



# DECODER MONITOR

User Manual

SMT-2721D

# Decoder Monitor

## User Manual

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### Warranty

Hanwha Vision shall repair a product free of charge if the product does not work properly when operating it under normal usage conditions. The warranty period for products is 2 years, except in the following events:

- If a system malfunctions due to the execution of programs unrelated to system operation
- If the product has changed over time or has defects caused by natural wear during use
- Sensory phenomena that does not affect the quality and function (Example: sound)

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

You can download the latest version from the Hanwha Vision web site. (<https://www.HanwhaVision.com>)

❖ The initial administrator ID is "admin," and you need to set the password when logging in for the first time.

Please change your password every three months to safely protect personal information and to prevent damage from information theft.

Please note that the user is responsible for their security and any other problems caused by mismanaging a password.

## IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit.

Follow all the safety instructions listed below.

Keep these operating instructions handy for future reference.

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



- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15) This product is intended to be powered by a Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated as 24 VDC, 1.4 A or PoE (54 VDC), 0.72 A.
- 16) The wired LAN hub providing power over Ethernet (PoE) in accordance with IEEE 802.3.bt must be a UL Listed Device with its output evaluated as a Limited Power Source as defined in UL60950-1 or evaluated as PS2 as defined in UL62368-1.
- 17) DECODER MONITOR is professional equipment and for use in locations where it is unlikely that children will be present. (including Remote control)
- 18) Connect the USB Devices for Monitor F/W update.  
This USB port only use for updating firmware, which cannot be used for other USB devices.

## Standards Approvals



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

## CAUTION

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

## ATTENTION

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

# overview

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## ABOUT USER MANUAL

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This user manual provides information necessary to use the product, including a brief introduction, names of each part, functions, the connection method, and menu settings. Please read this manual carefully before using the product for proper use.

- This manual explains how to use the product based on the default values and the default screens.
- The information in this manual may vary, depending on the product's software update and our policies, and is subject to change without notice to the user.
- Please note that we are not responsible for damage caused by using non-standard products or any other besides those mentioned in the product specification manual.
- If you need to open the case and repair the inside, please contact the place of purchase and get professional help.

## ABOUT TARGET READERS

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This manual contains information for the user using the product.

## ABOUT PRODUCT USAGE

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Users of this product can perform the following operations:

- Real-time monitoring of the cameras registered to the product

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

## Warning

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### Battery

The rear cover should be removed only when the battery inside the product needs to be replaced. Use the same battery as the one used in the product because wrong battery replacement may result in a risk of explosion.

The specifications of the battery in use are as follows.

- Voltage: 3V
- Capacity: 210 mAh
- Continuous standard load: 0.4 mA
- Size: CR2032
- Usable temperature: -20°C - +60°C



- Do not place the battery under direct sunlight or near a heat source, such as a heater.
- The remote control battery is CR2025.

### Operating temperature

The operating temperature of this product is from 0°C to 40°C.

If left in an environment with a temperature below the range of operating temperature, the product may not operate. If this occurs, try using the product after storing it at room temperature.

### About Security

The initial administrator ID is "admin," and you need to set the password when logging in for the first time. Please change your password periodically every three months to safely protect personal information and to prevent damage through information theft. Please note that the user is responsible for their security and any other problems caused by mismanaging a password.

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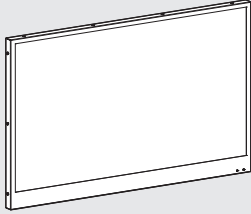
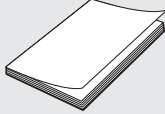
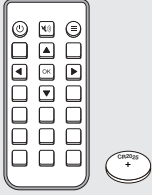
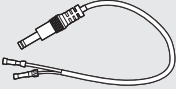
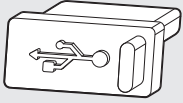
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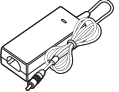
# overview

## CHECKING PACKAGE CONTENTS

Please unwrap the product, and place the product in a flat place or in the place to be installed.  
Please check the following contents are included in addition to the main unit.

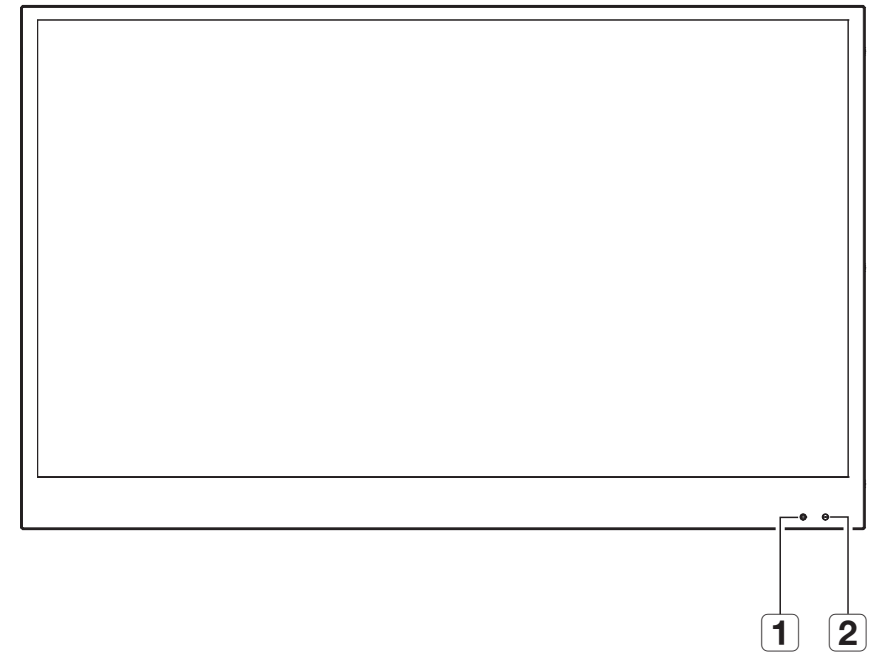
	
Monitor	Quick Guide
	
Remote Control, Battery (CR2025)	Power Inverter Harness
	
USB Connector cover	

## SEPARATELY SOLD PRODUCT

Appearance	Item Name	Description	Model Name
 (IEEE 802.3bt)	HPoE Injector	Connects power supply and network	SPO-8315
	Adpater	DC 24V power supply	SPU-60241

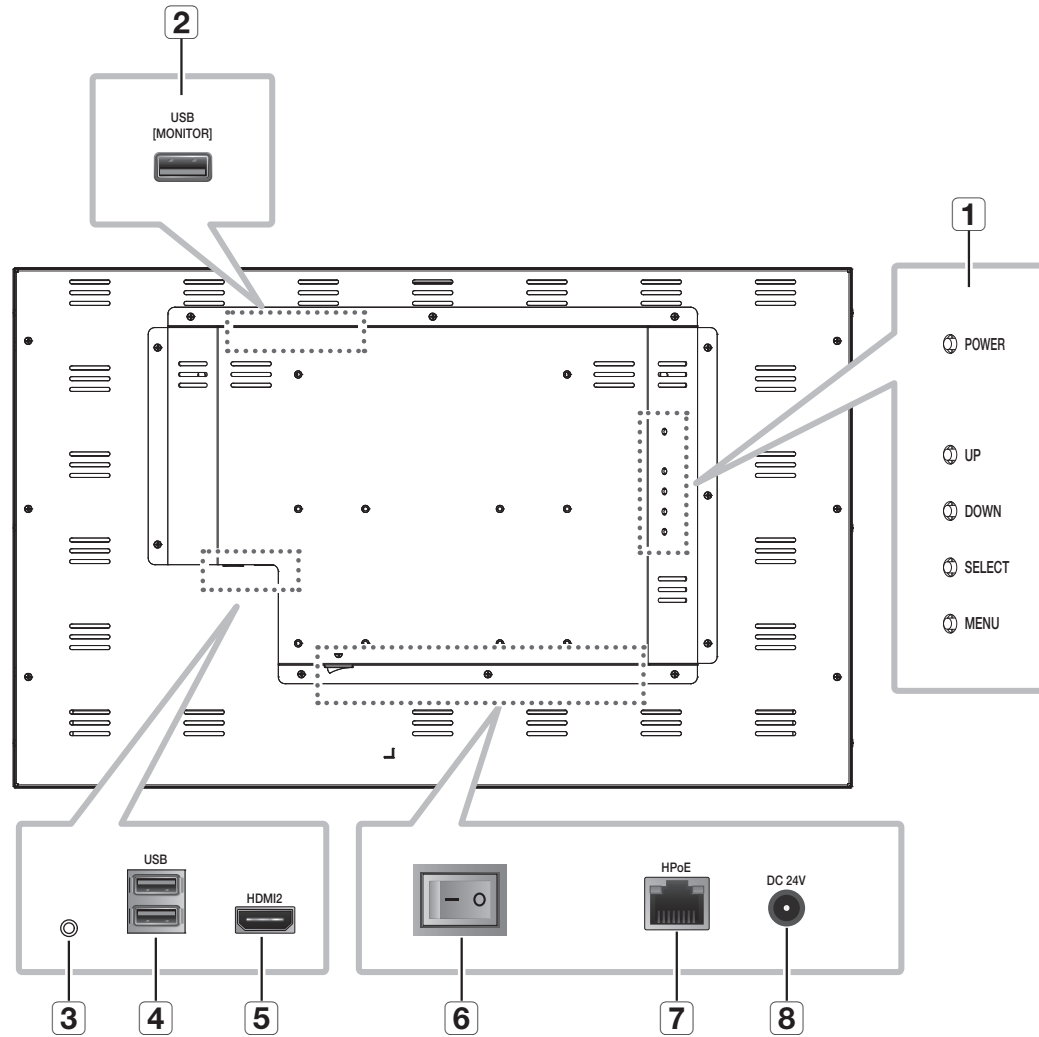
## NAMES AND FUNCTIONS OF EACH PART

### Front



Name	Functions
<b>1</b> LED Indicator	Displays the power ON/OFF status. <ul style="list-style-type: none"> <li>• Green: Monitor ON, Decoder ON</li> <li>• Red: Monitor OFF, Decoder ON</li> <li>• Orange: Monitor ON, Decoder OFF</li> </ul>
<b>2</b> Remote control receiver	The remote control receives the IR signal.

## Back

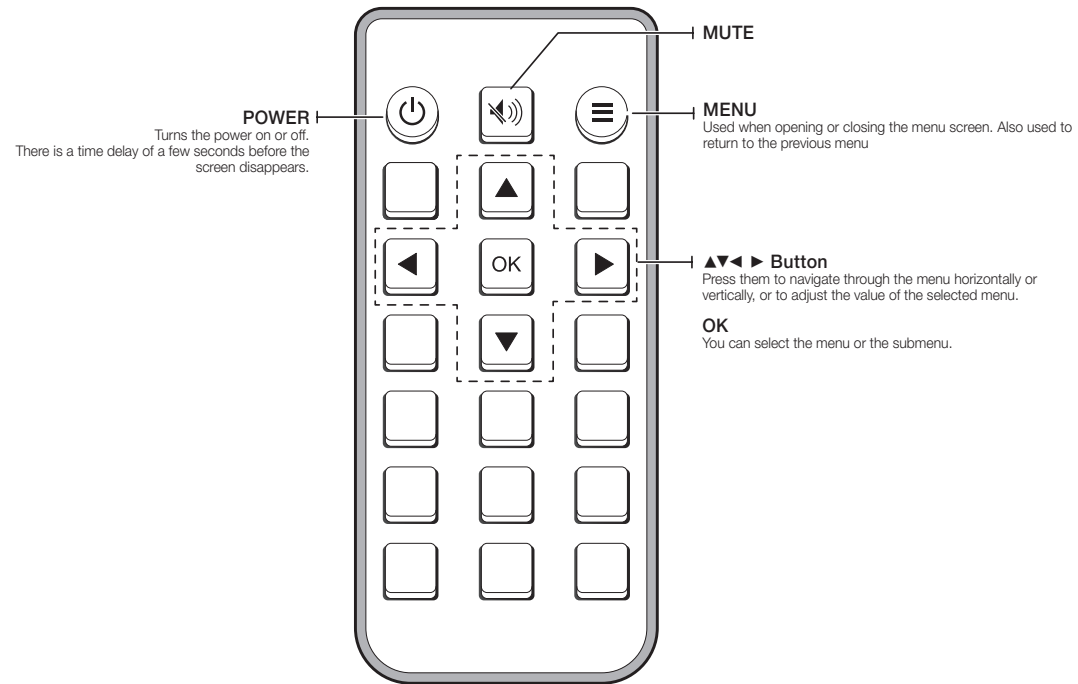


Name		Functions
<b>1</b>	Panel key	
	POWER	Turns the monitor power ON/OFF.
	UP	Press the button while the menu screen is displayed to move the menu or adjust the value.
	DOWN	
	SELECT	You can select the menu or the submenu.
MENU	When the button is pressed while the product is on, the menu screen appears. <ul style="list-style-type: none"> <li>To return to the previous screen, press the [MENU] button.</li> </ul>	
<b>2</b>	USB [MONITOR]	Connect the USB Devices for Monitor F/W update. <ul style="list-style-type: none"> <li>This USB port only use for updating firmware, which cannot be used for other USB devices.</li> </ul>
<b>3</b>	RESET	Resets the decoder installed in the monitor to its factory default settings. <ul style="list-style-type: none"> <li>If you forget your password, use the RESET button.</li> </ul>
<b>4</b>	USB	A USB port for connecting USB type devices (mouse, etc.) and updating decoder firmware. (USB 2.0 supported) <ul style="list-style-type: none"> <li>Firmware updates are also available online.</li> </ul>
<b>5</b>	HDMI2	Decoder extended screen output HDMI port. <ul style="list-style-type: none"> <li>Connector port that connects to the secondary monitor, and supports the maximum 1920 x 1080 60 Hz.</li> </ul>
<b>6</b>	Power switch	Decoder Power ON/ OFF switch.
<b>7</b>	HPoE	Network port for camera connections. <ul style="list-style-type: none"> <li>Power can be supplied to the HPoE injector (SPO-8315).</li> </ul>
<b>8</b>	DC 24V	DC 24V power input terminal.

# overview

## REMOTE CONTROL

If another display is used with this product in the same space where the remote control is being used, it may cause a malfunction due to interference of the remote control frequency.



 Those buttons without specific description are deprecated buttons.

# installation

Please take note of the followings before using this product.

- Do not use the product outdoor.
- Do not spill water or liquid in the connection part of the product.
- Do not impose the system to excessive shock or force.
- Do not pull out the power cord forcefully.
- Do not disassemble the product on your own.
- Do not exceed the rated input/output range.
- Use a certified power cord only.

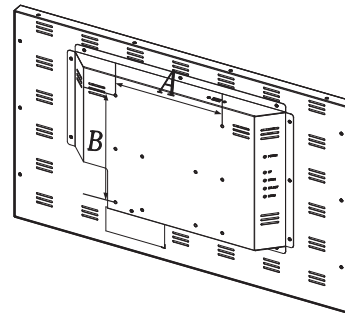
## INSTALLING WALL MOUNT PARTS

### Installing Wall Mount Kits

The wall mount kit (sold separately) allows you to hang the product on a wall.

For more information on wall mounting, refer to the owner's manual supplied with the wall mount parts. When installing the wall mount, seek the help of a technician.

Hanwha Vision is not responsible for any damage to the product or injury to the user or others caused by any accident due to a user's attempt to install the product.



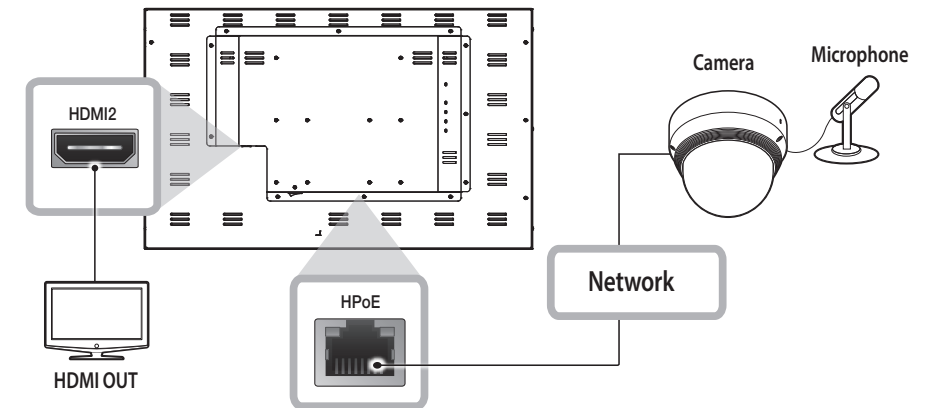
### Wall Mount Kit Specifications (VESA)

- ! Install the wall mount kit on a solid wall perpendicular to the floor.
  - ! Please refer to the nearest store when installing on other materials.
  - ! Installing on an inclined wall may cause the product to fall, which can result in serious injury.
  - ! When using a VESA mount, select a product that can hold 4 times the weight of the monitor.
- When you purchase our wall mount kit, you will find a detailed installation guide and all parts required for assembly.
  - Do not use screws that are longer than the standard dimensions or that do not conform to the VESA standard screw specifications. Using screws that are too long may damage the inside of the product.
  - For wall mount parts that do not conform to the VESA standard screw specifications, the screw length may vary depending on the wall mount specifications.
  - Do not over-tighten the screws. The product may be damaged, or may fall, resulting in injury. Hanwha Vision is not responsible for any damage to the product or injury to the user or others caused by any accident due to a user's attempt to install the product.
  - Hanwha Vision is not responsible for damage to the product or injury to the user caused by using non-compliant or non-VESA wall mount parts, or by the customer not following the product installation instructions.
  - When hanging on a wall, two people should always lift the product.
  - The standard dimensions of the wall mount kit are shown in the table below. [Unit: mm]

VESA dimensions (A * B)	Standard screws	Quantity
200 X 200	M4/L8	4
200 X 100		
100 X 100		

- ! Do not install the wall mount kit with the product turned on. This may lead to injury due to electric shock.

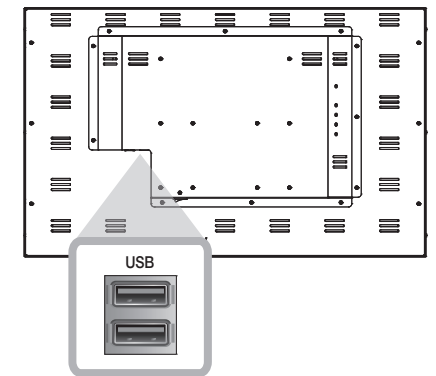
## CONNECTING TO AN EXTERNAL DEVICE



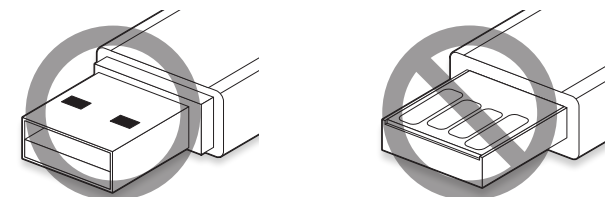
- ! Unrated or improper power source may cause damage to the system. Ensure that you use only the rated power source before connecting power to the system.

## CONNECTING A USB DEVICE

1. A USB port is on the rear of the product.
2. You can connect a USB memory or mouse to the USB port.
3. The product supports a hot-plugging function that enables connecting/disconnecting USB devices while operating the system.



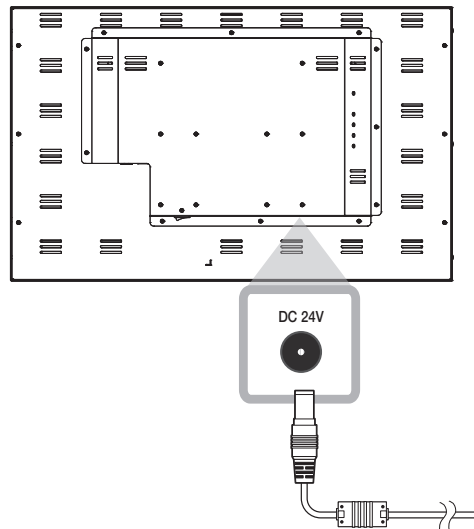
- ! Some USB devices may fail to function properly due to compatibility issues, please check the device before using it.
- ! If the USB memory is not detected, try formatting it on the "Setup > System > System management > Settings" menu.
- ! Only USB storage devices that comply with the standards (having a metal cover) are guaranteed for data transfer.
- ! In case the USB device's electric contacts have been worn out, data transfer between the devices may not properly function.



# installation

## CONNECTING TO POWER

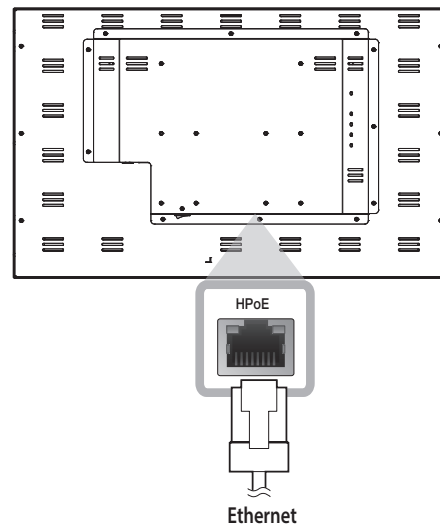
When using a common ethernet cable, please connect to the power adapter for a power supply.



### Connecting to a Power Source with Ethernet

You can supply power separately from the PoE switch without connecting to the power adapter.

- Please see below for PoE power specifications.
  - Power in use: HPoE(IEEE802.3bt)

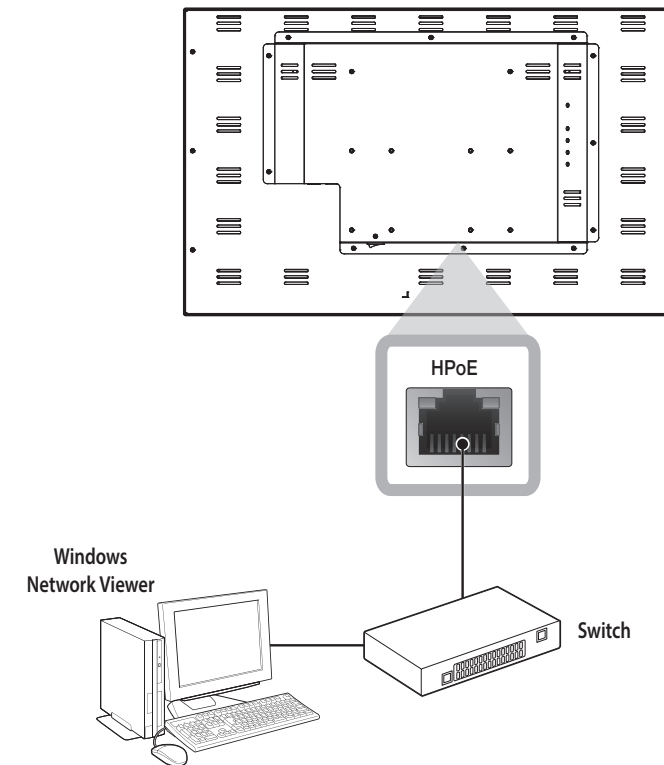


- ! ■ When the PoE and DC 24V is powered on at the same time, the device operates with external power (DC 24V).
  - For the PoE, use equipment that supports the HPoE(IEEE802.3bt) standard.
- When connecting to external devices, be sure to power off the connected device before connecting.
- Connect the set and the adapter power line before connecting to a 220V wall socket.
- Do not extend the adapter output cable.
- Please contact the service center when you need to extend the power cable.

## CONNECTING THE NETWORK

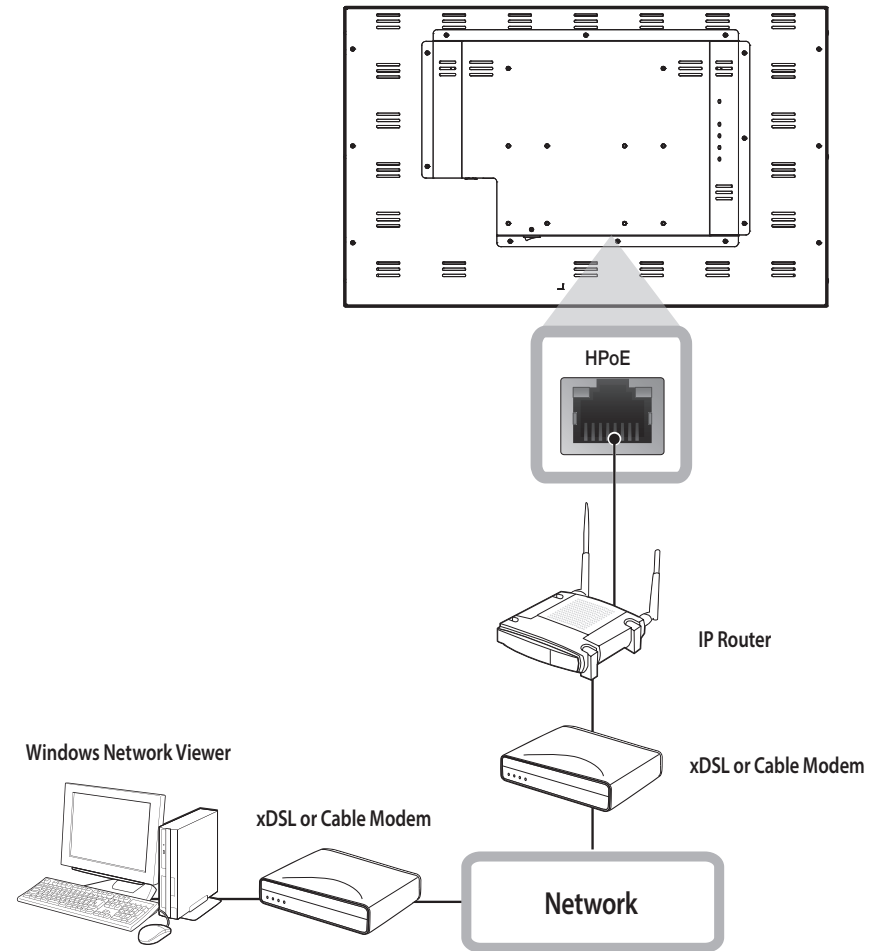
- ✍ ■ For more information about network connections, see "Setting the Network" in the User Manual.

### Network connection via Ethernet (10/100/1000BaseT)

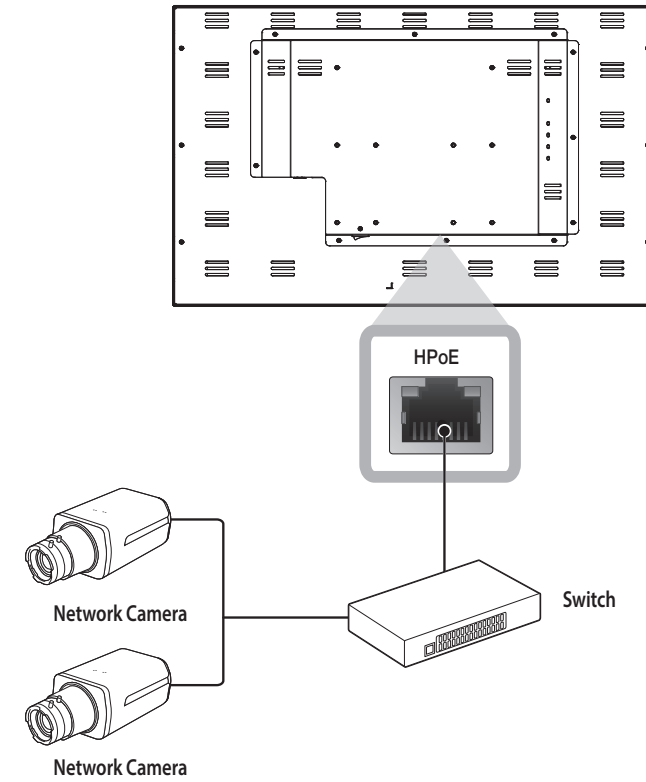


- ! ■ The product may not operate on an ethernet device that does not have sufficient power supply (approx. 40W). The use of the dedicated adapter is recommended.

## Connecting to a Network Using a Router



## Connecting the Network Cameras



# getting started

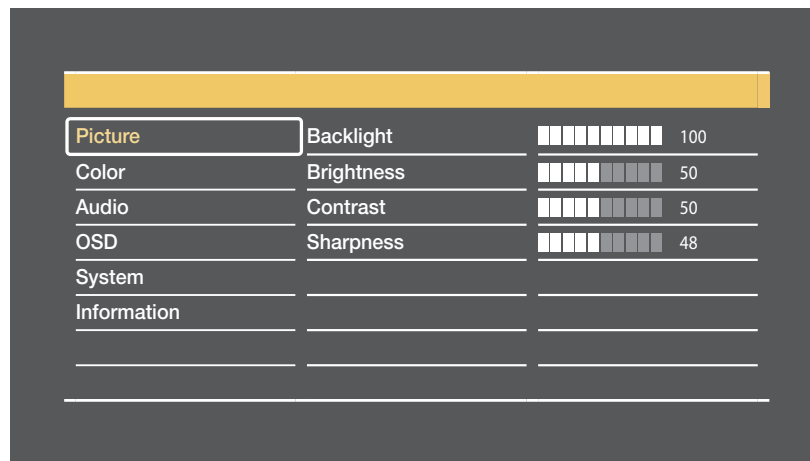
## SETTING UP THE MONITOR MENU

You can adjust menu settings by using the panel keys on the monitor.

1. Pressing the **[MENU]** button allows the main menu to appear.
2. Pressing the **[UP/DOWN]** button allows you to navigate the menu or set adjustment values.
3. Pressing the **[SELECT]** button allows you to select the menu or the submenu.
4. Press the **[MENU]** button to exit.

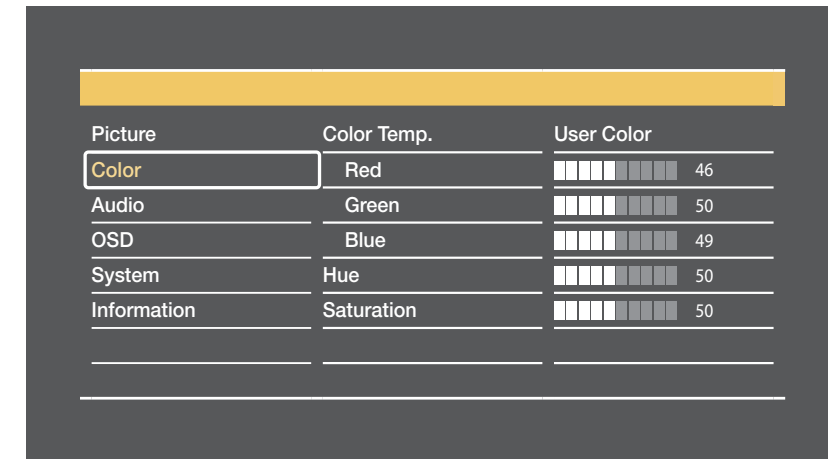
- ! To return to the previous screen, press the **[MENU]** button.
- ! If you do not press any buttons for a certain period of time, the OSD menu screen will disappear. You can set the time up to 60 seconds in **<OSD settings> → <Timeout>**.

## Picture settings



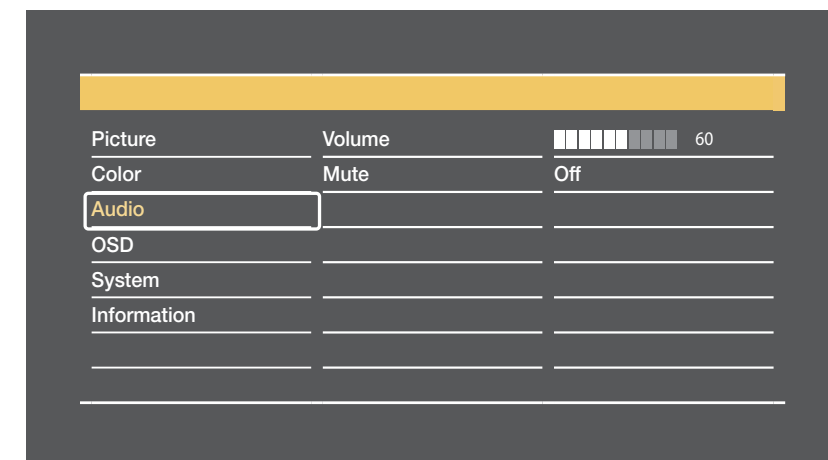
- Backlight: Adjusts the brightness of the menu screen.
- Brightness : Adjusts the brightness of the screen.
- Contrast : Adjusts the difference in brightness between the object and the environment.
- Sharpness: Adjusts the sharpness of the screen.

## Color settings



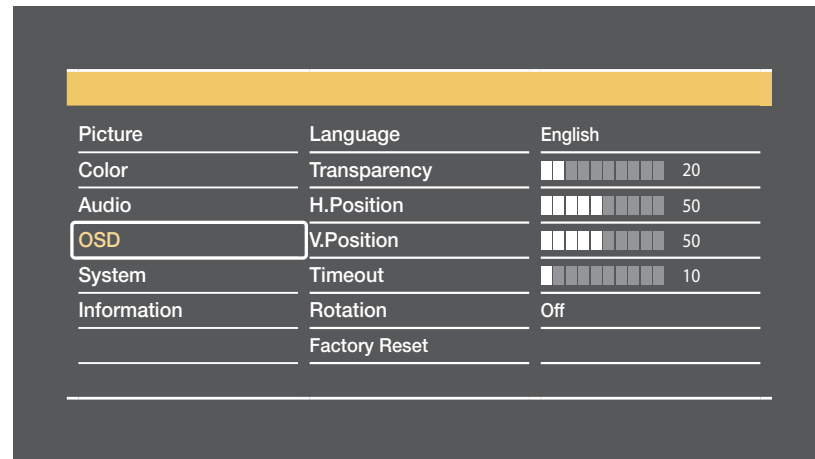
- Color Temp. : The color temperature can be adjusted and used depending on the monitor color. Red/Green/Blue values can be adjusted manually.
- Hue: Adjusts the hue of the screen.
- Saturation: Adjusts the saturation of the screen.

## Audio settings



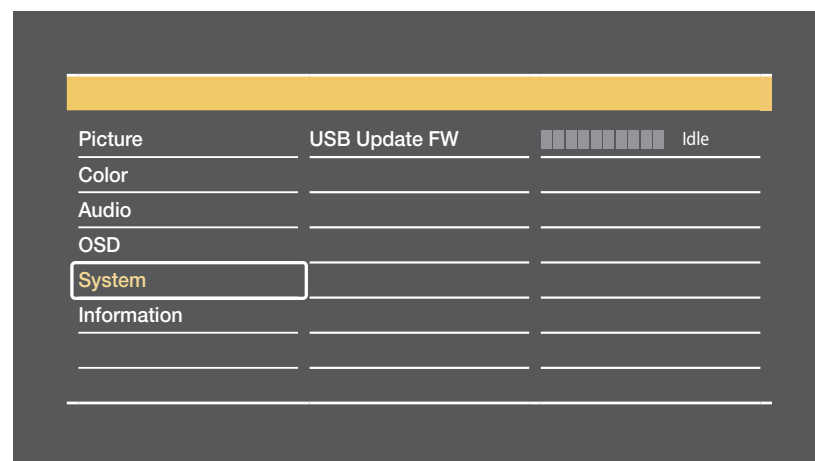
- Volume : You can adjust the volume.
- Mute: You can set whether to use the mute function.

## OSD settings



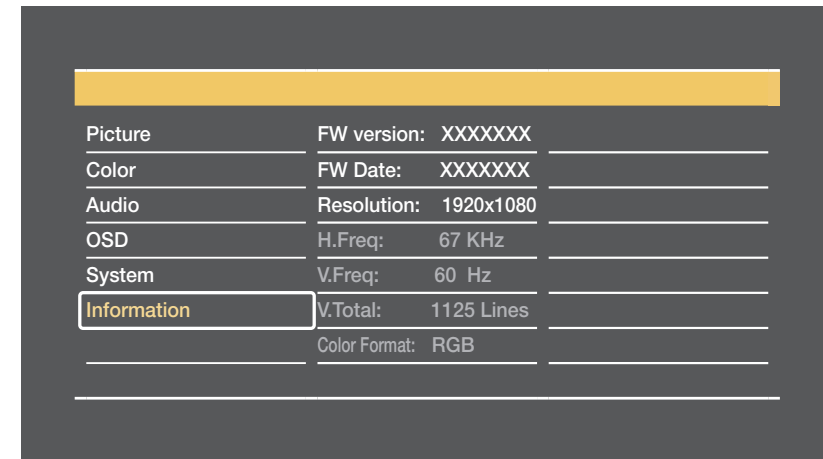
- Language : Select the screen language.
- Transparency : Sets the transparency of the menu screen.
- H.Position : Moves the screen of the menu to the left or right.
- V.Position : Moves the screen position of the menu up or down.
- Timeout : The menu screen disappears if the screen does not change for a certain period of time.
- Rotate : Rotates the menu screen to the set angle.
- Factory Reset : Resets the monitor settings to default.

## System settings



- USB Update FW : The monitor can be updated by connecting a USB to the USB port.

## Information



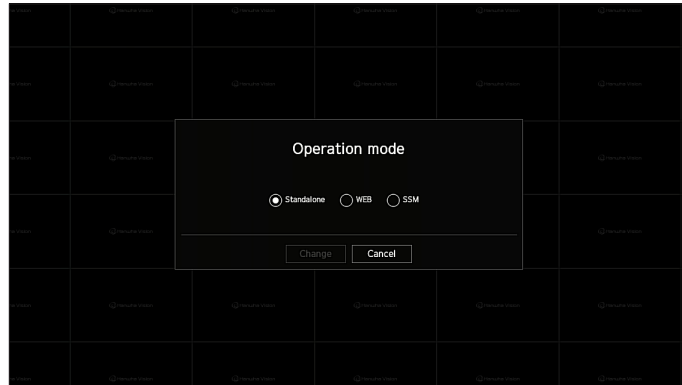
- FW Version: Displays the version of the monitor firmware.
- FW Date: Displays the update date of the monitor.
- Resolution: Displays the monitor resolution.



## SETTING THE SYSTEM OPERATION MODE

If you have admin permissions, you can select operation mode to control the decoder.

1. Select <⚙️> at the top right of the screen.
2. The <Operation mode> settings window will appear.



3. After selecting the desired operation mode, click <Change>.
  - Standalone: Can control Live monitoring and changes to the settings of the camera on a decoder. You can only change admin account information and operation mode in the web viewer.
  - WEB: Can only Live monitor the camera on a decoder, and you need a web viewer to change the settings or control.
  - SSM: The decoder only allows live monitoring of the appropriate camera, and changing settings or controlling is available only in the SSM.
4. If you change the operation mode, the decoder restarts and the set layout is initialized.

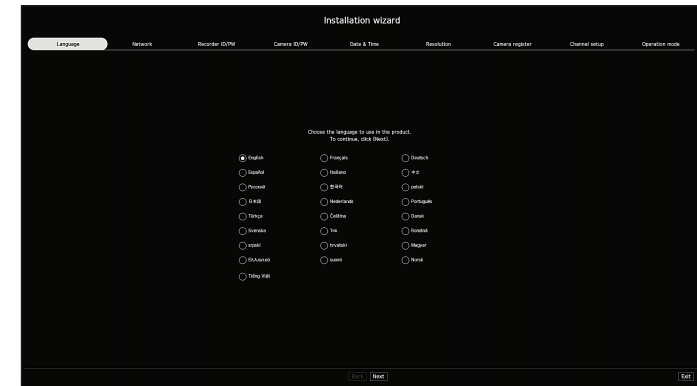
## INSTALLATION WIZARD

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

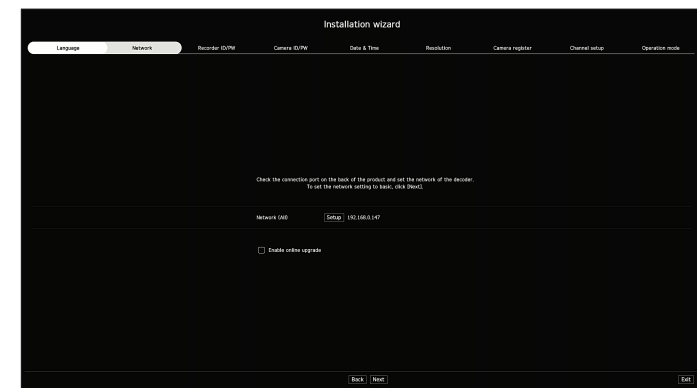
Installation Wizard can only be accessed at factory default status. If you do not want to proceed, click <Exit>.

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

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



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



### Setting up the Network

- Network (All): Can be used as a common port for the camera and web viewer connection.
- Setup
  - IP type: Allows you to select the type of network access.
  - IP address, Subnet mask, Gateway, DNS
    - Manual: The IP address, subnet mask, gateway, and DNS can be entered manually.
    - DHCP: The IP address, subnet mask, gateway, and DNS can be automatically set.

### Online Upgrade

You can receive new firmware notifications when the decoder connects to a network.

# getting started

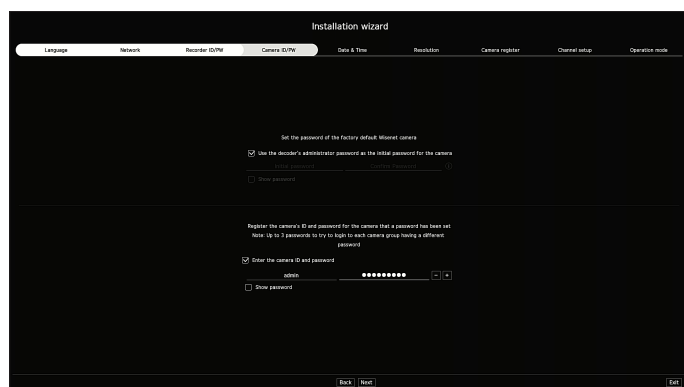
3. Set the administrator password on the <Decoder ID/PW> screen and click the <Next>.

If you click <i>, a basic guide for password setup is displayed. Refer to the password setup rules.



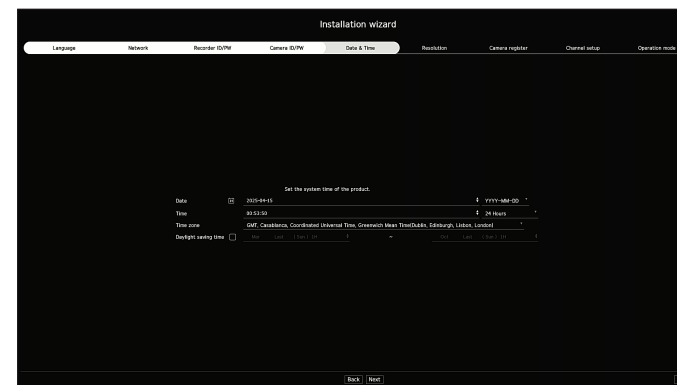
4. Set the camera password in factory default status on the <Camera ID/PW> screen.

If ID/PW is already set in the camera, register the ID/PW and click <Next>.



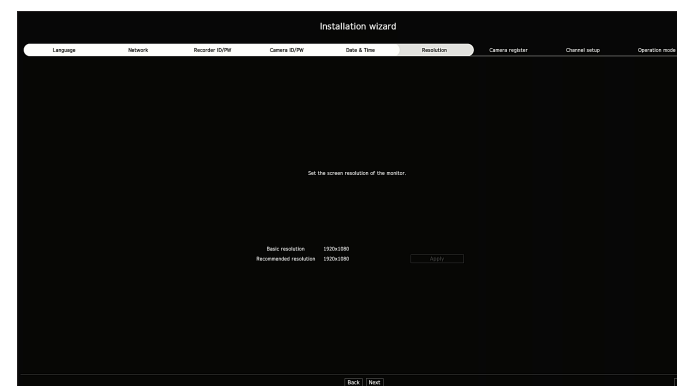
- When the password is in factory default status, it can be changed and managed in a batch.
- Up to 3 sets of camera IDs with passwords and passwords can be registered.
- You may change the passwords of registered cameras all at once on the "Setup > Camera > Camera password" menu.
- You cannot change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

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



- Depending on the location of the product release, the standard time zone setup may vary.

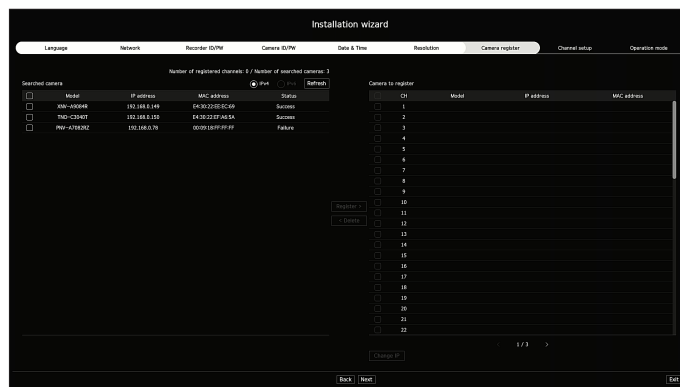
6. To set the recommended resolution on the <Resolution> screen, click <Apply> followed by the <Next> button.



7. On the <Camera register> screen, select a camera to register from the searched camera list and click <Register>.

Select a camera to register from the list and click <Change IP>.

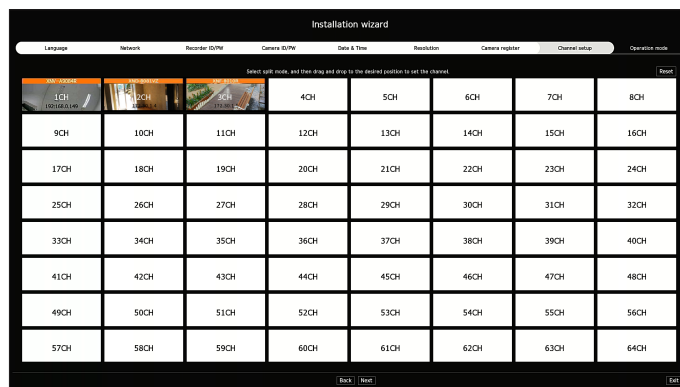
After completing camera register click <Next>.



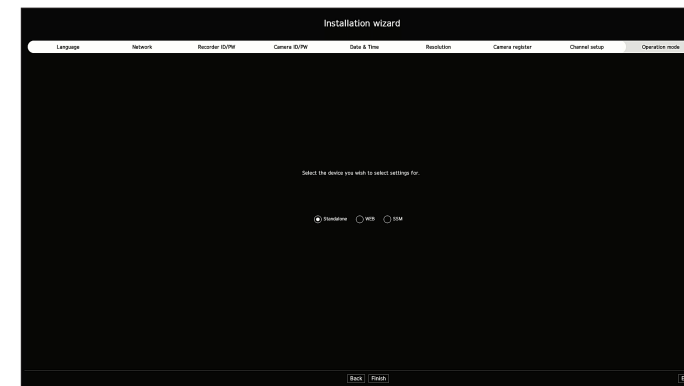
 The operation will become available after entering the set ID and password for the camera and completing the connection test.

8. On the <Channel setup> screen, you can view the camera videos registered to each channel in thumbnails along with thumbnail information. To change the camera video position, select a video and drag and drop it to the desired location.

After completing channel setup, click <Next>.



9. Select an operation mode that can control the decoder from the <Operation mode> screen.



- Standalone: Can control Live monitoring and the setting changes of the camera on a decoder. You can only change admin account information and operation mode in the web viewer.
- WEB: Can only Live monitor the camera on a decoder, and you need a web viewer to change the settings or control.
- SSM: The decoder only allows live monitoring of the appropriate camera, and changing settings or controlling is available only in the SSM.

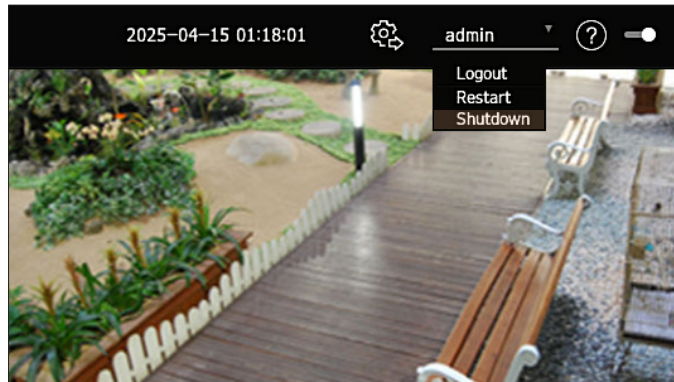
10. Click <Finish> to complete the installation wizard.

# getting started

## SHUTTING DOWN THE SYSTEM

1. Select <Shutdown> in the top right of the screen.
2. The <Shutdown> confirmation pop-up window will appear.
3. Click <Ok>.

The system will shut down.

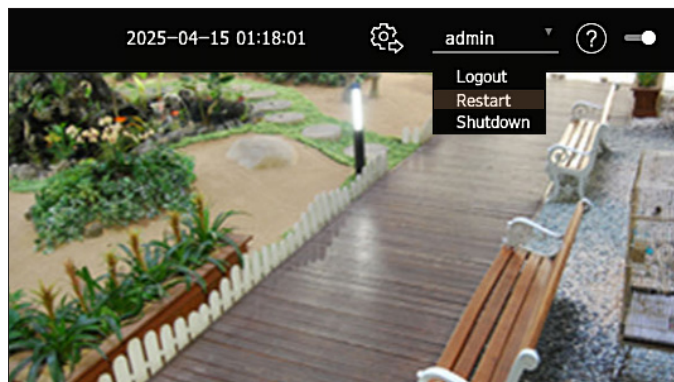


❖ For more information on decoder settings, refer to the SPD-152 manual.

## RESTARTING THE SYSTEM

1. Select <Restart> at the top right of the screen.
2. The <Restart> confirmation pop-up window will appear.
3. Click <Ok>.

The system will restart.



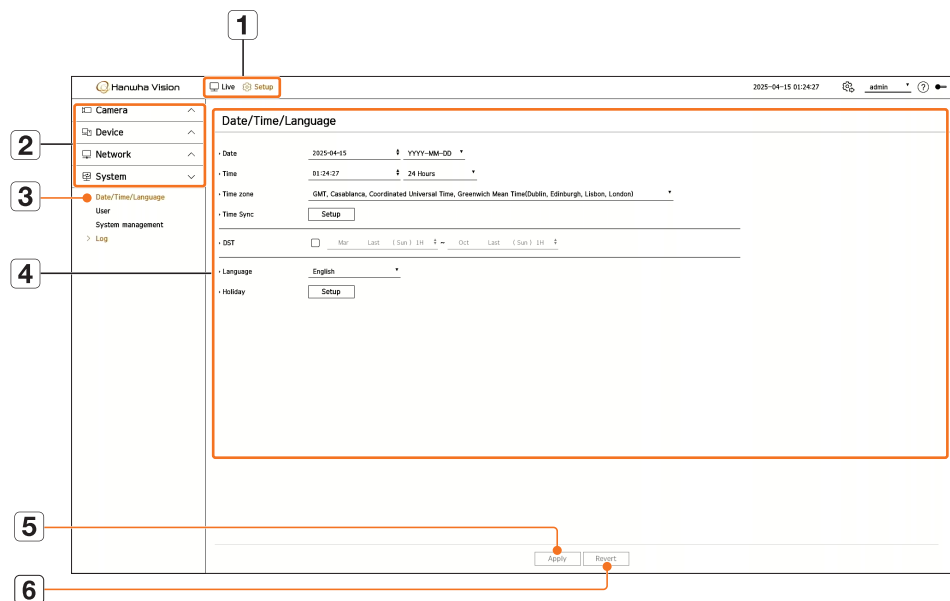
- Only users with the "Restart/Shutdown" permission can shut down or restart the system.
- For more information on permission setup management, see the "Setup > Setting the System > User" page in the table of contents.

# setup

The camera, device, network and system can be set up.

- You can check the following setup screen configuration when it is in **<Standalone>** operation mode.

## SCREEN LAYOUT OF THE SETUP



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

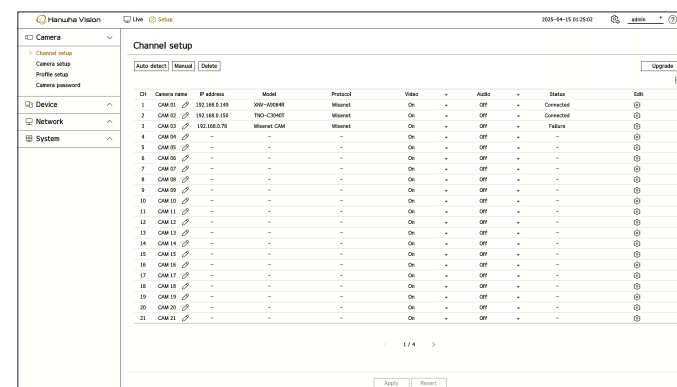
## SETTING THE CAMERA

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

### Channel setup

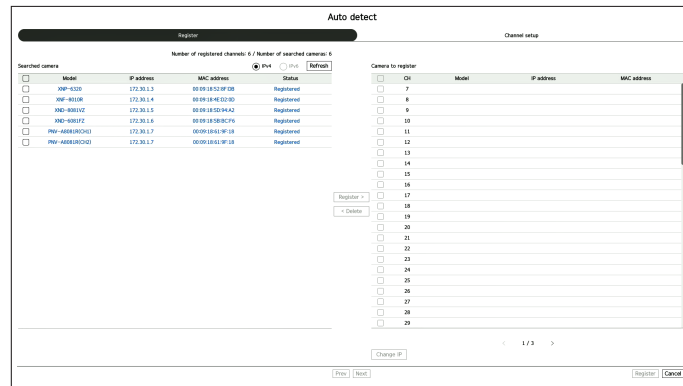
You can register a network camera for each channel and make connections between them.

#### Setup > Camera > Channel setup



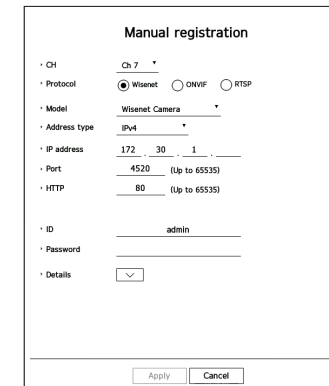
- Displays the camera of the channel as a list or thumbnail.
  - Cameras connected by ONVIF do not support preview.
- Camera name: Provide a camera Name. You can enter up to 15 letters including spaces.
- IP address: Display the IP address of a network camera.
- Model: Show the camera model name.
- Protocol: Show the protocol information of a registered network camera.
- Video
  - On/Off: You can turn on/off the selected channel's camera. If the camera video is turned off, a blank screen is displayed.
  - Covert 1: Displays information except for the video information from the selected channel. The video is not displayed to protect privacy of a person under surveillance.
  - Covert 2: Does not display all information of the selected channel, and only displays an empty screen.
- Channels for which video is set as **<Covert 1>** or **<Covert 2>** do not produce sound.
- Audio
  - If set to **<On>**, you can turn the audio of the channel ON/OFF on the Live screen.
  - When set to **<Off>**, the sound is turned off on the live screen.
- Channels for which video is set to **<Covert 1>** or **<Covert 2>** do not produce sound on live screen even if the audio is set to **<On>**.
- Status: Display the connection status.
- Edit: You can change the connection information of the camera.
- Upgrade: You can check the camera's version, upgrade version, and status and upgrade it.
- If you cannot register a camera after initializing the system, check the network setting. As the system is initialized and the network setting is reset, the camera's network bandwidth will be different from the product's network bandwidth, so it will be impossible to register a camera.

## Automatic Registration of Network Cameras



- In the <Channel setup> field, click on the <Auto detect> button.
- The <Auto detect> window will appear.
  - When you click on the camera list on the live screen, you can automatically search and register a camera.
- Select a camera to register from the <Searched camera> list and click <Register>. You can check the selected camera in the <Camera to register> list.
  - An already registered camera will be marked in blue in the list.
  - In case you search again or keep the same IP because the IP of the camera has not been assigned by the DHCP server yet (Example: 192.168.1.100), click <Refresh> to confirm whether it is assigned.
  - <Status> displays the camera authorization status. If the status is <Auth failed>, then click to enter the camera ID and password.
  - Click a header at the top of the list to sort the list according to that header.
- To change the IP address of the camera, select the desired camera from the <Camera to register> list and press the <Change IP> button.
- Click <Next> at the bottom of the screen to set the registered camera channel.
- Press the <Register> button on the lower right of the screen to register the selected camera.
  - If you register a camera using a user account—not an admin account—the camera features may be limited.
  - When changing the camera ID and password in the camera webviewer, if the camera is already registered on a decoder, you must change the ID and password of the camera registered on the decoder as well.
  - When the camera is in the factory default status, it will be changed to the ID and password set in "Setup > Camera > Camera password".
  - If the ID and password of a camera are already set, the ID and password set in "Setup > Camera > Camera password" will be registered. (up to 3 sets)
  - Wisenet camera is registered via Wisenet protocol while a third party camera is registered via ONVIF protocol.
  - You must not connect a device running a DHCP server to the PoE port or camera setup port. (Example: Router)
  - If a camera uses its own power source, the user must manually or automatically register a camera.

## Manual Registration of Network Cameras



- Click <Manual> in the <Channel setup> field.
- The <Manual registration> window will appear.
  - Click <+> on the camera list on the live screen to manually register a camera.
- Select a channel and protocol used to connect to a camera. The input items may differ depending on the selected protocol.
  - Wisenet: Wisenet camera's protocol can be used.
  - ONVIF: Means the camera supports ONVIF protocols. When connecting a camera whose name cannot be found from the list, select <ONVIF>.
    - When registering a camera with ONVIF, if the system time of the camera and the decoder is more than 2 minutes, the camera cannot be registered. Synchronize the time setting of the camera and decoder before registration.
  - RTSP: Comply with RFC 2326, one of the "Real Time Streaming Protocols (RTSP)" for real-time streaming.
- If you select the <Wisenet> protocol, check options as necessary.
  - Model: Select a camera model.
    - Unknown: Select when the camera model cannot be identified.
    - Wisenet Camera: You can register Hanwha Vision's cameras and encoders.
    - Wisenet Multi-Channel: You can register Hanwha Vision's multi-directional cameras and multi-imager cameras. A multi-channel camera is a camera that has multiple camera modules in one body. If a camera is automatically registered to a decoder, you can register several channels at once. However, if you want to manually register it, you need to register one channel at a time.

- Address type: Select the access address type of a camera.
  - The supported address type may differ depending on the type of the connected product.
  - IPv4/IPv6: Use in case you have to directly enter the IP address of the camera.
  - Wisenet DDNS: Can be used when the camera is registered on the Wisenet DDNS (ddns.hanwha-security.com) server. Enter the registered domain in DDNS ID.  
**Example**) In case it is http://ddns.hanwha-security.com/snb5000, then enter snb5000 in Wisenet DDNS
  - URL: Use when you enter a URL.



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

- IP address: Provide the IP address of the camera.
- Port: Enter the device port of the camera.
  - Depending on a camera product, device ports might not be supported.
- HTTP: Enter the HTTP port of the camera.
- ID: Provide the ID of the camera that you want to register.
- Password: Enter the password of the camera to be registered.
- Details: The streaming mode can be set up.

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

- ONVIF: After selecting an IP type, set IP address, ONVIF port, ID, password, and details.
  - IP type: Select the IP type of the camera.
  - IP address: Enter the camera's IP address.
  - ONVIF port: Enter the port number when the address type is IPv4 or IPv6.
  - Channel: Enter the channel to register the camera.
  - ID: Enter camera ID.
  - Password: Enter the camera password.
  - Details: The TLS usage status, authentication mode, and streaming mode can be set up.
- RTSP: Set URL, ID, password, and details.
  - URL: Enter your RTSP access address. For more information, see your camera user manual.
  - ID: Enter camera ID.
  - Password: Enter the camera password.
  - Details: The streaming mode can be set up.



- When choosing the ONVIF, RTSP protocol, you can set the streaming mode in the details.
  - TCP: The connection with the network camera operates through RTP over TCP.
  - UDP: The connection with the network camera operates through RTP over UDP.
  - HTTP: The connection with the network camera operates in the RTP over TCP (HTTP) mode.
  - HTTPS: The connection with the network camera operates in the RTP over TCP (HTTPS) mode.

#### To check the error details of camera registration

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

- **Connection Failed due to an unknown reason** : This message appears if the camera has failed to be registered due to unknown connection status.
- **Disconnected because camera account has been locked.** : When you enter the wrong ID/password 5 times to log in to the camera account, this message is displayed.  
Try to log in again after 30 seconds. If the same message appears, you may need to check whether someone has tried to access your camera account from the outside.
- **Connected successfully.** : This message appears if the camera is connected successfully.
- **Model information is wrong. Please provide the correct model name.** : This message appears if the model information provided for registering the camera is incorrect.
- **Authentication is failed.** : This message appears if the ID or password provided for registering the camera is incorrect.
- **Access failed as the max number of simultaneous users is exceeded.** : This message appears if the concurrent user count exceeds the upper limit.
- **Connection has failed due to a wrong HTTP port** : This message appears if the HTTP port number of the camera is invalid.
- **Connection has failed. Unknown connection error.** : This message appears if the camera has failed to be connected due to an unknown error.
- **User Model Modification:** When registering a camera, if you set the model to <Wisenet Camera>, the name will be imported directly from the camera upon successful registration.

#### To edit camera profile

For more information on profile changes, see the "**Setup > Setting the Camera > Profile setup**" page in the table of contents.

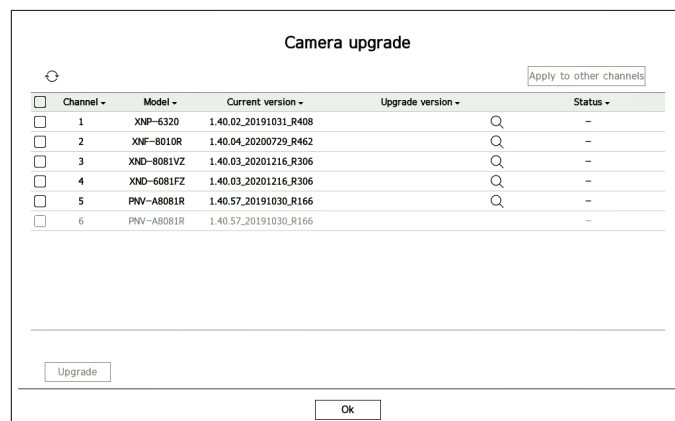


- For the decoder, if the live profile and remote profile are set differently, one camera can produce 2 types of streams. Especially, note that the live profile may vary depending on the screen split mode.
- For cameras, if applied with one profile only, the produced frame rate is fixed as the profile specifies; if applied with multiple profiles, produced video stream's frame rate is not guaranteed. For example, if applied with 2 profiles of 30fps, the camera may transmit streams at 20fps.

#### Delete Network Camera

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

## Network Camera Firmware Upgrade



- Channel: Displays channel information.
- Model: Displays the camera model information.
- Current version: Displays the current camera firmware version.
- Upgrade version: Displays the firmware version to upgrade.
  - Press the <Q> button to select the firmware manually within the USB.
  - <🖥️> indicates an upgrade via a remote server.
- Status: Displays the status of the ongoing upgrade (upgrading, successful, failed).

1. Click <Upgrade> in the <Channel setup> field.

2. Displays the upgradeable channel list among the connected cameras.

- If newer firmware exists on the remote server, the upgrade version is displayed, and the check box is automatically selected.
- If you do not see the upgrade version, you can press the <🔄> button to get the upgrade version information from the server.
- Connect the USB with the camera firmware to a decoder and click <Q> to search and select firmware files from the USB.
- Select a channel and press the <Apply to other channels> button to apply the firmware to other channels connected to the same model at once.

3. Check the box of the channel you want to upgrade.

4. Click the <Upgrade> button. The camera firmware upgrade starts.

- You can move to another menu while upgrading.
- Click <Stop> during an upgrade to stop upgrading.
- When the upgrade is completed, you can see the result in the popup window.

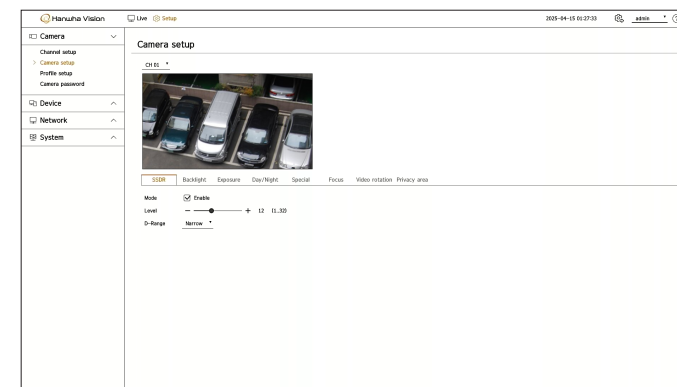


- Firmware upgrade is available only for channels connected with the Wisenet protocol and the camera's administrator account.
- If the upgrade version is not displayed even though the camera's firmware is out of date, check the network settings.
- If there are more than 50 firmware files in the top USB folder, the file may not be scanned.
- Disconnecting the USB from the decoder during an upgrade over the USB may cause the system to reboot.

## Camera setup

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

### Setup > Camera > Camera setup



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

### SSDR

If there is a significant difference between the dark and the bright areas, increase the brightness of the dark areas to maintain the level of brightness of the entire area.

The mode, level, and D-Range can be set up.

### Backlight

You can view both bright and dark areas.

The mode, WDR level, WDR black level, and WDR white level can be set up.

### Exposure

You can adjust the exposure of your camera.

The brightness, shutter, SSNR, Sens-up, Iris/Lens, and AGC can be set up.

- Brightness: Adjusts the brightness by setting the exposure value.
- Shutter: Adjusts the brightness by controlling the camera shutter speed. If you select shutter, you can set among the items below.
  - Auto: Adjusts the brightness automatically, controlling the shutter speed of the camera.
  - ESC (Electronic Shutter Control): Adjusts the brightness automatically, controlling the shutter speed according to the surrounding brightness.
  - Manual: Adjust the brightness by manually selecting the maximum/minimum shutter speed of the camera.
  - Anti-flicker: Reduces the shaking of the video when the screen shakes occur due to different frequencies and illumination. The shutter speed cannot be set when the anti-flicker frequency is selected.

- SSNR: Reduce noise, even in dark places, and minimize the afterimage of the object to control brightness.
- Sens-up: Automatically adjusts the shutter speed according to the brightness of the current light.
- IRIS/Lens: Adjusts the brightness by automatically or manually adjusting the camera IRIS and lens.
- AGC: Adjust the brightness by amplifying the camera's electrical signal when images are shot in the dark.

### Day/Night

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

The mode, dwell time, negative color, duration, alarm input, switching brightness, simple focus after day/night, and activation time (color) can be set up.

- You can select the day/night video display mode in **<Mode>**.
  - Color: Images are always displayed in color.
  - B/W: Images are always displayed in B/W
  - Auto: The video will be displayed in color in normal environments and in B/W at night.
  - External: Displays a color or B/W video by linking an external infrared camera to the alarm input terminal. Set the alarm input item when selecting the **<External>**.
  - Schedule: Directly enter the activation time (color) to control video display mode. Click **<Setup>** and enter the activation time.

### Special

The DIS (Digital Image Stabilization), defog function, and level can be set up.

### Focus

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

Focus, zoom, simple focus, focus initialization can be set up.

### Video rotation

Mirror mode, flip, and hallway view can be set up.

### Privacy area

You can set an area to be hidden in the camera image range to protect privacy. You can select whether or not to use the privacy setting and set up 32 new privacy areas.

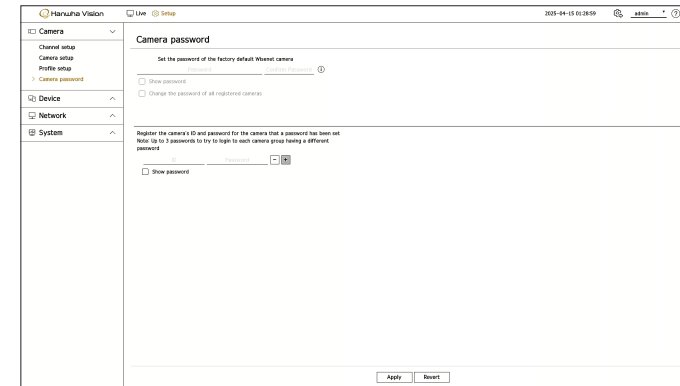
- For a PTZ camera, it is not possible to configure settings, and even when it is configured, the set area may be incorrect.

## Camera password setup

You can change the passwords of all registered cameras at once.

You can register the ID and password of the camera that you use.

### Setup > Camera > Camera password



- Password: Enter a new password for the camera in the factory default status according to the password setup rules. The initial password for the camera must be entered.
- Confirm password: Input the new password again.
- ID: Enter the ID and the ID of a camera whose password is set.
- Password: Enter the password of a camera whose ID and password are set.

- When the password is in factory default status, it can be changed and managed in a batch.
- If you click **< i >**, a basic guide for password setup is displayed.
- Check **<Show password>** to see the password that you are currently entering.
- If you check the **<Change the password of all registered cameras>** option, the passwords of all cameras are changed with the entered password.
- Up to 3 sets of camera IDs with passwords and passwords can be registered. You can auto-detect a camera with the ID/PW information of a registered camera on the "Channel setup > Auto detect" screen and directly register.
- A camera password registered with ONVIF and RTSP cannot be changed.

## SETTING THE DEVICE

Can make detailed settings related to the monitor.

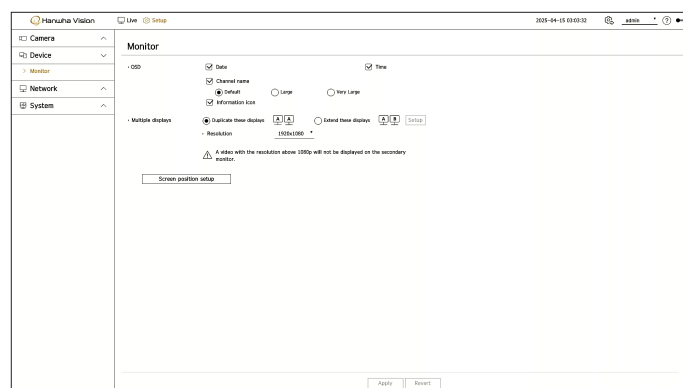
### Monitor

You can set the information displayed on the monitor the information location as well as the video output method.

Setup > Device > Monitor

### Monitor settings

You can set the settings related to the monitor output, such as screen displays and video output.

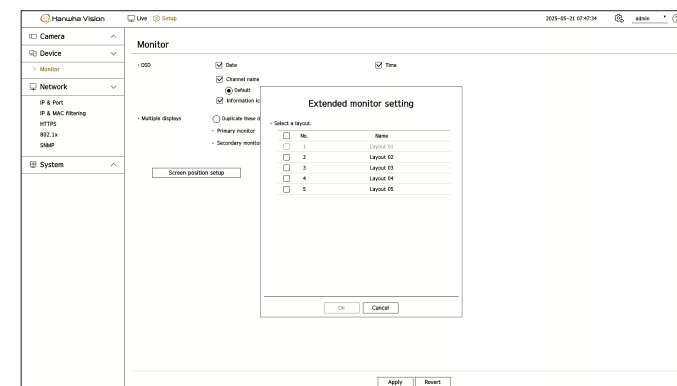


- OSD: Displays only the checked items from among the date, time, channel name, and information icon on the screen.
  - You can adjust the size of the channel name displayed on the live screen. Choose from <Default>, <Large>, <Very Large>.
- Multiple displays: You can set the resolution for the video display. The primary monitor and the extended secondary monitor support resolutions of 1920x1080, 1280x1024, and 1280x720. You can set the resolution of a device that supports a secondary monitor by selecting <Duplicate these displays> or <Extend these displays> mode.
  - Duplicate these displays: You can set the video display resolution of the primary monitor and secondary monitor to be the same. When operating in duplicate mode, if you set a resolution that exceeds 1920 x 1080, then the video will not be displayed on the secondary monitor.
  - Extend these displays: You can set the video display resolution of the primary monitor and the extended monitor separately.

- If the newly selected resolution does not fit with the monitor, the display won't function properly. In this case, wait until the native resolution is restored and then switch to another resolution of your choice.

### Expansion monitor settings

This function is only available for products that support the use of an extended monitor.



1. Select <Extend these displays> on the video display and click <Setup>.

You can change the layout of the extended monitor.

2. Select the desired layout.

When setting the layout of the expanded monitor, you can select one layout from the layout list set in the main monitor and assign it to the expanded monitor.

- Changing to the expanded mode is available only when there is a layout split into 25 or less portions among the added layouts in addition to the basic layout.
- When the extended mode is selected, the maximum resolution of the video output on the primary monitor (HDMI) is limited to 1920 x 1080.
- If the newly selected resolution does not fit with the monitor, the display won't function properly. In this case, wait until the native resolution is restored and then switch to another resolution of your choice.
- When setting the sequence switching time, consider the network environment.
- The profile used in the live output of the expanded monitor uses a remote profile. If the user changes the remote profile, the video output of the expanded monitor may be affected.
- By setting the monitor to duplicate mode, you can specify the monitor up to the maximum split mode supported by the decoder. If you set the monitor to extended mode, the screen of a secondary monitor can be designated up to 25 splits depending on the decoder model.
- The dynamic layout function can only be set on the primary monitor.

## Display position settings

On some monitors, depending on their status, the information of a decoder (camera name, icon) may not be displayed. Then, you can change the display position of the data.



1. Click **<Screen position setup>** on the monitor setup screen.
2. Using **<↕>** button to adjust the screen that is cut off.
3. Click **<Ok>**.

## SETTING THE NETWORK

The network settings of decoders can be set up.

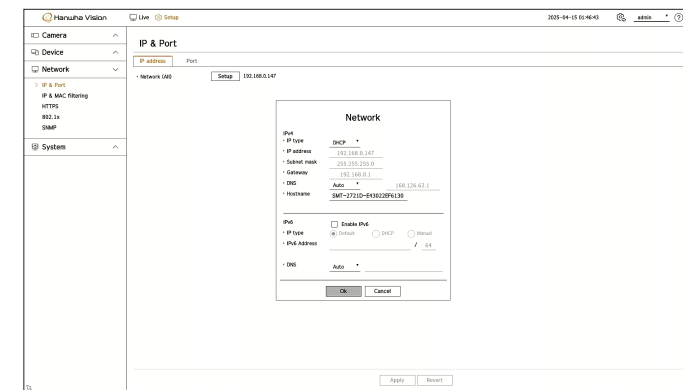
### IP & Port

You can set the network connection route and protocol.

### Setting a network connection

Sets the protocol and environment of the network.

#### Setup > Network > IP & Port > IP Address



- Network (All): Can be used as a common port for the camera and web viewer connection.
- Setup
  - IP type: Select the type of network access.
  - IP address, Subnet mask, Gateway, DNS
    - Manual: The IP address, subnet mask, gateway, and DNS can be entered manually.
    - DHCP: The IP address, subnet mask, gateway, and DNS can be automatically set.
  - You can only directly enter the DNS value of the DHCP when **<Manual>** is selected.

## Connecting and Setting the Network

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

### When no router is used

#### • Manual Setup Mode

- Internet connection method: Connect with a static IP or dedicated line, or connect a decoder and a remote user in the LAN (local area network) environment.
- Network setting method: Set the connected decoder's <IP type> to <Manual>.
  - Consult your network manager for IP, Gateway and Subnet Mask.

#### • DHCP mode

- Internet connection method: Connect a decoder directly to a cable modem, connect a decoder directly to a DHCP modem, or connect a decoder directly to the optical LAN.
- Network setting method: Set the connected decoder's <IP type> to <DHCP>.

### When a router is used

- ! ■ Check the following items to avoid collision with the decoder's static IP.

#### • Setting up the Decoder Static IP

- Internet connection method: Connect a decoder to an IP router connected to a cable modem, or connect a decoder to an IP router in a LAN (local area network) environment.

#### • Setting up the Decoder Network

1. Set the <IP type> of the connected decoder to <Manual>.
2. Make sure that the IP is within the static IP range provided by the IP router.  
IP address, Gateway, and Subnet mask: Consult your network manager.

- ! ■ If a DHCP server is configured with starting address (192.168.0.100) and end address (192.168.0.200), you should set the IP address out of the configured DHCP range (192.168.0.2 ~ 192.168.0.99 and 192.168.0.201 ~ 192.168.0.254).

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

#### • Setting the DHCP IP Address of the Broadband Router

1. Enter the access address of the IP router in the internet browser of the local PC connected to the IP router to access the setup menu of the IP router. (ex: http://192.168.1.1).
2. In this case, first, specify the Windows network settings of the local PC as in the following example.

**Example) IP:** 192.168.1.2

Subnet Mask: 255.255.255.0

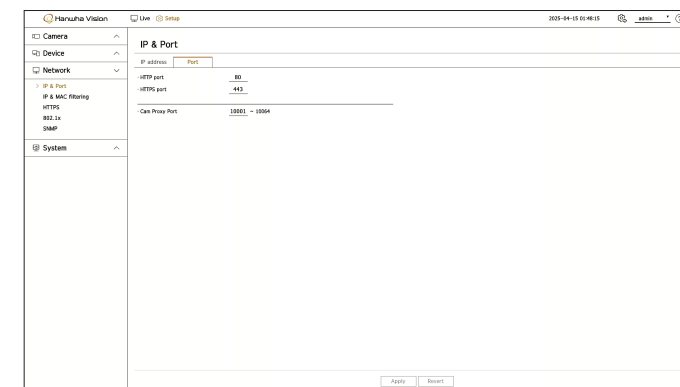
Gateway: 192.168.1.1

- Once connected to the Broadband Router, it prompts with a password. If you do not enter anything for the User Name, enter "admin" in the password and click <Ok>, then the IP router setting page will appear.
- Access the router's DHCP configuration menu and set its DHCP server activation, and provide the start and end address.
  - Start address: 192.168.0.100
  - End address: 192.168.0.200

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

## Port Setting

### Setup > Network > IP & Port > Port



- HTTP port: Enter the port value for the HTTP web viewer. The initial value is set to <80>.
- HTTPS port: Enter the port value for the HTTPS web viewer. The initial value is set to <443>.
  - HTTPS is a version of HTTP web communication protocol with advanced security. If security is important when accessing the web viewer, enable the HTTPS port.
- Cam Proxy Port: Sets the camera proxy port. The initial value is set to <10001>.

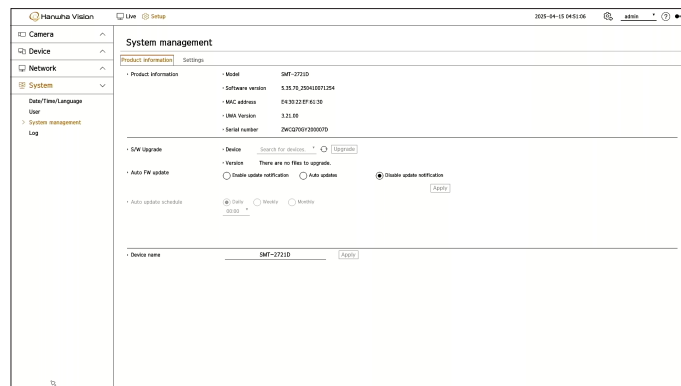
## System management


You can check the current system version and update it to a new version, export data, reset settings, and more.

### Checking the System information

You can check the current version of a system and MAC address and upgrade it.

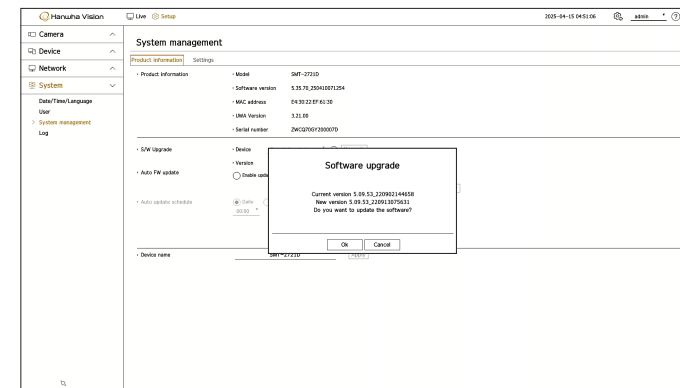
#### Setup > System > System management > Product information





- Product information: Display the information of the current system.
  - Model: Display the model name of a product.
  - Software version: The software version of the product currently being used is displayed. You can check the software version and upgrade to the latest version.
  - MAC address: Display the MAC address of a product.
  - UWA Version: Display the UWA Version of a product.
  - Serial number : Display the product serial number.
- S/W Upgrade: Upgrade the software of the searched decoder to the latest version.
  - If it is not normally connected, the software upgrade item will not be displayed.
  - Click  to search software in the USB or network.
  - When the updating is done, it automatically reboots. Be careful not to turn off the power during the upgrade.
- Device name: Enter the name of a device. We recommend naming devices differently to distinguish multiple decoders in VMS and Device Manager.

### To upgrade the current software version

#### Setup > System > System management > Product information

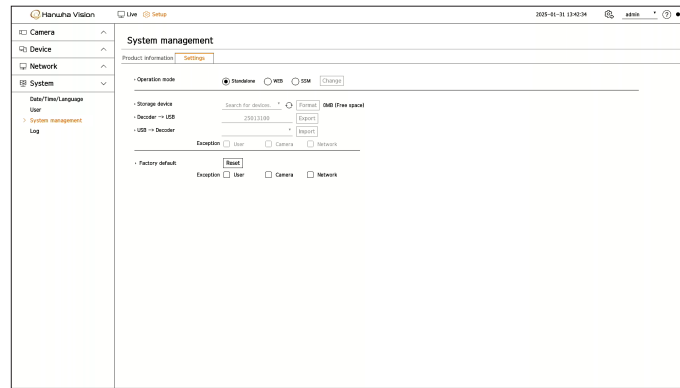


1. Connect a device storing the software to be updated.
  - It may take about 10 seconds to recognize the device.
  - Upgradeable devices include USB memory and network device.
  - If you want to upgrade it on the network, the product should be connected to an external network. Upgrade via the proxy server may not be enabled due to the restricted access.
2. When the recognized device appears, select **<Upgrade>**.
  - If you connect a device in the upgrade menu window, you can press the  button to search for available software.
  - If there is an upgraded version on the network, a popup window will appear.
  - **<Upgrade>** will be activated only when there is a higher version than the current software version.
3. Click **<Ok>** on the **<Software upgrade>** window.
  - While upgrading, it shows the progress.
4. When the upgrading is done, it automatically restarts. Do not turn the power off until it finishes restarting.
  -  Restart from the stage 2 if the "Upgrade failed" window appears. When you experience continued failure, consult the service center for assistance.

## Managing setup information

You can set the operation mode to control the decoder. In addition, you can apply the same settings in use to other decoders or initialize the product.

### Setup > System > System management > Settings



- Operation mode: If you have admin permissions, you can select operation mode to control a decoder.
  - Standalone: Can control Live monitoring and the setting changes of the camera on a decoder. You can only change admin account information and operation mode in the web viewer.
  - WEB: Can only Live monitor the camera on the decoder, and requires the web viewer to change settings or control.
  - SSM: The decoder only allows live monitoring of the appropriate camera, and changing settings or controlling is available only in the SSM.
- Storage device: Display the connected storage device.
  - Click <↻> to see the storage device.
  - If you click the <Format>, the format confirmation window will appear. Click on the <Ok> button to format the selected storage device.
- Decoder → USB: Store the information set on the decoder to the storage device.
  - If you select <Export> the confirmation window will appear. If you select <Ok> then the decoder information will be stored as a file.
- USB → Decoder: Apply the setup information stored in the storage device on a decoder.
  - If you select the exclusion setting, you can import all information but the selected information.
  - If you select <Import> then you can import setup information stored in the storage device. If you select <Ok> then the imported information is applied to a decoder.
    - The <Export> and <Import> settings can be used in the same software version only.
- Factory default: You can reset the system settings to the settings at the time of purchase. However, logs won't be reset. Anything selected under Exclusion Setting won't be part of the factory reset. A confirmation pop-up will appear when you press the <Reset> button. Select the <Ok> button to reset the selected items.

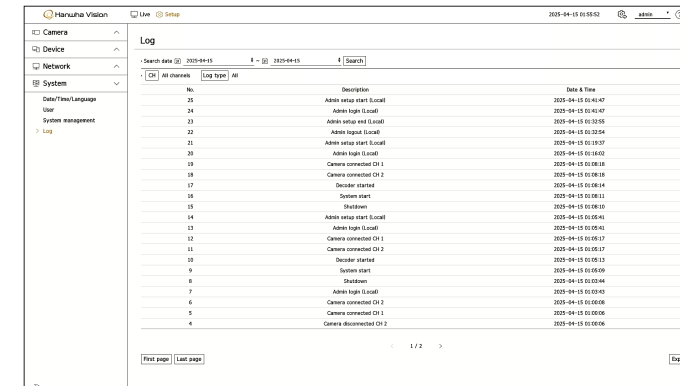


- If you export the setup information, the setup information is stored as a file in a decoder folder of the storage device.
- If you want to import setup information, you must have a setup information file in a decoder folder of a storage device.

## Log

System Log shows log and timestamp on every system start up, system shutdown, and changes on system settings.

### Setup > System > Log

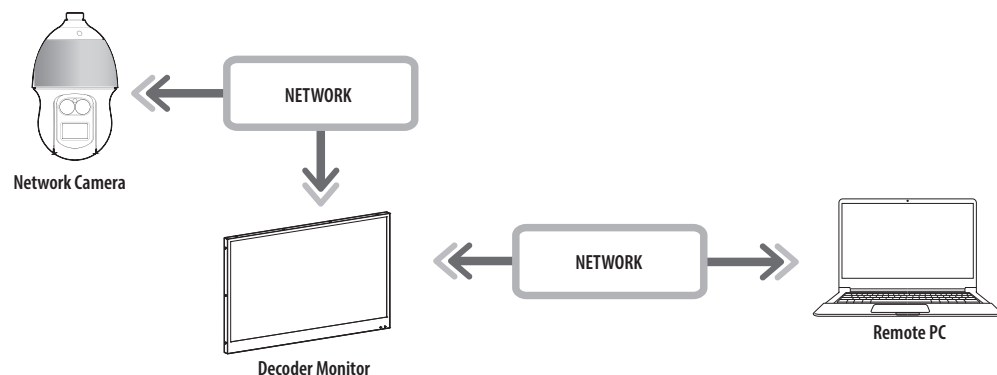


- Search date: You can use the calendar window which appears when using the calendar icon or the direction buttons to select the date to search the system log.
- Search: Specify the date and press this button to display the search result in the log list.
- CH: Select a channel to search.
- Log type: In case there is a lot of log information, you can conveniently search for the necessary information by selecting a log type. Select the desired type and click <Apply>.
- First page / Last page: If you have a lot of search results, you can move to the first or last page.
- Export: Store all log information recorded on a decoder to a storage device.

# starting web viewer

## WHAT IS WEB VIEWER?

The web viewer is a software program that the operator can access remotely to change the decoder setup.



## Key Functions

- Remote connection using the browser
- Split mode supported

 ■ Depending on the number of channels supported by the product, the number of screen split modes may vary.

## System Requirements

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


- Use the browser recommended by the OS.  
Example) Microsoft recommended browser: Microsoft Edge
- Supported browsers: Chrome, Edge, and Safari
- Supported OS: Works on all of the Windows, Linux, and OS X environments given the platform-independent nature of the web.
- Tested environments: Tested and certified to run on Windows® 10 with Edge 91, Google Chrome™ 91, and Intel® Core™ i7-7700 processor 3.60 GHz with NVIDIA® GeForce® GTX™ 1050 or Intel™ HD Graphics 630.


## CONNECTING WEB VIEWER

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

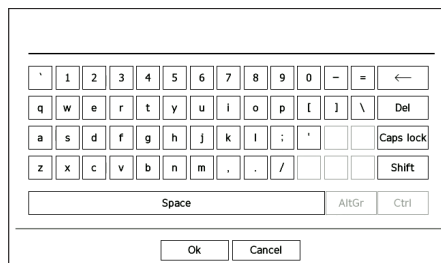
The screenshot shows a 'Sign in' page for a web viewer. The URL is 'http://192.168.219.193'. A warning message states 'Your connection to this site is not private'. There are input fields for 'Username' and 'Password'. At the bottom, there are 'Sign in' and 'Cancel' buttons.

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

-  ■ All settings are applied according to the decoder settings.
- If you change the web port when connecting to the Web viewer, you may fail to access it since the applicable port is blocked. In this case, change the port to a different port.
- Please change your password every three months to safely protect personal information and to prevent damage from information theft. Please note that the user is responsible for their security and any other problems caused by mismanaging a password.

-  ■ Only an administrator or a single user can access the web viewer.
- The passwords of the admin and general users can be changed in the <User> menu of the decoder.
- General users should have set <Web viewer> under <Remote access restriction> to Enable before connecting to the Web Viewer. For details, refer to the "Setup > Setting the System > User" page in the table of contents.
- All settings are applied according to the decoder settings.

## USING VIRTUAL KEYBOARD



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

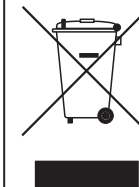
## TROUBLESHOOTING (FAQ)

Problem	Action
The screen appears and disappears repeatedly.	<ul style="list-style-type: none"> <li>Check the cable connection between the product and the external device, and check the locking status of the connection device.</li> </ul>
The screen will not switch on.	<ul style="list-style-type: none"> <li>Confirm that the power cable is properly connected.</li> </ul>
The screen seems to be flowing down.	<ul style="list-style-type: none"> <li>Check the cable connected to the product.</li> </ul>
The screen is too bright. The screen is too dark.	<ul style="list-style-type: none"> <li>Adjust the brightness and contrast.</li> </ul>
The product spontaneously turns itself off.	<ul style="list-style-type: none"> <li>Confirm that the power cable is firmly connected to the product and to the power outlet.</li> </ul>
The image on the screen appears strange.	<ul style="list-style-type: none"> <li>Video compression in scenes with fast transitions, such as sports or action movies, can cause screen distortion.</li> <li>Low signal level or poor quality may cause screen distortion. This is not a product issue.</li> <li>Cellular phones within a 1 meter radius may cause interference with analog/digital products.</li> </ul>
The brightness and color are strange.	<ul style="list-style-type: none"> <li>Adjust the screen options using the screen menu.</li> <li>Reset the screen with the default screen settings.</li> </ul>
I can see a dotted line on the edge of the screen.	<ul style="list-style-type: none"> <li>If the screen is the original size, try changing it to 16:9.</li> </ul>
I can see lines (red, green, blue) on the screen.	<ul style="list-style-type: none"> <li>This occurs due to a fault in the DATA SOURCE DRIVER IC of the monitor. Contact Hanhwa Vision Service Center to solve the problem.</li> </ul>
The screen is unstable and stops.	<ul style="list-style-type: none"> <li>Screen pauses may occur when the resolution is different from the recommended resolution, or when the signal is unstable. To solve this problem, change the resolution of the external device to the recommended resolution.</li> </ul>
The image is not displayed on the full screen.	<ul style="list-style-type: none"> <li>Try adjusting the screen size option of the product or external device.</li> </ul>
The product smells of plastic.	<ul style="list-style-type: none"> <li>This is a normal smell, and will disappear over time.</li> </ul>
Live video is slow or cut off.	<ul style="list-style-type: none"> <li>The frame number set for multiple data transmissions that are set in a camera or network environment could differ from the actual rate of transmission. Click <b>&lt;Frame&gt;</b> at the bottom of the screen to check the number of incoming frames per channel and the actual number of frames played. When you register a camera, the Live4NVR profile will be created by default. If necessary, go to <b>"Setup &gt; Camera &gt; Profile setup &gt; Edit"</b> and change the number of frames.</li> <li>If you keep seeing video slow down or cut off, then check the network environment or camera condition.</li> </ul>
The system does not turn on and the indicator on the front panel does not operate at all.	<ul style="list-style-type: none"> <li>Check if the power supply system is properly connected.</li> <li>Check the system for the input voltage from the power source.</li> <li>If the problem persists even after you have taken the above actions, check the power supplier and replace it with a new one.</li> </ul>

Problem	Action
The video input is okay, but the videos of some channels are not properly displayed or are abnormally displayed (e.g. black screen, B/W screen).	<ul style="list-style-type: none"> <li>• Check if the camera is properly supplied with power.</li> <li>• Check the state of the cable connected to the camera and reconnect it after replacing or disconnecting it.</li> <li>• Check the video output connecting the camera's Web Viewer.</li> <li>• Check if the network port is properly connected and the network setting is set correctly.</li> <li>• Changing the hub connected to the network to the one supporting Gigabit may solve this.</li> </ul>
The screen keeps displaying the logo image.	<ul style="list-style-type: none"> <li>• This may occur from a problem with the main board, or the related software being corrupt. Contact the nearest service center for more information.</li> </ul>
The camera is not connected or the PC fails to connect to the product.	<ul style="list-style-type: none"> <li>• Check if the network cable is connected properly.</li> <li>• Ensure that you have set Network - Connection Mode.</li> <li>• Check the IP setting of the PC or camera.</li> <li>• Try the Ping Test.</li> <li>• Check if there is a different device near the product that uses the same IP.</li> </ul>
The input camera image is too bright or too dark.	<ul style="list-style-type: none"> <li>• Check the registered camera settings in "<b>Setup &gt; Camera &gt; Camera setup</b>".</li> </ul>
The time setup window will pop up.	<ul style="list-style-type: none"> <li>• This message is displayed if there occurs a problem with the time setting of the internal clock or an error in the decoder internal clock. Contact the retailer or the service center for more information.</li> </ul>
I have connected an external storage device (USB Memory) to the decoder but I couldn't see the connection result.	<ul style="list-style-type: none"> <li>• If the connected external storage medium is not detected, try formatting it and check again on the "<b>Setup &gt; System &gt; System management &gt; Settings</b>" menu.</li> </ul>
I found it difficult to configure the network settings when using the router.	<ul style="list-style-type: none"> <li>• If you use the router for a network connection, refer to the "Connecting to a Network Using a Router" in the Quick Guide.</li> <li>• For more information, refer to the user manual.</li> </ul>
I forgot the password.	<ul style="list-style-type: none"> <li>• Contact the decoder installation manager for help.</li> </ul>



Hanwha Vision cares for the environment at all product manufacturing stages, and is taking measures to provide customers with more environmentally friendly products. The Eco mark represents Hanwha Vision's devotion to creating environmentally friendly products, and indicates that the product satisfies the EU RoHS Directive.



**Correct Disposal of This Product (Waste Electrical & Electronic Equipment)**

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.



**Correct disposal of batteries in this product**

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment. To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

