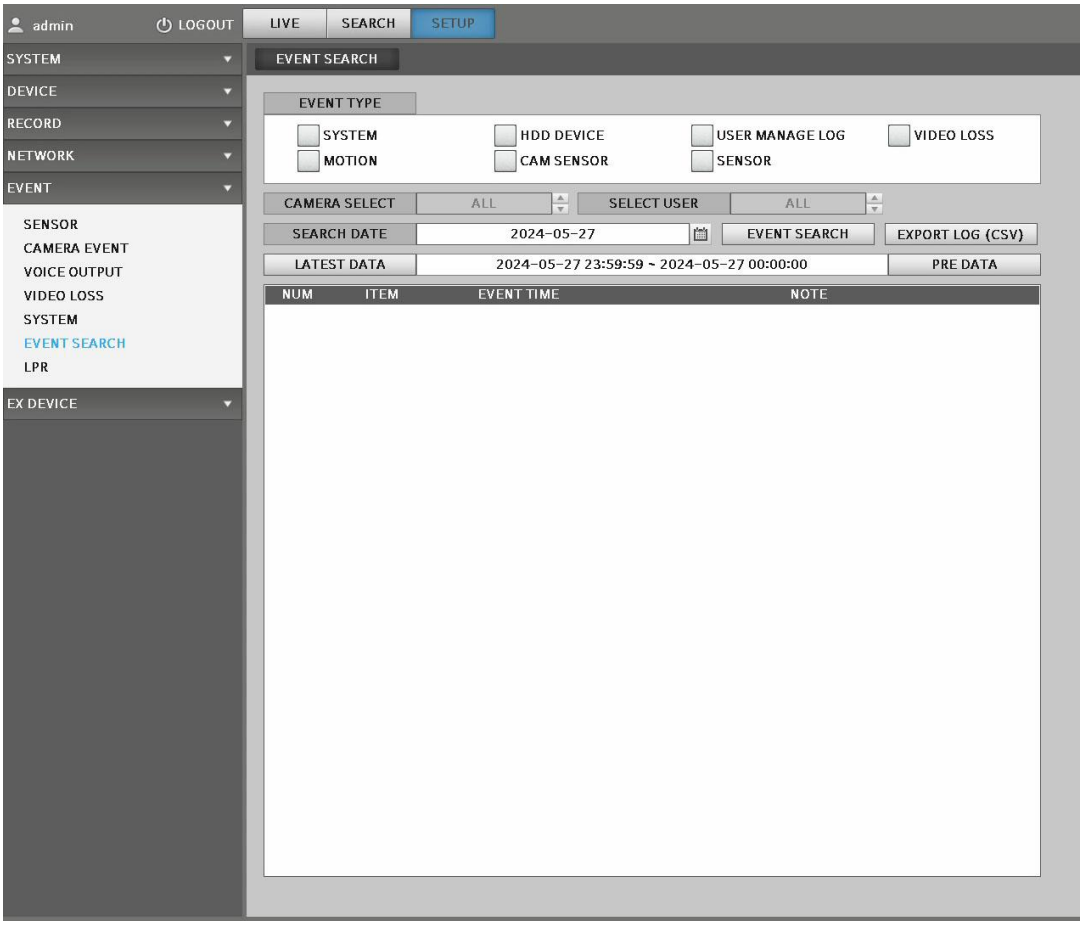
- CH: Displays the channel number.
- ON/OFF: Select on/off behavior for video loss event.
- ALARM OUT: Select whether to use alarm output.
- DURATION: Select the alarm output time (1 to 60 seconds).
- BUZZER: Select whether to use the buzzer.
- E-MAIL: Select whether to use email.
- SAVE: Save the settings.

System



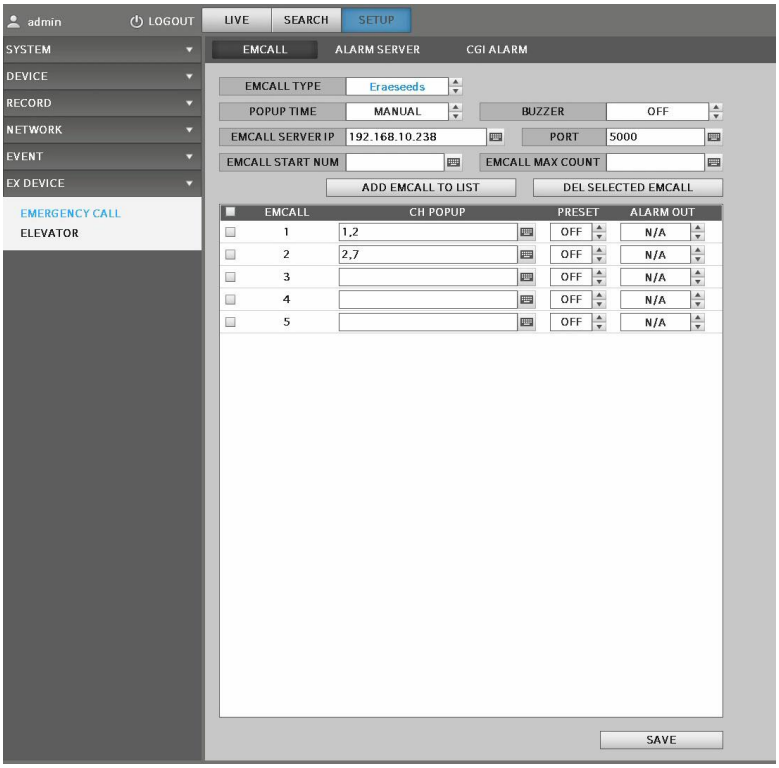
- SMART: Select usage of alarm and alarm time, buzzer, email.
- REC FAIL: Select usage of alarm and alarm time, buzzer, email.
- DISK FULL: Select usage of alarm and alarm time, buzzer, email.
- SAVE: Save the settings.

Event Search

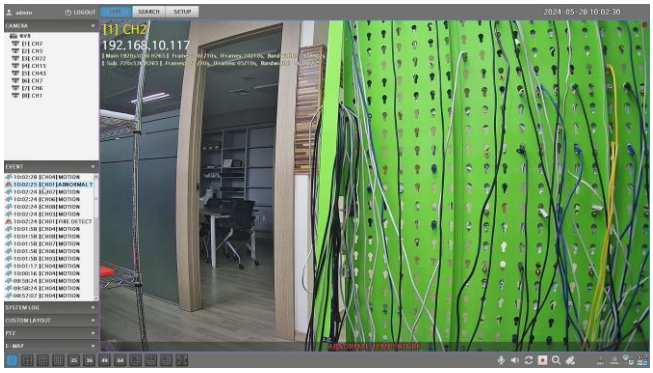


- EVENT TYPE: Select the type of event want to search for. SYSTEM, HDD DEVICE, USER MANAGE LOG, VIDEO LOSS, MOTION, CAM SENSOR, SENSOR etc.
- CAMERA SELECT: Select camera want to search. (video loss, motion, camera sensor applicable)
- SELECT USER: Select and search based on user account. (applies to user operation history)
- SEARCH DATE: Select date want to search.
- EVENT SEARCH: Execute event search.
- EXPORT LOG (CSV): Export events in CSV format. (USB device)
- LATEST DATA: Displays list of events in order of most recent data.
- PRE DATA: Displays list of events in order of previous data.

External Device (Emergency Call)

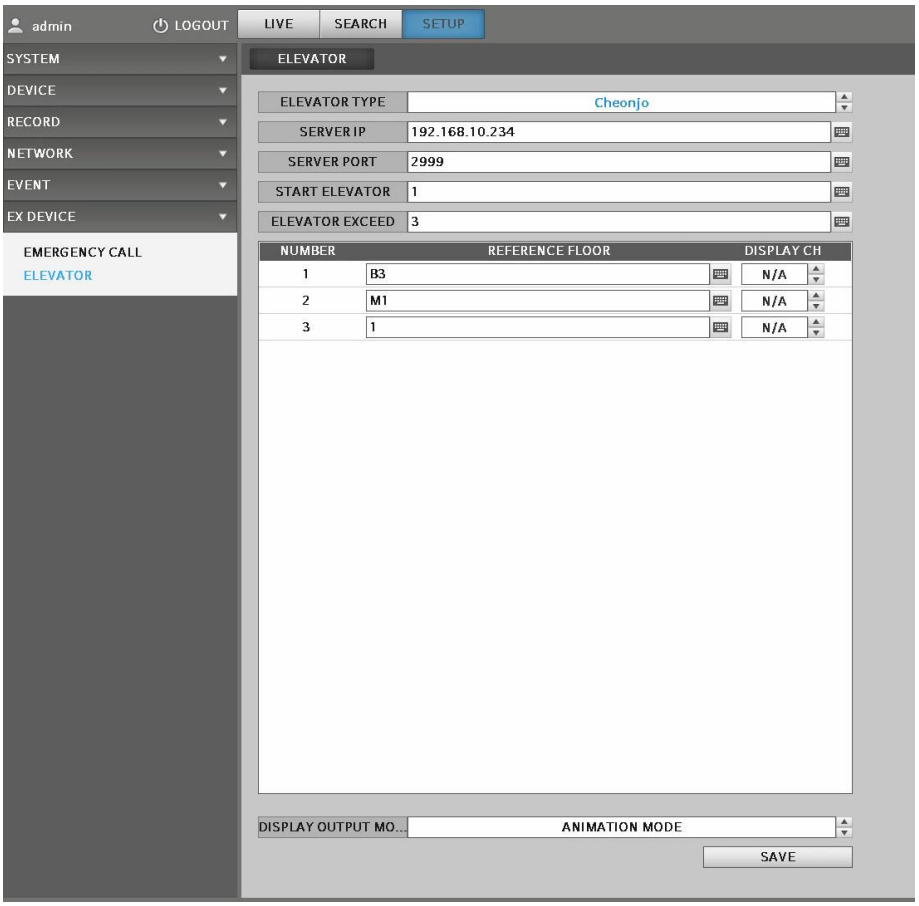


- EMCALL TYPE: Select emergency bell type.
- POP-UP TIME: Select time the channel is pop-up (5 to 60 seconds, manual: canceling manually).
- BUZZER: Select ON/OFF.
- EMCALL SERVER IP: Enter IP address of emergency bell server.
- PORT: Enter emergency bell port.
- EMCALL START NUM: Enter number the emergency bell starts.
- EMCALL MAX COUNT: Enter number of the emergency bells.
- ADD EMCALL TO LIST: Add list according to the number of emergency bells.
- DEL SELECTED EMCALL: Delete selected emergency bell.
- EMCALL: Display emergency bell number.
- CH POP-UP: When calling an emergency bell, additionally register channel for pop-up. (Pop-up screen when calling an emergency bell)



- PRESET: When calling an emergency bell, select preset channel (off, channels 1 to 64).
- ALARM OUT: When calling the emergency bell, select the alarm output. (Off, Alarm 1~4).
- SAVE: Save the settings.

External Device (Elevator)

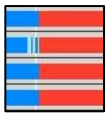
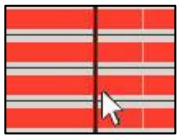


- ELEVATOR TYPE: Select the elevator type.
- SERVER IP: Enter server IP address.
- SERVER PORT: Enter server port.
- START ELEVATOR: Enter elevator number.
- ELEVATOR EXCEED: Enter maximum number of elevators.
- REFERENCE FLOOR: Enter value set as the reference floor.
- DISPLAY CH: Select channel shown on the display.
- DISPLAY OUTPUT MODE: Select screen display mode (text mode, graphics mode).
- SAVE: Save the settings.

Playback

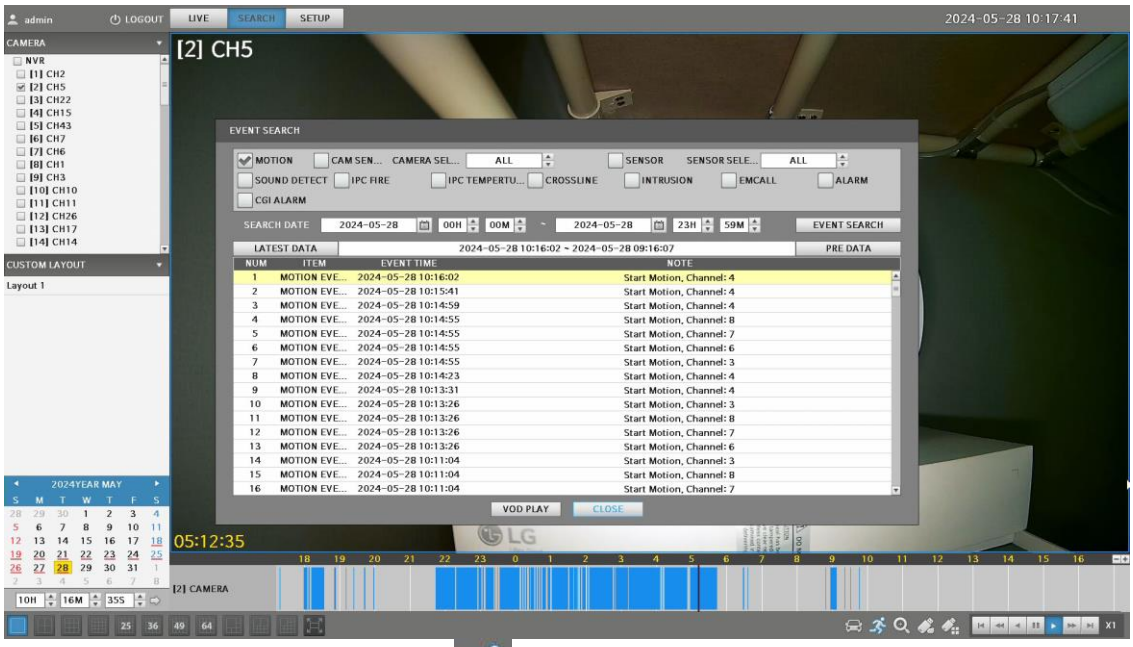


번호	명칭		설명
①	Playback	SEARCH	Playback recorded data.
②	Playback Screen OSD Display	[2] CH2	Display channel number and name.
		17:01:00	Display playback date and time.
③	Date Time Display	2020-05-19 17:51:21	Display system date and time.
④	Calendar	2024YEAR MAY	Select date want to playback. (Display date recorded data was saved.)
	Date/Time Playback	11H 01M 44S	Play immediately at the selected date/time.
⑤	Channel	[1] CAMERA [2] CAMERA [3] CAMERA [4] CAMERA	Scroll channel area with mouse wheel, channel will be moved.

번호	명칭		설명
⑥	Time Area		Display playback time (1-hour units).
			Display playback minutes (30-minute units).
			Display playback minutes (4-minute units).
			Display playback minutes (1-minute units).
			Display playback seconds (10-second units).
⑦	Playback status bar		**Display recording status in playback progress bar** Blue: Motion recording Light green: Continuous recording Red: Event recording, emergency recording Yellow: Motion event recording
	Playback baseline		Baseline for the currently playback time. **Mouse function in playback bar** . Scroll the mouse wheel downward, the time area is segmented t playback time. . Moving playback time by dragging playback bar with left mouse button for convenient playback.
⑧	Vehicle Number Search		Search for vehicle numbers.
	Event		Search events.
	ZOOM		Enlarge (zoom) video.
	Backup		Backup to USB storage device.
	Backup (Set mask area)		Backup video with masking specific area.
⑨	Playback Buttons		Reverse step playback.
			Reverse speed playback
			Reverse playback
			Pause
			Forward playback

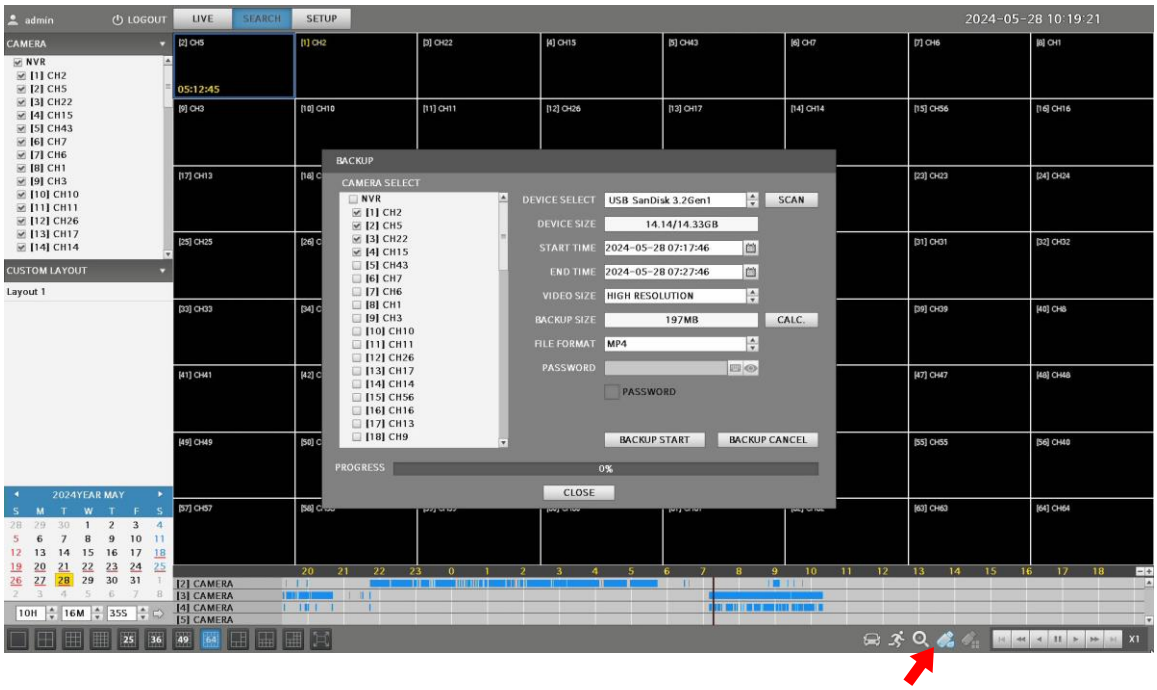
번호	명칭		설명
⑨	Playback Buttons		Forward speed playback
			Forward step playback
			1/4 speed playback
			1/2 speed playback
			1 speed playback
			2x speed playback
			4x speed playback
			8x speed playback
			16x speed playback
			32x speed playback
			64x speed playback
⑩	Zoom in/out time		Zoom in and out of the time area
⑪	Display playback channel layout		Select playback channel and layout

Playback (Event)



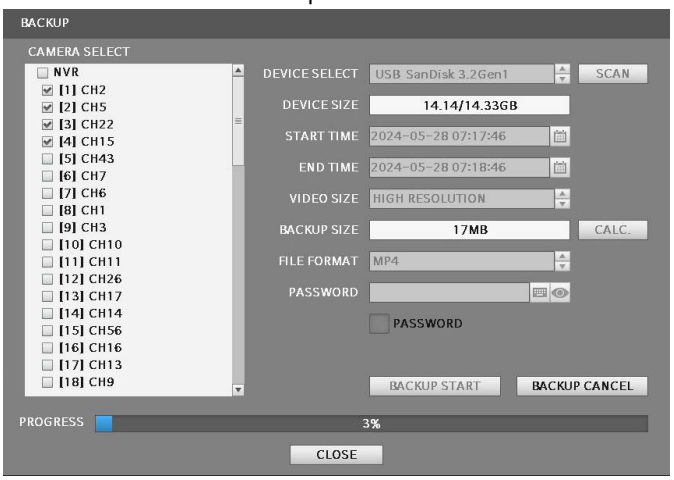
- EVENT SEARCH: When you click  icon, event search window will pop up as shown above image. Motion, abnormal sound detection, emergency bell, sensor, etc.
- SEARCH DATE: Select start time for event search.
- EVENT SEARCH: Search list of events.
- LATEST DATA / PRE DATA: Display recent/previous data for the searched events.
- Select searched event list and click “SEARCH” button to playback event.

Backup

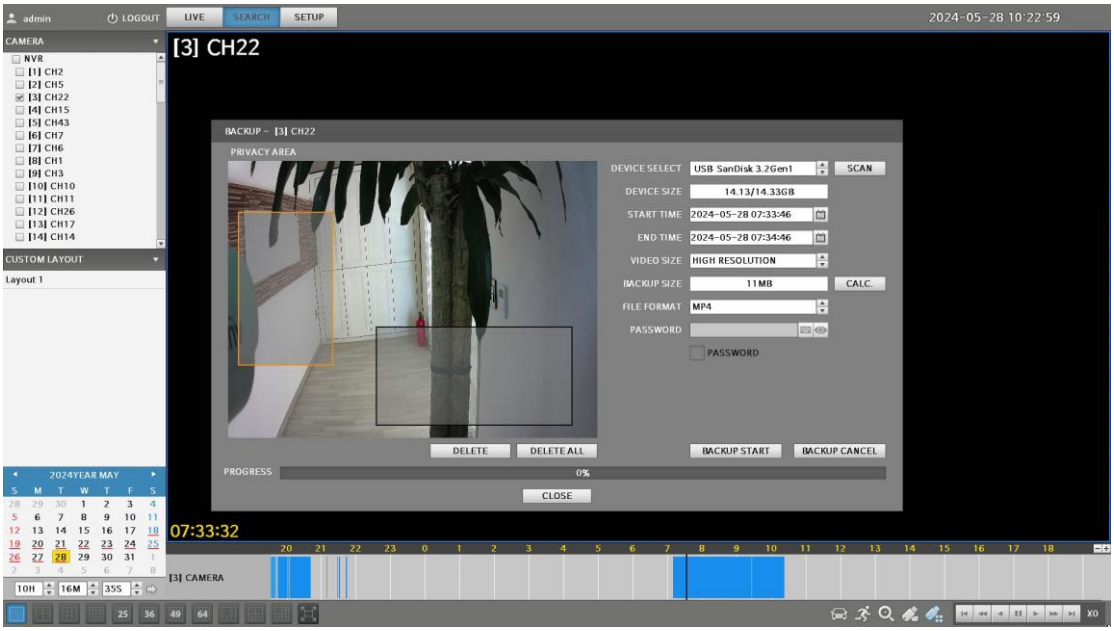




- Backup: When you click icon, backup window will pop up as shown above image.
- Backup Setting: Select device, device capacity, start time, end time, screen size, backup size, password etc.
  ※ File Type: Backup is possible in file formats such as BSF and MP4.
  (For backup files in BSF format, please download "NVR Backup Player" and play them.)
- BACKUP START: Backup will begin.
- BACKUP CANCEL: Backup will be cancelled.



Backup (Set Mask Area)



For the Backup (Set mask area) icon to be activated, must switch from split screen to single screen.

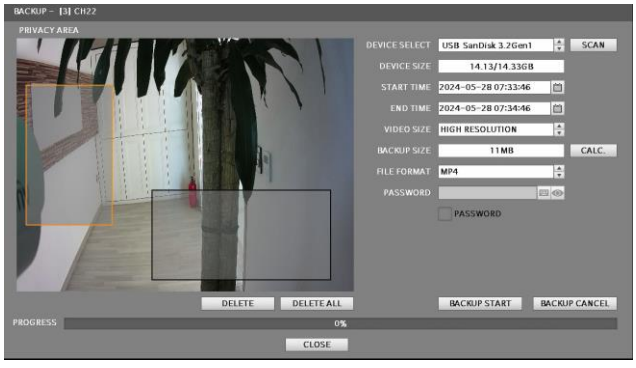
- Backup (Set mask area): Click  icon, Backup (Set mask area) window will pop up as shown.

※ Backup with set mask area

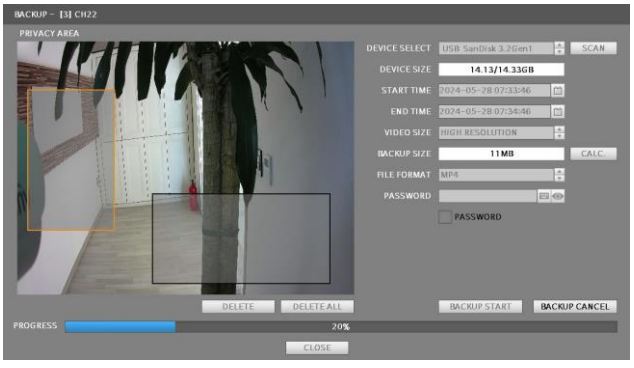
This method set mask area for video want to backup and can set up to 4 areas.
When playback with a backup player, the set mask area is masked and played.

- Backup Settings: Select device, start time, end time, video size, password, etc.
- Mask area: Designate the area want to mask in video by dragging with the mouse point.
  (Can be set from areas 1 to 4)
- Delete: Delete selected mask area.
- Delete All: Delete entire mask area.
- BACKUP START: Backup will begin.
- BACKUP CANCEL: Backup will be cancelled.

Set mask area screen



Mask area backup progress screen



Product Warranty

Product name		Network Video Recorder
Model name		
Serial no.		
Purchase date		Year Month date
Warranty Period		Year Month date
Customer	Name	
	Tel no.	
	Address	
Purchaser	Name	
	Tel no.	

This product has passed thorough quality control and inspection. If a malfunction occurs during normal use, We guarantee it based on the warranty.

[Warranty Information]

- ▶ Check the warranty first.
- ▶ After checking for any malfunctions, contact the place of purchase.
- ▶ Compensation standards for product repair and exchange follow the Economic Planning Board's 'Consumer Damage Compensation Regulations'.

[Warranty details]

- ▶ For failures that occur under normal usage conditions within the warranty period (1 year from the date of purchase), we provide free A/S according to the contents of the warranty.
- ▶ In the following cases, a small parts and service fee will be charged even during the free warranty period.
  1. Breakdown or damage due to careless handling
  2. Breakdown and damage due to natural disasters
  3. Malfunction caused by not following the usage instructions and precautions stated in the user manual.
  4. Malfunction caused by not using the designated power source (voltage, frequency)
  5. If general disassembly and cleaning and replacement of consumable parts are requested during the warranty period.
  6. If the contents of the product are changed or damaged due to repair by someone other than our company's designated A/S staff.
- ▶ For breakdowns that occur after the free warranty period, a small parts and service fee will be charged if requested by the user.
- ▶ This certificate cannot be reissued.
- ▶ When purchasing a product, please be sure to fill out the information.
- ▶ When receiving a free warranty, be sure to present this warranty.