Hanwha Vision

SSM Console Client
Administrator Manual

VER 2.13

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Learn about SSM

Learn about SSM

SSM is a program that connects and controls remote network products via PC. If you have a network connection, you can access network products from anywhere in the world, and watch videos from the cameras linked to the products. In addition, data stored on **SSM Core Server** can be searched and played remotely, providing for a convenient and efficient surveillance environment.
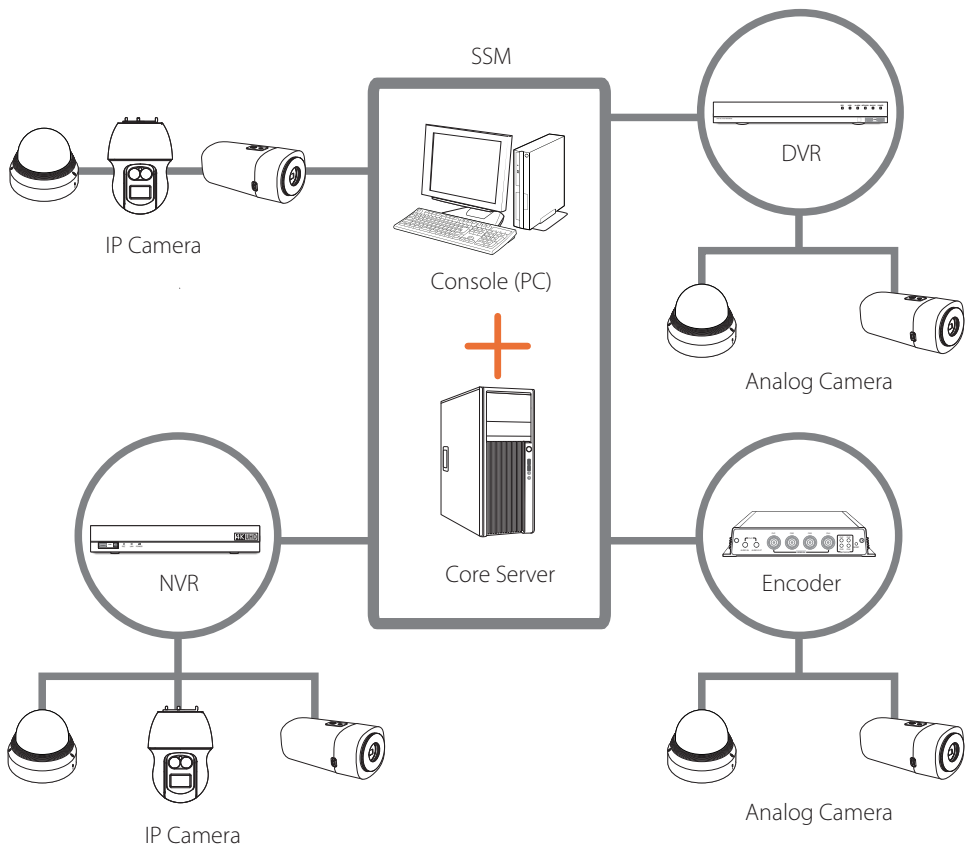
- **SSM Console Client**: This is **SSM** client software that provides functions such as camera video surveillance, setup, event, search, POS, etc.

- **SSM Core Server**: This is **SSM** server software that controls the data and user accounts and records camera videos.

- **Wisenet mobile**: This is a mobile viewer application that supports both iOS and Android starting with SSM 2.10.13.

Learn about System Configuration

What is SSM domain?

SSM domain refers to a unit of integrated video management system that configures **SSM**. You can configure the SSM domain with one **SSM Core Server**, or establish multiple **SSM Core Servers** with server clustering to configure them as one domain.

Learn about SSM Domain Configuration

You can configure the SSM domain as follows.

| Network/
Analog Camera | NVR/DVR | SSM Core Server | Console Client |
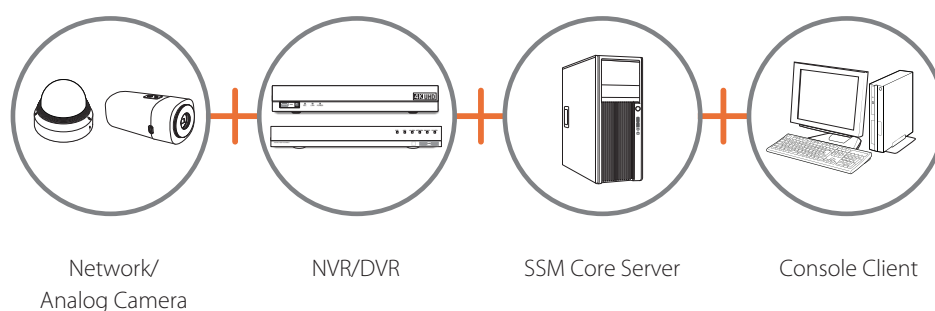
- You can configure multiple **SSM Core Servers** and **Console Clients** as one domain with server clustering.
- You can operate the system safely in the domain by sharing user information and device information among multiple servers.

Share SSM Domains

You can share videos and events among domains via federation.

Domain 1

Domain 2   Domain 3
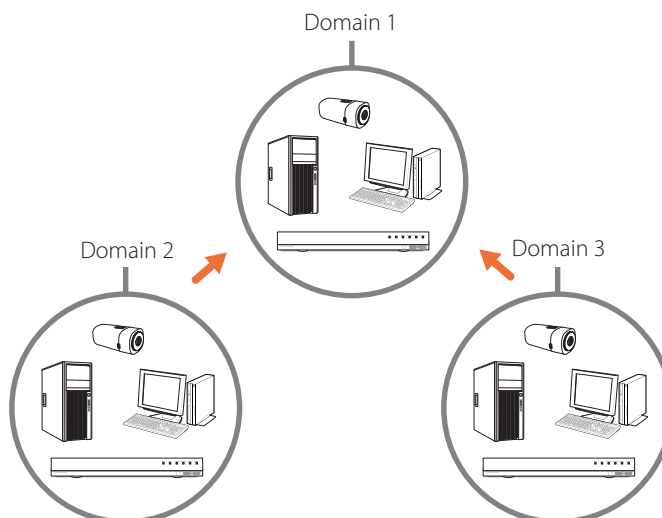
Learn about Recording Methods for SSM Videos

You can classify the recording methods for SSM videos into **NVR/DVR recording** and **Server recording** according to the recording methods for the camera videos.

◼ NVR/DVR Recording Method

This method records camera videos in **DVR/NVR**.

| 1 | 2 | 3 | 4 |
| Camera | Storage Device | Core Server | Console Client |
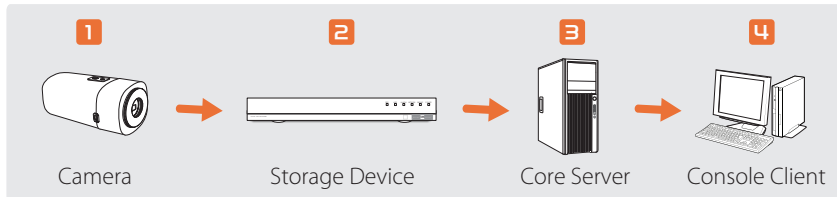
- It does not require the Server recording, so you can use the viewer license, which is a free license.

- There is no limit to the number of recording devices that you can register in one **SSM Core Server**, and you can register up to 3,000 channels. You can register up to 10,000 channels in one domain.

- When you want to configure one domain with multiple **SSM Core Servers**, you need as many channel licenses as the number of **SSM Core Servers**.

- When you get license authentication with a viewer license, you can only register Hanwha Vision devices.

> **NOTE**
> NVR/DVR recording method does not support Auto Recovery Backup.

◼ Server Recording Method

This method records the camera videos in **SSM Core Server**.

| 1 | 2 | 3 |
| Camera | Core Server + Recording | Console Client |
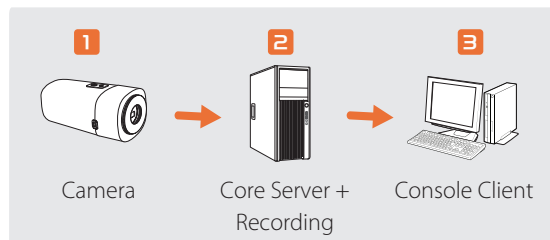
- You need as many licenses as the number of channels to record camera videos.

- You can record up to 128 camera videos in one **SSM Core Server**.

- When you configure one domain with multiple **SSM Core Servers**, you can record and inspect up to 3,584 camera videos.

Learn about License Policies

SSM Software Licenses

SSM license consists of a channel license and a viewer license.

When you install SSM, you can record and monitor camera videos from 128 channels for 45 days without license authentication. After 45 days, however, you must be authenticated with either a channel license or a viewer license to continue using the software.

> **NOTE**
> Even if you delete and re-install SSM, the free license term will be applied based on the initial installation time.

Channel License

This is a paid license that allows you to register third-party devices with the network devices from Hanwha Vision and ONVIF protocol. If you get as many license authentications as the number of channels in **SSM Core Server**, you can record and monitor as many camera videos as the number of channels. Therefore, you can configure an integrated video management system from small to large-scale environments, and use the server clustering that manages multiple **SSM Core Servers** as one domain.

Viewer License

This is a free license that only allows you to register the network devices from Hanwha Vision. You can use it as a viewer software that mainly monitors camera videos linked to Hanwha Vision's DVR/NVR recording devices. When you use the cameras of Hanwha Vision in a small-scale environment, you can record and monitor 16 camera videos or less in one **SSM Core Server**. You cannot use the recording and server clustering of **SSM Core Server** at the same time.

Learn about Frequently-used Terms

Terms	Description
SSM Console Client	This is SSM client software that provides functions such as camera video surveillance, setup, event, search, POS, etc.
SSM Core Server	Stores licenses and device setting information, and provides recording and video services to **SSM Console Client**.
SSM	Refers to Smart Security Manager, and "SSM" is used in the document.
Object	Collectively call things such as device, camera, site, layout, or alarm input as objects.
Domain	Refers to the entire local environment for operating SSM.
Device	Generic term for network video surveillance devices such as NVR, DVR and network camera.
Shortcut menu	Refers to the menu that appears when you right-click.
Clustering	Refers to a build that combines multiple **SSM Core Servers** into a single domain.
Tile	Refers to an area where one video is shown.
Tree	Refers to an area where you can check the object list and the inclusion relationship among objects.
Federation	Refers to a configuration that creates a hierarchy between domains.

Get Started with SSM

Prepare for Installation

▌ Learn about Installation Order

To install **SSM**, follow the guide below.
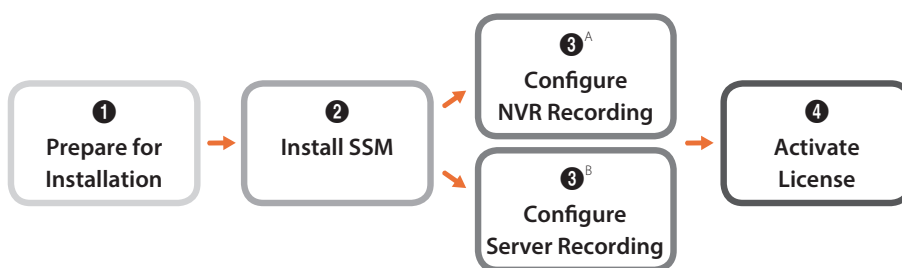
1. Install the cameras and recording devices, then set the IP addresses of all devices.

2. Install **SSM Core Server** on a server PC, then install **SSM Console Client** on a client PC.

3. Refer to each installation process depending on your recording configuration.

4. Get authentication with your channel or viewer license within 45 days after initially installing **SSM Core Server**.

Install SSM Core Server

To install **SSM Core Server**, follow the guide below.

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
Run the SSM Core Server Installation Program	Accept the License	Proceed with SSM Core Server Installation	Installation Completed	Set Initial Password

- It takes about 10 minutes for the installation, which may vary, depending on the installation environment.

- Initial password setting is available when you first log in to SSM Core Server via SSM Console Client.

- Recorded video files are not automatically deleted when deleting the program. To delete recorded video files, please format the storage disk or delete the storage folder (Drive:\SSMRecordData).

Setting up the storage drive

It is recommended to secure free space of 20GB or more and disable indexing after installing the operating system and **SSM Core Server**.

- Stop the **Windows Search** Service and change **Startup type** to **Disabled**.

- Go to **Indexing Options** > **Modify** and disable the drive path.

- In the drive property, disable the indexing of file properties and content in the drive.

Setting up the antivirus software

To optimize the performance of **SSM**, it is recommended to change the settings of antivirus software. Please add items that might affect the action of SSM to the list of scan-excluded or excepted items

- Excepted path
  - C:\ Program Files\Wisenet\SSM Server
  - C:\ Program Files\Wisenet\SSM Client
  - C:\ Program Files\Wisenet\SSM Tool
  - C:\Users\Public\Documents\Wisenet\SSM
  - C:\Program Files (x86)\Common Files\Aladdin Shared\HASP
  - Storage drive:\SSMRecordData
  - Storage drive:\SSMBackup
  - Storage drive:\PostgreSQL

- If there is any option that exclude a certain process
  - C:\Program Files\Wisenet\SSM Server\ServiceManager\ServiceManager.exe
  - C:\Program Files\Wisenet\SSM Server\Media Server\Media ServerService.exe
  - C:\Program Files\Wisenet\SSM Server\System Manager\jre\bin\system_manager.exe
  - C:\Program Files (x86)\Common Files\Aladdin Shared\HASP\hasplms.exe
  - C:\Program Files\Wisenet\SSM Server\Service Manager \HTW.SSM.ServiceManager.Services.WatchServices.exe
  - C:\Program Files\Wisenet\SSM Server\System Manager\PostgreSQL\bin\postgres.exe
  - C:\Program Files\Wisenet\SSM Server\System Manager\mq\bin\win64 \activeMqService.exe
  - C:\Program Files\Wisenet\SSM Server\System Manager\jre\bin\activemq.exe
  - C:\Program Files\Wisenet\SSM Client\Console\ConsoleStudio2.exe
  - C:\Program Files\Wisenet\SSM Client\Console\ConfigurationManager2.exe
  - C:\Program Files\Wisenet\SSM Server\Event Gateway\prunsrv.exe
- Examples of scan excluded items in Windows Defender
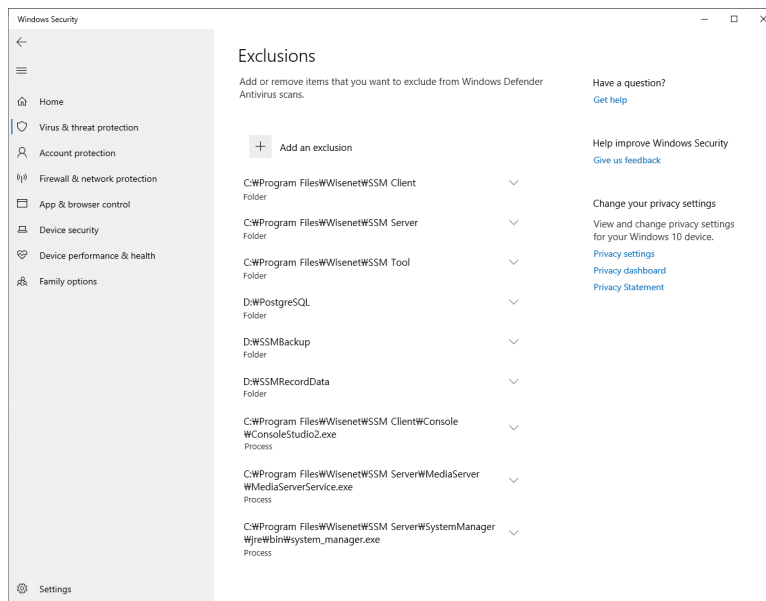
Setting up the network firewall

The network communication of **SSM** can be blocked by a firewall. It is recommended to make the **SSM** application and network port as an exception in the firewall. Since some antivirus software have a built-in firewall, please also check the antivirus software that you currently use.

- Firewall exception process setup
    - **SSM Core Server** and **SSM Console Client** are automatically registered as exception process.
    - Event Gateway : C:\Program Files\Wisenet\SSM Server\Event Gateway\prunsrv.exe
- Port information
- Go to **Wisenet SSM Service Manager** > **Network Settings** to check the network port of **SSM Core Server**. The default is as follows:
    - **Media Server** : 4510, 4511, 4512, 4513, 4514, 4515, 4516, 4517
    - **System Manager** : 9999, 9991, 61616, 9876

Install SSM Console Client

Learn about Installation Order

To install **SSM Console Client** on your local PC, follow the guide below.

STEP 1	STEP 2	STEP 3	STEP 4
Run the SSM Console Client Installation Program	Accept the License	Proceed with SSM Console Client Installation	Installation Completed
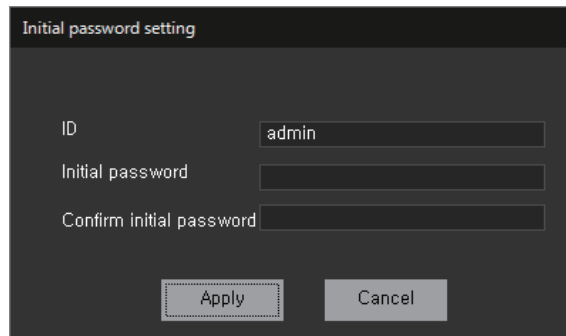
First-Time Login

Install **SSM Core Server**, then you need to set an initial password for the Administrator when you log first in to **SSM Core Server** in **SSM Console Client**.

1. Run the **SSM Console Client** program.

    -   Double-click the **SSM Console Client** program icon on the desktop.
    -   You may also select ⊞ > **Wisenet** > **SSM Console** in order.

2. Click the **Login** button in the Login screen.

3. When the **Initial password setting** dialog box appears, set an initial password, then click the **Apply** button.

> **NOTE**
> - If the password is 8 to 9 characters long, set it with at least 3 combinations of English uppercase and lowercase letters, numbers, and special characters.
> - If the password is 10 characters or longer, set it with at least 2 combinations of English uppercase and lowercase letters, numbers, and special characters.
> - You cannot use the ID as the password.
> - You cannot use more than 4 consecutive characters (e.g., 1234, abcd, etc.).
> - You cannot repeat the same character 4 times or more (e.g., !!!!, 1111, aaaa, etc.).
> - There are no restrictions on special characters.
> - You cannot use spaces.

4. Enter the initial password in the Login screen.

5. Click the **Login** button.

- The **Monitoring** menu page of **SSM Console Client** appears.

- When you log in for the first time or there is no device registered, **Configuration** menu page runs automatically.

> **NOTE**
> If you lose your password, you won't be able to reset it. Make sure you write it down somewhere secure.

> **NOTE**
> - When you want to change the server to log in, you can select the desired server from the server list in the Login screen.
> - If you cannot find the server to log in on the server list, you can click the ⚙ button to set the server to connect.
> - When you select IP address for your server setup, you can select automatically-searched server IP address or click the ➕ button to manually set the server IP address.
> - When you set DDNS for server setup, you can set by entering DDNS name and product ID.
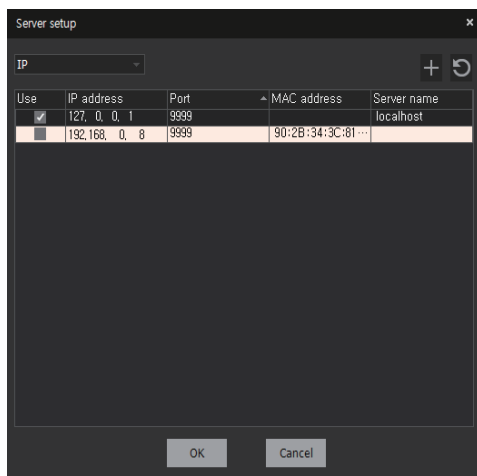
Learn about Screen Configuration

When you run **SSM Console Client** program, it displays the screen as below.
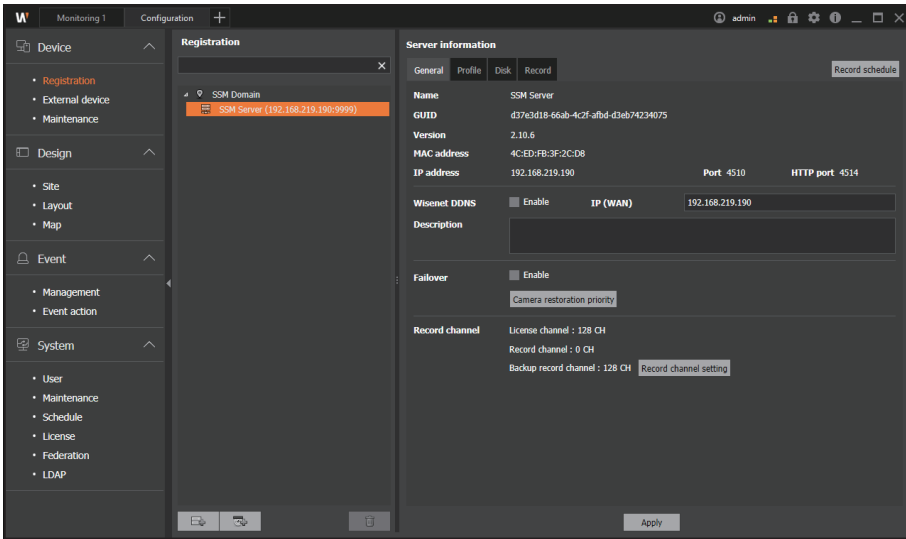
Learn about Menu

You can select from **Configuration** menu.
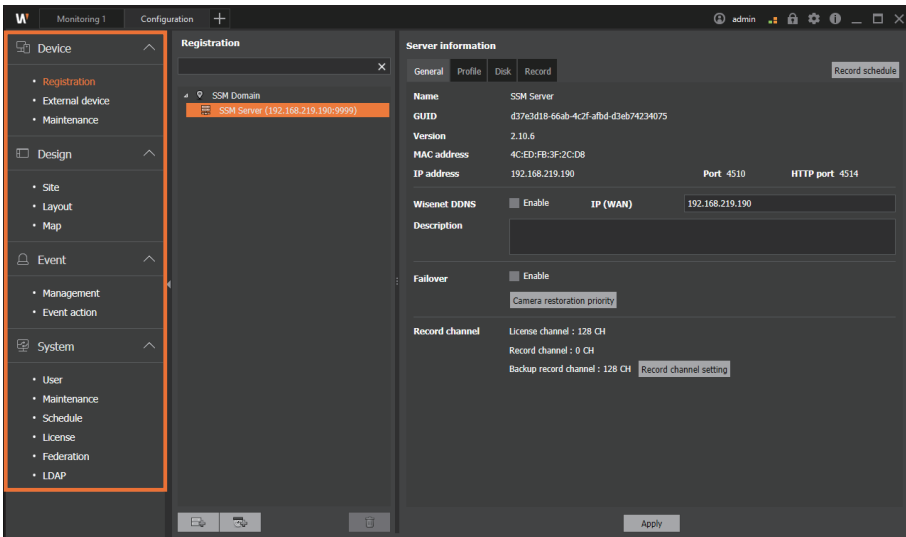
- In the **Device** menu, you can manage the registration and settings of video devices for operating the system.

Registration	You can register or set up recording devices, cameras, and external devices in **SSM Core Server**.
External device	You can add external devices for linking with external systems. • You need a separate **Transaction Server** to link with an external system. • You can add **Wisenet ACS** without a separate **Transaction Server**.
Maintenance	You can perform maintenance for the Wisenet devices registered in **SSM Core Server**.

- In the **Design** menu, you can configure the screen to monitor the video devices registered in a domain.

Site	You can create a flexible domain structure by specifying groups by device.
Layout	You can configure a tile layout with video. You can also create a tile pattern that you can design.
Map	You can configure an image map that a user registered with a camera screen.

- In the **Event** menu, you can set event-related settings of devices.

Management	You can manage all kinds of events used in SSM.
Event action	You can set the event notification actions based on the conditions set by a user.

- In the **System** menu, you can set various system settings.

User	You can add the user group or users of **SSM Core Server**. You can also set the permissions by user group.
Maintenance	You can maintain the system for **SSM Core Server**.
Schedule	You can add or manage schedules to be used from the camera video recording schedule, event schedule, etc.
License	You can get online or offline authentication for SSM licenses.
Federation	You can configure several **SSM Core Servers** as a hierarchy to manage as one system.
LDAP	You can log in to SSM with LDAP directory user account of Windows server.

Learn about Trees

You can check or modify the object list of the selected menu.
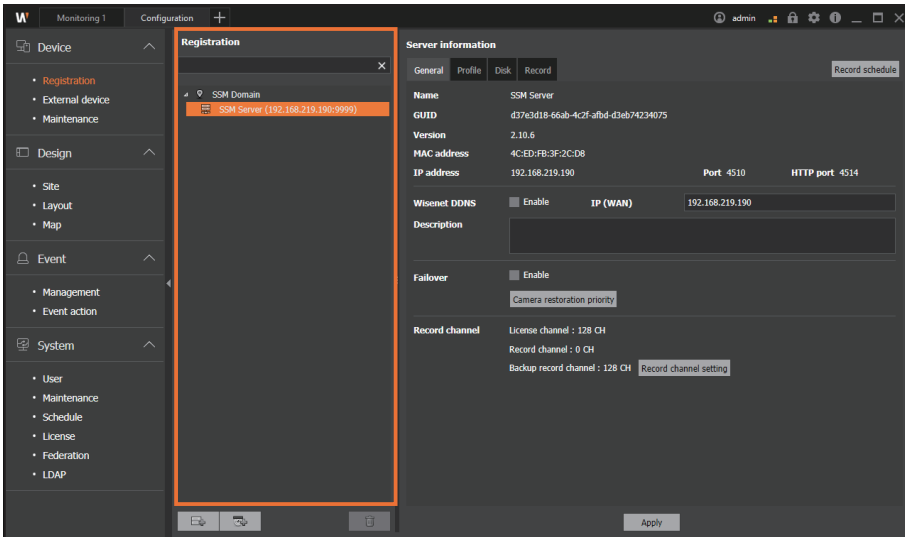
- You can click the [image] or [image] button to register recording devices or cameras.
- If you click the [image] button, you can Delete the selected object.

Learn about Details

You can check or modify the details of the selected object in the tree.
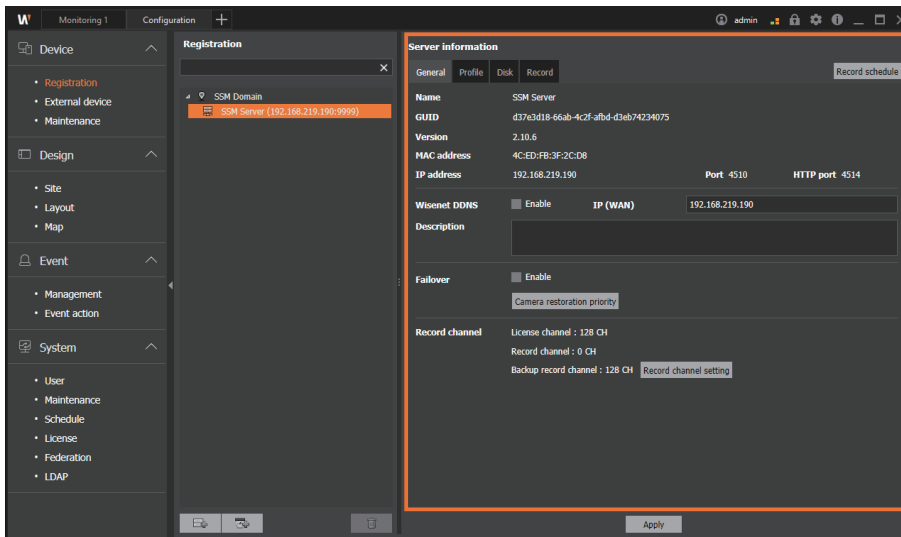
- Click the **Apply** button below the page to apply the modified object information.

- If Details window consists of tabs, you must click the **Apply** button in each tab to save the modified information.

Set Devices

Open the Device Menu

You can register recording devices, cameras and external devices in **SSM Core Server**, or modify the setting details of the registered devices. In addition, you can upgrade the firmware of a device registered in the domain, back up and restore the device setting details, and change the device password.

1. Run the **SSM Console Client** program.

   On initial startup, the **Configuration** tab appears.
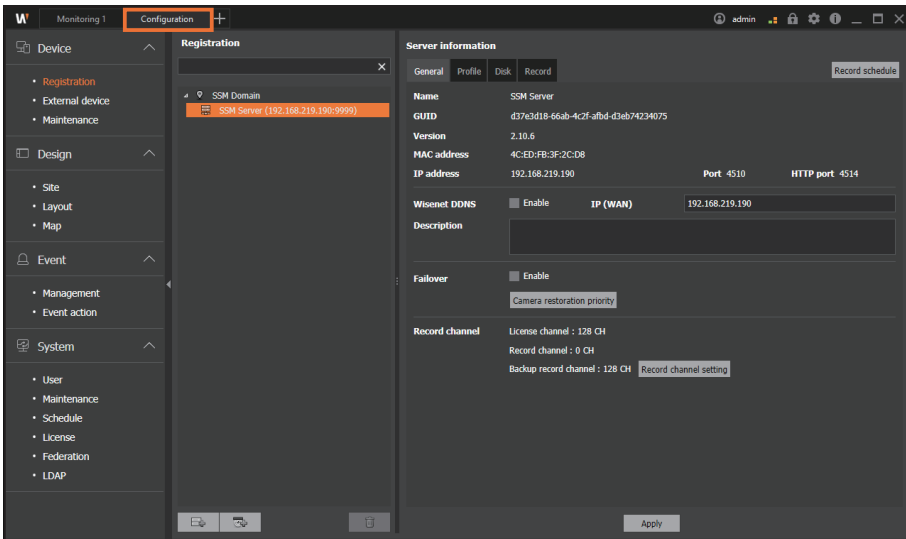
> **NOTE**
> - If you exit the program and resume it, then the last menu opened before exiting the program appears.
> - You can change the startup option for the program through the path below:
>   **SSM Console Client** > ⚙ > **General** > **Startup option**
> - **SSM Console Client** screens may vary in configuration depending on the menu selected by the administrator.

2. To open the **Configuration** menu, click the ➕ button at the top left of the program.

> **NOTE**
>
> **SSM Console Client** program consists of menu tabs.
>
> • You can freely move among the menu tabs to select the desired menu item.
> • You can separate a page from the menu tab and run it like a separate program.
> • You can insert a new page into the menu tab.

Monitoring	You can monitor a live camera feed and an event video in real time. You can also search or play the videos saved in the server and network storage devices.
Search	You can search and play the event logs that occurred on your devices. Also, by connecting to an AI camera, you can play videos or search for images in various conditions such as people, face, vehicle, vehicle number.
Advanced search	You can search the thumbnails created at the moment when a motion detection event occurred in the recorded video. You can also search for people passing through virtual lines set on the recorded video, or search for people who are intruding into or loitering within a specific area.
Audit log search	You can search audit logs from your device.
POS	You can monitor the data and the camera video of the POS device connected to the DVR or NVR in real time. You can also search for the stored POS data or play the video from the camera.
Dashboard	You can monitor the status of **SSM Core Server** system or the registered device.
Configuration	You can configure and manage the **SSM Core Server** system.

3. In the **Add tab** dialog box, select **Configuration**.

4. When the **Configuration** menu page appears, click **Device** > **Registration** in the menu list on the left.

> **NOTE**
>
> • For details about how to use the menu of **SSM Console Client** program, please refer to the separate **User Manual**.
> • You can download the **User Manual** from the product homepage (**http://www.HanwhaVision.com**).

Register Devices

Register Devices in SSM Core Server Automatically

You can automatically search the list of devices that can be registered in **SSM Core Server**, then register the devices.

1. Select the **SSM Core Server** where you want to register the devices in the Device tree.

2. Click the ⬛ button. **Register device** dialog box appears.
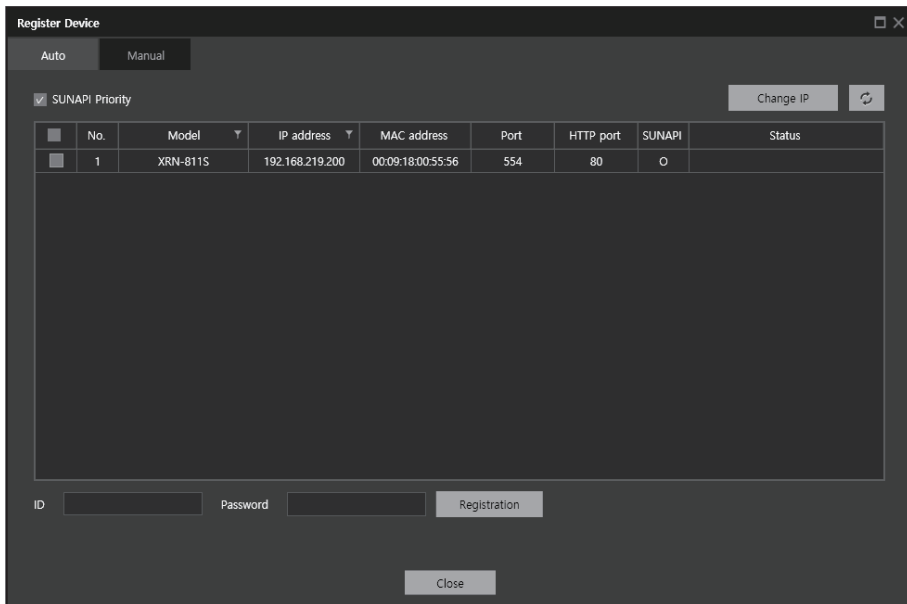
- If you select **SUNAPI Priority**, then the devices are registered with SUNAPI protocol for SUNAPI protocol-supporting devices, and with SVNP protocol for non-supporting devices.

3. Select the devices to be registered.

You can select multiple devices with the same ID and password and then register them collectively.
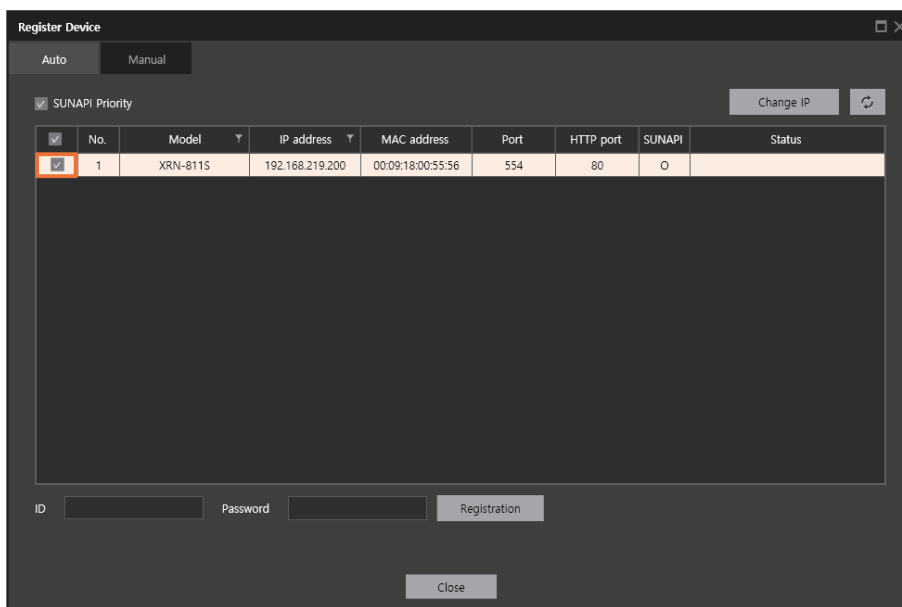
4. Enter your ID and password.

> **NOTE**
> The ID and password above are the ID and password of the device to be registered.

5. Click the **Registration** button.

- If you fail to register the device, then an error message is displayed in the Status column.
- When you register the device, "Registered" is displayed in the Status column, and a camera appears under **SSM Core Server** of the Device tree.

6. To close **Register Device** dialog box, click the **Close** button.

Register Devices in SSM Core Server Manually

You can manually enter the device information in **SSM Core Server** to register the devices.

1. Select the **SSM Core Server** where you want to register the devices in the Device tree.

2. Click the 🖫 button, then click the **Manual** tab.

3. Select the model of the device to be registered.

   - Wisenet Recorder, Wisenet DVR: You can register Hanwha Vision NVRs and DVRs.

   - ADAM-6050, 6060, 6066, NA-4010: You can register the I/O devices of Advantech and MOXA.

   - Select **Wisenet Recorder** for the model and **SUNAPI** for the protocol type to register the devices with SUNAPI protocol.

4. Select the protocol type and the address type.

   - You can select IP, IP+SSL, URL, URL+SSL, or Wisenet DDNS for the address type. Address type may vary from device to device.

   - If you select SUNAPI for the protocol type, then a streaming protocol combo box appears.

5. Enter other device information, such as address type and port.

 • The information you need to enter may vary, depending on the address type.

 • You can register the devices collectively if you enter an IP address range to register multiple devices manually at once.

6. Enter the ID and password of the device to be registered.

7. Click the **Registration** button.

 • If you fail to register the device, then an error message is displayed in the Status column.

 • When you register multiple devices at once, you can click the **Cancel** button to cancel registration of the pending devices.

NOTE

Click the **Reset** button to reset the registered results.

Register Cameras in SSM Core Server Automatically

You can automatically search the camera list that can be registered in **SSM Core Server**, then register the cameras.

1. Select the **SSM Core Server** where you want to register the cameras in the Device tree.

2. Click the [icon] button. **Register Camera** dialog box appears.

	No.	Model	IP address	MAC address	Port	HTTP port	SUNAPI	Status
☐	1	XNP-6320	192.168.219.209	00:09:18:52:8f:db	4520	80	O	
☐	2	XNF-8010R	192.168.219.62	00:09:18:4e:d2:0d	4520	80	O	
☐	3	PND-A9081RV	192.168.219.184	00:09:18:61:a0:47	4520	80	O	
☐	4	QND-6070R	192.168.219.149	00:09:18:51:19:51	4520	80	O	
☐	5	XND-8081VZ	192.168.219.173	00:09:18:5d:94:a2	4520	80	O	
☐	6	XNV-6081Z	192.168.219.137	00:09:18:5b:bd:66	4520	80	O	
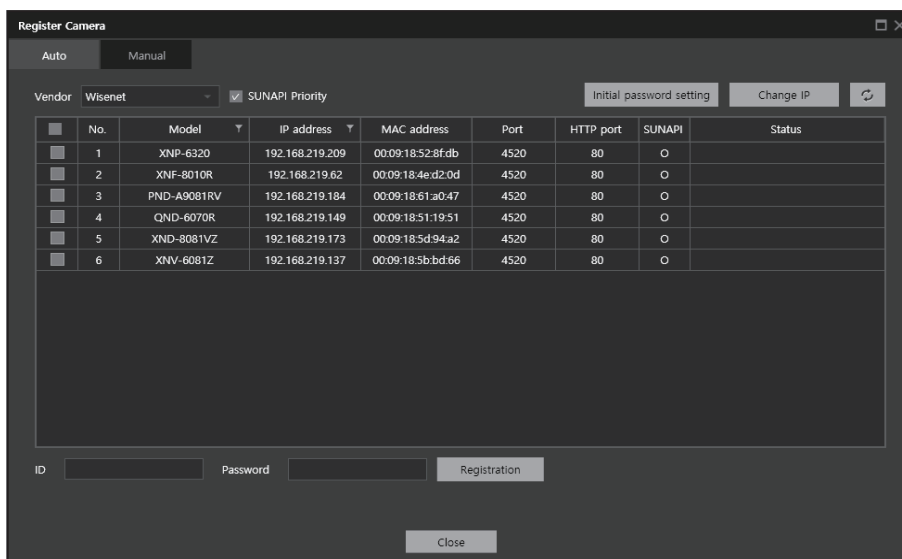
> **NOTE**
>
> For cameras without passwords, set the password by pressing the **Initial password setting** button, then register the camera.
>
> – New cameras after October 2019.
> – X series cameras with firmware installed after October 2019.

3. Select Vendor. You can select Wisenet or ONVIF for the Vendor.

- Wisenet: You can register the cameras of Hanwha Vision.

- ONVIF: You can register the cameras that support ONVIF protocol. ONVIF is available only when authenticated with a channel license.

4. Select the cameras to be registered.

   You can select multiple cameras with the same ID and password and then register them collectively.

5. Enter your ID and password.

🔍 **NOTE**
The ID and password above are the ID and password of the camera to be registered.
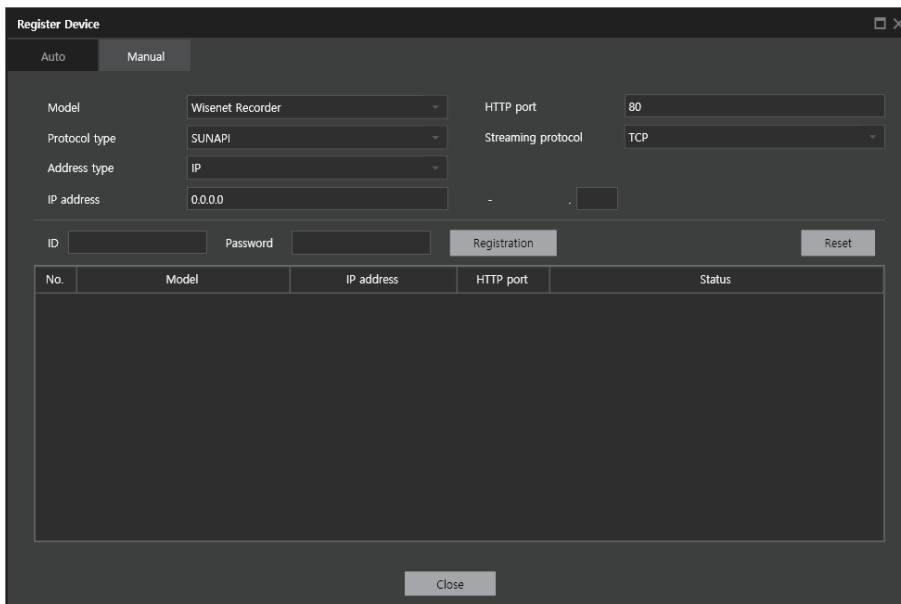
6. Click the **Registration** button.

   • When you register multiple cameras at once, you can click the **Cancel** button to cancel the registrations of the pending cameras.

   • In case of a connection error, a message about the cause of the error appears in the Status column.

   • When you register the camera, **Registered** is displayed in the Status column, and it is registered under **SSM Core Server** of the Device tree.

Register Cameras in SSM Core Server Manually

You can manually enter the camera information in **SSM Core Server** to register the cameras.

1. Select the **SSM Core Server** where you want to register the cameras in the Device tree.

2. Click the [icon] button, then click the **Manual** tab.

3. Select the model of the camera to be registered.

- Wisenet Network Camera/Encoder: You can register Hanwha Vision cameras and encoders.

- Wisenet IP Speaker: You can register Hanwha Vision IP speakers.

- SSM-SC: The SSM-SC (Screen Mirroring Agent) software is an add-on program for the SSM, and links with the SSM to transmit the user's computer screen to the SSM.

- ONVIF: You can register the devices that support ONVIF protocol. ONVIF is only available when authenticated with a channel license, which is a paid license.

- RTSP: Register devices that support RTSP protocol for realtime streaming transmission.

- Select **Wisenet Network Camera/Encoder** for the model and **SUNAPI** for the protocol type to register the cameras with SUNAPI protocol.

4. Select the protocol type and the address type.

- You can select IP, IP+SSL, URL, URL+SSL, Wisenet DDNS for the address type. Address type may vary from camera to camera.

- If you select SUNAPI for the protocol type, then a streaming protocol combo box appears.

5. Enter other camera information, such as address type and port.

  • The information you need to enter may vary, depending on the address type.

  • You can register the cameras collectively if you enter the range of an IP address to register multiple cameras manually at once.

Register Camera				
Auto	Manual			

Model: Wisenet Network Camera/Encoder   HTTP port: 80
Protocol type: SUNAPI   Streaming protocol: TCP
Address type: IP
IP address: 192.168.219.1   - 192.168.219 . 100
ID: admin   Password: *********   Cancel   Reset

No.	Model	IP address	HTTP port	Status
1	Wisenet Network Camera/Encoder	192.168.219.1	80	Registration In progress
2	Wisenet Network Camera/Encoder	192.168.219.2	80	
3	Wisenet Network Camera/Encoder	192.168.219.3	80	
4	Wisenet Network Camera/Encoder	192.168.219.4	80	
5	Wisenet Network Camera/Encoder	192.168.219.5	80	
6	Wisenet Network Camera/Encoder	192.168.219.6	80	
7	Wisenet Network Camera/Encoder	192.168.219.7	80	
8	Wisenet Network Camera/Encoder	192.168.219.8	80	
9	Wisenet Network Camera/Encoder	192.168.219.9	80	
10	Wisenet Network Camera/Encoder	192.168.219.10	80	

Result : 0 Registered, 0 Failed

Close

6. Enter the ID and password of the camera to be registered.

7. Click the **Registration** button.

  • If you fail to register the camera, then an error message is displayed in the Status column.
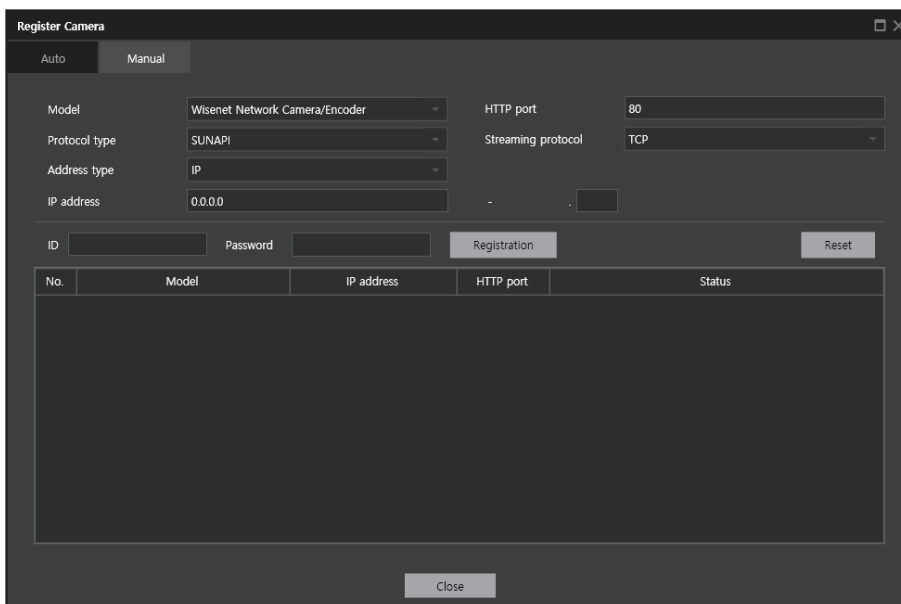
  • When you register multiple cameras at once, you can click the **Cancel** button to cancel registration of the pending cameras.

> **NOTE**
> Click the **Reset** button to reset the registered results.

Set Alarm Input/Alarm Output

You can register the recording devices or the cameras in **SSM Core Server**, and then set the alarm input and alarm output.

1. Select the desired device in the Device tree.

2. Click the **Settings** button next to **Alarm input/Alarm output** at the bottom right of the page.
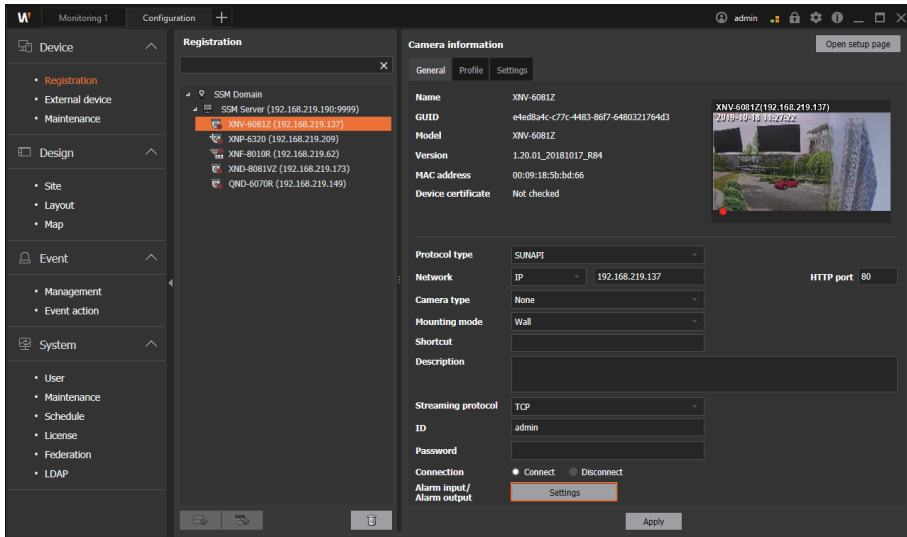
3. Select the alarm input or the alarm output to be added.
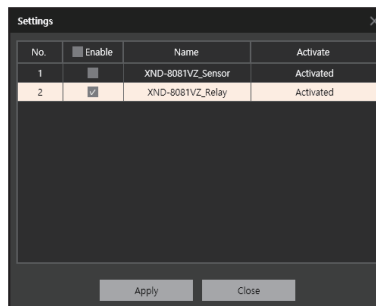
4. Click the **Apply** button.

Change the Device IP Address

You can change the network information of the devices when you register recording devices or cameras automatically.

1. Select the desired **SSM Core Server** in the Device tree.

2. Click the ![icon] or ![icon] button to open the **Auto** dialog box.

3. Select the desired devices.

   You can select multiple devices with the same ID and password and then change them collectively.

4. Click the **Change IP** button at the top right.

5. Enter a new IP address. If you want an IP address to be automatically assigned, set **Obtain an IP address automatically (DHCP)** to **Enable**.

6. Enter other information such as ID, Password, HTTP Port, and Port.

7. Click the **Apply** button.

> **NOTE**
> - You can click the **Test** button to check whether the changed IP information is valid.
> - When you select 2 or more devices, the range of an IP address is automatically set, and when you click the **Test setup** button, the automatically-set IP address is displayed in the Status column.

Set Servers in a Domain

You can add several **SSM Core Servers** in SSM domain to cluster. In addition, you can change the domain information already set.
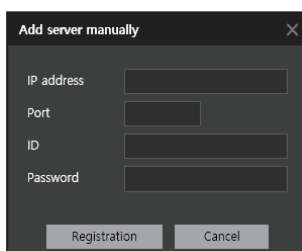
Add Servers to a Domain Automatically

1. Select "SSM Domain" in the Device tree.

2. Select **Auto discovery** button on Domain information page on the right.

3. Select a server to be added to the domain in the searched server list.

4. When the **Add server to domain** dialog box appears, enter the ID and password of the selected **SSM Core Server**.

5. Click the **Registration** button.

   Once clustered, the **SSM Core Server** is displayed under the "SSM Domain" of the Device tree.

Add Servers to a Domain Manually

1. Select "SSM Domain" in the Device tree.

2. Select **Add server manually** button on Domain information page on the right.

3. When the **Add server manually** dialog box appears, enter the IP address, port, ID, and password of the **SSM Core Server** to be added to the domain.

4. Click the **Registration** button.

   Once clustered, the **SSM Core Server** is displayed under the "SSM Domain" of the Device tree.

> **NOTE**
>
> If you restart a clustered server, it may take a few minutes to properly start it depending on the number of devices.

Recovering a Clustering Connection

When any of the clustered **SSM Core Servers** are disconnected due to a change in your IP settings, you can reconnect them by setting a new IP address.

1. Select "SSM Domain" in the Device tree.

2. Select **Clustering connection recovery** button on the Domain information page to the right.

   - If there is more than one server in a state that requires recovery of the clustering connection, the **Clustering connection recovery** button will be enabled.

3. When the **Clustering connection recovery** dialog box appears, enter a new accessible IP address and click the **Test connection** button.

No.	Server name	Current IP address	New IP address	Port	Status
1	SSM Server	192.168.1.99		9999	

Clustering connection recovery

Test connection | Apply | Close
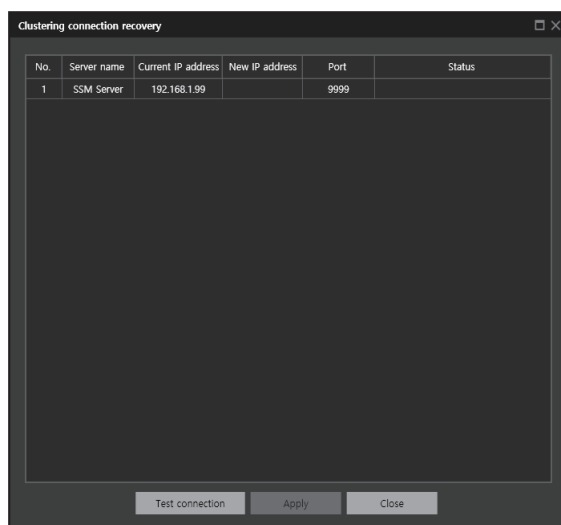
4. Click the **Apply** button.
   The IP address of the **SSM Core Server** that succeeded in the connection test is reflected.

Synchronize time

The current server's time can be used to synchronize the times of other servers in the same cluster.

1. Select "SSM Domain" in the Device tree.

2. Click the **Time Setup** button on the Domain information page on the right.

3. When the **System time setup** dialog box appears, configure the time sync settings.
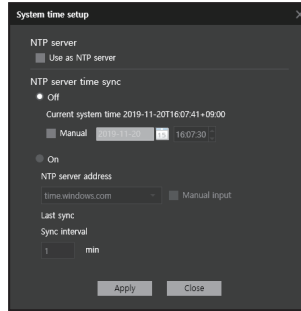
- **Use as NTP server**: SSM domain system time can be set as an NTP server. Devices that set the SSM domain as an NTP server can sync with the SSM domain system time.

- **NTP server time sync**: Configure whether to use NTP server time sync. If choosing not to use NTP server time sync, the system time may be modified manually.

- **NTP server address**: Select the desired server from the NTP server address list to sync with the selected NTP server time. Users may choose manual input to manually input the server address.

- **Last sync**: The time stamp of the most recent NTP server time sync is displayed.

- **Sync interval**: The system time is synced with the NTP server time at the designated times

Set SSM Core Server information

You can set a **SSM Core Server** as Wisenet DDNS, or use it as a failover server.

Set Wisenet DDNS

Wisenet DDNS server, provided by Hanwha Vision, is available. DDNS allows you to change and set the **SSM Core Server** to a normal host name that is easy for a user to remember.

> **NOTE**
>
> If you want to use the Wisenet DDNS, sign up for membership at the Wisenet DDNS homepage (http://ddns.hanwha-security.com), then register your product in **My DDNS** > **Product registration**.

1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page on the right, set **Wisenet DDNS** to **Enable**.

3. Enter the ID of the product registered in the Wisenet DDNS server in **Product ID**.

4. Click the **Apply** button.

Set Wisenet DDNS Automatically

In the case of a server-type NVR, you can set Wisenet DDNS without a membership.

1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page on the right, set **Wisenet DDNS** to **Enable**.

3. Click the **QR** button to create a product ID.

   - The QR code created with product ID is used when accessing the Wisenet mobile app. For details, please refer to **Wisenet mobile User guide**.
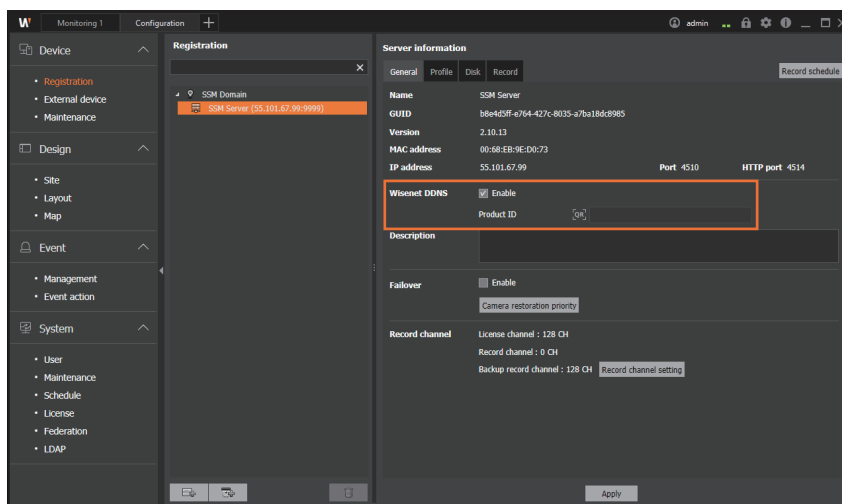
4. Click the **Apply** button.

Set to a Failover Server

When any of the clustered servers in the domain fails, you can set it to act as a server on behalf of the failed server. The device (recording device, camera) registered to the failed server is automatically connected to the failover server, so you can continue to use monitoring and video recording.

1. Select the desired **SSM Core Server** in the Device tree.

2. Under the **Server information** page on the right, set **Failover** to **Enable**.

3. Click the **Apply** button. The set information appears on the right of the **Failover**.
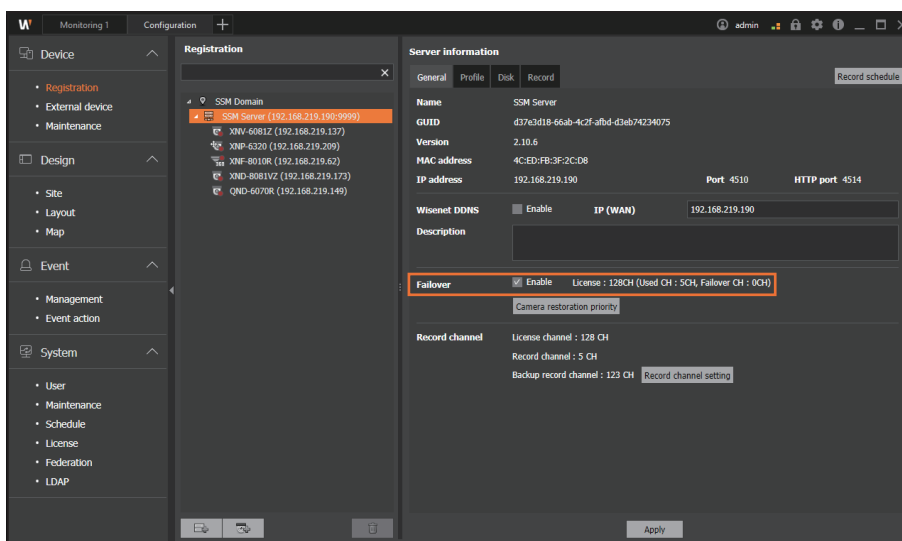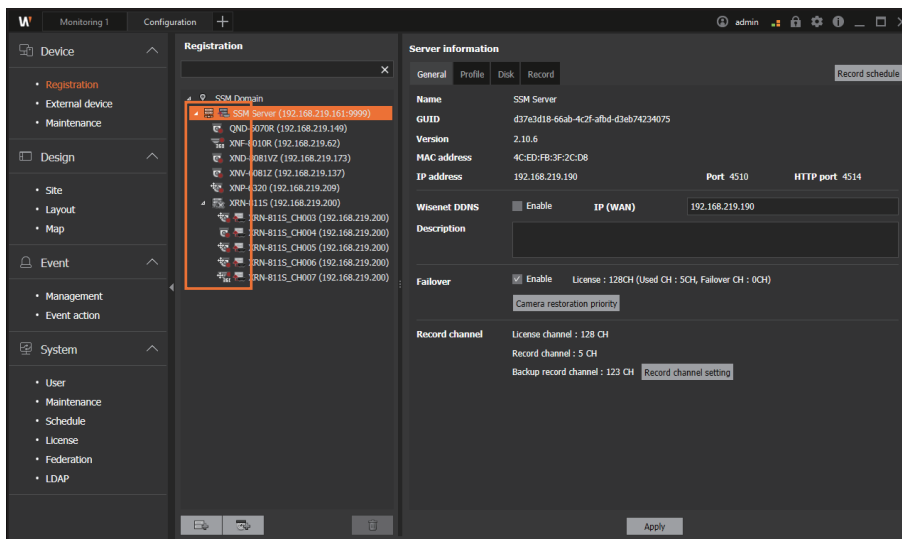
4. Click the **Camera restoration priority** button. Configure the camera restoration priority settings as desired, then click the **Apply** button. When a problem occurs, recording will proceed in accordance with the configured priority settings.
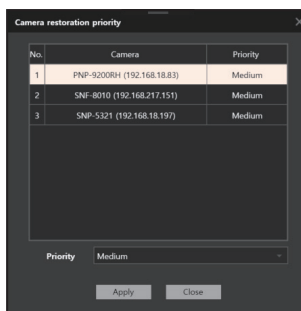
> **NOTE**
> - When acting as a failover server, the icon for the failed server is displayed as Disconnected, and the icons for all devices registered in the failed server are additionally marked with a ⬚ icon.
> - When operating as a failover server, you cannot change the device information of the previous server.

Set Record Channel

Once a camera is registered to the **SSM Core Server**, it is assigned to a record channel by default, and when registering in excess of the licensed channels they will be assigned to live channels. Record channels and live channels can be configured to channels as desired by the User.

1. Select the desired **SSM Core Server** in the Device tree.

2. Under the **Server information** page on the right, click the **Record channel setup** button.
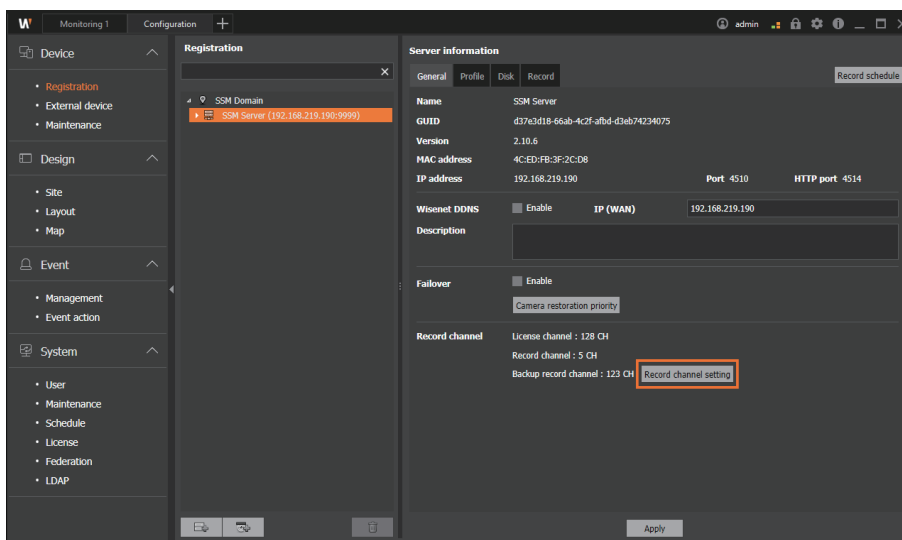
3. Select the device to set as the record channel or live channel. Click the ◀ or ▶ button and add to the desired channel list.
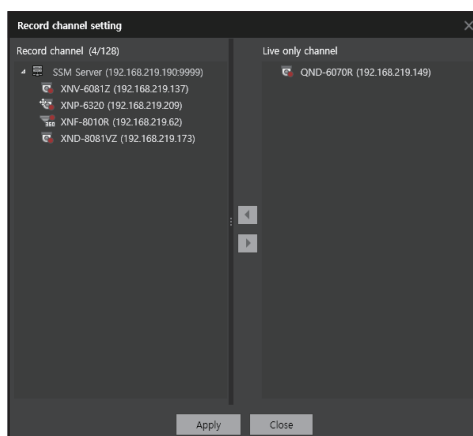
4. Click the **Apply** button.

Set Server Recording

You can change the disk status of **SSM Core Server**, or change the camera list which is assigned automatically to the recording disk. In addition, you can add a record schedule or change the recording settings of the camera.

Set Disk Status

1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page, click the **Disk** tab.

3. Select the disk to be changed in **Disk information** page.

4. Click the list in the Status column.

   - Recording: You can record camera videos on your disk. You can search or play the recorded camera videos.

   - Release: You cannot record camera videos on your disk. But you can search or play the existing recorded camera videos.

   - System: It is a system disk where Windows OS is installed. You cannot record camera videos on the system disk. If you only have a system disk on the PC installed with **SSM Core Server**, you cannot record the camera videos.

5. Select the disk status value to be changed, then click the **Apply** button.

> **NOTE**
> - Overwrite: You can set whether or not to overwrite the existing recording files when there is no free space on the disk.
> - Dual Recording: When you record camera videos on **SSM Core Server**, you can set whether to record low resolution videos and high resolution videos at the same time.
> - Recording encryption: Installs or deletes a recorded video encryption certificate. If a recorded video encryption certificate is installed, all videos being recorded in the **SSM Core Server** are encrypted and stored.
> - Refresh: You can update and view the disk information of **SSM Core Server**.

Set Dual Recording

SSM Core Server provides dual recording function.

Dual Recording allows you to receive and record both high resolution and low resolution streams from the camera simultaneously when recording camera videos on the **SSM Core Server**.

With dual recording, you can automatically change the resolution of the playback video depending on the size of the video tile when you play the recorded video like when you monitor the real-time video from the camera. If you add the number of cameras to be played while playing the recorded video at high resolution, then the number of video tiles increases and the size of tiles decreases. As the size of the tile becomes smaller, the resolution of the recorded video automatically changes to low resolution, so the recorded video is played seamlessly, which improves playback performance.

The resolution of the playback video varies depend on the set value of **Setup** > **Minimum tile size for high resolution playback**.

> **NOTE**
> - When you register a camera in **SSM Core Server**, a profile called "Live4NVR" is automatically added to the camera profile.
> - If you cannot add a new profile to the camera or registered the camera with SVNP protocol, then an error message, **Failed to create low profile video** appears in the Status column.
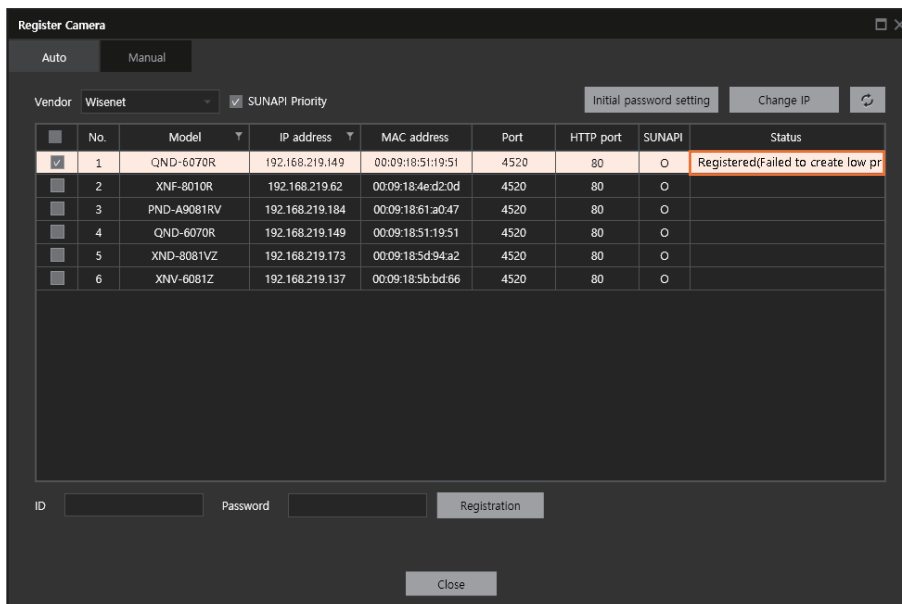
1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page, click the **Disk** tab.

3. Under the **Disk information** page, set **Dual recording** to **Enable**.
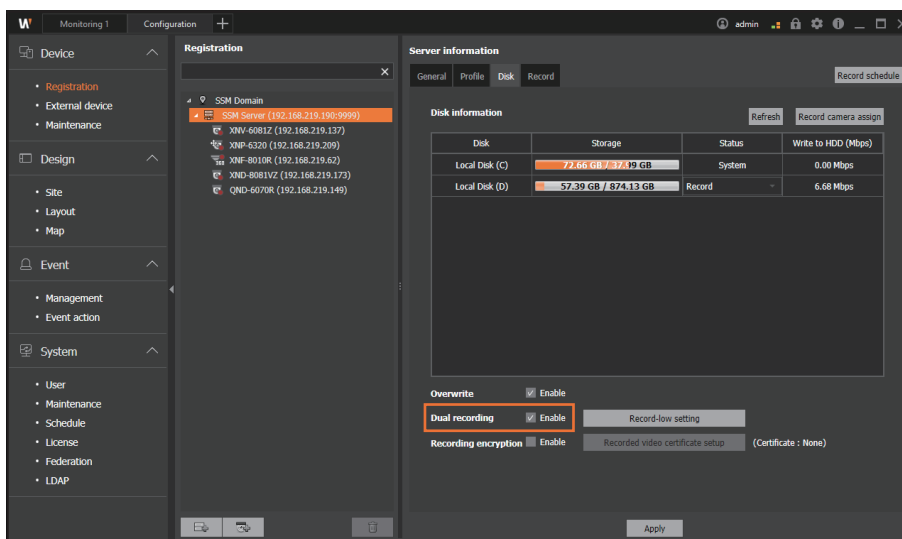
4. Click the **Apply** button.

> **NOTE**
>
> If you click the **Record-low** setting button, then you can set the low resolution profile for the dual recording.

- Once you set the **Dual recording** to **Enable**, you can change the **Continuous recording profile**.

Set Video Recording Encryption

For the security of the recorded videos, they can be encrypted before being saved. To save encrypted videos, a recorded video encryption certificate needs to be installed in the **SSM Core Server**.

> **NOTE**
>
> Please be very careful not to lose or damage the certificate. Otherwise, you might run into one of the following situations:
>
> * If you lose the certificate, a security problem might occur regarding the stored video recording.
> * If the certificate is deleted due to corrupted disk, previously recorded video cannot be played back.

1. Select the desired **SSM Core Server** from the Device tree.

2. In the **Server information** page, click the **Disk** tab.

3. Under the **Disk information** page, set **Recording encryption** to **Enable**.
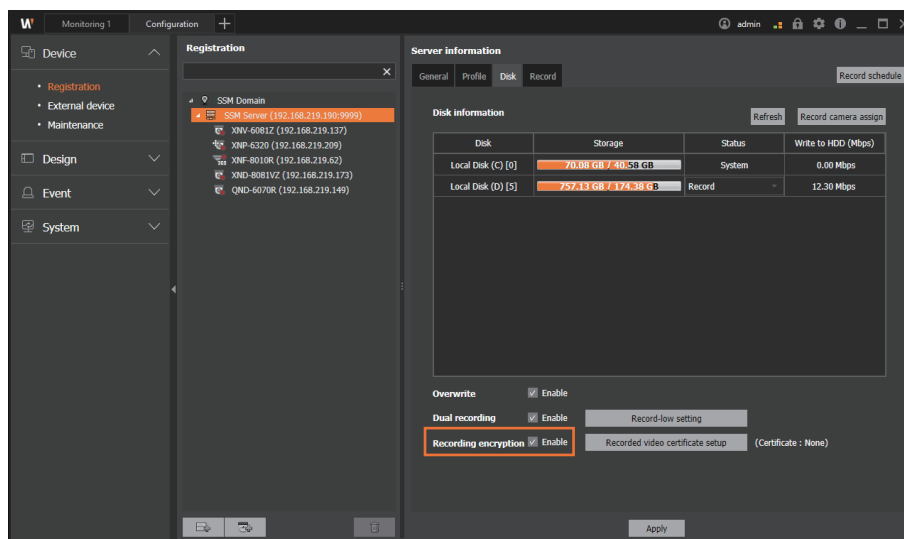
4. Click the **Apply** button.

5. To install a recorded video encryption certificate, click the **Recorded video certificate setup** button.

6. Click the [...] button under **File Path** and select the certificate file to install.
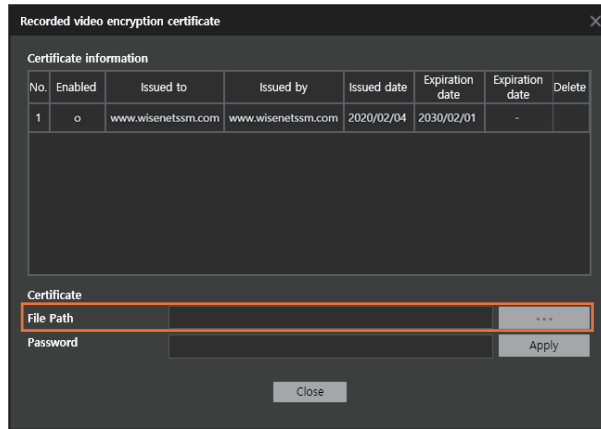
7. Set a password, then click the **Apply** button.
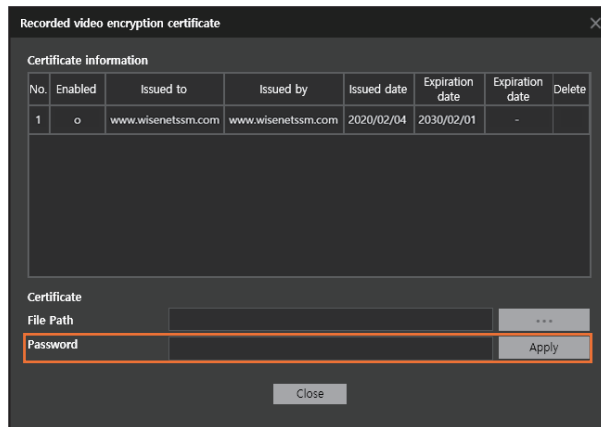
Assign a Camera to Disks

When you register a camera in **SSM Core Server**, a recording disk to record camera videos is set automatically. You can set the desired camera video to be recorded on a specific disk instead of the automatically-specified disk.

<table>
<tr><td>🔍</td><td>

NOTE

Unless a recording disk is specified in the camera, you cannot record the camera video.
</td></tr>
</table>
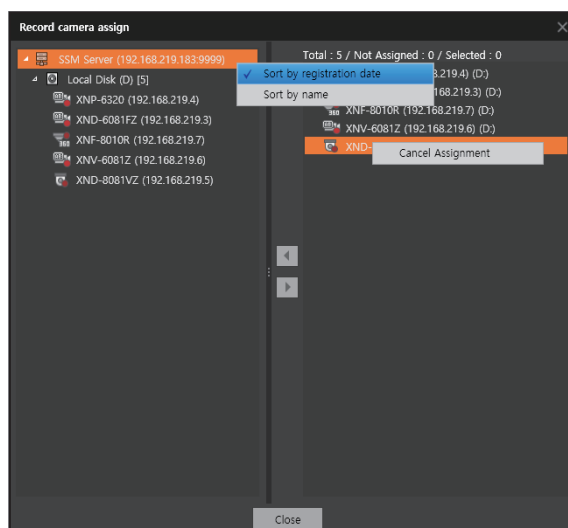
1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page, click the **Disk** tab.

3. Click the **Record camera assign** button at the top right of the **Disk information** page.

4. When the **Record camera assign** dialog box appears, select "SSM Server" in the disk list on the left.

5. Select a recording disk to record camera videos in the left tree.

6. Select a camera to record on the selected disk in the camera list on the right.

7. Click the ◀ button to add a camera to the disk.

    • The selected camera is displayed below the recording disk.

    • You can assign a camera to multiple disks.

Set Record Schedules

When you want to record camera videos at specific events or at specific times, you can set the record schedule and record. You can modify or delete the added schedule.

▌ Add Record Schedules

1. Select the desired **SSM Core Server** in the Device tree.

2. Click the **Record schedule** button at the top right of the **Server information** page.

3. When the **Record schedule** dialog box appears, click the 🔍 button at the bottom left.

4. Select the schedule you added from the Recording schedule list on the left.

5. Select a schedule by event type in the list of the events on the right.

   - Always: Records the camera video for 24 hours every day regardless of the day of the week.

   - None: Does not record the camera video.

   - If you want to set a schedule not on the schedule list, click the **Schedule** button at the top right to perform Set Schedules.

     (Example) If you want to record the camera videos only when motion detection events occur, set the schedule for the motion detection events to **Always**, and set the schedule for the remaining events to **None**.

6. Click the **Apply** button.

> **NOTE**
>
> When you want to change the name of the record schedule, click **Change basic information** in the shortcut menu of the schedule list.

▌ Delete Record Schedules

1. Select the desired **SSM Core Server** in the Device tree.

2. Click the **Record schedule** button at the top right of the **Server information** page.

3. When the **Record schedule** dialog box appears, select the schedules to be deleted in the **Recording schedule list**.

4. Click the 🗑 button.

Add Schedules

When you want to record camera videos at specific time intervals, you can add a new schedule to set a record schedule.

1. Select the desired **SSM Core Server** in the Device tree.

2. Click the **Record schedule** button at the top right of the **Server information** page**.**

3. When the **Record schedule** dialog box appears, click the **Schedule** button at the top right.

4. On the bottom left of **Schedule** dialog box, click the 🖳 button.

5. Select the added schedule from the schedule list.

6. Enter the **Name** of the schedule in the **Schedule information** page on the right.

7. Set the schedule **Cycle**.

   - Daily: Camera videos are recorded daily on the set schedule.
   - Weekly: Camera videos are recorded on the set day of the week.

8. Set the time interval for recording the camera videos.

   - When you click or drag the time interval to record, a time area is selected.
   - You can select the desired time only by pressing the [**Ctrl**] or [**Shift**] key.

9. Select a time interval and click the **Settings** button.

   - The area where the schedule is set is displayed in green.
   - Select the desired interval and click the **Release** button to release the setting.

10. Click the **Apply** button.

> **NOTE**
> - If you select to use holidays, then the schedule is not applied to the dates you specify as holidays.
> - You can set the Holiday settings in the **Record schedule** > **Schedule** > **Holiday** tab.
> - In addition, you can set the Add schedule in the **Configuration** > **System** > **Schedule** menu.

Set Camera Recordings

You can modify the recording settings of the cameras registered in **SSM Core Server**.

Modify Camera Recording Setups

1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page, click the **Record** tab.

3. Select the desired camera from the camera list.

   If you want to change the settings of multiple cameras collectively, then you can press the [**Ctrl**] or [**Shift**] key to select the desired cameras only.

4. Modify the settings in **Record** page.

5. Click the **Apply** button.

> **NOTE**
> - When you record camera videos in **SSM Core Server**, you can receive and record both high resolution and low resolution streams from the camera simultaneously.
> - You can choose the record schedule from Recording schedule always, None, or User-added record schedule.
> - You can set the recording file retention period by camera.
> - Recording files are automatically deleted after the set retention period.
> - You can set whether or not to record audio. When the audio recording is set to **Disable**, the audio is not recorded while recording the camera videos. Set audio recording as **Two-way** to record audio input from the camera as well as any audio input after turning on the mic while monitoring.
> - For recording stability, use SATA2 7200 rpm or higher HDD. (Maximum recording throughput per HDD is 130 Mbps.)
> - You can search and play the recorded camera videos in the Monitoring menu of **SSM Console Client**.

Set Camera Profiles

You can check and change the profiles of the cameras registered in **SSM Core Server**.

Registered Device List — Camera Profile List
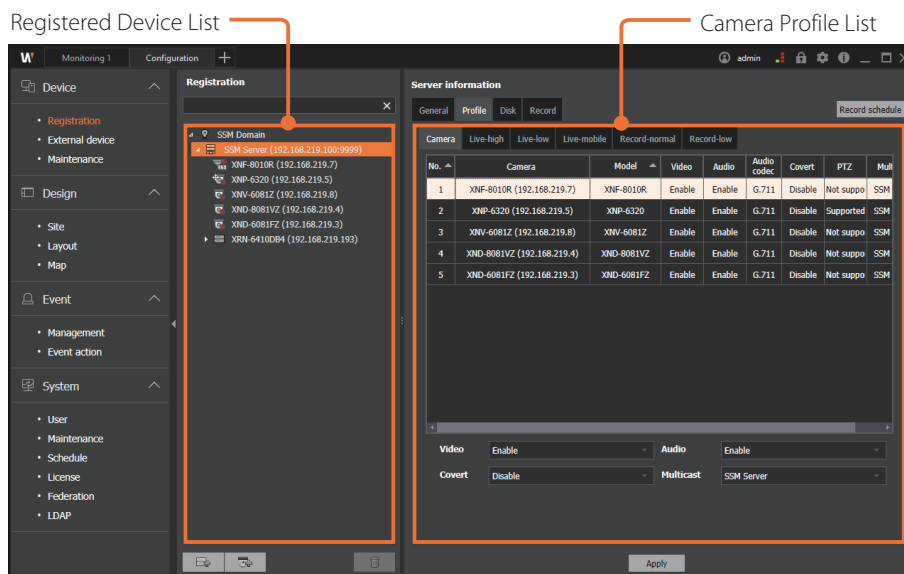
Set Videos

1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page, click the **Profile** tab.

3. In the **Profile** page, click the **Camera** tab.

4. Select the desired camera from the camera list.

   If you want to change the settings of multiple cameras collectively, then you can press the [**Ctrl**] or [**Shift**] key to select the desired cameras only.

5. Set the profile of the camera.

   - **Video**: If you set this to **Disable**, you cannot view a video when monitoring it, and the audio will be automatically set to **Not supported**.

   - **Audio**: If you set this to **Disable**, you cannot hear the audio when monitoring a video.

   - **Covert**: If you set this to **Enable**, videos and audios can be recorded but users cannot monitor them without the proper credentials.

   - **Multicast**: You can set the camera data transmission method to Multicast. If you select **SSM Server**, you can transmit data by Multicast from **SSM Core Server** to **SSM Console Client**.

     - Multicast is used when the recipient of the data is a specific group consisting of multiple addresses. When transmitting data to multiple networks, you can do so to multiple devices at once.

6. Click the **Apply** button.

Set Audios

1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page, click the **Profile** tab.

3. In the **Profile** page, click the **Camera** tab.

4. Select the desired camera from the camera list.

    If you want to change the settings of multiple cameras collectively, then you can press the [**Ctrl**] or [**Shift**] key to select the desired cameras only.

5. Set Audio under **Camera** page.

    -   If you set Audio to **Disable**, you cannot hear the audio while monitoring the real-time videos from the camera.

    -   You can set Audio recording in **Record** > **General** tab of Server information page.

6. Click the **Apply** button.

Set Coverts

1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page, click the **Profile** tab.

3. In the **Profile** page, click the **Camera** tab.

4. Select the desired camera from the camera list.

    If you want to change the settings of multiple cameras collectively, then you can press the [**Ctrl**] or [**Shift**] key to select the desired cameras only.

5. Change the settings in **Covert** list under the Camera page.

    -   If you set Covert to **Enable**, then you cannot check the video and the audio while playing the real-time videos and recorded videos from the camera. However, you can record the video and the audio.

    -   If you change the settings of Covert to **Disable**, you can play the recorded videos previously covert enabled.

6. Click the **Apply** button.

Change Camera Profiles

You can change Live-high, Live-low, Live-mobile, Record-normal, or Record-low profiles of the camera.
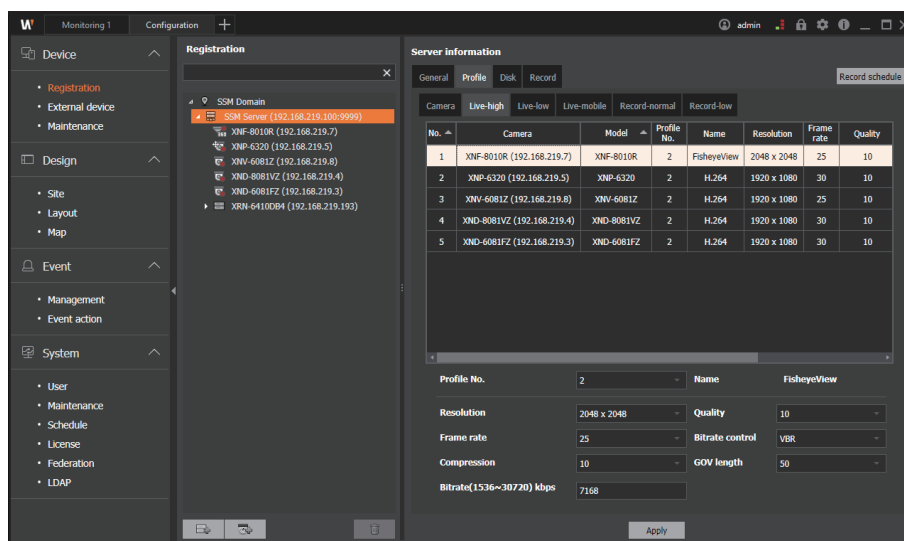
1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page, click the **Profile** tab.

3. In the **Profile** page, select the profile tab to be changed.

   Options: Live-high, Live-low, Live-mobile, Record-normal, Record-low

4. Select the desired camera from the camera list.

   If you want to change the settings of multiple cameras collectively, then you can press the [**Ctrl**] or [**Shift**] key to select the desired cameras only.

5. Change the settings under the **Profile** page.

6. Click the **Apply** button.

> **NOTE**
> - **Record** profile can be set only for the cameras registered in **SSM Core Server**.
> - You can set Live-high, Live-low, Live-mobile, Record-normal, and Record-low profiles by camera.
> - You can set Profile No., Frame rate, Compression, Bit rate, Resolution, Quality, Bit rate control, and GOV length by profile.
> - You cannot modify the profile information of cameras registered in DVR and NVR.

Create New Profiles/Delete Profiles

1. Select the desired **SSM Core Server** in the Device tree.

2. In the **Server information** page, click the **Profile** tab.

3. In the **Profile** page, select the profile tab to be changed.

4. Select the desired camera from the camera list.

    If you want to change the settings of multiple cameras collectively, then you can press the [**Ctrl**] or [**Shift**] key to select the desired cameras only.

5. Under the **Profile page**, click **Profile No.**.

6. Under the **Profile No.** list, select **Create new profile**.

    You can select Create new profile even in **Name** when you select multiple cameras.

7. When the **Create new profile** dialog box appears, set **Name** and **Video codec** of the profile to be created.
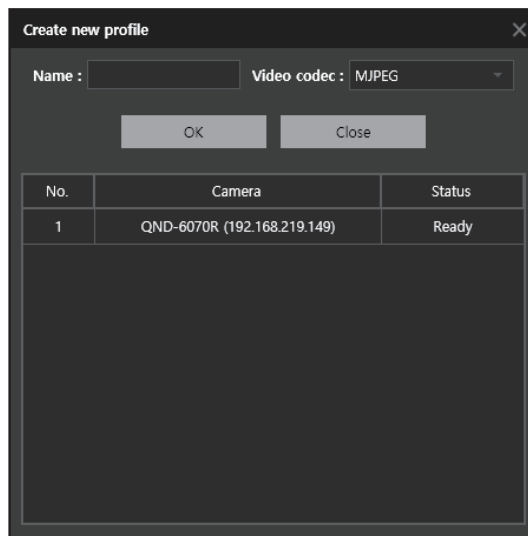
8. Click the **OK** button.

    Newly-created profile is added to **Profile No.** list.

> **NOTE**
> - Create new profile/Delete profile is only available for cameras registered with SUNAPI.
> - If you want to delete the created profile, then click the ✕ button in Profile No. list to delete the selected profile.

Modify Device Information

Use Shortcut Menu

When you select the device registered in the Device tree and right-click, shortcut menu appears.
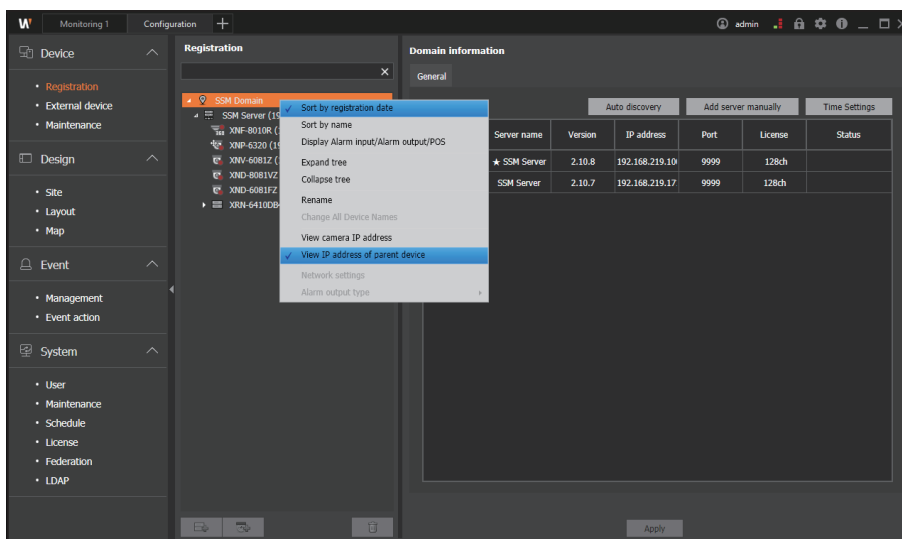
Sort by registration date	Sorts the registered servers or devices in the order of registration.
Sort by name	Sorts the registered servers or devices in the order of name.
Display Alarm input/ Alarm output/POS	Shows alarm input and alarm output of the registered devices.
Expand tree/Collapse tree	Expands a Device tree to show all or hide all.
Rename	Changes the name of the selected items in the tree.
Change All Device Names	Changes the registered devices' name in batch.
View camera IP address	Shows the IP addresses of the camera connected to the recorder.
View IP address of parent device	Shows the IP addresses of the recorder connected to the camera.
Network settings	In the case of a camera registered using ONVIF protocol, you can change its IP address, subnet mask, and gateway.
Alarm ouput type	You can select the alarm output type of a camera registered using ONVIF protocol. (Normal Open / Normal Close)

Modify Device Information

You can change the setting information of the devices registered in **SSM Core Server**.

1. Select the desired device in the Device tree.

2. Change the device information in **Device information** page on the right.
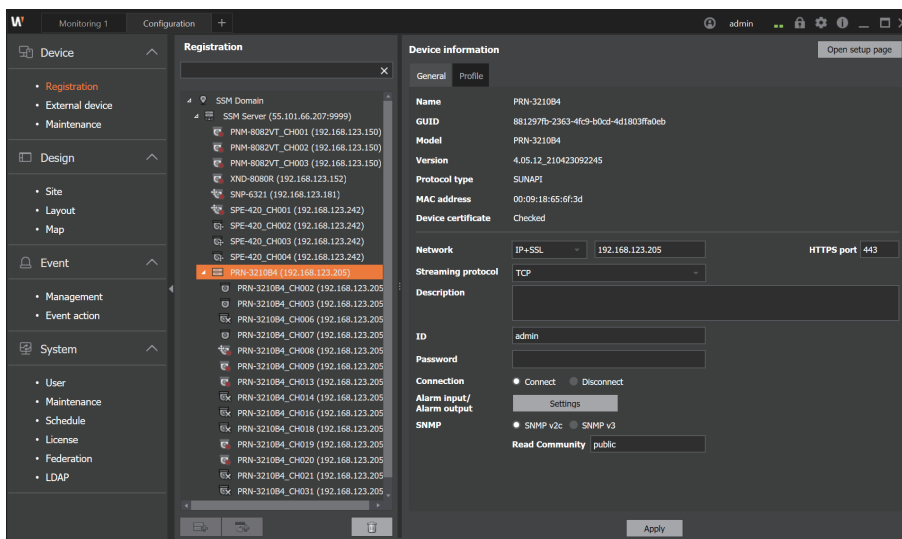
- Connect/Disconnect: You can connect or disconnect a device.

- Alarm input/Alarm output: You change the settings of alarm input/alarm output.

- SNMP: The SNMP protocol allows system or network administrators to remotely monitor and configure the network devices. Set the same as the SNMP information of the network device.

   - SNMP v2c: Enter the name of read-only community to access the SNMP information. The initial value is **public**.

   - SNMP v3: Set the initial user password.

3. Click the **Apply** button.

> **NOTE**
>
> When you replace with another device due to a device failure, a dialog box appears asking you whether to replace the device or not.
> - Click the **Yes** button to replace the device.
> - Click the **No** button to maintain the existing device settings.
> - Device replacement is possible only with devices of the same model.

Modify Camera Information

You can change the setting information of the cameras registered in **SSM Core Server**.
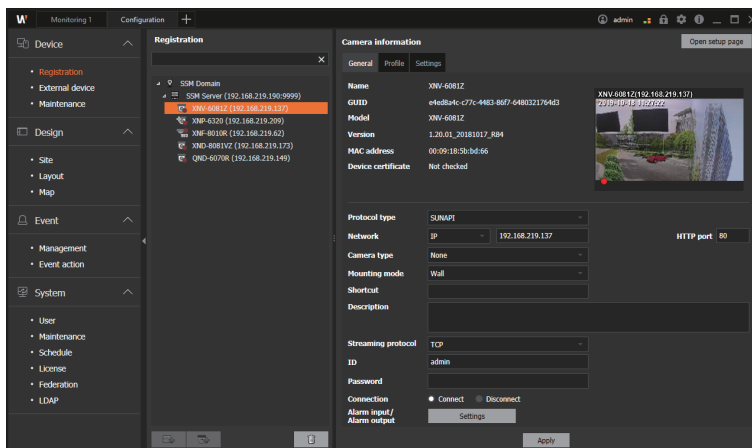
1. Select the desired camera in the Device tree.

2. Change the camera information in **Camera information** page.

   - **Camera type**: Set to the desired camera type. When you set the camera type, the icon of the selected camera type is displayed in the Camera tree of **SSM Console Client.**
     - For fisheye cameras, their camera type must be set to Fisheye dewarp to use the dewarp view function in the Monitoring menu.

   - **Mounting mode**: You can set the installation location of the camera.

   - **Shortcut**: You can easily upload the camera video to the video tile by executing the shortcut from Monitoring menu. Shortcuts can be set to numbers only.
     - How to use: Select the video tile from Monitoring menu, hold down [Alt] key, and press the number specified as the shortcut and [**Enter**] key in turn.

   - Preview Camera Video: When you hover over the desired camera in the registered camera list, the video from the camera appears as a thumbnail.
     - If the camera does not support preview, then the **No preview support** tooltip appears when you hover over it.

3. Click the **Apply** button.

Delete Devices

You can delete the recording devices and cameras registered in **SSM Core Server**.

1. Select the devices to be deleted.

2. Click the [🗑] button.

3. When the Delete dialog box appears, click the **Yes** button.
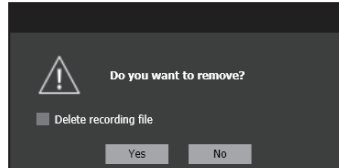
> **NOTE**
> - When you delete cameras registered in **SSM Core Server**, you can select whether to delete the recording file in the Delete dialog box.
> - If you select **Delete recording file**, all the recorded videos from the camera in **SSM Core Server** are deleted.
> - If you want to delete multiple cameras registered in **SSM Core Server** collectively, then you can press the [**Ctrl**] or [**Shift**] key to select the desired camera only.

Control Camera Settings

You can control functions such as focus, iris, backlight, day/night mode, and digital zoom of the camera.

1. Select the desired camera in the Device tree.

2. In the **Camera information** page, click the **Settings** tab.

3. Modify the camera settings information.

   - Simple focus: You can automatically adjust the focus of the camera.

   - Focus: You can manually adjust the focus of the camera. For cameras registered with SUNAPI protocol, you can set the focus shift interval to 1, 10 or 100.

   - Digital zoom in/out: You can zoom in/out on the video to the desired magnification. For cameras registered with SUNAPI protocol, you can set the zoom shift interval to 1, 10 or 100.

   - Show/Hide OSD: You can set whether to display OSD on the camera video.

   - Backlight: It is a backlight compensation mode. You can set the level value only when you select WDR mode.

   - Day/Night: You can select among Color, B/W, and Auto.

   - P-Iris: You can adjust the light exposure by opening the iris as much as the value set in the box or dome camera. You can set it by sliding the control or by entering a value. The greater the value, the screen is brightened by light exposure.

4. Click the **Apply** button to store the changed settings.

> **NOTE**
> Supported setting menus may vary, depending on the camera model.

Set Privacy Areas

1. Select the desired camera in the Device tree.

2. In the **Camera information** page, click the **Settings** tab.

3. Click the **Privacy area settings** button to set the privacy area on the video.

   - When you click with the mouse, a rectangle appears. If you click again on the desired location, then the privacy area is set.

   - You can set up to 8 privacy areas.

4. Click the **Apply** button.

5. Go to **Configuration** > **System** > **User** menu.

6. Select the user group and set whether to display the **Privacy area** in **Function-specific permissions**.

   Depending on the settings, the privacy area is displayed on the video tile in the Monitoring menu.

7. Click the **Apply** button.

Open Device Web Viewers

1. Select the desired recording device or camera in the Device tree.

2. Click the **Open setup page** button at the top right of the page.

3. If the setup page does not open, enter the ID and password of the device.

Add and Delete Presets

1. Select the desired camera in the Device tree.

2. In the **Camera information** page, click the **Settings** tab.

3. Control PTZ to set the desired view of the camera.

4. Enter the preset **Number** and **Name**.

5. Click the [image] button.

> **NOTE**
> - Select the desired preset in Preset list and click the [image] button to delete the preset.
> - When Homeposition is supported, or the camera is a Fisheye camera, the Homeposition item is automatically added in Preset list. Select Homeposition to go to the set home position.
> - For the PTZ control method, please refer to "PTZ" tab in the User Manual.
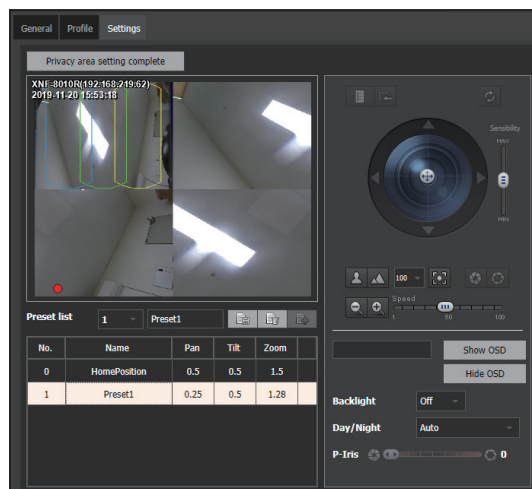
Set SSM Tours

1. Select the desired camera in the Device tree.

2. In the **Camera information** page, click the **Settings** tab.

3. Click the ⊞ button on the right of Preset list.

4. When the **SSM tour** dialog box appears, click the [+] button to add a preset.

5. Set the desired preset in the preset list.

6. Set **Dwell time**.

7. Click the **Apply** button.

No.	Preset

SSM tour ✕

Dwell time 10 s   ▼   + −

Apply   Close
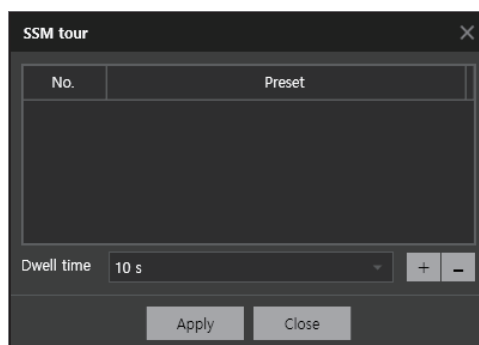
NOTE

You can set SSM tour by adding multiple presets.

Set External Devices

You can use external systems or external devices in conjunction with the SSM system. You can register the external devices directly in SSM or register the external systems in a transaction server.

Add External Devices

You can register items such as fire alarm, light bar, circuit breaker, or external alarm sensor in SSM.

1. Open the **Configuration** menu page.

2. In the menu list, click **Device** > **External device**.

3. Under the **External device** page, click the Add device [🖳] button. External devices for linking an external device appear in the device list.

> **NOTE**
>
> - After adding devices, you can add cameras, alarm inputs, and alarm outputs. When you click the [▾] button and select an item to add, the icon on the left changes to the icon of the selected item. When you click the changed icon, camera, alarm input, and alarm output are added under the device.
>
> - When you select an added device from the list, you can see or modify the device information on the right page.
>
> - The Add device button works independently of the transaction server for external device mapping.

Add Transaction Servers

You can use external systems such as Access Control System (ACS) and Intrusion Detection System (IDS) by linking with the SSM system. You need to register the external system in a transaction server to link SSM with the external system. For details, please refer to **Transaction Server Product Instruction Manual**.

1. Open the **Configuration** menu page.

2. In the menu list, click **Device** > **External device**.

3. Under the **External device** page, click the [🖃] button.

4. When the **Add transaction server** dialog box appears, click the **Manual** button on the right.

5. Enter the IP address and port.

   You can select the automatically-searched transaction server to add.

6. Click the **Registration** button.

> **NOTE**
> • In the **Configuration** menu, you cannot add an external system in a **Transaction server**.
> • Adding or editing an external system can only be set from the web viewer on the **Transaction server**.
> • When you add an external system from the web viewer, you can see the external system added to the External devices tree in **Configuration** menu.
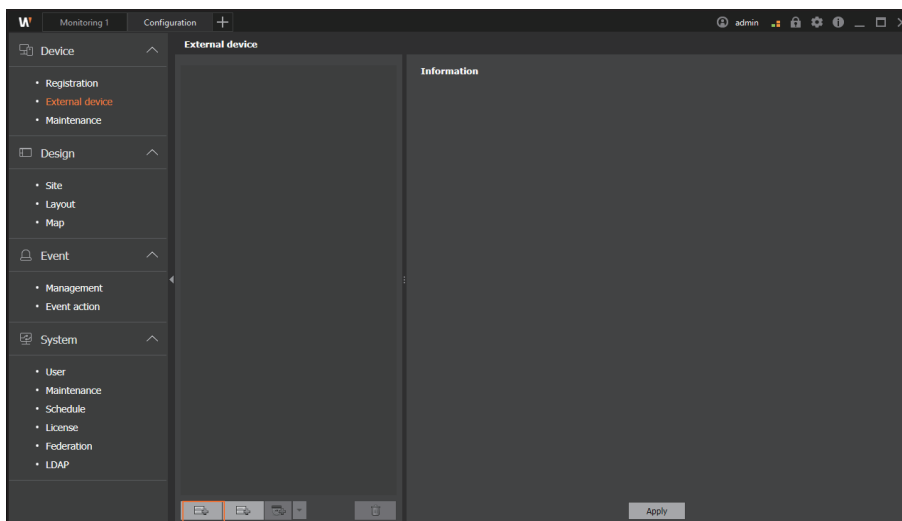
Modify External Device Information

You can modify the information of the registered external devices.

1. Select the external device registered in the server.

2. Modify the setting information of the device in Information page on the right.

3. Click the **Apply** button.
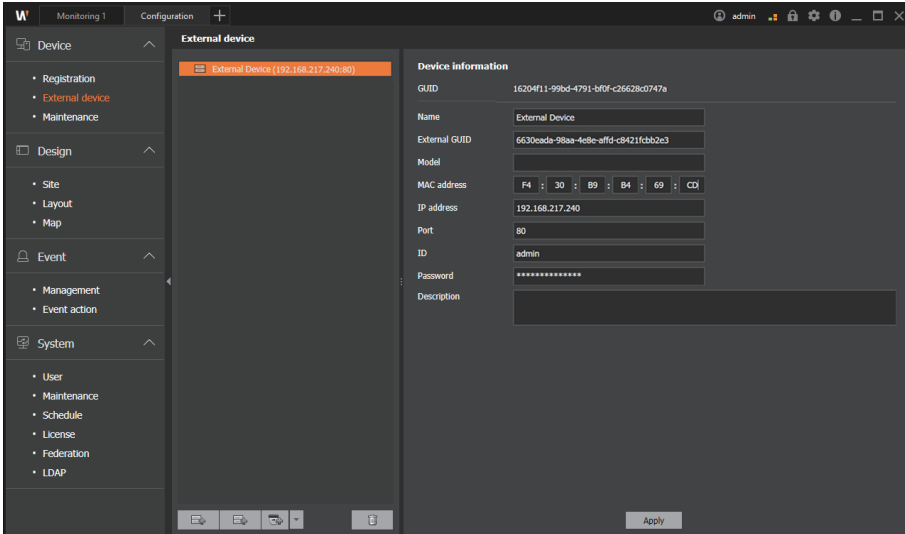
Maintain Devices

You can upgrade the firmware of recording devices or cameras registered in **SSM Core Server**, or backup or restore the setting information. In addition, you can change the password of the device remotely.

Upgrade Firmware

You can upgrade the firmware of the recording devices or cameras registered in **SSM Core Server** in **Configuration** menu.

1. Open the **Configuration** menu page.

2. In the menu list, click **Device** > **Maintenance**.

3. Click the **Firmware upgrade** tab in **Maintenance** page on the right.

4. Select the desired model in **Model**.

5. Select a device to be upgraded.

6. Click the **Upgrade** button.

7. Select the firmware file.

   The progress and status of the upgrade are displayed in the column.

> **NOTE**
> You can select multiple devices of the same model and upgrade the firmware at the same time.

Backup Setting Information

You can back up the setting information of a recording device or a camera registered in **SSM Core Server** to a file.

1. Open the **Configuration** menu page.

2. In the menu list, click **Device** > **Maintenance**.

3. Click the **Configuration backup & restore** tab in **Maintenance** page on the right.

4. Select the desired model in **Model** list.

5. Click the **Backup** button to set a file path to store the setting information.

> **NOTE**
>
> To back up the settings information of a device that supports encryption, enter the password to encrypt the settings file. Enter the password again when restoring the settings information.
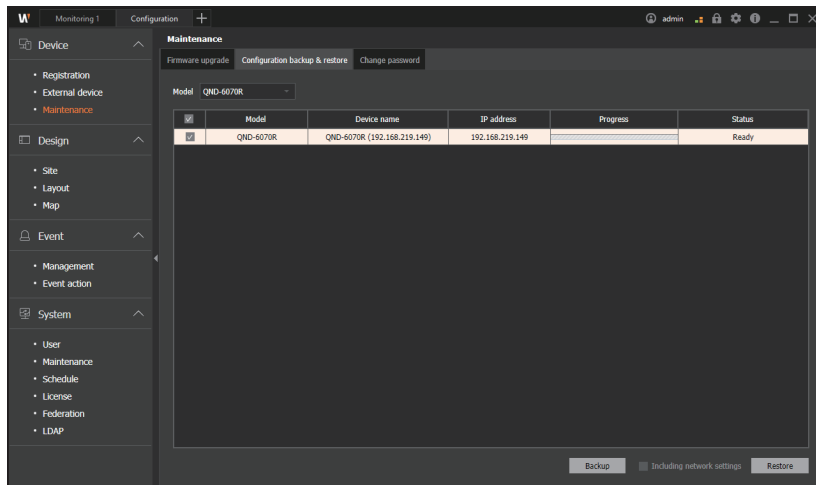
Restore Setting Information

You can restore the device settings with the setting information of the device at the time of the backup. After creating multiple setting files for the device, you can restore them to the desired settings depending on the purpose of use or the environment of the device.

1. Open the **Configuration** menu page.

2. In the menu list, click **Device** > **Maintenance**.

3. Click the **Configuration backup & restore** tab in **Maintenance** page on the right.

4. Select the desired model in **Model** list.

5. Click **Restore** and select the backup settings file.

> **NOTE**
> - When you restore device settings, select **Including network settings** to change the network information of the device to the network settings of the backup file.
> - Settings restoration allows you to select multiple devices and restore them collectively, but for setting backup, you can back up only one device at a time.

Change Passwords

You can change the password of the devices registered in **SSM Core Server**.

1. Open the **Configuration** menu page.

2. In the menu list, click **Device** > **Maintenance**.

3. Click the **Change password** tab in the **Maintenance** page on the right.

4. Select a device whose password is to be changed.

5. Enter the current password for the device and set a new password.

6. Click the **Apply** button.

   You can select multiple devices with the same ID and password and then change them collectively.

Set Designs

Set Sites

Devices registered on the **SSM Core Server** can be categorized and managed in accordance with the management standards. You can also create a site according to the categorization criteria and assign or remove a device to and from the relevant site.

▋ Utilize Sites

- Manage by region with sites
- Manage sites (Add, modify, and delete)

▋ Manage Sites

Administrators can use the site to group cameras, alarm output, etc. by area. This allows you to easily find the desired cameras by region, even when the number of cameras registered in **SSM Console Client** is large.
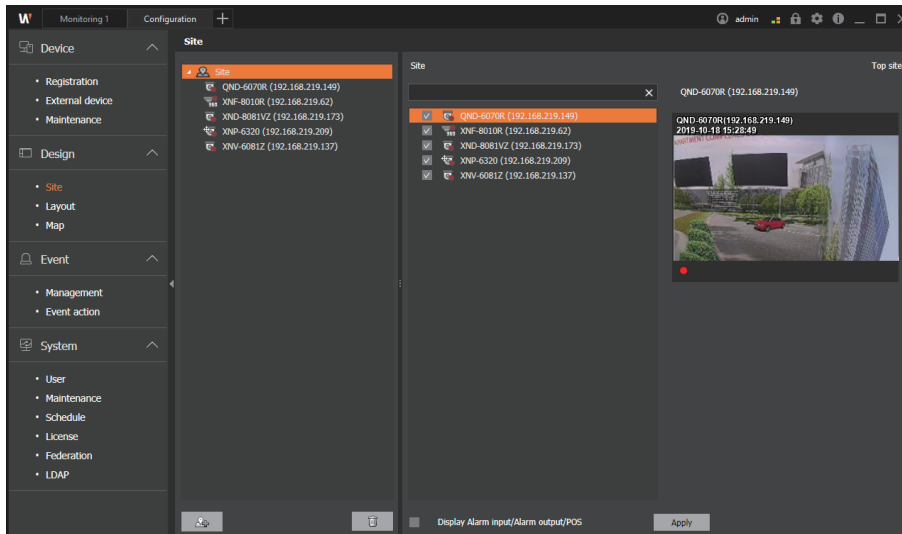
> **NOTE**
> The top-level site is provided by default when you install the program and you cannot delete it.

Assign Cameras to Sites

You can add devices or cameras to monitor on your site.
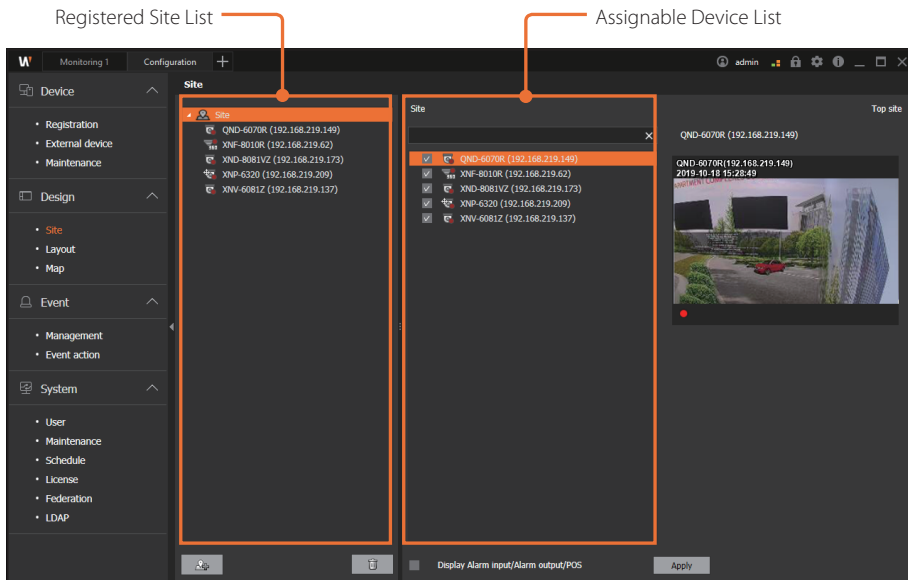
Registered Site List ──────── Assignable Device List

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **Design** > **Site** in the menu list on the left.

4. Select a camera to add to the site in the registered device list on the right.

   • You can search for cameras in the Search window.

   • When you select a device, the preview screen of the device appears on the right screen.

   • To delete a device added to a site, click the checkbox of the device to be deleted in the Device list.

5. Click the **Apply** button. The selected device is assigned to the site item.

   • Below is an example of site configuration and use.
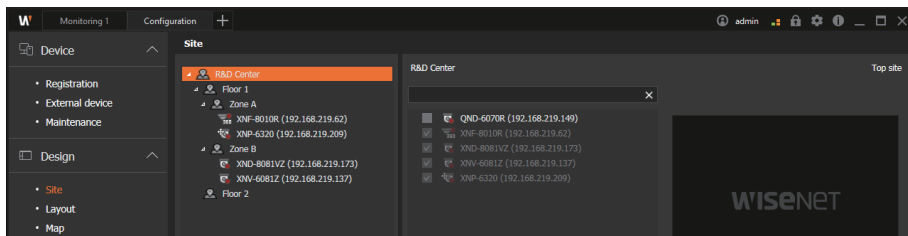
Modify Sites

You can sort device lists or change the tree view state from the shortcut menu of the tree list.

You can change the sorting criteria in the device list and edit the tree items.
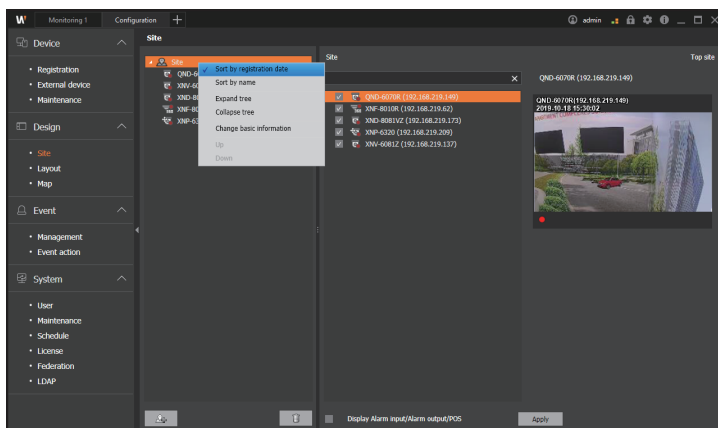
Sort by registration date	The devices in that device tree are sorted in the order they are registered.
Sort by name	The devices in that device tree are sorted by name.
Expand tree **Collapse tree**	Expand or hide the entire Device tree.
Change basic information	Change the site name or description.
Up	The selected device moves up one place.
Down	The selected device moves down one place.

Set Layouts

You can set the video of the desired camera to be selected and viewed in one screen. You can create a layout, view the configuration information of the cameras and sites included in the layout. You can configure the screens by region, store them, and select them to view immediately when you need them.

> **NOTE**
> - When creating a layout, ownership is created in the group to which the user logged in to **SSM Console Client** belongs.
> - Thus, the layout can only be edited when the user with the ownership logs in.

Add Layouts

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **Design** > **Layout** in the menu list on the left.

4. Click the [⊞] button under the Layout page. The layout added is displayed in the left tree.

5. Select a layout split mode in **Pattern**.

6. Add a camera to be placed in the layout to the video tile in the Device tree under **Site**.

   - Enter text to search devices by name.

   - Double-click the camera or select the desired camera, then drag it on a tile.

   - To assign multiple cameras at once, press the [**Ctrl**] or [**Shift**] keys to choose the desired camera, then drag on to the tile.

   - If you click the [⤢] button an the top right of Layout page, then only the Layout area is brought up to full screen.

7. Click the **Apply** button.
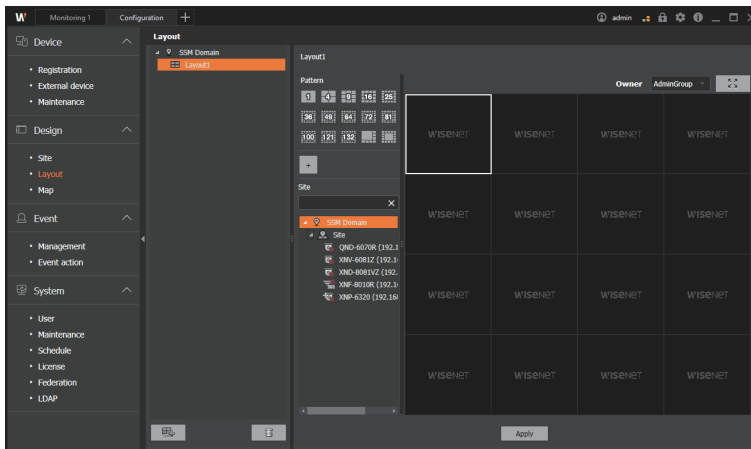
Set User Patterns

The administrator can create a screen split pattern of a layout.

■ **Add User Patterns**

1. Open **Layout** menu page.

2. Click the ⊞ button under Pattern in the right page.

3. When the **Add user pattern** dialog appears, enter **Name** and set **Row** and **Column** of the layout.

4. Click the **Create** button. Then, the user pattern appears with the information you set.

> 🔍 **NOTE**
> - You can set up to 11 rows and 12 columns in the pattern (e.g., 1 x 1, 1 x 4, ..., 11 x 11, 11 x 12).
> - Drag cells to merge them.
> - To return the merged cells to their previous state, click the **Unmerge** button.
> - To reset all settings, click the **Reset** button.
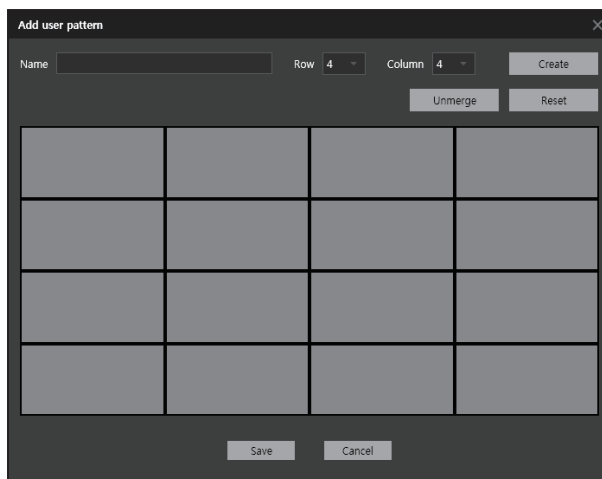
5. Click the **Save** button to store the settings.

■ **Modify and Delete Set Patterns**

If you select a custom pattern and right-click, then you can modify and delete the pattern.

Set Maps

You can add a new map, or set images such as a map or plan in Map. In addition, you can set a map link to go to another map on a map, set a map icon to display a specific building or location, or monitor by placing the camera or alarm output/alarm input.

Add Maps

You can configure a map into a hierarchy below a site or a map already created.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **Design** > **Map** in the menu list on the left.

4. Click the [icon] button at the bottom left of the Map page. The added map appears in the left tree.

Set Map Images

You set images such as map, plan, or aerial view on a map layout.

1. Click the **Map** menu in the **Configuration** menu page.

2. Select the desired map from the Map tree on the left.

3. Select the desired split mode in **Map pattern.**

4. Click the [icon] button on the right of **Map pattern**.

5. Set the map image file. The set map image is displayed in Map layout preview area.

6. Click the **Apply** button.

Set Map Links

You can set a map link so that you can easily move from one map to another.

1. Click the **Map** menu in the **Configuration** menu page.

2. Select the desired map from the Map tree on the left.

3. Click the **Map link** tab in the right page.

4. After selecting the desired map in Map list, set it in the Map layout preview area on the right.

   - Double-click the map or drag it over the preview area.

   - Then, the map is displayed as a link icon above the preview area.

   - From **Monitoring** menu page of **SSM Console Client**, you can click the Map link icon in the Map layout to go to the selected map.

5. Click the **Apply** button.

> **NOTE**
> The screen control button appears when you hover over the top right of the Map layout preview area. You can zoom in/zoom out on the map layout or move up/down or left/right with screen control button.
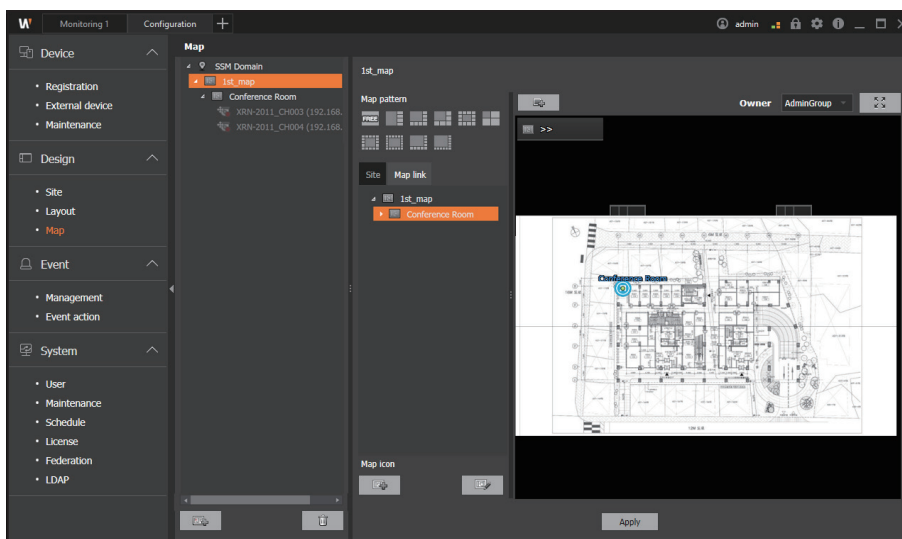
Add Map Icons

You can add a map icon to display a specific building or location on the map.

1. Click the **Map** menu in the **Configuration** menu page.

2. Select the desired map from the Map tree on the left.

3. Click the [icon] button under the right page.

4. When the **Add icon** dialog box appears, set Name and an icon image file.

   - You can set Name to 32 characters or fewer in Korean or 64 characters or fewer in English.

   - You can set the icon image in JPG, BMP, or PNG file format, in the size of 50 KB or less.
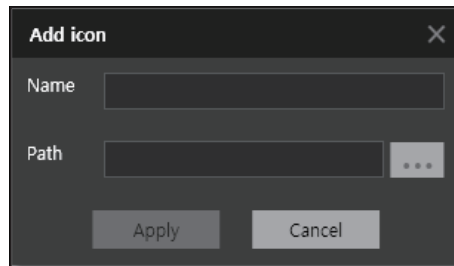
5. Click the **Apply** button.

> **NOTE**
> - To change the icon name or image, select the icon and then right-click to use the shortcut menu.
> - If you click the [icon] button, then you can change icon size, font size, and font location.

Place Devices

You can place and monitor cameras or alarm input/alarm output on the map.

1. Click the **Map** menu in the **Configuration** menu page.

2. Select the desired map from the Map tree on the left.

3. Click the **Site** tab in the right page.

4. After selecting the desired device in Site tree, place it in the Map layout preview.

   – Double-click the device or drag it over the preview area.

   – You can set the camera, alarm input, and alarm output.

5. Click the **Apply** button.
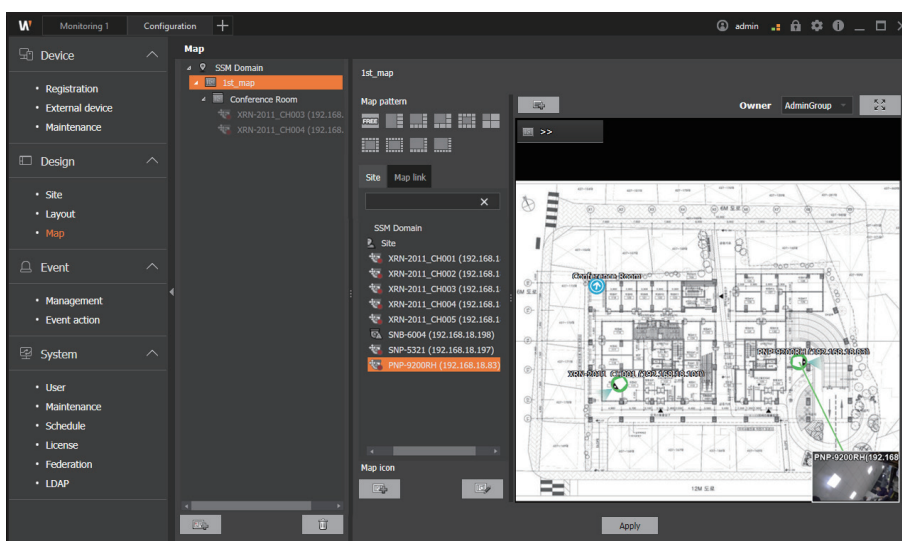
■ **Camera**

- You can check the connection status of the camera.

- You can check whether the camera has an event occurrence or not.

- You can display the camera name in the Monitoring menu page.

- You can check the camera information in the Monitoring menu page.

■ **Alarm output**

- You can check the connection status of Alarm output.

- You can check the name of the alarm output.

- You can turn the alarm output on or off in the Monitoring menu page.

■ **Register Parking Lot**

If Hanwha Vision's parking guidance camera is placed on the map, it can be used as a parking map. In addition, you can check the entire parking lot status on the monitoring menu page.
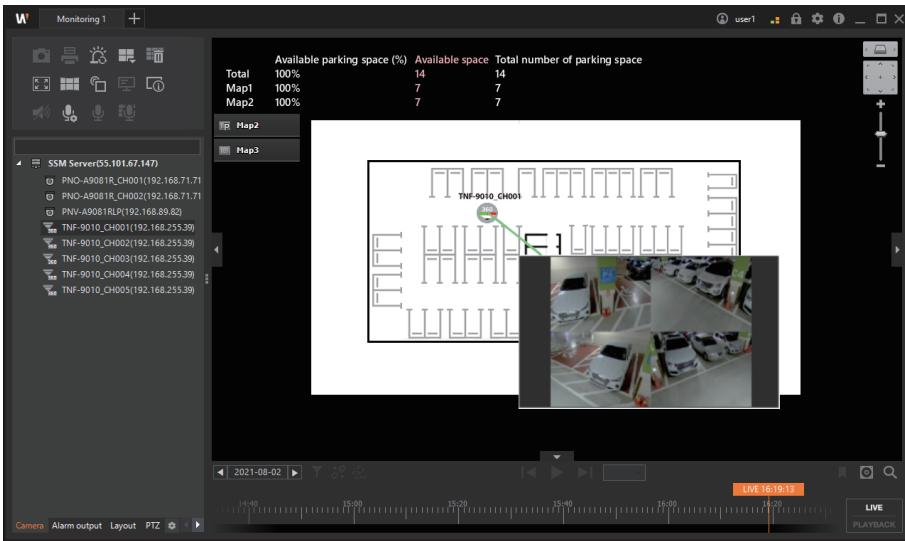
- 'Channel 1' of the parking guidance camera must be placed on the map to update the parking lot status.
- The icon of the parking guidance camera is displayed in one or two colors depending on the number of LEDs.

🔍 **NOTE**
- To change the location of a device icon, click the device icon and drag it to the desired location.
- You can rotate the image of the device icon. You can rotate the image to express the camera FOV direction or installation location of Alarm output.

  * How to set: A green ball appears in the center of the icon when you click the device icon. Click and drag the green ball in the desired direction to change the direction of the device icon.
- You can also change the icon image or remove the icon from the shortcut menu of the device icon.
- You can double-click the camera icon to view the camera video.

Set Events

Manage Events

You can select events to use in SSM or set event priority. In addition, you can specify the event color to be displayed in the video tile, or set event filters to receive only certain events when they occur.

▍ Modify Event Information

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **Event** > **Management** in the menu list on the left.

4. Select the desired event in the event list on the right.

5. Set **Whether or not to use** and **Priority** in the event information on the right.

6. Select **Event color**.

7. Click the **Apply** button.
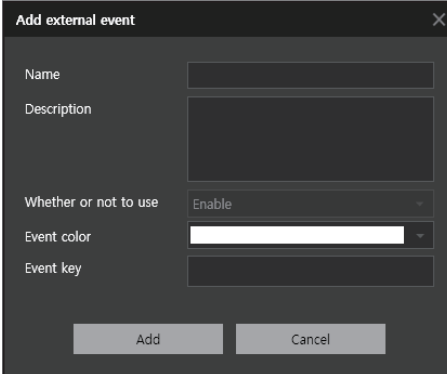
> **NOTE**
> ● If you set Event color, then it is reflected in the event log of **SSM Console Client** or the border of the camera video tile.
> ● If you set **View advanced settings** at the top right of the event list to **Enable**, you can additionally view the list of external events in the event list.

Add External Events

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **Event** > **Management** in the menu list on the left.

4. Select the item to which you want to add an external event in the event list.

5. Click the **Add external event** button under the **Management** menu page.

6. When the **Add external event** dialog box appears, enter the event information such as Name, Description, or Whether or not to use.

7. Click the **Add** button. Then the added external events appear in the event list.

Set Event Discard Times

If the same event occurs within the specified time after the event occurs, then you can discard the additional events and suppress them.

> **NOTE**
>
> You can set the Event discard time for events related to Camera and Alarm input only.

Set Client Event Colors

A client event color is a color that is displayed to inform the user of an event. If an event occurs while monitoring a real-time video from the camera, then the OSD color above video tiles changes to the client event color.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, select **Event** > **Management** menu in the menu list on the left.

4. Click the **Client event** button at the top right of **Management** menu page.

5. Select **Display event color** in **Client event** dialog box.

    *   Event color: If an event occurs, the OSD color changes to the event color specified by event.

    *   Priority color: If an event occurs, the OSD color changes to the priority color.

Client event					✕
Display event color	Event color ▾				
Event filtering					
Name	IP address	■ Very High	■ High	■ Medium	
		✓	✓	✓	
⊟ SSM Server	192.168.219.190	✓	✓	✓	
XNV-6081Z	192.168.219.137	✓	✓	✓	
XNP-6320	192.168.219.209	✓	✓	✓	
XNF-8010R	192.168.219.62	✓	✓	✓	
XND-8081VZ	192.168.219.173	✓	✓	✓	
QND-6070R	192.168.219.149	✓	✓	✓	
		Apply	Cancel		
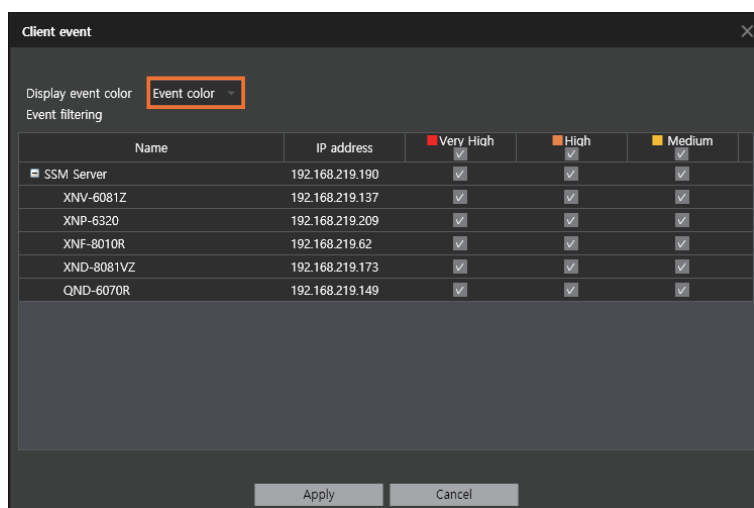
6. Click the **Apply** button.

Set Event Filtering by Device

In the Monitoring menu or Event menu page, you can set to filter and receive only the certain events by device. If you set the event filtering by device, you can only receive events of the specified priority.

(Example) If you set the Camera A to receive only events with the priority set to **High**, the Camera A cannot receive face detection events with **Very High** priority.

When multiple **SSM Core Servers** are clustered in a domain, you can monitor events by setting priority to receive only the user-desired event by device, rather than receiving all events from multiple cameras.
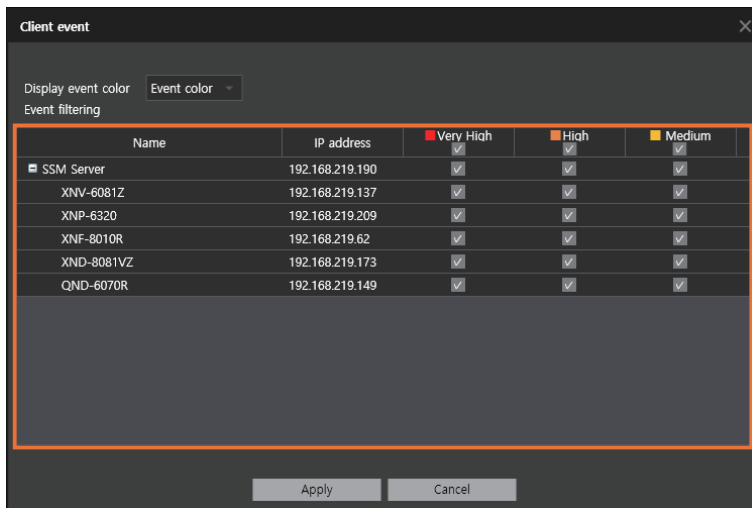
NOTE
The default setting for Event filtering is set to receive all events.

Set Event Actions

Event action sets the action (output) to respond when a specific event (input) occurs from the device. You can add, modify, or delete the event action.

- Set the name, description, event (input) settings, and actions (output) of the event action.

- Set the event action function that selects various types of actions (output) for events (input) occurred from the device.

Add Event Action — Add Schedule Action — Delete the Selected Event Action — Event Action Information

Add Event Actions

You can add or modify actions for events received from the event action.

Select the event type followed by the device and action method to take action when the event occurs.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, select **Event** > **Event action** menu in the menu list on the left.

4. At the bottom left of **Event action** page, click the [icon] button. The added event action appears in the list on the left.

5. Select the added event action. The event action information appears on the right.
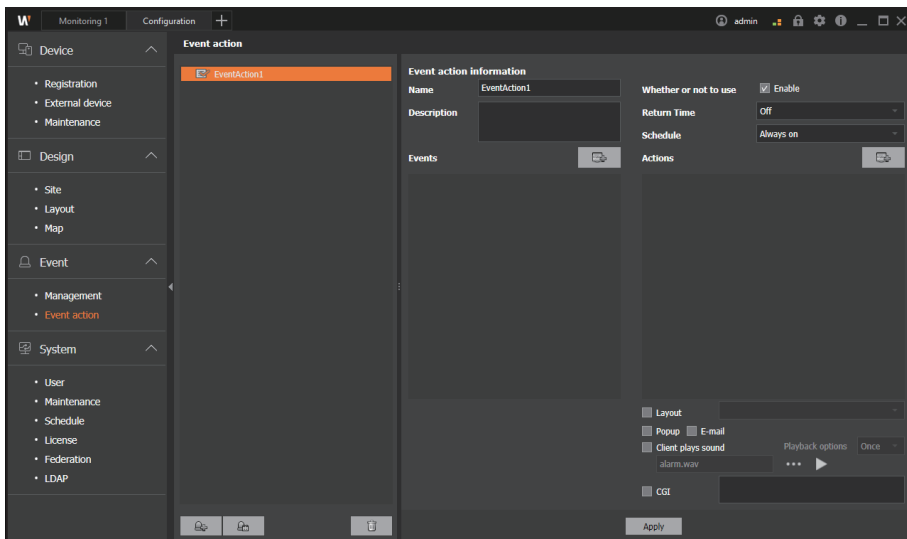
6. Select **Whether or not to use** of the event action.

7. Enter **Name** and **Description** of the event action.

8. Set **Schedule** and **Return Time**.

9. Click the [icon] button on the right of the **Event** to set the event to receive.

10. When the **Event** dialog box appears, select the device of the event occurrence in **Device** tree, then select the received event of the device in **Event** (Specifying the event type to set for a specific device).
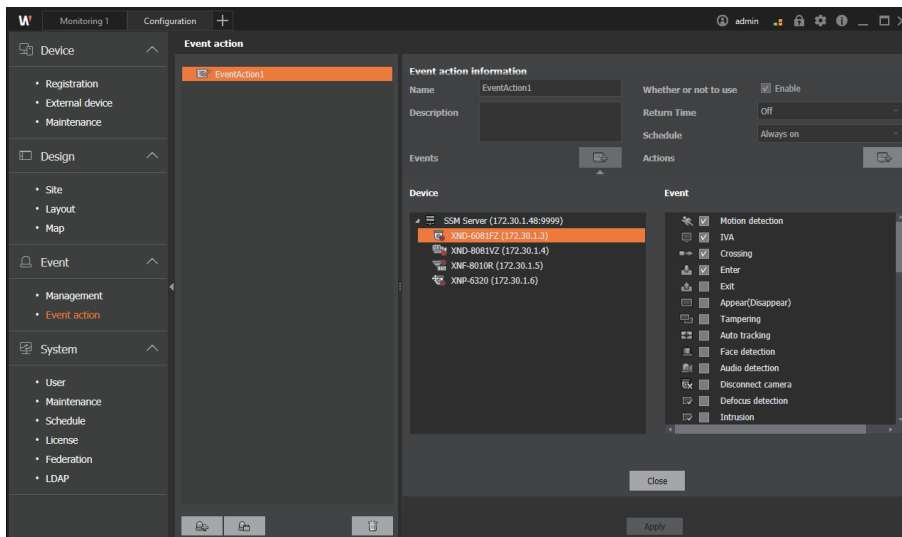
11. Click the **Close** button to finish the event setting.

12. Click the ⊞ button on the right of the **Actions** to set the event action.

13. When the **Actions** dialog box appears, select the device to take actions for an event occurrence in **Device** tree, then select the method for event actions in **Actions** (Specifying the action to take in a specific device when an event occurs).
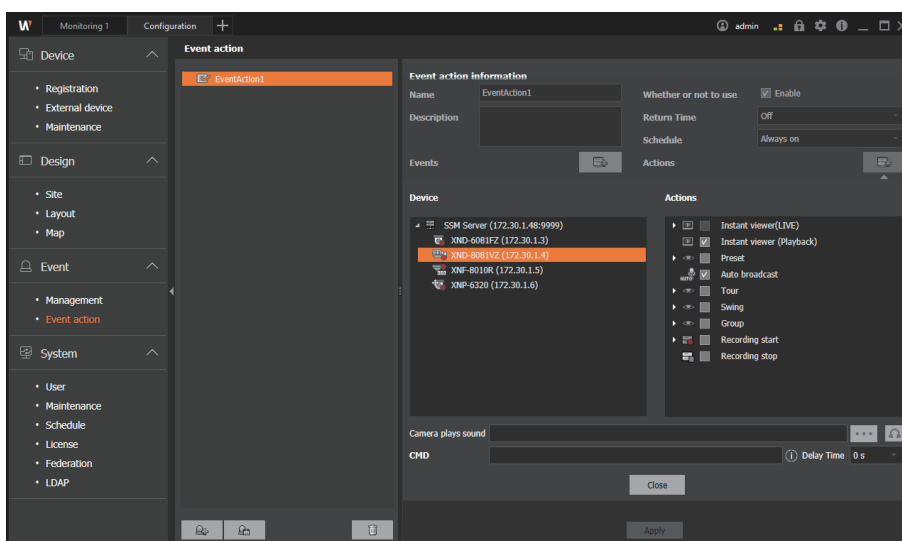
14. Click the **Close** button to complete the setup.

15. Click the **Apply** button.

Delete Event Actions

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, select **Event** > **Event action** menu in the menu list on the left.

4. Select the event actions to delete in the list on the left of **Event actions** page, then click the 🗑 button below.

Add Schedule Actions

You can select from a variety of actions (output) depending on the set schedule.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, select **Event** > **Event action** menu in the menu list on the left.

4. At the bottom left of the **Event action** page, click the 🔒 button. The added schedule action appears in the list on the left.

5. Select the added schedule action. The schedule action information appears on the right.
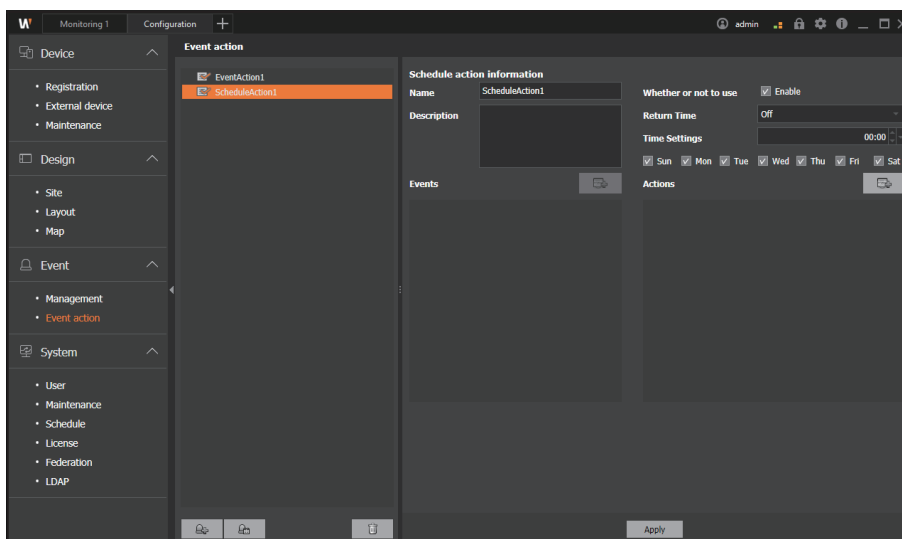
6. Select **Whether or not to use** the schedule action.

7. Enter **Name** and **Description** of the schedule action

8. Set Schedule, Return Time and day of the week.

9. Click the 🔲 button on the right of the **Actions**.

10. Select a device to operate from the **Device** tree, and select an action to take from **Actions**.
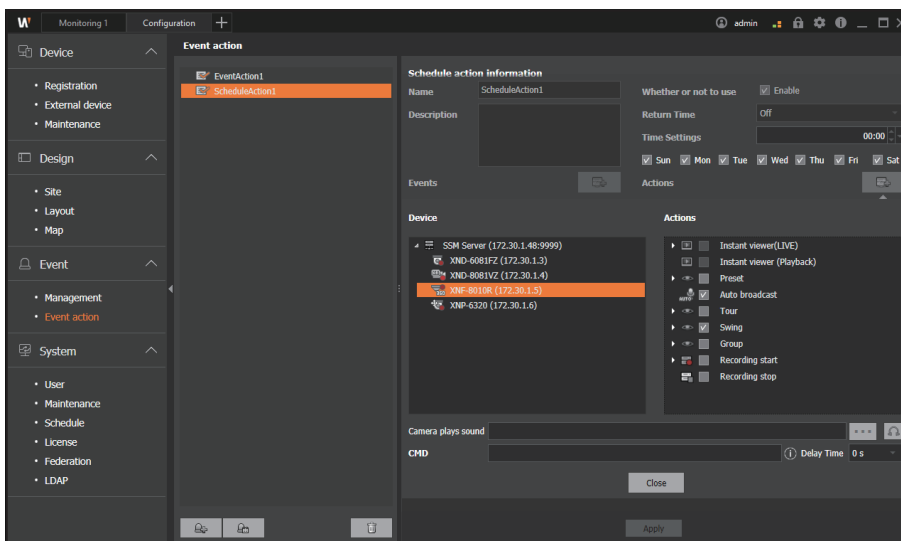
- To broadcast a sound according to the set schedule, go to **Actions**, select **Auto broadcast**, and set the sound you want under **Camera plays sound**.

11. Click the **Close** button to complete the setup.

12. Click the **Apply** button.

Learn about Frequently-used Terms

Learn about Event Terms

Device	Event Name for Input	Description
Camera	Motion detection	An event occurs when motion is detected in the area of interest set in the camera.
	Video loss	An event occurs when DVR, NVR, or encoder device cannot receive camera videos.
	IVA(Intelligent Video Analytics)	An event occurs when Intelligent Video Analytics are detected.
	Crossing	An event occurs when an object crossing a virtual line set on the camera is detected.
	Enter	An event occurs when a moving object enters from outside to inside of the virtual area set in the camera.
	Exit	An event occurs when a moving object exits from inside to outside of a virtual area set on the camera.
	Appear/Disappear	An event occurs when an object that does not exist in the virtual area set by the camera remains in the area for a certain period of time or when an object within the area does not exist for a certain period of time.
	Tampering detection	An event occurs when the camera video is hidden or the camera position is changed.
	Auto tracking	An event occurs when the moving object is automatically tracked on the camera video.
	Face detection	An event occurs when a person's face is detected on the camera video.
	Audio detection	An event occurs when audios are detected at the level set by the camera.
	Failed to connect	An event occurs when a camera cannot be connected.
	Connect camera	An event occurs when a camera is connected.
	Disconnect camera	An event occurs when the camera is disconnected.
	Defocus detection	An event occurs when the defocusing of the camera lens is detected.
	Intrusion	An event occurs when a moving object is detected within the virtual area set in the camera.

Device	Event Name for Input	Description
Camera	Loitering	An event occurs when motion of a loitering object is detected within the virtual area set in the camera.
	Fog detection	An event occurs when the camera detects foggy or cloudy images.
	Scream	An event occurs when the camera detects a screaming or shouting person.
	Gunshot	An event occurs when the camera detects shots not fired continuously.
	Explosion	An event occurs when the camera detects an explosion.
	Glass breaking	An event occurs when the camera detects a sound of shattering glass.
	Temperature change detection	An event occurs when a sudden temperature change occurs in the area of interest set in the camera.
	Shock detection	An event occurs when a shock or vibration is detected on the camera or when a change in the camera's physical location is detected.
	Alert for video recording	An event occurs when the incoming frame rate of the recording profile is lower than the configured value.
	Object detection (Person) Object detection (Face) Object detection (Vehicle) Object detection (License plate)	An event occurs when a preset object such as a person, face, vehicle, or license plate is detected by the camera.
	Face mask detection	An event occurs when the face of a person wearing or not wearing a mask is detected on the camera screen.
	Estimated body temperature detection	An event occurs when temperature equal to or higher than the specified temperature level is detected by the camera.
	Occupancy monitoring (over the limit) Occupancy monitoring (under the limit)	An event occurs when the number of people is over or under the specified value of indoor capacity set for the camera.
	Parking detection	An event occurs when a vehicle parks in or out of the parking lot.
	Social distancing detection	An event occurs when the distance between people is closer than the distance set on the camera.
	Call button push detection	An event occurs when the camera detects a call request.
	Tampering switch detection	An event occurs when it detects manipulation of the camera's tampering switch.

Device	Event Name for Input	Description
Storage Device	Disconnected	An event occurs when the storage device is disconnected.
	Disk full	An event occurs when the storage device has no free space left.
	Disk error	An event occurs when the storage device fails to read the disk.
	Fan error	An event occurs when the fan of the storage device fails to be operated properly.
	Recording error	An event occurs when the recording fails to be operated properly in the storage device.
	Power recovery	An event occurs when the power of the storage device is recovered.
	Network recovery	An event occurs when the network of the storage device is recovered.
	RAID rebuild failed	When using the RAID function on the storage device, an event occurs if a problem occurs in the rebuild of the RAID.
	RAID degrade status	An event occurs when a RAID system fails and the RAID performance degrades.
	HDD warning	A warning event occurs before an HDD error or problem occurs.
	HDD count changed	An event occurs when an error occurs due to any changes in HDD configurations.

Learn about Action Terms

Device	Event Name for Output	Description
Camera	Instant viewer(Live) Instant viewer(Playback)	An instant viewer window pops up, showing the video of the event type selected in the Monitoring viewer.
	Preset	Run the selected preset.
	Auto broadcast	Runs the auto broadcast file when an event occurs.
	Tour	Runs the tour of the selected device when an event occurs.
	Swing	Runs the swing/auto pan of the selected device when an event occurs.
	Group	Runs the group/scan of the selected device when an event occurs.
	Recording start	Starts the recording of the selected device when an event occurs. • To set up pre-recording, select a time in the path below. When an event occurs, it begins recording with some pre-record time added to the actual recording according to the set time. **Configuration** > **Device** > **Registration** > **Server information** > **Record** > **Event** > **Before detecting custom event**
	Recording stop	Stops the recording when an event occurs.
IP Speaker	Speaker group or speaker + Audio source	The selected audio source is played through the set speaker group or speaker when an event occurs.
Alarm	Enable	The action of the alarm is performed when an event occurs.
Client PC	Pop-up	It is automatically selected together when selecting the instant viewer item. If you select pop-up only without selecting the instant viewer, then an instant viewer with no video output will be shown for taking actions for the event that occurred.
	Client plays sound	Create sounds when an event occurs.
	E-mail	An e-mail is sent to the registered e-mail address when an event occurs.
Wisenet mobile	Mobile	If you register a server-type NVR with a QR code in the Wisenet mobile app, an event push notification is sent by the Wisenet mobile app when an event occurs.

Device	Event Name for Output	Description
Server PC	CMD	Runs the CMD command entered if an event occurs. However, applications (exe, bat) cannot be run.
Others	CGI	Runs the CGI command entered if an event occurs.

Set System

Set Users

You can add a user group or set permissions for a user group. In addition, you can add a user to a user group.

▌ Add User Groups

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **User** in the menu list on the left.

4. Click the [🧑‍🦱⁺] button under the **User** page.

5. Select the added user group and set the permission.

   You can set the site permissions, function-specific permissions, viewer authorization, and other permissions.

   • Click the **Validity Period Setup** button to configure the usage validity period for cameras.

6. Click the **Apply** button.

> **NOTE**
>
> You cannot delete the **AdminGroup** as it is the default user group in SSM.

▌ Add Permissions of User Groups

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **User** in the menu list on the left.

4. Select a user group to set permissions in User tree.

5. Set the permissions of the user group. You can select the site permissions and function-specific permissions.

   • **Site permissions**: You can assign permissions for the accessible sites (maps and layouts) in the selected group.

   • **Function-specific permissions**: You can set the functions that can be run in the selected group.
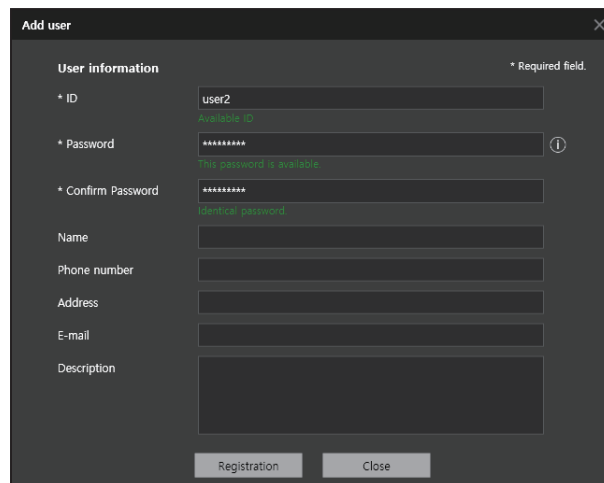
6. Click the **Apply** button.

Add Users

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **User** in the menu list on the left.

4. Select a user group in User tree.

5. Click the ![button icon] button under the **User** page. Users are added below the selected group.

6. Enter the user information.

Add user			×
User information			* Required field.
* ID	user2		
	Available ID		
* Password	********		ⓘ
	This password is available.		
* Confirm Password	********		
	Identical password.		
Name			
Phone number			
Address			
E-mail			
Description			
	Registration	Close	

7. Click the **Registration** button.

Modify User Information

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **User** in the menu list on the left.

4. Select the desired user in User tree.

5. Modify the user information on the right of **User** page.
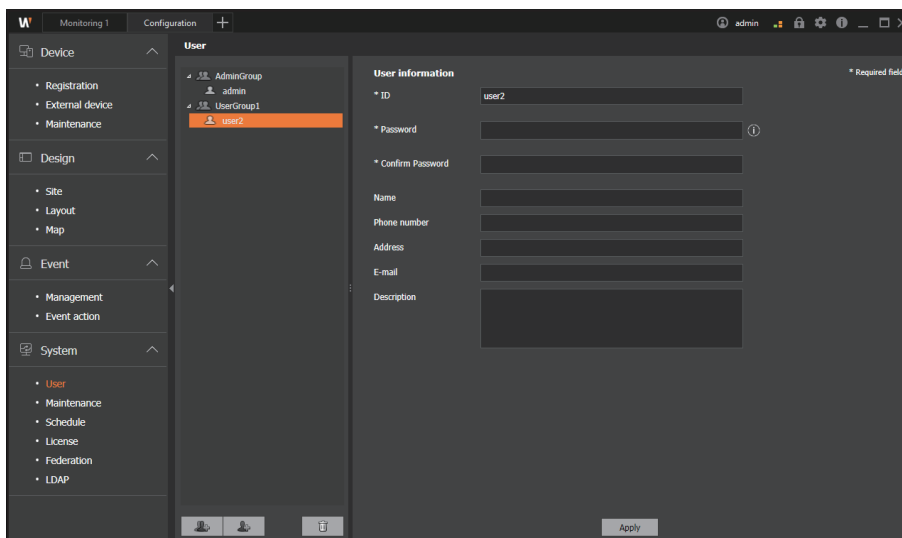
6. Click the **Apply** button.

> **NOTE**
>
> User permissions can vary, depending on the permissions of the user group to which the user belongs. The **AdminGroup** has all permissions. Therefore, the users belonging to the **AdminGroup** also have all permissions.

Maintain System

You can manage the settings of **SSM Core Server**.
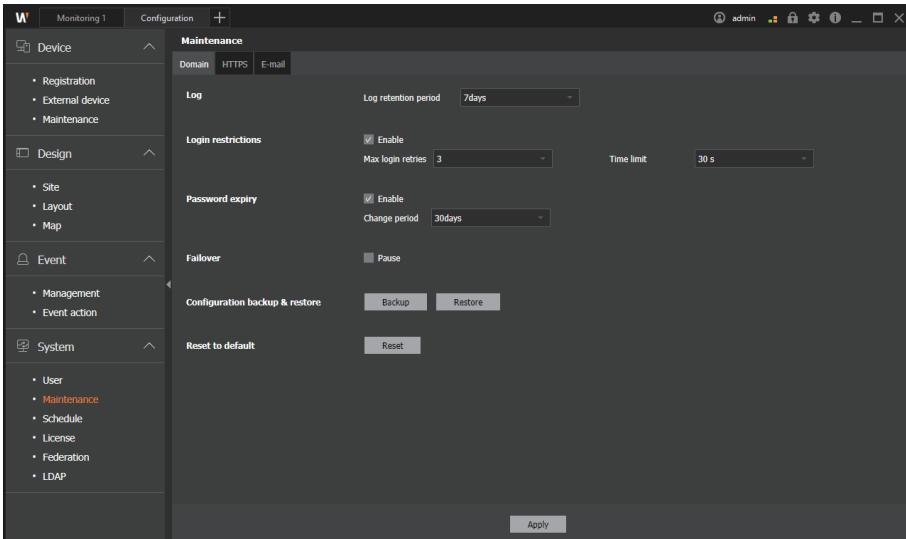
Set Domains

You can set the log retention period for **SSM Core Server**, or back up/restore or reset the SSM system settings. In addition, you can set a login lock or set a password change period.

■ **Log**

You can set the **Log retention period** to delete the relevant file automatically when a certain period has passed.

■ **Login restrictions**

You can set it to run a login lock.

- **Max login retries**: Restricts login if failed five times.

- **Time limit**: Restricts login for a certain period of time after a failed login.

■ **Password expiry**

You can set a password change notification to change your password periodically.
For security reasons, change your password every three months.

■ **Failover**

You can pause the Failover settings before you upgrade **SSM Core Server** or before you change the server settings. When services of **SSM Core Server** are restarted due to the upgrades or setting changes, you can pause the failover settings so that they are not mistaken for failures.

■ **Configuration Backup & Restore**

You can back up the system configurations of the current **SSM Core Server**, or restore the system configurations to the backup point later on.

- **Backup**: If you select an item, then the button is enabled. If you set the path and click the **Backup** button, then the backup will be executed with the set path.

- **Restore**: If you select an item, then the button is enabled. After you set the path and click the **Restore** button, it loads the settings from the specified path and starts the restoration.

■ **Reset to default**

You can reset **SSM Core Server** to its initial installation settings.

Set HTTPS

You can set a secure connection system or install a public certificate.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears: click **System** > **Maintenance** in the menu list on the left.

4. Click the **HTTPS** tab in the **Maintenance** page.

5. Select one of below items for **Secure connection system**:

   - HTTP (Do not use a secure connection)

   - HTTPS (Secure connection mode using a unique certificate)

   - HTTPS (Secure connection mode using the public certificate)

6. Click the **Apply** button.
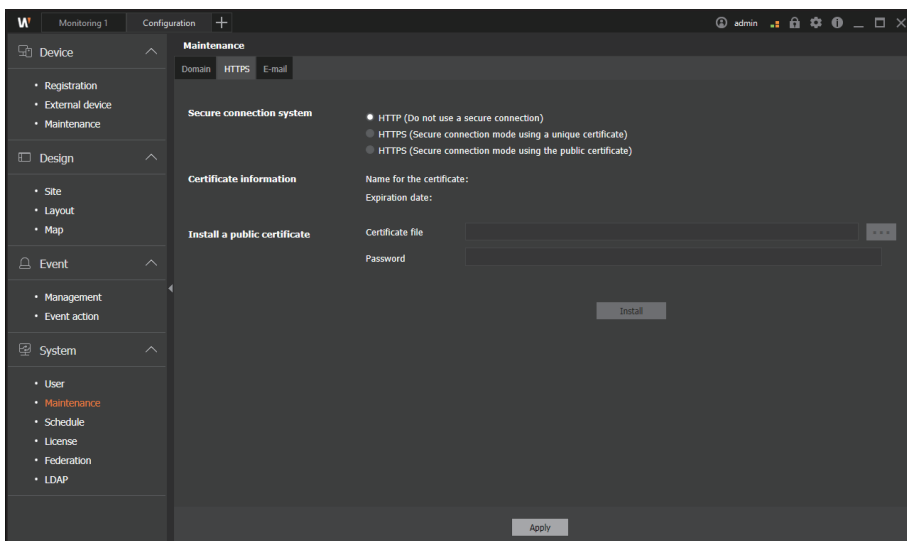
Install Public Certificates

If you select **HTTPS (Secure connection mode using the public certificate)** as your secure connection system, then you need to install a public certificate.

1. Select **HTTPS (Secure connection mode using the public certificate)** as your **Secure connection system**.

2. On the right of **Certificate file**, click the [•••] button to select a public certificate file to be installed.

3. Enter the password of the certificate and click the **Install** button.

4. Click the **Apply** button.

Set E-mails

You can set the e-mail information to be sent when an event occurs.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **Maintenance** in the menu list on the left.

4. Click the **E-mail** tab in the **Maintenance** page.

5. Enter the Recipient address, Sender address, Subject, and SMTP mail server setting information when sending an **E-mail**.

6. Click the **Apply** button.
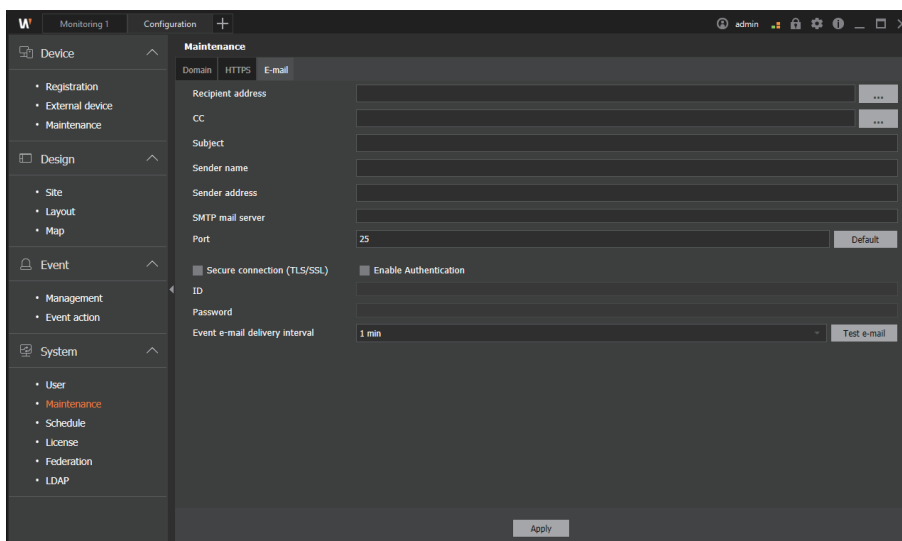
Set Recipients or Referrers

You can select recipients and referrers from the user group or enter their e-mail addresses directly to receive event notification e-mails when an event occurs.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **Maintenance** in the menu list on the left.

4. Click the **E-mail** tab in the **Maintenance** page.

5. In the **E-mail** page, click the [...] button on the right of **Recipient address** or **CC**.

6. Under **Select e-mail address**, select the user to receive e-mails in the user tree.

7. Click the [+] button. Then, the e-mail address of the selected user is added to the **E-mail list**.

> **NOTE**
> - If the e-mail address of the user is not set, then set the e-mail address in **System** > **User** menu.
> - You can also send e-mails to users other than those registered in the user group. Enter the e-mail address in Email address input window, then click the [+] button.

8. Click the **Apply** button.

Set Schedules

Set Schedules

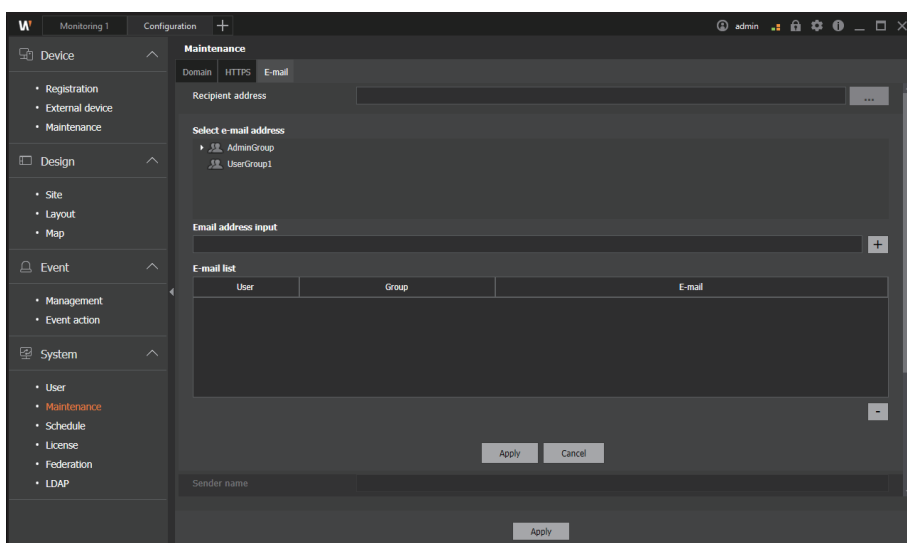You can set the record schedule, event action schedule, and holiday.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **Schedule** in the menu list on the left.

4. Click the **Schedule** tab.

5. At the bottom left of **Schedule** page, click the [⊞] button.

6. Select the added schedule from the schedule list.
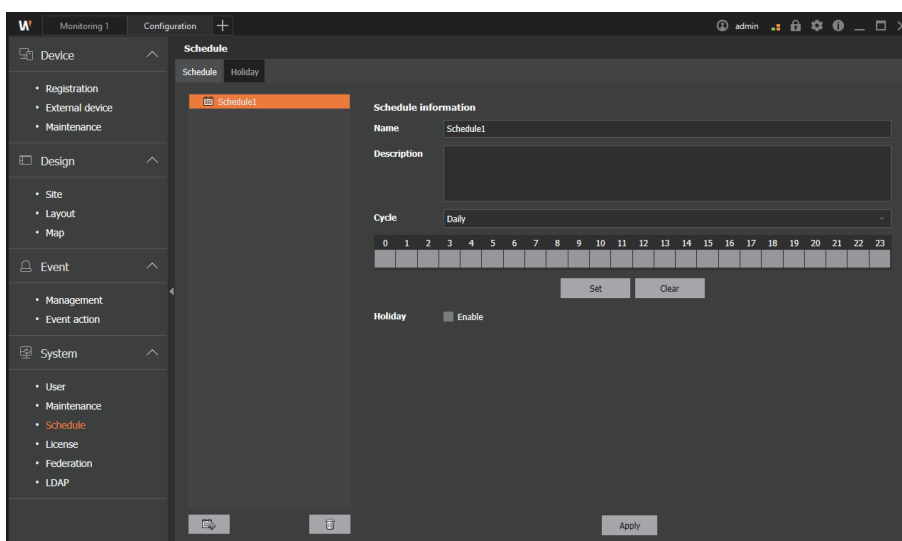
7. Enter **Name** and **Description** of the schedule in **Schedule information** on the right.

8. Select the schedule **Cycle**.

   • Daily: Sets the schedule on a daily basis.

   • Weekly: Sets the schedule on a weekly basis.

9. After selecting a time to set schedule in the time cell under the Cycle, click the **Set** button.

   • Select the area to clear and click the **Clear** button to clear the setting.

   • You can select multiple time cells by using the [**Ctrl**] key or dragging.

   • If you double-click the selected time cell, then the **Min setting** dialog box appears. Set the minutes for **Start time** and **End time**.

Min setting			×
	h	min	
Start time	6	0	
End time	6	59	
	OK	Cancel	
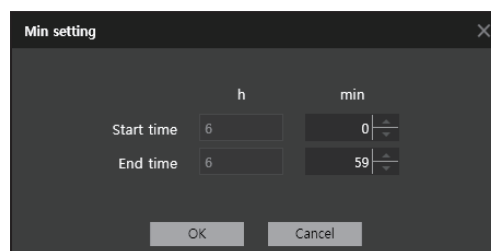
10. Select whether or not to **Enable Holiday**.

> **NOTE**
> If you select Enable Holiday in Schedule setup, then the schedule does not run on the dates you specify as holidays.

11. Click the **Apply** button.

Set Holidays

You can set holidays on a specific date or at specific cycles.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **Schedule** in the menu list on the left.
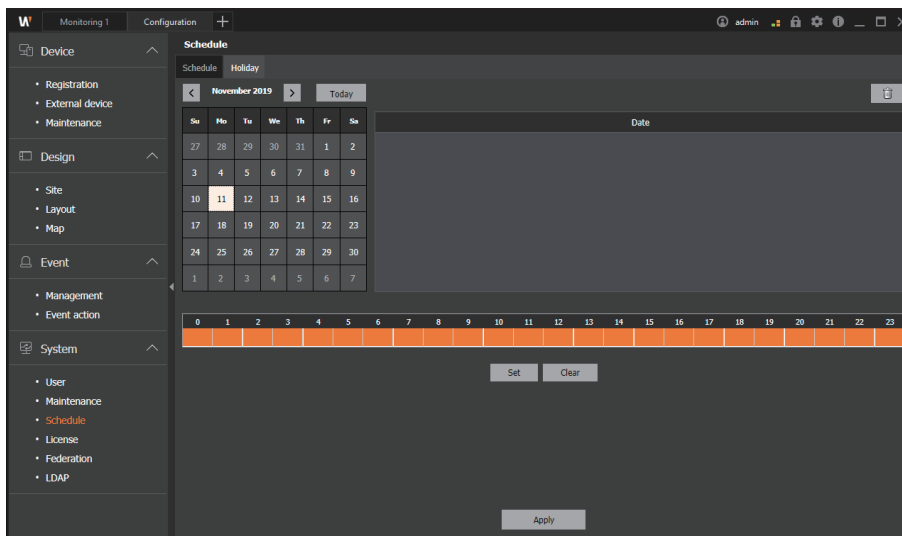
4. Click the **Holiday** tab.

5. Select the dates you want to set as holidays in the calendar.
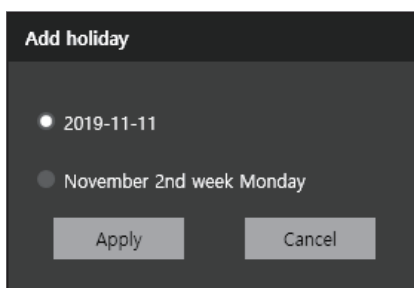
6. When the **Add holiday** dialog box appears, select the holiday type.

- First option: You can only set a day as a holiday on the date you specify.

- Second option: You can set a day of the week to be set as a holiday repeatedly every year.

7. Select the holidays you added from the holiday list and set the time cell.

- Select the area to clear and click the **Clear** button to clear the setting.

- You can select multiple time cells by using the [**Ctrl**] key or dragging.

- If you double-click the selected time cell, then the **Min setting** dialog box appears. Set the minutes for **Start time** and **End time**.

8. Click the **Apply** button.

Get License Authentications

SSM licenses consist of a channel license and a viewer license. You can get the license authentication from **Configuration** menu of **SSM Console Client**. You can use either online authentication or offline authentication for the license authentication.

Get Online Authentications for Licenses

In environments where the Internet is available, you can get online authentication for licenses. Simply enter the **Product key** to get your license authenticated.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **License** in the menu list on the left.

4. Under the **License** page, click the **Online activation** button.
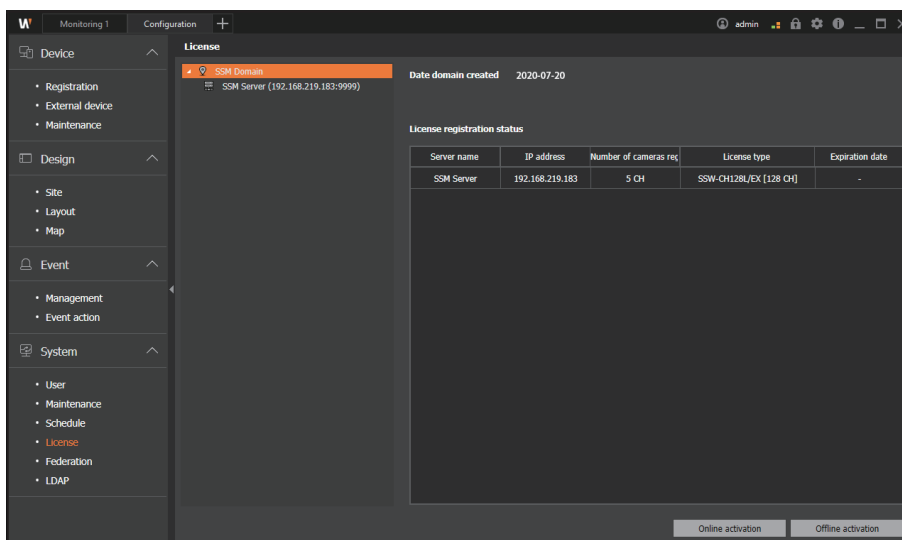
5. In the **Online authentication** dialog box, select the server for which you want to get license authentication.

6. Enter the product key in **Product key** column and click the **Activate** button.

Get Offline Authentications for Licenses

In environments where the Internet is not available, you can get manual authentication for licenses. After you have gathered information about **SSM Core Server** to be licensed, you can download the license file directly from the web page of the license server to get the license authentication.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **License** in the menu list on the left.

4. Under the **License** page, click the **Offline activation** button.
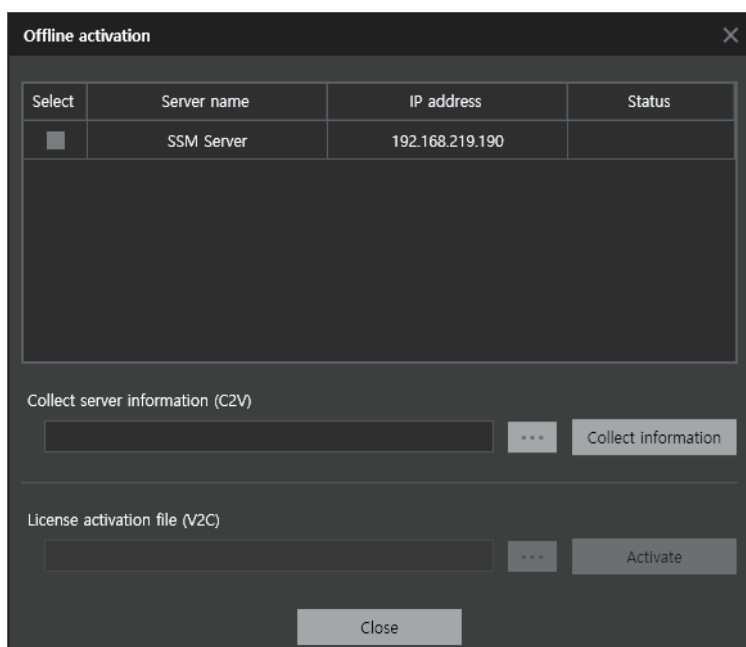
5. In the **Offline activation** dialog box, select **SSM Core Server** that you want to get license authentication.

6. Click the **Collect information** button. A server information file (C2V) is created in the path you set.

7. Access the web page of the license server from a PC that can use the Internet.

   License server address: https://ems.HanwhaVision.com/ems/customerLogin.html

8. Enter the product key and click the **Login** button.

9. Click the **Register later** button at the top right, then click the **Offline activation** button.

10. Upload the server information file (C2V) in **Generate license** dialog box, then click the **Generate** button. Download the generated license file (V2C).

11. In **SSM Console Client** > **Configuration** > **System** > **License** menu page, click the **Offline activation** button.

12. In the **License activation file (V2C)** under the **Offline activation** dialog box, set the downloaded license file (V2C).

13. Click the **Activate** button.

Confirm Licenses

You can view the license information registered with each server.

Set Federations

You can link two or more **SSM Core Servers** to manage your site as a hierarchy so that users of the federating site can use the devices of the federated site.
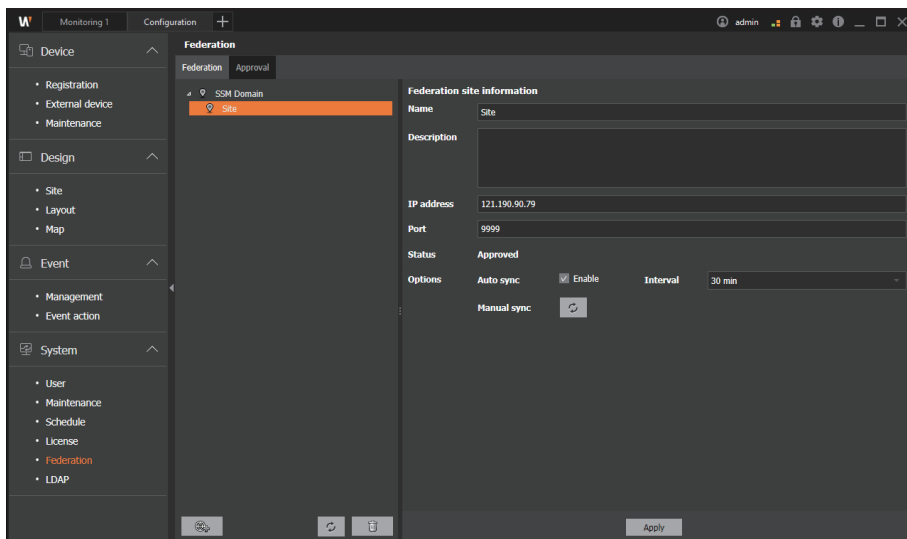
Add Federation Sites

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **Federation** in the menu list on the left.

4. Click the **Federation** tab, then select SSM Domain.

5. Under the **Federation** page, click the [button icon] button.

6. When the **Federation site registration** dialog box appears, enter the setting information and click the **Registration** button.

- If you enter your ID and password, you can use the federation function without approval of the added site.

- If you do not enter your ID and password, you can use the federation function after getting the approval from the added federation site.

7. If synchronized after the federation site registration, then the device information of the added site is added to the user group page. Then, you can allocate or deallocate devices later.

> **NOTE**
> The federation sites that have registered the sites or are awaiting approval appear in the list.

Modify Federation Site Information

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **Federation** in the menu list on the left.

4. Select the desired federation site in **Federation** page.

5. Change the settings in federation site information.

   Click the **Options** button to set the details regarding the sync.

6. Click the **Apply** button.

> **NOTE**
> In Configuration, you cannot get low rank information; you can only view federation site information.

Approve Linked Sites

If the federating site requests the link, then you can select whether to approve in the federated site. You can check the name and status of the linked sites in Federation site list. If the federating site requests the link, then you can select whether to approve in the federated site.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **Federation** in the menu list on the left.

4. In the **Federation** page, click the **Approval** tab.
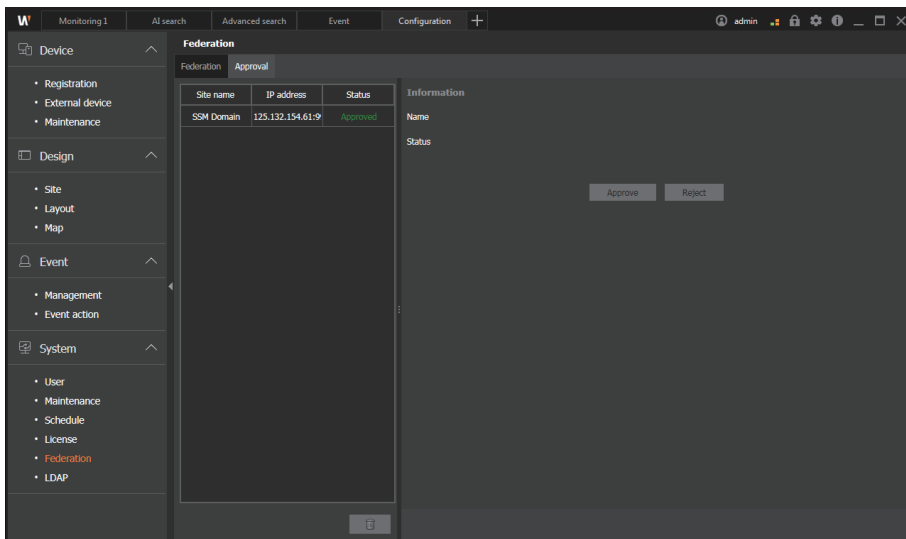
5. Click on the federated site that is pending approval, then set whether or not to approve the link in **Status**.

   • Approved: Approved the link

   • Cancel: Cancels the link

6. Select an event to share with the federating site.

7. Click the **Apply** button.

Check Approvals on the Declined Sites

If you select a site that has been declined, you can decide whether to re-approve it in the Information area.

Delete Linked Sites

You can delete the linked site. If you delete the linked site, then your site is disconnected from the linked site, and the linked site is deleted from the list.

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **Federation** in the menu list on the left.

4. Click the **Federation** tab, then select the site to be deleted in Site list.

5. Click the 🗑 button.

6. When the **Delete** dialog box appears, click the **OK** button.

7. Click the **Apply** button.

Set LDAP

You can log in to **SSM Core Server** with LDAP directory user account of Windows server.

Add LDAP Servers

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **LDAP** in the menu list on the left.

4. Click the ⬛ button under the **LDAP** page.

5. Enter the server information in the **Add LDAP server** dialog box.
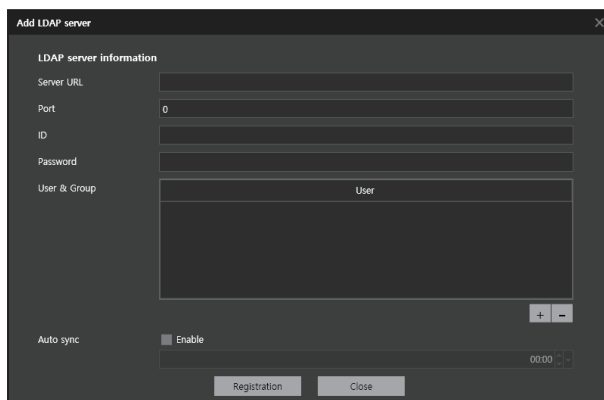
6. Click the **Registration** button. The added server appears in the LDAP tree.

Modify LDAP Server Information

1. Run the **SSM Console Client** program.

2. Open the **Configuration** menu page.

3. When the **Configuration** menu page appears, click **System** > **LDAP** in the menu list on the left.

4. Select the desired server in the **LDAP** tree.

5. In the **LDAP server information** on the right, modify the information of the LDAP server.

6. Click the **Apply** button.

Appendix

System Requirements

SSM Core Server

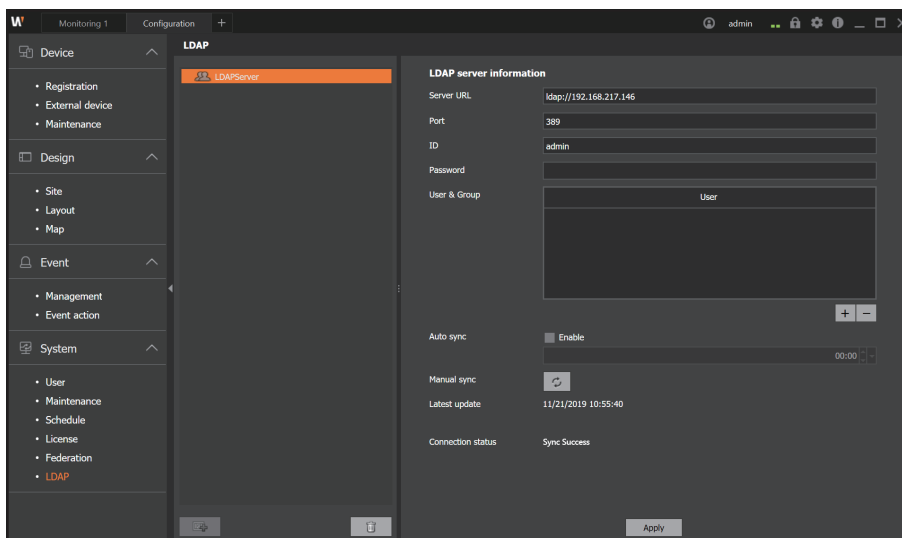|	Minimum Specifications	Recommended Specifications
CPU	Intel Core i5 or more (i5-4670@3.40GHz)	Intel Core i7 or more (i7-4770@3.40GHz) Xeon E3-1275 v5 (8M Cache 3.6 GHz)
RAM	8 GB or more	16 GB or more
OS	Windows 8.1/10 (Pro, Enterprise) Windows 10 IOT Enterprise Windows 11 Pro Windows Server 2008 SP2/2008 R2 SP1 (Standard) Windows Server 2012/2012 R2 (Standard) Windows Server 2016 (Standard) Windows Server 2019 (Standard) Windows Server 2019 (Essential) * Can be installed on 64-bit OS only.	
HDD	**Operating System HDD** • SSD recommended • 20 GB or more free disk space is required after OS and SSM Core installation **Camera Video Recording HDD** • Requires separate HDD for recording (Requires a minimum of 200 GB for logging) • HDD: SATA3 7200 rpm (64 MB Cache) • NIC Bandwidth 1 Gbps or more	**Operating System HDD** • SSD recommended • 20 GB or more free disk space is required after OS and SSM Core installation **Camera Video Recording HDD** • Requires separate HDD for recording (Requires a minimum of 200 GB for logging) • HDD: 4 SATA3 7200 rpm (64 MB Cache) or more • NIC Bandwidth 1 Gbps or more • RAID, iSCSI support: RAID5, HW RAID Controller (AF support)

> **NOTE**
> SSM 2.10.8 or later requires a separate HDD, other than the C drive, for event recording and searches.

SSM Console Client

	Minimum Specifications	Recommended Specifications
CPU	Intel Core i5 or above (i5-4670@3.40GHz)	Intel Core i7 or above (i7-4770@3.40GHz) Xeon E3-1275 v5 (8M Cache 3.6 GHz)
VGA	Geforce GTX 740 (1 GB RAM) 6th gen. Intel Processor Graphics Supports DirectX 11	• When using CUDA H/W Decoder GeforceGTX960 (RAM 2GB) or more GeForce GTX1050 (RAM 2GB) or more DirectX 11 • When using Intel Quick Sync H/W HDGraphics P530 or above
RAM	8 GB or more	16 GB or more
OS	Windows 8.1/10 (Pro, Enterprise) Windows 10 IOT Enterprise Windows 11 Pro * Can be installed on 64-bit OS only.	
HDD	20 GB or more free disk space is required after OS and **SSM Console Client** installation	

Product Specifications

System		
Max Monitoring Channels	Max 10,000 channels/domain Max 3,000 channels/server * Camera registration: Max 328 channels Camera recording: Max 128 channels	In case of using Camera/NVR/DVR

Max Storage Channels	Max 3,584 channels/domain
	 Max 128 channels/server
	 Max 520 Mbps
	 Supports dual recording (High/Low)
	 * The maximum recording performance
	   varies depending on the specs of
	   HDD, H/W RAID, and iSCSI.
		In case of using server storage

Software Structure	Server/Client	Multi-server clustering, max 28 servers
Client	Console client, mobile viewer	Supports up to 37 simultaneous connections per server
Supported Devices	Network camera/encoder/decoder, DVR/NVR, controller	Supports Wisenet products + ONVIF Profile S **Onvif®** | **S** ONVIF® conformant (www.onvif.org)

Basic Component		
SSM Core Server	Central license management	45-day trial
	Server clustering	Server data sharing, failure management
	System dashboard	Real-time system health monitoring
	User management	Device access permission, function access authorization
	Federation	Multi-domain federation, up to 10 domains, up to 4 depths, up to 10000 channels
	Central device setup	Automatic/Manual registration of devices and additional servers
	Event setup	4-step importance setting, color management by event
	Event action	Event users setup and trigger activities
	Layouts and patterns	Custom layouts and tile patterns
SSM Console Client	Tab-based windows	Monitoring, Search, Advanced search, ANPR, POS, Dashboard, Configuration, Setup
	Output channels	Max 132 channels
	Decoding	Supports hardware accelerator (CUDA, Intel Quick Sync)
	Playback	Multi-channel playback, bookmark
	Real-time events	Filters by situation, type, and importance
	Search	Event search, Person search, Face search, Face recognition search, Vehicle search, User defined search, LPR search, Audit log search
	Advanced search	Thumbnail search, Smart search
	POS text search	Searches receipt list, keywords
Supported Languages	Korean, English, Chinese, Croatian, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Spanish, Taiwanese, Thai, Turkish, Arabic, Ukrainian, Vietnamese	

Service Ports

Please see the list of ports used by SSM.

Name	Port	Protocol
System Manager	9991, 9999, 61616, 9876	SSL(9991) TCP for Web Service(9999) Active MQ(61616) PostgreSQL(9876)
Media Server	4510-4517	TCP(4510, 4511) SSL(4512, 4513) HTTP(4514) RTSP(4515, 4516, 4517)

Supported Devices

Please see the list of supported products.

DVR

■ 4-channel

HRX-435, HRX-435FN/TE, HRX-435L, HRX-434, HRX-421, HRX-421FN/TE, HRX-420, HRX-421, HRD-440, HRD-442, SRD-493, SRD-494, SRD-443, SRD-473D, SRD-476D, SRD-482, SRD-445, SRD-470, SRD-440

■ 8-channel

HRX-835, HRX-821/TE, HRX-820, HRX-821, HRD-842, HRD-841, SRD-893, SRD-894, SRD-840, SRD-482, SRD-852D, SRD-870DC, SRD-873D, SRD-876D, SRD-880D

■ 16-channel

HRX-1635, HRX-1632, HRX-1621, HRX-1621/TE, HRX-1620, HRD-1642, HRD-1641, SRD-1685, SRD-1694(U), SRD-1684, SRD-1630(D), SRD-1640, SRD-1642(D), SRD-1653D, SRD-1654D, SRD-1656D, SRD-1673D, SRD-1676D, SRD-1680D, SRD-1673DU

NVR

PRN-6410DB4, PRN-6410B4, PRN-6405DB4, PRN-6405B4, PRN-6400DB4, PRN-6400B4, PRN-3210B4, PRN-3205B4, PRN-3200B4, PRN-3205B2, PRN-3200B2, PRN-1605B2, PRN-1600B2, PRN-4011, XRN-6410DB4, XRN-6410B4, XRN-6410RB2, XRN-6410B2, XRN-3210B4, XRN-3210RB2, XRN-3210B2, XRN-3010A, XRN-3010, XRN-2011A, XRN-2011, XRN-2010A, XRN-2010, XRN-1620SB1, XRN-1620B2, XRN-1610SA, XRN-1610A, XRN-1610(S), XRN-820S, XRN-810S, XRN-420S, XRN-410S, QRN-1620S, QRN-820S, QRN-810, QRN-430S, QRN-420S, QRN-410S, QRN-410, LRN-1610S, LRN-810S, LRN-410S, KRN-3200, KRN-1600, SRN-4000, SRN-1000, SRN-1670D, SRN-470D, SRN-1673S/873S/473S, SRN-472S, VPM-4800/4400/5400/6400

NETWORK CAMERA

■ BOX

KNB-2000, KNB-5000, PNB-A6001, PNB-A6002, PNB-A7002, PNB-A8002, PNB-A9001, PNB-A9001OP, PNB-A9002, QNB-6000, QNB-6002, QNB-7010RH, QNB-7080RH, QNB-8002, SNB-1001, SNB-3002, SNB-5000, SNB-5001, SNB-5003, SNB-5004, SNB-6003, SNB-6004(F), SNB-6005, SNB-6010(B), SNB-6011B, SNB-7001, SNB-7004, SNB-8000, SNB-9000, SNZ-5200, SNZ-6320, TNB-9000, XNB-6000, XNB-6001, XNB-6002, XNB-6003, XNB-6005, XNB-8000, XNB-8002, XNB-8003, XNB-9002, XNB-9003, XNZ-6320

■ **DOME**

KND-2020R, KND-2080R, KND-4010R, KND-4080R, KND-5020R, KND-5080R, PND-A6081RF/RV, PND-A6082RF/RV, PND-A7082RF/RV, PND-A8082RF/RV, PND-9080R, PND-A9081RF/RV, PND-A9082RF/RV, PNM-9020V, PNV-9080R, PNV-A9081R, QND-6010R, QND-6020R, QND-6030R, QND-6070R, QND-7010R, QND-7012R, QND-7020R, QND-7022R, QND-7032R, QND-7080R, QND-7082R, QNE-6080RV, QNE-6080RVW, QNE-7080RV, QNE-7080RVW, QNV-6010R, QNV-6070R, QNV-7010R, QNV-7012R, QNV-7020R, QNV-7022R, QNV-7030R, QNV-7032R, QNV-7080R, QNV-7082R, SND-6012, SND-L6013R, SND-L6083R, SND-7084R, SNV-L6013R, SNV-L6014RM, SNV-6084R, SNV-6085R, SNV-7084R, SNV-8081R, SNV-8030R, TNV-C7013RC, TNV-8010C, XND-6010, XND-6020R, XND-6080RG, XND-6080RV, XND-6080(R)(V), XND-K6080, XND-6081RE, XND-6081RVE, XND-6083RV, XND-C6083RV, XND-6085, XND-6085V, XND-C7083RV, XND-8020R, XND-8030R, XND-8040R, XND-8080R, XND-8081RE, XND-8081RVE, XND-8082RF, XND-8082RV, XND-8083RV, XND-C8083RV, XND-8093RV, XND-9082RF, XND-9082RV, XND-9083RV, XND-C9083RV, XNV-6010, XNV-6011, XNV-6012, XNV-6012M, XNV-6013M, XNV-6020R, XNV-6022R, XNV-6022RM, XNV-6080(R), XNV-6083R, XNV-C6083, XNV-C6083R, XNV-6085, XNV-6120, XNV-6120R, XNV-6123R, XNV-C7083R, XNV-8020R, XNV-8030R, XNV-8040R, XNV-8080RS, XNV-8080(R)(RV), XNV-8082R, XNV-8083R, XNV-8083RZ, XNV-C8083R, XNV-8093R, XNV-9082R, XNV-9083R, XNV-C9083R

■ **FISHEYE**

XNF-9013RV, XNF-9010RS, XNF-9010RV, XNF-9010RVM, XNF-8010, XNF-8010R, XNF-8010RV, TNF-9010, SNF-8010(VM), SNF-7010, QNF-9010, PNF-9010R(RV)(RVM)

■ **MULTI-SENSOR**

PNM-9322VQP, PNM-9320VQP, PNM-9081VQ, PNM-9080VQ, PNM-9030V, PNM-9022V, PNM-C9022RV, PNM-9020V, PNM-9002VQ, PNM-9000VQ, PNM-9000QB, PNM-8082VT, PNM-7002VD, PNM-7000VD

■ **BULLET**

KNO-2080R, KNO-2010R, KNO-2120R, KNO-4010R, KNO-4080R, KNO-5020R, KNO-5080R, PNO-A6081R, PNO-A6082R, PNO-A7082R, PNO-A8082R, PNO-9080R, PNO-A9081R, PNO-A9082R, PNV-A6081R, PNV-A6082R, PNV-A7082R, PNV-A8082R, PNV-A9082R, QNO-6010R, QNO-6020R, QNO-6030R, QNO-6070R, QNO-7010R, QNO-7012R, QNO-7020R, QNO-7022R, QNO-7030R, QNO-7032R, QNO-7080R, QNO-7082R, SNO-5080R, SNO-L5083R, SNO-5084R, SNO-6011R, SNO-L6013R, SNO-L6083R, SNO-6084R, SNO-6085R, SNO-7084R, SNO-8081R, TNO-6320E, TNO-6322ER, TNU-6320E, XNO-6010R, XNO-6020R, XNO-L6020R, XNO-6080R, XNO-6080RA, XNO-6080RG, XNO-L6080R, XNO-6083R, XNO-C6083R, XNO-6085R, XNO-6085RA, XNO-6085RG, XNO-L6085R, XNO-L6085RA, XNO-6090RH, XNO-6095RH, XNO-6120R, XNO-6120RG, XNO-L6120R, XNO-6123R, XNO-6320RHP, XNO-C7083R, XNO-8020R, XNO-8030R, XNO-C8083R, XNO-8040R, XNO-8080R, XNO-8082R, XNO-8083R, XNO-9082R, XNO-9083R, XNO-C9083R

- **PTZ**

  XNP-9300RW, XNP-9300R, XNP-9300, XNP-9250R, XNP-9250, XNP-8300RW, XNP-8300R, XNP-8300, XNP-8250R, XNP-8250, XNP-6400RW, XNP-6400R, XNP-6400, XNP-6321H, XNP-6321, XNP-6320HG, XNP-6370RHA, XNP-6320H, XNP-6320, XNP-6320HS, XNP-6370H, XNP-6040H, XNP-6120H, XNP-6370RH, XNZ-6320, XNP-6550RH, XNP-6371RH, XNP-6371RHG, XNP-6370RH, PNP-9200RH, QNP-6320(H), QNP-6250(H), SNP-6321(H), SNP-L6233(H)(RH), SNP-L5233(H), SNP-6320(H)(RH), SNP-6230(RH), SNP-5430(H), SNP-3302(H), SNP-3371(H)(TH), SNP-5300(H), SNP-5321(H), SNP-5430(H), SNP-6200RH, SNP-6201(H), SNP-3120(VH)

- **POSITIONING**

  TNU-4051T, TNU-6320, TNU-6320E, TNU-6321

- **THERMAL**

  TNM-3620TDY, TNM-C4960TD, TNM-C4950TD, TNM-C4940TD, TNO-4051T, TNO-4041TR, TNO-4040TR, TNO-4030TR, TNO-L4030TR, TNO-4030T, TNO-L4030T, TNO-3050T, TNO-3040T, TNO-L3030T, TNO-1030T, TNB-1080T, TNB-1050T, TNB-1040T

ENCODER

SPE-400/100/101, SPE-1600R, SPE-1610/410, SPE-1620, SPE-1630

DECODER

SPD-1660R

SENSOR

- **Advantech's Extended I/O**

  ADAM-6050: Sensor x12, AlarmOut x6

  ADAM-6060: Sensor x6, AlarmOut x6

  ADAM-6066: Sensor x6, AlarmOut x6

- **MOXA's Extended I/O**

  NA-4010 (Sensor: M-1601 (16-channel), AlarmOut: M-2601 (16-channel))

- **ONVIF**

  ONVIF compatible camera

  Camera supporting ONVIF 1.02 or later (Compatible with Prole-S)

  Video codec: MJPEG, MPEG4, H.264, H.265

  Audio codec: G.711(pcm ulaw), G726, AAC

INTERCOM

TID-600R

ANPR

TNO-6070RHLP, TNO-6081RLP, TNO-7180R, TNO-7180RLP, TNO-9070RHLP

IP Speaker

SPA-C100, SPA-H100, SPA-P100, SPA-W100, SPA-D1000

Use System Controller

You can check the connection settings and connection status in **SSM Console Client** > ⚙ > **General** > **System Controller**.
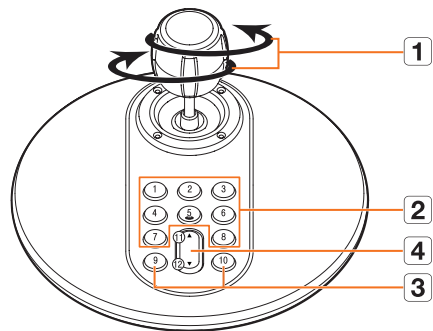
▌ SPC-2000/SPC-2001

The SPC-2000/SPC-2001 joystick is operated as follows:

- SPC-2000/SPC-2001 must be connected to the PC before the console is launched in order to be recognized.
- SPC-2000/SPC-2001 can run in PTZ or Screen mode.
- In Screen mode, the layouts assigned to the console are numbered 1~8 in the order of assignment.
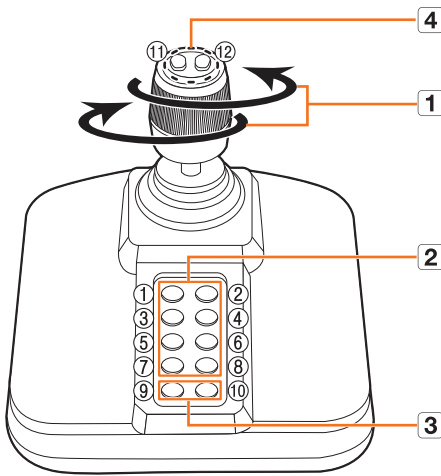
SPC-2000   SPC-2001

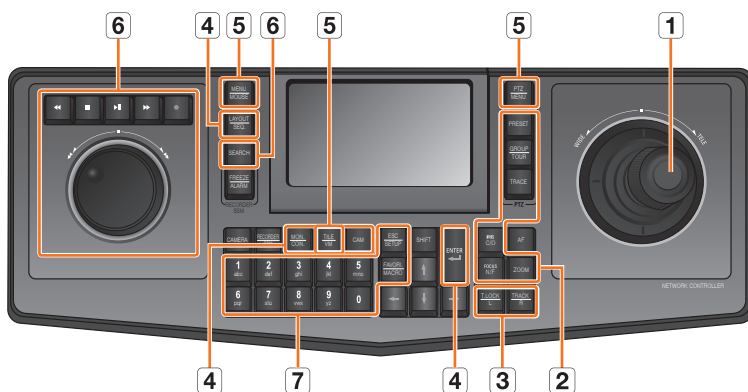|	Name	Function
1	Up/Down/Left/Right	• In PTZ mode, the camera can be panned, tilted, and controlled in 8 directions. • In Screen mode, the top/bottom/left/right tile can be selected.
	Rotation	In PTZ mode, the screen is zoomed in when it is rotated clockwise and zoomed out when it is rotated counterclockwise.
2	1 ~ 8	• In PTZ mode, presets number 1~8 are run. • In Screen mode, the layout corresponding to the button number is run.
3	9~10	PTZ mode and Screen mode are switched.
4	11, 12	• In PTZ mode, Focus Near/Far operation is run. • In Screen mode, multiple monitors can be selected and changed.

> **NOTE**
>
> To set the correct image, the axis calibration is needed.
>
> Select ⊞ > **Set** > **Control Panel** > **Game Controller** > **Property** > **Set** via the PC, click the **Compensation** button to run the **System Compensation Wizard** and then follow the guide on the screen to complete axis compensation.

SPC-7000

The operating specifications with SPC-7000 joystick connected are as follows.

- SPC-7000 displays each operating status of the system controller on the LCD monitor, and allows the user to easily select a menu with a touch screen, or using a joystick.

- It operates in the following 5 modes; PTZ/Screen/Mouse/Console/VM

Name			Function
①	Joystick	Up/Down/Left/Right	• In PTZ mode, you can control the Pan and Tilt motion. • In Screen mode, you can change the Up/Down/Left/Right tile selection. • In Mouse mode, you can move the mouse cursor.
		Rotation	In PTZ mode, the screen zooms in when turning in the WIDE direction, and zooms out when turning in the TELE direction.

Name			Function
2	PTZ control	[FOCUS N/F] + ←	Runs the Focus Near/Far motion. • [FOCUS N/F] + ← : Focus Near • [FOCUS N/F] + → : Focus Near
		[FOCUS N/F] + →	
		[IRIS C/O] + →	Runs the IRIS Open/Close operation. • [IRIS C/O] + → : IRIS Open • [IRIS C/O] + ← : IRIS Close
		[IRIS C/O] + ←	
		[PRESET]	When you click a number + [PRESET] button, the preset corresponding to each button number is activated.
		[GROUP]	When you click a number + [GROUP] button, Group/Scan corresponding to each button number is activated.
		[TRACE]	When you click a number + [TRACE] button, Pattern/Trace corresponding to each button number is activated.
		[ZOOM] + →	Runs the zoom in motion.
		[ZOOM] + ←	Runs the zoom out motion.
3	Mouse control	[T. LOCK(L)]/[TRACK(R)]	Uses the left/right button of the mouse in mouse mode.
4	Screen control	[MON.(CON.)]	You can change the multi monitor selection by clicking a number + [MON.(CON.)] button in the screen mode (previous/next according to the monitor number).
		[LAYOUT(SEQ.)]	When you click a number + [LAYOUT (SEQ.)] button, the layout corresponding to each button number is activated.
		[CAM]	When you click a number + [CAM] button, the camera corresponding to each button number is activated.
		[ENTER]	Clicking once will display a single screen on the live viewer. Clicking once again will return to the original screen.
			When you click a number + [ENTER] button in the live viewer, the screen is split into the number input.
		LCD SnapShot Button	Captures the video of the current tile.
		LCD UI Alarm Off Button	Initializes the event.
		Number + [TILE(VM)]	Moves to the tile corresponding to the number.

Name			Function
5	Mode Change	[PTZ(MENU)]	Changes the PTZ mode. Click the [PTZ (MENU)] button while in PTZ mode and the screen mode will be changed.
		[SHIFT] + [MENU(Mouse)]	Changes the mouse mode. Click the [SHIFT] + [MENU (Mouse)] buttons while in mouse mode and the screen mode will be switched.
		[SHIFT] + [Mon.(Con.)]	Changes the console mode.
		[SHIFT] + [TILE(VM)]	Runs the VMD control.
6	Play screen control	[SEARCH]	Outputs the video of the current tile through live/search.
		■	The video will be stopped.
		▶	Plays and pauses the video.
		●	Starts/Ends manual recording of the video.
		Shuttle wheel	Fast plays in the forward direction when the wheel is turned clockwise, or fast plays in the reverse direction when the wheel is turned counter-clockwise.
		Jog wheel	Performs frame search.
7	0 ~ 9		Button to input a number.
	[ESC(SETUP)]		Initializes the input number.
	[FAVORI.(MACRO)]		Performs the motion as a key value designated to SPC-7000 is automatically generated. Example) When the [FAVORI.(MACRO)] key is pressed, the same motion that is activated when the user presses a number + [MONITOR] + number + [TILE (VM)] is carried out.