

wiseNET

NETWORK VIDEO RECORDING

User

Network Video Recorder

User Manual

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❖ Design and specifications are subject to change without prior notice.

You can download the latest version from the Hanwha Techwin web site. (www.hanwha-security.com)

❖ The initial administrator ID is "admin" and the password should be set when logging in for the first time.

Please refer to the manual and the user's manual of the connected device for the detailed information about the use of the product.

Overview

IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit.
Follow all the safety instructions listed below.

Keep these operating instructions handy for future reference.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean the contaminated area on the product surface with a soft, dry cloth or a damp cloth.
(Do not use a detergent or cosmetic products that contain alcohol, solvents or surfactants or oil constituents as they may deform or cause damage to the product.)
- 7) Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding- type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety, if the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Standards Approvals



- ! Any changes or modifications in construction of this device which are not expressly approved by the party responsible for the approval may void the user's authority to operate the equipment.
- ⚡ This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- ⚡ This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a typical environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions in the manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user will be required to correct the interference at his own expense.
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

PRODUCT USER MANUAL DESCRIPTION

This document is a user manual for Recorder product. Before using this product, please read the manual in order to use it properly.

- This user manual explains how to use the product based on the defaults and default screen policies.
- The content of this manual is subject to change depending on the product software update policies. It is subject to partial changes without prior notification to users.

TARGET AUDIENCE

This user manual contains contents for Recorder users.

HOW TO USE THE PRODUCT

Users of this product can perform the following:

- Monitor cameras registered to Recorder in real time
- Search for or play videos saved in Recorder
- Monitor text data being transmitted to the POS device connected to Recorder in real time
- Search for text data from the POS device connected to Recorder

CAUTION

- RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
- Do not ingest battery, Chemical Burn Hazard.
- This product contains a coin / button cell battery. If the coin / button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children.
If you think batteries might have been swallowed or placed inside any part or the body, seek immediate medical attention.

ATTENTION

- IL Y A RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UNE BATTERIE DE TYPE INCORRECT. METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS.
- Ne pas ingérer la pile, risque de brûlure chimique.
- Ce produit contient une pile de type bouton/pièce de monnaie. Si la pile de type bouton/pièce de monnaie est avalée, elle peut causer de graves brûlures internes en seulement 2 heures et peut entraîner la mort.
- Gardez les piles neuves et usagées hors de portée des enfants. Si le compartiment de la pile ne se ferme pas correctement, cessez d'utiliser le produit et gardez-le d'atteinte des enfants.
Si vous suspectez que des piles ont été avalées ou insérées dans une partie du corps, consultez un médecin sans tarder.

FUNCTIONS SUPPORTED BY MODEL

Function	Model name	PRN-6400DB4	PRN-6405DB4	PRN-6400B4 PRN-3200B4 PRN-3200B2 PRN-1600B2	PRN-6405B4 PRN-3205B4 PRN-3205B2 PRN-1605B2	XRN-6410DB4	XRN-6410B4 XRN-3210B4 XRN-6410RB2 XRN-3210RB2	XRN-6410B2 XRN-3210B2	XRN-1620B2
	Fan	O	O	O	O	O	O	O	O
	P2P	O	O	O	O	O	O	O	O
	Joystick	O	O	O	O	O	O	O	O
	Extended monitor	O	O	O	O	O	O	O	O
	Failover	O	O	O	O	O	O	O	O
	Alarm	O	O	O	O	O	O	O	O
	RAID	O	O	O	O	O	O	X	X
	Distributed recording	O	O	O	O	O	O	O	X
	iSCSI	O	O	O	O	O	O	O	O
AI compatible function	AI search	O	O	O	O	O	O	O	O
AI recognition function	Object detection	O	O	O	O	X	X	X	X
	LPR search	O	X	O	X	X	X	X	X
Power supply redundancy		O	O	X	X	O	X	X	X
PoE		X	X	X	X	X	X	X	X
Dewarping		O	O	O	O	O	O	O	X

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STARTING THE SYSTEM

1. Connect the power cable of the recorder to the wall outlet.
2. You will see the initialization screen.

The initialization process will last about 2 minute. If a new HDD is installed, the initialization process may take longer.



3. The live screen appears with a beep.

The following symptoms might be observed when starting the system.



- If the HDD number is displayed at the bottom of the screen along with <HDD 1, 2> while the product is booting up, it indicates that the HDD is in recovery, and for this reason booting up may take longer.



- If the progress stalls while in <HDD 1, 2> state, it indicates that the HDD has problems. Visit your nearest customer service center to check the HDD.



INSTALLATION WIZARD

As shown below, proceed through each step of the <Installation wizard>.

Install Wizard can only be accessed at factory reset. If you do not want to proceed, click <Exit>.

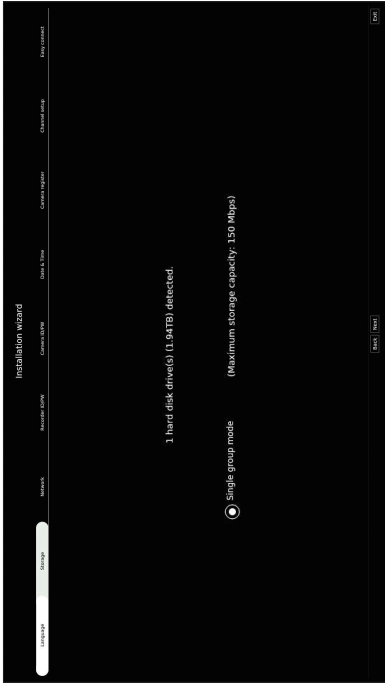


- It will automatically change to the optimal monitor resolution and run the install wizard.
- If the install wizard does not run, remove the monitor connection from the back of the recorder, reboot the recorder and run the install wizard.

1. In the <Language> screen, select the language and press the <Next> button.

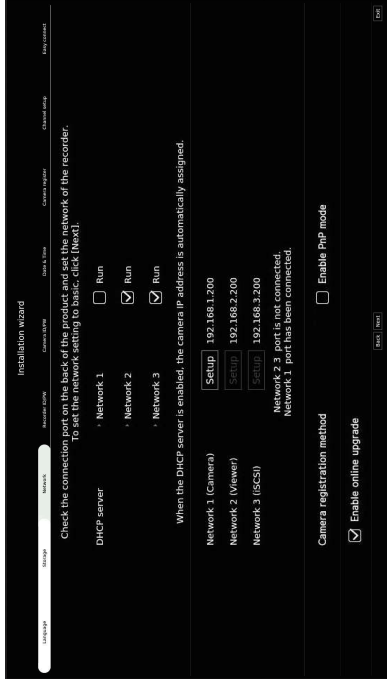


2. Set the video recording method on the <Storage> screen, and then click <Next>.



- Distributed mode : This function is only available for products that support distributed recording. <Distributed mode> can be selected when there are two or more hard disks. This mode distributes data across all hard disks, saving space and improving performance.
- RAID mode : This function is only available for products that support RAID. <RAID mode> saves data by configuring the hard disk in the RAID format.
- Single group mode : Saves data on one hard disk. If the hard disk is recognized as an unusable disk, the data will be lost.

3. Set the network connection type and the connection environment on the <**Network**> screen, and then click the <Next>.



Setting up the DHCP server

If you set up the DHCP server to <Run>, the IP address is automatically assigned to your camera.

For more details, refer to the "**Setup** > **Setting the Network** > **DHCP Server**" page in the Table of Contents.



- Depending on the camera's state, no IP may be automatically assigned to the camera. After exiting the installation wizard, go to the menu to assign an IP to DHCP, or set the IP manually.

Setting up the network

Each product supports a different number of network ports. If it supports two or more network ports, you can set the network for each function as follows. Click <**Setup**> of the network connected to the recorder.

- Network 1 (Camera) : Can be used as a port for connecting a camera. If you connect a camera, then the camera video will be transmitted.
- Network 2 (Viewer) : Can be used as a port transmitting video to the web viewer. If you access the network information on your browser, then you can remotely monitor video in your web viewer.
- Network 3 (iSCSI) : Can be used as a port for an iSCSI connection.

- Only provided for products that support Network 3.
- Network (All) : Can be used as a common port for connecting camera, web viewer, and iSCSI.

- IP type : Allows you to select the type of network access.
- IP Address, Subnet Mask, Gateway, DNS
 - Manual : IP address, subnet mask, gateway, and DNS can be directly entered.
 - DHCP : IP address, subnet mask, gateway, and DNS can be automatically set.
- If the LAN cable is not connected to the port, <**Setup**> button will not be activated for use. Check the LAN cable connection. (In case of a PoE product, Network 1 is activated.)
- The built-in DHCP Server in Recorder will turn on automatically at stage 1. At this stage, using the existing DHCP server in the same network



Setting the camera registration method

This function is only available for products that support PoE. For products that support PoE, click the <**Functions Supported by Model**> page.

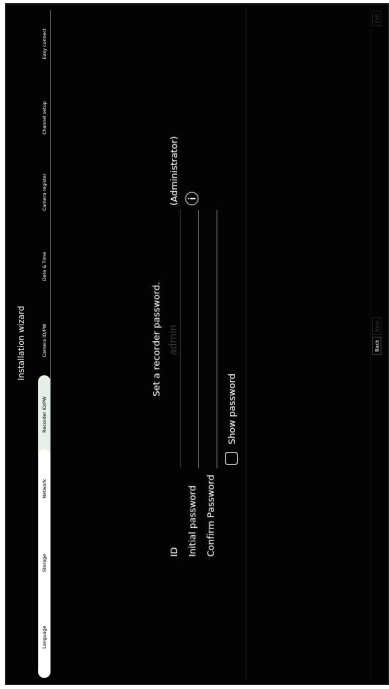
- Enable PnP mode: Cameras connected to the PoE port of the product will automatically register to the recorder in order of port number.
 - When the camera resets to factory default, it defaults to the ID and password set during the **PW**> step. If the camera ID and password are not set, the recorder ID and password will be used.
 - If the camera's ID and password have already been set, the information that matches the recorder ID and password will be used.
- Manual mode: If your camera uses a manual IP, its bandwidth should match with that of Network 1.
 - If manual mode is used, it automatically detects and registers cameras connected to the recorder and cameras connected to a separate switch.

Online Upgrade

You can receive a new firmware notification when the recorder is connected to a network.

4. Set the administrator password on the <**Recorder ID/PW**> screen and click the <**Next**>.

Click <(i)> to view the basic guide for setting a password. Refer to the password setup rule.



getting started

5. Set the camera password in factory reset on the <**Camera ID/PW**> screen. If ID/PW is already set in the camera, register the ID/PW and click <**Next**>.

Installation wizard

Step 5: Camera ID/PW

Set the password of the factory default Wiernet camera

☒ Use the recorder administrator ID and password as the camera account

☐ Enter the camera ID and password

Camera ID: Password:

☐ Show password

Register the camera ID for which the password had been set and the password (up to 3)

☐ Show password

Model	IP Address	MAC Address	Status
WNR-001	192.168.1.1	08:00:27:00:00:00	Normal
WNR-002	192.168.1.2	08:00:27:00:00:01	Normal
WNR-003	192.168.1.3	08:00:27:00:00:02	Normal
WNR-004	192.168.1.4	08:00:27:00:00:03	Normal
WNR-005	192.168.1.5	08:00:27:00:00:04	Normal
WNR-006	192.168.1.6	08:00:27:00:00:05	Normal
WNR-007	192.168.1.7	08:00:27:00:00:06	Normal
WNR-008	192.168.1.8	08:00:27:00:00:07	Normal
WNR-009	192.168.1.9	08:00:27:00:00:08	Normal
WNR-010	192.168.1.10	08:00:27:00:00:09	Normal

- When the password is in factory reset, it can be changed and managed in a batch.
- Up to 3 sets of camera ID with password and password can be registered.
- You may change the passwords of registered cameras all at once in the "Setup > Camera > Camera password" menu.
- You cannot change the password for cameras registered with ONVIF and RTSP.

6. Set the date, time, and daylight saving time on the <**Date & Time**> screen, and then click the <**Next**>.

Installation wizard

Step 6: Date & Time

Set the system time of the product:

Date: 2022-08-03

Time: 00:38:38

Time zone: GMT

Daylight saving time: ☐

Set the system time of the product:

Year: Month: Day: Hour: Minute: Second:

- The time zone setup might differ depending on the region that the product is released.

7. On the <**Camera register**> screen, select a camera to register from the searched camera list. Select a camera to register from the list and click <**Change IP**>. After completing camera register click <**Next**>.

Installation wizard

Step 7: Camera register

Select a camera to register from the searched camera list

Model	IP Address	MAC Address	Status
WNR-001	192.168.1.1	08:00:27:00:00:00	Normal
WNR-002	192.168.1.2	08:00:27:00:00:01	Normal
WNR-003	192.168.1.3	08:00:27:00:00:02	Normal
WNR-004	192.168.1.4	08:00:27:00:00:03	Normal
WNR-005	192.168.1.5	08:00:27:00:00:04	Normal
WNR-006	192.168.1.6	08:00:27:00:00:05	Normal
WNR-007	192.168.1.7	08:00:27:00:00:06	Normal
WNR-008	192.168.1.8	08:00:27:00:00:07	Normal
WNR-009	192.168.1.9	08:00:27:00:00:08	Normal
WNR-010	192.168.1.10	08:00:27:00:00:09	Normal

- After entering the ID and password set in the camera, the connection test must be completed to successfully register.
8. On the <**Channel setup**> screen, you can view the camera videos registered to each channel with thumbnail information. To change the camera video position, select a video and drag and drop location. After completing channel setup, click <**Next**>.

Installation wizard

Step 8: Channel setup

Select a video and drag and drop to the channel position to set the channel

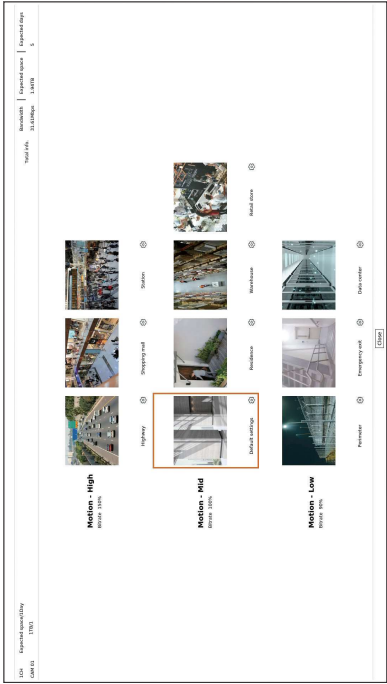
1CH	2CH	3CH	4CH	5CH	6CH	7CH	8CH

getting started

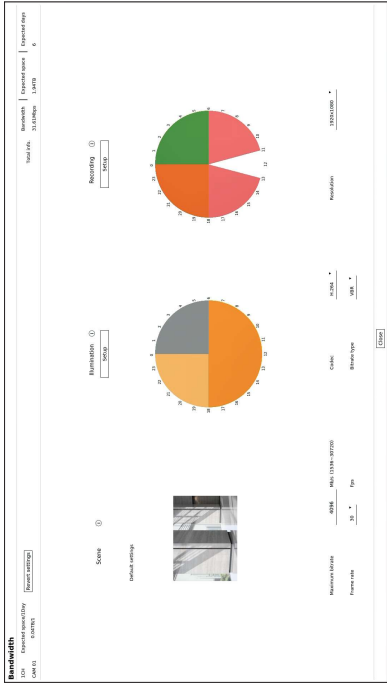
Configuring the Video Environment

Select the thumbnail of the channel whose settings you want to change and click <⚙️>. The setting window that was classified according to the scene will appear.

You can select items that are relevant to your channel. A video with more motion may have a higher bitrate, resulting in a larger expected space and fewer expected days.



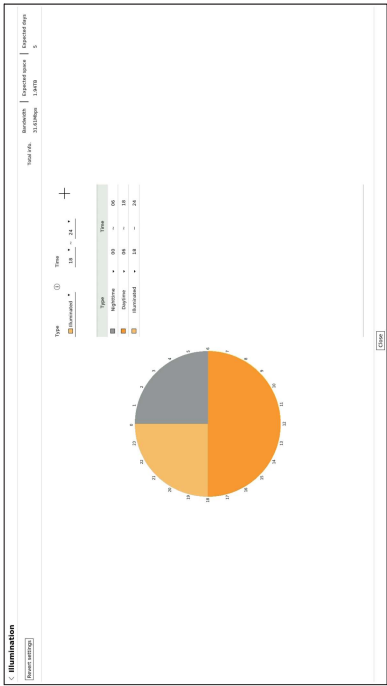
You can click <⚙️> to change to the setting you want.



- Expected space/1Day : Displays the expected space based on one day.
- Revert settings : Reverts to the settings that were set before the user modifies them.

Configuring the Illumination

You can click <Setting> to change to the setting you want.

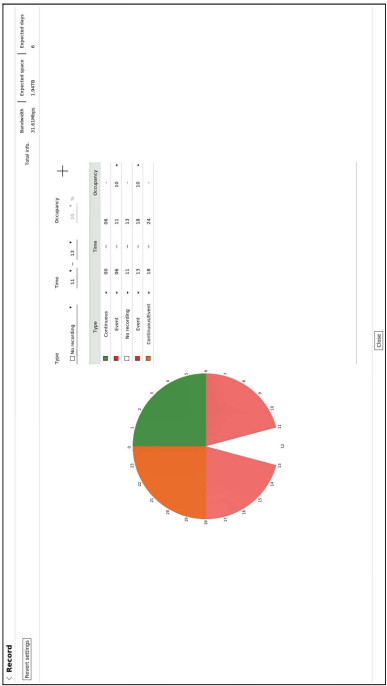


Set up the desired type and time.

- The bitrate is higher in the following order : **Nighttime** > **Illuminated** > **Daytime**.
- Revert settings : Reverts to the settings that were set before the user modifies them.

Setting the Recording

You can click <Setting> to change to the setting you want.



Set up the desired type and time.

- Not recording : Do not record for the set time.
- Continuous, Continuous/Event : Recording is executed for the set time.
- Event : When an event occurs at the set time, a recording will be executed.
- You can set the occupancy (10 to 90) indicating the frequency of movement.
- Revert settings : Reverts to the settings that were set before the user modifies them.

SHUTTING DOWN THE SYSTEM

1. Select <**Shutdown**> at the top right of the screen.
2. The <**Shutdown**> window will appear.
3. Click on <**OK**>.

The system will shut down.



RESTARTING THE SYSTEM

1. Select <**Restart**> at the top right of the screen.
2. The <**Restart**> window will appear.
3. Click on <**OK**>.

The system will restart.



LOGIN

To use the Recorder menu, you are required to login as a user that is authorized to access the a

1. Select <**Login**> at the top right of the screen.
2. The <**Login**> window will appear.
3. Enter the user ID and password, then click <**Login**>.



-  The initial administrator ID is "admin" and you will need to configure the password in the installation wizard.
-  Please change your password every three months to safely protect personal information and to prevent the damage o
take note that it's a user's responsibility for the security and any other problems caused by mismanaging a password.
-  For more information about limited-access permission, refer to the "Setup > Setting the System > User" page in th

Shows the video of the camera connected to the recorder. Also, you can adjust the camera and check the network transfer status.

SCREEN LAYOUT OF THE LIVE

The live screen is built as follows.



Item		Description
6		Saves the recorded video of the selected channel in the designated path.
		Clears the alarm in the event list and stops the alarm/beep sound for the system.
		Activates the manual recording function of the recorder.
		Displays information of the OSD screen on the video window.
7		Shows channel information.
		Shows the status of all cameras connected to the recorder.
8		Removes all screens from the video window.
		Shows the video in its original aspect ratio or full screen.
9		It changes to full screen from the current split mode.
	Video window	Shows the video of the camera connected to the recorder. - You can change to single screen by double-clicking the desired video in Split mode. Next video, click the or button that appears when you mouse over the selected video. - If you double-click the video in single screen, it will change to split screen.
10		Displays the IP address and mutual authentication status of the viewer receiver. : Mutual authentication connection using WISENET device certificates : Mutual authentication connection without WISENET device certificate --: Connection without mutual authentication - No viewer connected: Displayed when there is no viewer connected to the recorder.
	admin ▾	The ID of the connected user is displayed. The <Logout/Restart/Shutdown> menu will appear if you click.
		Displays a QR code to download the user manual.
11		Changes the color theme of the screen.
		Stops the alarm/beep sound for the system status when it is emitted.
12	System status display	Displays the status of the system, hard disk, and network.

Checking the System Status

The icon at the top of the screen indicates the status of the system.



Item	Description
	It is displayed when there is a problem with the fan. Only provided for products that support fans. (Refer to the "Functions Supported by Model" page.)
	It is displayed when there is a problem with the power supply. Only provided for products that support power supply redundancy. (Refer to the "Functions Supported by Model" page.)
	Display when recording data is not properly saved.
	Displayed if the HDD is full and the Recorder has an insufficient space to record.
	Displayed when there is no HDD or HDD is not detected.
	Displayed if the HDD needs a technical examination.
	It is displayed when RAID contains a malfunctioning HDD or cannot be used due to HDD malfunction. Only provided for products that support RAID.
	It is displayed when recovering a RAID Error. Only provided for products that support RAID.
	Appears when input data rate per channel exceeds the specified data rate limit.
	It is displayed when an iSCSI device is disconnected. Only provided for products that support iSCSI.
	It is displayed when the network is overloaded. It occurs when the max receiving allowance is exceeded, causing an overload to the CPU. It disappears when you modify the

Item	Description
	Displayed if the server has firmware to update.
	It is displayed when the system is overloaded. Limit the number of users remotely monitored by Web Viewer or VMS, or control the number of of the recorder.
	Displayed when manually recording a video while the access restriction for stop recording is enable. Only a user with the permission to stop recording is allowed to stop recording.
	Displayed when exporting a recorded video in live mode.
	Displayed when there is software to update on the camera.
	Displayed when playing the layout sequence.
	Displayed when running automatic switching of the split screen.
	Displayed when an error occurs in the internal memory.

Error Information

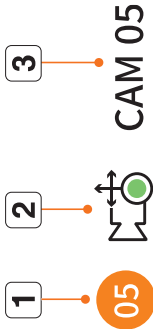
- If the built-in HDD is not connected, the "NO HDD" icon () will be displayed. You center since the Recording, Play, Export, and Upgrade functions do not work while do
- If you do not format a purchased HDD in a format supporting Recorder, a "NO HDD" icon is displayed. If the "No HDD" icon is displayed, check the hard disk connection status in "**Storage device**" and format the hard disk.
- If a product with a fan does not work or has a problem with the fan, <**Fan Information**> the fan malfunction icon () is displayed. In this case, check the fan inside the product it can shorten the product life cycle, so please make sure to contract service center ne



- If an abnormal fan () icon, HDD FAIL () icon is displayed, contact our c

Check Camera List

Displays the camera type, status, and name registered in the recorder.



Item		Description
1	Channel information	Displays channel information (channel number, video window assignment, and color indication).
	Camera type	Displays a normal camera.
		Displays a PTZ camera.
2	Camera status	Recording an event video.
		Recording a general video.
		Displays the camera error status.
3	Camera name	Displays the name set for the camera.

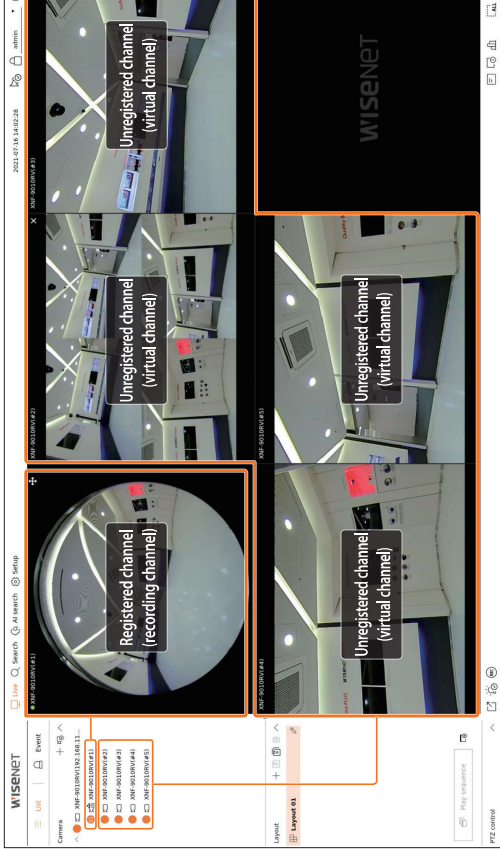
-
- If a camera connection error occurs, it is disabled in the list.
 - The camera status display information changes according to the network connection status and settings.

Check Multichannel Cameras List

For multichannel cameras registered with the Wisenet protocol, the channel information will be displayed in the recorder. The model name of the multichannel camera.



In case of multichannel cameras, only one main channel can be registered for recording. Subchannels in which recording is not required do not need to be registered on the recorder in monitored real time. However, recording, event reception, or camera settings are not available for these subchannels.

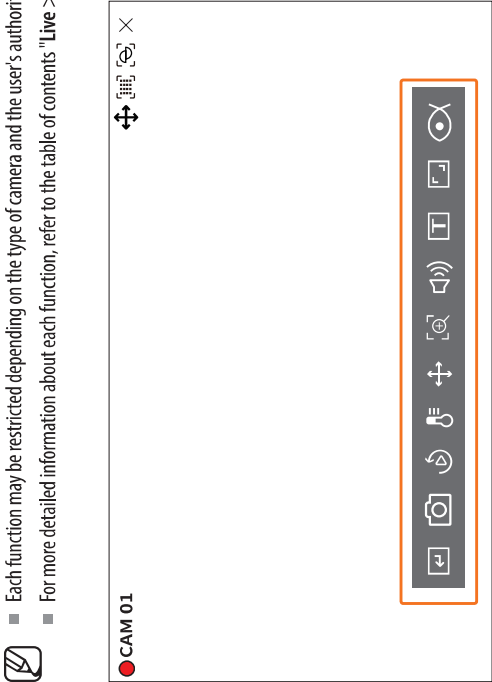


Live Screen Menu

After selecting the desired channel on the split mode, roll the mouse cursor over the screen to see the live screen menu.

The live screen menu appears differently depending on the recorder operation status or the type of the registered camera.

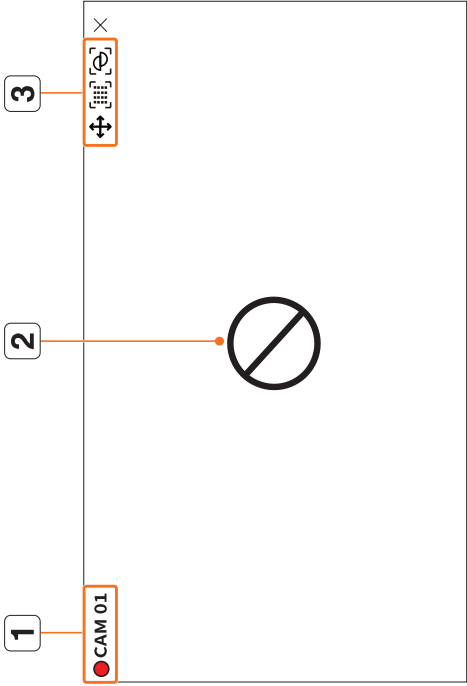
- Each function may be restricted depending on the type of camera and the user's authority.
- For more detailed information about each function, refer to the table of contents "Live > Camera Video Control".



Icons on the Live Screen

You can check the status or operation with the icons on the live screen.

- The icons displayed on the screen may differ depending on the type of camera and the user's authority.

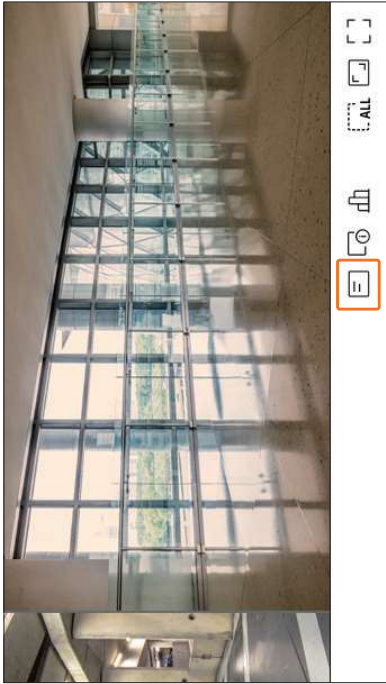


Item		Description
	Manual trigger	If the event action for <Manual trigger> is set for the selected channel, the event rule name is displayed when you hover the mouse over <Manual trigger>. Click <Manual trigger> to activate the set event.
	Capture	You can take a screenshot of the selected channel.
	Instant Viewer	You can rewind 30 seconds while monitoring the video.
	Temperature Detection	For images that support the thermal imaging camera function, you can click the desired point to check the temperature information.
	PTZ control	If the network camera connected to the selected channel supports the PTZ function, it changes to the PTZ control mode.
	Zoom in	You can zoom in or zoom out the video.
	Audio	Turns the audio on or off when the audio is connected.
	Display Text	Turns the text output on or off.

Item		Description
1	Recording status and camera name	Displays camera's recording status and name. - Red dot: Displays the event recording. - Green dot: Displays the normal recording.
2		Displayed when there is no input while the camera is on.
		Displayed when the resolution of the live video exceeds the camera's on.
	Video input status	Displayed if no permission to live view is granted.
		Displayed when the camera is not registered. If you set the channel setup to <Covert2>, nothing will be displayed. If you set the channel setup to <Covert1>, the live screen, but only the OSD will be displayed.

OSD Information Display

You can show or hide the recording status, camera status, event display, etc. in the video window. To show or hide the OSD information, click  > at the bottom of the screen.



Item	Description
Event Display	Events from the recorder and camera are displayed in icons. For details, refer to the 'Setup > Setting the Event > Event rule setup' page in the Table of Contents.
Status Display	 It is displayed on the channels that can enable the PTZ mode.
	 Displays AUDIO ON/OFF. It will not be displayed when <Off> is selected for the audio in the channel setup.
	 If the alarm is in set, it is displayed on the connected channel when an external signal is entered.
	 If the event detection is set for each channel, it is displayed when a camera event occurs.
	 It is displayed when it fails to decode all the frames due to limited decoding performance and in this case only the I-Frame is decoded.
	 This is displayed when a POS (text) event occurs.
	 Displayed when there is an error with the SD card.
	 Displayed when the SD card capacity is full.
	 Displayed when a defocus event occurs.
	 Displayed when a fog detection event occurs.
	 Displayed if the Wisenet camera's certificate is valid.



- The 'Live4NVR' profile is added automatically with network camera auto registration, and settings can be changed according to user environment.
- Depending on camera specification, you may not be able to add a profile or if you have the PLUGINFREE profile, you will not be able to add the Live4NVR profile.
- When system overloaded and the performance is down, network camera may play only main frame(I-frame).

Record Status

If you select <Record> in the <Status> menu, you can check the profile, record type, frame rate (Input/Record), and bit rate (Limit/Input/Record) for each channel.

LiveRecordNetworkPoE

Total bitrate (record/max): 17.5/100 Mbps

CH	Profile	Frame rate (fps)		Bitrate (bps)				
		Type	Frame	Record	Limit			
1	H.264	Continuous	Full	30.0	12.5M	1.5M	1.5M	12.0%
2	H.264	Event	Full	30.0	30.0	12.5M	0.5M	4.0%
3	Flashes/ew	Continuous	Full	25.0	25.0	12.5M	6.8M	54.4%
4	H.264	Continuous	Full	24.0	24.0	12.5M	5.1M	40.8%
5	H.264	Continuous	Full	29.9	29.9	12.5M	2.4M	19.2%
6	H.264	Continuous	Full	29.9	29.9	12.5M	1.2M	9.6%
7	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-

● Rec data exceeded

● Profile error

● HDD capacity exceeded

HDD capacity (free/total): 3120/3971 GB

Recording (free/total): 15 days 16 hours /19 days 23 hours

Overwrite: Not overwriting yet as you have enough HDD space.

Record setup

- Total bitrate (record/max) : Record shows the amount of data currently being recorded, and Max shows the amount of recorded data allowed for the recorder.
- Current : Shows the recording status information of currently transferred data.
- Max : Shows recording information of the most biggest recording data out of configured standard and event recordings.

- : Reloads the recording information.
- Profile : Shows the video profile configured to each channel.
- Record : View the record type according to normal or event recording.
- Frame rate (fps) : Shows the receive/record frames per second for each channel.
- Bitrate (bps)

- Limit / Receive / Record : Shows the amount of limit/receive/record data for each channel.
- Receive/Limit : Shows the data ratio of actual data transferred from the camera and allowed maximum defined by user.

- Record setup : You can set detailed recording settings.

For more details, refer to the "**Setup > Setting the Recording > Record Setup**" page in the Table of Contents.

- If an error occurs during recording, the channel's profile column turns yellow.
This profile error indicates that when a recording profile cannot be used to receive video from camera, an alternative profile is used to record the video. When the recording profile resumes, the camera video can record by using the set recording profile.
- If Recorder exceeds the recording limit, only the key frame will be recorded. In that case, a restricted recording popup and an icon will appear.
The restricted recording popup appears only once. If you change the camera setup and record setup, the restricted recording popup may appear once more to confirm the status.
If you don't want to see it again, then check Do not show this again in the popup.

For the maximum allowed number of recording, refer to the "**Setup > Setting the Recording > Record Setup**" page in the Table of Contents.

Network Status

Select <Network> in the <Status> menu to check the status of network bandwidth currently transmitted.

LiveRecordNetworkPoE

Status

Network	Receive (bps)	Transfer (bps)
Network 1	0.0 M	0.0 M
Network 2	17.3 M	3.9 M

OK



- Each product supports a different number of network ports.

PoE Status

This function is only available for products that support PoE. For products that support PoE "**Functions Supported by Model**" page.

Select <PoE> in the <Status> menu to check the current PoE status of each port.

LiveRecordNetworkPoE

Status

Port	Consumption (W)	Enable	Detailed Information
1	0	☒	-
2	0	☒	-
3	0	☒	-
4	0	☒	-
5	0	☒	-
6	0	☒	-
7	0	☒	-
8	0	☒	-

Total power consumption (W) : 0.0W

OK

- Consumption (W) : Displays the power consumption in PoE.

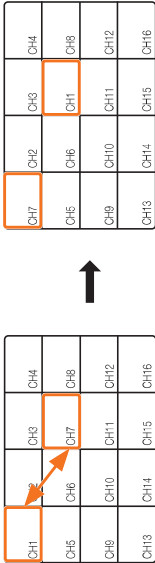
- Enable: Turns on/off the power supply to the camera.
 - Checked (☑): Power supply available
 - Not checked (☐): Power supply limited
- Detailed information: If there is a problem with power supply, it is described here. Power supply problem includes overload power (Class 1 to 4) and voltage fault.
- Total power consumption (W): Displays the sum of power consumption of all ports.

Channel Setting

You can display the channel in a desired area of a split screen.

To switch the position of a channel, hold a channel and drag and drop it to the desired location.

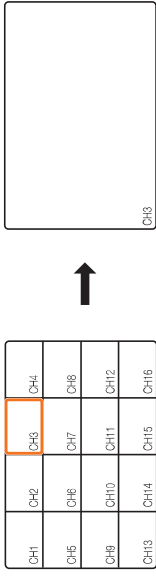
Example) If switching CH 1 to CH 7



Switching to Single Mode

When in split mode, select and double-click a desired channel to switch to its Single mode.

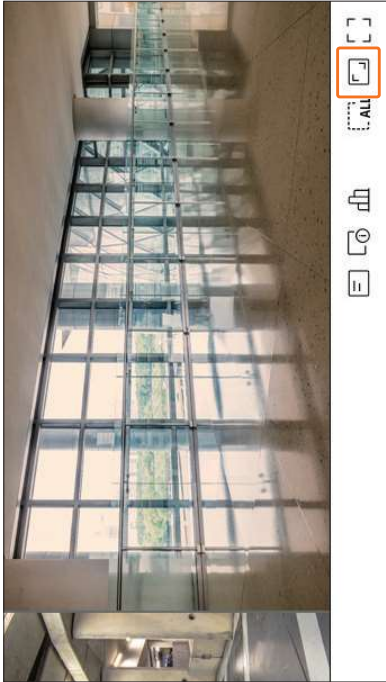
Example) If double-clicking CH 3



Changing Overall Channel Aspect Ratio

Video screen ratio for all channels can be changed in live split screen mode.

Click <  > at the bottom of the screen. It changes to the actual proportion of the video



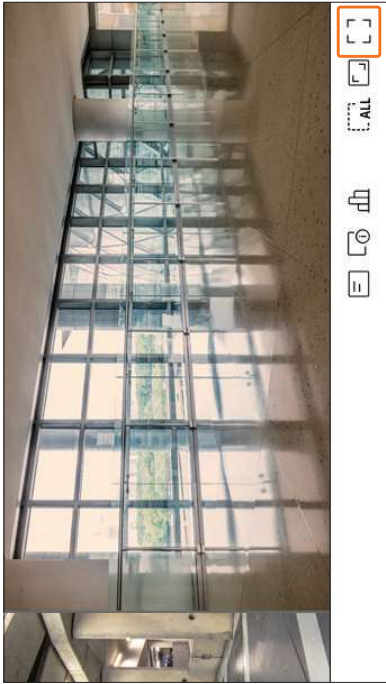
Click <  > to return to the previous aspect ratio.



- You can change the aspect ratio of each channel. For more information, refer to the "Live > Camera Video C Ratio" page in the Table of Contents.

Full Screen Mode

You can change to full screen mode, which has no top/bottom/left/right areas of the live screen. Click <[]> at the bottom of the screen.



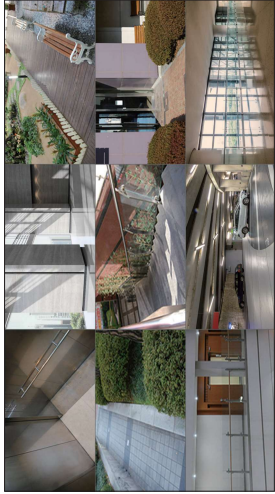
Changes to full screen mode.

- To exit full screen, place your mouse cursor over the bottom of the full screen mode and click <[]>.

General mode



Full screen mode



SETTING UP THE LIVE LAYOUT

This section outlines how to select a series of channels based on their purpose/accessibility and a single layout.

Example) Layout "Lobby" - Lobby camera 1, Lobby camera 2, Front entrance camera 2
Layout "VIP" - Directors' meeting room 1, Directors' meeting room 2, Directors' lounge the 7th floor

- After the software upgrade, the previously set layout may be changed. Reset the layout and sequence.

Check Layout List

Click <≡ List > at the top left of the live screen, and then click <✓> to display the layout



- + : Create a new layout.
- [] : Save the changed layout.
- [] : Saves the selected layout with a different name.
- [] : Delete the added layout.
- ^ / v : Open or close the layout list.
- [] : Change the name of the layout.

Add Layout and Set Name

1. Click  > to add a layout.
2. Click  > to set the name for the added layout.
3. Double-click or drag and drop a channel from the camera list to display it on the layout screen. The selected channel will be displayed in the video window.
 - You can simultaneously assign multiple consecutive channels from the camera list to the video window. Drag the desired channels from the camera list and drop them on the video window. Depending on the drop location and the number of channels, empty area or the current layout will be expanded to assign the video.
4. Click  > to save the set layout.



- Each layout is saved separately by the user.
- The layout set on the live screen can also be used for time search and can be searched according to the channel order and channel combination set by the user. For more information, refer to the "Search > Time Search" page in the Table of Contents.

Delete Layout

Click  > after selecting the layout to delete.



- You cannot delete the default layout.

Change of Layout Channel and Name

1. Click  > after selecting a layout.
2. Add or delete channels or rename layouts.
3. Click  > to save the changed settings.

Dynamic Layout

You can set the size and position of the video assigned to the layout as desired.



- The dynamic layout function can only be set on the primary monitor.

Assigning One Channel

Double-click or drag and drop a channel from the camera list to display it on the layout. The video is assigned to the empty area or depending on the drop location, the current layout is expanded to assign the video.

Example) When assigning 9 channels to a new layout, the channels are arranged in



Assigning Multiple Channels at once

Drag multiple consecutive channels from the camera list and drop them into the video window. Depending on the drop location and the number of channels, the videos will be assigned to the current layout or the layout will be expanded to assign the videos.

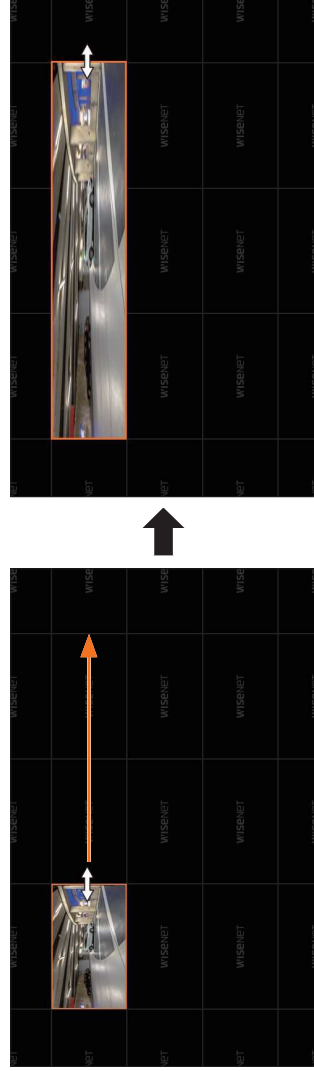
Example) When assigning 9 consecutive channels to a new layout, the channels are arranged below.



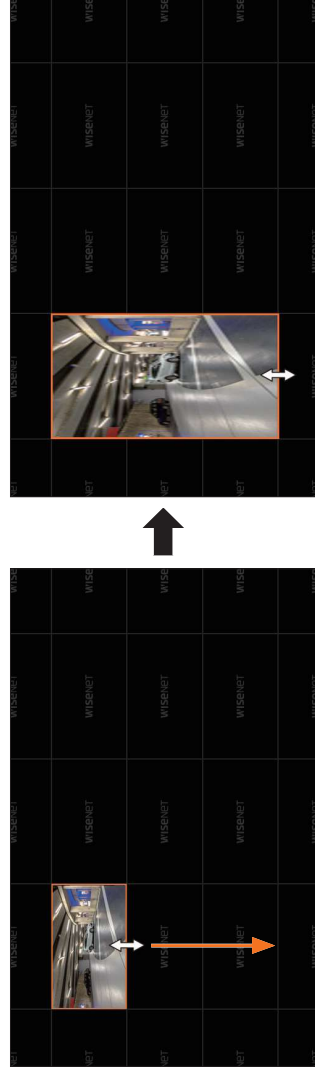
Zooming In and Out of Videos

You can enlarge or reduce the video by dragging a corner or vertex of the video in the desired direction. If you double-click the corner or vertex of the enlarged video area, the video will be reduced step by step. The video can be enlarged if there is an expandable blank area around the video.

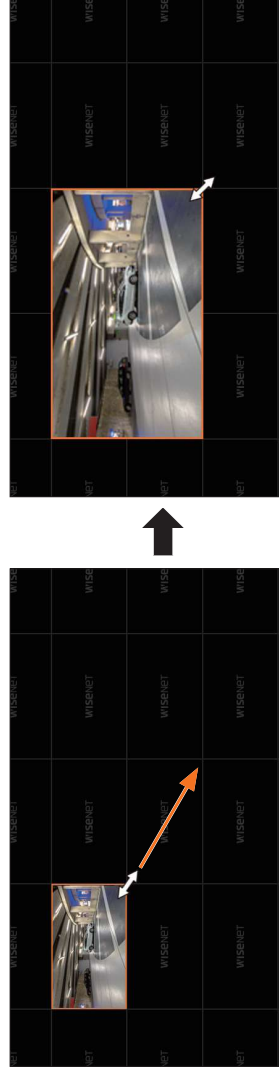
Horizontal zoom



Vertical zoom

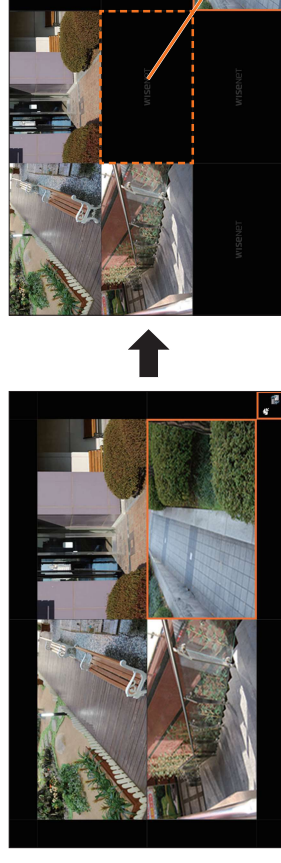


Diagonal zoom

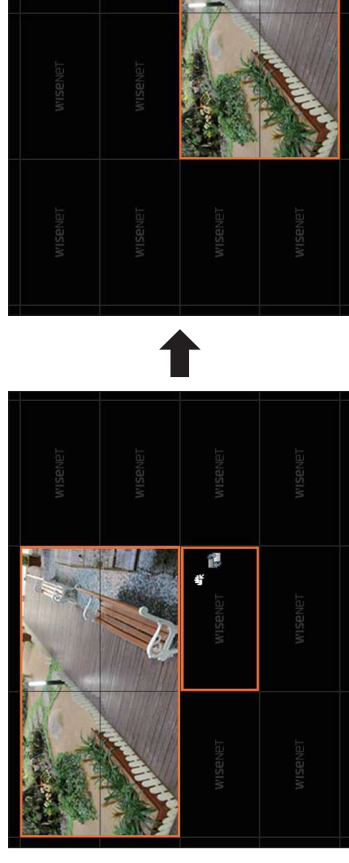


Moving Videos

To move the video, click the video and then drag and drop it in the desired location. Dragging it outside of the layout area will expand the layout area.



The enlarged video can be moved only when there is an empty area that is the size of the

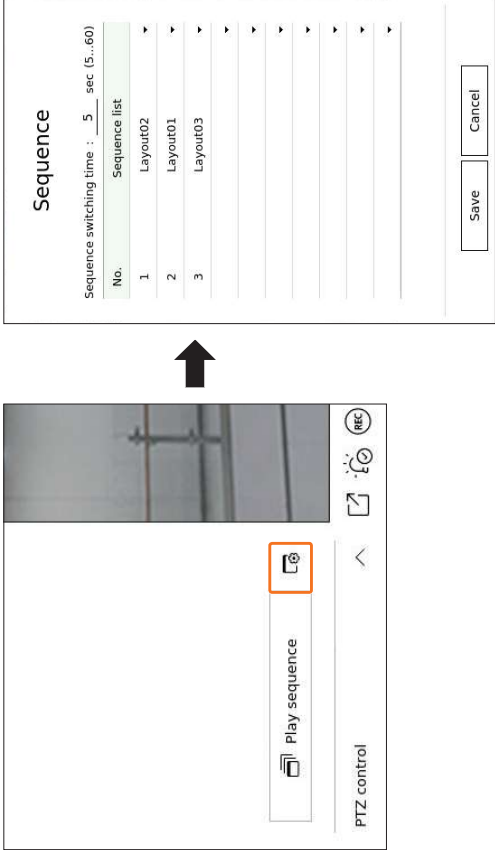


Play Layout Sequence

You can automatically switch the layout list to a set time interval to view.

Sequence Setting

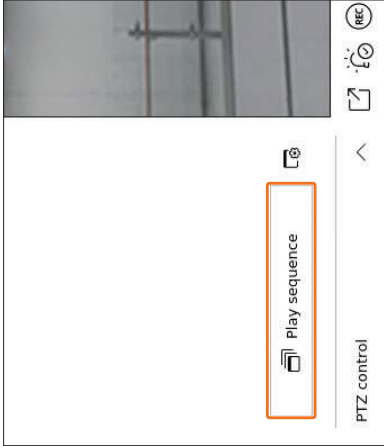
Click <  > at the bottom of the layout list to set the sequence.



- Sequence switching time : Set the switching time of the layout list.
- Sequence list : Set the layout sequence playback order. You can add the same layout repeatedly.

Play Layout Sequence

Click <  Play sequence > at the bottom of the layout list to automatically switch the layout according to the sequence settings.



REAL-TIME EVENT MONITORING

Real-time events that occurred on the camera can be checked in the live video window and event list.



- AI events are only available for products that support AI.
- AI events are displayed only after setting event rules. AI event search may have different settings and operation specifications or camera.

Check Event List

Click <  Event > on the left side of the live screen to display the real-time event list.

- When new events occur, the list of events will be updated accordingly.
 - The specified channels and events are displayed in the list according to the event rule setup.
- For details, refer to the "Setup > Setting the Event > Event rule setup" page in the Table of Contents.



-  : Browses for the event by the desired condition.
-  : Plays the video at the time of the event.



- When an alarm output occurs, if event recording is set and pre-event time and post-event time are set, event recording will be performed. For more information about event recording settings, refer to the "Recording > Record setup" page in the Table of Contents.



- The video may be delayed depending on the network condition.
- The event output can be delayed as the transfer of the alarm event from the network camera takes time.

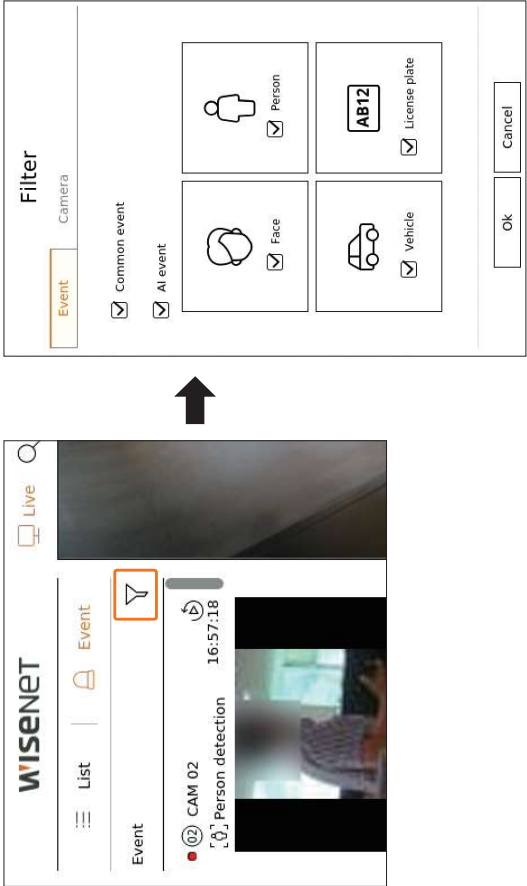
Event Search

You can browse events by camera and event type.

To search for a specific event, click < 🚫 > to select the event type and camera to browse.

Event filter

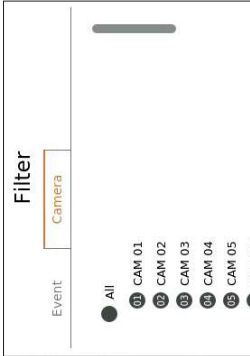
Displays only selected events in the event list.



- Common event : Searches for event types that have occurred in general cameras such as motion detection and IVA.
- AI event : Searches for AI event types such as face, person, and vehicle.
 - AI events are only activated when an AI camera is connected.
 - AI events are displayed only after setting event rules. For details, refer to the "Setup > Setting the Event > Event rule setup" page in the Table of Contents.

Camera filter

Displays events for the selected camera only.



Event Instant Viewer

Select an event to check from the event list, and click < 📺 > to play the recorded video at t occurred.

- Instant viewer can play an event video for 1 minute.
- For AI events, the best shot and details of the event that occurred are displayed.



- AI event recognition may have different settings and operation specifications depending on the recorder model.
- To see AI events, set any of the following options as necessary : See the relevant page for detailed setup method.

- Setup > Event > AI engine
- Setup > Event > Event setup > Object
- Setup > Event > Event setup > AI recognition
- Setup > Event > Event setup > Mask
- Setup > Event > Event setup > IVA
- Setup > Event > Event rule setup

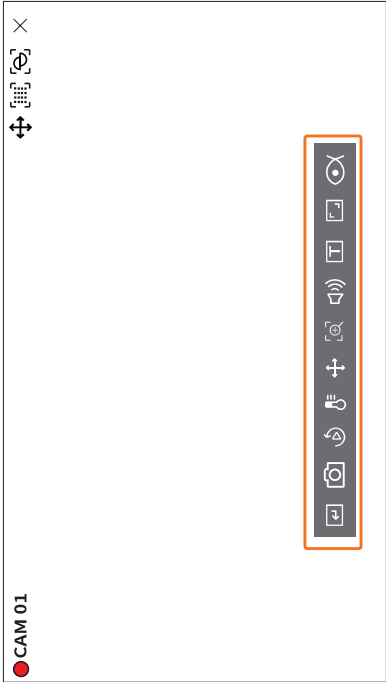
AI event



- 📺/|| : The video is played/paused.
- 📺 : Moves to the playback screen.

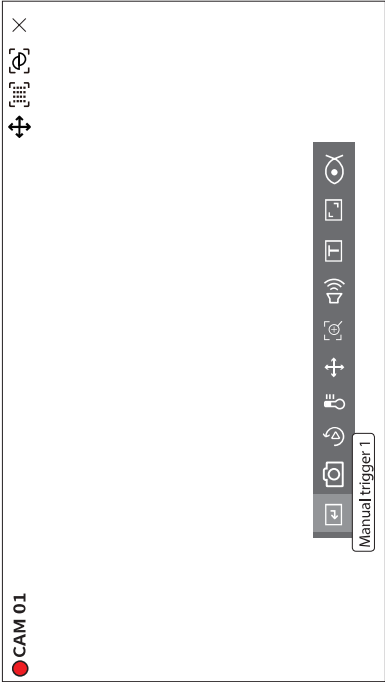
CAMERA VIDEO CONTROL

By using the function icon of the video window, you can easily use the functions of capture, video zoom, PTZ camera and thermal imaging camera. When you place your mouse over the video window, the live screen menu will appear.



Manual trigger

If the event action for <Manual trigger> is set for the selected channel in the "Setup" menu, the event rule "Manual trigger" menu, the event rule name will be displayed when you hover the mouse over the icon. Click the icon to activate the set event.

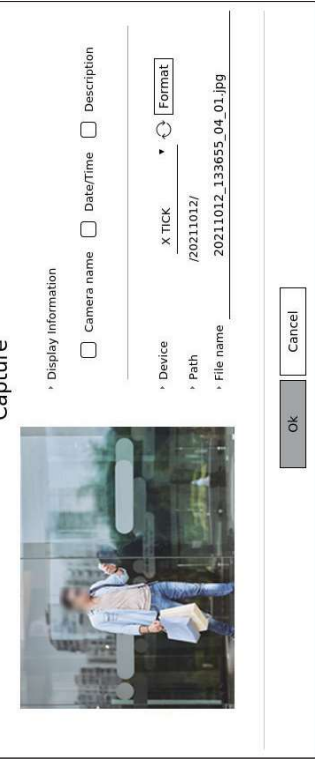


Capture

You can take a screenshot of the current video of a specific channel selected on the live screen. The screenshot will be displayed in the screenshot window.

1. Select a channel to capture video and click the icon.

2. Select the output information to be displayed on the captured screen.



3. Set the device where the screenshot file will be saved and the file name.

4. Complete the settings and click <OK> then the image captured from the screen is saved to the device.



- Camera screen larger than 2 megapixels is captured in Full HD size.

Instant Viewer

You can move the video back 30 seconds and play it while live monitoring. Instant viewer can be used to view the video of the selected channel. Select the desired channel and click the icon. The Instant Viewer screen appears.

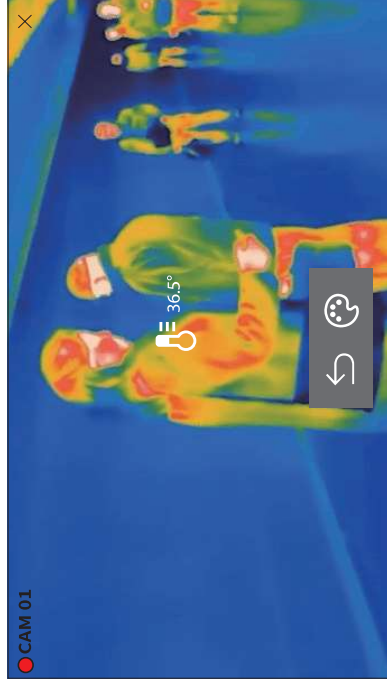


Temperature Detection Mode

For images that support the thermal imaging camera function, you can click the desired point to check the temperature information.

Select the desired channel and click **>**.

When you place your mouse over the video, the mouse pointer changes to a thermometer shape, and when you click a specific location on the video, the temperature at that location is displayed next to the mouse pointer.



- : Exits temperature sensing mode.
- : The color of the video changes according to the temperature color selection.

PTZ Mode

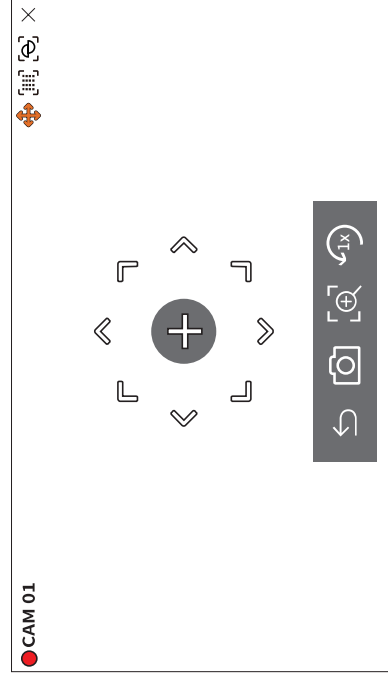
You can run PTZ control of the selected channel.

Select the desired channel and click .

Enters the PTZ control mode.



- Depending on the camera, the PTZ control function and speed may be different.



- : The PTZ mode is closed.
- : Captures video of the current state.
- : After clicking the digital zoom icon, you can use $\langle \oplus \rangle$ / $\langle \ominus \rangle$ to zoom in or zoom out
- : Returns to the 1x zoom screen.

Adjusting the Camera Direction

When you rolls over the mouse to $< + >$, the 8-way key appears, and when the mouse leaves the direction key, the direction key disappears. You can fine-tune the camera direction by clicking once. Keep clicking the arrow keys to move in the desired direction and release the mouse once. To quickly adjust the direction of the camera, click $< + >$ and drag. The screen moves quickly in the direction. You can adjust the screen movement speed according to the drag distance.

Moving to the Center of the Screen

Click a specific location on the screen to move the video at that location to the center of the

Zooming the Selected Area

Drag a specific area of the screen, to move and the selected area to the center of the screen

Zooming In and Out of Images

Zoom In

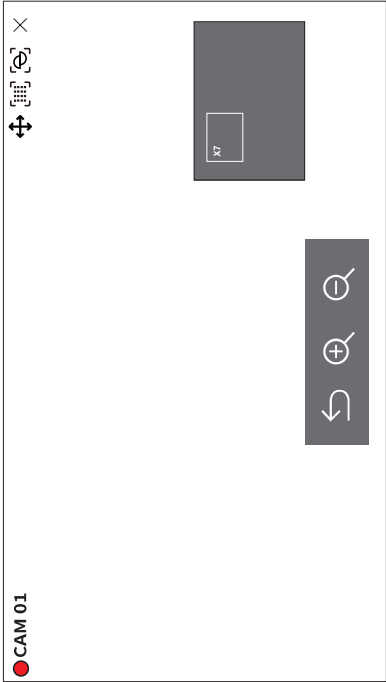
You can zoom in or out the video via digital zoom.

Select the desired channel and click < [Ⓢ] >.

Enters the digital zoom mode.



- In PTZ mode, click < [Ⓢ] > to run the digital zoom.



- [←] : Exits the digital zoom mode.
- [Ⓢ] / [→] : Zooms in or out the video.

- Minimap : When the video is enlarged 10%, a minimap is displayed. You can quickly check the desired location in the enlarged video through the mini-map.

Audio

You can turn the sound on/off corresponding to the channel in Live mode.

Select the desired channel and click < [Ⓢ] >.

Audio output can only be turned on in one channel. The audio output of other channels will be automatically turned off.



- If you have configured the audio output settings properly but the audio or voice is not output, check if the connected network camera supports the sound signal and if you have configured the sound settings as appropriate.
The sound icon can be displayed if the sound signal fails to output from noise.
- Only the channel where <Audio> is set to <On> in "Setup > Camera > Channel Setup" displays the audio icon ([🔊]) in Live mode that you can use to turn the sound on/off.

Display Text

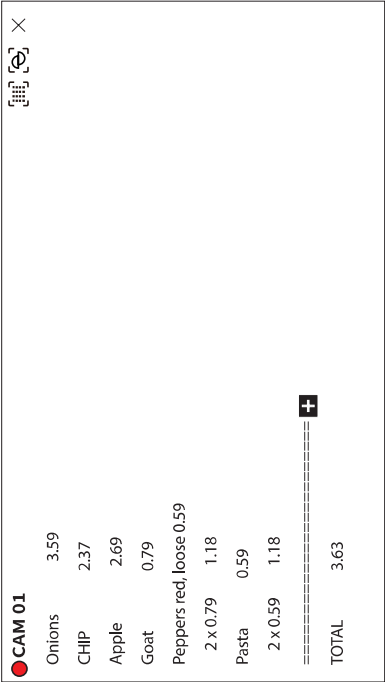
You can monitor texts regarding the sales record received from POS in real time.



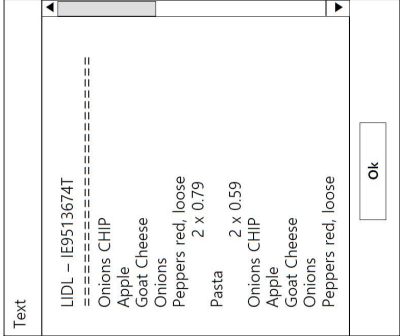
- This is executable when a text device is connected.
- The Recorder can display text on a live screen when a text device is set. For details, refer to the "Setup > Settings" page.

Select the desired channel and click < [T] >.

When text information occurs, the text information is displayed in the corresponding video. Also, when a set text event occurs, the corresponding part of the text is displayed in a set text.

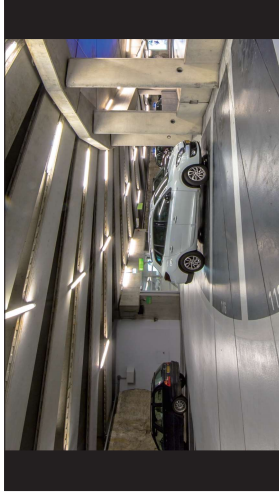


< [Ⓢ] > appears when text information crosses the screen. Click < [Ⓢ] > to display a pop-up screen to check the entire content.



Change Channel Aspect Ratio

You can change the aspect ratio of each channel.
Select the desired channel and click  >.
It changes to the actual proportion of the video.



Dewarping

You can correct distorted images from the fisheye camera by running dewarping.
Select the channel you want and click  >.
It will enter the setup mode for dewarping.



- This function is not supported in some models.
- This works only when the video resolution is 1:1.
- The set dewarping mode is cleared when the layout is changed, so set it again.
- Dewarping will be applied only to the selected channel.
- In dewarping mode, the frame rate of the video is limited depending on the resolution (3-30 fps).



-  : Dewarping mode is closed.
-  : You can select from **<Single>**, **<Quad view>**, **<Single panorama>**, and **<Double view mode>**.
 - Single, Quad view : You can use the PTZ function by dragging the mouse up/down/left mouse wheel.
 - Single panorama : You can select when the mounting mode is **<Wall>**
 - Double panorama : You can select when the mounting mode is **<Ground>** or **<Ceiling>** PAN function by dragging the mouse left or right.
-  : You can select the mounting mode from **<Ground>**, **<Wall>**, and **<Ceiling>**.

PTZ CONTROL

With this Recorder, you can configure the settings of a PTZ camera as well as commercial cameras in the market to your preference.

This is active only if a channel that a PTZ camera is connected to is selected.

Getting Started with PTZ Operations

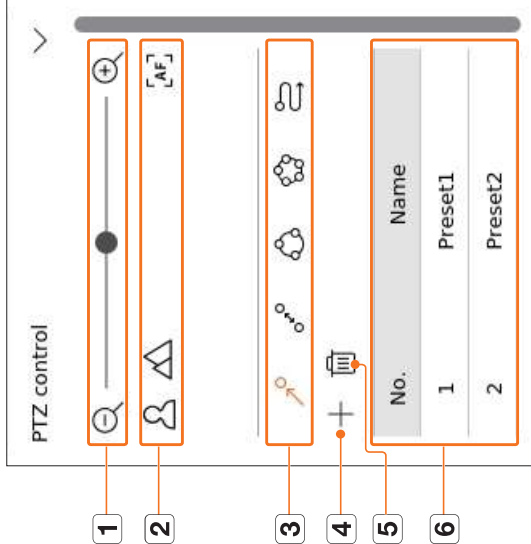
The PTZ camera will be activated only if the channel of the PTZ camera is selected. After selecting the desired channel, click <  > on the live screen menu.

- 
- This is available only if a PTZ camera is connected and the <  > icon is displayed on the screen.
 - Even if the connected network camera does not support the PTZ operations, you can configure the PTZ control settings (if possible) by installing the PTZ driver (physical device).
 - It only supports a network camera with Hanwha Techwin's PTZ function and a camera registered in the ONVIF.

PTZ Control Menu

You can use a single PTZ camera to perform the Pan, Tilt and Zoom operations to monitor multiple places, and configure the custom settings of the presets in a desired mode.

Click < **PTZ control**  > on the bottom left of the live screen to display the PTZ camera control menu as shown below.



Item		Description
1		Zoom out/Zoom in
		Near/Far
		Auto focus
2		Preset
		Swing
		Group
3		Tour
		Trace
		Delete
4		Preset List



- The PTZ working (active) mark can be active even if the PTZ operation is not available in normal mode. So ensure the PTZ settings before proceeding.
- Some cameras may differ in the menu title and operation with regard to Swing, Group, Tour and Trace.



- Even if your network camera supports the function, you can use it only if the button is activated in the PTZ control menu.

Using Digital PTZ (D-PTZ) Function

1. Register a camera that supports the D-PTZ profile.
 - In cameras that support the D-PTZ profile, you can use the D-PTZ function.
2. Both cameras that support general PTZ and cameras that support D-PTZ can control the live image using some of the **<PTZ control>** function menus.
 - For more information about the supported functions, please refer to the camera manual.

Presets

Presets is a set of saved data specifying the locations of a PTZ camera. A single PTZ camera can save up to 300 locations.



- The max. number of presets may vary depending on the number of presets supported by the camera.

To add a preset

1. Select the desired channel and click **<+>**.
 - The PTZ control screen appears.
2. Use the arrow keys to adjust the camera to the point.
3. Click **<P>**.
4. If you click **<+>**, the **<Preset setup>** window will appear.

Preset setup

No. 3

Name

Save

Cancel

5. Click **<3>** to select the Preset Order to set.
6. Enter the Preset name.
7. Click **<Save>**.
The preset setting will be saved.



- If you replace a camera that saves your preset settings with a different one, you must configure the preset settings again.

To delete a registered preset

1. Click **<P>**.
2. Click **<Delete preset>** window will appear.

Delete preset

No. 1: Preset1

Delete

Cancel

3. Click **<1: Preset1>** to select the preset to delete.
4. Click **<Delete>**. The selected preset will be deleted.

Running Preset

1. Click **<P>**.
2. Click the preset you want to run from the list.
The camera lens moves to the set position.

Running Swing (auto pan), Group (scan), Tour, or Trace (pattern)

The running method of each function is the same as the preset operation method. For details, refer to the camera's user manual.



- Depending on the camera's capabilities, only some features may be available.

EXPORTING THE RECORDED VIDEO

You can search the storage device to be exported and export the recorded video of the desired time by layout or channel.

1. Click <> at the bottom of the screen.
2. The export setup screen will appear.

Layout 01

All Channels

Start time

2021-10-12 13:35:00

DST DST Not Applied

End time

2021-10-12 13:40:00

DST DST Not Applied

Overlap

Overlapped 0

DST DST Not Applied

Device

X-TICK

Format

File type

SEC

PW Setup

include text data

Path

20211012_1335

Check capacity

Export space : 85.42M

Used space : 358.64M

Free space : 1.63G

Start

Close

- Select a layout : Select a desired layout from the layout list.
- Channel : Select a channel to export.

■ You can select multiple channels. If you select <All channels>, all channels will be selected.

- Export section : Set the <Start> and <End> time to run the export select to.

– Start : You can set the start time for the export to the desired time.

Click <**Start**> to set the export start time to the first time the video was recorded.

– End : You can set the end time for the export to the desired time.

Click <**End**> to set the export end time to the last time the video was recorded.

- Overlap : Shows a list of overlapping data on a same time according to the number of data.

This is displayed when there are duplicate data in the same channel due to changes in the time or time zone.

■ For more details, refer to the "Setup > Setting the System > Date/Time/Language" page in the Table of Contents.

- Device : Select a device to export the among the searched devices.

- Format : If you click <**Format**>, the format confirmation window will appear. Click <**Yes**> to format the selected storage device.

- File type : Select the export format.

– SEC : You can export in your own file format that can be played directly on your PC. You can play with the viewer

included in the export folder.

■ If you select SEC format, you can choose whether to include "PW Setup" and "Include text data".

– Recorder : You can export to a file that can be played only on the recorder.

– AVI : You can export to an AVI format-compatible with popular media players.

3. After completing the export setup, select <**Start**>.

- If there is no device to export, the <**Start**> button will be deactivated.
- If you click <**Stop**> during the export progress, which is the export will be canceled.

4. Click <**OK**> on the export completion confirmation window to finish.



- Exporting will not be able to start when a USB with insufficient free space is inserted.
Format the memory stick or delete some of the data on the memory stick to secure adequate storage space.
- The operation speed of the product may slow down if the export is in which is a progress.
- You can switch to the menu screen during export progress, but data playback will not be possible.
- If the export fails, check the current capacity and status to see if the hard disk is connected properly in the "Diagnostics" menu.

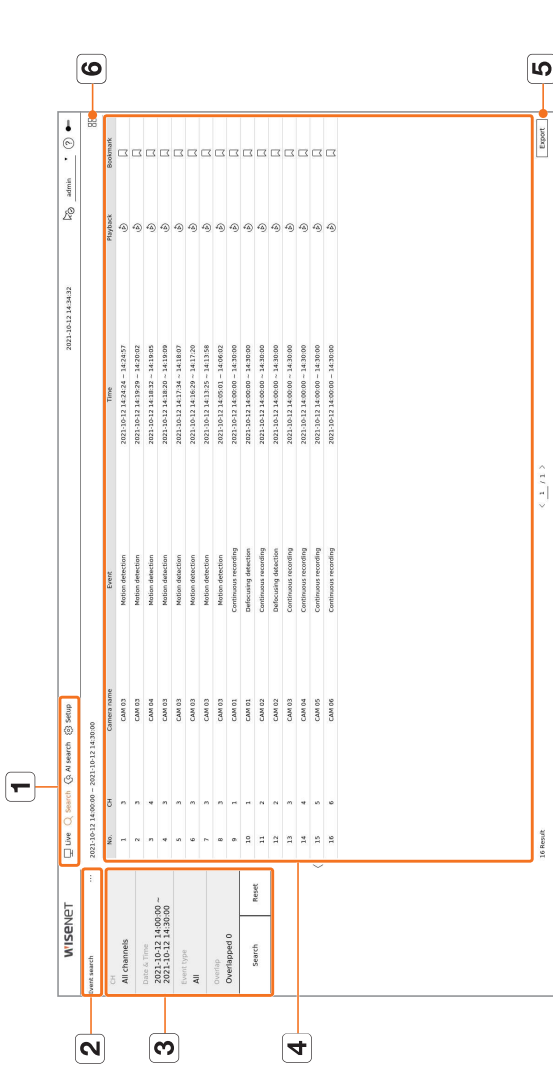


- If <**Hide**> is selected while the export is in progress, the screen changes to the upper menu, but the export continues.

search

You can search recorded video by various conditions such as time, event, and export.

SCREEN LAYOUT OF THE SEARCH



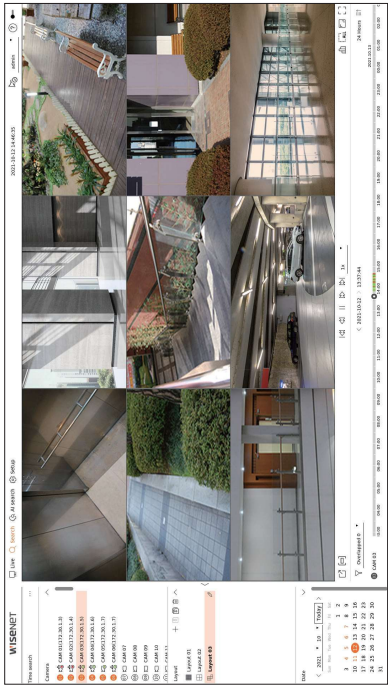
Item	Description
1	Click each menu to go to the corresponding menu screen.
2	Click the menu tab to display the detailed search menu. Click Search menu to go to the corresponding Search screen.
3	You can set various search conditions, such as date/time/event.
4	Displays search results.
5	Exports search results to a file.
6	Displays the search results as a list or thumbnail.

- Click <Reset> to initialize the search conditions and results.
- Double click on the desired item in the search results list to go to the play screen. When you click Playback (⏮), the video will be played in an instant viewer.
- You can specify a bookmark by clicking the bookmark (🔖) in the search results list. You can check the specified video in the bookmark search menu.
- If the search results are in multiple pages <, > you can click to go to the previous/next page. Or, you can click the current page number and enter the desired page to move.

TIME SEARCH

You can search the recorded data by the desired date and time conditions.

- The time displayed will be based on the time zone and daylight saving time (DST) applied time zone, so it may be displayed whether the data time zone recorded at the same time and daylight saving time (DST) is applied.



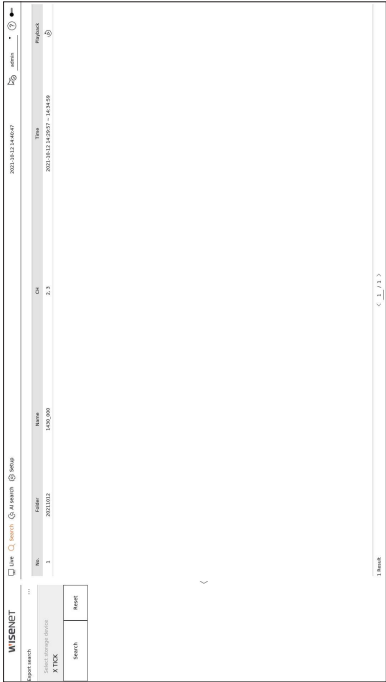
- Select <Time search> in the <Search> menu.
- Select a channel to search.
- Choose a layout.
- Click <, > in the date selection window to select the year and month to search. Dates with data will be shown in orange and current dates will be shown in orange circles.
- Select a date to search from the calendar. The first video of the searched data of the day will be displayed in the video window and the other videos will be displayed in the time line.
 - Click <Today> to search for today's date. Today's date will be selected.
 - If you click <Overlapped>, you can check the time line by setting the overlapping section.
 - The displayed color differs depending on the type of recording data.
 - Light green : Normal recording video
 - Red : Event recording video
- Double click the time of the desired channel to play the recorded video of that time.

6. If you double-click an item to play in the search list, the recorded video will be played.

search

EXPORT SEARCH

You can search the exported data on the connected storage device. Only data saved in recorder file format when exported will be retrieved.



1. Select **<Export search>** in the **<Search>** menu.

2. When you click **<Select storage device>**, the device search window is displayed. Click **< >** to search for storage device.

3. Click **<Search>**.

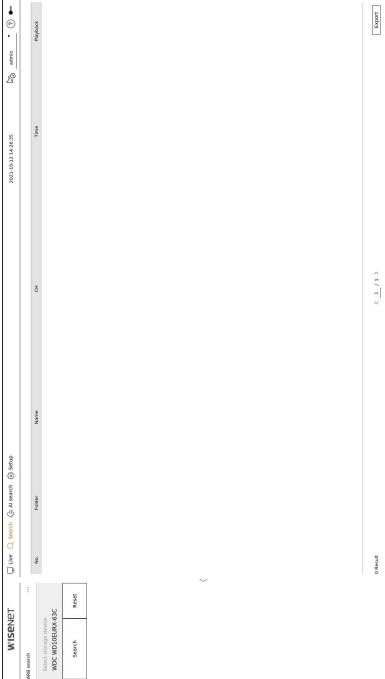
Exported file information will be displayed.

- Folder : Displays the folder where files are stored.
- Name : Displays the saved file name.
- CH : Displays the channel of the recorded video.
- Time : Displays the start time and end time of the exported video.
- Playback : Plays the exported video with an instant viewer.

4. If you double-click an item to play in the search list, the recorded video will be played.

ARB SEARCH

You can search auto-recovery backup data stored on ARB storage devices.



1. Select **<ARB search>** in the **<Search>** menu.

- For more information about ARB search, refer to the "**Setup > > Setting the Device > Storage device**" page.
2. When you click **<Select storage device>**, the device search window is displayed. Click **< >** to search for storage device.

The model name of the ARB storage device will be displayed.

3. Click **<Search>**.

The ARB file information stored on the device will be displayed.

- Folder : Displays the folder where ARB data is stored.
- Name : Displays the file name stored on the ARB device.
- CH : Displays the recorded channel.
- Time : Displays the start time and end time of the backed up video recording.
- Playback : Plays the recorded video with an instant viewer.

4. If you double-click an item to play in the search list, the recorded video will be played.

BOOKMARK SEARCH

You can search for bookmarked data.

WISERNET

2023.10.13 14:48:07

Time search

All Channels

2023.10.13 14:48:07

2023.08.27 14:48:07

Search

Reset

No.	Bookmark name	Event	Set	Playback	Search
1	CAM04_2023.10.13 11:06:54	Motion detection	4	▶	▶
2	CAM05_2023.10.13 11:06:54	Person	5	▶	▶
3	CAM06_2023.10.13 11:06:54	Vehicle	6	▶	▶
4	CAM07_2023.10.13 11:06:54	Smart detection	7	▶	▶
5	CAM08_2023.10.13 11:06:54	Video recording	8	▶	▶
6	CAM09_2023.10.13 11:06:54	Continuous recording	9	▶	▶
7	CAM10_2023.10.13 11:06:54	Exclusive region	10	▶	▶
8	CAM11_2023.10.13 11:06:54	Exclusive region	11	▶	▶

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1. Select <Bookmark search> in the <Search> menu.

- To search for bookmarks, you need to specify them by clicking the bookmark (🔖) in the instant viewer or search results. If no bookmark is specified, search results will not be displayed.

2. Select a channel to search.

- If you select a channel to search, you can change the channel display mode by clicking <🔍>. You can select a desired channel by clicking or dragging it from the channel table, and clicking the channel in the channel list.

3. Select a date and time to search.

4. Click <Search>.

The search results list will be displayed.

- Bookmark name : Displays the bookmark name you set.
- Event : Displays the event type of the recorded video.
- CH : Displays the recorded channel.
- Time : Displays the start time and end time of the recorded video.
- Playback : Plays the recorded video with an instant viewer.
- Bookmark : Displays whether bookmarks are specified.

5. If you double-click an item to play in the search list, the recorded video will be played.

- Bookmarked images will be stored without being overwritten during repeated recording. However, when the automatic deletion is set, it will be deleted according to the set period.
- When the bookmark is released, the video will not be saved. If necessary, before releasing the bookmark, export the video.
- Up to 100 bookmarks can be specified.



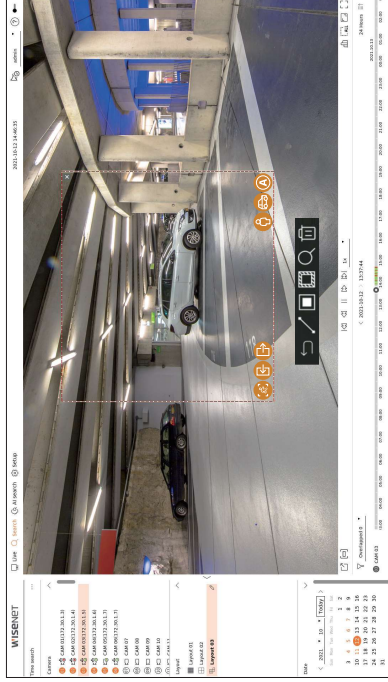
SMART SEARCH

You can search for events by selecting a region of interest, an exclusive region, or a virtual line a specific time.



- To use smart search, you need to set the area of the camera's "Motion Detection" or "IVA" to the entire area. However, after Wisenet X series, you must select "Enable" in "Event setup > IVA" of the camera. For details, refer to the "Setup setup" page in the Table of Contents.

1. Click <🔍> on the video window menu.
2. Set the smart search area in the video window.



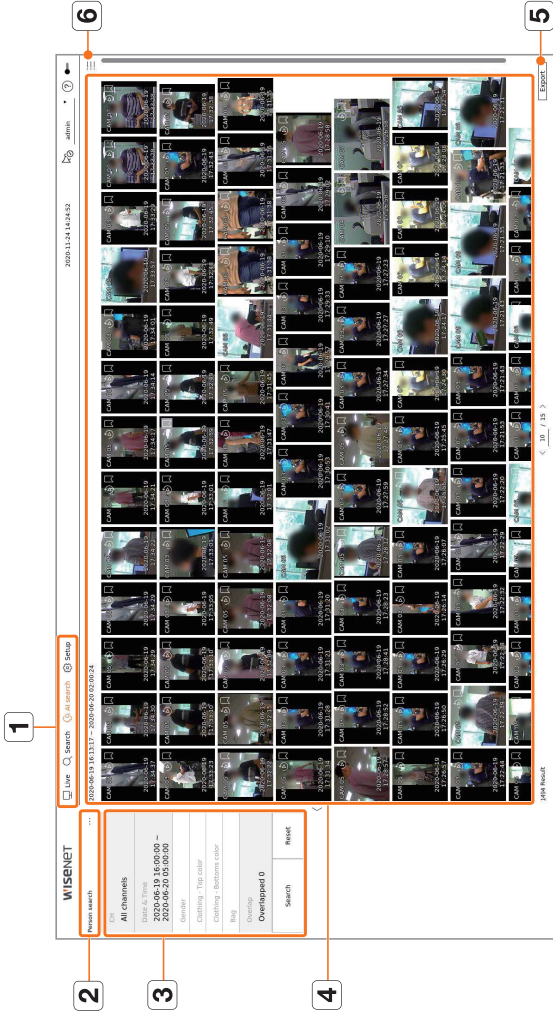
- Virtual line (📏) : Detects the passing of an object based on the virtual line and direction and drag the start and end points of the virtual line to the desired location with the mouse.
 - The virtual line can be set in one direction or both directions. If you select the option of virtual line on both sides, it will detect all objects passing in both directions on one virtual line.
 - Region of interest (📦) : Uses the entire screen as a non-detection area and specifies a specific detection area. Drag the mouse over the image or take a vertex to set the detection area.
 - When you set a zone, an event/object option icon will be displayed at the bottom of the zone to exclude the event/object from the search.
 - Intrusion (🚧) : Detects and searches for moving objects within the area set by the user.
 - Enter (👤) : Searches by detecting movement from the outside to the inside of the area.
 - Exiting (👤) : Searches by detecting the movement from the inside to the outside of the area.
 - Person (👤) : Searches for events that include people within the area set by the user.
 - Vehicle (🚗) : Searches for events that include vehicles within the area set by the user.
 - All Objects (👤) : Searches for events that include all objects within the area set by the user.
 - Exclusive region (🚫) : Uses the entire screen as a detection area and specifies a non-detection area of a specific area.
- Drag the mouse over the image or take a vertex to specify the non-detection area at the

AI search

If there is AI data recorded by the camera, you can search for images in various conditions such as people, faces, and vehicles.

- This function is not supported in some models.
- For products that support the AI search function, refer to the "[Functions Supported by Model](#)" page.

SCREEN LAYOUT OF THE AI SEARCH

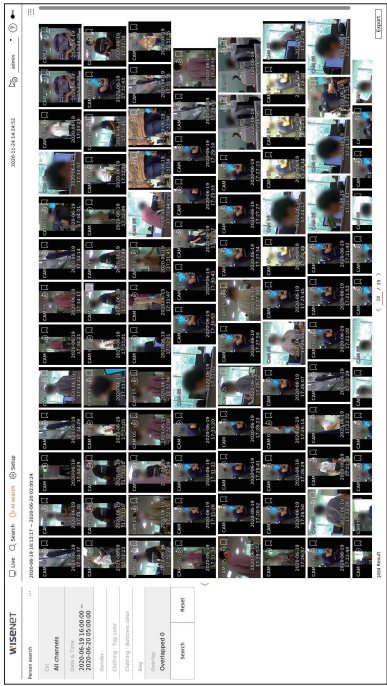


Item	Description
1	Click each menu to go to the corresponding menu screen.
2	Click the menu tab to display the detailed search menu. Click Search menu to go to the corresponding Search screen.
3	You can set various search conditions, such as date/time/gender.
4	Displays search results.
5	Exports search results to a file.
6	Displays the search results as a list or thumbnail.

- The search options you set will be saved, and click <Reset> to reset the search conditions.
- Double click on the desired item in the search results list to go to the play screen.

PERSON SEARCH

In the recorded data, you can search for a person by any condition you want, such as gender, top,



1. Select <Person search> in the <AI search> menu.
2. Select a channel to search.
 - If you select a channel to search, you can change the channel display mode by clicking >. You can select a desired channel from the channel table, and clicking the channel in the channel list.
3. Select a date and time to search.
4. Select a detailed search option.
 - Person search options : **Gender, Clothing-Top color, Clothing-Bottoms color, Bag**
 - Click the option to display the option selection window. Select the desired search option.
 - If no details are set, all conditions will be selected and searched.
5. Select the overlap.

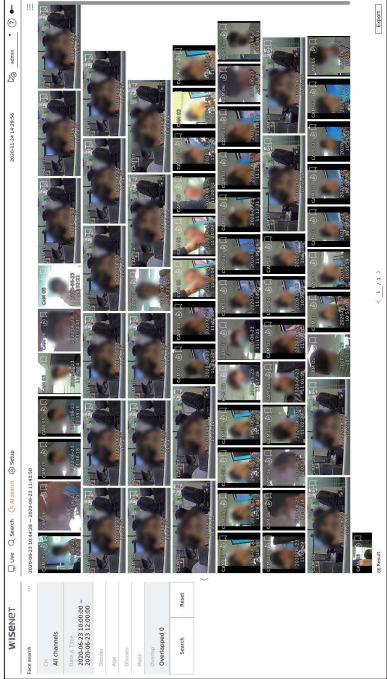
It will be displayed when there is overlapped data in one channel by changing the time or time time.
6. Click the <Search> button.

The search results list will be displayed.

 - To stop the search, click <Stop> in the search pop-up window. You can check the search results up until now.
 - CH : Displays the recorded channel.
 - Camera name : Displays the camera name.
 - Attribute : Displays the recognized search result attributes.
 - Time : Displays the start time of the recorded video.
 - Playback : Plays the recorded video with an instant viewer.
 - Bookmark : Specifies a bookmark to the recorded video.
7. If you double-click an item to play in the search list, the recorded video will be played.

FACE SEARCH

From the recorded data, you can search faces according to your desired conditions such as gender and age.



1. Select **<Face search>** in the **<AI search>** menu.

2. Select a channel to search.

- If you select a channel to search, you can change the channel display mode by clicking  >. You can select a desired channel by clicking or dragging it from the channel table, and clicking the channel in the channel list.

3. Select a date and time to search.

4. Select a detailed search option.

- Face search options : **Gender, Age, Glasses, Mask**
 - Click the option to display the option selection window. Select the desired search option.
 - If no details are set, all conditions will be selected and searched.

5. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

6. Click the **<Search>** button.

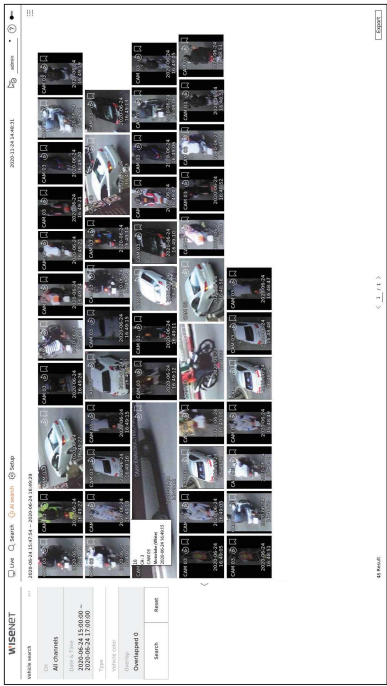
The search results list will be displayed.

- To stop the search, click **<Stop>** in the search pop-up window. You can check the search results up until now.
- CH : Displays the recorded channel.
- Camera name : Displays the camera name.
- Attribute : Displays the recognized search result attributes.
- Time : Displays the start time of the recorded video.
- Playback : Plays the recorded video with an instant viewer.
- Bookmark : Specifies a bookmark to the recorded video.

7 If you double-click an item to play in the search list, the recorded video will be played.

VEHICLE SEARCH

You can search the vehicle by setting the vehicle type and color conditions from the recorded



1. Select **<Vehicle search>** in the **<AI search>** menu.

2. Select a channel to search.

- If you select a channel to search, you can change the channel display mode by clicking  >. You can select a desired channel from the channel table, and clicking the channel in the channel list.

3. Select a date and time to search.

4. Select a detailed search option.

- Vehicle search options : **Type, Vehicle color**
 - Click the option to display the option selection window. Select the desired search option.
 - If no details are set, all conditions will be selected and searched.

5. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

6. Click the **<Search>** button.

The search results list will be displayed.

- To stop the search, click **<Stop>** in the search pop-up window. You can check the search results up until now.
- CH : Displays the recorded channel.
- Camera name : Displays the camera name.
- Attribute : Displays the recognized search result attributes.
- Time : Displays the start time of the recorded video.
- Playback : Plays the recorded video with an instant viewer.
- Bookmark : Specifies a bookmark to the recorded video.

7 If you double-click an item to play in the search list, the recorded video will be played.

AI search

LP SEARCH

You can search for vehicle license plates from the recorded data.



1. Select <LP search> in the <AI search> menu.

2. Select a channel to search.

- If you select a channel to search, you can change the channel display mode by clicking <□□□>. You can select a desired channel from the channel table, and clicking the channel in the channel list.

3. Select a date and time to search.

4. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

5. Click the <Search> button.

The search results list will be displayed.

- To stop the search, click <Stop> in the search pop-up window. You can check the search results up until now.
- CH : Displays the recorded channel.
- Camera name : Displays the camera name.
- Time : Displays the start time of the recorded video.
- Playback : Plays the recorded video with an instant viewer.
- Bookmark : Specifies a bookmark to the recorded video.

6. If you double-click an item to play in the search list, the recorded video will be played.

LPR SEARCH

You can search for the license plate number recognized in the recorded data.



- LPR search is only available on recorder models that support AI recognition.



1. Select <LPR search> in the <AI search> menu.

2. Select a channel to search.

- If you select a channel to search, you can change the channel display mode by clicking <□□□>. You can select a desired channel from the channel table, and clicking the channel in the channel list.

3. Select a date and time to search.

4. Enter the license plate number to search.

- Click <?> to see the search guide for license plate number.
- The option of license plate number entry field is only available on recorder models that support LPR search.

5. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

6. Click the <Search> button.

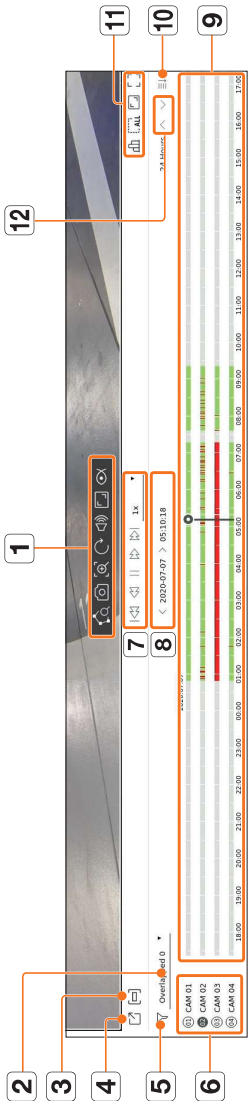
The search results list will be displayed.

- To stop the search, click <Stop> in the search pop-up window. You can check the search results up until now.
- CH : Displays the recorded channel.
- Camera name : Displays the camera name.
- LPR : Shows the identified license plate number.
- Time : Displays the start time of the recorded video.
- Playback : Plays the recorded video with an instant viewer.
- Bookmark : Specifies a bookmark to the recorded video.

play

You can play the recorded data and export the video you want during playback.

SCREEN LAYOUT OF THE PLAY



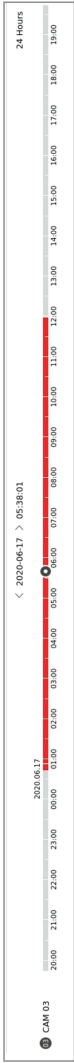
Item	Description
7	Playback control You can control video playback.
8	Date/Time Set the date/time.
9	Time line Move the playback position and display event data.
10	Show/Hide Channel You can change the number of channels displayed in the time line. ■ Up to 4 channels of time line can be displayed.
	Status You can check the live, recording, and network status.
11	Remove all tiles Removes all screens from the video window.
	Full aspect ratio Change the video display ratio.
	Full screen Display the image enlarged to full screen.
12	Previous/ Next Channel You can check the time line of the previous/next channel.

Item	Description
1	You can use the video control function. 🔍 : Runs a smart search by specifying an area in the video window. 📷 : Saves the video screen as an image. 🔍 : Zooms in the selected area on the screen. It only runs on a single split screen. 🔄 : Displays the image rotated 90 degrees. (This function is not supported in some models.) 🔊 : Turns the sound on or off. 📺 : Changes the video display ratio. 👁 : Enters the setup mode for dewarping the fisheye camera. It works only when the video resolution is 1:1. Some models do not support this function.
2	Overlap The list will be displayed according to the number of overlapped data in the same time zone. It will appear when a video is overlapped in one channel due to time or time zone change at the selected time.
3	Export section Turns the export section setting on or off. You can select a start time and end time for exporting.
4	Export You can export the video of the channel you are playing.
5	Filter You can filter the event items to see the time line.
6	Channel The channel and camera name will be displayed.

PLAY SEARCH RESULTS

Time Line Adjustment

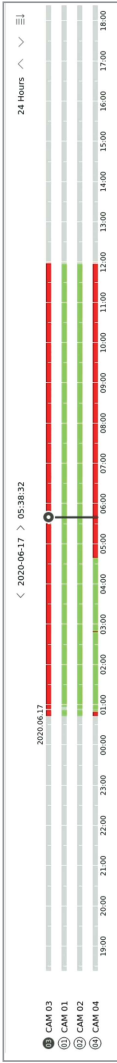
You can move the playback position and zoom the time line in and out.



- Click the desired play position in the time line.
The playback start position will be moved.
 - Click the start point on the left side of the time line to move the playback position to the start point of the first video.
 - Place your mouse over the time line to see the corresponding thumbnail of the recorded video.
- Click the time line and use the mouse wheel to zoom in or out on the time scale.
It will change in the order of 24 hours-12 hours-6 hours-3 hours-1 hour-30 minutes-15 minutes-5 minutes-1 minutes.
 - The time line magnification of the time line will be displayed at the top right of the time line.
- To see the time line previous or next zooming in, zoom in and drag the time line left or right.

Open Time Line Channel

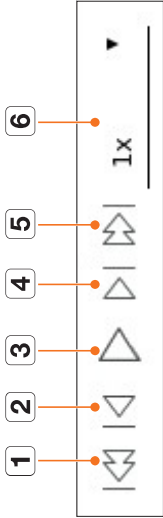
You can display the time line of multiple channels.



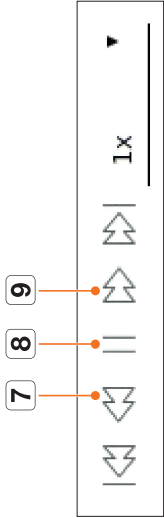
- You can click to display 1 to 4 channels in the time line. The time line will be displayed as many channels as selected.
- Click to move to the previous or next channel.
- Place your mouse over the time line to see the corresponding thumbnail of the recorded video.

Play Button Name and Function

Paused state



Playback state



Item		Description
1	Previous event	Go to the previous event video.
2	Previous frame	Moves backward to the key frame (I-frame).
3	Playback	Play the video.
4	Next frame	Moves forward one frame or more.
5	Next event	Go to the next event video.
6	Speed	Select the video playback speed. Speed : x1/8, x1/4, x1/2, x1, x2, x4, x8, x16, x32, x64, x128, x256
7	Fast backward	It is used for reverse playback. Speed : -x1/8, -x1/4, -x1/2, -x1, -x2, -x4, -x8, -x16, -x32, -x64, -x128, -x256 ■ Depending on the split screen, the maximum speed may be limited.
8	Pause	Pause the video.
9	Fast forward	It is used for forward playback. Speed : x1/8, x1/4, x1/2, x1, x2, x4, x8, x16, x32, x64, x128, x256

SEARCH RESULTS EXPORT

You can export the search results to a file.

1. Click the  > button.
2. Select a layout and channel to export.

Layout 01

All Channels

1

2

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Start time2021-10-12 13:35:00DSTNot Applied

End time2021-10-12 13:40:00DSTNot Applied

Overlap0

X-TICKFormat

File typeSECFile typePWInclude text data

Path\\20211012\\1335

Check capacity

Export space : 85.42M

Used space : 358.61M

Free space : 1.63G

StartClose

3. Select a start date/time and an end date/time.

- If you changed the time zone of the recorder, select whether to apply DST.

4. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

5. Click  > to select a storage device.

- If you click <Format>, the format confirmation window will appear. Click <Yes> to format the selected storage device.

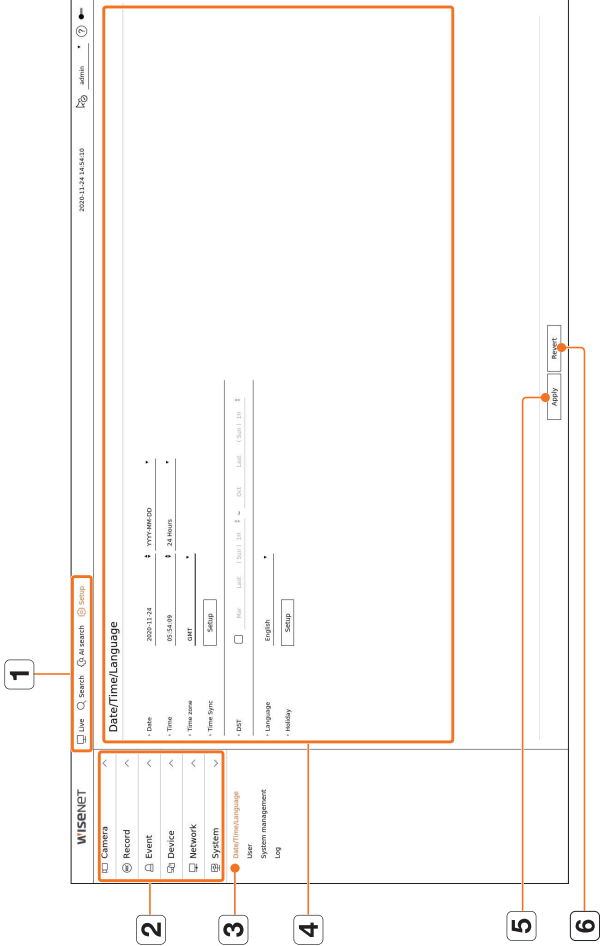
6. Please select a storage file type.

- SEC : You can export in your own file format that can be played directly on your PC. You can play with the viewer included in the export folder.
 - Click <Setup> to set a password for the exported video.
 - If you check <Include text data>, you can save text data in the exported video.
 - Recorder : You can export to a file that can be played only on the recorder.
 - AVI : You can export to an AVI format-compatible with popular media players.
7. Check the path to save the file to be exported. Only the file name to be saved can be changed.
 8. Click <Check capacity> to check the storage capacity.
 9. Click <Start>.
- When the export is complete, a confirmation window will be displayed.
10. Click <OK> to exit.

setup

Sets the camera, recording, event, device, network, and system environment.

SCREEN LAYOUT OF THE SETUP



Item	Description
1	Menu Click each menu to go to the menu screen.
2	Top menu list Configure the settings or select a parent item to change the existing settings.
3	Sub-menu list Among the sub-menus of selected parent menu, select a desired item to set.
4	Detailed Menu Click desired item's input field to change and enter a desired value.
5	Apply Apply the modified settings.
6	Revert Revert to the settings used before the change.

SETTING THE CAMERA

You can access to the channel setup, camera settings, and profiles and camera password-related

Setting the Channel

You can register a network camera for each channel and make connection between.

Setup > Camera > Channel setup



- When you register a camera for the first time in the "Setup > Camera > Channel setup" menu, the camera displayed. For details, refer to the "Getting Started > Camera Setup" page of the table of contents.

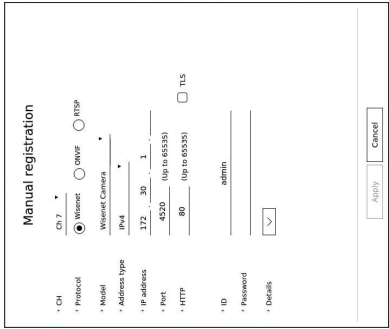


- Displays the camera of the corresponding channel as a list or a thumbnail.
- Camera searched with ONVIF does not provide previews.
- Camera name : Provide a camera Name. You can enter up to 15 letters including spaces.
- IP address : Display the IP address of a network camera.
- Model : Show the camera model name.
- Protocol : Show the protocol information of a registered network camera.
- Video
 - On/Off : You can turn ON/OFF the selected channel's camera. If the camera video is tu is displayed.
 - Covert1 : Shows information other than the video of the selected channel. For privacy protection, it does not display the video while the recording continues.
 - Covert2 : Shows nothing but an empty screen while the recording continues.



- If the channel is set to <Covert1> or <Covert2> mode, the channel's sound is not hearable. However, the channel's sound is recorded if its Audio setting is set to <On>, even the sound is not heard in L

Registering a Network Camera Manually



1. In the <Channel setup> field, click on the <Manual> button.

2. <Manual registration> window appears.

- You can register the camera manually by clicking <+> from the camera list on the live screen.

3. Select a channel and protocol used to connect to a camera.

The input items may differ depending on the selected protocol.

- Wisenet : Wisenet camera's protocol can be used.

- ONVIF : Means the camera supports ONVIF protocols. When connecting a camera that its name cannot be found from the list, select <ONVIF>.



- When a camera is registered with ONVIF, if the difference in system time between the camera and recorder is 2 minutes or more, you won't be able to register it. In this case, synchronize the camera and recorder time.

- RTSP : Comply with RFC 2326, one of "Real Time Streaming Protocol (RTSP)" for real-time streaming.

4. If you select the <Wisenet> protocol, check options as necessary.

- Model : Select a camera model.

- Unknown : Select when the camera model cannot be identified.

- Wisenet Camera : You can register Hanwha Techwin's cameras and encoders.

- Wisenet Multi-Channel : You can register Hanwha Techwin's multi directional cameras and multi-imager cameras. A multi-channel camera is a camera that has multiple camera modules in one body. Auto-registering your camera to Recorder lets you register multiple channels at once. However, if you want to manually register it, you need to register one channel at a time.

- Address type : Select an address type of the camera.

- The supported address type may differ depending on the type of the connected product.
- IPv4/IPv6 : Used to provide the IP address of the camera manually.
- Wisenet DDNS : This is available only if the camera is registered with the Wisenet DDNS server. Provide the registered domain for DDNS ID.
Example http://ddns.hanwha-security.com/snb5000 ; provide "snb5000" for Wisenet DDNS ID.
- URL : Used for URL address input.



- The DDNS specs supported by each camera can be checked in the user manual of the corresponding camera.

- IP address : Provide the IP address of the camera.

- Port : Provide the device port of the camera.

- Depending on the camera type, some device ports will not be supported.

- HTTP : Provide the HTTP port of the camera.

- TLS : You can set whether to use TLS.

- ID : Provide the ID of the camera that you want to register.

- Password : Enter the password of the camera to be registered.

- Details : You can set the streaming mode.

5. Select <ONVIF> or <RTSP> for the protocol and enter your input for each field appears

- ONVIF : After selecting an IP type, set IP address, ONVIF port, ID, password, and details

- IP type : Select the IP type of the camera.

- IP address : Enter the camera's IP address.

- ONVIF port : Enter the port number when the address type is IPv4 or IPv6.

- TLS : You can set whether to use TLS.

- Channel : Enter the channel to register the camera.

- ID : Enter the camera ID.

- Password : Enter the camera password.

- Details : You can configure the authentication mode and streaming mode.

- RTSP : Set URL, ID, password, and details.

- URL : Enter your RTSP access address. For more information, see your camera user manual.

- ID : Enter the camera ID.

- Password : Enter the camera password.

- Details : You can set the streaming mode.

- If ONVIF or RTSP protocol is selected, you can set the streaming mode in the Details section.

- TCP : The connection to network camera operates in the RTP over TCP mode.

- UDP : The connection to network camera operates in the RTP over UDP mode.



If you want to check the error details of camera registration

If you failed to register a camera, the reason for the failure will be displayed.

- **Connection failed due to unknown error.** : This message appears if the camera has failed to be registered due to unknown connection status.
- **Due to the camera account locking, access has failed.** : When you enter a wrong ID/password 5 times to login to the camera account, this message is displayed.
Try to log in again after 30 seconds. If the same message appears, you may need to check whether someone has tried to access your camera account from the outside.
- **Connected successfully.** : This message appears if the camera is connected successfully.
- **Incorrect model information. Provide the correct model information.** : This message appears if the model information provided for registering the camera is incorrect.
- **Authentication has failed.** : This message appears if the ID or password provided for registering the camera is incorrect.
- **Connection has failed due to excessive concurrent users.** : This message appears if the concurrent user count exceeds the upper limit.
- **Connection has failed due to incorrect HTTP port information.** : This message appears if the HTTP port number of the camera is invalid.
- **Connection has failed. Unknown connection status.** : This message appears if the camera has failed to be connected due to a unknown error.
- **User Model Modification** : When registering a new camera, it is named according to the device's default : if user set the model to <Wisenet Camera>. In case if automatic registration fails, user can change the model name of camera to be registered.

To edit camera profile

To change profile, refer to the “**Setup > Setting the Camera > Setting the Profiles**” page in the Table of Contents.



- In case of Recorder, if you set 3 different profiles for live, recording and network profile, one camera will produce video streams accordingly, having different stream formats. Especially, note that the live profile may vary depending on the used screen split mode.
- For cameras, if applied with one profile only, the produced frame rate is fixed as the profile specifies; if applied with multiple profiles, produced video stream's frame rate is not guaranteed. For example, if applied with 2 profiles of 30fps, the camera may transmit streams at 20fps.

Delete Network Camera

1. Click <**Delete**> in the <**Channel setup**> field.
2. When the delete window appears, select the camera channel to delete.
 - Click <**All channels**> to select cameras for all channels.
3. Click <**OK**> to delete the camera of the selected channel.

Network Camera Firmware Upgrade

Camera upgrade

Channel

1

XND-6081FZ

1.40.02_20191024_R293

Q

2

XND-8081VZ

1.40.02_20191024_R293

Q

3

XNF-8010R

1.40.04_20200729_R462

Q

4

XNP-6320

1.40.02_20191031_R408

Q

5

PNV-48081R(CH11)

1.40.57_20191030_R166

Q

6

PNV-48081R(CH21)

1.40.57_20191030_R166

Q

Apply to other channels

Upgrade

OK

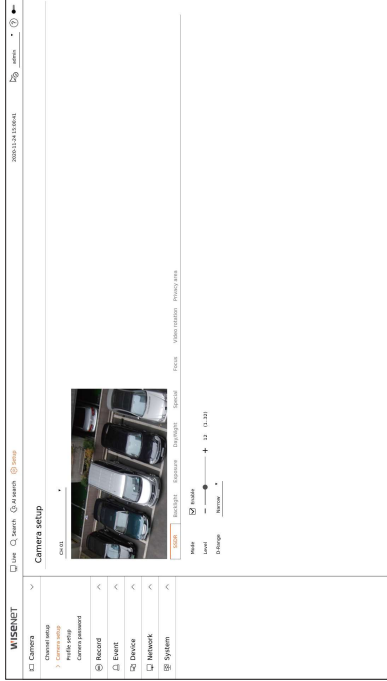
- **Channel** : Displays channel information.
 - **Model** : Displays the camera model information.
 - **Current version** : Displays the current camera firmware version.
 - **Upgrade version** : Displays the firmware version to upgrade.
 - Press the <Q> button to select the firmware manually within the USB.
 - <🖥> indicates an upgrade via a remote server.
 - **Status** : Displays the status of the ongoing upgrade (upgrading, successful, failed).
1. Press the <**Upgrade**> button in the <**Channel setup**> field.
 2. Displays the upgradeable channel list among the connected cameras.
 - If newer firmware exists on the remote server, the upgrade version is displayed, and the check box is automatically checked.
 - If you do not see the upgrade version, you can press the <↺> button to get the upgrade version information.
 - Connect a USB camera with camera firmware to the recorder and press the <Q> button to check and select the upgrade version.
 - Select a channel and press the <**Apply to other channels**> button to apply the firmware to other channels connected to the recorder.
 3. Check the box of the channel you want to upgrade.
 4. Click the <**Upgrade**> button. The camera firmware upgrade starts.
 - You can move to another menu while upgrading.
 - You can stop the upgrade by clicking the <**Stop**> button during the upgrade.
 - When the upgrade is completed, you can see the result in the popup window.
 - Firmware upgrade is available only for channels connected with the Wisenet protocol and the camera's address.
 - If the upgrade version is not displayed even though the camera's firmware is out of date, check the network connection.
 - If there are more than 50 firmware files in the top USB folder, the file may not be scanned.



Setting the Camera Functions

You can set the camera while viewing the live video of the selected camera.

Setup > Camera > Camera setup



- You can use this feature in the following cases :
 1. A camera connected to Wisenet protocols.
 2. A camera connected with admin privileges.
- For more details on camera settings, refer to the camera user manual.
Settings and operational spec vary depending on each camera.
- This function is not supported in some models.

SSDR

If there is a significant difference between the dark and the bright areas, increase the brightness of the dark areas to maintain the level of brightness of the entire area.
You can set Mode, Level, and D-Range.

Backlight

You can view both bright and dark areas.

You can set Mode, WDR level, WDR black level, and WDR white level.

Exposure

You can adjust the exposure of your camera.

You can set brightness, shutter, SSNR, Sens-up, iris/lens, and AGC.

- Brightness : Adjusts the brightness by setting the exposure value.
- Shutter : Adjusts the brightness by controlling the camera shutter speed. If you select shutter, you can set among the items below.
 - Auto : Adjusts the brightness automatically, controlling the shutter speed of the camera.

– SSC (Electronic Shutter Control) : Adjusts the brightness automatically, controlling the shutter speed.

- SSNR : Adjusts the brightness by reducing noise and minimizing afterimages even in dark.
- Sens-up : Automatically adjusts the shutter speed according to the brightness of the current image.
- IRIS/Lens : Adjusts the brightness by automatically or manually adjusting the camera IRIS.
- AGC : Adjust the brightness by amplifying the camera's electrical signal when images are dark.

Day/Night

You can change the mode to adjust the color and contrast.

You can set Mode, Dwell time, Negative color, Duration, Alarm input, Switching brightness, Day/Night, and Activation time (color).

- You can select the day/night video display mode in <Mode>.
 - Color : Images are always displayed in color.
 - B/W : Images are always displayed in B/W
 - Auto : The video will be displayed in color in normal environments and in B/W at night.
 - External : Displays a color or B/W video by linking an external infrared camera to the alarm in item when selecting the <External>.
 - Schedule : Controls the video output mode by directly inputting the color video activation time.

Special

You can set DIS (Digital Image Stabilization), Defog, and Defog level.

Focus

You can adjust the focus of your camera's video.

You can set Focus, Zoom, Simple focus, and Initialize focus.

Video rotation

You can set flip/mirror modes and hallway view.

Privacy area

You can set an area to be hidden in the camera image range to protect privacy. You can set the privacy setting and set up to 32 new privacy areas.



- With a PTZ camera, it is not possible to configure settings, and when it is permitted, the setting area may be limited.

setup

Setting the Remote Profile

You can set the video profile transmitted to the network.

Setup > Camera > Profile setup > Remote

WISERNET

Camera status

Camera setup

Camera parameter

Profile setup

Profile

Remote

1. Camera name

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

2. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

3. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

4. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

5. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

6. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

7. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

8. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

9. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

10. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

11. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

12. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

13. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

14. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

15. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

16. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

17. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

18. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

19. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

20. Camera ID

172.28.2.2

Profile

LiveStream

Resolution

1920x1080

Frame rate

30 FPS

Size

6.144

1/4

Next

Warning profile name is different from channel profile.

It is the same, please only add the channel name to the channel name.

- Displays the camera of the corresponding channel as a list or a thumbnail.
- Camera name : Display the camera name.
- IP address : Display the IP address of a camera.
- Profile : Select a network profile for the connected camera.
- Codec : Show the codec information for the selected network profile.
- Resolution : Display the resolution for the selected network profile.
- Frame rate : Shows the selected network profile's frame rates.
- Edit : You can add, change, and delete the camera profiles.



- If the profiles used for network and recording are different, camera's video feed may not comply with the frame rate as specified in the camera.

Editing the Profiles

You can change the video settings of a registered network camera for each channel.

Setup > Camera > Profile setup

Channel

Detailed profile configuration

AddDeleteApply to other channels

Profile	Codec	Resolution	Frame rate	Type	Bitrate	Bitrate range	Type
☐ MPEG	MPEG	2048x2048	1	-	6144	3072 ~ 6144	-
☐ H.264	H.264	2048x2048	25	VBR	7144	1536 ~ 30720	Record
☐ H.265	H.265	2048x2048	25	VBR	512	512 ~ 30720	Remote
☐ LiveH.264	H.264	600x400	15	VBR	512	512 ~ 30720	-
☐ LiveH.265	H.265	600x400	15	VBR	512	512 ~ 30720	-
☐ LiveH.264	H.264	600x400	10	VBR	2048	512 ~ 30720	-

Dynamic GOP & FPS

ApplyCancel

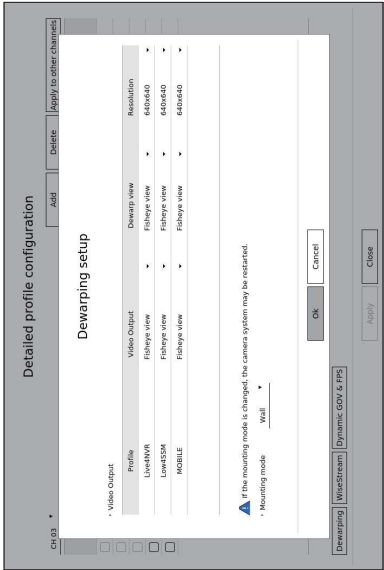
- Channel selection : You can select camera channels to change their video transmission s
- Add : You can add camera profile. Click on the <Add> button to launch the addition win Enter the information and click on the <OK> button to add it to the list.
- Delete : You can delete the selected profile from the list.
- Apply to other channels : If you select <Apply to other channels>, "Apply to other channels" window will appear.
- After selecting channels that the settings will be applied to, click on <OK> to apply them channels.
- Profile : You can check the video profile of the camera connected in the camera setup.
- Codec : You can check the codec for the selected channel.
- Resolution : You can change the resolution of the selected channel.
- Frame rate : You can change the frame rate of the selected channel.
- Bitrate control : You can change the bitrate of the selected channel.
- Type : Displays the currently applied profile.



- If you change specific profile settings for each product, the frame rate's setup range may be changed. Example) If you set the frame rate for the first profile to 30 fps, then the setting range for the second profile is 15 ~ 30 fps.
- Any settings other than codec, resolution, and frame rates can be changed in the setup menu of the camera viewer, refer to the "Setup Viewer > Setting the Camera > Camera Setup" page in the Table of Contents. button for connection.
- If you change the current profile settings, you may encounter an interrupted playback on the recording or live view.
- Changes made in your camera's setup page will be applied immediately. But any changes made through the camera viewer may take up to 3 minutes to apply the changes.
- Bitrate settings are not supported for ONVIF cameras.

Dewarping Setup

Press the <**Dewarping**> button at the bottom of the <**Detailed profile configuration**> window to go to the distortion correction setup popup window for each channel.



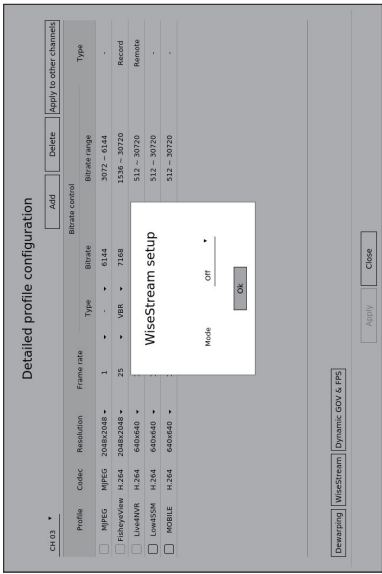
- Profile : Displays the profile type.
- Video output / Dewarp view: You can set <**Video output**> and <**Dewarp view**> for each profile type.
 - Fisheye view : If you select <**Fisheye view**> from <**Video output**>, the <**Fisheye view**> is automatically selected for <**Dewarp view**>.
 - Dewarp view : If you select <**Dewarp view**> from <**Video output**>, you can set <**Quad view**>, <**Panorama**>, or <**Quad view 1 - 4**> for <**Dewarp view**>.
 - You can select view modes supported by your camera.
- Resolution : You can set the resolution of the profile.
- Mounting mode : You can change the fisheye installation type. You can select a view mode from among ceiling/ground/wall depending on the installation location.



- If there is no camera registered in the Recorder that supports fisheye view, Dewarping Setup will not be available.

How to set WiseStream

Function to analyze the complexity of the video and effectively reduce the data size while maintaining quality. For details, refer to the camera's help or the product's user guide. Press the <**WiseStream**> button at the bottom of the <**Detailed profile configuration**> window to go to the WiseStream setup popup window for the channel.



- Mode : You can choose the degree of video compression. You can choose <**Off**>, <**Low**>, <**High**>.



- WiseStream setup cannot be executed if there is no camera registered in Recorder that supports WiseStream.

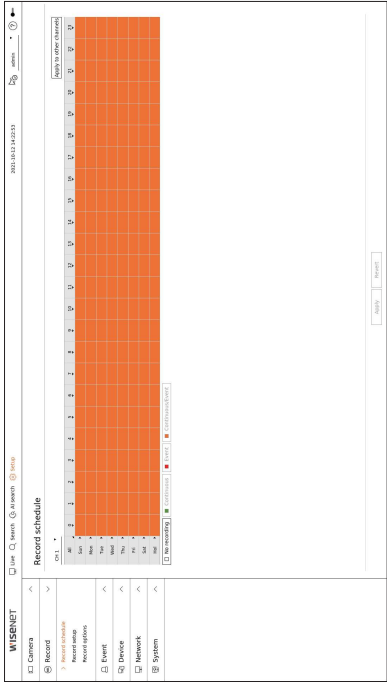
SETTING THE RECORDING

You can setup scheduled recording, event recording and other recording related settings.

Record Schedule

If you set a recording schedule for a specific date and time, the recording will start at that specific time.

Setup > Record > Record schedule



- Channel : Select the channel you want to set.
- All : The entire time range (Monday through Sunday including holidays, AM 0~ PM 23) will be reserved with the same recording schedule.

- Apply to other channels : If you select **<Apply to other channels>**, “**Apply to other channels**” confirmation window will appear.

After selecting channels that the settings will be applied to, click on **<OK>** to apply them to the selected channels.

- Event recording and scheduled recording starts about 3 seconds prior to the event/schedule for guaranteed recording.

Record setting by the color

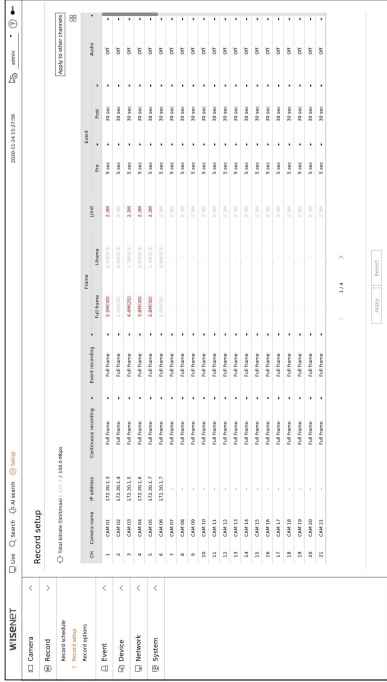
Color	Function	Description
White ()	No recording	No schedule / event recording
Green ()	Continuous	Scheduled recording only
Red ()	Event	Event recording only
Orange ()	Continuous/Event	Both scheduled / event recordings

Record Setup

You can set the resolution and number of recordings for each channel when an event occurs recording.

You can check frame rates and data transfer amount of Full Frame and Key Frame recording and set the transfer limit for recordings.

Setup > Record > Record setup



- Apply to other channels : If you select **<Apply to other channels>**, “**Apply to other channels**” window will appear.

After selecting channels that the settings will be applied to, click on **<OK>** to apply them to the selected channels.

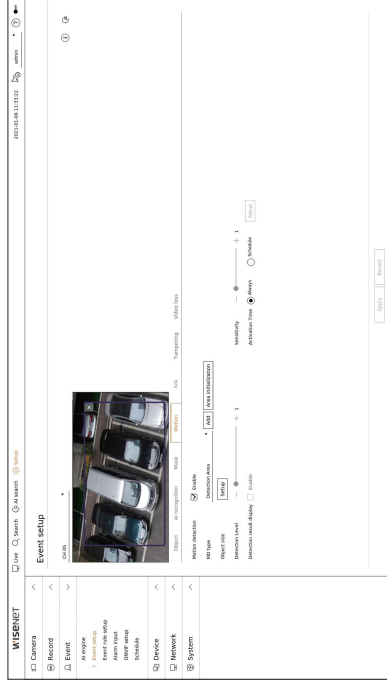
- Displays the camera of the corresponding channel as a list or a thumbnail.
- Camera name : Display the camera name.
- IP address : Display the IP address of a camera.
- Continuous recording / Event recording : Set the recording method for Continuous recording.
- Full frame : Records all frames fed by the camera.
- I-frame : Records only key frames fed by the camera. It depends on the camera's setting.
- Off : No recording is made.

- Frame
- Full frame : Shows the amount of data for all the scene recordings.
- I-frame : Shows the amount of data for the main scene recordings.
- Limit : Set the amount of data allowed for input for each channel.
- Event : When an event occurs, you can set which point you will start or stop recording
- Pre : When an event occurs, recording will be started regardless of the time set.
- If you set it to five seconds, recording will start at five seconds before an event occurs

setup

Motion

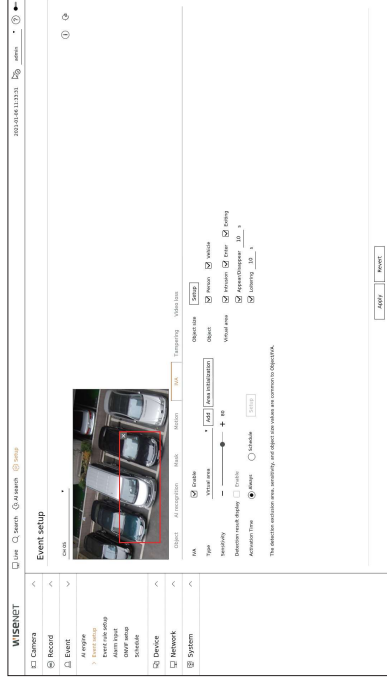
Setup > Event > Event setup > Motion



- Motion detection : You can set whether to enable motion detection.
- MD type : You can set a detection area and a detection excluded area.
 - Detection area : Set the area to detect motion.
 - Detection excluded area : Set the area to not detect motion.
 - Add : After selecting the desired area item, set the area on the preview screen.
 - Area initialization : You can clear all the set areas.
- Object size : You can set the size of the object to recognize the motion.
 - Click <Setup> to select the minimum/maximum size and set the object size on the preview screen.
- Detection level : You can set the basic level required for motion detection. Level values can be set for each detection area set in <MD type>. If a motion value is bigger than the set level, then a motion detection event is triggered.
- Detection result display : You can overlay the detection area over video.
- Sensitivity : You can set the sensitivity of motion detection for each area. Set a lower sensitivity for an environment where the background and an object are clearly distinguishable and a higher sensitivity for an environment where the background and an object are not clearly distinguishable.
- Activation time : You can set the activation time for motion detection.
 - Always : Detects motion regardless of time.
 - Schedule : Detect motion only during the set period. Click <Setup> to set the detection schedule.
 - Each camera product support different features. For more information, see the camera manual or help.

IVA

Setup > Event > Event setup > IVA



- IVA : You can set whether to enable intelligent video analytics.
- Type : You can set a virtual line, virtual area, and detection excluded area.
 - Virtual line : Set the virtual line to enable intelligent video analytics.
 - Virtual area : Set the area to enable intelligent video analytics. You can set the details your purposes.
 - Intrusion : Creates an event when the motion of an object in the designated area is detected.
 - Enter : Creates an event when a moving object enters into the target area from the outside.
 - Exiting : Creates an event when a moving object goes out of the target area.
 - Appear/Disappear : When an object which does not exist inside the area designated by the user appears inside the area line and remains for a certain period of time, or if an object which exists inside the area disappears, an event duration to be recognized as an event.
 - Loitering : Creates an event when the motion of a loitering object in the virtual area is detected. You can enter the an event.
 - Detection excluded area : Set the area to not enable video analytics in the virtual line
 - Add : After selecting the desired area item, set the area on the preview screen.
 - Area initialization : You can clear all the set areas.
- Sensitivity : You can set the motion detection sensitivity for the virtual line and the virtual area.
- Detection result display : You can overlay the detection area over video.
- Activation time : You can set the activation time to recognize motion analysis.
 - Always : Detects motion analysis regardless of time.
 - Schedule : Detects motion analysis only during the set period. Click <Setup> to set the motion analysis.
- Object size : You can set the size of the object to recognize the motion.
 - Click <Setup> to select the minimum/maximum size and set the object size on the preview screen.

setup

Item	Description
	Video loss detection
	SD Card
	Dynamic event Example) DigitalAutoTracking, Queue, ShockDetection, MaskDetection
	ObjectDetection
	Manual trigger
	Video loss recovered
	System event (Change password, Upgrade, HDD state, Fan failure, Power On/Off, Start manual recording, End manual recording, Recording error, Account locked)

- Event action : Displays the event action set in the event rule.

Item	Description
	Record/Go to preset
	Alarm output
	E-mail
	Transfer images to FTP server
	Mobile push notification
	Monitor event
	Shutdown
	User coding

- Edit : Changes the registered event rule.

Register a new event rule

Rule name Event

Event trigger



Motion detection

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24

Duration

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3

 s (3...5)

Event action



Alarm output

1

2

3

4

Beep

Duration

Off



Monitor event

Duration

5 s

+

Add action

OK

Cancel

1. Click **<Add>** in the **<Event rule setup>** field.

2. Click **<Create rule>**.

- Copy rule : When you select one of the event rules already created, it is added to the You can click **<Edit>** to modify the rule name.

3. Set the details when the event rule setting window is displayed.

- Rule name : Enter the name of the event rule.
- Event trigger : Click **<+ Add trigger>** to set the event trigger and channel.

- Up to three event triggers can be added.

- The event trigger option may vary depending on the recorder model.

- Duration is the waiting time to recognize the occurrence of a selected event. You have to select two or more event triggers. The event action will run only when all the selected event triggers occur within the duration time.

- Event triggers will be displayed on the live screen when an event occurs and are used for event log recording.

- To select a channel to detect an event trigger, click or drag the desired channel in the channel table. It will be displayed when the event occurs and the selected channel is selected.

- Schedule : Select the schedule to run the event action.

- Event action : Click **<+ Add action>** to set the event action.

- Record/Go to preset : Set the PTZ preset to be displayed when an event occurs. Click **<Preset>** to select the PTZ preset for each channel.

- Alarm output : Set the alarm out to be generated when an event occurs. Select the alarm output according to the number of alarm terminals on the recorder to set the alarm duration.

- E-mail : Set up users to receive e-mail when an event occurs. Click **<E-mail>** to select the e-mail address.

ONVIF Setup

You can set the details related to camera events registered with the ONVIF protocol.

Setup > Event > ONVIF setup

[illegible]

- **No. :** Select the channel to which the ONVIF camera is registered.
- **Camera event :** It shows the list of all the events supported by a camera by using the ONVIF camera.
- **NVR event :** You can map the list of events supported by a camera to events that the NVR supports. It shows the value sent by a camera.

- Mobile push notification : When an event occurs, the event push notification will be displayed on the connected smart phone.
 - Monitor event : When an event occurs, the screen of the corresponding channel will be displayed by switching to the live screen. When selecting event monitoring, set the alarm duration in consideration of network conditions.
 - Shutdown: When an event occurs, a pop-up window will appear. You can select **<Shutdown>** or **<Cancel>**.
 - User coding: It can be selected when **<Manual trigger>** is set. You can set the WISENET camera to execute the SUNAPI command entered in **<User coding>** when an event occurs. Click **<Test>** to test the execution of the entered SUNAPI command.
 - Event action will run only when all set event triggers occur. If only one of the multiple events set has occurred, the event action will not run.
 - Set the event action only when necessary.
4. Click **<OK>** at the bottom of the setting window to register the event rule.

Alarm Input

You can set the operation of the alarm sensor.



- This function is not supported in some models.

Setup > Event > Alarm input

WISNET

Camera
 Record
 Event
 Group
 Device
 Network
 System

lan

home

status

alarm

history

search

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Alarm input

Index	Type	Status	Message
1	N.I.S. Remote Output	*	Normal
2	N.I.S. Remote Output	*	Normal
3	N.I.S. Remote Output	*	Normal
4	N.I.S. Remote Output	*	Normal
5	N.I.S. Remote Output	*	Normal
6	N.I.S. Remote Output	*	Normal
7	N.I.S. Remote Output	*	Normal
8	N.I.S. Remote Output	*	Normal

Device
 Network
 System

alarm

history

alarm

history

- **Type**: Set the mode in which the alarm sensor will operate.
 - **Off**: Alarm sensor is disabled. Alarm is not used.
 - **N.O. (Normal Open)**: Sensor is opened. If the sensor is closed, it generates alarm.
 - **N.C. (Normal Close)**: Sensor is closed. If the sensor is opened, it generates alarm.
- **Channel**: You can set the channel to execute an event action when a signal is input to the selected alarm. This is possible when **<Alarm input(NVR)>** trigger and event action are set up in the "**Event> Event rule**".

- Storage Status : Displays the working status of a storage device. Click the <View> to display the storage status window.

- Red : Displays the situation of video loss.
- Green : Displays the normal situation without video recording losses.
- View : Click <View> to see detailed information.

Storage status					
Device	No.	Model	HDD write	Present loss	Worst loss
HDD	8	ST1000VX002-1CT1	160Mbps	0%(0Mbps)	0%(0Mbps)
USB	-	X-TICK	0Mbps	0%(0Mbps)	0%(0Mbps)

Confirm

- HDD write : Displays the current rate of recording.
 - Present loss : Displays the current recording loss rate.
 - Worst loss : Displays the maximum amount of losses up until now.
 - If loss is continuously generated, check the following.
For more information, refer to the "Troubleshooting (FAQ)" in the Appendix.
 - When data is lost due to system failure (reset the rate of data transferred from the camera)
 - When there is a problem in HDD recording performance due to an HDD malfunction (check the HDD error or replace the HDD)
- !
- Formatting will delete all the recording data that has been saved. Be careful.
 - While formatting is ongoing, you cannot record video.
 - Do not remove a formatting device until it is finished.
 - After installing an HDD, if the state of use of the HDD is <Not Defined>, format the HDD before use. (If the warning message persists after formatting, replace the HDD with a new one)

- ARB : Video that was not recorded due to a camera disconnection can be backed up after the connection with the camera is re-established. Press the button and an <Auto recovery backup (ARB)> window is opened.
 - Select HDD : Select a HDD to be set to ARB.
 - Capacity : Shows the capacity of the HDD to be set as ARB.
 - Select channel : Select a channel to run the ARB.
 - You can select multiple channels. If you select <All channels>, all channels will be selected.
 - ARB bandwidth : Select a bandwidth for the ARB function.



- The ARB feature is available only when your video is saved in the SD card after registering your Wisenet camera. This is only supported in SUNAPI 2.3.2 or later.
 - Set the profile bitrate used for recording a video in the SD card of camera to 6144 kbps or below. For more information on how to set the SD card recording profile, see your camera manual.
 - To use the ARB function correctly, both the camera and Recorder should be time synchronized with the time. Refer to the "Setup > Setting the System > Date/Time/Language" page in the Table of Contents.
 - ARB function is activated when Recorder starts/when the channel camera set is reconnected/when an ARB recurs at regular intervals after Recorder starts.
 - Recorder recording missing section that can be restored with the ARB function is for 24 hours backwards from the time when the function is activated.
 - You can check which channels have ARB function activated through the message on each channel screen in the Recorder.
 - Refer to the "Live > Live screen mode > Channel Information Display" page in the Table of Contents.
 - For automatically recovered files through ARB, refer to the "Search > ARB Search" page in the Table of Contents.
 - ARB storage capacity is recommended to be at least one day.
Example) If you saved 64 channels with 1 Mbps each, the ARB capacity should be set to 0.7 TB or higher.
- HDD map : You can check the location according to the assigned number for the HDD.
 - Refer to this when servicing or installing an additional HDD.
- !
- Do not add or remove an HDD while Recorder is running.

RAID mode setting

This function is only available for products that support RAID. For products that support RAID, refer to the **"Functions Supported by Model"** page.

If you enable the RAID (Redundant Array of Independent Disks) mode, you can safely recover your data even if your system HDD is damaged.

- RAID for each product

- 8 HDDs model: Supports Array 1
- 16 HDDs model: Supports Arrays 1 and 2

Setup > Device > Storage device > RAID

[illegible]

RAID mode setting

1. Click on the **<Enable>** or **<Setup>** button.
2. In the use RAID window, select settings of RAID and click on the **<OK>** button.
 - Enable : You can select whether or not to use the RAID mode.
 - Shows the RAID types supported by each product.

Product	RAID type
32-channel model	Level 5, level 6
64-channel model	

3. It will show the list of HDDs that compose a RAID. In the RAID screen, click on **<OK>**.
4. The data deletion and system rebooting message window will appear. You can click **<OK>** to delete the data and reboot the system for RAID mode setting.

5. When RAID building is complete, select "**Setup** > **Device** > **Storage device** > **RAID**"



- If you disable the RAID mode at RAID level 5 or 6, then every RAID array will be canceled. If you want to cancel use, then go to the setup window and disable that specific RAID array.
- If the Status of HDD is displayed as Check or Replace under <Management>, you cannot use it when connecting the HDD.
- When the RAID mode is in use, it is recommended to use HDDs with the same storage space from the same manufacturer.
- If you enable or disable the RAID mode, existing data will be deleted. If you need to keep your old data, export it before changing the RAID mode.
- RAID Array capacity calculation
 - When you build the RAID in level 5, the available capacity of a RAID is (the least HDD capacity) x (total number of HDDs) - 1 x (least HDD capacity).
 - When you build the RAID in level 6, the available capacity of a RAID is (the least HDD capacity) x (total number of HDDs) - 2 x (least HDD capacity).
- If you use HDDs with different capacity, the HDD with the smallest capacity will be used to build a RAID.

Recovering RAID Array

1. If the HDD number whose **<Status>** is shown as **Faulty** or **Check** is recognized, check to be replaced on the HDD map.
2. Replace the malfunctioning HDD from the recorder with a new HDD.
3. When the recovery starts, the LED of the replaced hard disk lights up in yellow.



- Replace it with the same model of HDD or an HDD of the same capacity from the same manufacturer.
 - A HDD used to build the RAID should be one of the recommended models.
 - If it's not possible to use the same model of HDD, then use the HDD with the same capacity from the same manufacturer.
 - If you remove the power cord while using the RAID, it can damage it, so be careful.
- For reliable power, it is recommended you use the UPS.

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 4. **Results**
 5. **Discussion**
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 150. **Figure 142**
 151. **Figure 143**
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 209. **Figure 201**
 210. **Figure 202**
 211. **Figure 203**
 212. **Figure 204**
 213. **Figure 205**
 214. **Figure 206**
 215. **Figure 207**
 216. **Figure 208**
 217. **Figure 209**

Monitor

You can set the information displayed on the monitor as well as the output system.

Setup > Device > Monitor

Monitor settings

You can set the monitor output related screen displays, switching time, video display, etc.



- OSD : Only checked items among date, time, channel name and information icon will be displayed on the monitor screen.
 - You can adjust the size of the channel name displayed on the **live** screen. Select from among <**Default**>, <**Large**>, <**Very large**>.
- Multiple displays : Set the video display resolution.

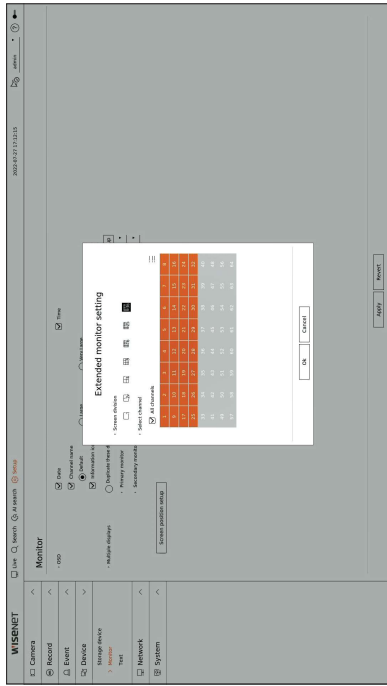
For products that support the extended monitor, you can set the resolution after selecting <**Duplicate these displays**> or <**Extend these displays**> mode for video display.

 - Duplicate these displays : You can set the video display resolution of the primary monitor and secondary monitor to be the same.

If you set a resolution exceeding 1920 x 1080 while operating in clone mode, the video will not be displayed to the secondary monitor.
 - Extend these displays : You can set the video display resolution of the primary monitor and secondary monitor respectively.
 - Primary monitor supports 4K resolution (or 1080p), and Secondary monitor supports 1080p resolution.
 - If the newly selected resolution does not fit with the monitor, the display won't function properly. In this case, wait until the native resolution is restored and then switch to another resolution of your choice.
 - The video output for Primary monitor and Secondary monitor may differ depending on the recorder model.
 - Primary monitor: HDMI
 - Secondary monitor: HDMI or VGA

Extended monitor setting

This function is only available for products that support the use of an extended monitor.
For products that support extended monitor, refer to the "**Functions Supported by Mo**



1. Select <**Extend these displays**> for video display and click <**Setup**>. You can change extended monitor.
2. Select the Screen division you want.
3. Select as many channels from the channel table as the selected number of Screen division the videos on the monitor screen.

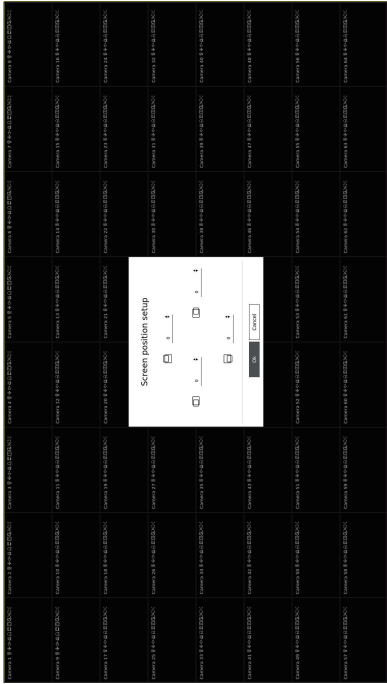


- When extended mode is selected, the maximum resolution of the image output on the primary monitor (resolution) is restored and then switch to another resolution of your choice.
- Set up Event Display and Sequence Switching Time in consideration of the network environment time.
- The profile used in the live output of the expanded monitor uses a remote profile. If the user changes the profile of the expanded monitor may be affected.
- If the monitor is in clone mode, you can specify up to the split mode supported by the recorder. When the you can split the screen of the Secondary monitor up to 36-split mode depending on the recorder model.
- The dynamic layout function can only be set on the primary monitor.

setup

Screen position setup

Some monitors many not display information (camera name, icon) about the Recording, depending on the condition. Then, you can change the display position of the data.



1. From the monitor setup menu, select **<Screen position setup>**.
2. Using **<◀>** button to adjust the screen that is cut off.
3. Click **<OK>**.



- This product only supports 30Hz at 4K resolution.

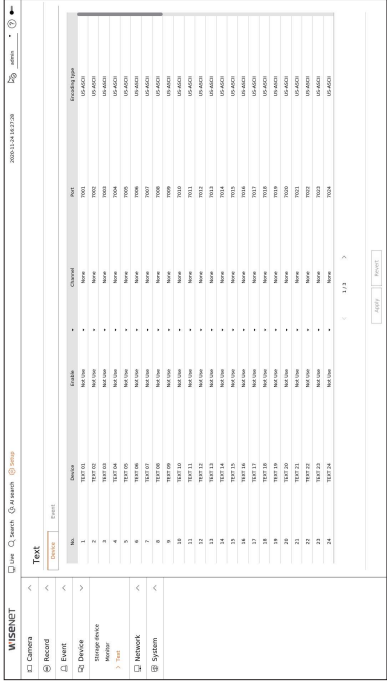
Text

You can set the POS device setting to send text information and text event information.

Device Settings

You can make detailed settings for the POS device connected to the recorder.

Setup > Device > Text > Device



- Device : Displays the text device name registered by the user.
 - Enable : Specifies whether to enable text device.
 - Channel : Select a channel to add a device from a channel table.
 - Port : Display a port number that is set.
 - Encoding type : Select an encoding type to use from a list.
-  Epson, Wincor Nixdorf, Axiohm, Radiant System, IBM POS device, and ANPR protocols are supported.
-  POS device connected to Recorder uses TCP/IP communication protocol.

Registering a Text Device

Modify the text device

No.

Device name

Text device

TEXT 01

1

2

3

4

5

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11

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57

58

59

60

61

62

63

64

Enable

All channels

Pre-event playback time

seconds ago

Port

US-ASCII

Encoding type

User Defined

Device type

Start

End

Text

Ok

Cancel

1. Click the desired item in the text device list.
2. Enter the device information to register in the <**Modify the text device**> window.
 - Device name : Enter the desired text device name.
 - Text device : Specify whether to enable text device.
 - CH : Select a channel to add a device from a channel table.
 - Pre-event playback time : Enter the start time of the playback from how many seconds before when an event occurs.
 - Port : Enter the device's port number.
 - Encoding type : Select the encoding type of the device.
 - Device type : Select the device type.
 - Start / End : You can select starting and ending character strings.
 - A text string can be entered by using texts, hex codes, and regular expressions.
 - Text : Enter a text string to search for.
 - Hex Code : Enter a hexadecimal text string to search for.
(Your input should not be in hexadecimal —e.g. 1b40, 1b69)
 - Regular expression : Enter a regular expression to search for text strings that follow specific rules.

3. Click <OK>.

Text Event Settings

You can set the text to receive an alarm when an event occurs.

Setup > Device > Text > Event

[illegible]

- **Total amount** : Set the condition of the total amount to be notified when a text event the total amount is used, and then select the base amount and range.
- **Keyword** : You can register or delete keywords to be notified when an event occurs.
 - If the **<Add>** button is clicked, a screen to add keywords pops up.
 - If you select one of the added keywords to delete and click the **<Delete>** button, the keyword will be deleted.



- When entering the total amount, set it to 15 characters or less, including minus and decimal point.
- When entering keywords, set them within 50 characters. Up to 20 keywords can be specified.

setup

SETTING THE NETWORK

You can set various network functions, such as monitoring live video by connecting to a network from a remote location and receiving an event by e-mail.

IP & Port

You can set the network connection route and protocol.

Setting a network connection

Sets the protocol and environment of the network.

Setup > Network > IP & Port > IP address

[illegible]

Network2

	Manual
* IP address	172.30.1.200
* Subnet mask	255.255.255.0
* Gateway	172.30.1.1
* DNS	Manual

168.126.63.1

IPv6

- * IP type ☐ Enable IPv6
- * IP address
☒ Static
 ☐ DHCP
Static

DNS

- * IP address
 Manual
 / 64
- * DNS Auto

OK
Cancel

- **Network :** Each product supports a different number of network ports. If it supports two or more network ports, you can set the network for each function as follows.
- **Network 1 (Camera) :** It can be used as a port for connecting a camera. If you connect a camera, then the camera video will be transmitted. Using the network information, you can access the web viewer.
- **Network 2 (Viewer) :** It can be used as a common port for camera and web viewer connection.
- **Network 3 (iSCSI) :** It can be used as a dedicated port for iSCSI connection.
 - Only provided for products that support Network 3.
- **Network (All) :** It can be used as a common port for connecting camera, web viewer, and iSCSI.
 - IP type : Select the type of network access.
 - IP address, Subnet Mask, Gateway, DNS
 - Manual : IP address, subnet mask, gateway, and DNS can be directly entered.
 - DHCP : IP address, subnet mask, gateway, and DNS can be automatically set.
- **Transfer bandwidth :** Enter the max data volume of a rate for transfer.
- **Default gateway :** Select the default gateway. If there are multiple network ports, set one of them as the default

Connecting and Setting the Network

Networking may differ from the connection method, check your environment before setting mode.

When no router is used

- **Manual mode**
 - Internet connection : Static IP, leased line, and LAN environments allows connection and remote user.
 - Network Settings : Set the **<IP type>** of the connected recorder to **<Manual>**.
 - Consult your network manager for IP, Gateway and Subnet Mask.
- **DHCP mode**
 - Internet connection : Connect the Recorder directly to a cable modem, DHCP ADSL modem or network.
 - Network Settings : Set the **<IP type>** of the connected recorder to **<DHCP>**.

When a router is used

- To avoid IP address conflict with the Recorder's static IP, check followings :
 - **Setting the Recorder with a static IP**
 - Internet connection : Connect the recorder to an IP router where cable modem is connected in the local area network (LAN) environment.
 - **Setting the Recorder Network**
 - 1. Set the <IP type> of the connected recorder to <Manual>.

2. Check whether the set IP address is in the static IP range provided by the Broadband Router. IP Address, Gateway, and Subnet Mask : Consult your network manager.
 - If a DHCP server is configured with starting address (192.168.0.100) and end address (192.168.0.200), you should use the configured DHCP range (192.168.0.2 ~ 192.168.0.99 and 192.168.0.201 ~ 192.168.0.254).
3. Check the Gateway address and subnet mask are equal to those set in the Broadband Router.

- 3.** Check the Gateway address and subnet mask are equal to those set in the Broadband R

- **Setting the DHCP IP Address of the Broadband Router**

1. To access the Broadband Router's configurations, open a web browser on the local PC that is connected to the Broadband Router and enter the router's address (ex : <http://192.168.1.1>).

- 2.** At this stage, make the local PC's windows network configurations to the below example :

Example) IP: 192.168.1.2

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.1

- Once connected to the Broadband Router, it prompts with password. While entering nothing to the User Name field, enter “**admin**” into the password field and press <OK> to access the router configurations.
- Access the router's DHCP configuration menu and set its DHCP server activation, and provide the start and end address.

- Start address: 192.168.0.100
- End address: 192.168.0.200

- Above steps may differ from the router devices depending on the manufacturer.



Port Setting

Setup > Network > IP & Port > Port

[illegible]

- Protocol type : Select the protocol type among TCP, UDP Unicast and UDP Multicast.
- RTSP port : It is used to transmit the video over the network. The initial value is <**558**>.
- UDP port : Activated when an UDP item is selected in protocol type. The initial value is <**8000-8159**>, and the setting value changes in 160 units.
 - UDP : It has less stability and faster speed when compared to TCP, and recommended for local area network (LAN) environments.
- Multicast IP address : Enter the IP address directly when selecting an UDP Multicast.
- Multicast TTL : Enter the TTL value when selecting an UDP Multicast. The initial value is set to <**5**>, and enter a

DDNS & P2P

A remote user can network a recorder using a DDNS address in a dynamic IP system. If you have a dynamic IP, you can easily access using a P2P service.

Accessing using DDNS address in the dynamic IP environment

In the dynamic IP environment such as xDSL/Cable modem, the router's WAN IP can be DDNS (Dynamic Domain Name Server) service so that you can always access the recorded address even in the dynamic IP environment.

Before using Wisenet DDNS & P2P, please set up the network connection and DDNS first.

DDNS Setting

Setting DDNS in the Recorder

Set <Protocol type> to <TCP> in the "Setup > Network > IP & Port > Port" menu of the

DDNS Settings of the Router

Select the corresponding menu for the network transfer protocol of the router.

Setting up UPnP of Router

Refer to the router's documentation to enable the UPnP function of the router.

Setting the Wisenet DDNS & P2P

Setup > Network > DDNS & P2P

[illegible]

- `Enable::Click <Enable>` to test the connection to see if the current recorder can be co

setup



- In a double NAT environment or if the router's port is not configured, the DDNS status will be displayed as <Successful>, but the DDNS connection from the viewer to the recorder may fail.
- You must be connected to an external network for a DDNS connection. (If there are two or more networks, be sure to connect an external network to the network set as the <Default gateway>.)
- If you are setting up a port that is already in use, then the connection might fail. Check the port setup of your router.
- If the viewer is connected through P2P instead of DDNS when connecting to a recorder, performance may be lower than that of the DDNS connection. You can check the current connection method (DDNS or P2P) in each viewer.
- DDNS is a short form of Dynamic Domain Naming System.
DNS (Domain Name System) is a service that routes a domain name consisting of user friendly characters (ex : www.google.com) to an IP address consisting of numbers (64.233.189.104).
DDNS (Dynamic DNS) is a service that registers a domain name and the floating IP address with the DDNS server so that the domain name can be routed to the IP address even if the IP is changed in a dynamic IP system.

- Quick connect (UPnP) : To use the function, set to <Enable> after connecting the Recorder to a UPnP router.
The message about the progress appears when connecting to Quick connect (UPnP).
 - **Quick Connect Success** : Message for a successful connection.
 - **Invalid Network Configuration** : Message appears if the network configuration is not valid. Check the configuration.
 - **Please enable UPnP function of the router.** : Message appears if the router requires UPnP function enabled.
 - **Failed to find the router.** : Message appears if the router is not found. Check the router's configurations.
 - **Please restart the router.** : Message appears if the router should be restarted.
 - **Quick Connect not supported in UDP mode.** : Set <Protocol type> to <TCP> in the "Setup > Network > IP & Port > Port" menu of the connected recorder.
 - **Connection Failed.** : If the connection fails due to an unknown error, the message is displayed.



- If there is a port conflict, it will automatically change to another port. You can check the changed port information in the "Setup > Network > IP & Port > Port" menu of the connected recorder.
- If there is a port conflict, check the port forwarding or UPnP settings in the user manual of the connected router.

Setting the Public DDNS

- DDNS site : Select whether to use DDNS and the site registered when using it.
- Host name : Enter the host name registered with the DDNS site.
- User name : Enter the user name registered with the DDNS site.
- Password : Enter the user password registered with the DDNS site.

Connecting to the Viewer

To connect to the Wisenet mobile from your smartphone

1. Install and run the "Wisenet mobile" app on your smartphone.
You can scan the QR code of the recorder on the <Add device> screen.
2. When the QR code is scanned, the <Product ID> shown in the recorder is automatically mobile viewer, and you can use the mobile viewer by entering the recorder ID/password.
3. Then, when you run the "Wisenet mobile" app, it will be automatically connected to the monitor it easily with your smartphone.

To connect to the Wisenet Viewer from your PC

1. Go to <https://www.hanwha-security.com> on your PC.
Install and run the "Wisenet Viewer" app.
2. Select <IP type> to <DDNS/P2P> in the "Setup > Device > Device list > Add > Manual" screen.
3. Enter the recorder ID/password and <Product ID>, and then click <Register>.

The information of the current recorder will be displayed, and you can use the "Wisenet

To connect to the WebViewer from your PC

If you connect to <http://ddns.hanwha-security.com/product ID> including <Product ID> in the address bar, the recorder's web viewer screen will appear.



IP Filtering

You can prepare the list of IP addresses to allow or block access to a specific IP address.

Setup > Network > IP filtering

The screenshot shows the 'IP filtering' configuration page. It includes a table with columns for 'Filtering type' (Permit/Block), 'IP address', and 'Filtering range'. The 'Permit' tab is active. Below the table, there are input fields for 'IP address' and 'Filtering range', and a 'Filtering range' button. The bottom of the page has a 'Save' button.

Filtering type

- Deny registered IP : Access to the registered IP address will be limited.
- Allow registered IP : Only registered IP addresses can be accessed.

Enable : Select whether to enable registered IP filtering.

IP address : Displays the registered IP address. Double click the IP address to change the settings.

Prefix : Displays the prefix to be filtered. Double-click the prefix to change the settings.

Filtering range : If you enter an IP address or prefix, then the range of IP addresses blocked or permitted will be displayed.

- If a camera's IP address is not included in the Permit list or is in the Reject list access to it will be rejected.
- For IPv4, camera IP filtering through PoE port is not immediately applied. (Previous connections are maintained, and filtering is applied on next login.)

To register the IP addresses to filter

1. Select the IP type you want to register from IPv4 or IPv6.
2. Click <Add> at the bottom of the screen.
3. When the additional window is displayed, set the details.
 - IP filtering : Select whether to enable IP filtering.
 - IP address : Enter the address to enable IP filtering.
 - When entering an IP address, a value in the range 0-255 must be entered to register.
 - Prefix : Enter the prefix value.

HTTPS

You can choose a secured connection system or install a certificate.

Setup > Network > HTTPS

The screenshot shows the 'HTTPS' configuration page. It includes a table with columns for 'Filtering type' (Permit/Block), 'IP address', and 'Filtering range'. The 'Permit' tab is active. Below the table, there are input fields for 'IP address' and 'Filtering range', and a 'Filtering range' button. The bottom of the page has a 'Save' button.

- Secure connection system : You can select a type of secure connection system based on environment and the security level.
 - HTTPS (Hypertext Transfer Protocol Secure) is a more secure version of HTTP that exchanges encryption and decryption of the user's page request at the TLS (Transport Layer Security) (Does not use a secure connection) : Transmits data without encryption.
 - HTTPS (Secure connection mode using a unique certificate) : Establishes a secure connection using a unique certificate provided by the recorder.
 - Mutual authentication : Mutual authentication can be performed to enhance security. If you select <Allow all mutual authentication>, mutual authentication is not performed. If you select <Allow only mutually authenticated devices>, the storage device even if mutual authentication is not performed. If you select <Allow only mutually authenticated devices>, access the storage device only when mutual authentication was successful.
 - HTTPS (Secure connection mode using the public certificate) : Establishes a secure connection using a public certificate. You can select this after installing a public certificate.
- TLS settings : You can select the Cipher mode or TLS version to use for encrypted communications.
 - Cipher mode : Cipher suites are provided by combining different algorithms for use in communications, such as key exchange, authentication, and encryption.
 - <Secure cipher suites only> uses only high-security cipher suites.
 - For backward compatibility, select <All compatible cipher suites>. However, selecting <All compatible cipher suites> may cause compatibility issues with some devices.
 - Version : You can select the TLS protocol version to use for encrypted communications.
 - If <Cipher mode> is set as <Secure cipher suites only>, you can select only <TLS 1.2> or <TLS 1.3>.
 - If the recorder is connected to the external Internet or installed in an environment with high priority for security, connection is recommended.

E-mail

You can send an e-mail to a Recorder-registered user at a specific time interval, or if an event occurs.

SMTP Setting

Sets the SMTP mail server.

Setup > Network > E-mail > SMTP

WISENET

Live Search 4 month Setup

E-mail

SMTP

Server address

Port

Enable authentication

Authentication method

Sender

Receiver

Test e-mail

WISENET

Camera

Record

Event

Device

Network

IP & Port

SMTP server

System

- Server address : Enter the SMTP server address to connect to.
- Port : Enter the connection port.
- Enable authentication : Check this if the SMTP server uses user authentication.
The ID and password fields will be activated when the authentication is enabled.
 - ID : Enter a ID to use authentication when connecting to the SMTP server.
 - Password : Enter the password of the SMTP server user.
- Enable Transport Layer Security (TLS) : Select one from **<Disable>** and **<TLS (if available)>**.
- Sender : Use the virtual keyboard to enter the sender's e-mail address.
- Test e-mail : Conducts the test on the server settings.

Event Setting

You can set the interval and type of the event that will be sent to the user.

Setup > Network > E-mail > Event

WISENET

Live Search 4 month Setup

E-mail

Event

Event name

Interval

Recipient

Test e-mail

WISENET

Camera

Record

Event

Device

Network

IP & Port

SMTP server

System

- Delivery interval : Set the event interval.
 - If a series of events occurs, the e-mail will be sent at the specified interval, not on each event.

Recipient Setting

You can create a group and add users to it or; you can delete users and change a group.

Setup > Network > E-mail > Recipient

WISENET

Live Search 4 month Setup

E-mail

Recipient

Recipient information

Group

Name

Email

Group

Test e-mail

WISENET

Camera

Record

Event

Device

Network

IP & Port

SMTP server

System

- Click on **<Add>** to add a group.
Enter the group name.
- Select a recipient group to receive emails.
If a group is added, it will appear in the group list.

setup

SNMP

The SNMP protocol allows system or network administrators to remotely monitor and configure the network devices.

Setup > Network > SNMP

[illegible]

- Enable SNMP v1 : SNMP v1 is used.
- Enable SNMP v2c : SNMP v2c is used.
 - Read community : Enter the name of read-only community to access the SNMP information.
 - Write community : Enter the name of write-only community to access the SNMP information.
- Enable SNMP v3 : SNMP v3 is used.
 - Password : Set the initial user password for SNMP version 3.
- Enable SNMP traps : SNMP trap is used to send important events and conditions to the Admin System.
 - IP address : Enter the IP address to which messages will be sent.

DHCP Server

You can set the internal DHCP server and assign an IP address to the network camera.

Network Setting

Setup > Network > DHCP server > Network

[illegible]

- **Network:** You can set the IP range and time to activate as the recorder's DHCP server.

To set the DHCP server

1. Click **<Setup>** of the network you want to set as a server.
2. When the network setting window is displayed, select **<Run>** for **<Status>**.
3. Enter the starting IP and end IP in the **<IP range>** field.
4. Fill in the **<IP lease time>** field.
5. Click **<OK>**.

The IP range entered is set as the DHCP server address of the network.

setup

In the case of standby mode

- Device list & status : Shows the status of the normal recorder currently connected to the standby recorder. To delete the normal recorder connected, click **<Delete>** on the right side of the recorder.

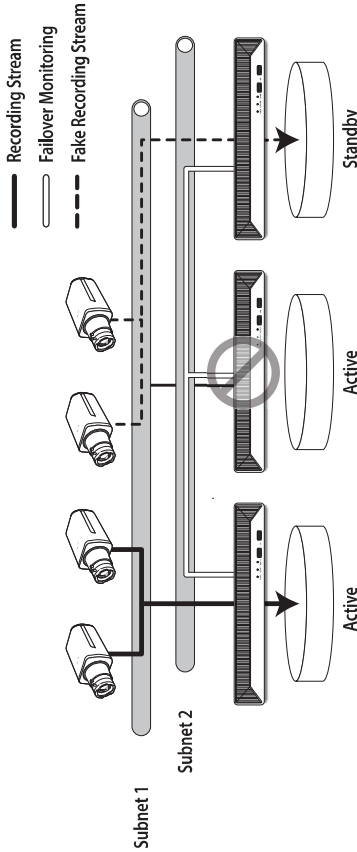


- The standby recorder can only enable some functions in the **<System>**, **<Device>**, and **<Network>** menus. You can't use the **<Record>** and **<Event>** menus.
- In the standby recorder, the previous operation will stop when a failover is performed during the playback or section export, and the screen will move to the live screen.

State name	Description
Ready	Ready to be connected
Connected	Normal recorder and standby recorder connected (failover available)
Failover	Troubleshooting is being performed
Connected fail	Connection was attempted but failed
Authentication failure	Auth failed by entering an incorrect standby password when attempting to connect
Connected(Match Time Required)	Connected without time synchronization with the standby recorder
Connected(check camera port IP)	Even if the camera port of a normal recorder is connected to the viewer port of the standby recorder or connected to the same viewer port, the IP port of the camera port is not matching.
Connected fail(check camera port IP)	The connection from the normal recorder's camera port to the standby recorder's camera port failed.
Connected fail (It is a different model.)	Failed connection by connecting recorders of different models.

Example of setting up failover

- Subnet 1 ➡ Network 1 (Camera)
- Subnet 2 ➡ Network 2 (Viewer)
- Subnet 3 ➡ Network 3 (iSCSI)



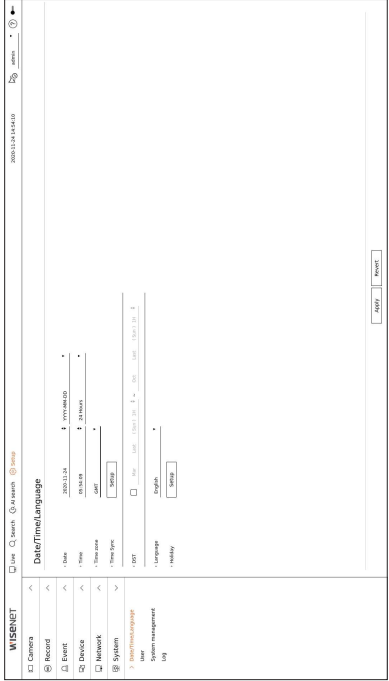
SETTING THE SYSTEM

You can set the date, language, authority, etc. displayed when using the system, and query system information.

Date/Time/Language

You can check and setup the current Date/Time and time related properties, as well as the interface on the screen.

Setup > System > Date/Time/Language



- Date : Sets the date and its format that will appear on the screen.
- Time : Sets the time and its format that will appear on the screen.
- Time zone : Sets the time zone of your area based on the Greenwich Mean Time (GMT).
 - GMT (Greenwich Mean Time) is standard World Time and the basis of world time zone.
- Time sync : Specify the use of synchronization with the time server.
Click the **<Setup>** button to display time synchronization setup screen.
If you enable **<Synchronize with NTP server>**, the current time of the recorder is synchronized in **<NTP server address>**, and the time information cannot be manually changed.
 - Synchronize with NTP server : Specify the use of synchronization with the time server.
 - NTP server address : Enter an IP or URL address of the time server.
 - Last sync : Displays the most recent synchronization time from the selected time server.
 - Enable as NTP server : If you select **<Enable>**, this recorder will act as a time server for network camera.
- DST : Set up Daylight Saving Time with its period to make the time earlier than the GMT hour during the set period.
- Language : Select your language. Sets the language for the interface.

User

You can manage users, such as adding or deleting users and granting different authorities.

Setting the Administrator

You can set and change Administrator's ID and password. The administrator can use and perform various functions.

Setup > System > User > Administrator

- ID : Change the admin ID.
- Current PW : Enter the current PW.
- New password : Enter new password.
- Confirm new password : Enter the new password again.
 - If <Show password> is selected, the password will no longer be hidden on the screen when you type it.



- The initial administrator ID is set to "admin" and you will need to configure the password in the installation.
- Please change your password every three months to safely protect personal information and to prevent theft.
- Please, take note that it's a user's responsibility for the security and any other problems caused by mismanagement.
- If you click <i>, a basic guide for password setup is displayed.

- Holiday : A user can select specific dates as holidays according to their own preferences. Select a holiday from the calendar displayed by clicking <Setup>.
 - The same applies to <Record schedule> or <Schedule> settings as holidays.

Example) If you select May 1 and check <May 1Day>, May 1 will be set as a yearly holiday, and if you check <May 1Day> and <First Friday I May> May 1 of every year and all Fridays of the first week of May will be set as holidays.

To use the calendar

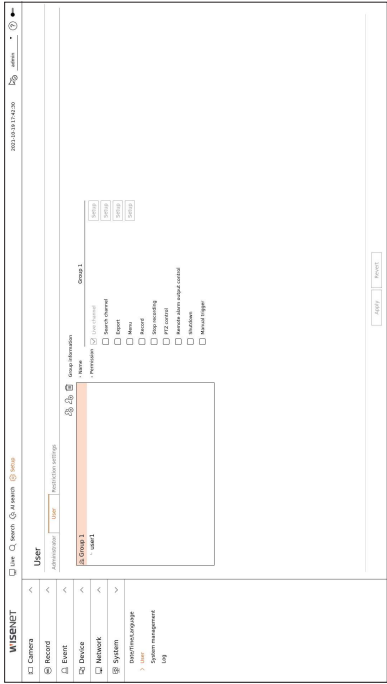
1. Select year and month.
 - Click <◀> on the right side of the year to change the year by one year.
 - Click the <▼> to the right side of the month to change the month every 3 months.
2. Select a date and click on the <Apply> button.

setup

User setting

You can create user groups and set authorities for each group. You can manage user information such as registering and deleting users in the created user group.

Setup > System > User > User



If you want to add a group

1. Click on the <Add> button to launch the Group Addition popup window.
If you want to add a group, click on <OK>.
2. If you click the group name item on the right, a virtual keyboard to enter the group name will appear.
Enter the group name to register.
 - You can add a maximum of 10 groups.

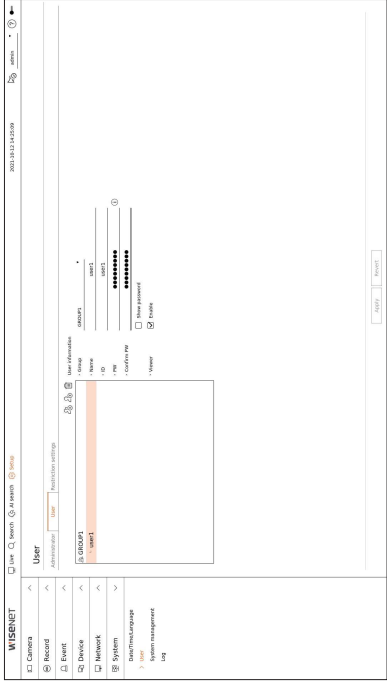
If you want to set group permission

Set the access authority of the group.

Users in the group can only enable the menu to which they have been granted authority.

1. Select the menu to set group permissions.
Set the menu and click <Setup> on the right to display the detailed settings window.
 - Live channel : You can set permissions to access the live screen for each channel.
 - Search channel : You can set permissions to access the search menu for each channel.
 - Export : You can set the authority to access the export menu for each channel.
 - Menu : You can select and set the setting menu that can be accessed. A group user can only access the menu selected. If you select the menu, the menu permission setting screen will be displayed.
 - Record, Stop recording, PTZ control, Remote alarm output control, Shutdown : You can set the menu to grant access to users in the group.

If you want to register a user



1. Click on the <Add> button to launch the user addition popup window.
To add a user, click on <OK>.
2. Select a group.
When registering a user, the selected group will be automatically registered.
 - You can change the group after entering all the user information.
3. Enter a name, ID and password (confirm password) and enable or disable the viewer option.
If you activate use of <Viewer>, you will have the right to use the web viewer and the n
 - If <Show password> is selected, the password will no longer be hidden on the screen when you type it.
4. Click <Apply>.
Registered user information will be saved.

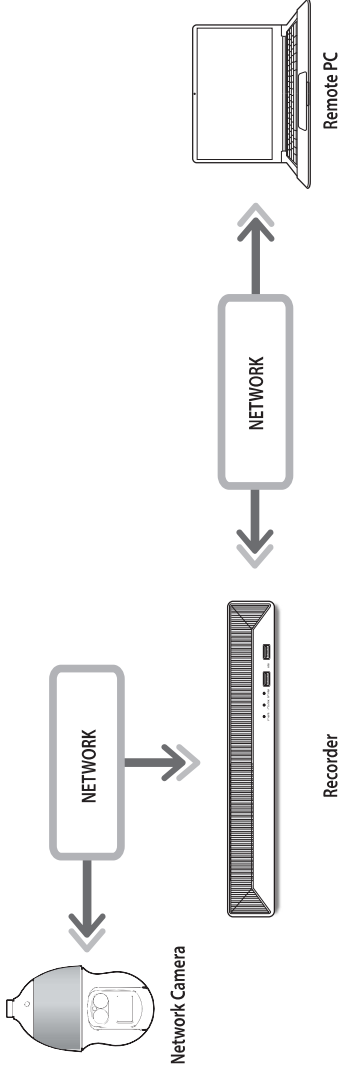
When you want to delete the group and user information

1. Select the group or user to delete and press the <Delete> button.
2. The deletion confirmation window will appear and click on <OK>.

starting web viewer

WHAT IS WEB VIEWER?

Web Viewer is a software program with which the operator can access a remote Recorder for real-time monitoring, PTZ control (if configured) or search.



Product Features

- Remote connection using the browser
 - PTZ camera control enabled
 - Split mode supported
 - 2-split vertical, 2-split horizontal, 3-split, 4-split, 6-split, 1+5-split, 1+7-split, 9-split
- ⚠ Depending on the number of channels supported by the product, the number of screen split modes may vary.

- Takes a screenshot and saves images in PNG format
- Record video in AVI format-compatible with popular media players. (The integrated codec is needed)

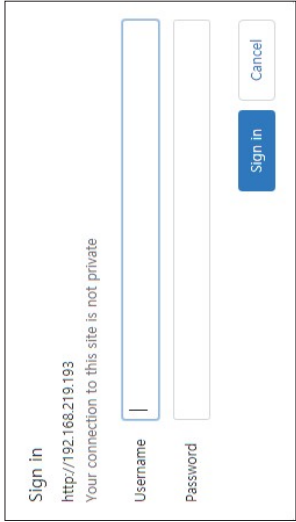
System Requirements

The following lists the minimum suggested hardware and operating system requirements needed to run the Web Viewer.

- Use the browser recommended by the OS.
Ex.) Microsoft recommended browser: Microsoft Edge
- Supported browsers : Chrome, Edge, and Safari
- Supported OS : Works on all of the Windows, Linux, and OS X environments given the platform-independent nature of the web.
- Tested environments : Tested and certified to run on Windows® 10 with Edge 91, Google Chrome™ 91 and Intel® Core™ i7-7700 processor 3.60 Ghz with NVIDIA® GeForce® GTX™ 1050 or Intel™ HD Graphics 630.
- Performance restrictions : The performance of users' CPU/GPU may impact the video playback performance of the web viewer. The video playback performance depends on the settings on the hardware and software.

CONNECTING WEB VIEWER

1. Open your web browser and type the IP address or URL of Recorder into the URL address bar.
2. A user with the admin permissions should provide the admin ID and password.
A registered user should provide the user ID and password.



3. After you log in, the Live Viewer main screen appears.



- All settings are applied according to the Recorder settings.
- If you change the web port when connecting to the Webviewer, you may fail to access since the applicable port is blocked to a different port.
- Please change your password every three months to safely protect personal information and to prevent the damage or take note that it's a user's responsibility for the security and any other problems caused by mismanaging a password.



- It allows up to 10 simultaneous access including the admin and general users.
- Password of the admin and general users can be changed in <User> menu of the Recorder.
- Normal users should have set <Web viewer> under <Remote access restriction> to use before connecting to the Web viewer. For details, refer to the "Setup > Setting the System > User" page in the Table of Contents.
- All settings are applied according to the Recorder settings.

starting web viewer

SET THE RECORDER PASSWORD

After factory reset, the password must be set for the recorder to access the web viewer.

Enter the password of the admin account, and click **<Login>**.

WISENET

admin

Password

Confirm Password

☐ Show password

Login

- Click  to view the basic guide for setting a password. Refer to the password setup rules.

INSTALLATION WIZARD

As shown below, proceed through each step of the **<Installation wizard>**.

Install Wizard can only be accessed at factory reset. If you do not want to proceed, click <Exit>.

- When you complete installation using the install wizard on your recorder, the install wizard will not appear on your web viewer.

1. In the <Language> screen, select the language and press the <Next> button.

Language	Answer	Time taken	Costs & Time	Any comment
Choose the language to use in the product. You must use the French. Current bill for Source Language	Choose the language to use in the product. You must use the French. Current bill for Source Language	Choose the language to use in the product. You must use the French. Current bill for Source Language	Choose the language to use in the product. You must use the French. Current bill for Source Language	Choose the language to use in the product. You must use the French. Current bill for Source Language

- 2.** Set the video recording method on the **<Storage>** screen, and then click **<Next>**.

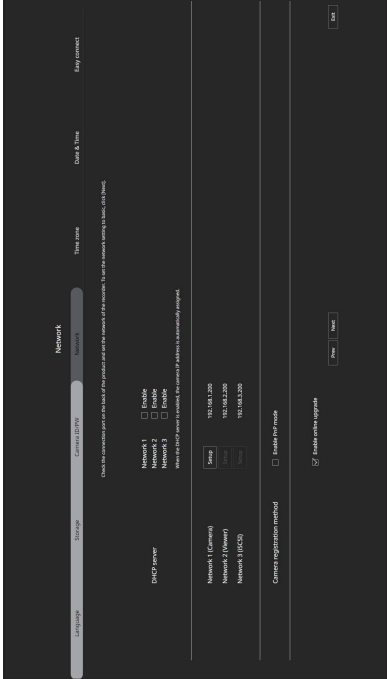
Category	Storage	Capacity	Cost	Access	Performance	Availability	Security	Compliance	Integration	Support	Documentation	Community	Vendor
Cloud Storage	Google Drive	15 GB free, up to 15 TB paid	\$0.02/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Google Workspace	24/7	Help Center	Stack Overflow	Google
Cloud Storage	OneDrive	5 GB free, up to 1 TB paid	\$0.02/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Microsoft 365	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Dropbox	2 GB free, up to 18 TB paid	\$0.02/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Dropbox Business	24/7	Help Center	Stack Overflow	Dropbox
Cloud Storage	Box	10 GB free, up to 10 TB paid	\$0.02/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Box Enterprise	24/7	Help Center	Stack Overflow	Box
Cloud Storage	Amazon S3	5 GB free, up to 1 TB paid	\$0.02/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	AWS IAM	24/7	Help Center	Stack Overflow	Amazon
Cloud Storage	Microsoft Azure	5 GB free, up to 1 TB paid	\$0.02/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Azure AD	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Google Cloud Storage	5 GB free, up to 1 TB paid	\$0.02/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Google Cloud IAM	24/7	Help Center	Stack Overflow	Google
Cloud Storage	Amazon S3 Glacier	1 TB free, up to 100 TB paid	\$0.0004/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	AWS IAM	24/7	Help Center	Stack Overflow	Amazon
Cloud Storage	Microsoft Azure Archive Storage	1 TB free, up to 100 TB paid	\$0.0004/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Azure AD	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Google Cloud Storage Nearline	1 TB free, up to 100 TB paid	\$0.0004/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Google Cloud IAM	24/7	Help Center	Stack Overflow	Google
Cloud Storage	Amazon S3 Glacier Deep Archive	1 TB free, up to 100 TB paid	\$0.0001/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	AWS IAM	24/7	Help Center	Stack Overflow	Amazon
Cloud Storage	Microsoft Azure Cold Storage	1 TB free, up to 100 TB paid	\$0.0001/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Azure AD	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Google Cloud Storage Coldline	1 TB free, up to 100 TB paid	\$0.0001/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Google Cloud IAM	24/7	Help Center	Stack Overflow	Google
Cloud Storage	Amazon S3 Glacier Flexible Retrieval	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	AWS IAM	24/7	Help Center	Stack Overflow	Amazon
Cloud Storage	Microsoft Azure Blob Storage	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Azure AD	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Google Cloud Storage Standard	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Google Cloud IAM	24/7	Help Center	Stack Overflow	Google
Cloud Storage	Amazon S3 Standard	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	AWS IAM	24/7	Help Center	Stack Overflow	Amazon
Cloud Storage	Microsoft Azure Blob Storage Premium	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Azure AD	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Google Cloud Storage Enterprise	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Google Cloud IAM	24/7	Help Center	Stack Overflow	Google
Cloud Storage	Amazon S3 Enterprise	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	AWS IAM	24/7	Help Center	Stack Overflow	Amazon
Cloud Storage	Microsoft Azure Blob Storage	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Azure AD	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Google Cloud Storage	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Google Cloud IAM	24/7	Help Center	Stack Overflow	Google
Cloud Storage	Amazon S3	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	AWS IAM	24/7	Help Center	Stack Overflow	Amazon
Cloud Storage	Microsoft Azure	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Azure AD	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Google Cloud	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Google Cloud IAM	24/7	Help Center	Stack Overflow	Google
Cloud Storage	Amazon	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	AWS IAM	24/7	Help Center	Stack Overflow	Amazon
Cloud Storage	Microsoft	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Azure AD	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Google	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Google Cloud IAM	24/7	Help Center	Stack Overflow	Google
Cloud Storage	Amazon	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	AWS IAM	24/7	Help Center	Stack Overflow	Amazon
Cloud Storage	Microsoft	1 TB free, up to 100 TB paid	\$0.0003/GB/month	Web, mobile apps	100 MB/s	99.9%	Encryption	GDPR, HIPAA	Azure AD	24/7	Help Center	Stack Overflow	Microsoft
Cloud Storage	Google	1 TB free											

- Distributed mode : This function is only available for products that support distributed recording. If **<Distributed mode>** can be selected when there are two or more hard disks. This mode distributes data across all hard disks, and saves it after the hard disk is formatted.
 - RAID mode: This function is only available for products that support RAID.
<RAID mode> saves data by configuring the hard disk in the RAID format.
 - Single group mode : Saves data on one hard disk. If the hard disk is recognized as an unusable recorder, the data can be saved after formatting the hard disk.
- 3.** Set the camera password in factory reset on the **<Camera ID/PW>** screen.
If ID/PW is already set in the camera, register the ID/PW and click **<Next>**.

[illegible]

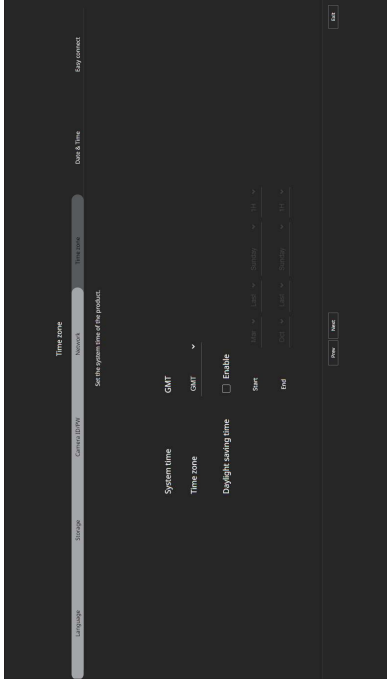
- When the password is in factory reset, it can be changed and managed in a batch.
- Up to 3 sets of camera ID with password and password can be registered.
- You may change the passwords of registered cameras all at once in the "Setup > Camera > Camera password" menu.
- You cannot change the password for cameras registered with ONVIF and RTSP.

4. Set the network connection type and the connection environment on the **<Network>** screen, and then click the **<Next>** button.

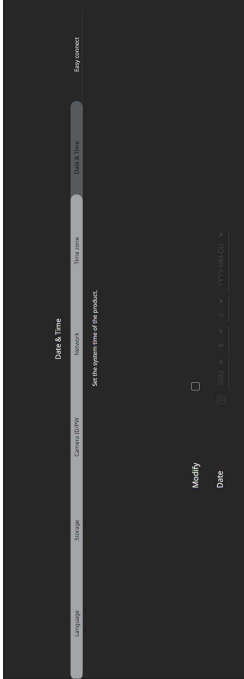


- For details on network settings, refer to the "Getting Started > Installation wizard" page in the Table of Contents.

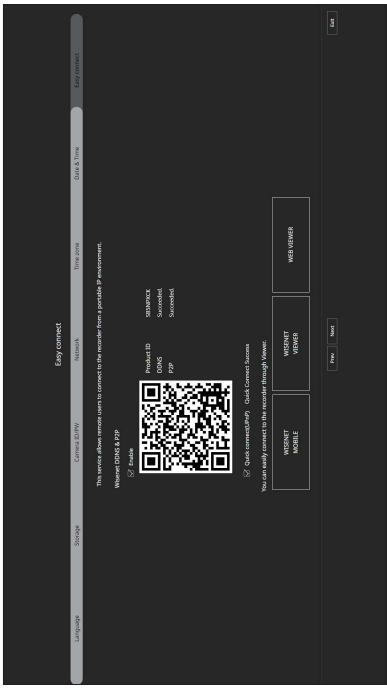
5. Set the daylight saving time on the **<Time zone>** screen, and then click **<Next>**.



6. To modify the date and time on the **<Date & Time>** screen, select the **<Modify>** check box. Set the date and time, and then click **<Next>**.



7. On the **<Easy connect>** screen, a remote user can network a recorder in a dynamic IP system. Click **<Enable>** to test the connection to see if the current recorder can be connected remotely. If the connection is successful, a QR code is created. To connect a recorder via a viewer, select the viewer you want to use. You can check the connection status of the selected viewer in the popup window.



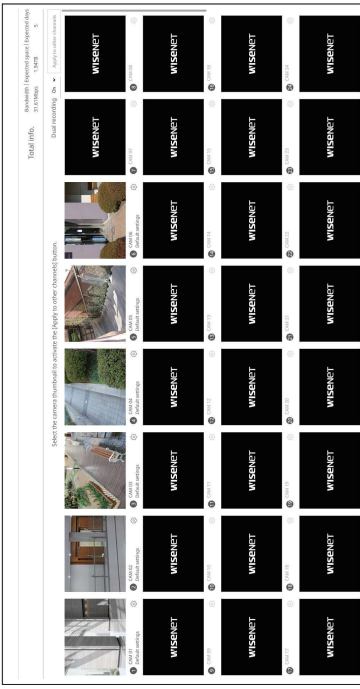
- It connects to WiserNet DDNS first. If it does not connect to DDNS, it automatically connects to P2P.

8. Click the **<Next>** button to complete the installation wizard.

CAMERA SETUP

When the installation wizard closes, the camera setup screen will automatically appear. Based on the registered camera's record profile information, you can check the total bandwidth of expected days.

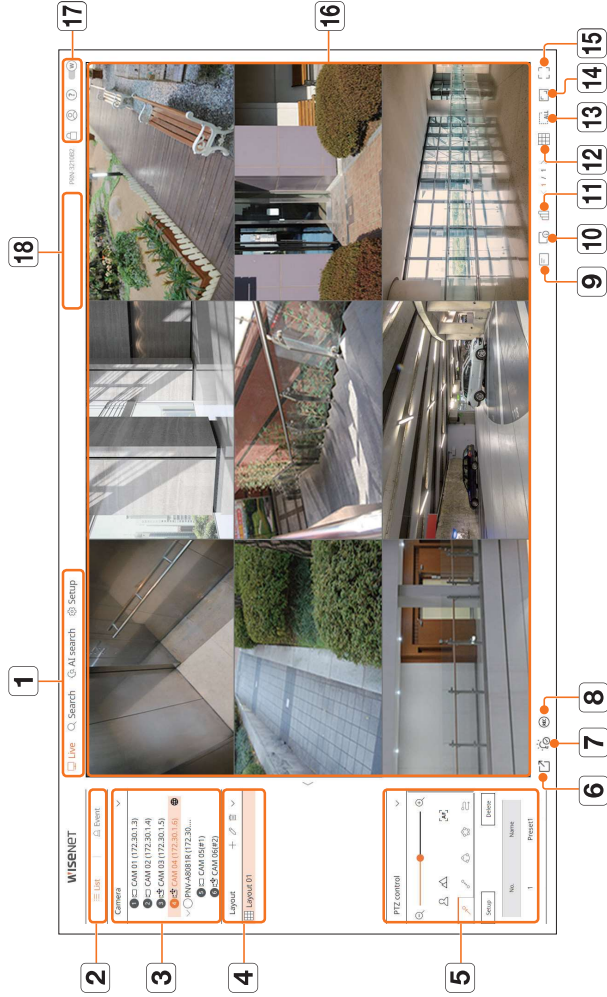
You can change camera setup and the record schedule, and apply the same settings to other cameras. For details, refer to the **"Getting Started > Camera Setup"** page of the table of contents.



live viewer

You can check the video from camera registered in the Recorder connected from a remote PC. Also, you can adjust the camera and check the network transfer status.

SCREEN LAYOUT OF THE LIVE VIEWER



Menu		Description
5	PTZ Control	Controls the connected PTZ camera.
6		Saves the video saved in the set time of the selected channel in PC in AVI format.
7		Clears the alarm in the event list and stops the alarm/beep sound for the system status.
8		Enables the Manual recording function of the recorder.
9		Displays the information on the OSD screen in the video window.
10		Shows the selected Channel Information.
11		Shows the status of all cameras connected to the recorder.
12		Sets the split screen of the video window.
13		Removes all screens from the video window.
14		Shows the video in actual proportions.
15		It changes to full screen from the current Split Mode. To exit full screen, press the ESC key on your keyboard. ■ MAC Safari does not support full screen.
16	Video window	Shows the video of the camera connected to the recorder.
17		Displays the IP address and mutual authentication status of the viewer receiving the video. ✓ : Mutual authentication connection using WISENET device certificates ✗ : Mutual authentication connection without WISENET device certificate - : Connection without mutual authentication - No viewer connected : Displayed when there is no viewer connected to the recorder.
		The ID of the connected user is displayed.
		You are directly connected to the Hanwha Techwin homepage (www.hanwha-security.co.kr).
		Changes the color theme of Web Viewer.
18	Custom status display	Displays the status of the system, hard disk, and network.

CHECKING THE SYSTEM STATUS

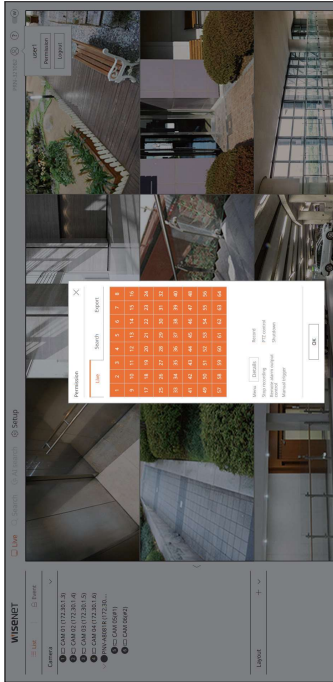
The icon at the top of the screen indicates the status of the system.

Name	Description
	Displayed when a problem occurs with the pan or recording status. Displayed when an error occurs in the power supply. Displayed when the amount of input data by channel exceeds the set amount of data limit.
	Displayed when the hard disk is full during recording and the recording capacity is insufficient. Displayed when the hard disk does not exist or needs to be replaced.
	Displayed when there is an abnormality in RAID or cannot be used. Displayed when RAID is being rebuilt. Only provided for products that support RAID.
	Displayed when an error occurs in the iSCSI device connection. Only provided for products that support iSCSI.
	Displayed when the capacity of the built-in battery in the recorder is insufficient. After replacing the battery, set the system time again. Displayed when network overload occurs. - It occurs in case of excessive CPU load because the reception performance is exceeded. It disappears when you modify the Delete Camera or Set Camera to reduce the data rate. - Limit the number of users remotely monitored by Web Viewer or VMS, or control the number of channels played by remote or recorder.
	Displayed if the server has firmware to update.

CHECKING USER ID

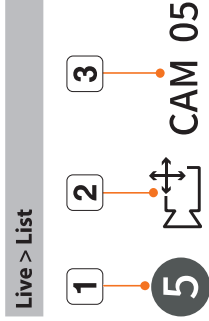
Displays the user ID and authority for the user connected to Web Viewer.
Click <Logout> to log out the logged-in user.

- If you are logged in with an admin account, the authority setting window will not be displayed.



CHECKING CAMERA LIST

Displays the camera type, status, and name registered in the recorder.



Name		Description
1	Channel information	Displays channel information (channel number, video window assignment number, etc.)
2	Camera type	Displays a normal camera.
	Camera status	Displays a PTZ camera.
2	Camera status	Displays the camera error status.
	Camera name	Displays the name set for the camera.



- If a camera connection error occurs, it is disabled in the list.
- The camera status display information changes according to the network connection status and settings.
- For multichannel cameras registered with the Wisenet protocol, the channel information will be displayed under the main channel camera.
- In case of multichannel cameras, only one main channel can be registered for recording. Subchannels in which recording is not required do not need to be registered on the recorder, as they can be monitored event reception, or camera settings are not available.

live viewer

CHECKING THE ALL CAMERA STATUS

You can check the status of all cameras connected to the recorder.

Live Status

Click the  button. You can check the status and transmission information of the camera connected to each channel.

- To change the profile setup, click the <Camera setup> button. For details on how to set up the profile, refer to the "Setup > Setting the Camera > Setting the Profiles" page in the Table of Contents.

[illegible]

Record Status

Click the button, followed by the **<Record>** tab.

You can check the profile, record type, frame rate (Input/Record), and bit rate (Limit/Input/Record) for each channel.

- Use **<Current** **Max** to check the current recording status and maximum recording setting value.
- To change the profile setup, click the **<Record Setup>** button.

Status

Last update time 05:20:52 PM

Live Record Network

Total bitrate (record/max): 24.7/51 Mbps

CH	Profile	Type	Record		Frame rate (fps)		Bitrate (bps)		Limit	Receive		Current
			Full	Continuous	30.0 fps	30.0 fps	2.0 M	2.0 M		2.0 M	2.0 M	
1	H.264	Continuous	Full	Continuous	30.0 fps	30.0 fps	2.3 M	2.0 M	2.0 M	2.0 M	86.0 %	
2	H.264	Continuous	Full	Continuous	30.0 fps	30.0 fps	2.3 M	0.6 M	0.6 M	0.6 M	26.0 %	
3	FlvH264	Continuous	Full	Continuous	25.0 fps	25.0 fps	2.3 M	6.8 M	6.8 M	6.8 M	295.0 %	
4	H.264	Continuous	Full	Continuous	30.0 fps	30.0 fps	2.3 M	6.3 M	6.3 M	6.3 M	273.0 %	

Network Status

Click the button, followed by the **<Network>** tab.

You can check the status of network bandwidth currently being received/transmitted.

Status		Last update time 04:35:16 PM	
Live		Record	
Network		Network	
Network		Receive (ops)	
		Transfer (ops)	
Network 1	0.0 M	0.0 M	
Network 2	15.1 M	6.2 M	
Network 3	0.0 M	0.0 M	



- Each product supports a different number of network ports.

PoE Status

Click the button and then click **<PoE>**.

You can check the current PoE status of each port.

Status			Last Update time 11:51:38 AM	⌕
Live	Record	Network	PSE	
Port	Consumption (W)	Enable	Detailed Information	
1	0.0	☒	-	
2	0.0	☒	-	
3	0.0	☒	-	
4	0.0	☒	-	
5	0.0	☒	-	
6	0.0	☒	-	
7	0.0	☒	-	
8	0.0	☒	-	
Total power consumption (W): 0.0 W				
				Channel setup
				OK

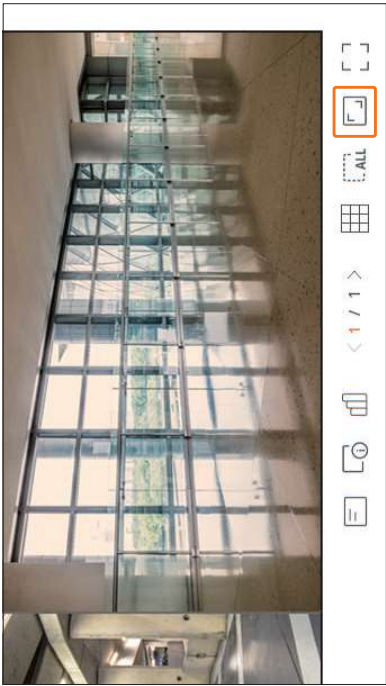
CHANGING THE PATTERN OF SPLIT SCREEN

Click the  > button and select the desired split screen.
The selected split screen is applied to the video window.

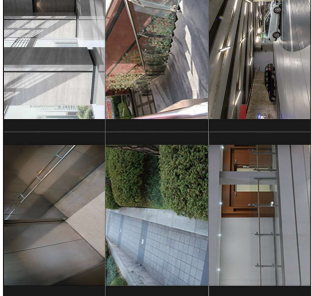


CHANGING OVERALL CHANNEL ASPECT RATIO

Video screen ratio for all channels can be changed in live split screen mode.
Click <  > at the bottom of the screen. It changes to the actual proportion of the video.



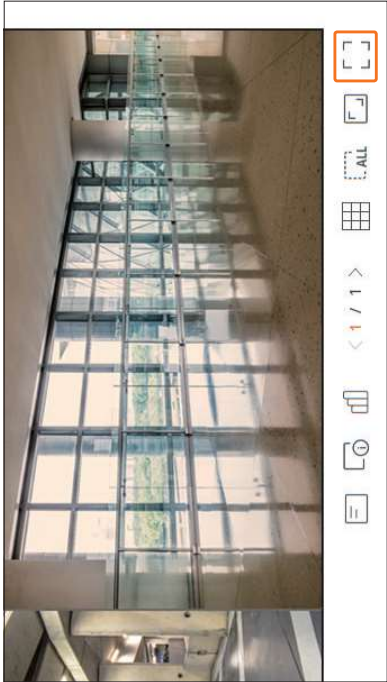
If you want to go back to the previous screen ratio, click <  > again.



live viewer

FULL SCREEN MODE

You can change to full screen mode, which has no top/bottom/left/right areas of the live screen. Click <[]> at the bottom of the screen.

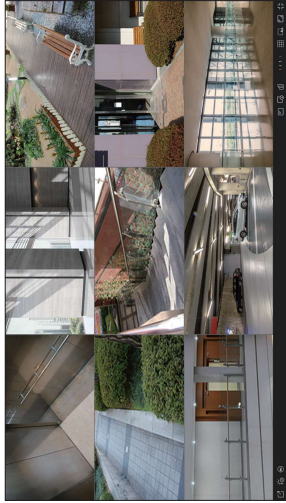


To exit the full screen, press the **ESC** key on the keyboard or click <[]> at the bottom of the full screen mode.

General mode



Full screen mode

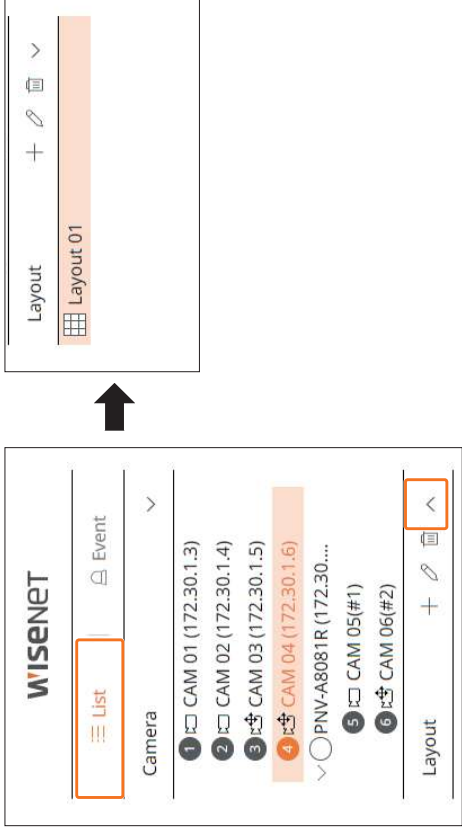


SETTING UP THE LIVE LAYOUT

This section outlines how to select a series of channels based on their purpose/accessibility and a single layout.

Live > List

Check Layout List



- **+** : Create a new layout.
- **✎** : Change the channel or name of the layout.
- **📄** : Save the changed layout.
- **🗑** : Delete the added layout.
- **^ / v** : Open or close the layout list.

Add Layout and Set Name

1. Click the **< + >** button.
2. Set the name of the layout.
3. Double-click a channel to display on the layout screen from the camera list.
4. Click **< 📄 >** to save the set layout.
 - The default layout of the live viewer consists of a 4-split screen.
 - Each layout is saved separately by the user.

Change of Layout Channel and Name

1. Click  > after selecting a layout.
2. Add or delete channels or rename layouts.
3. Click  > to save the changed settings.

Delete Layout

Click  > after selecting the layout to delete.

REAL-TIME EVENT MONITORING

Real-time events that occurred on the camera can be checked in the live video window and event list.



- AI events are only available for products that support AI.
- AI events are displayed only after setting event rules. AI event search may have different settings and operation specifications for each camera.
- Live event monitoring can receive data on only one channel and data can be received only from the camera currently being monitored.

Live > Event

Check Event List

Click <  Event > on the left side of the live screen to display the real-time event list.

- When new events occur, the list of events will be updated accordingly.
 - The specified channels and events are displayed in the list according to the event rule setup.
- For details, refer to the "Setup > Setting the Event > Event rule setup" page in the Table of Contents.



-  : Browses for the event by the desired condition.
-  /  : Open or close the event list.



- When an alarm output occurs, if the event recording is set and the pre-event time and post-event time are set, the video will be recorded before or after the event according to the set recording method. For more information about event recording, refer to the "Setup > Setting the Event > Event rule setup" page in the Table of Contents.

Setting the Recording > Record setup" page in the Table of Contents.



- The video may be delayed depending on the network conditions.
- The event output can be delayed as the transfer of the alarm event from the network camera takes time.

live viewer

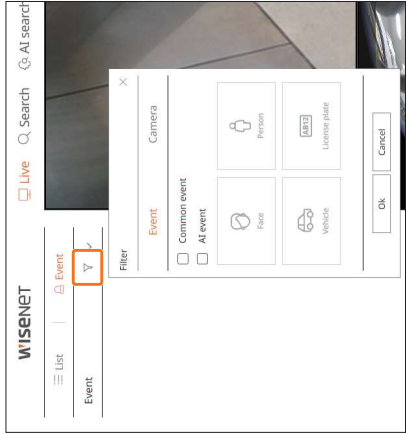
Event Search

You can browse events by camera and event type.

To search for a specific event, click < 🔍 > to select the event type and camera to browse.

Event filter

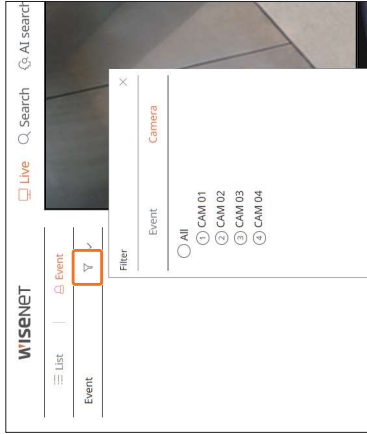
Displays only selected events in the event list.



- Common event : Searches for event types that have occurred in general cameras such as motion detection and IVA.
- AI event : Searches for AI event types such as face, person, and vehicle.
 - AI events are only activated when an AI camera is connected.
 - AI events are displayed only after setting event rules. For details, refer to the "Setup > Setting the Event > Event rule setup" page in the Table of Contents.

Camera filter

Displays events for the selected camera only.



Event Instant Viewer

Select an event to check from the event list, and click < ▶ > to play the recorded video at t occurred.

- Instant viewer can play an event video for 1 minute.
- For AI events, the best shot and details of the event that occurred are displayed.



- AI event recognition may have different settings and operation specifications depending on the recorder model.
- To see AI events, set any of the following options as necessary : See the relevant page for detailed setup method.
 - Setup > Event > AI engine
 - Setup > Event > Event setup > Object
 - Setup > Event > Event setup > AI recognition
 - Setup > Event > Event setup > Mask
 - Setup > Event > Event setup > IVA
 - Setup > Event > Event rule setup

AI event



Common event



- ▶ || : The video is played/paused.
- 🔍 : Go to the search menu screen.
- ✕ : Instant Viewer playback ends.

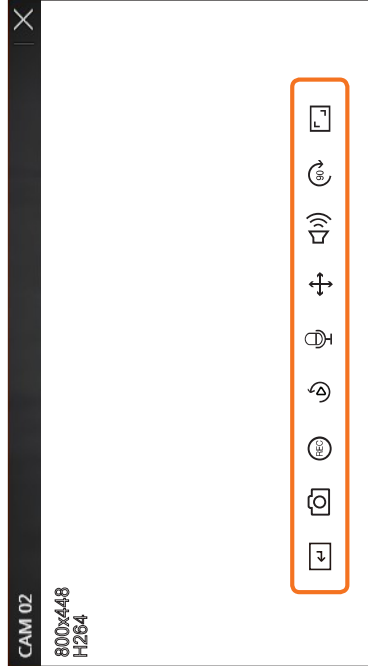
Stop Alarm Output

LIVE SCREEN MENU

After selecting the desired channel on the split mode, roll the mouse cursor over the screen to see the live screen menu. The live screen menu appears differently depending on the recorder operation status or the type of the registered camera.



- Each function may be restricted depending on the type of camera and the user's authority.



Menu		Description
	Manual trigger	If the event action for <Manual trigger> is set for the selected channel, the event rule name is displayed when you hover the mouse over < >. Click < > to activate the set event.
	Capture	You can take a screenshot of the selected channel.
	PC REC	Images can be saved on a PC.
	Instant viewer	During monitoring, you can rewind 1 minute before playback.
	Microphone	Turns the microphone on or off on your PC.
	PTZ control	If the network camera connected to the selected channel supports the PTZ function, it changes to the PTZ control mode.
	Audio	Turns the audio on or off when the audio is connected.
	Image rotation	Rotates the video to display.
	Channel aspect ratio	Shows the video in actual proportions.

CAMERA VIDEO CONTROL

By using the function icon in the video window, you can easily enable functions such as screen PTZ control.

Manual Trigger

If the event action for <Manual trigger> is set for the selected channel in the "**Setup**" menu, the event rule name will be displayed when you hover the mouse over < > to activate the set event.



Capture

Select a channel to capture video and click the < > button.

The captured image is saved as .png file in the download folder.

PC Recording

You can record video on your PC while monitoring.

1. Select the desired channel and click the < > button to start PC recording.
2. To end the PC recording, click the < > button.
The recording ends, and the recorded video is saved as .avi file in the download folder.

live viewer

Instant Viewer

During monitoring, you can rewind 1 minute before playback.

Select the desired channel and click < ⏮ >. The Instant Viewer screen appears.



- ⏮/|| : The video is played/paused.
- 🔍 : Moves to the playback screen.
- ✕ : Instant Viewer playback ends.

Microphone Output

You can turn the microphone of the selected channel on or off in the live screen.

Select the desired channel and click < 🔊 >.

PTZ Mode

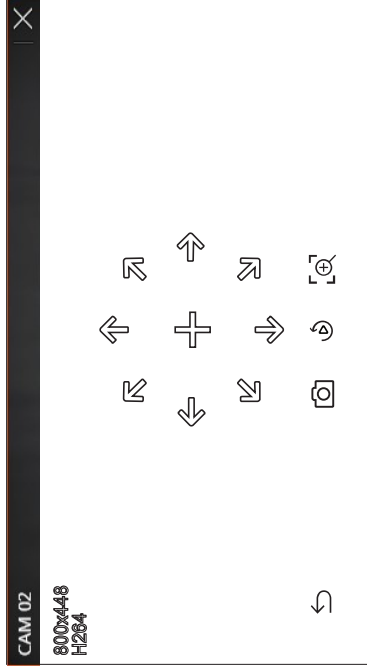
You can run PTZ control of the selected channel.

Select the desired channel and click < ⏮ >.

Enters the PTZ control mode.



- Depending on the camera, the PTZ control function and speed may be different.



- ⏮ : The PTZ mode is closed.
- 📷 : Captures video of the current state.
- 🔍 : Go to the instant viewer.
- 🔍 : Click the Digital zoom icon and use the mouse wheel to zoom in or out on the video.

Digital zoom ends when the video screen is reduced to the original size.

Adjusting the Camera Direction

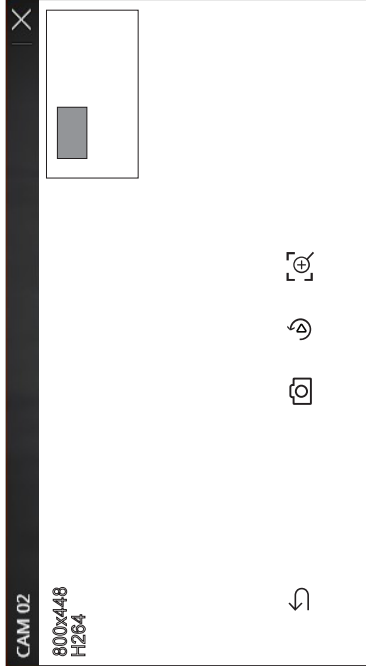
When you rolls over the mouse to < ⏮ >, the 8-way key appears, and when the mouse leaves the direction key, the direction key disappears. You can fine-tune the camera direction by clicking once. Keep clicking the arrow keys to move in the desired direction and release the mouse once. To quickly adjust the direction of the camera, click < ⏮ > and drag. The screen moves quickly in the direction. You can adjust the screen movement speed according to the drag distance.

Zoom In

You can zoom in or out using the mouse wheel.

If you scroll up using the mouse wheel, the selected video screen is enlarged by 10%, and a thumbnail window is displayed.

- Scrolling up/down using the mouse wheel will zoom in/out the video screen by 10%.
- Digital zoom ends when the video screen is reduced to the original size.
- In PTZ mode, click the <[⌂]> button to run digital zoom.



Audio

You can turn the sound on/off corresponding to the channel in Live mode.

Select the desired channel and click <[🔊]>.

Audio output can only be turned on in one channel. The audio output of other channels will be automatically turned off.



- If you have configured the audio output settings properly but the audio or voice is not output, check if the connected network camera supports the sound signal and if you have configured the sound settings as appropriate.
The sound icon can be displayed if the sound signal fails to output from noise.
- Only the channel where <Audio> is set to <On> in "Setup > Camera > Channel setup" displays the audio icon ([🔊]) in Live mode that you can use to turn the sound on/off.

Image Rotation

You can rotate the live video screen.

Select the desired channel and click <[↻90]>.

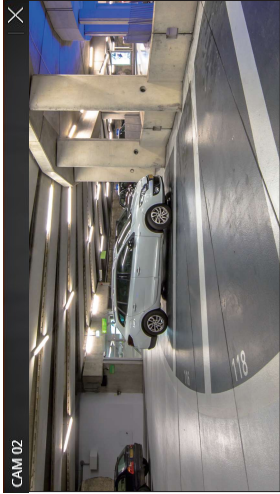
Each click of the button will rotate the video 90 degrees clockwise.

Channel Aspect Ratio

You can change the aspect ratio of each channel.

Select the desired channel and click <[F-J]>.

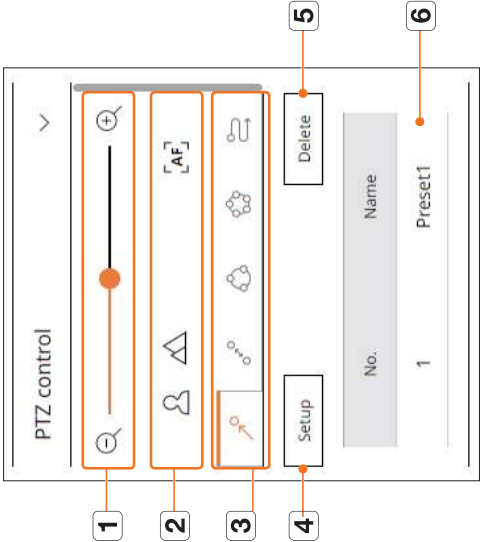
It changes to the actual proportion of the video.



PTZ CONTROL

PTZ Control Menu

If the connected network camera is a PTZ camera, the  icon is displayed in the camera list. When the camera channel is selected, you can control the PTZ.



Name		Description
1		Zoom out/Zoom in
	Activate the Zoom operation of the PTZ camera.	
	Near/Far	You can adjust the focus manually.
2		Auto focus
	You can adjust the focus automatically.	
	Preset	Set the preset position to move the camera, and then select the desired preset to move to the set position.
3		Swing
	Swing is a monitoring function that moves between two preset points and enables you to trace the motion.	
	Group	The group function enables you to group various presets before calling them in sequence.
	Tour	Monitor all the groups created by a user in turn.
4		Trace
	Tracking remembers the trace of movements that you instructed and reproduces it for your reference.	
	Set	The preset you set is saved and displayed in the list.

Using Digital PTZ (D-PTZ) function

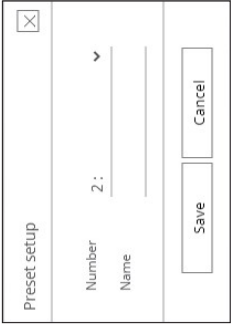
1. Register a camera that supports the D-PTZ profile.
 - In cameras that support the D-PTZ profile, you can use the D-PTZ function.
2. Both cameras that support general PTZ and cameras that support D-PTZ can control the some of the **<PTZ control>** function menus.
 - For more information about the supported functions, please refer to the camera manual.

Preset

Preset is a set of saved data specifying the locations of a PTZ camera. A single PTZ camera can have multiple locations.

To add a preset

1. Select the desired channel and click  >.
 - The PTZ control screen appears.
2. Use the arrow keys to adjust the camera to the point.
3. Click  >.
4. If you click **<Set>**, the **<Preset setup>** window will appear.



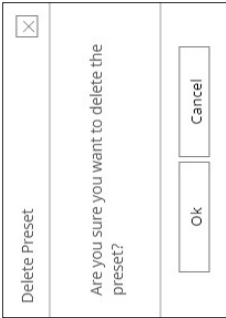
5. Click **< 2 : >** to select the Preset Order to set.
6. Enter the Preset name.
7. Click **<Save>**.
The preset setting will be saved.



- If you replace a camera that saves your preset settings with a different one, you must configure the preset settings again.

To delete a registered preset

- 1. Click <🗑>.
 - 2. Select the preset to delete, and click <Delete>.
 - 3. <Delete preset> window will appear, and click <OK>.
- The selected preset will be deleted.



Running Preset

- 1. Click <🏃>.
 - 2. Double-click the preset you want to run from the list.
- The camera lens moves to the set position.

Running Swing (auto pan), Group (scan), Tour, or Trace (pattern)

The running method of each function is the same as the preset operation method. For details on how to use it, refer to the camera's user manual.



- Depending on the camera's capabilities, only some features may be available.

EXPORTING VIDEO

You can export the recorded video by manually inputting the desired channel, date, and time.

- 1. Click the <📁> button.

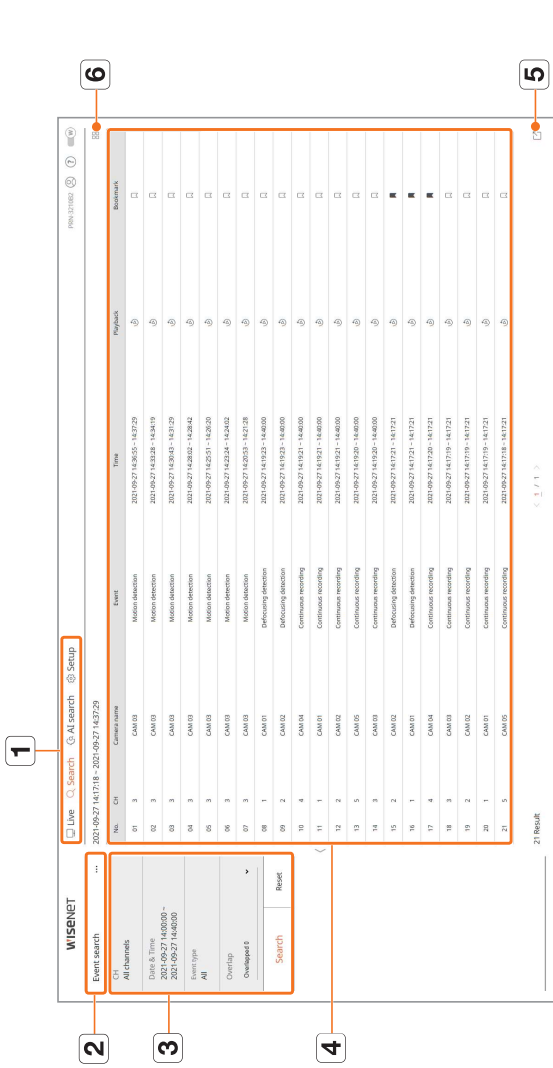


- 2. Select a layout to export and select the desired channel.
- 3. Set the start date/time and end date/time.
 - After setting whether to enable DST or not, select the overlap. It will be displayed when there is overlapped data in one channel at the selected time.
- 4. Enter a file name to save, and then click the <OK> button.
- 5. When the export is complete, a confirmation window appears.
 - The exported video is saved as .avi file in the download folder.

search viewer

You can search and play the recorded video stored in the recorder by connecting the recorder remotely.

SCREEN LAYOUT OF THE SEARCH VIEWER



Name		Description
1	Menu	Click each menu to go to the corresponding menu screen.
2	Search menu tab	Click the menu tab to display the detailed search menu. Click Search menu to go to the corresponding Search screen.
3	Search conditions	You can set various search conditions, such as date/time/event.
4	Search results	Displays search results.
5		Exports search results to an .avi file. In the <Text search> results, you can also click < > to export to a .csv file.
6		Displays the search results as a list or thumbnail.

- Click <Reset> to initialize the search conditions and results.
- When you click Playback (), the video will be played in an instant viewer.
- You can specify a bookmark by clicking the bookmark () in the search results list. You can check the specified video in the bookmark search menu.
- If the search results are in multiple pages, you can click </> to go to the previous/next page. Or, you can click the current page number and enter the page you want to move to.

TIME SEARCH

You can search the recorded data by the desired date and time conditions.



- The time displayed will be based on the time zone and daylight saving time (DST) applied time zone, so it may be displayed whether the data time zone recorded at the same time and daylight saving time (DST) is applied.



1. Select <Time search> in the <Search> menu.

2. Select a channel to search.

3. Select the year and month to search.

Dates with data will be shown in orange and current dates will be shown in orange circles.

4. Select a date to search from the calendar.

The recorded video for that day will be played from the beginning, and the data will be displayed.

- Click <Today> to search for today's date. Today's date will be selected.
- The displayed color differs depending on the type of recording data.
 - Light green : Normal recording video
 - Red : Event recording video
- You can filter the event items to view the time line.
- Overlapped : You may check the timeline by setting the overlapping section caused by time

EVENT SEARCH

You can search for various events by channel.

WISENET

Event search

Time search

2021-09-27 14:00:00 ~ 2021-09-27 14:00:00

All

Channel

All

Search

Result

01	5	CH001	Camera name	Event	Time	Playback	Bookmark
02	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
03	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
04	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
05	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
06	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
07	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
08	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
09	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
10	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
11	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
12	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
13	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
14	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
15	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
16	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
17	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
18	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
19	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
20	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0
21	5	CH001	Camera name	Camera disconnection	2021-09-27 14:00:00 ~ 14:00:00	0	0

21 Results

1. Select <Event search> in the <Search> menu.

2. Select a channel to search.

3. Select a date and time to search.

4. Select an event type.

- Event type options may vary depending on the camera model.

5. Select the overlap.

- It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

6. Click the <Search> button.

The search results list will be displayed.

- To stop the search, click <Stop> in the search pop-up window. You can check the search results up until now.

- CH : Displays the channel where the event occurred.

- Camera name : Displays the camera name.

- Event : Displays the event type of the recorded video.

- Time : Displays the start time and end time of the recorded video.

- Playback : Plays the recorded video with an instant viewer.

- Bookmark : Specifies a bookmark for the recorded video.

TEXT SEARCH

You can search the data input to the POS device connected to the recorder.

WISENET

Event search

Time search

2021-09-27 14:00:00 ~ 2021-09-27 14:00:00

All

Search

Result

01

10

1001-01

Device

Keyword

Time

Playback

Bookmark

02

10

1001-01

Device

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8	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
9	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
10	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
11	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
12	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
13	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
14	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
15	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
16	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
17	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
18	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
19	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
20	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
21	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
22	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
23	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
24	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
25	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
26	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
27	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
28	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
29	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
30	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
31	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
32	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
33	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
34	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
35	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
36	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
37	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
38	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
39	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
40	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
41	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 2021-09-26 10:00:00
42	Good 15 Times 2021-09-26 10:00:00	Good 15 Times 20							

AI search viewer

If there is AI data recorded by the camera, you can search for images in various conditions such as people, faces, and vehicles.

- This function is not supported in some models.
- For products that support the AI search function, refer to the "**Functions Supported by Model**" page.

SCREEN LAYOUT OF THE AI SEARCH VIEWER

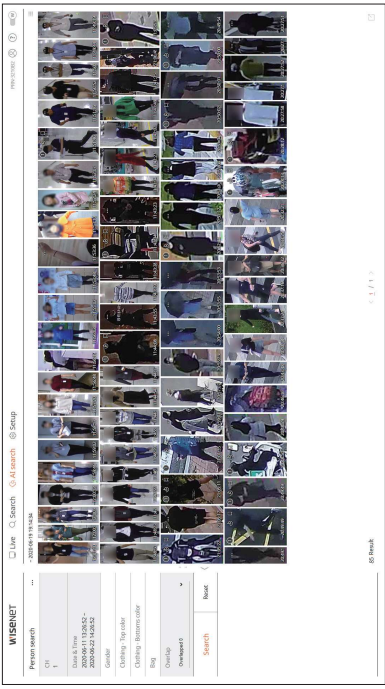


Name	Description
1	Click each menu to go to the corresponding menu screen.
2	Click the menu tab to display the detailed search menu. Click Search menu to go to the corresponding Search screen.
3	You can set various search conditions, such as date/time/gender.
4	Displays search results
5	Exports search results to a file.
6	Displays the search results as a list or thumbnail.

- Click <Reset> to initialize the search conditions and results.
- You can specify a bookmark by clicking the bookmark (🔖) in the search results list. You can check the specified video in the bookmark search menu.

PERSON SEARCH

In the recorded data, you can search for a person by any condition you want, such as gender, top color, bottom color, bag, and camera name.



1. Select <Person search> in the <AI search> menu.
2. Select a channel to search.
3. Select the date and time to search.
4. Select a detailed search option.

- Person search options : **Gender, Clothing-Top color, Clothing-Bottoms color, Bag**
 - Click the option to display the option selection window. Select the desired search option.
 - If no details are set, all conditions will be selected and searched.

5. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time range.

6. Click the <Search> button.

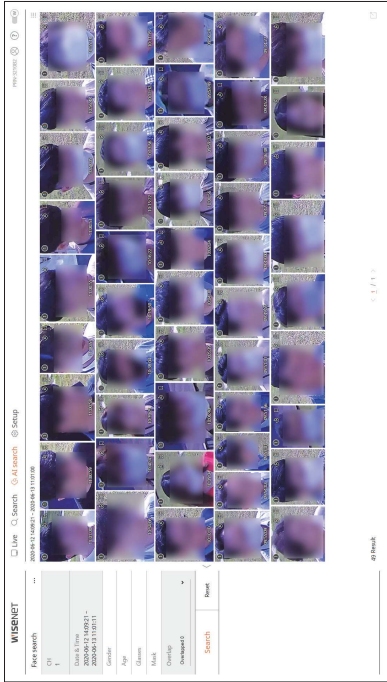
The search results list will be displayed.

- To stop the search, click <Stop> in the search pop-up window. You can check the search results up until now.
 - CH : Displays the recorded channel.
 - Camera name : Displays the camera name.
 - Attribute : Displays the recognized search result attributes.
 - Time : Displays the start time of the recorded video.
 - Playback : Plays the recorded video with an instant viewer.
 - Bookmark : Specifies a bookmark to the recorded video.
7. Click <🔖> in the search list to display the instant viewer.
 8. Click <🔍> to go to the playback screen.

AI search viewer

FACE SEARCH

From the recorded data, you can search faces according to your desired conditions such as gender and age.



1. Select **<Face search>** in the **<AI search>** menu.
2. Select a channel to search.
3. Select the date and time to search.
4. Select a detailed search option.

- Face search options : **Gender, Age, Glasses, Mask**
 - Click the option to display the option selection window. Select the desired search option.
 - If no details are set, all conditions will be selected and searched.

5. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

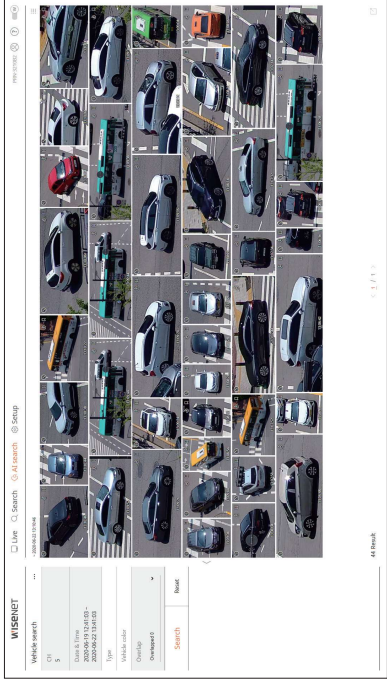
6. Click the **<Search>** button.

The search results list will be displayed.

- To stop the search, click **<Stop>** in the search pop-up window. You can check the search results up until now.
 - CH : Displays the recorded channel.
 - Camera name : Displays the camera name.
 - Attribute : Displays the recognized search result attributes.
 - Time : Displays the start time of the recorded video.
 - Playback : Plays the recorded video with an instant viewer.
 - Bookmark : Specifies a bookmark to the recorded video.
7. Click **<🔍>** in the search list to display the instant viewer.
 8. Click **<Q>** to go to the playback screen.

VEHICLE SEARCH

You can search the vehicle by setting the vehicle type and color conditions from the recorded data.



1. Select **<Vehicle search>** in the **<AI search>** menu.
2. Select a channel to search.
3. Select the date and time to search.
4. Select a detailed search option.

- Vehicle search options : **Type, Vehicle color**
 - Click the option to display the option selection window. Select the desired search option.
 - If no details are set, all conditions will be selected and searched.

5. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

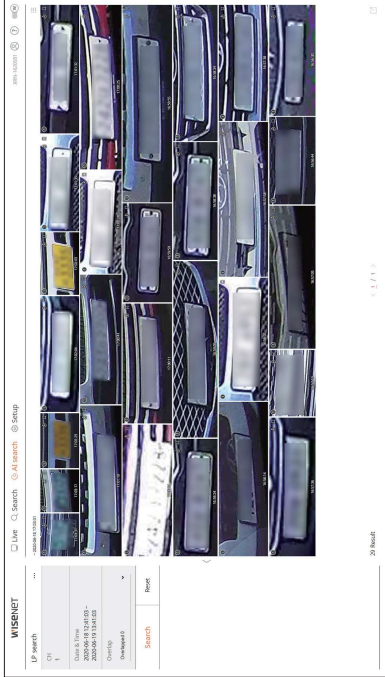
6. Click the **<Search>** button.

The search results list will be displayed.

- To stop the search, click **<Stop>** in the search pop-up window. You can check the search results up until now.
 - CH : Displays the recorded channel.
 - Camera name : Displays the camera name.
 - Attribute : Displays the recognized search result attributes.
 - Time : Displays the start time of the recorded video.
 - Playback : Plays the recorded video with an instant viewer.
 - Bookmark : Specifies a bookmark to the recorded video.
7. Click **<🔍>** in the search list to display the instant viewer.
 8. Click **<Q>** to go to the playback screen.

LP SEARCH

You can search for vehicle license plates from the recorded data.



1. Select **<LP search>** in the **<AI search>** menu.

2. Select a channel to search.

3. Select the date and time to search.

4. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

5. Click the **<Search>** button.

The search results list will be displayed.

- To stop the search, click **<Stop>** in the search pop-up window. You can check the search results up until now.

- CH : Displays the recorded channel.

- Camera name : Displays the camera name.

- Time : Displays the start time of the recorded video.

- Playback : Plays the recorded video with an instant viewer.

- Bookmark : Specifies a bookmark to the recorded video.

6. Click **<⏮>** in the search list to display the instant viewer.

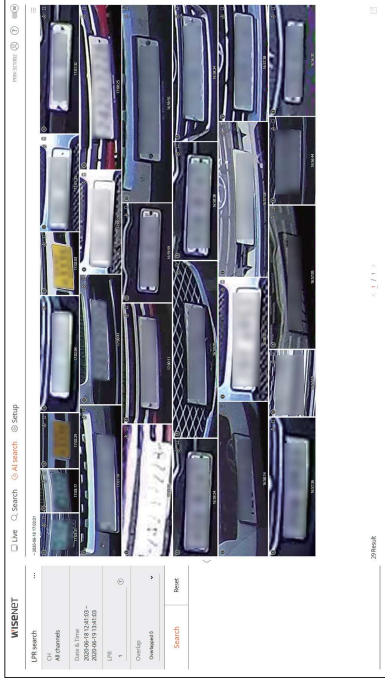
7. Click **<Q>** to go to the playback screen.

LPR SEARCH

You can search for the license plate number recognized in the recorded data.



- LPR search is only available on recorder models that support AI recognition.



1. Select **<LPR search>** in the **<AI search>** menu.

2. Select a channel to search.

3. Select the date and time to search.

4. Enter the license plate number to search.

- Click **<?>** to see the search guide for license plate number.

- The option of license plate number entry field is only available on recorder models that support LPR search.

5. Select the overlap.

It will be displayed when there is overlapped data in one channel by changing the time or time zone at the selected time.

6. Click the **<Search>** button.

The search results list will be displayed.

- To stop the search, click **<Stop>** in the search pop-up window. You can check the search results up until now.

- CH : Displays the recorded channel.

- Camera name : Displays the camera name.

- LPR : Shows the identified license plate number.

- Time : Displays the start time of the recorded video.

- Playback : Plays the recorded video with an instant viewer.

- Bookmark : Specifies a bookmark to the recorded video.

7. Click **<⏮>** in the search list to display the instant viewer.

AI search viewer

SEARCH RESULTS EXPORT

Search results such as people, faces, and vehicles can be exported to a file.

Example) Person search results export

1. Click  in the search results list.

Export

☐	No.	Ch	Camera name	Attribute	Time
☐	001	2	CAM 02		2020-12-17 17:57:45
☐	002	2	CAM 02		2020-12-17 17:57:07
☒	003	2	CAM 02		2020-12-17 17:57:07
☒	004	2	CAM 02		2020-12-17 17:56:59
☐	005	2	CAM 02		2020-12-17 17:56:53
☐	006	2	CAM 02		2020-12-17 17:56:35
☐	007	2	CAM 02		2020-12-17 17:56:29
☐	008	2	CAM 02		2020-12-17 17:56:15
☐	009	2	CAM 02		2020-12-17 17:56:03
☐	010	2	CAM 02		2020-12-17 17:55:41

Time before30 s (0 - 999)

Time after30 s (0 - 999)

Total13 %

No. 00327 %

OK

Stop

Cancel

2. Select the desired list and click **<OK>**.

- The exported video is saved as .avi file in the download folder.

PLAY SEARCH RESULTS

You can play the recorded data and export the video you want during playback.

To Adjust the Time Line

You can move the playback position and zoom the time line in and out.



- Click the desired play position in the time line.
The playback start position will be moved.
 - Click the start point on the left side of the time line to move the playback position to the start point of the first video.
 - Place your mouse over the time line to see the corresponding thumbnail of the recorded video.
- Click <⏮> <⏭> <⏪> <⏩> to zoom in or out the time display magnification. When the time line is enlarged, a scroll bar will appear at the bottom.
 - You can use the mouse wheel over the time line to zoom in or out on the time scale.
 - The time line magnification of the time line will be displayed at the top right of the time line.
- To see the time line before or after zooming in, zoom in and drag the time line left or right.



EXPORT VIDEO BY SECTION SETUP

You can select the desired section from the time line or search list during video playing and export.

1. Click the <[]> button
2. Select the start and end points of the desired section in the time line with the mouse.



3. Click the <[]> button.

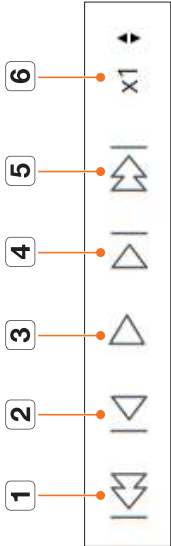


4. Select a layout to export and select the desired channel.
5. Set the start date/time and end date/time.
6. Enter a file name to save, and then click the <OK> button.
7. When the export is complete, a confirmation window appears.
 - While exporting, click the <Stop> button to stop the export.

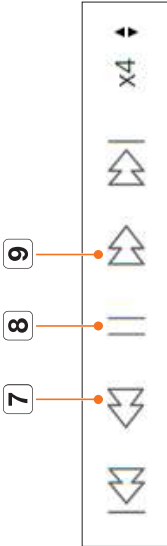
play

Play Button Name and Function

Paused state



Playback state

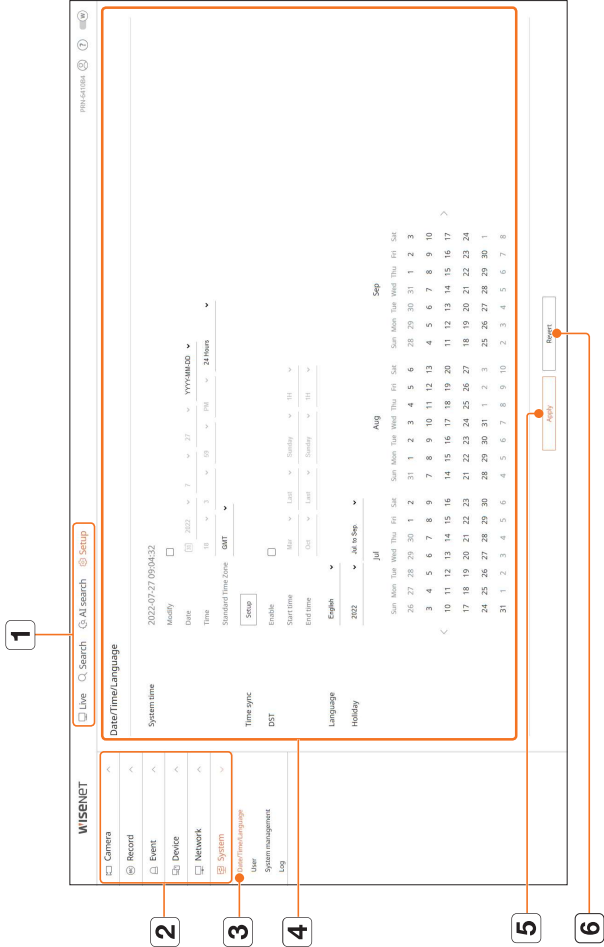


Name		Description
1	Previous event	Go to the previous event video.
2	Previous frame	Moves backward to the key frame (I-frame).
3	Playback	Play the video.
4	Next frame	Moves forward one frame or more.
5	Next event	Go to the next event video.
6	Speed	Select the video playback speed. Speed : x1/8, x1/4, x1/2, x1, x2, x4, x8, x16, x32, x64, x128, x256
7	Fast backward	It is used for reverse playback. Speed : -x1/8, -x1/4, -x1/2, -x1, -x2, -x4, -x8, -x16, -x32, -x64, -x128, -x256 ■ Depending on the split screen, the maximum speed may be limited.
8	Pause	Pause the video.
9	Fast forward	It is used for forward playback. Speed : x1/8, x1/4, x1/2, x1, x2, x4, x8, x16, x32, x64, x128, x256

setup viewer

You can configure the Recorder settings remotely on the network.

SCREEN LAYOUT OF THE SETUP VIEWER



SETTING THE CAMERA

You can check a list of cameras that are connected to the Recorder and configure the necessary settings. For details, refer to the "Setup > Setting the Camera" page in the Table of Contents.

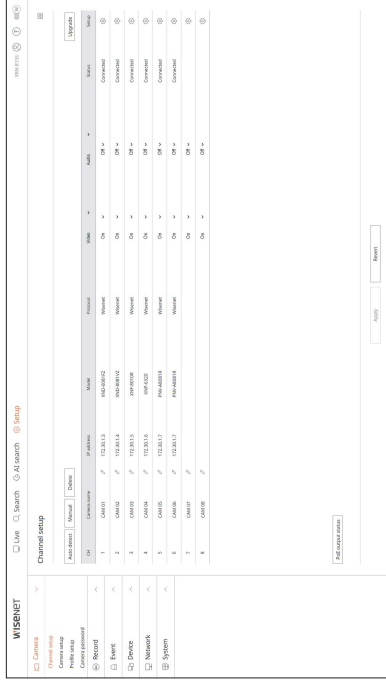
Channel setup

You can register a network camera for each channel and make a connection between the camera and the Recorder.



- When you register a camera for the first time in the "Setup > Camera > Channel setup" menu, the camera is added to the "Channel setup" page. For details, refer to the "Getting Started > Camera Setup" page of the table of contents.

Setup > Camera > Channel setup



- When you click the <Upgrade> button, you can check the camera's version, upgrade the camera, and upgrade the camera's firmware.

Camera setup

You can change the video settings of network cameras registered for each channel by clicking the <Video> button.

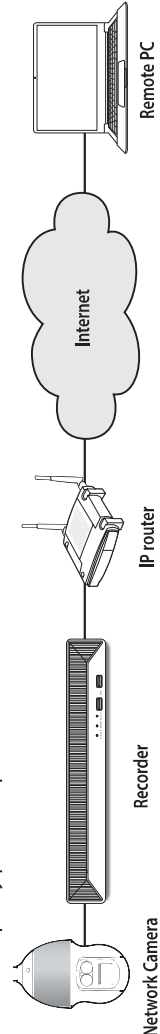
Setup > Camera > Camera setup



setup viewer

- When you click the <<**Camera webviewer**>> button, a new camera web browser window is opened.
 - This is not supported if the camera is connected to the RTSP protocol.
 - This is not supported if the camera is connected to DDNS or a URL.
 - It supports the version specified below or later for each Q/P/X series camera.
(QND-7010R series : 1.04, QND-7080R series : 1.02, QND-6010R series : 1.02, QND-6070R series : 1.01, P series : 1.01)
- When you are connecting to the camera web page on a closed network, a camera that does not support the universal web will not be able to output an image.
- The cam proxy port's default settings are automatically set in sequence as many as the number of channels supported by Recorder. If you want to change the proxy port, then select the port setup menu.
 - 4 channels (10001-10004), 8 channels (10001-10008), 16 channels (10001-10016), 32 channels (10001-10032), 64 channels (10001-10064)

Example) Defaults of cam proxy ports for each product

- 4-channel model : 10001-10004
- 8-channel model : 10001-10008
- 16-channel model : 10001-10016
- 32-channel model : 10001-10032
- 64-channel model : 10001-10064
- When connecting outside the closed network as shown in the figure, the port forwarding setting of the camera proxy port is required for the router.

```
graph LR
    Camera[Network Camera] --- Recorder[Recorder]
    Recorder --- Router[IP router]
    Router --- Internet((Internet))
    Internet --- PC[Remote PC]
```
- If there are multiple Recorders within the closed network, each cam proxy port should be set using a different port.
- If DDNS and Quick Connect are enabled, port forwarding will be automatically set.
- Chrome, Edge and Safari (Mac OS) browsers are supported.

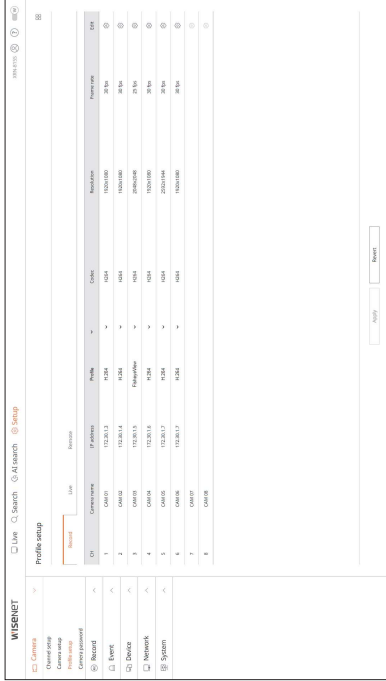
Profile Setup

You can set the profile for a network camera.

Setup > Camera > Profile setup

Record

You can set the recording profile for a network camera.



- Click <<Dewarping>> to change the profile settings. You can add or delete profiles, and change the <<Dewarping>>, <<WiseStream>>, and <<Dynamic GOV & FPS>>.

Live

You can change the live transfer settings of the network camera.



setup viewer

Record Options

You can set the hard disk recording option.

- You can set the recording duration separately for each channel.

Setup > Record > Record options

WISERNET

Camera

Record

Record schedule

Event

Device

Network

System

Record options

Enable dual recording

* If you use dual recording, recorded pictures cannot be browsed.

Overwrite

Run

Retention period (in days)

Days to keep frames

Channel

Camera name

IP address

Days

1	CH001	192.168.1.1	90
2	CH002	192.168.1.2	90
3	CH003	192.168.1.3	90
4	CH004	192.168.1.4	90
5	CH005	192.168.1.5	90
6	CH006	192.168.1.6	90
7	CH007	192.168.1.7	90
8	CH008		90
9	CH009		90
10	CH010		90
11	CH011		90
12	CH012		90
13	CH013		90
14	CH014		90

Apply

Reset

SETTING THE EVENT

For details, refer to the "Setup > Setting the Event" page in the Table of Contents.

AI engine

You can set whether or not to use AI events (object detection, AI recognition) and check the usage.

- AI engine settings are only available on recorder models that support AI recognition.

Setup > Event > AI engine

WISERNET

Camera

Record

Event

AI engine status

Device

Network

System

AI engine status

AI engine status

3%

Ch	Camera name	IP address	Obj. ID	Obj. ID	Obj. ID	Obj. ID	Obj. ID
1	CH001	192.168.1.1	Human	Human	Human	Human	Human
2	CH002	192.168.1.2	Human	Human	Human	Human	Human
3	CH003	192.168.1.3	Human	Human	Human	Human	Human
4	CH004	192.168.1.4	Human	Human	Human	Human	Human
5	CH005	192.168.1.5	Human	Human	Human	Human	Human

Apply

Reset

* To use the AI recognition feature, object detection needs to be enabled first. Only the camera that can use the AI engine are displayed in this list.

Event Setup

You can set detailed settings for each channel's event detection mode.

Setup > Event > Event setup

Object detection

You can change the AI object detection event setup.

- The object detection function is displayed only when connected Wiseret AI camera.

WISERNET

Camera

Record

Event

AI engine status

Device

Network

System

Object detection

Object detection

ON

Object detection

Object detection

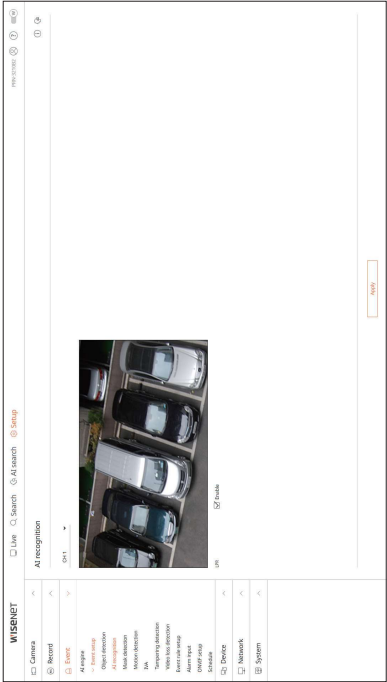
ON

AI recognition

You can change the AI recognition event setup.



- Settings and operating specifications may differ depending on the recorder model and camera.

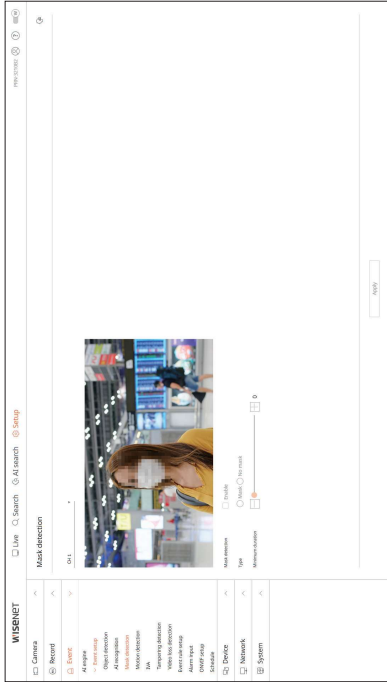


Mask detection

You can change the mask detection event setup.



- Settings and operating specifications may differ depending on the recorder model and camera.



Motion detection

You can change the settings for motion detection events.



- Detailed video analysis can be set by accessing the Camera webviewer.

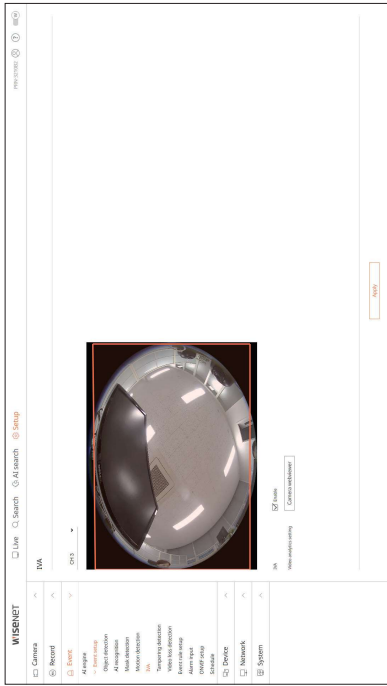


IVA

You can change the settings for Intelligent Video Analytics (IVA) events.



- Detailed video analysis can be set by accessing the Camera webviewer.



setup viewer

Tampering detection

You can change the tampering detection event setup.

[illegible]

Video loss detection

You can change the video loss detection event setup.

[illegible]

Event Rule Setup

You can set the event trigger and action rule to output an alarm when an event occurs.

Setup > Event > Event rule setup

[illegible]

Alarm Input

You can set the operation of the alarm sensor.



- This function is not supported in some models.

Setup > Event > Alarm input[illegible]

ONVIF Setup

You can set the camera registered with the Onvif protocol.

Setup > Event > ONVIF setup

[illegible]

Schedule

Whether to output an alarm can be scheduled according to the day and time.

The initial setting will be an event sync, and an alarm will be sent only when an event occurs.

Setup > Event > Schedule

[illegible]

SETTING THE DEVICE

You can check a list of devices that are connected to the Recorder and configure the necessary
For details, refer to the "**Setup > Setting the Device**" page in the Table of Contents.

Storage Device

You can check and change the settings related to the data storage device.

Setup > Device > Storage device

Management

You can check a storage device, amount of use, type of use and status of storage device.

[illegible]

- ARB : Video that was not recorded due to disconnection from the camera can be backed up to the PC. Press the button and an **<Auto recovery backup (ARB)>** window is opened. For details, refer to the "**Setup > Setting the Device > Storage Device**" page in the T2000 User's Manual.

iscsi

This function is only available for products that support iSCSI.

When connecting an iSCSI device to the recorder, you can search for the iSCSI device and it.

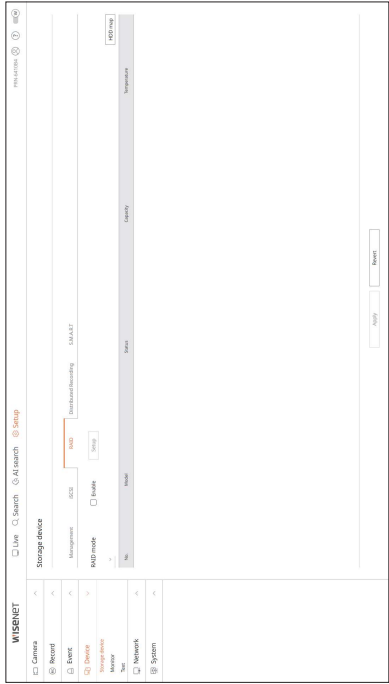
[illegible]

setup viewer

RAID

This function is only available for products that support RAID.

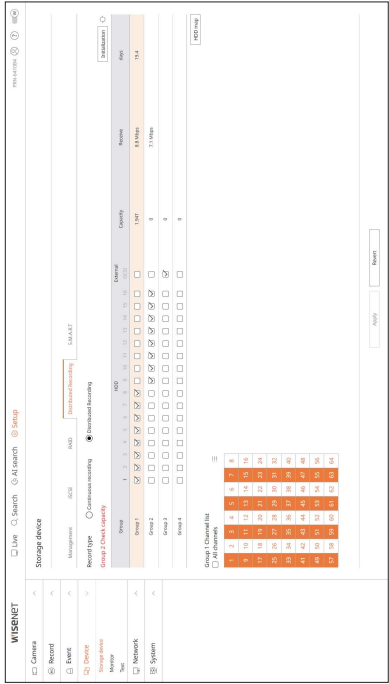
You can set the RAID (Redundant Array of Independent Disks) mode.



Distributed recording

This function is only available for products that support distributed recording.

By allocating a certain portion of HDDs to each group, you can distribute the amount of recording for optimal saving.



S.M.A.R.T

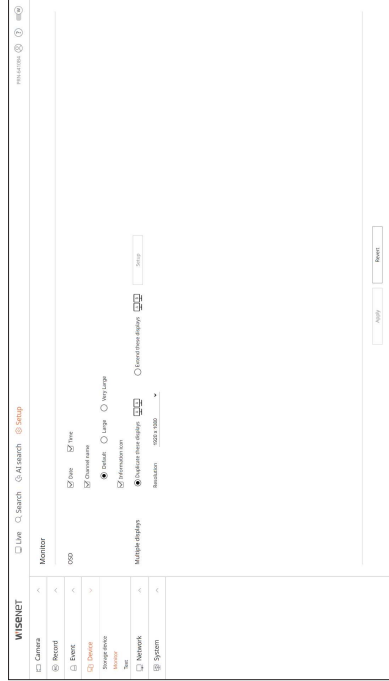
You can check the connection status and details of the hard disk mounted in the recorder.



Monitor

You can set the information displayed on the monitor as well as the output system.

Setup > Device > Monitor



- If the screen does not work properly, see “Troubleshooting (FAQ)” in the Appendix.
- The Monitor Setup settings control the monitor connected to the Recorder.
- Video exceeding the resolution of 1080p will not be displayed from the secondary monitor.

setup viewer

DDNS & P2P

A remote user can network a recorder using a DDNS address in a dynamic IP system. If you cannot connect with a dynamic IP, you can easily access using a P2P service.

Before using Wisenet DDNS & P2P, please set up the network connection and DDNS first.

Setup > Network > DDNS & P2P

WISENET

Live Search All search Setup

HTTPS

Camera

Record

Event

Device

Network

DDNS & P2P

IP Filtering

802.1x

P2P

System

Secure connection option

External domain

Internal domain

Public ID

Private ID

QR Code

Quick connectivity

Click Connect button

Public DDNS

Subdomain

Domain name

IP address

Port

Protocol

Save

Reset

IP Filtering

You can prepare the list of IP address to allow or block accesses to a specific IP address.

Setup > Network > IP filtering

WISENET

Live Search All search Setup

IP filtering

Camera

Record

Event

Device

Network

IP Filtering

802.1x

P2P

System

Filtering type

Allow

Deny

Block

Filtering list

IP address

Port

Protocol

1

On

On

On

2

On

On

On

3

On

On

On

4

On

On

On

5

On

On

On

6

On

On

On

7

On

On

On

8

On

On

On

9

On

On

On

10

On

On

On

Save

Reset

HTTPS

You can select a security connection system or install public certificates.

Setup > Network > HTTPS

WISENET

Live Search All search Setup

HTTPS

Camera

Record

Event

Device

Network

IP Filtering

802.1x

P2P

System

Secure connection option

External domain

Internal domain

Public ID

Private ID

QR Code

Quick connectivity

Click Connect button

Public DDNS

Subdomain

Domain name

IP address

Port

Protocol

Save

Reset



- While using HTTPS, if you want to switch to HTTP, then abnormal operation can take place as the browser contains to change the URL to HTTP and reconnect or initialize the cookie setting of the browser.

802.1x

When connecting to a network, you can select whether to use the 802.1x protocol and install a certificate.

Setup > Network > 802.1x

WISENET

Live Search All search Setup

802.1x

Camera

Record

Event

Device

Network

IP Filtering

802.1x

P2P

System

Network 1 (Camera)

Network 2 (Server)

Network 3 (Switch)

Save

Reset

setup viewer

SNMP

Using the SNMP protocol, the system or network administrator can remotely monitoring the network devices and sets the environment.

Setup > Network > SNMP

Camera

Record

Event

Device

Network

IP Address

Port

Protocol

System

SNMP

Enable SNMP v1

Enable SNMP v2c

Enable SNMP v3

Read community

Write community

Trap community

Enable SNMP traps

Trap address

Trap port

Live

Search

AI search

Setup

Network

Network 1 (Camera)

Network 2 (Server)

Network 3 (Switch)

Trap

Trap

Trap

Trap

Trap

Trap

Status

You can check the IP and MAC currently used through the DHCP server, and the connected

Camera

Record

Event

Device

Network

IP Address

Port

Protocol

System

DHCP server

IP Address

MAC

Device

Live

Search

AI search

Setup

Network

Network 1 (Camera)

Network 2 (Server)

Network 3 (Switch)

Trap

Trap

Trap

Trap

Trap

Trap

DHCP Server

You can set the network camera IP address and check the details by setting up a DHCP server.

Setup > Network > DHCP server

Network

You can set the internal DHCP server and assign an IP address to the network camera.

Camera

Record

Event

Device

Network

IP Address

Port

Protocol

System

Network

Network 1 (Camera)

Network 2 (Server)

Network 3 (Switch)

Trap

Trap

Trap

Trap

Trap

Trap

Live

Search

AI search

Setup

Network

Network 1 (Camera)

Network 2 (Server)

Network 3 (Switch)

Trap

Trap

Trap

Trap

Trap

Trap

Event log

The event log lists recorded events, such as sensor events, camera events, or image losses.

[illegible]

Export log

You can search the user who performed the export and the execution time and details (time, channel, device, file type).

[illegible]

export viewer

SEC BACKUP VIEWER

You can play a file that is backed up in the format of SEC.

Backup in SEC format produces backup data file, library file and self-executable viewer file.
If you run the backup file viewer, the backup data file will be played.

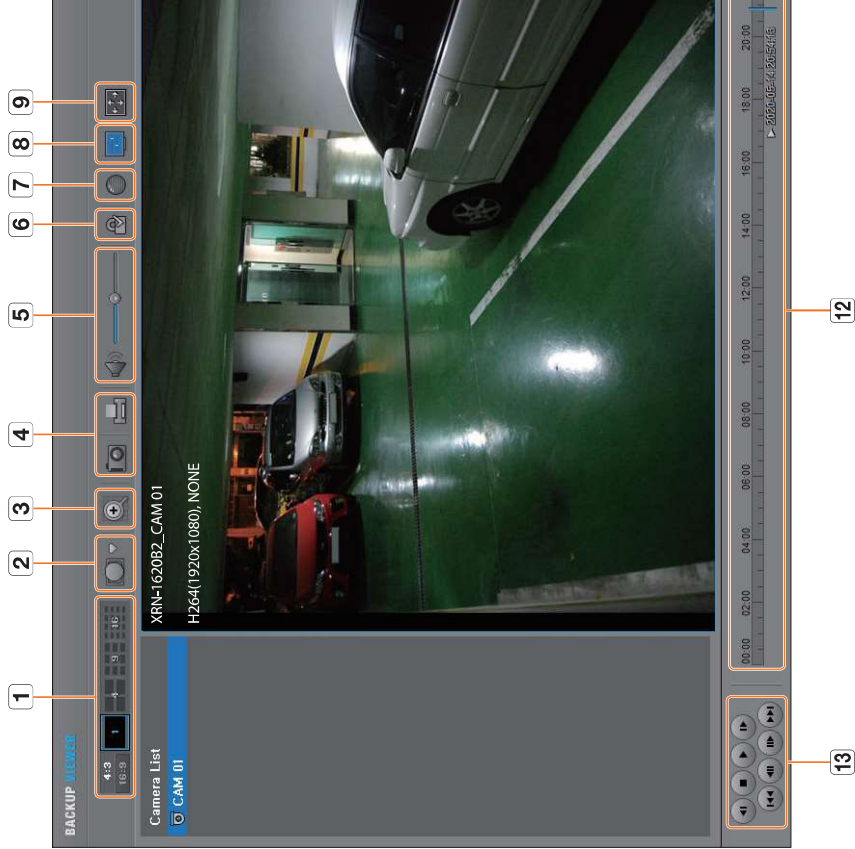
Recommended System Requirements

PCs with a lower specification than the recommended below may not fully support forward/backward and highspeed playback.

PC Specifications

Name	Minimum requirements	Recommended
CPU	Intel Pentium 2.5GHz or more	Intel i7(3.5GHz) or more
RAM	4GB or more	8GB or more
HDD	200GB or more	500GB or more
VGA memory	512MB or more	1GB or more
Display resolution	1280x1024 or higher	1920x1080 or higher
OS	Windows 7, 8, 10	

Screen Layout of the Backup Viewer



Name		Description
1	Split screen	Selects screen ratio to display. The screen is changed to a split screen.
	Fisheye view mode	If < > is pushed, it is possible to change to a fisheye installation view. If select wall/ground/ceiling mode according to the installation position. The fisheye view mode on the current screen can be changed in the installation position.
		Enlarge the image by up to 100 times as big as the current one. Press the Zoom In () button the enlarge the image; press the Zoom Out () button to shrink the image. You can also use the slide bar () to adjust the zoom.

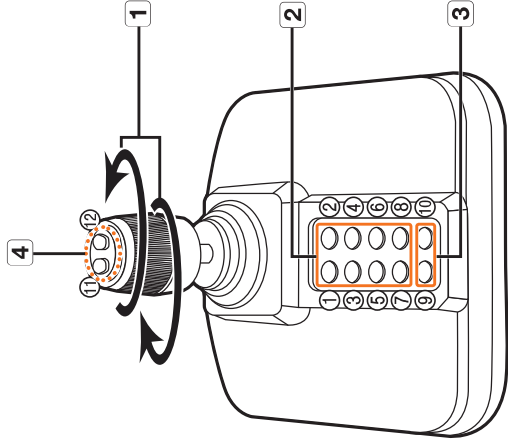
Name		Description
4	Screen Printout	 Saves the current video's image as in an image file. Supports JPEG file format.
		 Prints out the current screen. You should have installed the appropriate printer driver before you can print out the screen.
5	Audio	 A toggle button. Each time you press this button, the audio output will toggle between activated and deactivated.
		 You can adjust the volume level from 0 to 100.
6	Watermark	 Press the button to enable file tampering detection, to detect data file forging.
7	Deinterlace	 You can enable the De-interface function.
8	Show OSD	 Check the OSD checkbox to display the OSD information on the backup playback screen. Information such as backup date, day of the week, time, model name, and channel number will be displayed on the screen.
9	Maintain aspect ratio/Full screen	 Maintains the aspect ratio of the playback screen.
		 Plays the video on a full screen.
10	Enlarge/Reduce Timeline	 Collapses the time range that is displayed on the range bar of the storage time. You can collapse the range bar until the overall range is shortened to 24 hours.
		 Enlarges the time range that is displayed on the range bar of the storage time. You can enlarge the range bar until the overall range is extended to 1 minute.
11	Restore Timeline	 Restores the timeline to the default.
12	Display of storage time range	Displays the time range of a stored video file. You can move the gridline of the range bar to select a time point to play.
13	Playback Control	 You can adjust the video playback of the timeline.

appendix

USE JOYSTICK

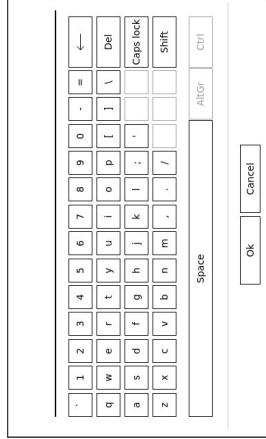
The function is only available for the product that supports a joystick. For products that support joysticks, refer to the "Functions Supported by Model" page.

The SPC-2000 joystick is operated as follows :



Name		Description
1	Up/Down/Left/Right	In PTZ mode, the camera can be panned, tilted, and controlled in 8 directions. The Web Viewer only supports the PTZ mode. In Screen mode, the top/bottom/left/right tile can be selected. When you press the Near/Far button while controlling with the joystick, you can perform control simultaneously.
	Rotation	In PTZ mode, the screen is zoomed in when it is rotated clockwise and zoomed out when it is rotated counterclockwise.
2	1~8	In PTZ mode, presets number 1~8 are run. Screen mode works as follows. 1 : Changing live layout / 2 : Search 3 : Export / 4 : Zoom mode 5 : Freeze mode / 6 : Audio 7 : Alarm / 8 : Rec
	9	It allows to exit PTZ mode in PTZ mode. The Web Viewer won't be able to stop the PTZ on its own. This is used to change to PTZ mode from screen mode.
3		It allows to exit PTZ mode in PTZ mode.

USING VIRTUAL KEYBOARD



- For alphanumeric inputs, the virtual keyboard window appears.
- Using a mouse, click on the desired character tab.
- Select **<OK>**.
Entered word is applied.
 - If you want to enter a special character or uppercase letters, select **<Caps lock>** or **<Shift>**.
 - Using the virtual keyboard is the same to a normal keyboard use in your region.
 - Your ID can contain any combination of upper/lowercase alphabet letters and numbers.
 - If the password length is 8 to 9 digits, you can combine at least three different types of the following characters : upper/lower and special characters.
 - If the password length is 10 digits or more, you can combine at least two different types of the following characters : upper/lower and special characters.

TROUBLESHOOTING

Problem	Action
Live video will be slow or cut off.	- The frame number set for multiple data transmission set in camera or network environment could differ from the actual rate of transmission. Click <  > at the bottom of the screen to check the number of incoming frames per channel and the actual number of frames played. When you register a camera, the Live4NVR profile will be created by default. If necessary, go to "Setup > Camera > Profile setup > Edit" and change the number of frames. - If you keep seeing video slow down or cut off, then check the network environment or camera condition. - Check if the power supply system is properly connected. - Check the system for the input voltage from the power source. - If the problem persists even after you have taken the above actions, check the power supplier and replace it with a new one if necessary. - Check inside if the cables are properly connected. (SMP5, FRONT)
The system does not turn on and the indicator on the front panel does not work at all.	- Check if the camera is properly supplied with power. - Check the state of the cable connected to the camera and reconnect it after replacing or disconnecting it. - Check the video output connecting the camera's Web Viewer. - Check if the network port is properly connected and the network setting is set correctly. - Change the hub supporting Gigabit, it may solves.
The video input is okay, but the videos of some channels are not properly displayed or are abnormally displayed (e.g. black screen, B/W screen).	This may occur from a problem with the main board, or the related software is corrupt. Contact the nearest service center for more information.
The screen displays the logo image repeatedly.	The Channel button does not work if the current screen is in the event monitoring mode.
The Channel button does not work on the Live screen.	Check if the channel and the date that you want to play are marked with the V symbol. Both channel and date should be checked before you can start playing with the Start button.
The cursor will not move to the Start button when I start the calendar search.	- Check if the necessary cables are connected to the monitor properly. - Some monitors do not support the Recorder output (HDMI1 or HDMI2/VGA). Check the monitor resolution. - HDMI1 : 3840x2160(30 Hz), 1080P, 720P, 1280x1024 - HDMI2/VGA : 1920x1080, 1280x720, 1280x1024, 1024x768 - Disconnect the monitor cable from the recorder, and connect again.
The screen of the connected monitor is displayed abnormally or not displayed at all.	The HDD may have problems. Visit your nearest customer service center to check the HDD.
Logo screen on bootup stalls in the <  > state.	Check the registered Camera if it support PTZ function.
No response controlling PTZ in the live viewer.	

Problem	Action
The camera is not connected or the PC fails to connect to the product.	- Check if the network cable is connected properly. - Ensure that you have set Network – Connection Mode. - Check the IP setting of the PC or camera. - Try the Ping Test. - Check if there is a different device near the product uses the same IP. - After registering a camera, a user need to edit/save the device mode and live screen fit for the setting appears.
I registered a camera, but the web viewer does not show live video.	Check the registered camera settings in "Setup > Camera
The input camera image is too bright or too dark.	This message is displayed if there occurs a problem with the camera or an error in the clock itself. Contact the retailer or the service center for more information.
The time setup window will pop up.	The timeline can switch between normal and extension mode. In extension mode, the time bar may not be displayed in the normal mode or use the left or right button to navigate the timeline.
The time bar is not displayed in Search mode.	- If you do not format your purchased HDD at all or in a format other than NTFS, the "NO HDD" icon () will be displayed at the top left. When you click the "NO HDD" icon, the message "NO HDD" will be displayed to "Setup > Device > Storage device" and check the HDD format. - If the problem persists in a normal condition, contact the nearest service center or contact the service personnel.
I have installed an additional HDD on the Recorder but it does not recognize the HDD.	See the compatibility list to check if the additional HDD is supported by the Recorder. For the compatibility list, contact the nearest service center or contact the service personnel.
I have connected an external storage device (USB Memory, USB HDD) to the Recorder but the Recorder seems not to recognize it.	See the compatibility list of external storage devices to check if the external storage device is supported by the Recorder. For the compatibility list, contact the nearest service center or contact the service personnel.
If I press the ESC key in full screen mode of the Web Viewer, the system does not switch to a normal split mode.	Press the ALT+TAB keys to select ACTIVE MOVIE and press the ESC key to switch to a normal split mode.
It is difficult to configure the network for default search, export, and router use.	- For more information, refer to the user manual. - If you want to check the basics of the product for a quick start (export, search). - If you use the router for network connection, refer to the "Configure Network" of the Quick Guide.
I forgot the password.	Contact the Recorder administrator for help.

appendix

Problem	Action
Exported data cannot be played on a PC or recorder.	- When setting the file format for exporting, first decide whether the device to be played is a PC or a recorder before setting. - When playing on a PC, the export file format must be SEC. - When playing on a recorder, the export file format must be recorder.
Recording does not work.	- If your player does not display a Live image at all, that indicates recording does not work so first check if you see an image on the screen. - Recording does not work if the recording settings are not properly configured. Scheduled Record : Specify a desired time in "Setup > Record > Record schedule". Recording will start at the specified time. - Continuous : Recording will proceed in any conditions at the specified time. - Event : When an event occurs, recording will perform only if the event is of alarm, motion detection and video loss. If there is no event found, recording will not perform. - Continuous/Event : If there is no event found, continuous recording will perform. Whereas, if an event occurs, event recording will perform. - Increase the resolution and quality level in "Setup > Camera > Profile setup > Record". - Resolution : Select a bigger size when specifying the recording size. The recording image in the CIF format shows a deteriorated quality as it is enlarged from a small-sized image. - Frame rate : Set the level of frame rate high. - If you increase the resolution and the recording quality, the data size increases accordingly. So the HDD will be filled faster. Overwriting will overwrite the existing data so recording will proceed at a shorter interval.
Frame rate of the actual recording does not match that of configured to the camera.	If multiple profiles were applied to one camera for video transmission, the actual video stream can be serviced by the camera at a lower frame rate than specified. Configure your camera to use one profile for data streaming as possible. For example, if you set the same profile for recording and network profiles, the actual recording is made at the specified frame rate. Still, live video display using split-screen mode may apply yet another profile to camera in accordance with the used screen mode. Note that allowed limit bitrate for recording / recording settings should be set to be bigger values than that of camera's feed.
In the recording setting screen, the permitted level for a specific channel is displayed in orange.	- If the input data is greater than the permitted level for each channel, it is displayed in orange. Set the permitted data limit to higher than the amount of input data. - If the sum of input data for each channel exceeds the limit, the alarm icon will be displayed. In this case, the channel exceeding the input limit does not record the entire frame, but it records the main frame only (one or two per sec).

Problem	Action
In the live screen, the  icon is displayed and the message window saying "Record data size exceeded limitation. Only key frames are recorded. Please check the record settings." pops up.	- If the sum of input data for each channel exceeds the limit, the window will be displayed. In this case, the channel exceeding the entire frame, but it records the main frame only (one or two per sec). - Set the permitted data limit to higher than the amount of input data in the "Record > Record setup" menu.
Recording is not performed in accordance with the settings.	If the recording status displays "Exceeds the maximum hard disk recording size according to the recording performance specification. For details, refer to the "Setup > Setting the Recording" page.
The recording screen will slow down.	- Check whether the recording performance specifications for each actual recording settings. For details, refer to the "Setup > Setting the Recording" page. - If the data volume of a video exceeds the playing performance specification.
If recording loss persists continuously	- Reset the camera recording profile to let the entire recording performance for each HDD condition. For details, refer to the "Setup > Setting the Recording" page. - Check the HDD status and determine whether inspection or replacement is required. For details, refer to the "Setup > Setting the Device > Storage of Contents".
When registering your camera in PnP mode, if the camera doesn't get registered but the logo keeps loading attempting access.	- If your camera is using a manual IP, the IP bandwidth might not match the bandwidth of the recorder. Please set it to the identical IP bandwidth. - If your camera is in DHCP mode, see if the Network 1 port is functioning properly on the recorder.

