Hanwha Vision

Wisenet Viewer

User Manual

VER 1.04

CE

About the User Manual

This document contains the instructions for the operator of the **Wisenet Viewer** program. Please read this User Manual before using the product to ensure correct usage.

- This manual explains how to use the product based on the default values and the default screens.
- The information in this manual may vary, depending on the product's software update and our policies, and is subject to change without notice to the user.

About Target Readers

This manual contains information for the operator using **Wisenet Viewer** program.

About Product Usage

Users of this product can perform the following operations:

- Monitoring the network devices registered at **Wisenet Viewer** in real time;
- Searching or playing the videos saved in the network recorders;
- Monitoring the real-time events that occurred in the network devices or searching the event logs.

Before using this product, please make sure that the product is the latest software version. You can visit Hanwha Vision's product homepage (**http://www.HanwhaVision.com**) to check and download the latest software version.

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Wisenet Viewer Introduction

Wisenet Viewer is a viewer program that can monitor and control the video of a device connected to a network through a PC in real time. You can search and play real-time events and recorded videos and save the videos as files on your PC.

Features

- **Putting registered devices and web pages into groups and setting them as layouts**

  You can group devices connected to your network and place each tile in the desired space to save it as a layout. Moreover, you can register a web page and monitor it along with your devices.

- **Monitoring real-time videos with dynamic layouts**

  If you enable the dynamic layout function to control and place tiles with a mouse, you can monitor the real-time video received on devices with any desired location or size.

- **Searching and playing saved videos by date/event/object**

  You can search and play videos by selecting saved regular/event videos by a specific date, event type, or object type.

- **Saving real-time videos or recorded videos to PC as files**

  You can save real-time videos or recorded videos as files on your PC.

- **Searching system/event/audit logs**

  You can search log data, such as event or program usage history, and save it as a file.

- **Managing events according to event rules**

  You can check the events detected in a device by applying the preset event rules.

- **Managing permissions by user group**

  If you set permissions by user group, the users that belong to the group can use only the menus they have permissions for.

Term Descriptions

It describes the terms needed for using Wisenet Viewer.

Item	Description
Layout	This is a function that can place several devices on each tile and monitor them all at once.
Bookmark	This is a function that marks specific parts of recorded videos saved on your device.
Tile	This is the area where a single video is displayed. It can display real-time videos, recorded videos, web pages, or images from a device.
Event	This means a function that sets rules and alerts when specific changes occur on the videos and the device.
Device	This means network video surveillance devices, such as NVR, network camera, etc.

Installing Wisenet Viewer

To install Wisenet Viewer, you must download the installation program from the Hanwha Vision homepage.
Please run the program after checking the hardware specs and OS version of the PC you will install Wisenet Viewer on.

System Requirements

Before installing Wisenet Viewer, check system requirements.
If the minimum requirements are not met, the program may not function Properly.

Item	Minimum requirements	Recommended requirements
CPU	Intel i3 or faster, Apple M1	Intel i7-11700 2.5GHz or faster
RAM	4 GB higher	16 GB higher
HDD	200 GB higher	200 GB higher
VGA	512 MB higher (OpenGL 2.1 support is required)	NVIDIA T600 (OpenGL 2.1 support is required)
LAN	1 GB NIC recommended	1 GB NIC recommended
Monitor	1366x768	FHD, 4K supported(High DPI Display), Multi monitors support
OS	Windows 8.1/10/11 64 bit macOS 11.0 / 12.0 / 13.0 Ubuntu 22.04 LTS/ 20.04 LTS	

NOTE

- The supported OS will be displayed when installing on Windows OS.
  The supported OS will not be displayed on macOS because it does not have an installer.
- You can install the program on an unsupported OS version of Windows and macOS, but the program may not function properly.
- Be aware of the following when using an Apple M1 CPU:
  - Rosetta 2 is required to run the program.
  - If you run Wisenet Viewer after rebooting your PC or installing Rosetta 2, it may run slowly.

Downloading and Installing

Download the Wisenet Viewer installer and install Wisenet Viewer on your PC.

https://www.hanwhavision.com/en/products/surveillance-software/viewer/

Starting Wisenet Viewer

When the Wisenet Viewer installation finishes, you must run the program to set up the login information.
Look through standard screen composition before enabling the program.

Running Wisenet Viewer

When the Wisenet Viewer installation finishes, you can run the program.

Launching via the Shortcut Icon

Double-click **Wisenet Viewer** program on your home screen.

Launching via the Start Menu

Select ⊞ > **Wisenet Viewer**.

NOTE

When running Wisenet Viewer on any Mac OS for the first time, the License Agreement window will appear. Select **I accept the license.** and click **OK**.

- Users that do not agree to the license agreement are not allowed to access Wisenet Viewer.

Setting up a Wisenet Viewer Administrator Password

After launching Wisenet Viewer, you must set an admin password.

1. Select the desired language from the Language options below.
2. After the **Set administrator password** window appears, enter a password.

- Password registration conditions are as follows:
  - If your password length is between 8 and 9 characters, you must use 3 of the following: upper and lower case letters, numbers, and special characters.
  - If your password length is 10 or more characters, you must use 2 of the following: upper and lower case letters, numbers, and special letters.
  - Your ID may not be used as the password.
  - There is no limit on using special characters.
  - You cannot use four or more consecutive characters (e.g., 1234, abcd).
  - You cannot use the same character 4 or more times consecutively (e.g., !!!!, 1111, abcd).
  - You cannot use the space characters.

3. Re-enter your password.
4. Select the **OK** button.

NOTE

- If you forget your password, you cannot reset it. Make sure to keep a record of your password.
- If you forget your password, you must reinstall Wisenet Viewer.
- For more information on changing a password, refer to Changing User/Group Information (page 101).

Logging in to Wisenet Viewer

When the Wisenet Viewer login screen appears, log in by entering ID and password.

1. Enter ID and Password.

2. Select the **Login** button.

NOTE

- If **Save ID** is checked, your ID information will be saved.
- If **Auto login** is checked, you will be automatically logged in when you open the program.

Checking Screen Components

After logging in to Wisenet Viewer, you will see the standard screen. The Wisenet Viewer screen consists of the following:

No.	Screen Configuration	Detailed Description on Functions
❶	**Layout Tab**	You can check the currently open Layout tab.
❷	**Function Button Panel**	You can adjust video, audio, and search events of a recorded video. Moreover, you can use various functions provided by Wisenet Viewer, such as registering the device or setting up the user environment. • ⋮ appears if you hover the mouse over the function button panel. If you click ⋮, you can edit the items that display on the panel.
❸	**Resource Tree**	You can check the device, web viewer, and media file registered on Wisenet Viewer. You can also search for a device or set it as a group.
❹	**Layout Tree**	You can create a layout to register, change the name, or enable the lock function. You can also save the registered layout as a sequence.
❺	**Timeline Panel**	You can see the timeline of a saved video by selecting Play mode. You can also select and save the desired part of a video during playback.
❻	**Layout Panel**	You can monitor video shot by a camera connected to a recorder in real time and control the video by tile.
❼	**Event Panel**	• Event Tab: You can check and search an event happening on a device in real time. • Bookmark Tab: You can check and open the bookmarks on the list.
❽	**Information/alarm display**	You can use the system alarm provided by Wisenet Viewer or the control function of Wisenet Viewer.

Layout Tab

If you right-click the mouse button on the Layout tab to use viewed its detailed menu.
After clicking and dragging the Open layout tab, you can change the tab order.

- If you click + on the right side of the Layout tab, a Layout tab will be added.
- If you click × on an open Layout tab, it will be closed.
- If components of the layout change, the * icon will appear next to the layout name. If you close a tab without saving the layout, changes will not be saved.

■ Layout Tab Shortcuts

New tab	Open a new Layout tab. Press Ctrl + N on the keyboard to open a new Layout tab.
New window	Open a Layout tab in a new window.
Save layout as...	Save the current layout with a different name. Press F12 to save the layout with a different name.
Save layout	Save changes to the current layout. Press Ctrl+S to save changes to the current layout.
Close	Close the current Layout tab. Press Ctrl+W to close the current Layout tab.
Close other tabs	Close every tab except the currently selected Layout tab.

Function Buttons

You can enable the following functions by clicking the function buttons.

	Search	You can select a search menu.
	Event search	You can search events in videos by date or event type.
	AI search	You can search AI event videos by date or object type.
	Smart search	You can search event videos by Include area, Exclude area, and Virtual line.
	Masking video	You can set privacy masking areas on a recorded video to protect privacy or to hide areas that you don't want to display. To use privacy masking, activate a video masking license. In case of activation, the **Video masking** button appears.
	Settings	You can set up program usage environment, such as device registration, user registration, event rules, etc. You can search for a specific menu option or function to open directly through the search box on the Settings page.
	Register	• Auto register: Search and register devices connected to the network automatically. • DDNS/P2P register: Register by entering the product ID and login information of devices connected to the network.
	Priority alarm	If an priority alarm event occurs while the event tab is closed, the icon will be activated. If you click the icon, you can check real-time events on the Event Tab.
	Volume	You can adjust the volume of a video.
	Full screen	It displays videos on the layout in full screen mode. Press F11 to exit full screen mode.
	Remove all video	Remove all videos from the selected layout.
	Channel name	Displays channel names on every video tile.
	Status	On the video tile, display video information, such as the Codec, resolution, and fps.

NOTE

⋮ appears on the right of the panel if you hover the mouse over the function button panel. If you click ⋮, you can select or unselect the items that display on the panel.

Resource Tree

In the Resource tree, you can register devices and web pages, and browse saved video files. You can also search the registered devices or create groups to manage.

For more information on creating and managing groups, refer to Managing Groups (page 40).

- **Root**: You can check devices registered on Wisenet Viewer, along with the web page. You can assign registered devices to a group and register them.
- **Media file**: You can check saved video files in the media file folder. You cannot add video files to the Root group but can create a group by adding them to a layout.

■ Device Icons

Channel		• : This is displayed when a camera of a recorder is connected. • : This is displayed when a camera of a recorder is disconnected.
	Web page	When a web page is registered, it is displayed at the bottom of the Root item.
	Media file	If image or video files are stored in the storage folder, it is displayed at the bottom of the Media Files item. • : Displays video files saved in the save folder. • : Displays Image files saved in the save folder.

NOTE

For more information on checking the media file folder, refer to Changing the Media File Folder Path (page 52).

Layout Tree

On the Layout tree, you can configure and register a layout, and change or delete a registered layout.

For more information on how to add and manage a layout, refer to Using Layouts (page 68).

You can also save the registered layout as a sequence. For more information on sequence settings, refer to Setting up Sequences (page 91).

Timeline Panel

On the Timeline panel, you can search and play saved videos. You can also save videos as files.

- If you select a video file saved on PC after adding it to the tile, you can control playback on the timeline.

■ Playing Recorded Videos

You can search videos saved in devices by date or event type and play them. For more information on video playback, refer to Controlling Playback (page 146).

■ Using the Shortcut Menu

After right-clicking the top of the timeline while playing a video, you can use the Shortcut menu. For more information on the timeline shortcut menu, refer to Timeline (page 143).

Layout panel

You can monitor the video coming from device and control the video via tiles. If a tile is selected, it will be marked with an orange line.

You can monitor the items of the resource tree or layout tree after adding them to the layout tree by dragging or double-clicking them. You can also add video or image files saved on your PC by dragging them with a mouse.

For more information on video control and shortcut menu, refer to Checking Layout Videos (page 76).

- You can add and delete devices or file items in the Layout panel.
  - Adding and deleting the videos of the channels registered on the resource tree
  - Adding and deleting video/image files saved in the designated folder of your PC
  - Adding and deleting the web page registered in the resource tree
- You can change the location or size of the video tile displayed on the Layout panel. Also, you can use various functions in the Shortcut menu of the grid or tile.
  - After selecting the tile, drag to move its location
  - After selecting the empty tile, drag to select several videos at once
  - Video control, such as brightness, focus, PTZ from the Shortcut menu of the tile
  - Spin your mouse wheel to zoom in or out on the grid
  - Select the **Autofit** button to use the automatic size fit function

Event Panel

On the Event panel, you can check real-time events and the bookmark list.

■ Using the Event Tab

When a new event occurs, it will be added to the Event list in real time. You can search event by channel or event type. For more information on using the Event tab, refer to Monitoring Real-Time Events (page 125).

■ Using the Bookmark Tab

You can check the bookmark list. You can search bookmarks by date or channel. For more information on using the Bookmark tab, refer to Using Bookmarks (page 165).

Information/Alarm Display

You can use the information/alarm display function provided by the program to control the window.

	CPU/RAM Usage	You can check the performance of your PC. • CPU: Displays the current CPU usage of your PC. • RAM: Displays the current memory usage of your PC. • The icon color changes depending on the CPU/RAM usage of your PC. – 0-60%: Gray, 60-90%: Yellow, Over 90%: Red
	Notification	If a system notification occurs, the icon will activate. If a notification occurs, the alarm history will be displayed below the information/alarm display icon. You can check the details by pressing the activated icon. • Right-click on the notification history and select **Clear** to clear all notifications. Select **Settings** to go back to the Notification settings page.
	User information	You can check the ID of the user who logged in. Clicking **Logout** will log out the current user.
	Help	You can find help for Wisenet Viewer. Clicking the icon will open the help screen.
	Screen minimization	You can minimize the Wisenet Viewer screen.
	Screen maximization	You can maximize the Wisenet Viewer screen.
	Exit	You can exit Wisenet Viewer. If you click **Exit program** on the exit confirmation window, it will be closed.

Checking the System Status

If a device or system error occurs while using Wisenet Viewer, the notification icon will be displayed in red.
When the notification icon is displayed, please check the error details and take the necessary action.

- **Power error**

Item	Description
Dual power system failure	There is problem with the power. Check the power LED.

- **Fan error**

Item	Description
Fan error	The fan is not working properly. Check the fan connection status.
CPU fan error	The CPU fan is not working properly. Check the CPU fan connection status.
Frame fan error	The frame fan is not working properly. Check the frame fan connection status.
Left fan error	The left fan is not working properly. Check the left fan connection status.
Right fan error	The right fan is not working properly. Check the right fan connection status.

- **Record error**

Item	Description
Disk full	Cannot save video because the disk is full. Check the disc status.
SD card is full	Cannot save because the SD card is full. Check the SD card status.
NAS full	Cannot save because the NAS is full. Check the disc status.
No disk	There is no HDD connected. Check the device.
Disc failed	There is a problem with the HDD. Check the HDD status.
SD card failed	There is a problem with the SD card. Check the SD card status.
NAS failed	There is a problem with NAS. Check the NAS status.
Disk error	There is a problem with the HDD. Check the HDD status.
RAID degraded	There is a problem with an HDD installed on the RAID. Check the HDD status.
RAID rebuilding	Recovering the Degrade status array in RAID.
RAID error	Due to disk error or RAID configuration problem, the RAID arrangement cannot be enabled anymore. Check the RAID status.
iSCSI disconnected	Check the iSCSI connection status.
NAS disconnected	Check the NAS connection status.
Allowed bitrate exceeded	Since the amount of data that can be saved per channel has been exceeded, only I-frame will be saved. Check the save setting.
Record error	Due to a camera issue, there was a problem saving the video. Check the camera status.

- **Overload**

Item	Description
Retransmission overload	During remote transmission, the amount of data exceeded the device's transmission bandwidth. Some channels are played on I-frame. Please reduce the number of users or channels to monitor.
Network traffic overload	
CPU overload	There has been a system overload. Please limit the number of users to monitor through remote control at the web viewers or VMS or adjust the number of channels played remotely or on a recorder.
VPU error	
Memory error	

- **Connection related**

Item	Description
Connected	Connected to device.
Disconnected	Playback ended due to network quality decline.
	User canceled connection.
	There is a problem with the device connection. Please check the network or device status.
	There is a problem with the device authentication information. Check the device authentication information.

- **Firmware related**

Item	Description
Latest firmware available	There is a software update on the update server. Upgrade to the latest version.
Firmware upgrade	Firmware is being upgraded. You cannot play video during the upgrade.

- **Alarm input related**

Item	Description
Alarm input	An alarm input error has occurred.

Shortcut Keys

This describes the keyboard shortcut available in Wisenet Viewer.

Item	Windows	MAC
Display the name change window of the resource tree and layout tree item	F2 * Enter: Close after applying changes ESC: Close	F2 * Enter: Close after applying changes ESC: Close
Run Autofit	F5	Command + R
Switch to full screen/window mode	F11	Control + Command + F
Opening media files	Ctrl + O	Command + O
Opening a new Layout tab	Ctrl + N	Command + N
Saving a layout	Ctrl + S	Command + S
Saving a layout with a different name	F12	Ctrl + Shift + S
Closing a Layout tab	Ctrl + W	Command + W
Delete selection	Delete or Backspace	Del
Play/pause	Space Bar	Space Bar
Reverse	Ctrl + [←]	Command + [←]
Forward	Ctrl + [→]	Command + [→]
Zoom in on the timeline	Ctrl + [↑] or [+]	Command + [↑] or Command + [+]
Zoom out on the timeline	Ctrl + [↓] or [-]	Command + [↓] or Command + [-]
Previous event	z	z
Next event	x	x

Managing Devices

You can assign the devices registered on Wisenet Viewer to a group and manage them. You can also update or back up the firmware of the registered device.

Registering Devices

You can enable the following three methods to register devices on Wisenet Viewer.

- **Auto registration**

  Search and register the devices connected to the network automatically.

- **Manual registration**

  Register by directly entering the network information of the device.

- **DDNS & P2P registration**

  Register by entering the product ID of the device.

Automatic Registration

You can automatically register the device connected to the network on Wisenet Viewer.

■ **Registering via the Function Button**

1. Click the button in the Function button and select **Auto register**.
2. Once the Information input window is displayed, enter the device login ID and password.
3. Select the **OK** button.

- If the ID/password information is not registered on Wisenet Viewer, the Login information input window will appear.
  If ID/password information is registered, the device automatically registered in the Root item will be displayed.
- If **Save ID and password** is checked, your login information will be saved.

■ **Registering via the Resource Tree**

1. Right-click the Root item of the resource tree.
2. Select **Auto register** in the Shortcut menu.

- If the ID/password information is not registered on Wisenet Viewer, the Login information input window will appear.
- The devices registered on the Root are displayed. Once a device is registered, a group will be created with the name of the device, and the connected channel will also be displayed.

NOTE

If you select **Add device** in the Shortcut menu, you can register the device from the Add device window.

■ Registering via the Setup Menu

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Device** > **Device List**.
   - Select **Add device** at the bottom of the main Setup page to open the Add device window directly.
3. Select **Add**.

4. When the **Add device** window is displayed, select **Auto** tab.

5. Check the device to register from list.
6. Enter the ID and password of the device.
   - If the device is not detected, select **Refresh**.
   - **Initial password**: Enter the device's initial password.
     If **Save ID and password** is checked, the ID and password will be saved on Wisenet Viewer.
   - **IP configuration**: Change network information, such as the IP and port of the searched device.

- Devices with the same ID and password can be selected and registered simultaneously.

7. Select the **Register** button.

- If the device is not registered, an error message will be displayed on the Status column.
- If the device is registered, **Success** will be displayed on the Status column.

8. To close the **Add device** window, select the **Close** button.

Registering Manually

You can register by directly entering device information in Wisenet Viewer.

■ Registering via the Resource Tree

1. Right-click the **Root** item of the Resource tree.
2. Select **Add device** in the Shortcut menu.

3. When the **Setup** menu's **Add device** screen appears, select the **Manual** tab.

4. Enter the information of the device to register.
5. Select the **Register** button.

6. To close the **Add device** window, select the **Close** button.

■ Registering via the Setup Menu

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Device** > **Device List**.
   - Select **Add device** at the bottom of the main Setup page to open the Add device window directly.

3. Select **Add**.

4. When **Add device** appears, select the **Manual** tab.

5. Enter the IP type of the device to register and the login information.
   - **IP type**: Select the IP type of the device.
     - **IPv4**: Enter the IP in IPv4 format.
     - **IPv4+SSL**: Enter the IPv4/SSL.
     - **IPv6**: Enter the IP in IPv6 format.
     - **IPv6+SSL**: Enter the IPv6/SSL.
     - **URL**: Enter the URL.
     - **URL+SSL**: Enter the URL/SSL.
     - **DDNS/P2P**: Enter the product ID, and select whether to use DTLS.

- **ID/Password**: Enter the ID and password of the device. If **Save ID and password** is checked, your login information will be saved.
- **IP**: Enter the start/end range for the IP.
  Within the IP range you specified, you can register several devices at once.
- **Port**: Enter the port information for the selected IP type.

NOTE

IPv6 is supported only on Windows OS.

6. Select the **Register** button.

- If the device is not registered, an error message will be displayed on the Status column.
- Once device registration is complete, **Success** will be displayed on the Status column.

7. To close the **Add device** window, select the **Close** button.

Registering as DDNS/P2P

You can enter a product ID to register a device on Wisenet Viewer.

■ Checking the Product ID

If you set up a DDNS address on a connected recorder, the product ID information that can be remotely connected will be displayed.

1. In the recorder's **Setup** > **Network** > **IP & Port** > **Port** menu, set **Protocol type** to **TCP**.
2. In the recorder's **Setup** > **Network** menu, set the **Wisenet DDNS & P2P** item to **Enable**.

NOTE

To use the Quick connect function, connect the recorder to the UPnP router and set the **Quick connect(UPnP)** item to **Enable**.

■ Registering via the Function Button

1. Click the button in the Function button and select **DDNS & P2P register**.
2. Once the Information input window is displayed, enter the product ID, device login ID and password, and select whether to use DTLS.
3. Select the **Register** button.

■ Registering via the Resource Tree

1. Right-click the **Root** item of the Resource tree.
2. Select **DDNS & P2P register** in the Shortcut menu.

3. Once the Registration window is displayed, enter the product ID, your ID, and password, and select whether to use DTLS.
4. Select the **Register** button.

■ Registering via the Setup Menu

When adding a device manually, you can select **DDNS/P2P** for the IP type and register it.

For more detail, please refer to Registering Manually (page 34).

Managing Groups

You can arrange registered channels or web pages as groups via the Resource tree. You can change channels in a group, move them to a different group, or delete a group.

If several devices are in a group, the channels included in the group can be moved or deleted simultaneously.

NOTE

Only users with administrator rights can create and manage groups.

Using the Group Shortcut Menu

Once a group is created, you can use the following menu.

	Open	You can open the selected group on the current Layout tab.
	Open in new window	You can open the selected group in a new window.
	Edit	You can change the name of the selected group.
	Remove	You can delete the selected group.
Add group		You can add a low rank group within the current group.
Expand all		You can expand all the details of groups and media files contained in the root item.
Collapse all		You can hide all the details of groups and media files contained in the root item.

Creating Groups

You can allocate registered devices and web pages to create groups.

NOTE

Media file videos cannot be added to a group.

■ Forming Groups

1. Right-click the Resource tree's Root or group item that is already created.
2. Select **Add group** in the Shortcut menu.

3. Once a group is created, drag the registered device or web page to the group item. An arrow will be displayed under the cursor.

- Channels that are added to a group are automatically arranged by name.

NOTE

- You can add a low-rank group in the Shortcut menu of the group item. If you create a low rank group, you can separate and manage channels assigned to devices.
- If there are many registered channels, enter the channel name in the search bar, and the channels will be displayed.

■ Changing Group Names

1. Right-click the Resource tree's group.
2. Select the button in the Shortcut menu.
   - You can change the name by selecting a group and pressing the F2 key.
     For more information on using the shortcut keys, refer to Shortcut Keys (page 30).
3. Change the name in the pop-up window and click the **OK** button.

Deleting Groups

You can delete created groups.

1. Right-click the Resource tree's group item.
2. Select the button in the Shortcut menu.
   - If a group is deleted, the included channels move below the Root.
     Low-rank groups included in the deleted groups are deleted together, and the channels move below the Root.

Managing Channels

You can move channels assigned to a group or release them from a group. You can also change the settings information of the selected channel or search for an event.

Using the Channel Shortcut Menu

	Open	You can open the selected channel in the current Layout tab.
	Open in new window	You can open the selected channel in a new window.
	Edit	You can change the name of the selected channel.
	Remove	You can delete the selected channel.
	Settings	You can check and change the channel settings information.
Move to		You can move the selected channel to a different group.
Ungroup		You can release the selected channel from the current group.
Event search		You can search events that happened in the selected channel.
NVR settings		You can check and change the settings of the recorder that includes the selected channel.
Event log		You can search the event log of the selected channel.

Export video	You can save the recorded videos of the selected channel.
Connect	You can connect a recorder to the selected channel.
Disconnect	You can disconnect the recorder from the selected channel.
Expand all	You can expand all the details of groups and media files contained in the root item.
Collapse all	You can hide all the details of groups and media files contained in the root item.

Moving Channels

You can move a channel assigned to a group to another group or release it from the group.

■ Moving Channels to Another Group

1. Right-click the Channel item of the resource tree.
2. Select **Move to** in the Shortcut menu.
3. Select a group to move within the group list.

- The channel moves to the selected group. Channels that are moved are automatically arranged by name.

■ **Releasing Channels from Groups**

1. Right-click the Channel item of the resource tree.
2. Select **Ungroup** in the Shortcut menu.
   - Channels that are released from groups move below Root.

Changing Channel Names

1. Right-click the Channel item of the resource tree.
2. Select the button in the Shortcut menu.
   - You can also change the name by selecting a channel and pressing the F2 key.
     For more information on using the shortcut keys, refer to Shortcut Keys (page 30).
3. Change the name in the pop-up window and click the **OK** button.

NOTE

If you change the channel name at the Resource tree, it will apply to **Setup** > **Device** > **Device list**.

Deleting Channels

1. Right-click the Channel item of the resource tree.
2. Select the button in the Shortcut menu.

NOTE

If the channel is deleted from the Resource tree, the saved layout will also be deleted. To register a deleted channel again, check **Enable** of **Activate** in the **Setup** > **Device** > **Device list**.

Setting up Channels

You can check the detailed information of the channel registered on Wisenet Viewer and change the desired information.

> **NOTE**
> On Wisenet Viewer, you can only change certain settings of the registered channels. You can change the detailed settings of a recorder from the web viewer of a connected device.

■ Checking Channel Information

1. Right-click the Channel item of the resource tree.
2. Select the ⚙ button in the Shortcut menu.
3. When the **Settings** window is displayed, select **Device** > **Device List**.
4. Choose the desired channel.
   Check settings information when device information is displayed.

- **Channel name**: Displays the name of the selected channel. You can customize the name.
- **Channel number**: Displays the number of the selected channel.
- **Activate**: Use Choose whether to use a channel. If **Enable** is unchecked, the channel will not be displayed on the Resource tree.
- **Fisheye dewarping**: Select whether to correct fisheye warping in videos.
  This capability is only available with cameras that support fisheye view.
  - **Mount**: Select the mounting mode from **Ceiling**/**Wall**/**Ground**.
  - **Fisheye camera model**: Select the Fisheye camera model.

- **Primary profile/Secondary profile**: Select the video's primary/secondary profile.
  - **Codec**: Displays codec information of the video.
  - **Resolution**: Displays resolution information of the video.
  - **Frame rate**: Displays frame rate information of the video.
  - **Bitrate**: Displays bitrate information of the video.

NOTE

Enabling fisheye dewarping on a channel disables the PTZ icon on the Screen Control menu.
Running the fisheye view mode enables PTZ functionality in the Single, Quad, or Panorama mode.

■ Changing Channel Information

1. Right-click the Channel item of the resource tree.
2. Select the ⚙ button in the Shortcut menu.
3. When the **Settings** window is displayed, select **Device** > **Device List**.
4. Select a channel and change the settings information.

- The detailed information on devices can be changed on recorders, and the items that can't be changed only show the settings values.

5. Select the **Apply** button.
   - Changed results will be displayed in the top-right part of the screen.

Managing Web Pages

You can enter a URL to register a web page. A registered web page can be assigned to a video tile to be monitored.

Registering Web Pages

1. Right-click the Root item of the resource tree.
2. Select **Add web page** in the Shortcut menu.

3. When the **New Web page** window is displayed, enter the information of the web page to register.

- **Name**: Enter the name of a web page to register on the Resource tree.
- **URL**: Enter the web page address.
- **Digest authentication**: Enter the web page's ID and password. If you check **Enable**, it will automatically log in when assigning a web page to a tile.

4. Select the **OK** button.

- The web page will be displayed below Root. To assign a registered web page to a group, drag it and add it.

Changing Web Page Names

1. Right-click the Web page item of the resource tree.
2. Select the button in the Shortcut menu.
   - You can also change the name by selecting a web page and pressing the F2 key.
     For more information on using the shortcut keys, refer to Shortcut Keys (page 30).
3. Change the name in the pop-up window and click the **OK** button.

Deleting Web Pages

1. Right-click the Web page item of the resource tree.
2. Select the button in the Shortcut menu.

Setting up Web Pages

The registered web page will be displayed on the assigned tile. When a web page is displayed on a video tile, you can zoom in and out on the web page within the tile and use the refresh function. You can also change and save registered web page information.

- —: You can zoom out on the web page ratio.
- **Web page ratio**: You can check the current web page ratio.
- +: You can zoom in on the web page ratio.
- : You can refresh the web page.
- ✕: You can close the web page tile. If the tile is closed, the layout will be deleted.

NOTE

When a video tile is assigned a webpage, right-click on it to access the shortcut menu options.

- **Full screen**: You can see the current layout in full screen.
- **Show in web browser**: You can browse the webpage through a web browser.
- **Back**: Move to the next page.
- **Forward**: Move back to the previous page.
- **Reload**: You can refresh the web page.
- **200%/100%/75%/50%**: You can select the ratio in which to display the web page.

■ Changing Web Page Information

1. Right-click the Web page item of the resource tree.
2. Select the ⚙ button in the Shortcut menu.
3. Change to desired information in the **Edit Web page** window.
4. Select the **OK** button.

Checking Media Files

You can bring the image or the video file saved on your PC and check it on Wisenet Viewer.

Changing the Media File Folder Path

You can change the folder the media file is saved in. Images captured or videos recorded at Wisenet Viewer are saved in the media file folder, and the images or videos that will be used in Wisenet Viewer can be saved here as well.

NOTE

- In Media File in the Resource tree, only video files with formats supported by Wisenet Viewer will be displayed.
- Videos or images added by directly dragging the saved files from PC are not displayed on the Media File of the resource tree.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window appears, select **System** > **Local Settings**.
3. When the **Local settings** window is displayed, select **Change** in the **Media file folder** item.

4. Set desired path in the **Select folder** window and click **Select folder**.

5. Select the **Apply** button.

6. Select the **Close** button on the confirmation window.

NOTE

- After changing the path of the media file folder, Wisenet Viewer must restart to display the video or image files in the changed folder at the bottom of the Root item.
- The Media file folder's file list is automatically updated.

Allocating Media Files

You can drag video or image files to directly allocate them to a tile. You can also arrange and save layouts.

NOTE

Here are the media file types that you can check on Wisenet Viewer: Files that are not supported may not work properly.

- Video: mkv, avi, mp4, wisenet media file(wnm), SEC
  - Video codec: H264, H265, MJPEG
  - Audio codec: AAC, G.711, G.726
- Image: png, jpeg, jpg, bmp

■ Adding Video/Image File via the Resource Tree

Drag a video file displayed on the Media File item of the Resource tree to add to a tile.

■ Adding Video/Image File from PC

Drag video or image files saved on your PC to add them to a tile.

NOTE

- If you select the **Open Media File** from the shortcut menu, which appears when right-clicking on an empty tile in the grid, you can add media files to the tile.
  Or, you can press Ctrl + O on the empty tile to add media files.
- If any video file has been assigned to a tile, you can configure the fisheye settings with the shortcut menu. You can enable the fisheye mode and select the type and mount to apply.
- If the tile with an assigned media file ends, it will be deleted from the layout.

■ Verifying the digital signature of the WNM video file

When saving a WNM video by adding a digital signature, the digital signature of the video can be verified.

1. Select a WNM file at the bottom of a media file on the resource tree, and right-click it.
2. Select **Verifying digital signature** in the Shortcut menu.
   - When verification is complete, **Verification has been completed** will be displayed in the upper right corner of the screen.
   - The icon of the file will be changed after the verification of the digital signature is completed. You can check whether the file has been tampered with by the selected file's icon.
     - **File tampered**: An authentication certificate is included since the digital signature function was used when exporting the video. However, the file has been abnormally altered and the authentication information cannot be verified.
     - **Verification complete**: An authentication certificate is included since the digital signature function was used when exporting the video, and the authentication information has been verified.
     - **No authentication**: The file does not include an authentication certificate since the digital signature function was not used when exporting the video, so it is impossible to determine whether the file has been tampered with.

NOTE

To save a WNM file with a digital signature, select **Enable** on the digital signature menu when exporting the video. For more information on exporting videos, refer to Exporting Recorded Videos (page 152).

Managing Devices

You can change and search device information registered on Wisenet Viewer.

Setting up Devices

You can check the detailed information of devices registered on Wisenet Viewer and change the settings.

NOTE

You can only change certain device settings in Wisenet Viewer. To change the detailed settings of a device, change them on the device or the web viewer.

■ Checking Device Information

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Device** > **Device List**.
3. Select the desired device.
   Check settings information when device information is displayed.

- **Device name**: Displays the name of the selected Device. You can customize the name.
  - Retrieve device name: Change the device/channel names in Wisenet Viewer to those set in the device.
- **GUID**: Displays the GUID of the selected device.
- **Model**: Displays the model name of the device.
- **Version**: Displays the firmware version of the device.
- **MAC address**: Displays the MAC address of the device.
- **Device certificate**: Displays the authentication information of the device.

- **Connected type**: Displays the network connection type of the device.
- **Network**: You can select the network type and change the information.
- **Port**: You can change the port information.
- **Streaming protocol**: You can change the streaming protocol of a device.
- **Connection**: You can select whether to use a device. If **Enable** is unchecked, it will not be displayed on the Resource tree.
- **Authentication**: If you select **Change**, you can check the device's ID/password in the pop-up window.
- **Web viewer**: If you select **Open**, you can check the device's web viewer in a new window.

NOTE

If several devices are selected, only the streaming protocol, the connection, and the authorization item will be displayed.

■ Changing Device Information

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Device** > **Device List**.
3. Select a device and change the settings information.

- The detailed information on devices can be changed on recorders, and the items that can't be changed only show the settings values.

4. Select the **Apply** button.
   - Changed results will be displayed in the top-right part of the screen.

Deleting Devices

You can delete the device registered in Wisenet Viewer.

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Device** > **Device List**.
3. After selecting a device, select **Delete**.

4. Select the **OK** button on the deletion confirmation window.
   - If you check **Don't ask again**, the confirmation window will not be displayed when deleting the device.
     However, when you restart the Wisenet Viewer, the delete confirmation window will be displayed again.
   - The results will be displayed in the top-right part of the screen.

NOTE

If a device is deleted, every device and channel allocated to the group/layout will be deleted.

Searching Devices

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Device** > **Device List**.
3. If you enter a name to search on the search bar of the **Device list** window, only the corresponding item will be displayed.

Updating Firmware

You can update the firmware of devices and cameras registered on Wisenet Viewer. Once connected with the network, you can check the latest version of the firmware by linking it with the update server, and proceed with the update.

NOTE

The sublist camera item is displayed on the bottom of the said device only when the device supports the camera firmware update.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **Device** > **Maintenance**.
3. Select the **Firmware upgrade** tab.

4. Select a device to update.

- If you check **Applied to the same model**, this firmware will be applied so that multiple devices

of the same model can be updated simultaneously. Even if the same firmware is applied, it does not apply when the device model is different.

5. Select ⓐ.

6. Select a firmware file and click the **Open** button.
7. Select the **Update** button.
   - Firmware update progress status will be displayed on the Status column.
   - When the firmware update is complete, **Success** will be displayed on the Status column.

NOTE

The items displayed in the Status column are as follows:

- **Success**: This is displayed when a device's firmware update is completed properly.
- **Update failed**: This is displayed when a firmware update is not completed properly.
- **Incompatible file**: This is displayed when a selected firmware update file is incompatible with a device.
- **Failed**: This is displayed when there is no response from a device or there is no update progress due to a network connection error.

Backing up Devices

You can save the backup file of the device registered on Wisenet Viewer to your PC.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **Device** > **Maintenance**.
3. Select the **Backup** tab.

4. Select a device to back up.

5. Select the **Backup** button.

6. Set up a path to save the backup file to and select the **Select folder** button.
7. Enter a backup password if the password input window appears.
8. Select the **OK** button.

- The password input window appears if a device that supports encryption is connected.
- The password that is entered when saving a backup file needs to be entered when restoring the device with the backup file.
- The device backup file is in .dat format and the backup file is saved in the folder that you select.
- When device backup is complete, **Success** will be displayed on the Status column.

NOTE

The items displayed in the Status column are as follows:

- **Success**: This is displayed when a device's backup file is saved properly.
- **Failed**: This is displayed when a device's backup file is not saved properly.

Restoring Devices

You can use a backup file stored on your PC to restore a device.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **Device** > **Maintenance**.
3. Select the **Restore** tab.

4. Select a device to restore.

- If you check **Applied to the same model**, you can restore multiple devices of the same model with the backup file applied simultaneously.

5. Select ⓐ.

- When restoring a device, you can apply the .bin or .dat format for the backup file.

6. Select a backup file and click the **Open** button.

7. Select the **Restore** button.

8. Enter a backup password if the password input window appears.
9. Select the **OK** button.

- The password input window appears if a device that supports encryption is connected.
- Device restoration status will be displayed on the Status column.
- Once device restoration is complete, **Success** will be displayed on the Status column.

NOTE

The items displayed in the Status column are as follows:

- **Success**: This is displayed when device restoration is complete.
- **Incompatible file**: This is displayed when the selected restored file is incompatible with the device.
- **Failed**: This is displayed when there is no response from the device or device restoration is stopped due to a network connection error.

Changing Device Passwords

You can change the password of devices registered on Wisenet Viewer.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **Device** > **Maintenance**.
3. Select the **Change password** tab.

4. Select a device to change the password.

- If you select several devices and change their passwords all at once, it will apply to all selected devices.

5. Enter the device's current password.

6. Enter the password you want to change.
   Enter the same password in the **Confirm password** field again.

7. Select the **Change** button.

Using Layouts

You can use a dynamic layout to freely customize the size of a video tile and move it. With it, you can configure a device, web page, video, or image registered on Wisenet Viewer with the desired layout. You can also operate an efficient monitoring system with a map layout in which the device is placed on a floor plan of a specific place.

When monitoring real-time video or playing recorded video, a user can use various control menus to change the settings.

Using Dynamic Layouts

With Wisenet Viewer, you can use dynamic layouts that allow smooth video tile size change and movement. You can use your mouse wheel on a grid to change the size and number of a tile quickly. You can also use the Autofit function to automatically adjust the tile size. This explains how to use dynamic layouts.

Adding Channels to Grids

You can add one or several devices to a grid simultaneously. A video tile is automatically added to the grid that functions as a starting point. Video tiles will be added from left to right and from top to bottom.

1 channel assignment

2 channels assignment

3 channels assignment

4 channels assignment

5 channels assignment

16 channels assignment

64 channels assignment

Dragging a device over a grid will make video be automatically added to an empty tile.
When added to an empty tile, it will be added from the right and bottom.

NOTE

A grid is created, depending on video ratio that the user sets via a Layout tab. For more information on the Layout tab Shortcut menu, refer to Using the Grid Shortcut Menu (page 84).

Moving Channels

You can freely move channels added to a grid and place it. You can drag a video to an empty tile to move it. If you drag it to a tile with a video added, the locations of the two tiles will change.

You can also zoom in on the tile size to move it. If you drag it to a tile with a video added, the existing tile will move to a different location, and the enlarged tile will take its place.

Changing the Video Tile Size

You can zoom in and out of a tile size of video added to a grid. If you move your mouse to video tile, the size change arrow will be displayed. You can freely change the tile size by dragging the arrow up and down, left and right, and diagonally.

You can maximize the tile to fit the Layout screen by double-clicking it.

Using Autofit

You can scroll your mouse wheel to zoom in or out on the grid. The Autofit button is displayed on top-right of the layout during this time. Select the Autofit button, and the current layout's entire video will be automatically adjusted to be viewed at a glance.

Zoom Out

Run Autofit

NOTE

To move to a different location on the grid, drag while right-clicking.

Creating Layouts

You can arrange several devices, web pages, videos, or images categorized according to the purpose or the convenience of the monitoring person into one layout to monitor it easily and quickly.

1. Right-click the **Layout** item in the Layout tree.
2. In the Shortcut menu, select **New layout**.

3. If a layout is created, drag the desired device or web page from the Resource panel on the created layout item.
   An arrow will be displayed under the cursor.

- You can also drag channels registered on the grid of the current layout to add them.
  For more information on channel allocation, refer to Adding Channels (page 73).

4. When a Channel is added, the video will be displayed on the grid.

NOTE

You can also create a layout by saving it on the Layout tab.

Adding Channels

If a layout is created, you can add web pages, videos, images, or Channel registered in the Resource tree to the layout.

■ Adding Channels to Layout

You can drag the desired channel from the Resource tree to add it to a created layout item or a grid. You can also drag one or several channel simultaneously to add them to a layout.

Assigning Layout Tree's Layout

Select one or several channels from the Resource tree and drag them on the Layout item of the Layout tree. If an arrow is displayed on the cursor, drag it to the desired layout.

If you add the channel by dragging it to the layout, the change history will be automatically saved.

Assigning to Grids

Select one or several channels from the Resource tree and drag them to an empty tile in the grid.

- To select several items from the Channel list, press Shift while selecting them.
  To select several separated individual items, press Ctrl while selecting them.

■ Adding Web Pages to Layouts

Select a web page registered in the Resource tree. Then, drag it to an empty tile or a saved Layout item.

■ Adding Video Files to Layouts

Select a video file of **Media file** from the Resource tree. Then, drag it to an empty tile or a saved Layout item.

- You can also add a video file to a layout by selecting **Open media file** from the Shortcut menu in an empty tile.

■ Adding Image Files to Layouts

To add an image file to the tile, you must select or drag a file from the folder it's saved in.

Arranging Map Layouts

You can set image files, such as maps or floor plans, as wallpapers and place other channels included in the layout in any location.

1. Drag an image file to add in to a tile.
2. In the tile's Shortcut menu, select **Set as background image**.
3. After adjusting an image to the desired size, place the tile on an image.

4. In the Shortcut menu of the layout, select **Save layout**.
   - Layout changes are not automatically saved. Save changes before exiting the program.

Checking Layout Videos

You can arrange channels with the desired layout to monitor a real-time video or play a recorded video. You can use various functions, such as setting video resolution by using the Screen control menu and Shortcut menu or controlling the PTZ mode.

Using the Screen Control Menu

If a video is displayed on a layout, you can control the screen by each tile. You can use the PTZ mode and zoom in and out on the video. You can also save or capture a video of the channel on your PC.

No.	Screen Configuration	Detailed Description on Functions
❶	Channel information	The channel name and live status are displayed.
❷	Remove video	Remove the current video.
❸	Video control function	• : You can monitor in various modes by correcting fisheye warping. • : You can control the PTZ mode and set up a preset. • : With digital zoom, you can zoom in on video and see new tiles. • : You can adjust the video's focus. • : You can adjust the brightness and contrast of a video or set it to the initial value. • : You can display and change the video profile settings of the current channel. • : You can save a real-time video on your PC. • : You can capture a video as a png file and save it. • : You can output the audio to the channel selected as the camera's microphone.

■ Fisheye dewarping

When a fisheye-enabled camera is connected, you can use dewarping correction for monitoring in various modes. By assigning the corrected screens to multiple tiles and saving them as layouts, you can monitor the entire site at the same time.

- Fisheye view

  You can view all the fisheye videos.
  Selecting the Crop function will display the enlarged, warping-corrected screens in an unoccupied tile. You can select the crop areas and angles you desire for monitoring.

  – Selecting the Fisheye view mode disables PTZ mode.

- Single view

  You can view fisheye images on a single screen.
  PTZ mode allows you to move between and zoom in on images by dragging on them or scrolling with the mouse.

- Quad view

  You can view the fisheye images on quadrant screens.
  PTZ mode allows you to move between and zoom in on images by dragging on them or scrolling with the mouse.

- Panorama view

  You can view fisheye images on a panoramic screen.
  PTZ mode allows you to move between images you're monitoring by dragging with the mouse.

  – Selecting the **Wall** mount type displays a panoramic image on a single screen, while the **Ceiling/Ground** mount type doubles the displays.

NOTE

- This is only available for registered cameras that support the fisheye view.
- When you assign a video file to a channel and play it, you can select **Fisheye settings** to set the type and mount type.

■ Controlling PTZ mode

NOTE

- When the fisheye dewarping feature is enabled, the PTZ mode control icon is not displayed.
- PTZ mode control is available in the Single, Quad, or Panorama fisheye view mode.
- Depending on the camera's performance, only some PTZ functions may be available.

- **Controlling PTZ video direction**

  If you select ✥ and move the cursor on the screen, the direction keys will be displayed. You can click the direction keys to control the video's direction. You can also select ⊕ and drag it to the desired direction to move quickly.

- **Zoom in the PTZ video**

  You can use your mouse wheel on the PTZ screen to zoom in and out on the video. You can use the ⊕ / ⊖ buttons on the right to zoom in and out on images.

- **Setting up PTZ preset**

  After selecting ✥, click **Preset**. You can select a preset from the PTZ list to apply.

- **Adding PTZ presets**

  1. After selecting ✥, click **Preset**.
  2. Select **Add** in the PTZ list.
  3. Enter the preset number and name in the pop-up window and select **Apply**.

- **Deleting PTZ presets**

  1. After selecting ✥, click **Preset**.
  2. Select 🗑 in the PTZ list.

- **Controlling PTZ Swing**
  1. After selecting ✥, click **Swing**.
  2. Select a function on the list. (Pan/Tilt/PanTilt)
  3. Select **Start** or **Stop** to run.
- **Controlling PTZ Group**
  1. After selecting ✥, click **Group**.
  2. Select **Start** or **Stop** to run.
- **Controlling PTZ Tour**
  1. After selecting ✥, click **Tour**.
  2. Select **Start** or **Stop** to run.
- **Controlling PTZ Tracking**
  1. After selecting ✥, click **Tracking**.
  2. Select **Start** or **Stop** to run.

NOTE

From preset number/To preset number is displayed on the preset items when controlling a PTZ function. However, the preset number may not display depending on the firmware version of the recorder connected to Wisenet Viewer.

■ Setting up the Focus

- **Near**

  Set the focus closer.
- **Far**

  Set the focus farther away.
- **Auto focus**

  Set the focus automatically.

NOTE

The auto focus function may not be supported depending on the camera specs.

■ Setting up Video Brightness/Contrast

- **Brightness**

  Adjust the video brightness by selecting -/+.

- **Contrast**

  Adjust the video contrast by selecting -/+.

- **Reset**

  Set the brightness and contrast of a video to their initial values.

■ Zoom in on Video with Crop

If you select , it will zoom in on the video in the empty tile.

Every time you select in a video, the enlarged videos will be constantly created in other tiles. If there are several cropped videos, they can be distinguished by their colors, and the last cropped video created is located at the top of the screen. You can also adjust the size of the crop area and check it on the zoomed-in screen.

■ Saving Real-time Video

If you select REC, the real-time video will be saved in the designated folder on your PC.

If you select REC one more time, **Video file saved** will be displayed at the top of the screen when the recording ends.

- If you select **Open folder**, you can open the folder with the saved file.

NOTE

The location of the folder in which the recorded video is saved can be checked at **Setup** > **System** > **Local settings**.

Video will be automatically saved in the My Documents folder path of a PC: <C:/User/user/Documents>
For more information on changing the video save folder, refer to Setting up the Local Save File Location (page 175).

■ Saving Captured Screens

If you select , you can capture a video as a png file and save it.

When capturing is complete, **Image file saved** will be displayed at the top of the screen.

- If you select **Open folder**, you can open the folder with the saved file.

NOTE

You can check the location of the folder in which a captured image is saved at **Setup** > **System** > **Local settings**.

■ Using the Microphone

You can select 🎙 to output audio with the channel's microphone.

NOTE

- To use a microphone, select the audio item and set it as **On** in the **Setup** > **Camera** > **Channel Setup** of the registered recorder.
- Only the users belonging to a user group with the microphone control permission can use the microphone.
- You cannot use the microphone if the PC does not support audio input or the channel's camera does not support the microphone function.

Using the Shortcut Menu

When monitoring or playing videos from the Layout tab, it explains the Shortcut menu that can be used in a grid or tile.

■ Using the Grid Shortcut Menu

If you set the Shortcut menu on a grid, it will be applied to every tile.

Autofit	It automatically adjusts and displays the tile size to put the current layout's entire video at a glance. If you use the mouse wheel on a grid to zoom in and out on a video, the **Autofit** button will be displayed on the top-right. If you use your mouse wheel to zoom in and out on the video with the Autofit function on, the Autofit function will automatically be canceled. To use the Autofit function, press the F5 key.
Full screen	You can see the current layout in full screen. You can also display a video in full screen by selecting [ ] from the Function button panel. Press F11 to exit full screen.
Save layout	You can save the current layout. Press Ctrl + S keys on the keyboard to save the layout.
Save layout as...	You can save the current layout with a different name. Press F12 to save the layout with a different name.
Open media file	You can bring files from the folder the image or video is saved in to a tile. To open a media file, press Ctrl + O and select the desired file.

Lock	You can lock the current layout settings to prevent them from being changed.
Fill in	You can select a tile's video display mode. • Stretch: Displays the video received from a device according to tile ratio. • Keep aspect ratio: Displays on tile according to the ratio of the video received from a device.
Video profile	You can select a video profile. • Auto: Automatically changes and displays a profile based on the size of the video tile. • Primary profile: Displays according to the primary profile settings of the video. • Secondary profile: Displays according to the secondary profile settings of the video.
Grid ratio	You can select a tile's video ratio.
Status	You can display a tile's video information.

■ Using the Tile Shortcut Menu

You can use Shortcut menu in each tile.

Full screen	You can see the current layout in full screen. You can also display a video in full screen by selecting [ ] from the Function button panel. Press F11 to exit full screen.

Brightness/Contrast	You can adjust the brightness and contrast of a video or set them to their initial values.
Rotate	You can rotate a video. • If the channel assigned in the tile has fisheye dewarping enabled, the Rotate menu will not be displayed.
Fill in	You can select a tile's video display mode.
Video profile	You can select a video profile.
PTZ preset	You can set up a PTZ preset. For more information on PTZ preset registration, refer to Controlling PTZ mode (page 79). • If the channel assigned in the tile has fisheye dewarping enabled, the PTZ preset menu will not be displayed.
Focus	You can set the video's focus. For more information on the video focus settings, refer to Setting up the Focus (page 80).
NVR settings	You can set it in detail by channel, such as channel activation and profile settings. For more information on channel settings, refer to Changing Channel Information (page 47).
Event rules	You can check the currently applied event rules and add or delete them. For more information on event rule settings, refer to Adding Event Rules (page 110) or Managing Event Rules (page 116).
Status	You can display a tile's video information.

Checking Videos

You can select a channel from the Resource tree or choose a saved layout to monitor the real-time video of the channel registered at Wisenet Viewer and play the recorded video. You can also add image or video files saved in your PC to the layout and check them.

■ Tile Status Icon

WISENET	This is displayed when a video is not assigned to the tile.
	This is displayed when a video is being loaded on the tile.
	This is displayed when the device is not receiving a real-time video.
	This is displayed when a video saved on a device or PC is not playing.
	This is displayed when the user does not have playback permissions.
	This is displayed when the number of concurrent users is exceeded.
	This is displayed when a connection to the device is lost.
Input password	This is displayed when assigning a media file with a password set. A video will not be displayed when an incorrect password is entered.

■ Selecting Channels from Resource Tree and Checking Video

You can drag the desired channel from the Resource tree to add to the tile and check the video.

- For more information on channel allocation, refer to Adding Channels (page 73).

■ Selecting Layouts and Checking Videos

If you double-click a layout saved in the Layout tree, the Layout tab will open. You can check the video of several Channel in a layout from a grid at a glance.

■ Checking Video in Full Screen

If you select [ ] among the function buttons, you can see the selected layout in full screen.

- To end full screen, press F11 or cancel Full Screen from the grid or tile Shortcut menu. For more information on using the shortcut keys, refer to Shortcut Keys (page 30).

Managing Layouts

Watcher can set the desired video for its intended use and convenience as a layout and monitor it. Watcher can also change and save layout settings and manage them by using the lock function so that settings cannot be changed.

Using the Layout Lock Function

You can use the lock function so that the settings, such as moving the video tile location of the layout, deleting the tile, or allocating the video, cannot be changed.

■ Locking Layouts

1. Right-click the Layout item in the Layout tree.
2. In the Shortcut menu, select **Lock**.

NOTE

- If the lock function is set, **Layout locked.** will be displayed on top of the video tile.
- If layout lock is set, the layout cannot be saved. To save a layout, unlock it first.

■ Unlocking Layouts

1. Right-click the Layout item in the Layout tree.
2. Select **Unlock** in the Shortcut menu.

Changing Layout Names

1. Right-click the Layout item in the Layout tree.
2. Select the button in the Shortcut menu.
   - You can also change the name by selecting a layout and pressing the F2 key.
     For more information on using the shortcut keys, refer to Shortcut Keys (page 30).
3. Change the name in the pop-up window and click the **OK** button.

Saving a layout

If you have changed the tile composition of a layout or an individual tile's size, save the changed layout before closing the Layout tab or Wisenet Viewer. If layout settings are changed, * will be displayed next to a layout.

1. Change the video tile's composition from the current layout.
2. Right-click the Layout item in the Layout tree.
3. In the Shortcut menu, select **Save layout**.

NOTE

- You can also save the layout by selecting **Save layout** in the Shortcut menu of the Layout tab.
- To save a changed layout with a different name, select **Save layout as…** from the Shortcut menu.

Deleting Layouts

1. Right-click the Layout item in the Layout tree.
2. Select the button in the Shortcut menu.

Using Sequences

You can set up a sequence by grouping the points that need periodic monitoring in a layout. When operating the set sequence, the layout will automatically switch according to the regular time intervals, resulting in more efficient monitoring.

Setting up Sequences

You can select a registered layout and set a sequence.

1. Right-click on the sequence item in the layout tree.
2. Select **New sequence** in the Shortcut menu.

3. When a new sequence window is displayed, enter a sequence name.

4. Select ⊕ to add a layout and set the intervals.
   - **Select layout**: Select the registered layout.
   - **Interval**: Set the switching time of the layout list. You can select a range of 5-60 seconds.
   - The list switches in the order where the layout has been added. Click the ∧ / ∨ on the right to change the order of the layouts.
   - You can delete the layout by selecting ⊖.
5. Select the **OK** button.

Executing Sequences

Select a sequence of your choice from the sequence list of the layout tree to start monitoring in a new layout tab.

- **Play**: Play the selected sequence.
- **Stop**: Stop playing the sequence.
- **Open in a new tab**: Play the selected sequence in a new tab.
- **Edit sequence**: Edit the layout or interval of the selected sequence.

NOTE

- The layout is locked so the channels cannot be added or repositioned on the layout tab where the sequence is running. To edit the layout included in the sequence, change the layout and reset the sequence.
- On the layout video of the sequence, some functions, including the on-screen control menu and Shortcut to grid and tile functions, are not available.

Editing Sequences

You can change the layout list or interval of the set sequence.

1. Select on the sequence control menu at the bottom of the layout tree.
2. Change the desired information in the **Edit sequence** window.

3. Select the **OK** button.

Changing Sequence Names

1. Right-click on the sequence item in the layout tree.
2. Select the button in the Shortcut menu.
   - You can change the name by selecting a sequence and pressing the F2 key.
     For more information on using the shortcut keys, refer to Shortcut Keys (page 30).
3. Change the name in the pop-up window and click the **OK** button.

Deleting Sequences

1. Right-click on the sequence item in the layout tree.
2. Select the button in the Shortcut menu.

Setting up Users

You can add user groups to Wisenet Viewer or set the authority for a user group. You can also edit or delete the information of a registered user or group and connect to the LDAP (Lightweight Directory Access Protocol) server to add users.

Adding Users

You can enter user information to add an account.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window is displayed, select **User** > **User list**.
   - Select **Add user** at the bottom of the main Setup page to open the Add user window directly.
3. Select **Add**.

4. If **Add user** window is displayed, enter the user information.

- **ID**: Enter the user ID.
- **Password**: Enter the password.
- **Name**: Enter the user name.
- **E-mail**: Enter the e-mail address of a user.
- **Description**: Enter a description of the user.
- **Group**: Select a group to register the user to. For more information on adding a user group, refer to Adding User Groups (page 97).
  - If you select **New user group**, you can add a new group to set up a group name and register users. When a new group is added, you can select their permissions, resources, or Shared layouts.
- **Group name**: The selected group name is displayed.
- **Permission**: Displays the permissions of the selected group.
  - **Playback**: Users of the group can search and play saved videos.
  - **Export video**: Users of the group can save the recorded videos they searched as files to a PC. You must select the playback item to select the video export permission.
  - **Local recording**: Users of the group can save real-time video.
  - **PTZ control**: Users of the group can control the PTZ mode of real-time videos.
  - **Audio**: Users of the group can control the sound.
  - **Microphone**: Users in the group can control the microphone.
  - **Setup**: An authority to set system. Only available for the administrator group.
- **Resources**: Displays the resource list that users of group can access. Only the users belonging to the group can access the selected Resources.
- **Shared layout**: Displays the Layout list that users of group can access. Only the users belonging to the group can access the selected Layouts.

NOTE

When a user is added to a group that is already registered, the added user is set with the same permission, resources, and shared layouts of that group.

5. Select the **OK** button.

NOTE

The admin account is a basic administrator right and its ID, group, and permission cannot be changed.

Adding User Groups

You can add user groups.

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **User** > **User group**.
   - Select **Add user group** at the bottom of the main Setup page to open the Add user group window directly.
3. Select **Add**.

4. When the **Add user group** window is displayed, select the group information.

- **Group name**: Enter the group name.

- **Permission**: Select the group's permissions. Users in the group can only use authorized menus, and all users assigned to the group are given the same access.
  - **Playback**: Users of the group can search and play saved videos.
  - **Export video**: Users of the group can save the recorded videos they searched as files to a PC.
  - **Local recording**: Users of the group can save real-time video.
  - **PTZ control**: Users of the group can control the PTZ mode of real-time videos.
  - **Audio:** Users of the group can control the sound.
  - **Microphone**: Users in the group can control the microphone.
  - **Setup**: An authority to set system. Only available for the administrator group.
- **Resources**: Displays the resource list that users of group can access.
  - If you select **All devices**, you can access all the devices registered on Wisenet Viewer.
- **Shared layout**: Displays the Layout list that users of group can access.

5. Select the **OK** button.

NOTE

To use an authorized microphone function, select the audio item as **On** in **Setup** > **Camera** > **Channel Setup** on the registered recorder. If the microphone function is activated, will be displayed on the video tile.

Managing Users and Groups

You can change or delete registered user/group information.

Checking User/Group Lists

You can check registered users or user groups.

■ Checking User Lists

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window is displayed, select **User** > **User list**.
3. The registered user list is displayed.

- You can check registered user information. If you click the top of a list's column, it will be arranged in ascending/descending order automatically.
- **ID**: Enter the user ID.
- **LDAP**: An icon is displayed on the LDAP item if a user is registered with the information that is brought from the LDAP server.
- **Name**: Displays the user name.
- **Group name**: Displays the name of the group the user belongs to.
- **E-mail**: Displays the e-mail address of a user.
- **Description**: Displays the detailed description entered during user registration.

■ Checking User Group List

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **User** > **User group**.
3. The registered user group list is displayed.

- You can check the registered user group. If you click the top of a list's column, it will be arranged in ascending/descending order automatically.
- **User group**: Displays the user group name.
- **Permission**: Displays the authority granted to the user group.
  - When you select all the detailed permissions, **All permissions** will be displayed. When a specific permission is selected, its icon will be displayed.
  - : Users of the group can search and play saved videos.
  - : Users of the group can save the recorded videos they searched as files to a PC.
  - : Users of the group can save real-time video.
  - : Users of the group can control the PTZ mode of real-time videos.
  - : Users of the group can control the sound.
  - : Users in the group can control the microphone.
- **Resources**: Displays the Resource item the user group can access.
  - When you select all the devices registered in the Root, **All devices** will be displayed. When specific channels are selected, the number of selected channels will be displayed.
- **Layout**: Displays the Layout item the user group can access.
  - When you select a layout, the name of the selected layout will be displayed. When multiple layouts are selected, the number of selected layouts will be displayed.

Changing User/Group Information

You can change the information of a registered user or user group.

■ Changing User Information

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window is displayed, select **User** > **User list**.
3. Double-click the desired user from user list.

4. When the **Edit user** window is displayed, change the information.

- You can change the user group of a user in the Group item.
  If you select **New user group**, you can add a new group to set up a group name and register users. When a new group is added, you can select their permissions, resources, or layouts.
- You have to enter the password item to save the change history.
- For more information on adding users, refer to Adding Users (page 95).

5. Select the **OK** button.

> **NOTE**
> The admin account is an administrator account that can use all the functions. You cannot set its Group, Resource, and Shared layout items, but only the password, name, and description items.

■ Changing User Group Information

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **User** > **User group**.
3. Double-click the desired group from the user group list.

4. When the **Edit user group** window is displayed, change the information.

- For more information on adding a user group, refer to Adding User Groups (page 97).

5. Select the **OK** button.

NOTE

The group administrator can use all the functions, so its group permissions cannot be changed.

Deleting Users/Groups

You can delete registered a user or user group.

NOTE

The admin accounts and administrator groups cannot be deleted.

■ Deleting Users

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window is displayed, select **User** > **User list**.
3. After selecting a user, select **Delete**.

4. Select the **OK** button on the deletion confirmation window.
   - The results will be displayed in the top-right part of the screen.

■ Deleting Users Groups

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **User** > **User group**.
3. After selecting a user group, select **Delete**.

4. Select the **OK** button on the deletion confirmation window.
   - The results will be displayed in the top-right part of the screen.

NOTE

If a user group is deleted, the user information included in the group will also be deleted.

Using LDAP

LDAP (Lightweight Directory Access Protocol) is a directory service that can save users, files, or device information into a tree structure to search on the network and it is used when managing certain data in the datacenter simultaneously.

In Wisenet Viewer, you can assign user roles and access permission by bringing user information that already exists in the LDAP server.

NOTE

The LDAP servers that can be connected to Wisenet Viewer are as follows:

- Microsoft Active Directory
- Open LDAP Server

Connecting an LDAP Server

You can connect Wisenet Viewer and a server by entering LDAP server information.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **User** > **LDAP**.
3. Enter LDAP server information to connect if the **LDAP** window appears.

- **Server URL**: Enter the LDAP server URL.
- **Administrator DN**: Enter the DN (Distinguished Name) of the LDAP server administrator account.
- **Password**: Enter the password of the LDAP server administrator account.
- **Search base**: Enter the DN of a group to load user information from the LDAP server.
- **Search filter (optional)**: If a certain attribute value is specified, it is reflected and displayed in the user search results from the LDAP server.

4. Select the **Apply** button.
5. Select the **OK** button if the server connection result window appears.
   - The number of registered users on the server appears in the result window if the server connection is successful.
   - A failure message is displayed in the result window if the server connection fails.

NOTE

All registered LDAP user ID information is deleted if the LDAP server information is changed.

- The existing ID information deletion notification pop-up window appears if the LDAP user changes the LDAP server information while logged in. The LDAP user should log in with the newly registered LDAP ID from the next login.

Adding LDAP Users

You can add users registered on the LDAP server as Wisenet Viewer users. Users can log in to Wisenet Viewer with the LDAP ID and password.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **User** > **LDAP**.
3. Enter the LDAP server information to load user information.
4. Select the **Apply** button.

   User information is displayed on the right table if the server is connected.

5. Select the user to register in Wisenet Viewer on the user list.

- **ID**: Displays user ID information.
- **Name**: Displays user name.
- **E-mail**: Displays user email.
- **DN**: Displays the user's DN (Distinguished Name).
- Select the user group to register from the list at the bottom of the screen.

6. Select the **Register** button.

NOTE

ⓘ is displayed next to the user name if the same ID is already registered in Wisenet Viewer or you want to register the same user again.

- The user information overwrite confirmation window appears if you want to register the same user again.

Monitoring events

If a change in a video or device is detected and a preset event happens, it will alert the watcher about the event status with various event actions, such as alarm sounds. You can check events in real time and search recorded videos by condition. If you set rules in advance, you can effectively monitor videos for events like this.

Adding Event Rules

You can add event rules to use on Wisenet Viewer. If an event trigger registered on a device is detected, you can check the event via event actions.

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Event** > **Event rules**.
   - Select **Add event rule** at the bottom of the main Setup page to open the Add event rule window directly.
3. Select **Add**.

4. If the **Add event rule** window is displayed, select **Add trigger**.

- Up to 3 event triggers can be selected.
- You can select a device for each event trigger to detect.
  - **Search**: If you enter a device name, only that item will be displayed on the Root.
  - **All devices**: You can detect the event of every device registered at Root.
  - **Root**: Select device/channel to detect event trigger among registered devices. Depending on the event trigger you choose, the item displayed on the Root becomes different.
- If you choose more than 2 event trigger, you can set the event emergence period via the **Duration** item. The event emergence period is at least 3 seconds. An event occurs only when all selected triggers are detected within the set time.
- For more information on event triggers, refer to Event Triggers (page 113).

5. In the **Event action** item, select **Add action**.

- If selected event trigger is detected, select an action to carry out. You can select up to 2 event actions.
  - **Alarm output**: You can set the alarm duration.
  - **Priority alarm**: You can select a channel to occur a priority alarm event.
  - **Open the layout:** You can select a layout to display when there is an event.
  - **E-mail**: You can select an e-mail address you wish to receive the event history in the case of events.
- For more information on event actions, refer to Event Actions (page 115).
- Select a schedule where event actions will be implemented when the triggered event is detected. For more information on registering the event schedule, refer to Setting up an Event Schedule (page 120).

6. Select the **OK** button.

NOTE

To use event rules in Wisenet Viewer, event rules usage of recorders must be set.

Event Triggers

You can check event triggers that can be registered for each device.

Item	Description
Alarm input	An event will occur if an alarm is inputted into the connected recorder.
Alarm Input (Camera)	An event will occur if an alarm is inputted into the connected camera.
Audio analytics	When audio analytics are detected, an event occurs.
Audio detection	When audio above the level set on the camera connected to the recorder is detected, an event occurs.
Defocus detection	When the lens of the camera connected to the recorder gets blurry, an event occurs.
Fan status	If the fan of a recorder is not working properly, an event occurs.
Power status	If the power of a recorder is restored, an event occurs.
Save error status	If the recording on a recorder is not working properly, an event occurs.
Storage status	If there is a problem with the hard disk of the recorder, an event occurs.
Device connected	An event is triggered when a recorder is connected.
Device disconnected	An event is triggered when a recorder is disconnected.
Face detection	If a person's face is detected by a video of the camera connected to the recorder, an event occurs.
Firmware	An event is triggered when software that can update the system is detected.

Item	Description
Fog detection	If fog or cloudy weather is detected by a video of the camera connected to the recorder, an event occurs.
Motion detection	If a motion is detected within an area of interest set on the camera connected to the recorder, an event occurs.
Overload	If the network connection is unstable or disconnected, an event occurs.
Tampering detection	If the video of the camera connected to the recorder is covered or the camera location is changed, an event occurs.
Auto tracking	If a moving object is traced, an event occurs.
Video analytics	If video analytics is detected, an event occurs.
Video loss	If a camera's video is not received from a device, an event occurs.
Queue	If a queue is detected by a video of the camera connected to the recorder, an event occurs.
Queue.Level.Medium	If a queue with medium occupancy is detected by a camera connected to the recorder, an event will occur.
Queue.Level.High	If a queue with a high level of occupancy is detected by a camera connected to the recorder, an event will occur.
Object Detection.Person	If a person is detected by the camera connected to the recorder, an event occurs.
Object Detection.Vehicle	If a vehicle is detected by the camera connected to the recorder, an event occurs.
Object Detection.Face	If a face is detected by the camera connected to the recorder, an event occurs.
Object Detection. LicensePlate	If a license plate is detected by the camera connected to the recorder, an event occurs.
Digital Auto Tracking	If a specific moving object is automatically detected on video of the camera connected to the recorder, an event occurs.
Shock Detection	If a shock, vibration, or change of physical location is detected by the camera connected to the recorder, an event occurs.

NOTE

The dynamic event item may be changed depending on the specs of the camera connected to the recorder.

Event Actions

You can check event actions that can be registered for each device.

Item	Description
Alarm output	If an event trigger is detected, an alarm sounds for a set duration from the device. If you select the alarm out, you can check the event alarm history from Wisenet Viewer. If an event trigger is detected from the device that supports Beep (alarm sound), an alarm will sound. When setting the alarm out, you can set the duration item. There will be no alarm when you set it to **Off** , and you can configure it as either **5-30 Seconds** or **Continuous**.
Priority alarm	If an event trigger is detected, the priority alarm event occurs in the selected channel. If the event that a Priority alarm is designated occurs, a priority alarm event will be displayed at the top of the Event tab. For more information on the alert alarm event operation, refer to the Priority Alarm Events (page 127).
Open the layout	If any event trigger is detected, the selected layout will appear on the Live screen.
E-mail	If an event trigger is detected, the event history will be sent out to the selected user email.

Managing Event Rules

You can delete or set whether to use registered event rules.

Checking Event Rules

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Event** > **Event rules**.
3. Check the Registered event rule list.

- If you click the top of a list's column, it will be arranged in ascending/descending order automatically.
- **Use**: Select whether to use registered event rules.
- **Name**: Displays event rule names.
- **Event trigger**: Displays the event trigger type of event rules.
- **Event action**: Displays the event action type of event rules.

Changing event rules

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Event** > **Event rules**.
3. Select an item from the list of event rules.

4. Change the event trigger and event action.

5. Select the **OK** button.

Releasing event rules

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Event** > **Event rules**.
3. After selecting an event to clear, select **Use** item as **Off**.

Deleting event rules

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Event** > **Event rules**.
3. After selecting an event to delete, select **Delete**.

4. Select the **OK** button on the deletion confirmation window.
   - If you check **Don't ask again**, the confirmation window will not be displayed when deleting the event rule.
     However, when you restart the Wisenet Viewer, the delete confirmation window will be displayed again.

- The results will be displayed in the top-right part of the screen.

Setting up an Event Schedule

You can set the operation time of an event action when setting the event rules.

Setting up an Event Schedule

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **Event**> **Event schedule**.
3. Select **Add**.

4. If the **Add event schedule** window is displayed, enter a name and select the **OK** button.
5. If the event schedule is displayed on the list, select the Off/On toggle on the top, and drag the day and date to when the event action is going to be implemented using your mouse.

- **Off**: Select Off and drag the item to have the selected cell displayed in gray. During times marked as Off, the event action will not be executed even if an event occurs.
- **On**: Select On and drag the item to have the selected cell displayed in orange. At the time selected as ON, the event action will be executed if an event occurs.
- Select the date and time of the schedule setting table to change the time and date of the selected cell to On/Off. Select **All** on the left side of the setting table to change all cells to On/Off.

6. Select the **Apply** button.

Changing an Event Schedule

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **Event**> **Event schedule**.
3. Select the desired item from the event schedule list.
4. Change an event schedule.

5. Select the **Apply** button.

Changing an Event Schedule Name

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **Event**> **Event schedule**.
3. Double-click the desired item on the event schedule list.
4. When the **Edit event schedule** window is displayed, change the name.
5. Select the **OK** button.

Deleting an Event Schedule

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **Event**> **Event schedule**.
3. Select the desired item from the event schedule list.
4. Select **Delete**.
   - You cannot change or delete the **Always** item as it is a basic setting of Wisenet Viewer.
5. Select the **OK** button on the deletion confirmation window.

NOTE

The currently used event schedule cannot be deleted. If you want to delete the event schedule, remove the schedule from the event rule that is in use first.

Setting up an E-mail Address

When an event occurs, the alarm history can be sent to users registered on Wisenet Viewer via e-mail.

Setting up the SMTP

You can set an SMTP to send e-mails.

■ Setting up a Gmail Account

1. Select the menu on **Google** > **Google Account** > **Security**. (https://myaccount.google.com/security)
2. On the security screen, select **2-Step Verification** > **Use a cellphone for 2-step login**, and proceed with the verification.
3. After completing 2-step verification, select **App Password**, and select **Other (Customized name)** on the selected item. Enter **Smtp Client** in the name input window, and select the **Create** button.
4. When the App Password window appears, check the 16-digit password and select **Confirm**.
   - The app password for the device is the same as the password used to log in to the SMTP on Wisenet Viewer.
     Make sure to keep a record of your password.

Checking Sent E-mails

You can send a test e-mail to the set mail account.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **Event** > **E-mail**.

3. Enter the SMTP information, including the SMTP server address and authentication condition.

- **Server address**: Enter the SMTP server address to connect to.
- **Authentication**: Set whether SMTP service user authentication is used. If you select **Enable**, the ID and password input window is activated.
  - **ID**: Enter the ID of the SMTP set mail account.
  - **Password**: Enter the password to connect to the set SMTP server. Gmail users may enter the 16-digit app password.
- **Port**: Enter the connected port.
- **Sender**: Enter the e-mail address of the user sending an e-mail.
- **Test**: Enter an e-mail address to receive a test e-mail and press the **Send** button.
  After sending an e-mail, the test result will be displayed on the right side of the Send button.

4. Click the **Apply** button.

Monitoring Real-Time Events

You can check real-time events for devices registered in Wisenet Viewer from the Event tab.

Checking Events

If a real-time event occurs on a connected device, you can check the event information from the Event tab and play it.

■ Regular Events

You can check the information of real-time events based on the preset event rules. The channel name, event type, and emergence time are displayed on the Event tab.

If you double-click an event, you can immediately play the event video from the channel being monitored.

Event
Bookmark
Search
CH03
Motion1
1/16/2023 4:39:10 PM
CH03
Motion1
1/16/2023 4:39:06 PM
CH03
Motion detection
1/16/2023 4:39:01 PM
CH03
Motion1
1/16/2023 4:38:46 PM

■ Priority Alarm Events

If an event occurs for which you have set a Priority alarm, the event will be indicated at the top of the event tab.
In the Event tab, the channel name, priority alarm event, and the time of emergence are always displayed, regardless of the set event filter.

If you double-click an event, you can immediately play the event video from the channel being monitored. The priority alarm event checked by playing video is automatically arranged in chronological order with regular events.

- If an event with Priority alarm occurs while the event tab is closed, the will be activated on the Functional buttons panel.

NOTE

- If you right-click the mouse on the Event tab, you can use the following Shortcut menu.
  - **Event search**: You can search events within the selected channel.
  - **Clear**: You can delete all event lists displayed on the event tab.
- For more information on the alert notification event settings, refer to the Adding Event Rules (page 110).

Searching by Device

You can search real-time events displayed on the Event tab by the device.

- You can search real-time events by entering the name of a device or a channel on the search window of the event tab.

1. Select in the Event tab.
2. Select a channel to search events.
   - **All channels**: Display the event of all channels registered on the Resource tree.
   - **On layout**: Displays events of all channels included in the current layout.
   - **Selected channel**: Displays events of the selected channels from the current layout.
3. Double-click searched event, and the video will play.
   - The event of the channel that is included in the current layout will play in the tile.
     The event of the channel that is not included in the current layout will play on an empty tile.

Searching by Event Type

You can search real-time events displayed on the Event tab by event type.

- You can search real-time events by entering the event types in the search window of the event tab.

1. Select in the Event tab.
2. Select the event type.
   - **All events**: Select and search all events.
   - **Motion detection**: This is an event caused by motion detection.
   - **Video analytics**: This is an event caused by intelligent video analytics.
     - **Video analytics (Passing)**: If a moving object passes the set area, an event occurs.
     - **Video analytics (Intrusion)**: If a moving object is detected within the set area, an event occurs.
     - **Video analytics (Entering)**: If a moving object enters from outside to the inside of the set area, an event occurs.
     - **Video analytics (Exiting)**: If a moving object exits from the inside of the set area to the outside, an event occurs.
     - **Video analytics (Appearing)**: If an object that didn't exist in the set area appears and stays in the area, an event occurs.
     - **Video analytics (Disappearing)**: If the existing object within the set area disappears, an event occurs.
     - **Tampering detection**: If the video of the camera connected to the recorder is covered or the camera location is changed, an event occurs.
     - **Video analytics (Loitering)**: If roaming motion is detected within the set virtual region, an event occurs.

- **Face detection**: This is an event that occurs when a face is detected in a video.
- **Defocus detection**: This is an event that occurs when the video becomes blurry.
- **Fog detection**: This is an event that occurs when the video becomes foggy.
- **Audio detection**: This is an event that occurs when audio that exceeds the level set on the camera is detected.
- **Audio analytics**: This is an event that occurs when audio analytics are detected. You can select **Scream** /**Gunshot**/**Explosion**/**Crashing** from the audio types.
- **Auto tracking**: This is an event that occurs when a moving object is tracked in a video. You can select the start/end points of tracking.
- **Video loss**: This is an event that occurs when a recorder cannot receive a camera's video. You can select the start/end points of video loss.
- **Alarm in (Camera)**: If an alarm is sent to the camera, an event occurs.
- **DynamicEvent**: This is an event that occurs when a certain motion or situation is detected in a video.
  Depending on the device registered on Wisenet Viewer, the Dynamic Event display list can be different.
  - **Queue**: This is an event that occurs when a queue is detected.
  - **Queue.Level.Medium**: Events that occur when a queue with a medium occupancy is detected by a camera connected to the recorder.
  - **Queue.Level.High**: Events that occur when a queue with a high level of occupancy is detected by a camera connected to the recorder.
  - **ObjectDetection.Person**: This is an event that occurs when a person is detected by the camera connected to the recorder.
  - **ObjectDetection.Vehicle**: This is an event that occurs when a vehicle is detected by the camera connected to the recorder.
  - **ObjectDetection.Face**: This is an event that occurs when a face is detected by the camera connected to the recorder.
  - **ObjectDetection.LicensePlate**: This is an event that occurs when a license plate is detected by the camera connected to the recorder.
  - **ShockDetection**: This is an event that occurs when a shock, vibration, or change of physical location is detected.
  - **DigitalAutoTracking**: This is an event that occurs when a specific moving object is automatically detected.

3. Double-click searched event, and the video will play.
   - The event of the channel that is included in the current layout will play in the tile.
     The event of the channel that is not included in the current layout will play on an empty tile.

Searching Event Videos

You can search videos through various filters, such as devices, events, objects, etc. You can play the queried videos with dynamic layouts and save them locally to your PC.

Searching Event Recorded Videos

You can select and search saved event recorded videos by selecting a device, date, and event type.

1. Select the button in the Function button panel.
   - If you select **Event search** from the shortcut menu of the timeline, the event search bar will be displayed.
2. If the **Event search** window is displayed, select the **Device** item.
   Select the desired camera from the device list.

- **Search**: If you enter a device name on the search bar of the Device item, only that device will be displayed.
- **All devices**: Select all devices registered in the Resource tree.

3. Press 31 in the **Date & time** item to select the start and end dates to search.
   You can directly enter the time item after selecting a date.

4. Click the **Event type** item to select an event to search.

- Selected events will be displayed below the Event type item.
- **All events**: Select all events.

5. Select the **Search** button.
   - **Reset**: Delete all event search conditions currently selected.

6. If you double-click a search result, the video will play on the right pane.

- When several videos are searched from the same channel, the video will be played on the channel tile.
  If you select another video while a video is playing, the new video will be added in accordance with the dynamic layout.
- If you select ☐ on the left in the search result, the event will be saved as a bookmark.
  You can view all bookmarks you saved in the Bookmark tab.
- Highlight the bookmark icon and select it again to delete the bookmarked video.
  - Select the bookmark icon and select **OK** if the Confirm bookmark deletion window appears.
- When the column item of a search result is selected, it will be automatically arranged in ascending/descending order.

NOTE

For more information on recorded video playback, refer to Using the Timeline (page 143).

AI Search

You can search videos recorded with AI-enabled cameras connected to the storage by persons, faces, vehicles, etc. Also, you can filter the search results by the details based on the selected object.

NOTE

AI Search is only available for AI-enabled recorders connected to Wisenet Viewer.

Searching AI-enabled videos

1. Select the button in the Function button panel.
   - Click ··· at the top of the Event search window and select **AI search** to open the AI search page.
2. If the **AI search** window is displayed, select the **Device** item.
   Select the desired camera from the device list.

- **Search**: If you enter a device name on the search bar of the Device item, only that device will be displayed.
- **All devices**: Select all devices registered in the Resource tree.

3. Press 31 in the Date & time item to select the start and end dates to search.
   You can directly enter the time item after selecting a date.

4. Select an object type to search.

- Searchable object types may differ by device model.

5. Select the **Search** button.
   The search results are presented in thumbnails.

- **Reset**: Delete all event search conditions currently selected.
- : You can view the search results in the thumbnails. You can adjust the size of the thumbnails by moving the upper slide bar or rolling the mouse wheel while holding the Ctrl key.
- : You can view the search results as lists.

6. Select the desired filter item from the search results.
   If you select any filter, the search results will be limited to that filter.

- The filter items that can be applied according to the object are as follows.
  - **Person**: Gender, Clothing(Top/Bottom) colors, Bags
  - **Face**: Gender, Age, Glasses, Masks
  - **Vehicle**: Vehicle type and color
  - **LPR**: Enter the vehicle license plate number.
- : You can flag the search results. Flags are only available when the search results are

presented as thumbnails.

- : You can export the search results as .jpg files.

7. Double-clicking a thumbnail or list item will play the recorded video on the right pane.

NOTE

- Flag search results and click at the top to see only the flagged results. Flags are removed if you perform a new search.
- Clicking on an item in the search result list will bookmark the video. You can view all bookmarks you saved in the Bookmark tab.
- For more information on recorded video playback, refer to Using the Timeline (page 143).

Filtering with the specific BestShot properties

1. Hover your mouse over a video that best matches your search conditions and select the button.

2. After selecting the desired properties, select the **Apply** button.
   - You can filter objects by selecting the properties that BestShot has.
3. Double-clicking a thumbnail or list item will play the recorded video on the right pane.

NOTE

- Clicking on the BestShot of a search result item will display the video information box. Click the button in the information box to pin the box. Click the button again to unpin it.
- Clicking on an item in the search result list will bookmark the video. You can view all bookmarks you saved in the Bookmark tab.
- For more information on recorded video playback, refer to Using the Timeline (page 143).

Smart search

You can search for events by Include area, Exclude area, and Virtual line from among recorded videos of a specific time period.

1. Select the button in the Function button panel.
   - Click ··· at the top of the Event search window and select **Smart search** to open the Smart search page.
2. When the **Smart search** window is displayed, select a channel which you would search an event from.

3. When a video tile is displayed, select the search area setting icon on the bottom, and set the desired area with the mouse.

- **Virtual line**: Detects passing objects based on the virtual line set on the video. Click or drag to set the start and the end of the virtual line. When a virtual line is created, click the arrow to select whether to monitor both ways or one direction.

- **Include area**: Designate a specific area on the video as a motion detection area. Drag a mouse on the video or click the vertex to set the detection area of your choice.
  - After setting the area, the option icon of the event/object is displayed at the bottom of the set area. Click the icon to exclude the event/object from the search.
  - **Motion detection**: Detect movements within an Include area of interest and search events.
  - **Entering**: Detect movements that come from the outside of an Include area and move into it and search events.
  - **Exiting**: Detect movements leaving the Include area and search events.
  - **Person**: Search events, including the persons within an Include area.
  - **Vehicle**: Search events, including vehicles, within an Include area.
  - **Etc.**: Search events, including objects other than persons or vehicles within the Include area.
- **Exclude area**: Designate a specific area on the video to exclude from detection. Drag the mouse on the video or click the vertex to set the area of your choice to exclude from detection.

NOTE

- You can set up to 3 items for each smart search item.
- You can delete the set smart search items by selecting on the video.
- If you select , all setting history on the video will be deleted.

4. Set the date and time frame to search on the timeline and select .
   The event search results are displayed on the list on the right, and the event video is played when selecting a search result.

- Select on the timeline to select the date of your choice.
- Select on the timeline to filter the items of your choice from among Crossing, Motion detection, Entering and Exiting, and play the video.
- The timeline and search results listed on the right will only show search results for the currently selected tile.
- When several videos are searched from the same channel, the video will be played on the channel tile. If you select another channel while playing a video, it is then added following the

dynamic layout standard.

Managing Recorded Videos

You can search and play recorded videos on devices registered in Wisenet Viewer by date or event type. If you add the part you are interested in as a bookmark, you can quickly search the video. You can also save videos of specific sections or channels in the desired file format on your PC.

Switching to Playback Mode

You can switch to Playback mode while monitoring real-time videos to search for or play saved recorded videos on a device.

Select the **Playback** button on the timeline or select the timeline of the channel to switch to Playback mode.

NOTE

- Even if several channels from the Layout tree are selected, only the timeline of the selected channel from the current layout screen will be displayed. Select ☰ if you want to display the entire timeline of the channel.
- If the **Live** button for Playback mode is selected, you can switch to Live mode.

Using the Timeline

If you switch to Playback mode, you can play recorded videos on that channel. You can control playback via the timeline while playing a video. You can also use the Shortcut menu.

Timeline

If you select a tile, the section mark bar is displayed on the timeline. The section mark bar is displayed only on the section with a recorded video. Timeline's standard display range is 1 day (24 hours), and you can zoom in or out the time display ratio with a mouse wheel. If you click the desired time, the recorded video of that time will play.

No.	Screen Configuration	Detailed Description on Functions
❶		Show or hide the thumbnail of the video that is currently playing. Divide the range of the timeline marks equally and display the thumbnail that is the first frame of each separate section on the timeline.
❷		Switch to multi timeline or single timeline. If you select multi timeline, the timelines of all channels in the current layout are displayed. For multi timeline, a timeline of 1 day is displayed.
❸		If the Record type filter window is displayed, select the record type to search. For more detail, please refer to Searching by Record Type (page 150).
❹	31	If the Calendar window is displayed, select a date to search for a video. For more detail, please refer to Searching by Date (page 149).
❺	1/16/2023 15:11:07	Displays the date and time of the video that is currently playing. If you click the date, you can select a date to search on the calendar window. If you click the time, you can enter the search time manually.
❻	x1	Controls the playback and play speed of a video. For more detail, please refer to Using the Playback Function (page 146).
❼	CH04	Displays the name of the currently selected channel.
❽		You can synchronize several videos with the same time to play or you can disable playback sync.

No.	Screen Configuration	Detailed Description on Functions
❾		Switch between Live mode and Playback mode. When playback is synced, all channels in the layout switch between Live or Playback mode.
❿		If there is a recorded video, a section mark bar will be displayed. If you select a specific point on the timeline with a mouse, the video will play from the selected point and the keyframe will be displayed. If you drag the keyframe, you can change the playback location.

NOTE

- Depending on the type of recording data, it will be displayed in different colors.
  Regular recorded videos are displayed in yellow-green while event recorded videos are displayed in red.
- You can select a slider at the bottom of the timeline to navigate through the timeline. Also, if you use your mouse wheel on the timeline, you can zoom in or out of the time display ratio.
- If a bookmark is set, the bookmark icon will be displayed on that point of the timeline. If the bookmark icon is selected, the set section will be displayed in orange, and you can check the bookmark in the Bookmark tab. For more information on using the Bookmark tab, refer to Using Bookmarks (page 165).

■ Using the Timeline Shortcut Menu

After right-clicking the top of the timeline while playing a video, you can use the Shortcut menu.

Overlapped data	If you change the time or time slot of a device, the video recorded at the same time will be overlapped and saved. If there is an overlapping video, it is displayed as a mosaic on the timeline and you can select and play it from the Overlap list.
Mark as start point / Mark as end point	Select the start and end points of the desired section from the timeline. If you click the desired point while pressing the Ctrl key, you can set the start and end points of the section. For more information on setting sections, refer to Selecting Sections (page 148).
Clear	You can remove the selected section box.
Zoom	You can zoom in on the selected section.
Add bookmark	You can select the desired section from the timeline and add a bookmark. For more information on using the Bookmark, refer to Adding Bookmarks (page 165).
Export video	You can select the desired section from the timeline and save it as a video file on your PC. For more information on exporting videos, refer to Exporting Recorded Videos (page 152).
Event search	You can search events in a channel. For more information on searching for events, refer to Searching Event Recorded Videos (page 131).
Event log	You can search the event log of the selected channel. For more information on event log searches, refer to Checking Event Logs (page 178).

NOTE

If you select a section, the menu related to the section will be added and displayed on the Shortcut menu. For more information on the Shortcut menu that can be used after selecting a section, refer to Selecting Sections (page 148).

Controlling Playback

You can control the speed or zoom in and out of the timeline while playing the video of a selected channel.

1. Select a channel from the Layout screen.
2. Select the **Playback** button of the timeline.
   - You can also click the timeline and switch to Playback mode.
3. Select the desired point with a cursor and play.

- You can change the playback location by dragging the keyframes or selecting the desired points with a mouse during the playback. If a device that supports thumbnails is connected and it is in single timeline mode, thumbnails are displayed while dragging the keyframe.
- After selecting the playback time area of the timeline, you can directly enter the desired time to change the playback location.

■ Using the Playback Function

⏮	**Previous event**	You can move to the previous event.
◀◀	**Reverse speed playback**	You can quickly play the video in reverse.
▶/⏸	**Play/pause**	You can play or pause a video.
▶▶	**Forward speed playback**	You can quickly play the video in the forward direction.
⏭	**Next event**	You can move to the next event.
	Play speed control slider	You can select the video playback speed. • Speed when playing in the forward direction: x1/8, x1/4, x1/2, x0, x1, x2, x4, x8, x16, x32, x64, x128, x256 • Speed when playing in reverse direction: -x1/8, -x1/4, -x1/2, x0, -x1, -x2, -x4, -x8, -x16, -x32, -x64, -x128, -x256

■ Moving Timelines

You can move to a different timeline after clicking on and dragging the timeline with your mouse or dragging the scroll bar on the bottom. You can also move the time zone by selecting the ← / → button on both endpoints of the timeline.

■ Changing the Timeline Time Display

You can change the time display ratio by scrolling your mouse wheel on the timeline. If you double-click the area that displays the time slot of the timeline, that section will be zoomed in on.

■ Synchronizing the Play Time

If you select 🔗 while playing a video, you can synchronize the playback of several videos with the same time.
If you select 🔗 again, video sync is disabled and the video plays by each channel.

- All play control actions that are performed during synchronization are applied on all channels of the layout equally.

Selecting Sections

You can select specific sections of the timeline as the start and end points to set a bookmark or save it as a file on your PC.

1. Select the desired spot on the timeline with your mouse.
   The Section box will appear.

- You can directly select the start and end points of a section with the mouse while pressing the Ctrl key.

2. Select the start and end points of a section by moving the mouse left and right.
3. Select the desired menu in the timeline Shortcut menu.

- **Overlapped data**: If there is any duplicated data while you change the time or time zone, the list will be displayed.
- **Mark as start point** / **Mark as end point**: You can select the start/end point of the section.
- **Clear**: You can remove the selected section box.
- **Zoom**: You can zoom in on the selected section.
- **Add bookmark**: You can add the selected section to the bookmarks.
- **Export video**: You can save the selected section as a file to your PC.
- **Event search**: In the Event search window, you can search events within the selected channel/section.
- **Event log**: You can search event logs within the selected section of the Event log window.

Searching Recorded Videos

You can search and play the recorded videos on a device registered in Wisenet Viewer by date or record type.

Searching by Date

You can select the date and search recorded videos on the selected channel's timeline.

1. Select the **Playback** button of the timeline.
2. Select 31 for the timeline.

3. When the Calendar window is displayed, select a date to search.

- The date of the recorded video is displayed in orange.
  The current date is indicated with an orange dot below it.
- After a date is selected, 24 hours timeline of that date will be displayed.

4. You can select and play the video of the desired period from the timeline.
   Select 31 to close the Calendar window.

Searching by Record Type

You can select a record type in the timeline of the selected channel to search recorded videos.

1. Select the **Playback** button of the timeline.
2. Select for the timeline.

3. If the **Filter** window is displayed, select the record type to search.

- **All**: You can search all events from the timeline of the selected channel.
- **Continuous recording**: This shows regular videos that were recorded continuously.
- **Manual recording**: This shows manually recorded videos.
- **Motion detection**: This shows event videos recorded when motion is detected.
- **Video analytics**: This shows event videos recorded when intelligent video analytics are detected.
- **Face detection**: This shows event videos recorded when a face is detected in a video.
- **Tampering detection**: This shows event videos recorded when a camera video is covered or the location is changed.

- **Auto tracking**: This shows event videos recorded when a moving object is tracked in the video.
- **Defocus detection**: This shows event videos recorded when the video becomes blurry.
- **Fog detection**: This shows event videos recorded when fog or bad weather is detected in the video.
- **Audio detection**: This shows event videos recorded when audio above the camera's set level is detected.
- **Audio analytics**: This shows event videos recorded when audio analytics are detected.
- **Alarm input**: This shows event videos recorded when a alarm input detected.
- **Person (AI)**: This shows event videos recorded when a person being detected.
- **Vehicle (AI)**: This shows event videos recorded when a vehicle is detected.
- **Play filtered section**: If you select the **On** button, only the selected record type will play. If you select the **Off** button, every type regardless of record type will play.

4. Select a video from the timeline to play it.

Exporting Recorded Videos

You can save the recorded video of the device registered on Wisenet Viewer as a file on your PC.

Select the desired section from the timeline or several channels to save them. You can also set the password for the file to save it.

1. Right-click on the timeline.

- You can select a specific section and export the video. For more information on selecting sections, refer to Selecting Sections (page 148).

2. Select **Export video** in the Shortcut menu.

3. Enter your password and click **OK** if you are prompted to.

- Check **Don't ask again** if you don't want to see the prompt anymore.
  The prompt will not appear unless the Wisenet Viewer is restarted.
- If you fail to provide the correct password, you won't be able to save the videos.

4. When the **Export video** window is displayed, select the video information to save.

- **Single channel**: Export videos from the currently selected single channel. You can preview the selected video.
- **Multi channel**: Export a video from the several channels included in the layout.
- **Date and time**: Select the start/end time of the video to send.
- **High resolution**: Select whether to save as a high-resolution video. If **Enable** is checked, when a video was recorded in dual profile, save it as a high-resolution video.
- **File name**: Enter the file name to be saved when selecting a single channel.
- **Folder name**: Enter the folder name to be saved on the PC when selecting multichannel.

- **File format**: Select a file format to save the video on your PC. If you select the WNM format, the digital signature and encryption item are activated.
- **Digital signature**: You can add a digital signature when saving a video in the WNM format.
- **Encryption**: Select whether to set a password when saving a video in the WNM format. If Use is checked, you can enter the password. If **Enable** is checked, you can enter the password.
- **Export**: Select a folder where the video will be saved..
  - **Media file folder:** The videos are saved in the file folder selected on **Setup** > **System**> **Local settings**.
  - **Select later**: You can select a folder on your PC to save videos.

5. Select the **OK** button.
6. Check the save status in the **Export video** progress window.
   Once saving is complete, select the **Close** button on the Progress window.

- If you cancel or close the window while exporting the video, it will be saved as a file only up to that point.
- If you select on the progress window after exporting the video, the folder where the videos are saved opens.
- When exporting multichannel videos, there must be a multichannel video folder in the selected folder to properly save videos.

NOTE

Wisenet Player is saved in the folder where videos are saved. Wisenet Player is a program that allows WNM, SEC files, and other common media files to be played without installing Wisenet Viewer.

- When executing Wisenet Player, all media file lists within the folder will be automatically loaded.
- Other methods for using the Wisenet Player are the same as the Wisenet Viewer when playing media files.

Applying Video Masking to Recorded Videos

You can set video masking (privacy masking) areas on a recorded video to protect privacy or to hide areas that you don't want to display. The privacy-masked section of the video can also be exported.

NOTE

To use video masking, activate a video masking license. In case of activation, the **Video masking** button appears.

Activating the Video Masking License

1. In the upper-left corner of **Wisenet Viewer**, click ⚙.
2. In the **Setup** window, click **System** > **Maintenance**.
3. In **Video masking license**, clcik the **Arrow** button and type your license number.

Checking a Video Masking Window

In **Wisenet Viewer**, click to open a **Video masking** window. Here are the components.

No.	Screen Configuration	Detailed Description on Functions
❶	**Icon Buttons**	• **Open media file** : Open a video file where you will apply masking to. Both .wnm and .sec extensions are supported. You can also select one of the files under **Resource** in **Wisenet Viewer** and drag the file to the video window of the **Video masking** window. • **Preview** : Enable the **Preview** button (displayed in orange) to view the masked areas with mosaic or color applied on the video. Disable **Preview** (displayed in white) to view the masked areas without any mosaic or color applied on the video (Only an orange frame will be shown). • **Fixed masking** : Apply a permanent masking to your defined area. To apply fixed masking, see Setting Video Masking Areas (page 159) > Applying Fixed Masking (page 159). • **Manual masking** : Manually track and mask the moving object that you select. To apply manual masking, see Setting Video Masking Areas (page 159) > Manually Tracking and Masking Objects (page 160). • **Auto masking** : Automatically track and mask the moving object that you select. To apply auto masking, see Setting Video Masking Areas (page 159) > Automatically Tracking and Masking Objects (page 163).

No.	Screen Configuration	Detailed Description on Functions
❷	**Masking Options**	• **Masking type** : Select **Mosaic** or **Fill**. • **Pixel size** : When selecting **Mosaic**, you can adjust the pixel size by dragging the bar to the right to increase pixels by 3 pixels each. (The default is 20 pixels.) • **Color** : When selecting **Fill**, you can select which color to use to cover the defined area. Your selected color will be applied to masking areas. • **Area** : Select **Include** ■ or **Exclude** to define what parts of the video where objects should be masked. – ■ : Apply masking only to the defined area. – : Apply masking to areas excluding the defined area.
❸	**Masked-Areas List**	Displays the masked areas with thumbnails. If you select a thumbnail from the list, the masked area will be shown in the video. • **Name** : Displays an auto-created name under the thumbnail. The default is "Mask {number} {masked type}." You can change the name. • **Time** : Displays the time of tracking and masking moving objects. You can also manually set the time. If the set time is longer than the original time, an orange frame for fixed masking will appear at the original start and end points of tracking objects, and fixed masking will be applied during the manually added time. For example, if the tracking and masking time was from 1:01:20 to 1:01:40, and you changed the start time to 1:01:10 and the end time to 1:01:50, fixed masking will be automatically applied from 1:01:10 to 1:01:20 and from 1:01:40 to 1:01:50. If you set the start time later than the original start time and the end time ahead of the original end time, e.g., from 1:01:25 to 1:01:35, your selected masking will be applied only during the changed time (i.e., only for 10 sec.). • **Information** – M, A : Displays your masking type. – , : Hide and show the masked area in the video. – : Delete the masked area.
❹	**Timeline**	Displays the duration of tracking and masking objects on the video. Select a thumbnail from the list, and the duration will be shown as an orange horizontal bar in the timeline bar.
❺	**Video Window**	Displays a video where masking is being applied. You can check whether masking is properly applied to the video in real time.

No.	Screen Configuration	Detailed Description on Functions
❻	**Export**	Set up the settings for exporting privacy-masked videos. • **Date & Time** : Set the start time and end time of the section that you want to export in the privacy-masked video file. You can also drag the controller in the timeline bar in the video window to set the start and end time. • **File name** : Type the name of the file. • **File format** : Select the file format between **MKV** and **WNM**. MKV or Matroska is an open video container format. You can open and play an .mkv file in almost any media player including Wisenet Viewer. WNM is a Wisenet media format. Yon can open and play a .wnm file only in Wisenet Player or Wisenet Viewer. • **Digital signature** : If you select **WNM** under **File format**, you can select whether to use digital signature. Check **Enable** to detect forgery or falsification of the file. • **Encryption** : If you select **WNM**, you can encrypt the file. The password must be 8 to 32 characters long and must include at least 1 alphabet and at least 1 number. To open the encrypted file, you must input the password. • **Path** : Specify a path to save the file. If you select **Media file folder** and click **Save**, the file will be automatically saved in the folder that you already designated in **Settings** > **System** > **Local settings** > **Media file folder**. If you select **Select later** and click **Save**, you can specify where to save the file. • **Export** : When you click **Export**, the file starts being exported with the progress bar appearing. If you click the **Cancel** button, the file will stop being exported, and the partially exported file will also be saved. When the (partially or completely) exported file is saved, appears. Click it to open the exported file.

Setting Video Masking Areas

Three masking types are supported: fixed, manual, and auto masking. You can use multiple masking types on one video file.

■ Applying Fixed Masking

With fixed masking, you can apply a static privacy masking to the area that you define.

1. In the upper-left corner of the **Video masking** window, click ⬚.
2. On the video, drag the mouse pointer and draw a frame around the object that you want to mask on the video. Then fixed masking will be applied during the whole running time of the video by default. To enable fixed masking only during a specific time slot, set the time under the thumbnail in the list.

3. To resize the frame, point to the edges of the frame and drag the arrow to any direction; to shift the position, drag and drop the inside of the frame to your desired position.
4. To delete the frame (masked area), click the inside of the frame and click 🗑 that appears under the frame.

■ Manually Tracking and Masking Objects

With manual masking, you can manually track and mask objects.

1. In the upper-left corner of the **Video masking** window, click .
2. On the video, drag the pointer and draw a frame around the object that you want to mask.

3. Click the **Start tracking** button under the frame (masked area) and manually track the object for masking.

① Drag the inside of the frame to track the object and put it in the frame. To track the object easily, you can play the video at 1/2 speed.

② To resize the frame, point to the edges of the frame and drag the arrow to any direction; to shift the position, drag and drop the inside of the frame to your desired position.

4. To stop tracking the object, click . The clicking will also pause the video. You can also resize the frame or shift the position when the video is paused.

5. To finish manual masking, click . You can no longer edit the existing masks nor add a new mask.

NOTE

In case the manually tracked object gets out of the frame, follow the steps:

1. Click to pause the video.
2. In the timeline bar, find out where the tracked object got out of the frame and resize the frame or shift the position to fully cover the object.

3. Click and re-track the object for masking manually. Then the changes will apply to the video file.

■ Automatically Tracking and Masking Objects

Once you apply auto masking to the object you select, the selected object will be automatically masked.

1. In the upper-left corner of the **Video masking** window, click .
2. On the video, drag the pointer and draw a frame around the object you want to mask.

3. Click , and the frame will automatically track the object for masking.

4. To resize the frame, point to the edges of the frame and drag the arrow to any direction; to shift the position, drag and drop the inside of the frame to your desired position. This clicking will pause the video. You can also resize the frame or shift the position when the video is paused.
5. Click to track the object again.
6. To finish auto masking, click . You can no longer edit the existing masks nor add a new mask.

NOTE

In case the automatically tracked object gets out of the frame, follow the steps:

1. Click to pause the video.
2. In the timeline bar, find out where the tracked object got out of the frame and resize the frame or shift the position to fully cover the object.
3. Click , and the object will be re-tracked automatically. Then the changes will apply to the video file.

Using Bookmarks

You can add a bookmark to a video section of the interest in Playback mode. You can check and play the added bookmark video via the Bookmark tab. You can also edit or delete bookmark information.

Adding Bookmarks

You can add a bookmark to a section of interest in a saved video.

1. Select a channel from the layout.
2. Select the desired spot on the timeline with your mouse.
   The Section box will appear.

- You can directly select the start and end points of a section with the mouse while pressing the Ctrl key.

3. Select the start and end points of a section by moving the mouse left and right.
4. In the timeline Shortcut menu, select **Add bookmark**.

5. When the **Bookmark** window is displayed, enter the bookmark information.

- **Name**: Enter the bookmark name to save.
- **From**: Enter the start date and time of bookmark. If you enter directly the date/time item with a keyboard, the selected section will be changed and displayed on the timeline.
- **To**: Enter the end date and time of the bookmark.
- **Description**: You can enter a description for the bookmark.

6. Select the **OK** button.

Managing Bookmarks

You can check and play videos added as bookmarks in the Bookmark tab. You can also edit or delete bookmark information.

■ Playing Bookmarks

1. Select the **Bookmark** tab from the Event panel.
2. Double-click the desired bookmark from the **Bookmark** tab's list, and the video will be played.

- If you can also play the video by right-clicking a bookmark and selecting **Open** on the Shortcut menu.
- If you click the bookmark icon displayed on the timeline, the section where the bookmark is saved will be displayed in orange. If you double-click the bookmark icon, you can play the bookmark.
- The bookmark of the channel that is included in the current layout will play in the tile. The bookmark of the channel that is not included in the current layout will play on an empty tile
- If duplicate channels are assigned on a layout, the bookmarked video will play on top of the screen or tile located on the left.
- While a bookmarked section is playing, the bookmark is highlighted in orange on the Bookmark tab.

■ Editing Bookmarks

1. Select the **Bookmark** tab from the Event panel.
2. When **Bookmark** tab is displayed, right-click the bookmark.
3. Select **Edit** in the bookmark Shortcut menu.

4. When the **Bookmark** window appears, edit the name or the description.

5. Select the **OK** button.

■ Deleting Bookmarks

1. Select the **Bookmark** tab from the Event panel.
2. When **Bookmark** tab is displayed, right-click the bookmark.
3. Select **Delete** in the bookmark Shortcut menu.

Searching Bookmarks

You can search for and play bookmarks by bookmark name and device in the Bookmark tab.

■ Searching Bookmarks by Name

1. Select the **Bookmark** tab from the Event panel.
2. Enter the content to search in the **Bookmark** tab's search bar.

- Only bookmarks corresponding to the entered content are displayed in the list.

3. Double-click the searched bookmark, and the video will be played.

■ Searching Bookmarks by Date

1. Select the **Bookmark** tab from the Event panel.
2. When the **Bookmark** tab is displayed, click 31.
3. Select a time range to search the bookmark.

- **Always**: Display the bookmarks of all the time slots.
- **From yesterday**: Displays the saved bookmark from 00:00 yesterday to the current search point of time.
- **From last 7 days**: Display bookmarks from the last 7 days.
- **From last 30 days**: Display bookmarks from the last 30 days.
- **Selected on timeline**: Display the bookmarks on the selected timeline.

4. Double-click the searched bookmark, and the video will be played.

■ Searching Bookmarks by Device

1. Select the **Bookmark** tab from the Event panel.
2. When the **Bookmark** tab is displayed, select .
3. Select a channel to search events.

- **All channels**: Display the bookmarks of every channel registered on the Resource tree.
- **On layout**: Display the bookmarks of every channel included in the current layout.
- **Selected channel**: Display only the bookmarks of the selected channel from the current layout.

4. Double-click the searched bookmark, and the video will be played.

Exporting bookmarked videos

You can export bookmarked videos as files to your PC.

1. Select the **Bookmark** tab from the Event panel.
2. When **Bookmark** tab is displayed, right-click the bookmark.
3. Select **Export video** in the bookmark Shortcut menu.

4. Enter your password and click **OK** if you are prompted to.

5. When the **Export video** window is displayed, select the video information to save.

6. Select the **OK** button.

7. Check the save status in the Export video progress window.
   Once saving is complete, select the **Close** button on the Progress window.

NOTE

For more information on exporting video, refer to Exporting Recorded Videos (page 152).

Setting up the Local Save File

When saving the video in real time with the local save function of Wisenet Viewer, you can set up maximum record time, file format, and file path.

Setting up the Local Save File Location

When using the local save function of Wisenet Viewer, you can set up a folder to save the file.

NOTE

It will be used as a common folder where the file displayed on the **Resource tree** > **Media file** item is stored.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window appears, select **System** > **Local Settings**.
3. When the **Local settings** window is displayed, select **Change** in the **Media file folder** item.

4. After selecting a folder to save file in, select **Select folder**.
   - If a save folder is selected, the path will be displayed.
5. Select the **Apply** button.

Setting up the Local Save Time

When using the local save function of Wisenet Viewer, you can set up the maximum record time.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window appears, select **System** > **Local Settings**.
3. If the **Local settings** window is displayed, select the **Maximum recording time**.

- You can set a maximum recording time of 5-120 minutes.

4. Select the **Apply** button.

Setting up the Local File Type

When using the local save function of Wisenet Viewer, you can set up the local file type.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window appears, select **System** > **Local Settings**.
3. If the **Local settings** window is displayed, select the **Recording file format**.

- **Matroska (*.mkv)**: It will be saved in a video format that includes video and sound.
- **Wisenet Media(*.wnm)**: It will be saved in a video format for Wisenet Viewer.

4. Select the **Apply** button.

Checking Logs

You can check the system, audit log, and event that occurs on devices connected to Wisenet Viewer.

Checking Event Logs

You can search event log for events that occurred on a device or save log information. You can check changes detected on a video and device, log content of preset events registered by users, and the occurrence date/time.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window is displayed, select **Log** > **Event log**.
3. If the **Event log** window is displayed, click 31 to select the start and end dates to search.

- You can directly enter dates via a keyboard.

4. Select the **Search** button.

- When search results are displayed, you can select a column filter to select only the specific item to check.
  When the column item of a search result is selected, it will be automatically arranged in ascending/descending order.
- Select **Export** at the bottom of the screen to export the search results as a file. For more information on exporting as a file, refer to Exporting Log Data (page 182).

Checking System logs

You can search system logs that occurred in the device or save log information. You can check log content related to the system such as system device, power and record error as well as the date and time it was run.

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Log** > **System Log**.
3. When the **System Log** window is displayed, click 31 to select the start and end dates to search.

- You can directly enter dates via a keyboard.

4. Select the **Search** button.

- When search results are displayed, you can select a column filter to select only the specific item to check.
  When the column item of a search result is selected, it will be automatically arranged in ascending/descending order.
- Select **Export** at the bottom of the screen to export the search results as a file. For more information on exporting as a file, refer to Exporting Log Data (page 182).
- For more information on system log, refer to Checking the System Status (page 27).

Checking Audit Logs

You can search audit logs for a device or save log information. Audit logs are records of all activities during Wisenet Viewer operation. You can check the date and time of occurrence and all log content, such as login per user, system settings, and checking real-time video.

1. Select the ⚙ button in the Function button panel.
2. When the **Settings** window is displayed, select **Log** > **Audit log**.
3. When the **Audit log** window is displayed, click 31 to select the start and end dates to search.

- You can directly enter dates via a keyboard.

4. Select the **Search** button.

- When search results are displayed, you can select a column filter to select only the specific item to check.
  When the column item of a search result is selected, it will be automatically arranged in ascending/descending order.
- Select **Export** at the bottom of the screen to export the search results as a file. For more information on exporting as a file, refer to Exporting Log Data (page 182).

Exporting Log Data

You can save log information that occurred on a device via your PC.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window appears, select the log menu.
3. When the Log window is displayed, click 31 to select start and end dates to search.
4. Select the **Search** button.
5. Select **Export** at the bottom of the Log search window.

6. When the **Export** window is displayed, choose a path to save the .csv file and select **Export**. A Log data file is saved on the selected path.

Setting up the System

You can set the language, auto start, and enable hardware acceleration for Wisenet Viewer. You can also backup/restore or initialize the settings information.

Setting up the Language

You can select a language to enable in Wisenet Viewer.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window appears, select **System** > **Local Settings**.
3. If the **Local settings** window appears, select a language to enable.

4. Select the **Apply** button.
5. Select the **OK** button on the pop-up window.
6. Select the Close button on the System restart window.
   Then, the program will automatically restart.

Setting up Auto Start

You can set Wisenet Viewer to automatically start when Windows starts.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window appears, select **System** > **Local Settings**.
3. If the **Local settings** window appears, select whether to use auto start.

4. Select the **Apply** button.
5. Select the **Close** button on the pop-up window.

Setting up Hardware Acceleration

If an Intel graphics card that supports Intel Quick Sync or a graphics card that supports NVIDIA CUVID on PC is being used, the hardware acceleration function can be used.

If you set the hardware acceleration function, you can play more videos using the GPU.

NOTE

The Enable hardware acceleration item is displayed only when an Intel Quick Sync or NVIDIA graphics card is installed on the PC.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window appears, select **System** > **Local Settings**.
3. If the **Local settings** window appears, select whether to use hardware acceleration.

- It is automatically set if Intel Quick Sync or a graphics card that supports NVIDA CUVID is installed on the PC.

4. Select the **Apply** button.

Setting up a Controller

You can select a controller to use in Wisenet Viewer.

NOTE

- The controllers that can be used in Wisenet Viewer are as follows:
  - SPC-2000/ SPC-2001
- Setting up a controller is only supported on Windows and Linux Ubuntu OS.

1. Select the ⚙ button in the Function button panel.
2. If the **Settings** window appears, select **System** > **Local Settings**.
3. Select whether to use the controller if the **Local settings** window appears.

4. Select the **Apply** button.

NOTE

For detailed information about how to use the system controller, refer to Using the System Controller (page 201).

Setting up notifications

You can set whether to notify you of events when they are detected by recorders or connected cameras. If you enable the notification for a specific event, both the event and details will be indicated in the Event tab as soon as the event occurs during real-time monitoring.

Setting up event notifications

1. Select the ⚙ button in the Function button panel.
2. If the **Setup** window appears, select **System** > **Notifications**.
3. Select the **Event** tab when the **Notifications** window appears.

4. Select at least one event type to display.

- Check **Show all notifications** to get notifications for all event types.
- For more information on event types, refer to Event Triggers (page 113).

5. Select the **Apply** button.

Setting up system notifications

1. Select the ⚙ button in the Function button panel.
2. If the **Setup** window appears, select **System** > **Notifications**.
3. Select the **System** tab when the **Notifications** window appears.

4. Select at least one event type to display.

- Check **Show all notifications** to get notifications for all system event types.
- For more information on event types, refer to Event Triggers (page 113).

5. Select the **Apply** button.

Managing the System

You can update Wisenet Viewer, back up the configurations, or roll back using existing backup files. You can also initialize the program or check the log files.

Updating the software

You can enable automatic updates of Wisenet Viewer software.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **System** > **Maintenance**.
3. Select **Update** under **Latest version** when the **Maintenance** window appears.

4. Wisenet Viewer closes, and the update commences.

Checking System logs

You can check the system folder where the Wisenet Viewer logs and administration files are retained.
If you have any system failures or errors with Wisenet Viewer, you will be asked to send this log folder to our customer contact center.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **System** > **Maintenance**.
3. Select **Open** under **Log** when the **Maintenance** window appears.

- You can check the system folder where the Wisenet Viewer logs and administration files are retained.

■ Configuring system log collection

You can set the system to collect the Wisenet Viewer program logs.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **System** > **Maintenance**.
3. Select **Open** under **Log** when the **Maintenance** window appears.
4. Select the **logs** folder when the WisenetViewer Folder window appears.

5. Open the **log_settings.conf** file in Notepad.

6. Change the **level** of the **[normal]**, **[stat]** items to **debug** and save the changes.

7. Restart Wisenet Viewer.
8. To collect logs for errors, you need to repeat the usage scenario where you experienced the error.
   - To report an issue, please provide the following information:
     - Description of the conditions of the issue in question
     - The time when the issue in question occurred
     - IP address, channel no., and name of the device where the issue in question occurred
   - For clarity on the issue, please provide footage or screenshots that can help us understand the issue in question.
9. Once log collection is completed, please compress the **WisenetViewer** folder and send the compressed file to our customer contact center.
10. If log collection is done, change the **level** of the **[normal]**, **[stat]** items to **info** and save the changes.

Backing up the System

You can save the saved devices, user info, layouts, and event rules in Wisenet Viewer as backup files. Kindly note that log information is not included in backup files.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **System** > **Maintenance**.
3. If the **Maintenance** window appears, select **Backup**.

4. Designate the folder to save the backup file in and select the **Select Folder** button.
   - The backup file is saved in .wdb format.
5. If a pop-up appears, select the **Close** button.

Restoring the System

With the backup file saved on the PC, you can restore the setting information of Wisenet Viewer back to the point of the backup.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **System** > **Maintenance**.
3. If the **Maintenance** window appears, select **Restore**.

4. Choose the saved backup file and select the **Open** button.
   - You can only apply the .wdb format for the backup file.
5. If a pop-up appears, select the **Close** button.
   - If restoration is complete, the program will restart automatically.

NOTE

When you restart the Wisenet Viewer program after restoring the system, the following items will be initialized. Then, set it up again.

- Detailed items in **Setup** > **System** > **Local settings**
  - Language
  - Maximum live buffer length
  - Media file folder
  - Maximum recording time
  - Recording file type
- Device login ID and password information used when registering the device
- ID and password information saved when automatically logging in to the Wisenet Viewer

Initializing the System

You can initialize to the initial setup of Wisenet Viewer.

1. Select the ⚙ button in the Function button panel.
2. When the **Setup** window is displayed, select **System** > **Maintenance**.
3. If the **Maintenance** window appears, select **Reset**.

4. If a pop-up appears, select the **OK** button.
   - If restoration is complete, the program will restart automatically.
     Every setting information besides log will be initialized, so set up necessary items for enabling the program, such as setting administrator password or device registration.

Troubleshooting

Problem Symptoms	Items to check and measures
The device is not connected.	Enter the IP and Port information that was entered during device registration in Wisenet Viewer into the web browser and check if the web browser opens normally. • When connecting with http://IP, enter 80 (default port) in the Port item. • When connecting with http://IP, enter 443 (default port) in the Port item.
	To strengthen security, the Wisenet Viewer first connects with https if the device information is set in https. • Some of the former recorder firmware may have passed the wrong https port number, disabling the connection to the device. • Some of the former recorder firmware may not be connected with https, disabling the connection to the device.
It does not appear on the list when searching for a device.	Check whether the device list is displayed normally in the device manager. • If the device list appears normally in the device manager but does not on Wisenet Viewer, check whether the execution permission is set **No** when first running the Wisnet Viewer program.
	Check whether Wisenet Viewer is registered in the Windows firewall and is being blocked.
Wisenet Viewer's detailed log history is required.	If a problem persists while using Wisenet Viewer and you need to contact the customer service center, collect and deliver the system log. When the system log delivers the collected folder in a compressed file format to the customer service center, we can diagnose the problem precisely and help you solve the problem. • For more information on system log collection, refer to Configuring system log collection (page 190).
What information is displayed when you press the button on the function button panel?	It will show the currently received frame rate. The frame rate displays the number of frames buffering for the video equivalence.
I want to play the recorded video by double clicking the event as soon as the event occurs on the event panel, but the video is not displayed.	It may vary depending on the platform of the recorder, but usually a recorder saves videos on an HDD when 2 Mbyte or 4 Mbyte capacity of data is accumulated. For videos with smaller amounts of data, the videos are saved on an HDD for up to 15 seconds. The video can be played on the client when the data is saved on an HDD.
Are previous DVR models supported?	Wisenet Viewer is compatible with DVR and NVR products that support SUNAPI version 2.3.1 or above. The previous DVR does not support the SUNAPI protocol, hence they are not compatible with Wisenet Viewer. However, if the previous DVR can support SUNAP 2.3.1 or above through firmware upgrades, then it is compatible with Wisenet Viewer.

Problem Symptoms	Items to check and measures
What information is being processed in Backup and Restore on the Settings Menu?	Bookmarks, channels, devices, event schedules, the device group, layout, user, user group, web-page information, event rules, and e-mails are backed up and restored.
What is the product ID on the screen of the manual registration device?	If you select DDNS/P2P when registering a device, you need to enter the device ID. It is the product ID registered on the DDNS site to establish a remote connection and is used when registering a device with DDNS.
I want to fix a slider control while playing the recorded video.	You can use the playback speed slider on a timeline when using fast forward. If you want to fix the playback rate, select the speed option of your choice from the combo box next to the playback speed slider.

Appendix

Product Specifications

General		
Media	Video streaming protocol	RTP/RTSP (UDP/TCP/HTTP/HTTPS)
	Video format	H.265, H.264, MJPEG
	Video resolution	Depending on the device
	Display	Multiple application on multiple monitors
	Audio format	G.711 u-law (PCM), G.726 (ADPCM), AAC, 2-Way audio
	Audio control	Audio volume control
	Decoding	Hardware accelerator(NVIDIA CUVID, Intel Quick Sync)
Video	Functions	PTZ, Fisheye dewarping, Focus, Brightness/Contrast, Crop area, Capture, Show video status
	PTZ control	Pan, Tilt, Zoom, Preset, Focus control, Swing, Group, Tour, Tracking
	Live local recording	Up to 2hours, mkv, wnm (Wisenet media file)
	Video rotation	90º, 180º, 270º
	Fisheye	Fisheye view mode (Original, Single, Quad, Panorama), PTZ
	Aspect ratio	16:9, 4:3, Stretch/Keep aspect ratio
	Change video profile	High/Low settings only
	Video status	Resolution, Framerate, Bitrate, Video format, Profile information, Audio format
Playback	Video control	Start/Pause, Forward/Backward speed playback, Previous/Next event, Keyboard shortcut, Playback sync/Individual playback
	Playback speed	1x, 2x, 4x, 8x, 16x, 32x, 64x, 128x, 256x
	Timeline	Event filter, Bookmark, Thumbnails, Multi timeline (Up to 64)
	Export	Up to 24hours, Single/Multi channel export, mkv, wnm(Wisenet media file with standalone player), Encryption password(wnm format only), Digital signature
	Search mode	Calendar, Timeline, Event, AI, Bookmark, Smart search

Video tile	Tile pattern	Flexible grid (Zoom in/out, Drag), Auto fit, Keyboard shortcut
	Supported type	Channel, Media file, Browser
	Media file	Image: jpeg, png, jpg, bmp
		Video : avi, mkv, mp4, wnm (Wisenet media file), SEC
	Browser	Web page
	Layout	Multi-tab, Layout management, Layout sequence
Event	Notification	Device analytics events, Device system events
	Event rules	Combine Event trigger, Event action, Event schedule, and duration
	Event Trigger *	Device analytics events, Device system events
	Event Action	Priority alarm, Alarm output, Open the Layout, E-mail
	Device analytics events	Motion detection, Video analytics (Passing, Intrusion, Entering, Exiting, Appearing, Disappearing, Loitering), Tampering detection, Face detection, Defocus detection, Fog detection, Audio detection, Audio analytics (Scream, Gunshot, Explosion, Crashing), Auto tracking, Video loss, Alarm in, Dynamic Event
	Device system events	Power status, Fan status, Recording status, Setting change, System status
Management		
Device	Supported devices	Wisenet NVR/DVR (SUNAPI v2.3.1 or higher)
	Supported controllers	SPC-2000, SPC-2001
	Maintenance	Viewing the device settings (device webpage), Updating the device firmware, Backup/Restore devices settings, Change devices password
Network protocol	IPv4, IPv6, TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, HTTP, DDNS, HTTPS, SUNAPI, P2P	
User	Assign permission/device/layout to user group, LDAP	
Log	Event log, System log, Audit log, Export log data to file (CSV)	
System settings	Backup/Restore/Reset Wisenet Viewer settings	
Maintenance	Software update notification	
Language	Total 23 languages Support English, Korean, Chinese, Croatian, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Spanish, Taiwanese, Turkish	

Performance		
Max channels	Up to 3000 channels (no limitations in S/W)	
Max DDNS/P2P channels	Up to 128 channels	
Max channels per layout	Up to 64 channels	
System		
System Requirements	Recommended	CPU: Intel i7-11700 2.5GHz or faster RAM: 16 GB above, Video Memory 1GB above HDD: Performance SSD, 128 GB higher VGA: NVIDIA T600 (OpenGL 2.1 support is required) LAN: 1 GB NIC Display Resolution : 1366X768 above, OpenGL compatible
	Minimum	CPU: Intel i3 or faster RAM: 4 GB higher HDD: 128 GB higher VGA: 512 MB higher (OpenGL 2.1 support is required) LAN: 1 GB NIC Display Resolution : 1366X768 above, OpenGL compatible
	Operating system	Windows 8.1/10/11 64 bit, macOS 11/12/13, Ubuntu 22.04 LTS/ 20.04 LTS

NOTE

* Wisenet Viewer supports events that device support only.

Supported devices

Please see the list of supported products.

NVR

■ 4-channel

ARN-410S, XRN-420S, XRN-410S, QRN-430S, QRN-420S, QRN-410S, QRN-410, LRN-410S

■ 8-channel

ARN-810S, XRN-820S, XRN-810S, XRN-815S, QRN-820S, QRN-810S, QRN-810, QRN-830S, LRN-810S, KRN-V810S

■ 16-channel

ARN-1610S, XRN-1620SB1, XRN-1620B2, XRN-1610SA, XRN-1610S, XRN-1610A, XRN-1610, QRN-1620S, QRN-1610S, QRN-1630S, LRN-1610S

■ 32-channel

XRN-3210RB2, XRN-3210B4, XRN-3210B2, XRN-2011A, XRN-2011, XRN-2010A, XRN-2010

■ 64-channel

PRN-4011, XRN-6410RB2, XRN-6410DB4, XRN-6410B4, XRN-6410B2, XRN-3010A, XRN-3010

■ AI NVR

PRN-6400DB4, PRN-6400B4, PRN-3200B4, PRN-3200B2, PRN-1600B2, PRN-6405DB4, PRN-6405B4, PRN-3205B4, PRN-3205B2, PRN-1605B2, PRN-6410DB4, PRN-6410B4, PRN-3210B4, PRN-3210B2, PRN-1610B2

DVR

■ 4-channel

HRX-435L, HRX-435, HRX-435FN/TE, HRX-434, HRX-421FN/TE, HRX-421, HRX-420, ARD-410

■ 8-channel

HRX-835A, HRX-835/TE, HRX-835, HRX-821, HRX-820, HRX-821/TE, ARD-810

■ 16-channel

HRX-1635, HRX-1635/TE, HRX-1635/TU, HRX-1634, HRX-1632, HRX-1621/TE, HRX-1621, HRX-1620, ARD-1610

Using the System Controller

You can enable or disable the controller in **Wisenet Viewer** > ⚙ > **System** > **Local settings**.

NOTE

- The controllers that can be used in Wisenet Viewer are SPC-2000/2001.
- SPC-2000/2001 can only be used on Windows and Linux Ubuntu OS.

SPC-2000/2001

The following operation specifications are needed when connecting an SPC-2000/2001 controller.

- SPC-2000/2001 can be recognized while it is connected to your PC before running Wisenet Viewer.
- SPC-2000/2001 can run in PTZ or Screen mode.

SPC-2000

SPC-2001

Terms		Description	
		PTZ mode	Screen mode
1	Joystick	Controls Pan, Tilt, and Zoom.	You can move the grid tiles of the layout. Move to the tile that is on the same row with the selected tile or that is closest to the previous one.

Terms		Description	
		PTZ mode	Screen mode
2	1~8	• Run presets 1-8 of the selected camera. • If fisheye DPTZ is available, – buttons 1-4 are for the view mode and – buttons 5-8 are for the quad view selection.	Switch the layout tab that is in Wisenet Viewer. The layout is switched from left to right, from tabs 1 to 8.
3	9, 10	• If you press button 9, the layout switches to PTZ mode. • If you press button 10, the layout switches to Screen mode.	
4	11, 12	• If you press button 11, the layout switches to Single channel mode. • If you press button 12, the layout switches to Multi channel mode.	Switches between windows if several windows are open in Wisenet Viewer. Press buttons to select the direction for switching windows.

NOTE

To set the correct image, the axis calibration is needed.

Select ⊞ > **Settings** > **Control Panel** > **Game Controller** > **Properties** > **Settings** via the PC, click the **Calibration** button to run the **Device Calibration Wizard** and then follow the guide on the screen to complete axis calibration.

Hanwha Vision