IDIS

Network Video Recorder

Operation Manual

DR-6308P
DR-6316PS
DR-6332PS

DR-6308P-SA
DR-6316PS-SA
DR-6332PS-SA

Powered by Direct IP™

Before reading this manual

This operation manual contains basic instructions on installing and using DirectIP™ Network Video Recorder, an IDIS product. Users who are using this product for the first time, as well as users with experience using comparable products, must read this operation manual carefully before use and heed to the warnings and precautions contained herein while using the product. Safety warnings and precautions contained in this operation manual are intended to promote proper use of the product and thereby prevent accidents and property damage and must be followed at all times. Once you have read this operation manual, keep it at an easily accessible location for future reference.

- The manufacturer will not be held responsible for any product damage resulting from the use of unauthorized parts and accessories or from the user's failure to comply with the instructions contained in this operation manual.
- It is recommended that first-time users of DirectIP™ Network Video Recorder and individuals who are not familiar with its use seek technical assistance from their retailer regarding product installation and use.
- If you need to disassemble the product for functionality expansion or repair purposes, you must contact your retailer and seek professional assistance.
- Both retailers and users should be aware that this product has been certified as being electromagnetically compatible for commercial use. If you have sold or purchased this product unintentionally, please replace with a consumer version.

Safety Precautions

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Symbol	Publication	Description
	IEC60417, No.5032	Alternating current

WARNING
Hazardous moving parts
Keep away from moving fan blades

AVERTISSEMENT
Pièces mobiles dangereuses
Se tenir éloigné des pales de ventilateurs mobiles

1. Read Instructions

All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions

The safety and operating instructions should be retained for future reference.

3. Cleaning

Unplug this equipment from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.

4. Attachments

Never add any attachments and/or equipment without the approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

5. Water and/or Moisture

Do not use this equipment near water or in contact with water.

6. Ventilation

Place this equipment only in an upright position. This equipment has an open-frame Switching Mode Power Supply (SMPS), which can cause a fire or electric shock if anything is inserted through the ventilation holes on the side of the equipment.

7. Accessories

Do not place this equipment on an unstable cart, stand or table. The equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

This equipment and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.

8. Power Sources

This equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer or local power company. You may want to install a UPS (Uninterruptible Power Supply) system for safe operation in order to prevent damage caused by an unexpected power stoppage. Any questions concerning UPS, consult your UPS retailer.

This equipment should be remain readily operable.

9. Power Cords

Operator or installer must remove power and TNT connections before handling the equipment.

10. Lightning

For added protection for this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power-line surges.

11. Overloading

Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

12. Objects and Liquids

Never push objects of any kind through openings of this equipment as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the equipment.

13. Servicing

Do not attempt to service this equipment yourself. Refer all servicing to qualified service personnel.

14. Damage requiring Service

Unplug this equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:

A. When the power-supply cord or the plug has been damaged.

B. If liquid is spilled, or objects have fallen into the equipment.

C. If the equipment has been exposed to rain or water.

D. If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation.

E. If the equipment has been dropped, or the cabinet damaged.

F. When the equipment exhibits a distinct change in performance — this indicates a need for service.

15. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

16. Safety Check

Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.

17. Field Installation

This installation should be made by a qualified service person and should conform to all local codes.

18. Correct Batteries

Warning: Risk of explosion if battery is replaced by an incorrect type. Replace only with the same or equivalent type. Dispose of used batteries according to the instructions. The battery shall not be exposed to excessive heat such as sunshine, fire or the like.

Avertissement: risque d'explosion en cas d'utilisation d'une batterie de type incorrect. Le remplacer uniquement par un type identique ou équivalent. Mettre les batteries usées au rebut conformément aux instructions. La batterie ne doit pas être exposée à une source de chaleur excessive, telle que le soleil, le feu, ou analogue.

19. Tmra

A manufacturer's maximum recommended ambient temperature (Tmra) for the equipment must be specified so that the customer and installer may determine a suitable maximum operating environment for the equipment.

20. Elevated Operating Ambient Temperature

If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (Tmra).

21. Reduced Air Flow

Installation of the equipment in the rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

22. Mechanical Loading

Mounting of the equipment in the rack should be such that a hazardous condition is not caused by uneven mechanical loading.

23. Circuit Overloading

Consideration should be given to connection of the equipment to supply circuit and the effect that overloading of circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

24. Reliable Earthing (Grounding)

Reliable grounding of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

In-Text

Symbol	Type	Description
	Caution	Important information concerning a specific function.
	Note	Useful information concerning a specific function.

User's Caution Statement

Caution: Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC Compliance Statement

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 USERS WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT THEIR OWN EXPENSE.

WARNING: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS OF DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE CAUSING EQUIPMENT REGULATIONS.

WEEE (Waste Electrical & Electronic Equipment)

Correct Disposal of This Product

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

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it 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 this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

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The software included in this product contains some Open Sources. You may obtain the complete corresponding source code depending on whether or not the source is publicly available under a license policy. Go to System Setup - About page for more information. This product includes software developed by the University of California, Berkeley and its contributors, and software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.oepnssl.org/). Also, this product includes cryptographic software written by Eric Young (eay@cryptsoft.com), and software written by Tim Hudson (tjh@cryptsoft.com).

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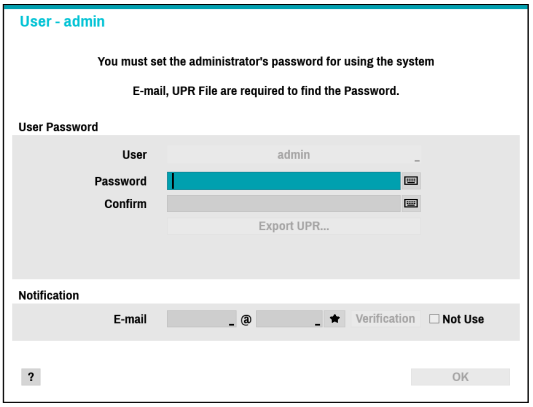
Part 1 - Getting Started

This document covers the 8-, 16-, and 32-channel network video recorders. The NVRs are identical except for the number of cameras and alarms that can be connected and the number of cameras that can be displayed. For simplicity, the illustrations and descriptions in this document refer to the 32-channel model.

Setting Password

1 The users must first run the system and then be required to set the password for the admin user account.



- It does not allow a user to run the system without a password.
- Click the question mark button on the bottom left corner and refer to the instruction on setting up a password.
- An email address and UPR files are required to find the password. Otherwise, you may not be able to find your password when you enter the incorrect information.

Setup Wizard

Setup Wizard lets you configure basic settings required for operating the system.

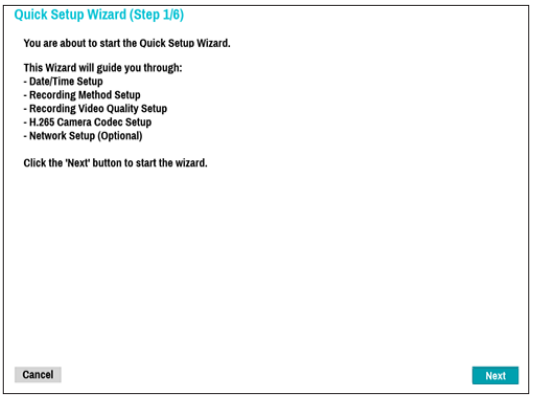
Setup Wizard only appears during initial booting. When you login as an administrator account after initial booting, you can use Wizard to go to Live menu and select Wizard.

1 Select a system language.

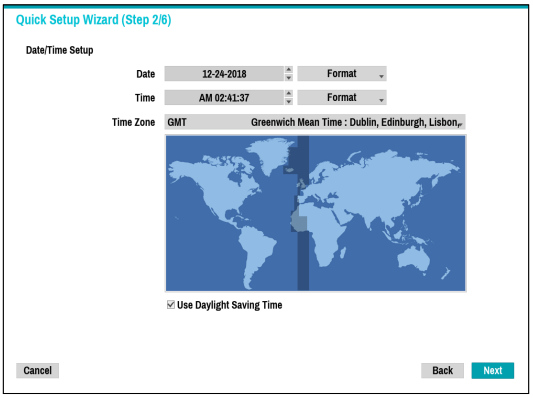
Select **Cancel** from any of the Wizard screen to cancel the setup process and return to the main setup menu.

Quick Wizard

1 Select Quick Wizard.

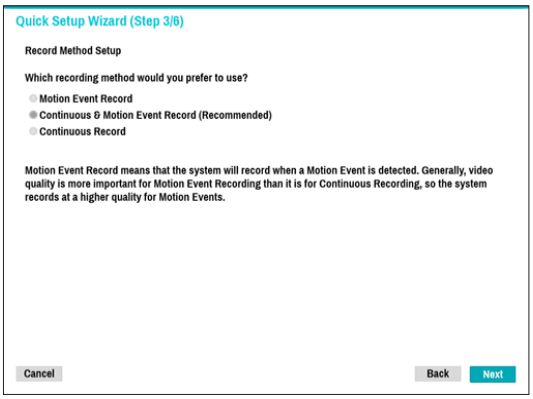


2 Specify the current date and time and then click **Next**.

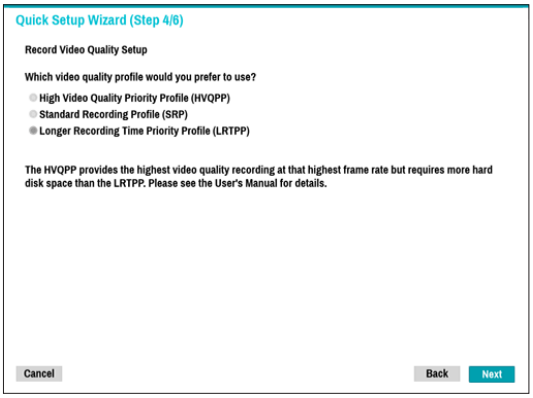


- The new date and time settings will only be applied after clicking **Next**.
- For more information on date and time settings, refer to the **Date/Time** section under **System Setup on page 35**.

3 Choose the desired **Recording Method** and click **Next**.



4 Choose the desired **Recording Quality** and click **Next**.

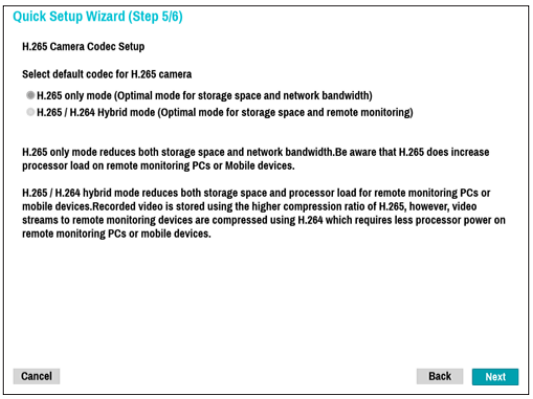


- Higher recording quality uses up more disk space.
- Recording resolution is determined based on the selected recording quality.
  - **High Video Quality Priority Profile**: Very high
  - **Standard Recording Profile**: High
  - **Longer Recording Time Priority Profile**: Standard

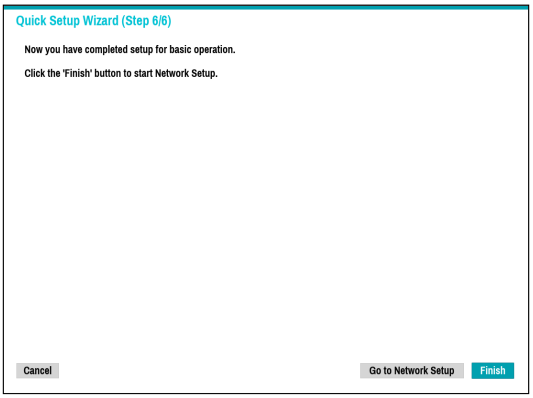
– Recording resolutions used under each recording method and record video quality setting are as follows:

	High Video Quality Priority Profile	Standard Recording Profile	Longer Recording Time Priority Profile
Motion Event Record	Profile 1	Profile 2	Profile 3
Continuous & Motion Event Record	Profile 2 (Continuous) / Profile 1 (Motion)	Profile 3 (Continuous) / Profile 2 (Motion)	Profile 4 (Continuous) / Profile 3 (Motion)
Continuous	Profile 1	Profile 2	Profile 4

5 Choose the desired codec and click **Next**.



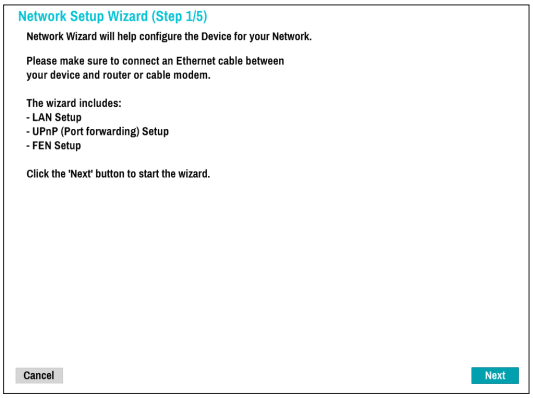
6 Click **Finish** to exit Quick Wizard.



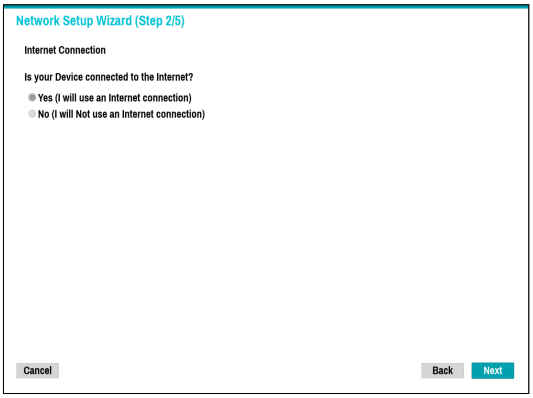
Network Wizard

After exiting from Quick Wizard, the network with Network Wizard will start automatically.

1 Select Network Wizard.

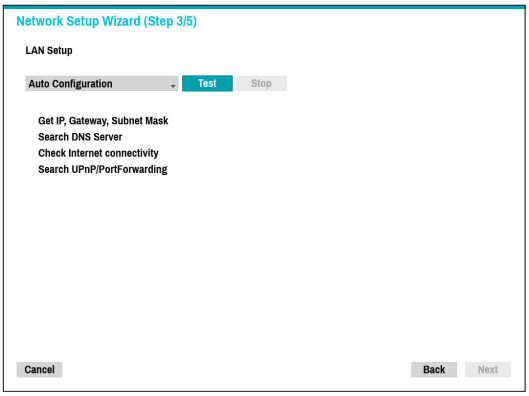


2 Specify whether the system is connected to the Internet and click **Next**.



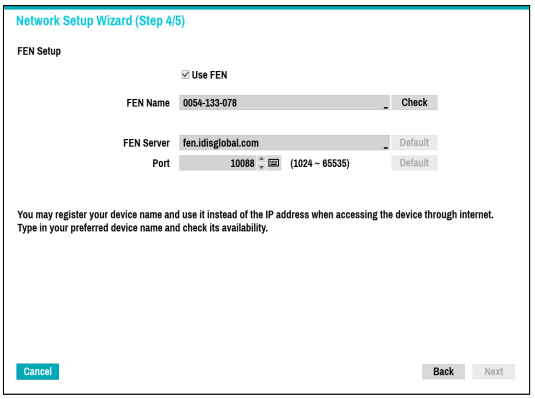
If you have chosen **No**, wait for the test to finish and then click **Finish** to exit Network Wizard.

3 Select Network Configuration and then click **Next**. Select either Auto Configuration or Manual Configuration and then click **Test** to test the system's current network configuration.



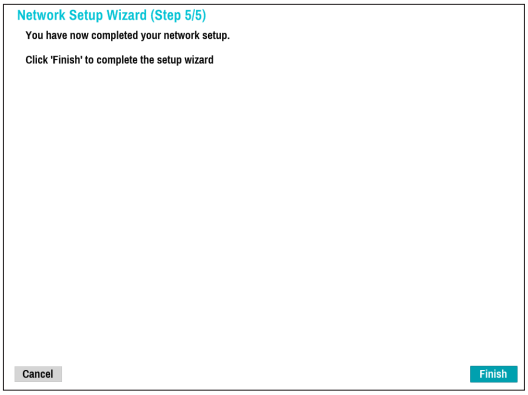
- This test must be performed before proceeding to the next step.
- If the NVR is on a network connected to a network that has a DHCP server, selecting **Auto Configuration** retrieves LAN settings such as IP and DNS addresses automatically. Selecting **Manual Configuration**, on the other hand, lets you specify the settings manually.
- **UPnP support device not found.** If this error message is displayed, check to see if the IP router (or NAT) supports UPnP and if UPnP has been enabled. For more information about the router's UPnP function, refer to the router's operation manual.

4 Enter in the **Device Name** field the NVR name to be registered on the FEN server and then click **Check** to check its availability.



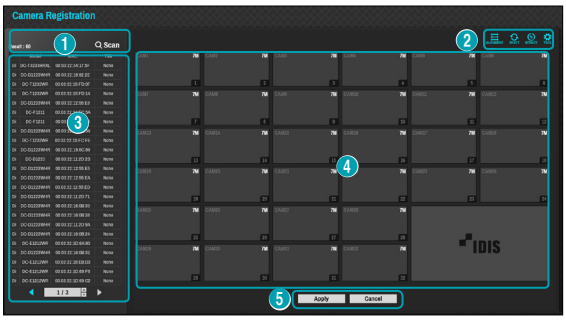
- The device name you register on the FEN server will be a unique name used to identify the NVR. Once registered, the name can be used to access the NVR directly from clients such as the IDIS Center. Check the name's availability to complete the registration process. The Finish button will then become activated.
- You will be prompted with an error message if you do not enter a name for the NVR or enter a name already registered on the FEN server.
- Depending on the network environment, FEN services may not be active and therefore prevent the NVR from connecting to the network. In this case, you will need to manually configure the ports. For more information on port configuration, refer to **Alarm Box_ Upgrade on page 85**.

5 Click **Finish** to exit Network Wizard.



Camera Registration

Once Network Setup Wizard is complete, live mode screen appears. While in live mode, right-click on the mouse and select Camera Registration to run the Camera Registration mode. It allows you to scan for the cameras connected to the NVR.



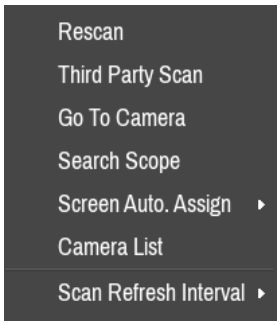
❶	Camera Scan Button
❷	Camera View Menus
❸	Camera List Area
❹	Video Display Area
❺	Apply/Cancel Buttons

You can also register cameras on the remote program. For more information on the remote camera registration, refer to **Registration on page 13**.

Camera Scan Button

You can scan and search and register cameras that were not detected automatically or third party cameras.

Pressing the **Scan** button displays the following sub-menu.



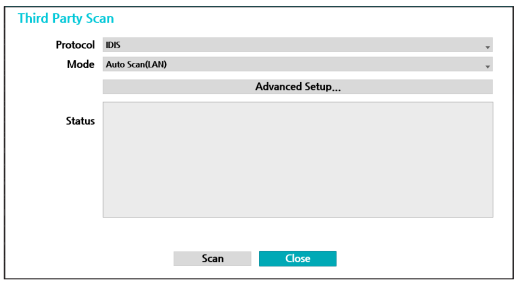
Rescan

Scans for DirectIP™ cameras that were not scanned automatically.

Third Party Scan

Used to manually scan for third-party cameras that cannot be recognized by the auto scan feature.

- Some functions may not be supported for the third-party cameras depending on their protocol and model.
- The device to be registered must have different IP addresses. Otherwise, the connection may fail.

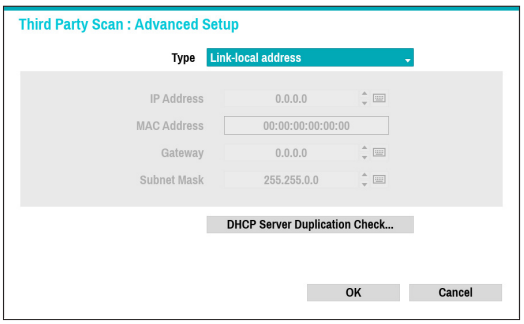


- **Protocol**: Select the protocol used by the camera (or video encoder) you wish to search for.

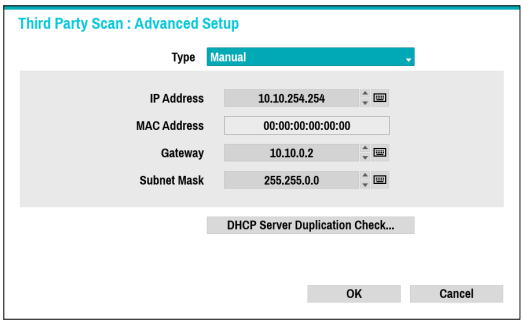
- Some functions may not be supported for the third-party cameras depending on their protocol and model.
- This system is optimized for combination with IDIS cameras. When registering other cameras, recording performance cannot be guaranteed and it can be restricted from several functions if the related video settings exceed the system performance. In this case, please make adjustments to optimize the performance.

- **Mode**: Select the scan mode.
  - **Auto Scan (LAN)**: Lists cameras in a LAN environment. If **Auto Scan (LAN)** fails to recognize a camera, try using **IP Address Scan** instead.
  - **IP Address Scan**: Enter the IP address of a camera. The NVR scans for the camera matching the specified address. If you enter IP address's range, the NVR scans for cameras falling under the specified address's range. By specifying an IP address, you can also specify which port to use with the Remote Admin feature. It is recommended that the camera not be networked via DHCP (Dynamic Host Configuration Protocol). If the camera is networked via DHCP, connection to the camera may not be made properly depending on changes in the external network environment.
- **Advanced Setup:** If the camera is networked but not scanned, use this setup. This setup allows you to change the network setting of the NVR's VIDEO IN port which is camera's network environment. Check the camera's network setting first before you use this setup.

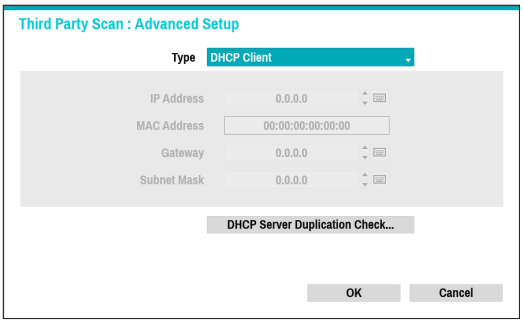
  Make sure that this setting does not conflict with the WAN setting. For more information on the WAN setting, refer to **WAN on page 88**.



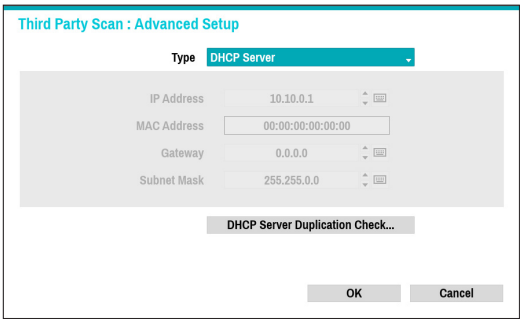
  - **Link-local address:** Indicates the default IP address of VIDEO IN port.



– **Manual:** Allows you to enter the IP address and other network settings manually.



– **DHCP Client:** Retrieves an IP address and other network settings automatically from a DHCP server.



– **DHCP Server:** It makes the NVR run as a DHCP server. Check if there is another DHCP server on the same network. If there is no DHCP server, this option is enabled. The NVR allocates an IP address automatically in the range of **10.10.0.128** to **10.10.254.254** by using DHCP to the camera connected to the NVR's VIDEO IN port. On **DHCP Server**, Video In Network is connected between NVR and network cameras only, so Gateway does not have any meaning. **Subnet Mask** is 255.255.0.0(Class B).

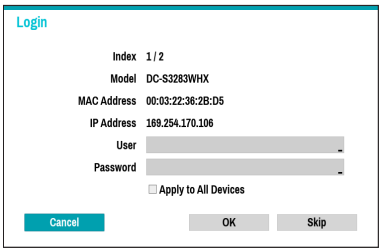
- When several NVRs exist in the same network, only one of NVRs has to be run as a DHCP server. If several DHCP servers are running, the redundant IP may be allocated to the camera.
- The range of 10.10.0.1 to 10.10.0.127 is not recommended because NVR system already has the IP address.
- It is not recommended to use addresses in the range from 10.10.0.1 to 10.10.0.127 because they can be allocated by a DHCP server.

1 Select **Scan** to commence scanning.

Only cameras that are connected to the NVR via VIDEO IN ports can be scanned and registered.

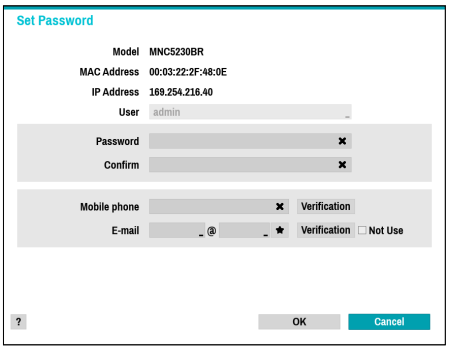
2 Select a camera from the scan list and then select **Add Camera**. The device login window will appear.

3 Enter a **User ID** and a **Password** for the selected camera.



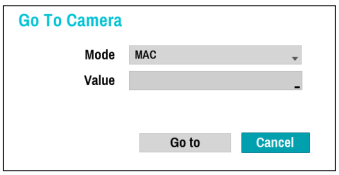
Set Camera Password

For IDIS protocol cameras that support changing and finding the camera password, you must set the camera password at the time of initial camera registration. The email information is used to change and find the camera password.



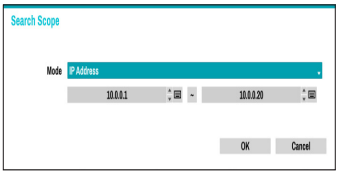
Go To Camera

Moves the focus automatically to the camera using the MAC address and model of camera in the camera list.



Search Scope

Filters the cameras in the camera list depending on the search scope such as specified IP address range.

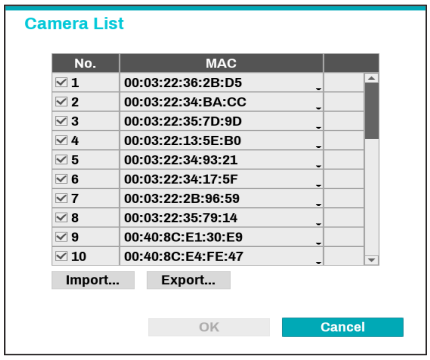


Screen Auto. Assign

Assigns the detected cameras on the video display area.

Camera list

By using the camera information file, .csv, the user can register the cameras easily.



- **Export :** Button : Exports the list of camera information on USB as a .csv file
- **Import :** Button : Imports a camera information file, .csv file. The user can edit a csv file directly.

- A column indicates camera number, B column the camera MAC address, C column the Video In port of the video encoder in the .csv file. C column indicates only for video encoders. If camera information displays as follows: 5,00:11:22:18:30:20,3, 5 = CAM 5, 5,00:11:22:18:30:20 = MAC address, 3 means video encoder.
- Before using this feature, the cameras must be scanned first. If the cameras to be registered do not exist in the list, the camera cannot be registered.
- This feature is not supported for the third-party cameras.

Scan Refresh Interval

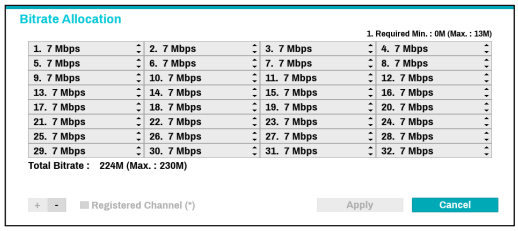
Configures the refresh interval to scan the camera. If the interval is short, camera scan results are refreshed more frequently. However, if the interval is long, it is advantageous to scan cameras on a wide network.

Camera View Buttons

- **ALIGNMENT** Button: Realigns camera screens displayed on the video display area in the order of **Video In** port connections.
- **RESET** Button: Refreshes the video display area and the camera list.

Selecting **RESET** clears all scanned devices from the list.

- **Bitrate** Button: Displays the following window to change the bitrate allocation for each channel.

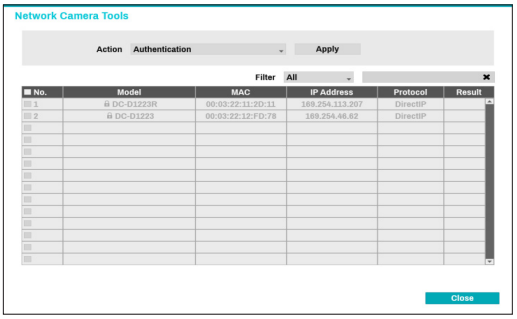


When registering the camera, you can set the stream as much as the performance (bitrate) assigned to the channel. If high performance (bitrate) is not allocated, Quailty, IPS and Resolution can be low. If a channel has a camera already registered, bitrates may not be lower than current stream settings. You can change the bitrate by pressing the + - button at the bottom left. Only the bitrate of the registered camera can be changed by checking the registered channel (*).

- **Tool** Button: Displays network camera tool window to run a camera-related actions. There are Authentication, Screen Assignment and Camera Protocol Change for actions.

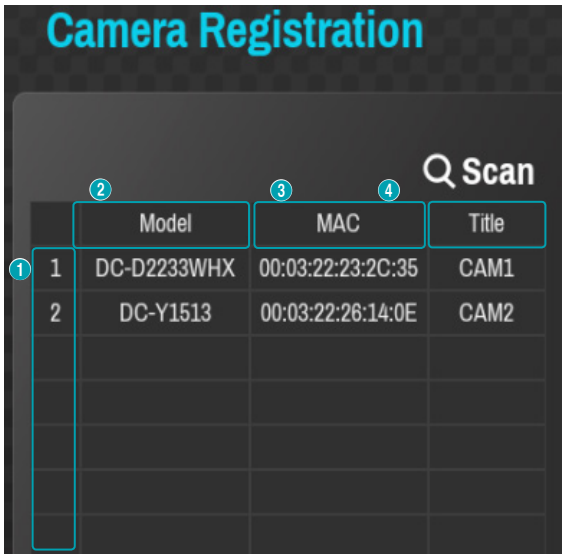
1 Select an **Action** to execute.

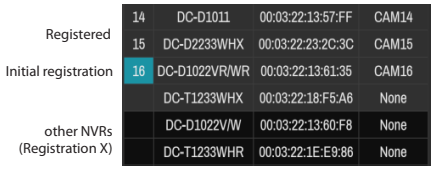
2 Select a camera from the list and press the **Apply** button.



IDIS cameras can be detected automatically but IDIS protocol cannot be detected automatically. We recommend you use the DirectIP protocol to detect the cameras automatically. When you change the protocol, the camera reboots and then you can register the camera on the NVR. For more information on the settings, please refer to the network camera manual.

Camera List Area





① **Screen Position/Registration Status**: Identifies the camera's position in the video display area. A blue background indicates a camera that is available for registration. A gray background indicates an already registered camera. Other registered cameras are shown in black background.

② **Model**: Indicates the camera's model.

③ **MAC**: Displays the 12 digits of the camera's MAC address.

④ **Title**: Indicates the camera's name. Changing a camera's name in the video display area updates the camera list as well.

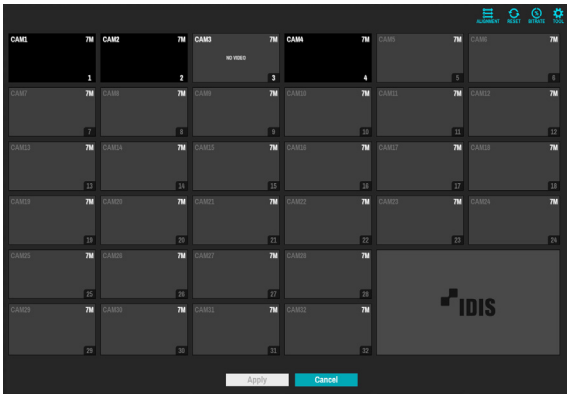
Following options can be accessed by right-clicking on a camera list entry:

- **Add/Remove Camera**: Adds or removes the selected camera. The Add Camera option is inactive if the camera has already been added to the screen.
- **Authentication**: Enter the necessary camera login info. This option is inactive for DirectIP™ / IDIS cameras because they do not require logins. This option is inactive for IDIS protocol only if the password is set.

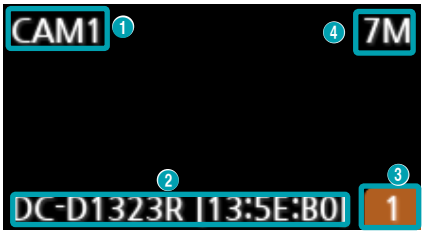
Video Display Area

Left-click on the video display area to toggle between split screen and single screen modes.

Drag the camera screens around to rearrange them.



Camera Screen



① **Camera Title**

Indicates the camera's title. Left-click on the title to edit the camera's title.

② **MAC Address**

Camera's model and MAC address are shown if the camera has not been registered to the NVR.

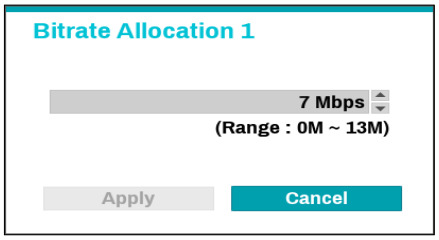
③ **Screen Position/Registration Info**

Flashes in orange if the camera has not been registered to the NVR.

- Information is not indicated on the bottom of the screen for cameras already registered to the NVR, and the **Screen Position**/**Registration Info** icon is shown with a black background.
- **Screen Position**/**Registration Info** icon for cameras registered to another NVR is shown with a steady orange background on top of a gray screen.

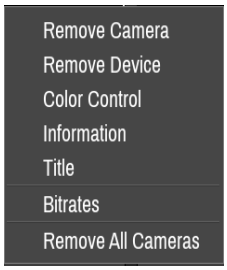
④ Bitrate Allocation

Indicates the performance (bitrate) allocated to the channel. Left-click on the upper right corner of the screen to change the bitrate.



Camera Menu

Right-click on the video display area to bring up the camera menu.

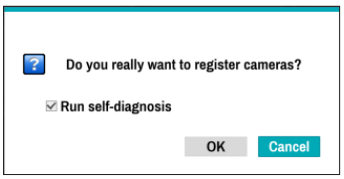


- **Remove Camera**: Removes the registered camera.
- **Remove Device:** Removes the registered encoder.
- **Color Control**: Adjusts the camera's color settings.
- **Information**: Displays the camera's basic information.
- **Title**: Edits the camera's title.
- **Bitrates**: Changes the bitrate allocated to the channel.
- **Remove All Cameras**: Removes all registered cameras.

You can drag & drop to add or remove cameras.

Apply/Cancel Buttons

While in Camera Registration mode, select **Apply** to register all changes. When selecting **Apply**, the following message will be displayed. You can activate or deactivate Self-diagnosis.

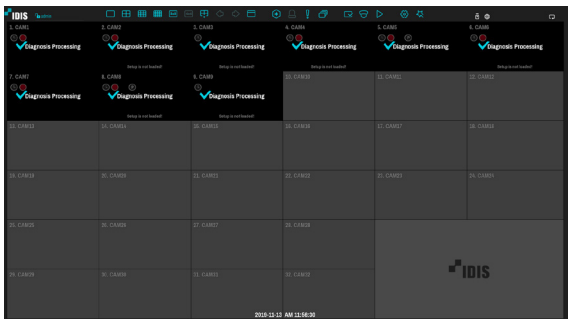


Select **Cancel** to exit Camera Registration mode without applying the changes.

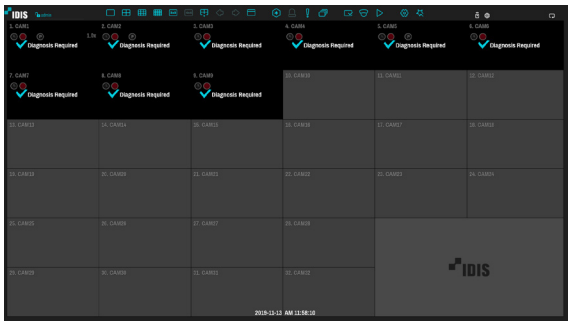
It is not possible to register a camera that has already been registered to a different NVR.

Diagnosis Process

When the camera is registered to the NVR, **Self-diagnosis** runs automatically for the new registered and changed cameras. If **Self-diagnosis** is processing, **Diagnosis Processing** message will be displayed.

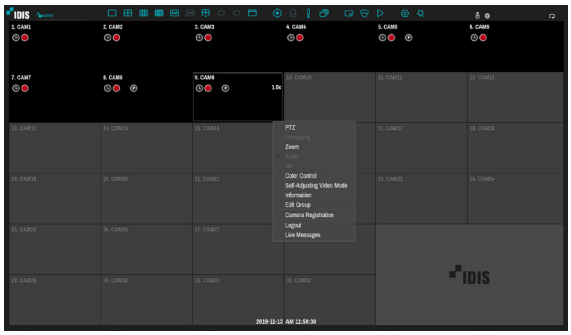


If **Self-diagnosis** is failed, **Diagnosis Requirement** message will be displayed. In this case, you can run **Self-diagnosis** manually.



Camera Registration Mode

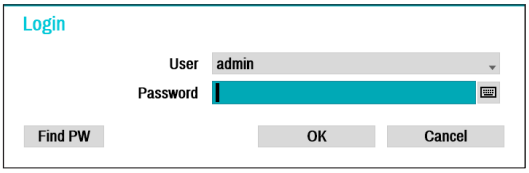
While in Live mode, right-click and select **Camera Registration**.



Login

Configuring the NVR's settings and accessing its searching and other functions require an authorized user login.

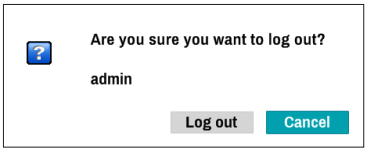
1 Bring up the Live menu and either press the **SETUP** button on the remote control or click on icon using the mouse to log in.



2 Select a user, enter the password, and then select **OK**.

- Leaving the admin account unassigned with a password poses a security risk. Please assign a password at your earliest convenience. A warning message will continue to be displayed until a password is assigned.
- Click on the button next to the password field using the mouse. This will bring up a virtual keyboard you can use to assign a password. For more information on using the virtual keyboard, refer to the **Text Input via Virtual Keyboard on page 34**.

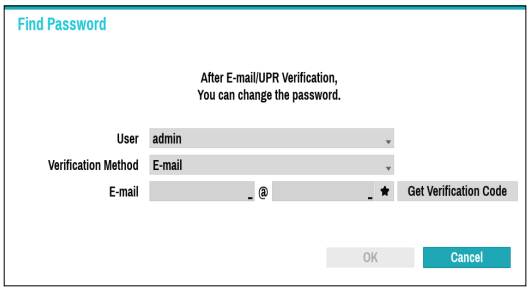
3 To log out, bring up the Live menu and click on icon using the mouse.



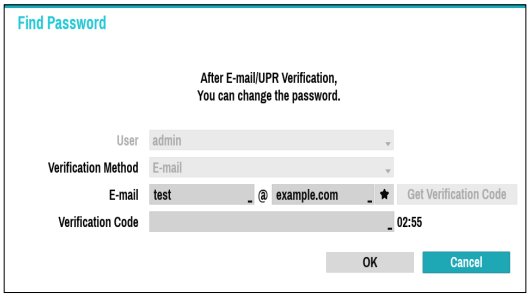
Find Password

If you do not know the password, select **FIND PW** . You can set a new password.

1 Enter a user, registered email and then select **Get Verification Code**.

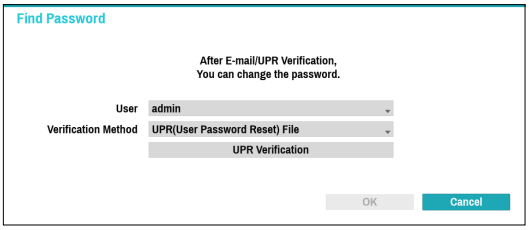


2 Enter Verification Code and select **OK**.



- Select the question mark button at the bottom left corner of the screen to refer to the password settings instructions.
- The password must be entered only with the virtual keyboard.
- FEN service must be enabled to use find password function. For more information on e-mail, refer to **Mail on page 95**.

3 Enter an UPR(User Password Reset) verification and then click on **UPR Verification** button.



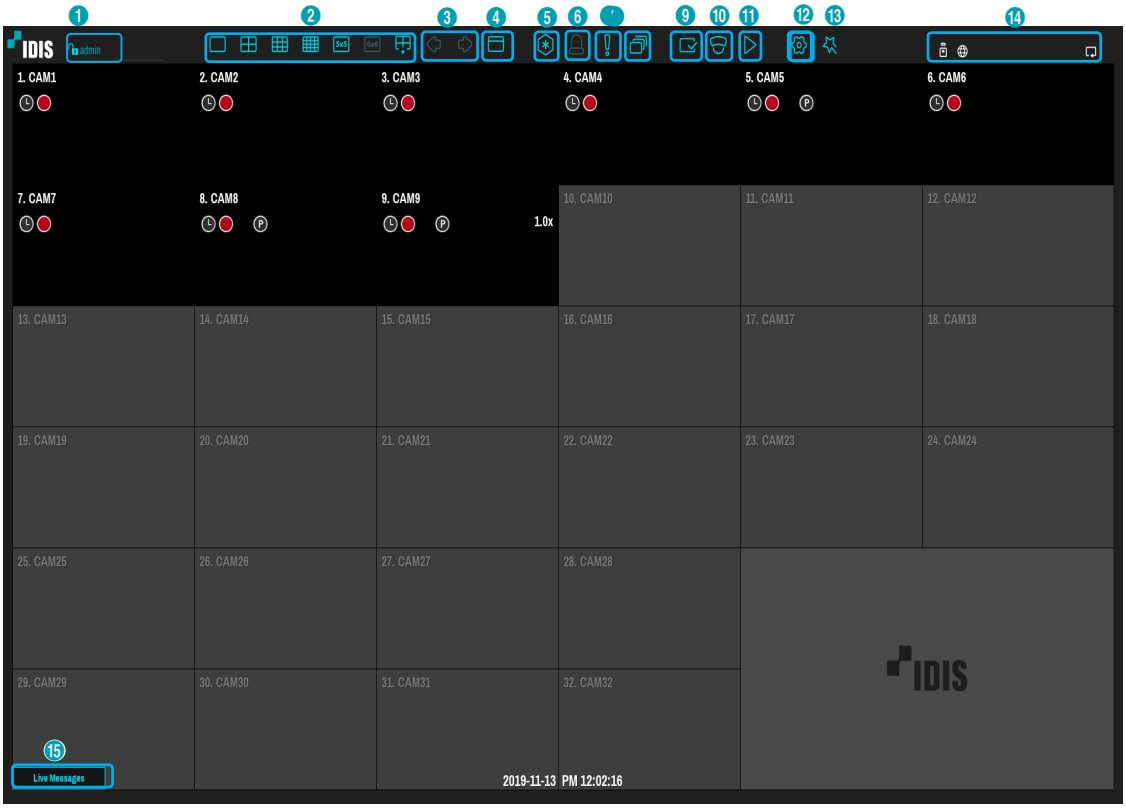
4 Select the UPR file and then click on **Import** button.

- To use UPR function, the UPR file must be saved in advance. For more information on saving the UPR file, refer to **User on page 37 .**
- You can reset the password using an encrypted UPR (User Password Reset; filename extension *.upr) file.
- It can be used as USB flash driver on local pc, but not remotely.
- Only files exported from the same device are available.
- If you lose the UPR file and change the password of the NVR, the UPR file may not be used.

Live Mode

Live Menu

Press the **MENU** button on the remote control while in Live mode to bring up the Live menu on the top of the screen. Press **MENU** button once more to hide the menu. Use the Arrow buttons on the remote control to select the menu options.



❶	Login/Logout	❷	Layout	❸	Previous Group, Next Group	❹	Display
❺	Freeze	❻	Alarm	❼	Panic Recording	❽	Sequence
❾	Status	❿	Select Camera	⓫	Search Mode	⓬	Setup
⓭	Wizard	⓮	Status Indication	⓯	Live Messages		

Placing the mouse pointer near the top portion of the screen also displays the Live menu.

① Login/Logout

Log into and out from accounts. If in the logged in state, the account ID is shown. If in the logged out state, the login icon is shown.

② Layout

Used to change the screen layout to single screen, 1x2, corridor format(1x3), 2x2,1+5, 1+7, 3x3, 1+12, 4x4, 5x5, or 6x6.

Corridor Format: Divides the screen into 3 panes. This format displays vertically and is set to display the optimized video of the camera when using the camera's pivot feature. This is particularly effective when monitoring hallways, passages, and other confined spaces.

③ Previous/Next Group

Loads the previous/next screen group.

④ Display

- **OSD** (On Screen Display): Enables/disables the **OSD** feature.
- **Full**: Displays the video in full screen mode.
- **Aspect Ratio**: Select whether to enable the original aspect ratio of video transmitted from the camera.

⑤ Freeze

Freezes the screen. Select **Freeze** again to unfreeze.

⑥ Alarm

Pressing this button while the alarm has been activated resets all NVR outputs, including the built-in buzzer. When an event occurs, the button is enabled. Press the button to turn off the alarm and deactivate it.

⑦ Panic Recording

Activates/deactivates Panic Recording.

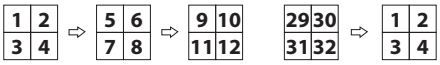
⑧ Sequence

Initiates **Sequence** in the same manner as pressing the **SEQUENCE** button while in Live mode. To exit, select **Sequence** once more or press the **SEQUENCE** button on the remote control. The icon is displayed on the upper right part of the screen while Sequence is in progress.

Full Sequence

Displays all channels in sequence while in Live mode (single and split screen settings). In order to use the Full Sequence feature, **Full Sequence** (Display Setup - Main Monitor > Sequence) must first be enabled.

e.g.) Full Sequence in 2x2 split screen mode



Cameo Sequence

In **Cameo Sequence** mode, only the bottom right screen in a split screen setup changes sequence. In order to use the **Cameo Sequence** feature, **Cameo Sequence** (Display Setup - Main Monitor > Sequence) must first be enabled.

e.g.) Cameo Sequence in 2x2 split screen mode

- If using the **Full Sequence** setting, page numbers appear on the system status area on the upper right part of the screen, next to the Sequence icon.
- Pages are skipped under the following circumstances:
  - If all cameras included in the page are deactivated.
  - If there are no video signals.
  - If the page contains "covert" cameras.
  - If the user does not have permission to view feeds from the cameras.

⑨ Status

Displays the status window for NVR's system and device.

⑩ Select Camera

Displays the selected camera in a single screen format.

⑪ Search Mode

- **Time-Lapse Search**: Select **Search Mode** > **Time-Lapse Search** to search for and play back saved data directly from the record table.
- **Event Log Search**: Select **Search Mode** > **Event Log Search** to search for event logs and play back associated event recordings.
- **Thumbnail Search**: Select **Search Mode** > **Thumbnail Search** to search associated event recording in detail.

⑫ Setup

Used to access the Setup menu.

⑬ Wizard

Launches the Setup Wizard.

Running the Wizard lets you configure basic settings required for operating the system.

⑭ Status Indication

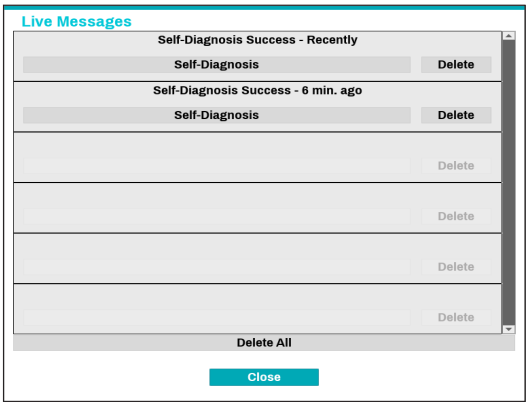
Displays system status icons.

Status Indication

	Indicates remote control receptivity.
	Indicates connection to the NVR from a remote program.
	Indicates two-way audio connection between NVR and PC.
	Indicates two-way audio connection between NVR and camera.
	Indicates two-way audio connection among NVR, PC and camera.
	Indicates connection to the NVR using the DirectNDC service.
	Indicates a zoomed in state.
	Indicates Freeze is in use.
	Indicates Sequence is in use.
1/4	Indicates the current screen's group.
	Indicates an event monitoring.
	Indicates dewarping is in use.
	Indicates HDD use. The icon to the left is shown if using the overwrite setting. Otherwise, remaining HDD space is shown as a percentage value.

⑮ Live Messages

Display a message to make it easier for users to recognize critical events and system information that happen in real time.



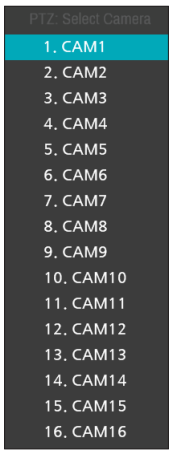
Zoom

Press the **ZOOM** button on the remote control or right-click on the mouse to select a channel you wish to zoom in on while in live mode or time-lapse mode. When a zoom frame appears on the selected channel, right-click on the mouse or press the **Enter** button to zoom in. Use the arrow buttons to position the frame. When Zoom is activated, icon is on the status bar located on the upper right corner of the system.

- In Full Screen mode, activating Zoom automatically selects the current channel.
- To restore the channel to normal size, press the Zoom button again.

PTZ Control

While in Live mode, right-click and select PTZ from the context menu or press the **PTZ** button on the NVR's front panel or remote control to display the PTZ camera selection window.



Select the camera you wish to control. The (P) icon will begin to flash on the selected camera's OSD window.

Use the **Arrow** buttons to pan and tilt the camera up, down, left, and right.

Use the [1] and [2] buttons to zoom in/out.

Use the [3] and [4] buttons to shift focus from nearby to far and vice versa.

Use the [5] button to load the preset window.

Use the [6] button to save current position as a preset.

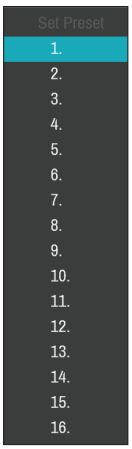
You can also change the direction by dragging on the mouse.

Also, it's possible to use the mouse wheel to zoom in/out.

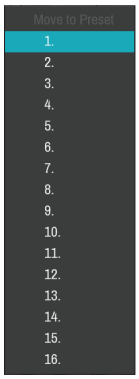
- Logging in with an account that has **PTZ Control Authority** is necessary in order to control PTZ cameras.
- A message will prompt if there is no PTZ camera displayed on the Live screen.
- Zoom in/out and shift focus using the **PTZ** Control (**ZOOM**, **FOCUS**) buttons on the remote control.
- To exit PTZ mode, press the **PTZ** button again.

Setting Up a PTZ Preset

While in PTZ mode, select the **VIEW** button on the remote control to display the **Set Preset** window and assign the current position as a preset.

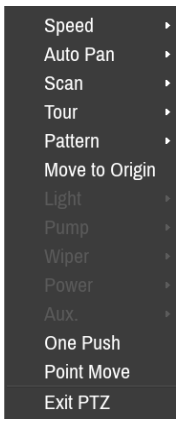


While in PTZ mode, select the **SAVE** button on the remote control to display the **Move to Preset** window. Select a preset to move the current PTZ camera to the selected preset's position.



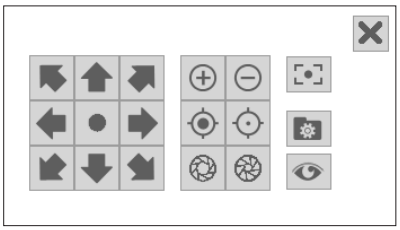
Advanced Settings

In PTZ mode, selecting a camera and then clicking **Menu** button loads the Advanced PTZ screen as shown below. You can load the Advanced PTZ screen also by pressing the **Play/Pause** button and then **SETUP** button on the front panel. This menu lists **Speed**, **Auto Pan**, and other advanced PTZ camera control options available for the camera. Also selecting **Point Move** button moves PTZ camera to the point that the user clicks. Options that are not available for the selected PTZ camera remain inactive.



You can use the mouse to control PTZ cameras. Left-click on the mouse and drag to move the camera in the desired direction and use the mouse wheel to zoom in/out.

While in PTZ mode, place the mouse pointer close to the bottom edge of the screen to display the PTZ Tools window.

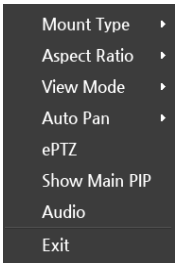


	PTZ Camera Pan and Tilt
	Zoom In/Out
	Focus Near / Far
	IRIS Open / Close
	One Push
	Set / Move to Preset
	Device Menu supported by the camera

- The exact PTZ protocol supported by the camera must be specified in order to use the NVR's PTZ controls.
- Drag and drop to reposition the PTZ Tools window.
- Select the icon to hide the PTZ Tools window.

Dewarping Control (NVR)

Use this feature to dewarp the fisheye image on NVR. image. While in live mode and search mode, right-click on the mouse to select Dewarping from the context menu. The screen is changed to the Dewarping mode.



- **Mount Type**: Choose a position that the camera is mounted. The available Screen Type changes depending on this setting.
- **Aspect Ratio**: Select the proper image aspect ratio.
- **View Mode**: Select the layout, Main View, Main +1,3,5 panes mode and panoramic mode.
- **Auto Pan**: Set to pan the camera automatically. +,- for direction and numbers for speed
- **ePTZ**: Control Pan, Tilt, and Zoom function. Dragging the mouse, the size of dragging indicates the speed of PTZ.
  - **Left button drag**: Left/Right (Pan control), Up/Down (Tilt control)
  - **Right button drag**: Zoom control
- **Show Main PIP**: Shows PIP (Picture in Picture) view to select the area easily in the main view screen.
- **Audio**: Enable/disable audio. Audio playback of the selected camera is available in full screen mode only.

Dewarping Control (Camera)

While in Live mode, right-click on the mouse to select Dewarping(camera) from the context menu. The D icon will begin to flash on the selected camera's OSD window. You can change the direction by dragging on the mouse. In order to select the type and mode of View Mode, **Video** (Camera - Advanced Setup) must first be enabled.

- This feature is supported only with Fisheye camera connected on the DirectIP protocol.
- Original mode does not support dewarping control feature.
- Configuring this feature requires an authorized user login.

Event Monitoring

When an event occurs, the NVR automatically changes to the camera screen linking event monitoring and shows the icon on the system status area on the upper right portion of the screen. To use the Event Monitoring feature, navigate to **Display Setup > Main Monitor** and enable **Event Monitoring**. Event Monitoring remains in effect throughout the entire **Linked Time**. After that, the NVR will return to the previous screen if a new event does not take place. Pressing the **Layout** or a **Camera** button before the end of the **Linked Time** reverts the system to Live mode.

Covert Camera

Use this feature to assign **Covert Camera View** permissions.

Navigate to **Camera Setup** > **General** and designate cameras as **Covert 1** or **Covert 2**.

- **Covert 1**: Hides images from the camera in Live mode but does indicate the camera's title and status via icons.
- **Covert 2**: The camera is indicated as being inactive. Images from the camera are not shown. Camera title and status icons are not shown.

Users that have a cover **Covert Camera View** are able to view both images from and status icons for all **Covert 1** and **Covert 2** cameras.

Context Menu Access

While in Live mode, press the remote control's ↵ button and then the Menu button to display the Context Menu window. You can display the ContextMenu window also by pressing the **Play/Pause** button and then **SETUP** button on the front panel. Alternatively, right-click on the mouse to access the Context menu.

- **PTZ**: Access PTZ controls.
- **Dewarping:** Dewarps the fisheye camera image.
- **Zoom**: Zoom in.
- **Audio**: Enable/disable audio. (This function supports only in single screen.)
- **Color Control**: Select a channel to display its Color Control window. Adjust the selected camera's brightness, contrast, saturation, and hue settings.
- **Self-Adjusting Video Mode**：Select the image preset (Natural, Vivid, Noise Reduction) and you can control it directly.
- **Microphone**: Enables audio transmission to a remote locale via microphone (This function only supports cameras with two-way audio).

Even if two-way audio communication is set up between the NVR and camera, the microphone connected to the NVR will terminate automatically when the microphone on the remote is turned on(The remote microphone takes priority).

- **Information**: Select a network channel to display information about the selected channel's device.
- **Edit Group**: Rearrange the split screen layout.
- **Camera Registration**: Activate Camera Registration mode.
- **Login/Logout**: Log into the account or log out of the account.
- **Live Messages**: Receive the message in real time.

Edit Group

Edit Group lets you customize split screen pages in both Live and Search modes.

1 While displaying a split screen page, select the **Edit Group** option from the context menu. A yellow border is drawn around the page. Use the arrow buttons on the remote control or the mouse to select a different page.

2 Press a **Camera** button or select a camera after pressing the **Menu** button. Selected camera is then loaded on to the selected page. Repeat to assign other channels to the page.

3 Press the remote control's ↵ button to exit Edit Group. Alternatively, press the **Menu** button and then select **Exit Group Edit** to exit.

Edit Group will terminate automatically after 15 seconds of inactivity.

Video Recording

Video recording will only take place if all the connections are made correctly as per information contained in Part 2 of this operation manual.
For more information on video recording settings, refer to the **Record Setup on page 57**.

Panic Recording

Select **Live** or **Search** menu's Panic Recording ! icon or press the **Panic Recording** button on the front panel or the remote control to commence panic recording on all registered cameras.

To stop Panic Recording, select the Panic Recording ! icon or press the **Panic Recording** button again. If the **Panic Recording Duration** option under **Record Setup > General** has been configured, Panic Recording will automatically terminate after the specified duration of time has elapsed. For more information, refer to the **Record Setup on page 57**.

- Panic Recording takes place irrespective of any recording schedule set up by the user.
- Panic Recording video profile from **Record Setup – General** applies to all Panic Recording videos.

Panic Recording will not take place if recording mode is not set to **Recycle** and the HDD has reached 100% of its capacity.

Audio Recording

If the Record Audio option under **Record Setup** > **General** has been enabled the camera will record audio along with video. For more information, refer to the **Stream II on page 54, Record Setup on page 57**.

Check your local laws and regulations on making audio recordings.

Video Recording Playback

You can play back video recordings by using mouse or remote control.

- Login with an account that has search permission is needed to playback video recordings.
- The initial video playback point in Search mode is the recording's last playback point or the end of the recording data.
- Audio playback of the selected recording is available in full screen mode only.
- Covert protection on cameras also applies to video recording playback.

All Channel Playback

1. Press the **Menu** button while in Live mode.
2. Select the Search Mode ▶ icon and then select **Time-Lapse Search** or **Event Log Search**.
3. The selected search mode will be initiated.

For more information on data search, refer to the **Part 3 - Search on page 105**.

Remote Control Buttons during Playback

1. **Camera Button**: Displays the selected recording in full screen.
2. **Zoom Button**: Allows you to zoom in on a specific area of the recording.
3. **Layout Button**: Cycle through 1x1, 1x2, corridor format(1x3), 2x2, 1+5, 1+7, 3x3, 1+12, 4x4, 5x5, and 6x6 modes.

Context Menu

While in Search mode, press the remote control's ↵ button and then the **Menu** button to display the Context Menu window. Alternatively, right-click on the mouse to access the Context Menu.

- **Zoom**: Zoom in.
- **Audio**: Enable/disable audio. (This function supports only in single screen.)
- **Dewarping**: Dewarp the fisheye camera image.
- **Edit Group**: Rearrange the split screen layout.
- **Live Messages**: Receive the message in real time.

Part 2 - Configuration

Menu Use

Information contained in this section (Menu Use) applies to all other instructions found throughout Part 2 - Configuration.

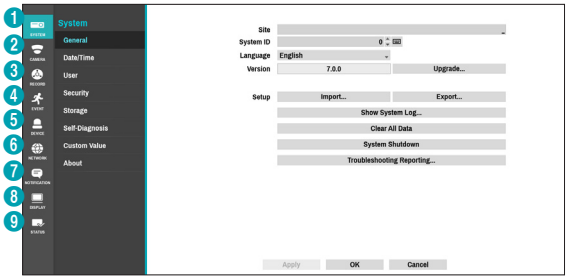
Menu Icon

	Use the virtual keyboard to enter text.
	Type the text.
	Open a drop-down menu.
X	Delete the item.
	Change the order of table entries.
	Change the range of values.
+	Add new items or works.
	Indicate that there are predefined items for convenience.
	Display the submenu or pop-up window. (except for information, error and alert windows)

Login with an ID that has permission to access the setup menu is needed to access and make changes to the Setup menu.

When using Use 2FA feature, registered mobile device must be authenticated before entering the setup menu. For more information on 2FA function, refer to **Use 2FA on page 40**.

1 While in Live mode, press the remote control's **SETUP** button or select Live menu > Setup using the mouse.



1	System Setup
2	Camera Setup
3	Record Setup
4	Event Setup
5	Device Setup
6	Network Setup
7	Notification Setup
8	Display Setup
9	Status Setup

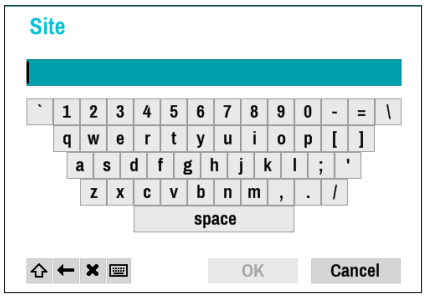
2 Use the remote control's arrow buttons to select an option and then press the remote control's ↵ button or left-click on the option using the mouse.

3 Change the setting and then select **Apply** or **OK** to save the change.

To apply default settings, select the Default button located on the left bottom corner of the setup window.

Text Input via Virtual Keyboard

Use the remote control's arrow buttons to select a virtual keyboard key and then press the remote control's ↵ button or click on the key using the mouse.



⇧	Toggle case.
←	Deletes the character to the left of the cursor.
✖	Deletes the character to the right of the cursor.
⌨	Converts keyboard.

Batch Assignment

Certain table-format menus such as the shown in the **Camera Setup on page 44** allow you to change the title value. In this case, changing the title value simultaneously changes all other entry values on the same row.

Mouse

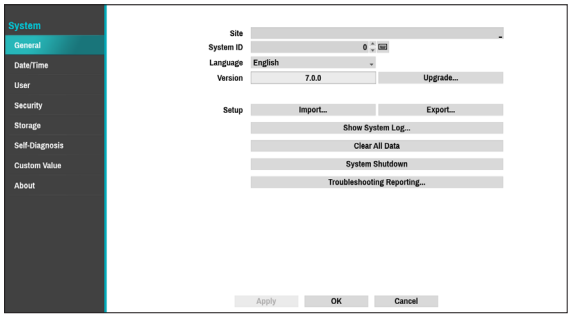
Using a mouse makes it easier to configure the settings. A mouse lets you make selections faster and use its wheel to scroll through long menus. You can also use the mouse wheel to increase/decrease numerical values.

System Setup

Refer to the **Menu Use on page 33** for basic information on using the Setup menus.

General

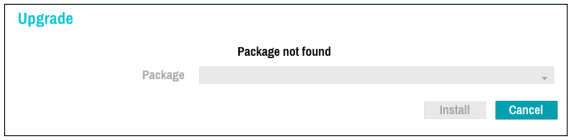
This Setup menu contains general system options.



- **Site**: Used to enter a description about the system's installation site (no description by default). You can edit the information using the virtual keyboard.
- **System ID**: Used to identify the NVR apart from other NVRs. System ID is also used to control the NVR with the remote control.

The default System ID is 0 and can be changed to a value between 0 and 99. The System ID can also be entered using the virtual keyboard.

- **Language**: Choose a language.
- **Version**: Indicates the software version.
- **Upgrade**: Upgrade the system. If NetFS feature is in use, click Upgrade. You can select the **USB Port** or **NetFS**. If the NetFS feature is not in use, you can only select the USB port. Selecting the USB port displays the USB search window. You will then be able to select an upgrade package and upgrade the system. Selecting NetFS displays the list of registered FTP sites. Once the upgrade is completed, the NVR will reboot automatically.



When using Use 2FA feature, registered mobile device must be authenticated to upgrade the system. For more information on 2FA function, refer to **Use 2FA on page 40**.

- **Setup**: Exports current NVR settings or imports existing settings. If the NetFS feature is in use, you can export or import NVR settings in the registered FTP site.
- **Import**: Decide whether to import network settings as well. If you do not wish to change the current network settings, do not select **Include Network Setup**.

Selecting **Setup Import** does not change the settings below.

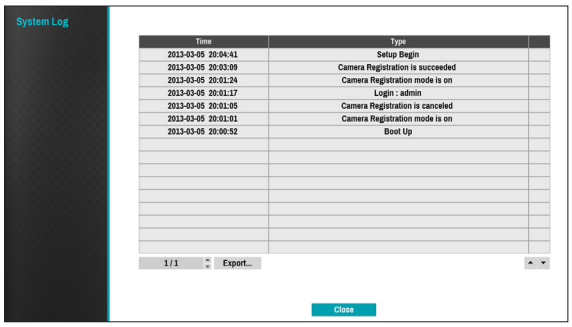
- Time-related settings (Date/Time, Time Zone, and Use Daylight Saving Time)
- Camera-related **Advanced Settings** settings
- Camera-related **Stream** settings (Only if the resolution is different from the camera in exporting)

If users and groups are deleted, existing user settings are retained.

- **Export**: Exports the current system settings to a storage device connected to the system's USB port or the registered FTP site in NetFS. You can designate a **File Name** for the export file.

For USB flash memory devices, the NVR supports the FAT32 file format only.

- **Show System Log**: Displays a searchable list of 5,000 most recent system log entries. For more information on types of system log entries, refer to the **System Log Types in the installation manual**. The icon appears next to log entries originating from a remote source. To export the system log, select the **Export** at the bottom of the screen and then designate a file name.

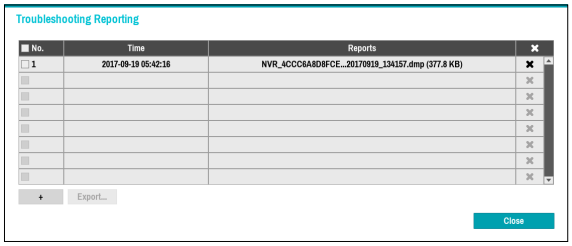


In order to display the system_log.txt file, you must use the correct character encoding settings and use a fixed-width font.

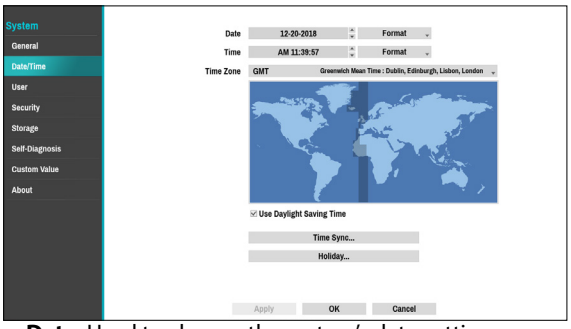
- **Clear All Data**: Erases all recording data. Selecting **Clear All Data** displays a confirmation window. Select **Clear** to proceed.

  - Before you perform **Clear All Data**, make sure you are not accidentally deleting important data. Erased data cannot be recovered.
  - **Clear All Data** does not affect the system log. Instead, the **Clear All Data** event will be added to the log.

- **System Shutdown**: Shuts down the system. When prompted, select **System Shutdown**.
- **Troubleshooting Reporting**: When there is a problem with NVR system, generate reports for troubleshooting.



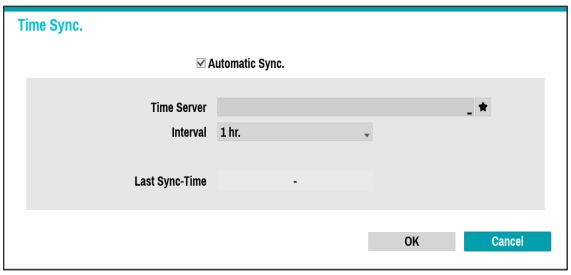
Date/Time



- **Date**: Used to change the system's date setting.
- **Time**: Used to change the system's time setting.
- **Date Format**/**Time Format**: Used to change the system's date and time formats.
- **Time Zone**: Used to designate the system's time zone.

Refer to the map displayed on the screen and change the time zone using the mouse or the arrow buttons.

- **Use Daylight Saving Time**: Enables DST correction.
- **Time Sync.**: Select a time server for the system to synchronize with.



1. Select **Automatic Sync**.
2. Enter the **Time Server**'s IP address or domain name or select ★ and then choose a server from the list of registered time servers.
3. Specify the server synchronization **Interval**.
4. Select **OK** to apply and exit.

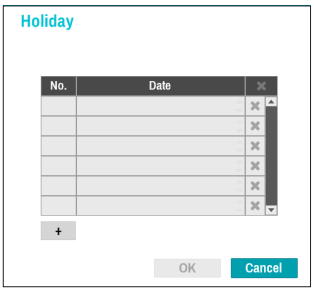
- If you have configured the DNS Server setting under **Network - WAN**, you can enter the time server's domain name instead of its IP address.

- **Holiday**: Designate holidays. On specified holidays, recording takes place according to the holiday recording schedule specified under Record Schedule.

1 Select the **+** button at the bottom of the window.

2 Select a date.

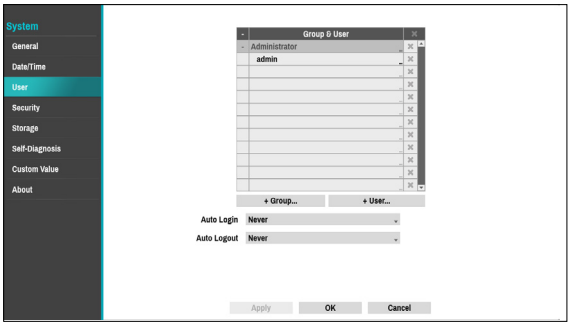
3 Select **OK** to apply and exit.



Select the ✕ icon to delete the existing holiday date.

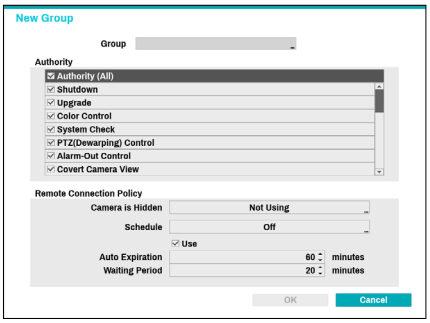
User

Use this option to register users and assign permissions.

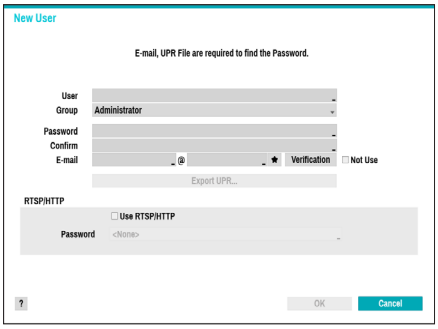


1 Select **+ Group** and enter a group name. A group name can be up to 15 characters in length.

2 Specify the group's permission settings. For more information on permission settings, refer to the **Group Permissions on page 39**.

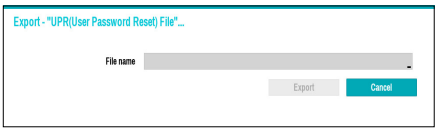


3 Select **+ User** and then enter a user name.



4 Select a group for the user and then enter a password. The password can be up to 16 characters in length and may include letters, symbols, and numbers. The e-mail address will be used as information on password verification.

5 Select the Export button to create the UPR(User Password Reset) file. The UPR file can be used to finding a password offline. Select the location to save the UPR file and enter the file name.



6 If you wish to use RTSP connection and HTTP API function, set the password. For security, it is recommended that you set a different password for RTSP, HTTP and User. For more information on RTSP, refer to **RTSP on page 92.**

7 Select **OK**.

8 Configure **Auto Login** and **Auto Logout** settings.

9 Select **Apply** or **OK** to exit.

- Group names, user names, passwords and email can be entered using the virtual keyboard. For more information on using the virtual keyboard, refer to the **Text Input via Virtual Keyboard on page 34**
- To delete a registered user or group, select the icon on the right of the corresponding user/group. **Group Administrator** and User admin cannot be deleted.
- Select the icon next to Group & User on the top of the screen to delete all groups and users except **Group Administrator** and **User admin** simultaneously.
- A password entry is required to edit existing groups and users.
- **Group Administrator**'s permissions cannot be changed.
- With the **User admin** account, only the password can be changed.
- When the system starts up, it will automatically log into the account designated under **Auto Login**.
- The system will automatically log out of the account if the duration of inactivity specified under **Auto Logout**.

Group Permissions

System Shutdown		May shutdown the system from the system menu.
Upgrade		May upgrade the system from the system menu (System Setup).
Color Control		May adjust each camera's brightness, contrast, saturation, and hue settings.
System Check		May view System Check results.
PTZ(Dewarping) Control		May control PTZ and Dewarping cameras.
Alarm-Out Control		May reset in the event of an alarm-out. Alarm-outs can be reset by pressing the **Alarm** button on the device or selecting the **Alarm-Out Control** button on the remote program.
Covert Camera View		May access covert cameras in Live and Search modes.
Audio (Live)		May use the camera audio on remote program and locals (NVR).
Factory Reset (NVR)		May reset the NVR to all its initial factory settings.
Search	**Clip Copy**	The user who has permission for Clip Copy can perform Clip Copy. If the user does not have permission, Clip Copy is not allowed but only search is allowed.

Setup	**Camera Setup**	May configure camera settings.
	System Time Change	May change the system's date and time settings.
	Data Clear / Protection	May clear data stored in the system or protect data from being deleted.
	PTZ Setup	May configure PTZ settings.
	Alarm-Out Setup	May configure alarm-out settings.
	Covert Camera Setup	May configure convert camera settings.
	VA Box Setup	May configure VA box settings.
	Alarm Box Setup	May configure Alarm box settings.
	Record Setup	May configure recording settings.
	DirectNDC Setup	May access the NVR and control it remotely via network.
	EventUpload	- May upload the video clips when an event occurs. - May configure FTP settings.
	Self-Diagnosis	May configure the NVR self-diagnostic settings.
	Setup Import	May import previously saved NVR settings.
	Setup Export	May export current NVR settings.

Security

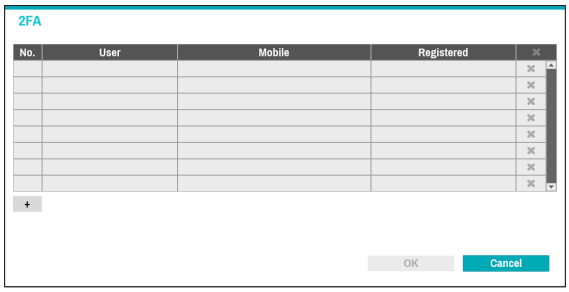
Use this option to configure security settings.

Use 2FA

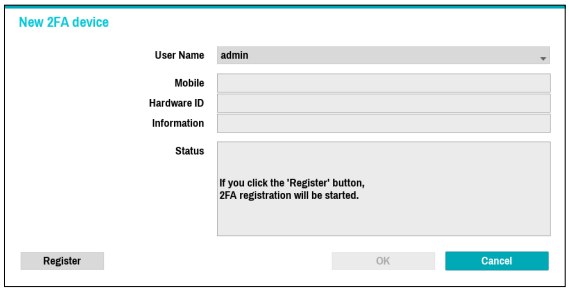
Two-factor authentication (2FA) is a method of confirming a user's claimed identity by utilizing a combination of two different components.

In other words, it is a method of authenticating the registered mobile devices such as mobile phones and smartphones on NVR for security when proceeding settings, search and upgrade.

When you click **Use 2FA** and **2FA Setup** buttons, the following window will appear (**Registered** means the time when the mobile device was registered).

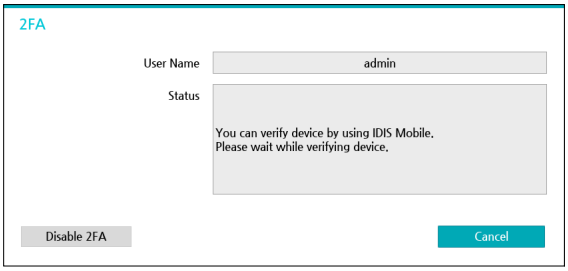


If you click the + button at the bottom of the table, the following message will appear and you can register the 2FA device.

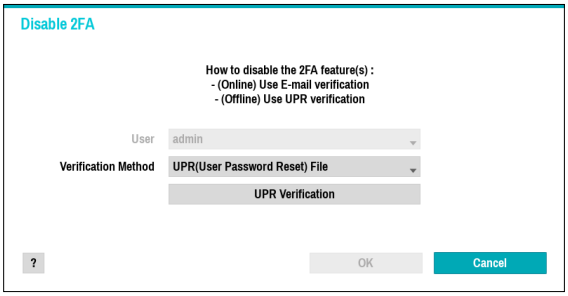


- 2FA device registration is supported only via IDIS Mobile app.
- Only the administrator account user can configure this option.
- The maximum number of device that can be registered is 16.

When the mobile device registration is complete, the following message will appear. Click **Disable 2FA** at the bottom left corner of the screen to deactivate 2FA function via the email of an administrator user account.



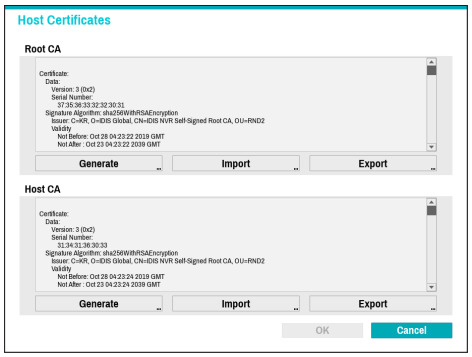
To use email authentication, the FEN setup must be configured. To use UPR function, the UPR file must be saved in advance.



For more information on saving the UPR file, refer to **User on page 37**.

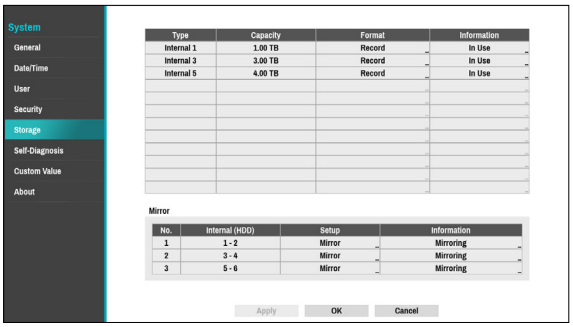
Network Security (Host Certificates)

This is the certificate management menu for network security access. It supports checking the product certificate information, creating the new certificate, exporting and importing certificates.



Storage

Use this option to configure storage settings.



- **Type**: Indicates the type of the installed disk.
- **Capacity**: Indicates the disk's capacity.
- **Format**: If the disk has been formatted, indicates either **Record** or **Not Using**. If you have connected an unformatted storage device, the Use As value will be indicated as **Not Formatted**.
- **Information**: Indicates if the disk is being used for recording purposes. Disks that were used in different systems will show up as **Other**. Select **Information** to check the saved data's time information or select **Delete** to erase the data.

  - Select **Format** to prepare the disk as a storage for data recording.
  - Disks formatted with Use As set to **Not Using** will not be used for data recording.
  - This NVR supports SATA2 HDDs.

Mirror

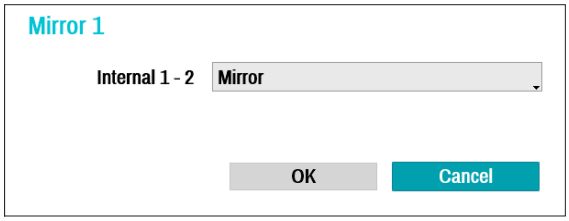
The NVR supports function that records the same data on the two disks at the same time. You can set up mirroring by selecting **Storage** in the System menu and then selecting **Setup** in the Mirror. Up to three Mirrors are supported.

This function only works if the two internal hard disks have the same capacity and model.

- If you change the setup related to Mirror, you must reboot the system.
- A disk problem may cause mirroring to stop. The separated disk can be used to reboot the system.

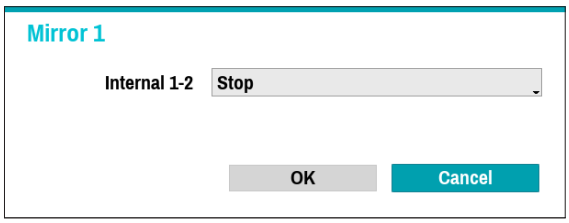
- **Internal HDD**: Indicates the available disks for mirroring.

- **Setup**: Configure detailed settings related to Mirror.
  - **Mirror**: Click **OK** to start mirroring. Once you start mirroring (writing data on the two disks at the same time between two disks), all existing data on the two disks will be erased.



Once you start mirroring, all existing data on the two disks will be erased. Please be careful not to designate the wrong disk by mistake.

  - **Stop**: Once mirroring starts, you can stop it by selecting **Stop** option and then designating disks to delete.



Mirror number 1 and 2 cannot resynchronize at the same time.

- **Information**: Indicates if the installed disk is being used for **mirroring** or **Resync** purposes. Select information about mirroring to check the disk's model and serial number.

Mirror Configuration Error

- **RAID Broken** : When some of the HDDs that make up mirroring are in error and then the defective HDDs are replaced, the data cannot be recovered.
- **Degrade :** If the defective HDDs are replaced, the data can be recovered by rebuilding the system. However, performance may be degraded in this case.

Self-Diagnosis

Use this option to configure self-diagnostic settings.

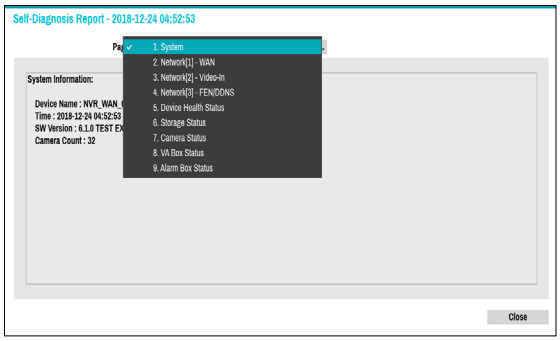
This feature is also supported when connected to the NVR from a remote program.

- **Reports**
  - **No.**: Selects which reports to export.
  - **Time**: Displays when you started the self-diagnosis.
  - **View a Report**: Briefly displays whether the report is "Good" or "Bad".
  - **:** Click the + icon at the bottom left corner of the screen to run the self-diagnosis**.**
  - **Export**: Saves the Saves the reports to a storage device, such as the USB port and NetFS site, by converting them to HTML format. You can export more than one report at a time by selecting multiple reports.
  - **Auto Generating Interval**: Select any time period between 6 hours and 7 days.

- The reports are stored in up to 24 files. If you have configured **Auto Generating Interval** as one-day period, only the reports from the last 24 days can be viewed.
- If the NVR is turned off, the reports will automatically turn off.
- The reports are organized by recent date and time.

- **FailOver:** When a problem is detected on the target device, click the **Run the failover button** to resolve the problem.
  - **Target Device.**: Selects which device to run the failover.
  - **Channels**: Select the camera channel if a camera is set to the target device.
  - **Action**: Select the type of action to run the failover.
  - **Run the failover**: Click the **Run the failover** button when a fail is detected on the target device to resolve the problem.

Once **Run the failover** have made to the camera, the camera will reboot automatically.

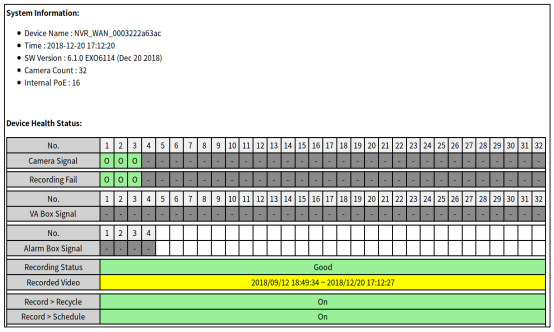


Once you have run failover on the camera, the camera will reboot automatically. By selecting **System, Network, Device Health Status, Storage Status, Camera Status** or **VA Box Status**, you can see the brief results of the self-diagnosis for the target device.

The NVR **self-diagnostic report** can only be viewed in text form.

This feature is also supported when connected to the NVR from a remote program.

We recommend clicking the **Export** button at the bottom of the list, which allows you to view the reports on a PC web browser. We also recommend scanning the self-diagnostic report on a remote program, which allows you to view the reports in HTML format as shown below.



System Information:

- Device Name : NVR_WAN_0003222a63ac
- Time : 2018-12-20 17:12:20
- SW Version : 6.1.0 EXG6114 (Dec 20 2018)
- Camera Count : 32
- Internal PoE : 16

Device Health Status:

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Camera Signal	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recording Fail	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
VA Box Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

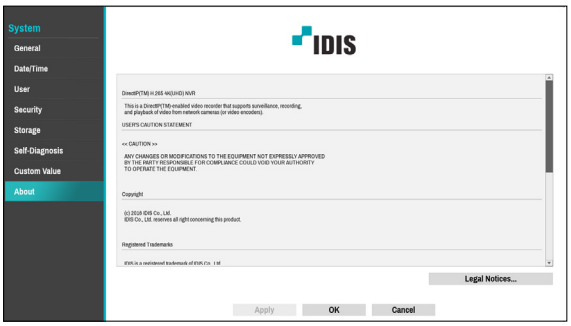
No.	1	2	3	4
Alarm Box Signal	-	-	-	-

Recording Status	Good
Recorded Video	2018/09/12 18:49:34 ~ 2018/12/20 17:12:27
Record > Recycle	On
Record > Schedule	On

Custom Value

- **Name:** Set the name of system properties to be included in a JSON file on HTTP notifications.
- **Value**: Set the value of system properties to be included in a JSON file on HTTP notifications.

About

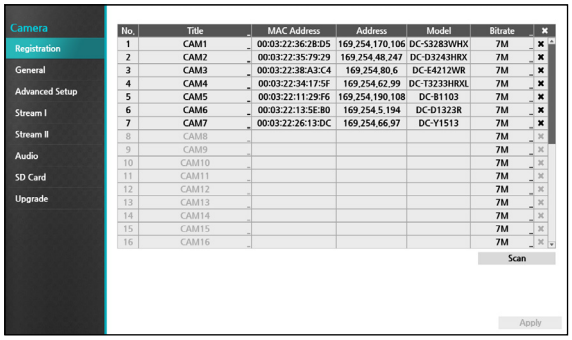


Camera Setup

Refer to the **Menu Use on page 33** for basic information on using the Setup menus.

Registration

You can register cameras at remote locales. By selecting a number from the list, you can move the camera up or down the list using the mouse wheel to reorder its position. The remaining cameras will move down the list automatically.

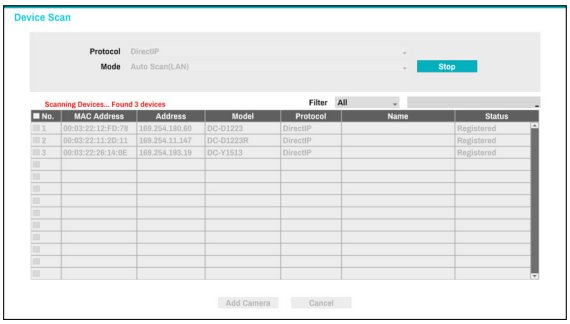


- **Title:** Edit the camera's name.
- **MAC Address**: Displays the camera's MAC address registered to the NVR.
- **Address**: Displays the camera's IP address registered to the NVR.
- **Model**: Indicates the camera's model.
- **Bitrate:** Changes the bitrate allocated to the channel.
- **Scan**: Select to scan and register the device connected to the NVR.

This feature is supported only when connected to the NVR from a remote program.

Device Scan

Scan the device under **Registration** - **Scan**.



- **Protocol**: Select the protocol you wish to search for that was used by the camera (or encoder).

  - Even if the network device uses a protocol supported by the NVR, the device itself may not be visible for scanning and registration by the NVR. For more information about supported network devices and models, contact your retailer.
  - The supported scan modes may vary depending on protocol selected.

- **Mode**: Select the scan mode.
  - **Auto Scan(LAN)**: Lists any cameras in a LAN environment. If Auto scan (LAN) fails to recognize the camera, try using IP Address scan instead.
  - **IP Address**: Enter the IP address of a camera. The NVR scans for the camera that matches the specified address. If you enter an IP address range, the NVR scans for cameras falling under the specified address range. By specifying an IP address, you can also specify which port to use with the Remote Admin feature. It is recommended that you do not network the camera via DHCP (Dynamic Host Configuration Protocol). If the camera is networked via DHCP, the camera may not be connected properly depending on changes in the external network environment.

If Auto Scan (LAN) fails to recognize a camera, try using the IP Address scan instead.

- **Filter**: Enter a keyword in the MAC Address / Address / Model / Name / Status fields for the selected camera. This allows the user to scan this camera easily.

  - When configuring a port, the device may fail to scan if the port selected for the NVR and the port selected for the camera differ. In this case, you must register the camera to change its IP address.
  - The device to be registered must have different IP addresses. Otherwise, the connection may fail.

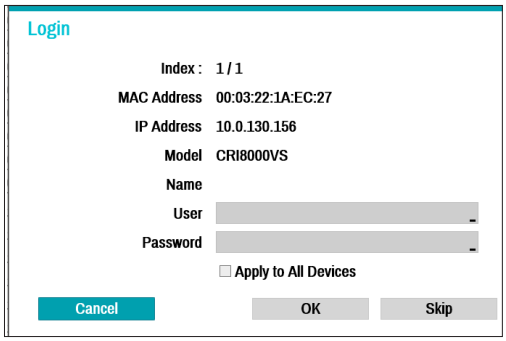
- **No.**: Select the registered camera number and click the **Add Camera** button to register the camera.
- **MAC Address**: Displays the scanned camera's MAC address.
- **Address**: Displays the scanned camera's IP address.
- **Model**: Indicates the camera model.
- **Protocol:** Indicates the scanned camera's protocol.
- **Name**: Displays the scanned camera's IP name.
- **Status**: "Registered" indicates the camera is registered to the NVR and "Not registered" indicates the camera is not registered to the NVR.

Login

If the password is set or you want to register third party cameras, registering a device requires an authorized user login.

1 Select the desired deivce from the list and click the **Add Camera** button, then the login window will appear.

2 Select a user, enter the password, and then select **OK**.

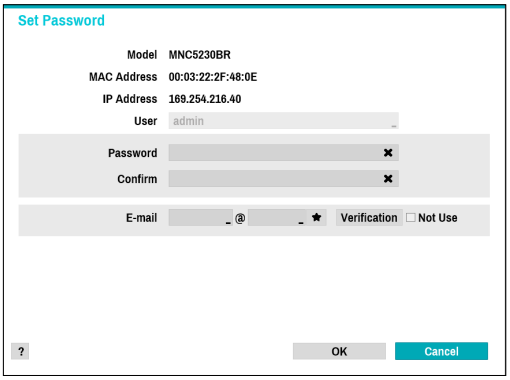


- By selecting **Apply to All Devices**, you can apply the same authentication information to all of the network devices in the list.
- When you select multiple network devices from the list and click the **Add camera** button, a window for the network device will appear. Select **Skip** to skip the authentication settings for the current network device and to display the Authentication window of the next network device.
- For IDIS cameras, a user and password may not be required.

Set Camera Password

For IDIS protocol cameras that support changing and finding the camera password, you must set the camera password at the time of initial camera registration. The email information is used to change and find the camera password.

1 Select the dedeivce from the list and click the **Add Camera** button, then Set Password window will appear.



Only the camera that does not set password of the camera which supports the password setting function is displayed.

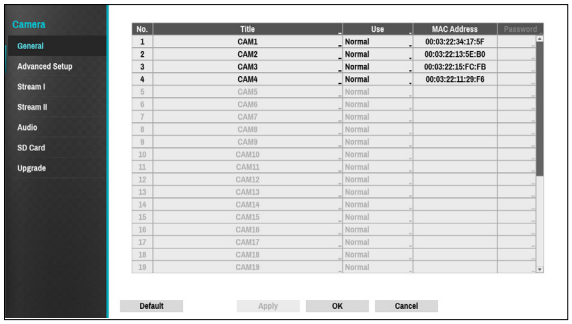
2 Enter the password and e-mail address, and then select **OK**.

- If you do not authenticate your email address, you may not be able to find your password unless you enter the correct information.
- FEN setup is required for authentication. For more information on FEN setup refer to **FEN on page 90**.
- By selecting **Apply to All Devices**, you can apply the same password and e-mail information to cameras that require password settings in the scan list.
- When you select multiple network devices from the list and click the **Add camera** button, a window for the network device will appear. Select **Skip** to skip the authentication settings for the current network device and to display the Authentication window of the next network device.

3 When the password is set, the login window will appear.

General

Enable/disable the covert view and rename cameras.

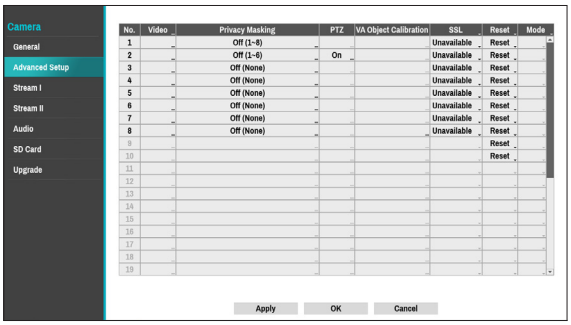


- **Title**: Edit the camera's name.
- **Use**: Set the camera as **Normal**, **Covert 1**, or **Covert 2**.

  Live images and video recordings from cameras that have been set as **Covert 1** or **Covert 2** will not be available to users who do not have covert camera access. Setting a camera as **Covert 1** hides its images but does display OSD information about the camera. Setting a camera as **Covert 2** hides its images as well as ODS information about the camera as if it has been deactivated completely.

Advanced Setup

Configure security and other advanced camera settings.

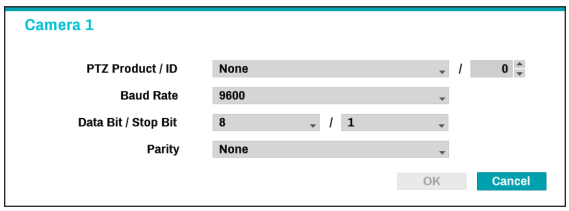


- **Video**: Adjust the camera image sensor settings such as white balance and exposure. Configuration options may differ depending on the camera model.
- **Privacy Masking**: Enable/disable and configure privacy masking for the camera.
- **VA Object Calibration**: Make detailed settings for object detection when using the camera video analysis function. This function affects events such as Loitering, Line Crossing and Object Detection.
  - **Minimum/Maximum**: Set the minimum and maximum size limit for ojbect to be detected.
  - **Mount Type**: Set the camera condition to detect the video.
  - **Sensitivity**: Set the sensitivity for obejct detection.
- **SSL**: Set the camera's security level as **Unavailable**, **Standard**, **High**, or **Very High**. **Standard**, **High** and **Very High** settings apply SSL (Secure Sockets Layer) protection to the camera.

  The more cameras security level is set to **Very High**, the more the device loads may occur due to the decoding of received data such as video and audio. This may cause the total recording performance to decrease and not work as you set it to. In this case, you must improve the load by lowering the security level or by lowering the recording bitrate.

- **Reset**: Resets the port or cameras.
  - **Factory Reset** : Control the PoE Switch's port. This option is available when connecting to Video In/ PoE port or using a DirectIP™ PoE Switch (optional). Select **PoE Reset** to reboot the camera. It is not supported by video encoders.
  - **Soft Reset** : Reboots the camera.
  - **Factory Reset** : Resets the NVR to all its initial factory settings. It is supported by DirectIP™ cameras only.
- **Mode**: Select a resolution mode. This is supported by video encoders only.

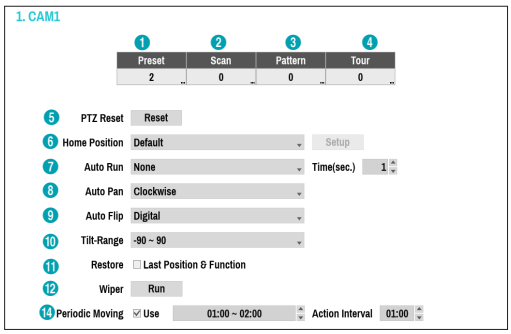
- **PTZ**: If using an RS-485-compliant camera, configure it for use in PTZ Mode.



  - **PTZ Product**: Choose to select the model of installed PTZ device.
  - **ID**: Choose to assign an ID to each PTZ device.
  - Choose to set up **Baud Rate**, **Data Bit**, **Stop Bit** and **Parity** of the connected device.

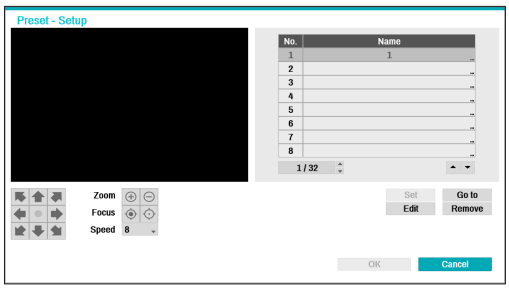
Refer to the PTZ device manufacturer's instructions for the proper settings.

Types of configuration options shown vary depending on the PTZ functions supported by the camera.



Numbers shown below Preset, Scan, Pattern, and Tour indicate the numbers of configured functions.

① Preset



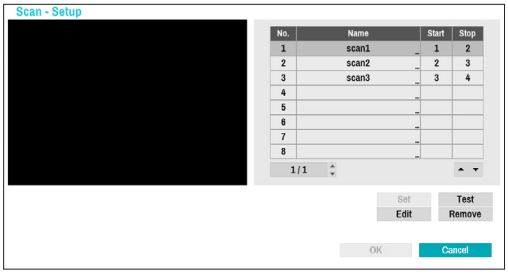
Use the buttons below to choose a preset position.

  - Directional Buttons ( ): Used to tilt and pan the camera.
  - **Zoom** ( ): Zoom in and out.
  - **Focus** ( ): Adjust camera focus to far or near.
  - **Speed**: Specify the camera's panning and tilting speed.

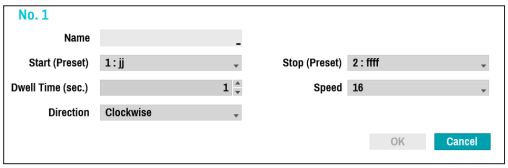
- **Set**: Choose a preset number and then enter a name. This saves the current preset under the specified preset number and name.
- **Go to**: Select a preset from the list and then click Go to to move the camera to the selected preset position.
- **Edit**: Used to change the selected preset's name.
- **Remove**: Used to remove the selected preset.

② Scan

Used to set up a profile for moving the camera between two points. At least two presets must be available in order to use the scan feature.



Set: Used to set up a scan profile.

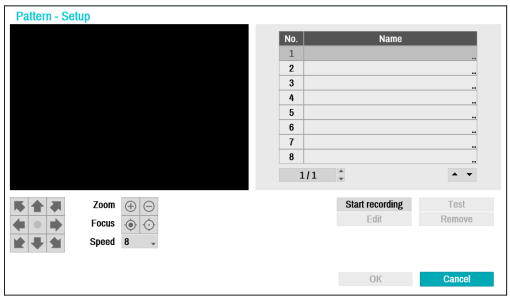


  - **Name**: Enter a name for the scan profile.
  - **Start/Stop**: Specify which presets to use as start and stop points.
  - **Dwell Time (sec.)**: Specify how long the camera will dwell at start and stop positions.
  - **Speed/Direction**: Specify scanning speed and direction.

- **Test**: Select a scan profile and then click Test to test it.
- **Edit**: Used to edit the selected scan profile.
- **Remove**: Used to remove the selected scan profile.

③ Pattern

Used to set up a pattern profile for the camera to follow along.



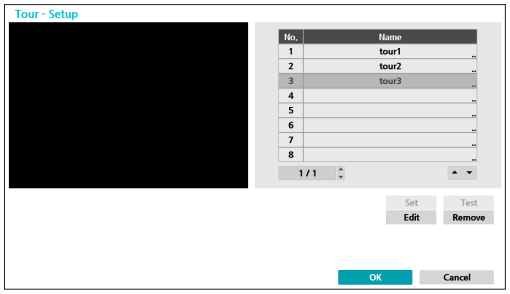
Start recording: Select a pattern number, enter a name for the pattern, and then click **OK** to save the pattern. Move the camera using directional, zoom, and focus buttons and then click **Stop recording** to save the pattern profile. You can record up to two minutes of movement.

- Directional Buttons ( ): Used to tilt and pan the camera.
- **Zoom** ( ): Zoom in and out.
- **Focus** ( ): Adjust camera focus to far or near.
- **Speed**: Specify the camera's panning and tilting speed.

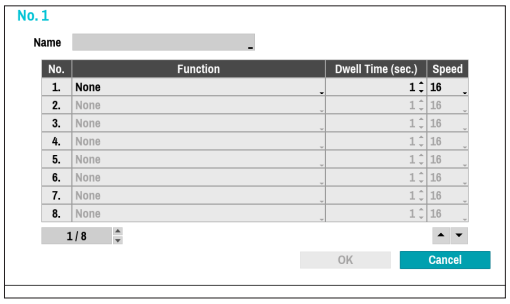
- **Test**: Select a pattern profile and then click Test to test it.
- **Edit**: Used to edit the selected pattern profile.
- **Remove**: Used to remove the selected pattern profile.

④ Tour

Used to set up a tour profile of multiple functions in a designated sequence.



Set: Used to set up a tour profile.



- **Name**: Enter a name for the tour profile.
- **Function**: Indicates the order of the function in the tour sequence.
- **Dwell Time (sec.)**: Specify how long to perform the selected function for.
- **Speed**: Specify the preset speed.

- **Test**: Select a tour profile and then click Test to test it.
- **Edit**: Used to edit the selected tour profile.
- **Remove**: Used to remove the selected tour profile.

Select **Apply** after setting up a preset, scan, pattern, or tour profile to see images from the concerned camera on the left side of the screen. Selecting **Apply** or **OK** displays a popup screen that indicates whether the profile has been set up successfully.

⑤ **PTZ Reset:** Reboots the camera's panning / tilting and zoom settings.

⑥ **Home Position**: Specify the camera's home position.

- **Default**: Uses the factory-default position as the camera's home position.
- **Custom**: Uses the user-defined position as the home position.
- Select **Set** to change the home position.

⑦ **Auto Run**: Specify which action to take if the camera has not been controlled for the specified duration of time.

⑧ **Auto Pan**: Specify the camera's panning direction. When Auto Pan is selected from a remote program, the camera pans in the direction selected here.

⑨ **Auto Flip**: Automatically flips the image when the camera tilts past 90° to prevent the objects from appearing upside down.

- **Digital**: Flips the image left to right or top to bottom.
- **Mechanical**: Automatically pans or tilts the camera.
- **Off**: Disables Auto Flip.

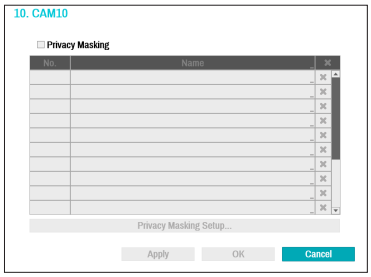
⑩ **Tilt-Range**: Specify the camera's tilting range.

⑪**Restore**: Specify whether to restore the camera to its last position or function. Enabling this option restores the camera to its last position or function after being restarted.

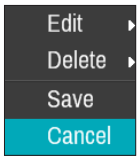
⑫ **Wiper**: Operate the wipers connected to the camera (stop after three round trips).

⑬ **Periodic Moving:** Operate the PTZ camera at each operation cycle for the specified schedule period.

Privacy Masking Options

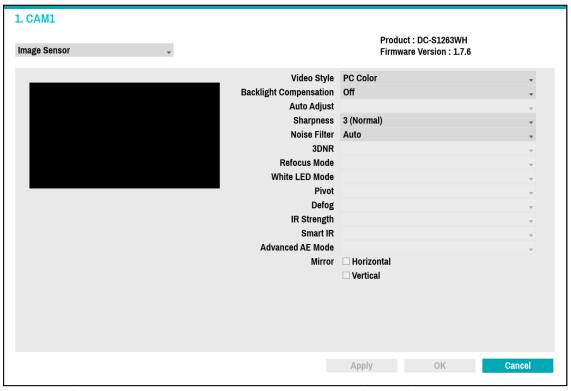


Select **Name** to rename the privacy masking area. Select the ✕ icon to delete the existing privacy masking area. Select **Privacy Masking Setup** to display additional privacy masking area options. You can drag on the area with the mouse to resize it or add up to 16 different areas.



- **Edit**: Rename the selected privacy masking area.
- **Delete**: Delete the selected privacy masking area.
- **Save**: Save the changes and exit the privacy masking area options screen.
- **Cancel**: Exit the privacy masking area options screen without saving the changes.

Image Sensor Options



- **Product, Firmware Version**: Displays the camera model name and firmware version.
- **Video Style**: Select **TV1 Color** or **PC Color**.
- **Backlight Compensation**: Enable/disable Backlight Compensation. If enabled, objects are exposed brighter in backlit situations.
- **Auto Adjust**: Selecting **Auto** allows the system to assess the lighting conditions and adjust the setting automatically. Selecting **Manual** allows the user to adjust the setting manually.
- **Sharpness**: Adjust the sharpness level. Adjust the contours to make the images look sharper. Increasing the value raises the sharpness level, but using too high a value can result in unwanted noise.
- **Noise Filter**: Select the noise filter level. Noise filter can reduce the noise in images taken under low-lighting conditions. Increasing the value reduces the noise, but using too high a value can result in blurry images.
- **3DNR** : Enable/disable 3DNR (3D Noise Removal). 3DNR reduces background noise in images taken under low-lighting conditions. 3DNR does not produce blurry images like Noise Filter but can result in ghosting.
- **Refocus Mode** : Readjust the focus of the camera when changing daytime to nighttime or nighttime to daytime.
  - **On/off**: Enable/disable **Refocus Mode**.
  - **DN Mode Shift**: When image of the camera is siwtched to daytime or nighttime, the focus of the camera will be adjusted.
  - **IR Adaptive Shift**: Readjust the focus of the camera when IR is detected by the camera.

- **White LED Mode**: Clicking on/off enables or disables White LED lighting when motion is detected by the PIR sensor. Also clicking auto allows the system to enable/disable **White LED mode** automatically.
- **Pivot**: Enable this option and choose the direction of the pivot. You can turn the image by 90 degree in the clockwise or counterclockwise direction. This feature is particularly effective when monitoring hallways, passages, and other confined spaces.
- **Defog**: Disables or enables the Defog feature. When it is enabled, image with a fog is adjusted.
- **IR Strength**: Adjust the IR LED's brightness level. Select a brightness level manually between 0% (darkest) and 100% (brightest). Selecting Auto(Smart IR) allows the system to control the IR LED's brightness level automatically.
- **Smart IR**: Help solve the problem of infrared LEDs whiting out images, such as people's faces, when they are too close to the IR LEDs of a night vision camera. In this case, the image is adjusted through AE control.
- **Advanced AE Mode**: Select desired setup mode between **Normal** and **Number-Identification**. In **Number-Identification** mode, when a certain area of images is too bright due to backlight under low lighting conditions and it causes the other area to be too dark, this function provides the other area of images brightly and clearly by blocking the backlight in the certain area. Dark parking lot entrances and gas station entrances at night, for example (Local Exposure compensates for the bright light coming from incoming vehicle headlights and makes it possible to see the license plates). When setting to the **Number-Identification** mode, some option settings will be adjusted automatically, and you cannot change them as long as the Setup Mode is not changed.
- **Mirror**: Select **Horizontal** or **Vertical** to flip the image horizontally and/or vertically.

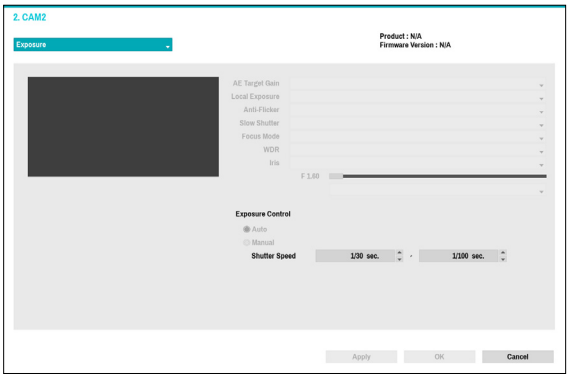
Select **Apply** after setting up a camera to see images from the concerned camera on the left side of the screen. Selecting **Apply** or **OK** displays a popup screen that indicates whether the camera has been set up successfully or not.

White Balance Options

- **Preset**: Use preconfigured white balance settings.
  - **Auto**: Allow the system to adjust the white balance automatically. The system will assess the lighting conditions and adjust the white balance automatically.
  - **Incandescent - Fluorescent Cold**: Select a lighting type to apply the appropriate white balance.
- **Manual**: Adjust the white balance manually. Adjust Red and Blue gain values. Greater the value, greater the intensity of the corresponding color.

Select **Apply** after setting up a camera to see images from the concerned camera on the left side of the screen. Selecting **Apply** or **OK** displays a popup screen that indicates whether the camera has been set up successfully or not.

Exposure Options

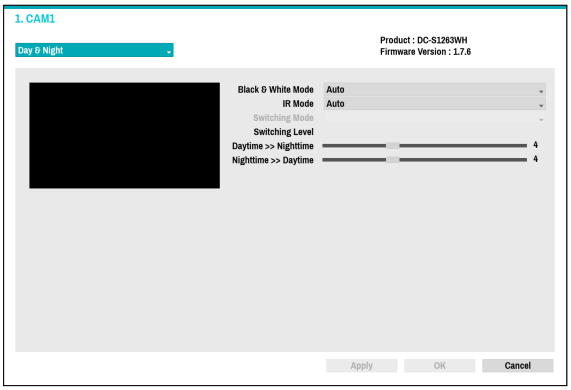


- **AE Target Gain**: Specify exposure compensation's target gain. Exposure is compensated automatically based on the specified target gain. Higher the gain, brighter the images.
- **Local Exposure**: Activate Local Exposure. Use Local Exposure on images that appear too dark due to backlighting conditions and on images containing over-exposed sections. Greater the value, clearer the image. e.g.) Dark parking lot entrances and gas station entrances at night (Local Exposure compensates for the bright light coming from incoming vehicle headlights and makes it possible to see the license plates).
- **Anti-Flicker**: If the lights in the area where the camera is located use alternating current, specify the frequency of the lights to minimize flickering. Matching the frequencies can eliminate flickering completely. (NTSC: 60Hz, PAL: 50Hz).
- **Slow Shutter**: Activate Slow Shutter. The slow shutter mode functions only under low lighting conditions. When the slow shutter mode is enabled, images are displayed bright even under the low-lighting conditions. There may be a difference in the way it functions depending on the camera model. See the camera user's manual for details.
- **Focus Mode**: Used to change the focus movement format as Auto/Manual/Semi-Automatic. It may not be supported depending on the device.
- **WDR**: Disables or enables the WDR (Wide Dynamic Range). When the very dark and very bright areas exist simultaneously on the screen, WDR allows you to recognize the both areas.

- **IRIS**: Depending on the camera type, the user can select DC-IRIS or P-IRIS.
  - **DC IRIS**
    - **OFF** : Select this if a manual IRIS lens is mounted on the camera.
    - **DC-IRIS (Auto) :** Select THIS IF A DC-type auto IRIS lens is mounted.
  - **P-IRIS**
    - **P-IRIS (Auto)** : The system will assess the lighting conditions and adjust the openness of IRIS automatically.
    - **P-IRIS (Fix) :** Use the slider to select the desired openness of IRIS. Select the most suitable value for the lighting conditions in the area where the camera is located.
- **Shutter Speed Control**: Adjust Shutter Speed. This option is available only when **Anti-Flicker** and **Slow Shutter** are both set to **Off**.
  - **Auto**: The system will assess the lighting conditions and adjust the shutter speed automatically.
  - **Manual**: Use the slider to select the desired shutter speed. Select the most suitable minimum and maximum shutter speeds for the lighting conditions in the area where the camera is located. (1/30 to 1/8000)

Select **Apply** after setting up a camera to see images from the concerned camera on the left side of the screen. Selecting **Apply** or **OK** displays a popup screen that indicates whether the camera has been set up successfully or not.

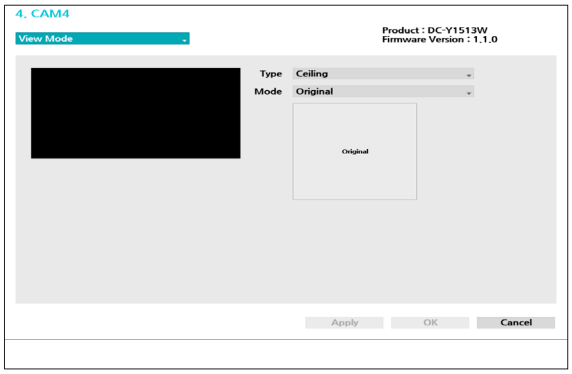
Day & Night Options



- **Black & White Mode**: Display the images in grayscale for greater clarity in low-lighting conditions.
  - **On/Off**: Enable/disable **Black & White Mode**.
  - **Auto**: Allow the system to enable/disable **Black & White Mode** automatically.
  - **Schedule**: Set up the **Black & White Mode** schedule. **Black & White Mode** is disabled for all days and times that are designated as **Daytime** in the schedule and is enabled at all other times.
- **IR Mode**: **IR Mode** blocks out the infrared spectrum. You can ensure clear images at all times by blocking out the infrared spectrum in high-lighting conditions and allowing the infrared spectrum to pass through in low-lighting conditions.
  - **Daytime Mode/Nighttime Mode**: Enable/disable **IR Mode**.
  - **Auto**: Allow the system to enable/disable **IR Mode** automatically.
  - **Schedule**: Set up the **IR Mode** schedule. **IR Mode** is disabled for all days and times that are designated as **Daytime** in the schedule and is enabled at all other times.

    Some camera models may not support the **Schedule** function.
- **Switching Mode :** Changes the switching mode of daytime and nighttime. In normal mode, daytime/ nighttime is switched through the amount of light received by the ambient light sensor. In advanced mode, it is switched through the amount of light and the analysis of the camera video.
- **Switching Level :** Controls the changing time of daytime / nighttime mode, depending on the Switching Level. The higher the value is, day / nighttime mode is changed under high-lighting conditions. Also the lower the value is, day / nighttime mode is changed under low-lighting conditions.

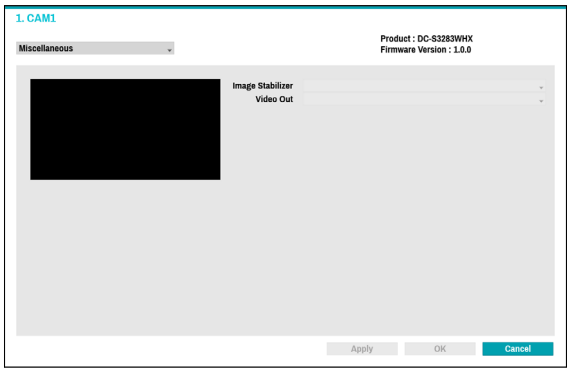
View Options



- **Type**: Selects the camera view.
- **Mode**: Selects the screen layout in live mode.

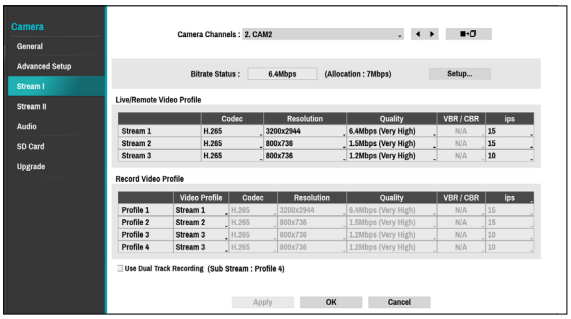
- Dewarping feature is not supported when mode is set to the original.
- When changing the view mode, the resolution will be applied automatically.

Miscellaneous



- **Image Stabilizer**: Activate Image Stabilizer. The Image Stabilizer reduces blurring caused by camera shake that results from external conditions such as the wind.
- **Video Out**: Select NTSC or PAL as the method of camera analog video output.

Stream I



Configure the camera's live and recording resolution, codec, picture quality, transfer speed, and ips speed settings.

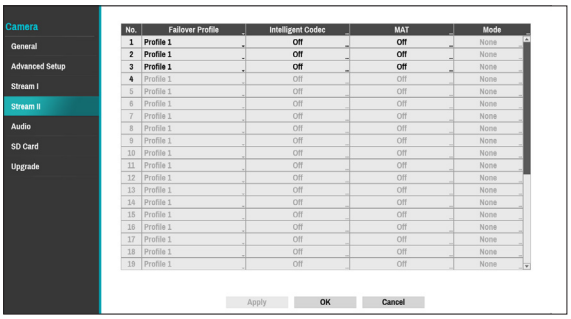
- **Camera Channels**: It's possible to configure a unique video profile for each camera.
- **Bitrate Status**: Display the highest value of stream. Click the Setup button to change the allocation for each channel. For more information on bitrate, refer to **Camera View Buttons on page 19**.
- ■→□: Apply the video profile settings of the camera selected under Camera Channel to a different camera.
- **Live/Remote Video Profile**: Check the current Live video picture quality and edit remote video profile settings.
- **Record Video Profile**: Set up 4 recording quality profiles.
- **Video Profile**: Select **Stream 1**, **Stream 2**, **Stream 3**, or **Custom** (available from Record Video Profile only).
  - **Codec**: Supports H.264 and H.265.
  - **Resolution**: Select a resolution supported by the camera. Maximum available resolution is chosen automatically based on the selected video profile.
  - **Quality**: Select **Very High**, **High**, **Standard**, **Basic**, or **Manual**. You can assign different Quality settings to different cameras.
  - **VBR/CBR**: Select **VBR** or **CBR**. Transmitted data size varies depending on the amount of movements in the images with **VBR** but is fixed with **CBR.**
  - **ips**: Select a value between 1 and 30. Maximum **ips** is determined automatically based on the selected video profile.
  - **Bitrate**: Displays the bitrate value of each stream.

The bitrate is determined by the codec, resolution, quality, and IPS settings. Settings beyond the channel's assigned bitrate are limited.

- **Use Dual Track Recording**: Set to record with the video profile value (main stream) set in the schedule and record with the profile 4 value (sub stream) at the same time.

  - It displays as below when recording on a network video recorder.
    - If the screen layout is less then 3x3, video profile (main stream) is displayed and if it is larger than 3x3, profile 4 (sub stream) is displayed.
    - If the channel is larger than 3x3 size on the screen layout such as 1+7 and 1+12, the video profile (main stream) is displayed first but otherwise the profile 4 (sub stream) is displayed first .
  - This function is supported only for cameras supprting dual recording function.

Stream II



Configure the camera's failover profile, intelligent codec and MAT settings.

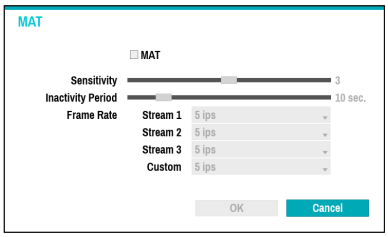
- **Failover Profile**: Select a video profile for the smart failover recording.
- **Intelligent Codec**: Lower bitrate by using the intelligent codec.

  - Some camera models may not support the Intelligent Codec function.
  - When using intelligent codec function, the start of some functions, such as clip copy or clip attachment can be changed to an earlier point than the selected point.

- **MAT Setup** : Select the MAP Setup option to use the MAT (Motion Adaptive Transmission) function during video transmission and recording.

  - When the MAT (Motion Adaptive Transmission) function is active, the associated VA device may not work properly.
  - It is recommended that you do not use the MAT function of the associated camera to increase the accuracy of the image analysis.
  - Some camera models may not support the MAT function.

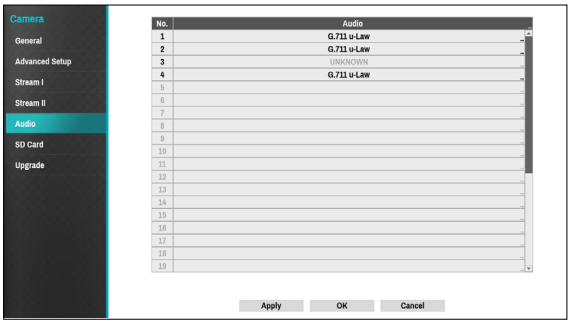
  * MAT function(Motion Adaptive Transmission) reduces bandwidth overload and saves storage capacity by reducing the frame rate of the video during periods of inactivity. The user can select the period of sustained inactivity which triggers this function by adjusting Inactivity Period.

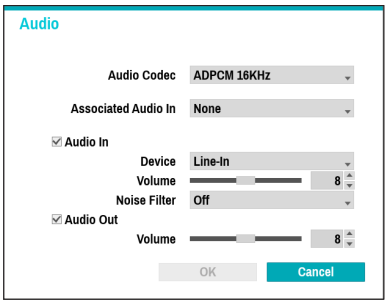


- **Sensitivity** : Set the motion detection sensitivity. Higher values will result in more sensitive motion detection.
- **Inactivity Period** : Set the Inactivity Period. If motion is not detected for the duration of time specified, video is transmitted and recorded using the frame rate designated below until movement is detected again.
- **Mode**: Set the camera resolution to 16:9, 4:3. Depending on the mode you have set, the resolution that can be set in the stream section changes.

Audio

Configure audio recording settings for all cameras simultaneously.



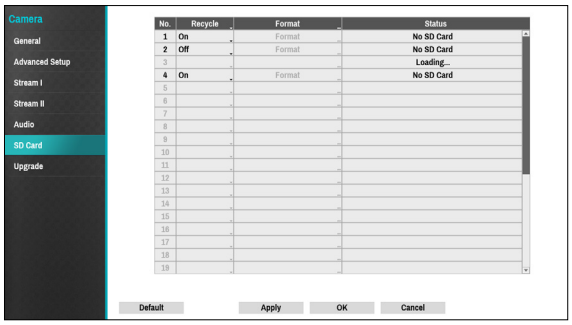


- **Audio Codec**: Select an audio codec. (G.711 u-Law, G.711 a-Law, ADPCM 16KHz or G.726)
- **Associated Audio In**: Associates the selected audio channel with the camera. It is supported by video encoders only.
- **Audio In**: Select an audio input source (microphone or line-in) and then adjust the volume. Noise Filter reduces the environmental noise and enhances the voice. If you turn on the noise filter, the sound may be distorted somewhat. We recommend that you do not use this function in a loud place because it may degrade performance.
- **Audio Out**: Adjust the volume.

Cameras do not feature built-in audio amplifier units and therefore require the user to purchase a speaker system with a built-in amplifier separately.

SD Card

If connection between the camera and NVR fails, the video will be recorded on SD memory card of the camera. When the connection is recovered again, the recorded video on SD memory card will be recorded on the NVR. For more information on Smart Failover, refer to the **Smart Failover on page 61.**



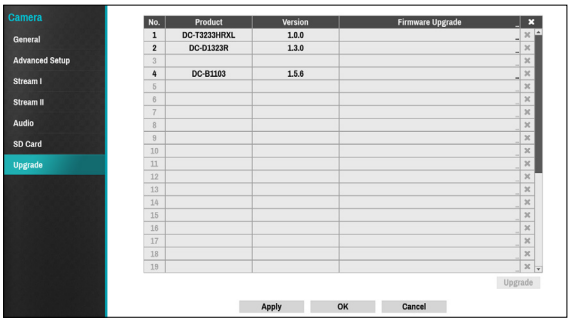
- **Recycle** : When there is not enough storage available on SD memory card, the oldest video will be deleted automatically.
- **Format** : Click on this button to format the inserted SD card. Formatting the SD card deletes all data saved on the card.
- **Status** : Display the status of the SD card.

- This function is only supported for the cameras supporting Failover recording of SD memory card.
- For cameras is in use by other NVRs or the newly registered cameras, the Format option displays **Other**. Please format the SD card to use this function.

Upgrade

When using NetFS, select Firmware Upgrade. You can select or USB port or NetFS. If not, you can only select USB port. Selecting Camera.

Select USB port to display USB search window and then select the corresponding upgrade package from the storage device connected to the NVR's USB port. After selecting an upgrade package, select Apply to upgrade the camera.



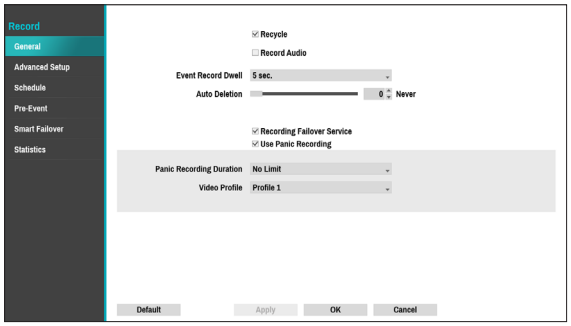
- If an upgrade attempt fails, an upgrade failure message will be displayed. Refer to **Error Code Types in the installation manual** for more details.
- The camera will reboot after the upgrade and then reconnect automatically.

Record Setup

Refer to the **Menu Use on page 33** for basic information on using the Setup menus.

General

Configure general recording settings.



- **Recycle**: When the recording disks become full, the system overwrites existing data with new data, starting with the oldest first. If **Recycle** is disabled, recording will simply stop when the recording disks reach their maximum capacity.
- **Record Audio**: The camera will record audio along with video.
- **Event Record Dwell**: If linked recording is designated as an event-triggered action, recording takes place for the duration specified under this setting.
- **Auto Deletion**: Configure this option to delete recording data automatically after the specified number of days has elapsed. Select between 1 day and 999 days.

To disable Auto Deletion, select **Never**. If enabled, recording data will be stored on the NVR for the specified number of days and then deleted automatically. Expired recording data are deleted automatically at midnight and will be deleted even if the system reboots or the **Auto Deletion** setting has been changed.

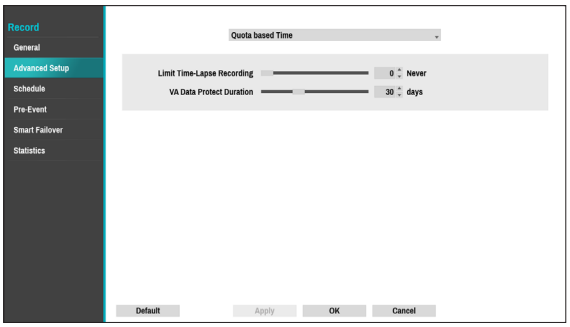
- **Recording Failover Service**: When a network failure is restored, videos stored on the camera SD memory card can be recorded on the NVR.

Data from the camera SD memory card can not be recorded to the NVR if the recording failover service function is not selected.

- **Use Panic Recording**: Enable/disable Panic Recording.
- **Panic Recording Duration**: Disable Panic Recording automatically. Select between 5 mins and 1 hr. If you do not wish to disable the feature automatically, select **No Limit**.
- **Video Profile**: Select a recording profile value for Panic Recording.

Advanced Setup

Quota Based Time



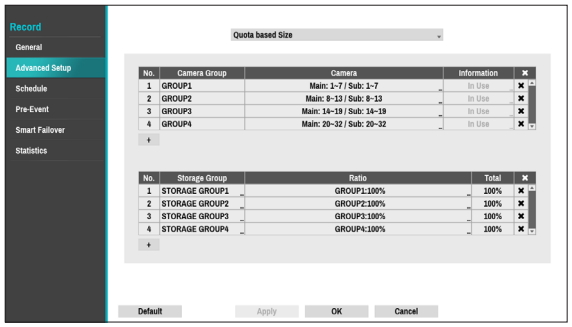
- **Limit Time-Lapse Recording**: You can store event recording data for longer. If you do not wish to use **Limit Time-Lapse Recording**, select **Never**. This function is activated when data has been stored for longer than as configured because the recording disk has sufficient capacity and saves new data by overwriting **Time Lapse Recording** data that are older than as specified under Recycle mode.

- If the recording stored on the disk is shorter than the duration specified under **Limit Time-Lapse Recording**, the older of **Event Recording** or **Time Recording** data is deleted first.
- The system's recording time may change depending on recording quality, resolution, motion, and other configurations made by the user. The duration specified under **Limit Time-Lapse Recording** may not be guaranteed in certain situations.

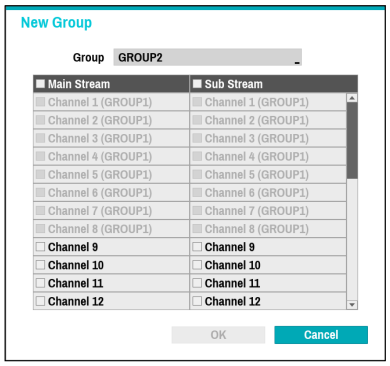
- **VA Data Protect Duration**: Configure this option to select the data protection period. Select between 1 day and 90 days.

Quota Based Size

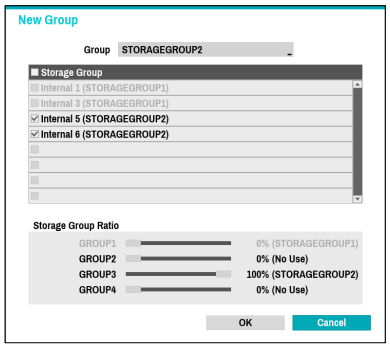
Cameras and disks are grouped to enable recording according to the set ratio.



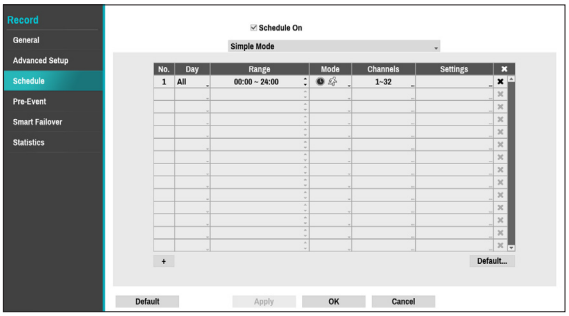
Click the + icon at the bottom left corner of the Camera Group list table to group the cameras by specifying the camera numbers as below.



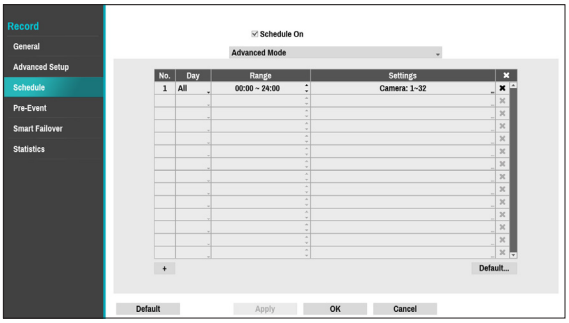
Click the + icon at the bottom left corner of the Storage Group list to create a seperate storage group by setting the recording storage space of each camera group.



Schedule



<Simple Mode>



<Advanced Mode>

Disabling **Schedule On** suspends schedule recording regardless of the schedule and displays the icon on the upper left corner of each camera screen. Pressing the **Panic Record** button displays the icon and commences panic recording.

Set Record Schedule mode as **Simple Mode** or **Advanced Mode**. **Advanced Mode** allows you to configure a unique recording schedule for each event.

Select the icon to delete a schedule.

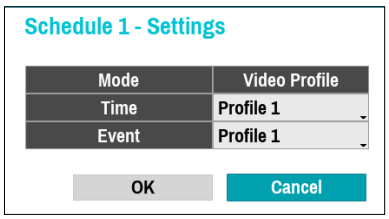
- Changing the recording schedule mode suspends all active event-linked actions.
- Select the + button on the bottom left of the screen to add a schedule. Select **Day** to specify the **Day** setting or select **All**. Select **Scope** to specify the time frame.

Simple Mode Options

- **Mode**: Select **No Record**, **Time**, **Event**, or **Time & Event**.

No Record	Unless the **Panic Record** button is pressed, no recording will take place during the scheduled time frames on the scheduled days.
Time	The icon appears on the upper left corner of the screen. The icon appears at scheduled times to indicate recording is in progress.
Event	The icon appears on the upper left corner of the screen. The icon appears when the specified event occurs to indicate recording is in progress. If Pre-Event is enabled, the and icons appear when recording is not in progress, or the and icons appear when an event occurs and recording is in progress.
Time & Event	The icon appears on the upper left corner of the screen and recording commences as per the video profile selected for time under **Setup**. When an event occurs, the icon changes into icon and recording commences as per the video profile selected for events under **Setup**.

- **Channel**: Select which cameras to apply the schedule to.
- **Settings**: Select to configure default recording profile values for Time Lapse and Event Recording modes.



If a camera supporting the Dual Track Recording function (Main and Sub stream) is in use, the following icon will be displayed.

	Recording both mainstream and substream
	Recording one of the mainstream and substream
	Failed to record both mainstream and substream

Advanced Mode Options

Select to configure event types and video profiles.

- **Type**: Event-specific and time recording icons are as follows:

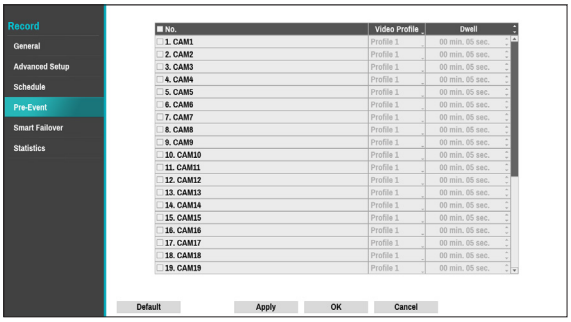
	Time Lapse (Time)		Audio Detection
	Alarm-In		Trip Zone
	Motion Detection		Tampering
	Video Loss		Text-In
	Recording Fail		Fan Error
	Exceed the People Limit		Exceed the Time Limit
	ANPR		VA Loss
	PIR		Alarm Box Loss
	Loitering		Auto Track
	Obejct Detection		Line Crossing

- **Video Profile**: Configure the profile to use for recording.
- **Dwell**: Specify how long to record for after a corresponding event occurs.

- Upper-tier schedule's settings apply to unconfigured channels.
- If multiple events take place on a specific channel and different **Video Profile** and **Dwell Time** settings apply, highest settings apply to all event-linked recordings.

Pre-Event

When an event occurs, enabling this option includes the specified duration prior to the event in the event-triggered recording.

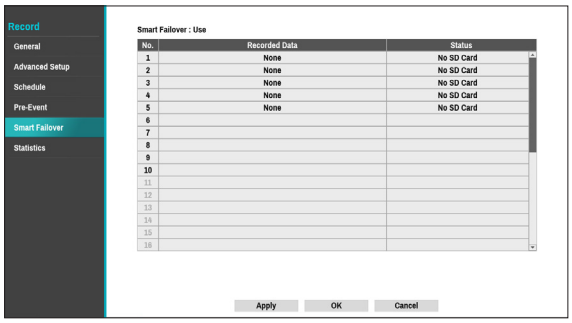


- **No.**: Select which cameras to apply Pre-Event to.
- **Video Profile**: Select a video profile for the recording.
- **Dwell**: Specify the duration of pre-event recording data.

- If no event mode schedule exists in the schedule, a warning message prompting you to add an event mode schedule will be displayed.
- The warning message will appear even in **Time & Event** mode.

Smart Failover

When the connection is recovered again, Smart Failover Service enables the data recorded on SD memory card to record on NVR.

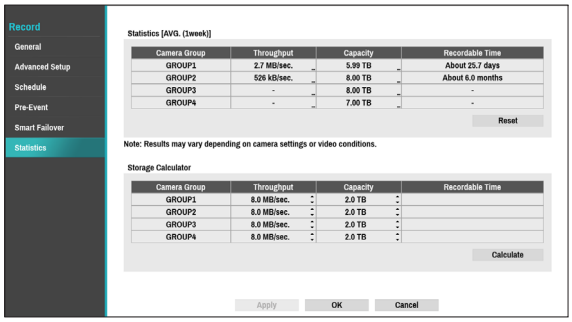


- **Smart Failover**: Depending on whether Recording Failover Service is in use, the screen indicates "Smart Failover: Use, or Unuse"
- **Recorded Data**: Indicates the time information of the recorded data.
- **Status**: Indicates the current status of the recorded data, depending on whether SD memory card is inserted.

- This function supports only if selecting the **Recording Failover Serivce**.
- This function is only supported for the cameras supporting Failover recording of SD memory card.
- If the camera is reconnected during recording, the video recording will restart from the beginning.

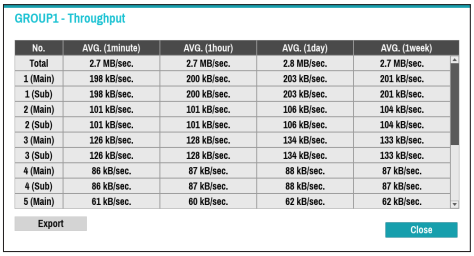
Statistics

Displays the throughput and recordable time that is being recorded depending on the camera and storage capacity by each group set in the NVR.

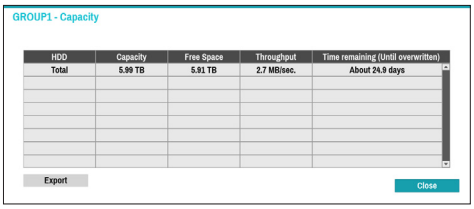


Statistics

- **Camera Group**: Indicates the name of the camera group.
- **Throughput**: Indicates the throughput of all cameras in the camera group. It is based on the longest accumulated time unit. Clicking **...** icon under **Throughput** tap displays the throughput that accumulates data by camera group, showing data throughput in terms of average duration, as shown below.



- **Capacity**: Indicates the sum of all storage capacity in the camera group. Click **...** icon under **Capacity** tap to calculate the capacity and throughput by each group and display the remaining time for recording.



- **Recordable Time**: It calculates the throughput and capacity of the camera group and displays the recordable time.

- **Reset**: Initializes accumulated throughput data used by statistics.

Results may vary depending on camera settings or video conditions.

Storage Calculator

You can check recordable time by setting the throughput and capacity by each camera group.

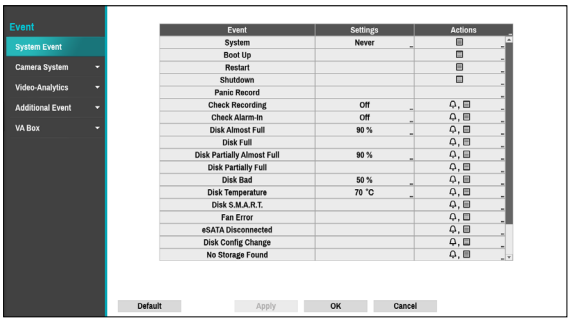
Click **Calculate** button to calculate the capacity and throughput by camera group of storage calculator and display the recordable time.

Event Setup

Refer to the **Menu Use on page 33** for basic information on using the Setup menus.

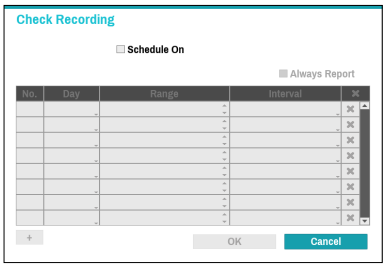
System Event

Use this option to configure Monitoring settings.



- **Settings**: Configure when and what the system should monitor for.
- **Actions**: Configure alarm-out (NVR alarm-out channel, NVR beep, camera alarm-out channel) and notification (email, LAN1 through 5, push, HTTP, alert window) settings.

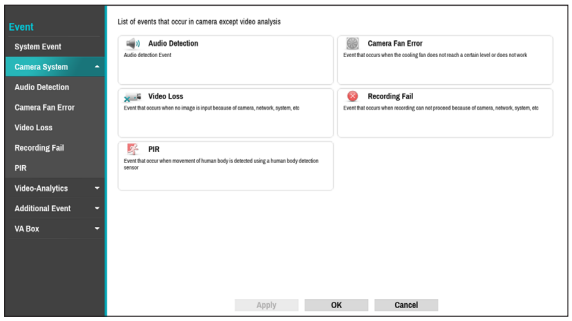
Monitoring Options

System	Define monitoring times. If self-diagnosis is not performed on a regular basis, the system will assume an error.
Bootup, Restart, Shutdown	Define bootup, restart and shutdown actions.
Panic Record	Define panic recording actions.
Check Recording	The system will assume an error if the system has been scheduled to record normally but recording does not take place during scheduled intervals. Select **Schedule On** and then configure the days of the week, times, and monitoring interval. Select the + button on the bottom left of the screen to add a schedule. Select ✕ icon to delete the schedule. 
Check Alarm-In	The system will assume an error if the alarm-in status does not change during the specified monitoring interval while alarm-in is active.
Disk Almost Full	Generates an event if the disk reaches the specified capacity (80% to 99%).
Disk Full	Generates an event when all disks reach their maximum capacity.
Disk Partially Almost Full	Generates an event when a disk in one of multiple quota groups reaches the specified capacity (80% to 99%).
Disk Partially Full	Generates an event when a disk in one of multiple quota groups reaches the specified capacity.
Disk Bad	Generates an event when the specified percentage of the disk becomes damaged. Set to between 10% and 90% in 10% intervals.
Disk Temperature	Specify the threshold temperature. Once any disk reaches this threshold, the system will issue an alert.
Disk S.M.A.R.T.	Monitors disks that support S.M.A.R.T. and notifies the user if a disk error is detected.
Fan Error	Notifies the user when the fan inside the system malfunctions.
eSATA Disconnected	Notifies the user if an eSATA device becomes disconnected while in use.
Disk Config Change	It will be highlighted when the NVR reboots after the hard disk drive has been replaced.
No Storage Found	It will be highlighted when no hard disk drive has been connected.
Consecutive Invalid PW	It will be highlighted when login fails by entering a wrong password for consecutive attempts.
RAID BROKEN	It will be highlighted when the mirroring configuration is broken.
Degrade	It will be highlighted when one of the HDDs composing mirroring is in error.

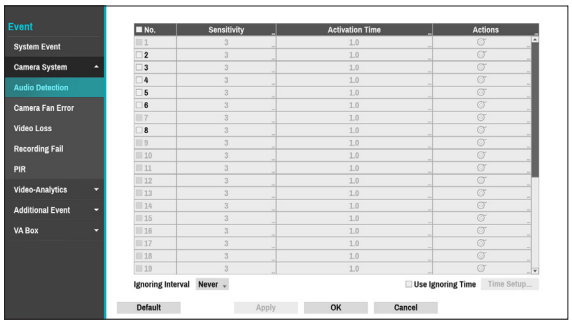
- For system events, only an e-mail notification of actions can be selected.
- In order to use the Notify(Callback) feature, the NVR must be registered to the remote program on the receiving PC's end.
- For mor information on RAID Broken and Degrade, refer to Mirror Configuration error on 39.

Camera System

A list of events that occur in the camera except for video analysis.



Camera System_Audio Detection



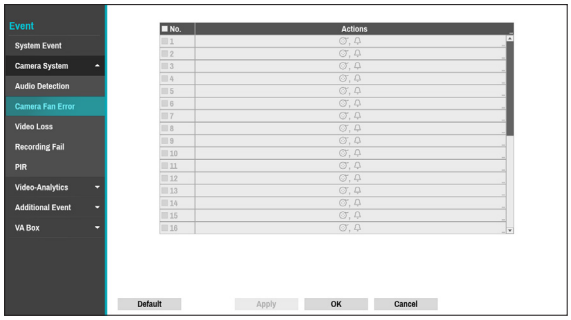
- **Activation Time**: Specify how long audio detection has to last in order for it to be considered as an event. When the audio detection is not detected for the specified duration of time, it will not be considered as an event.
- **No.**: Select which cameras to apply Audio Detection to.
- **Sensitivity**: Set to between 1 (Low) and 5 (High).
- **Activation Time**: Specify how long audio detection has to last in order for it to be considered an event. Audio detections that do not last for the specified duration of time will not be considered as events.
- **Actions**: Specify which actions to take when audio detection events occur.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

In order to use the Callback feature, the NVR must be registered on the remote program.

- **Ignoring Interval**: The system does not produce event log entries or issues remote notifications regarding audio detected during the specified time following the initial audio detection. Set a value between 1 sec and 5 secs or choose **Never**.
- **Use Ignoring Time**: Select **Time Setup** to specify the audio detection ignore time. Audio detection will be disabled during the specified time frame.

Camera System_Camera Fan Error

The event occurs when the fan has stopped in the fan mounted camera.



- **No.:** Select which cameras to apply Fan Error to.
- **Actions:** Specify which actions to take when a Fan Error event occurs.

  – **Record:** Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.

  – **Alarm-Out:** Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.

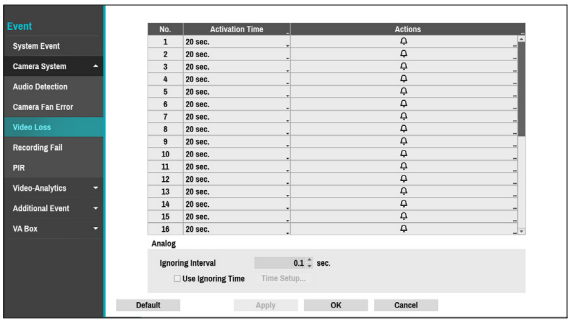
  – **Notify:** Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.

  – **PTZ:** Moves the PTZ camera to a specific preset position when an event occurs.

  – **Event Monitoring:** Selects the cameras to monitor when an event occurs.

- In order to use the Callback feature, the NVR must be registered on the remote program.
- In case of the camera that not supports camera system event, the camera system feature will be disabled.

Camera System_Video Loss

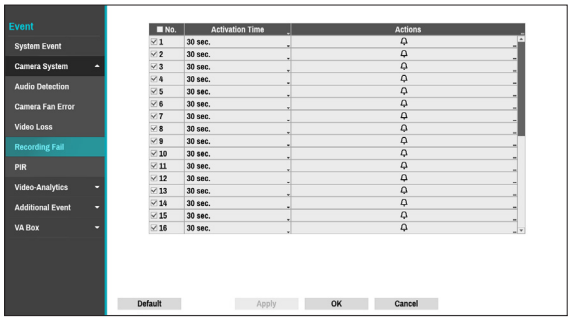


- **Activation Time**: Specify how long video loss has to last in order for it to be considered as an event. When the video loss is not detected for the specified duration of time, it will not be considered as an event.
- **Actions**: Specify which actions to take when a Video Loss event occurs.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to **Event** or **Time & Event** mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, HTTP, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

In order to use the Callback feature, the NVR must be registered on the remote program.

- **Ignoring Interval**: The system does not produce event log entries or issue remote notifications for video loss detected for the time specified after the initial video loss was detected. Set the value between 0.1 and 15 seconds or choose **Never**. This is supported only when video encoders are connected.
- **Use Ignoring Time**: Select **Time Setup** to specify the time to ignore video loss detection. Video loss detection will be disabled for a specified time period. This is supported only when video encoders are connected.

Camera System_Recording Fail

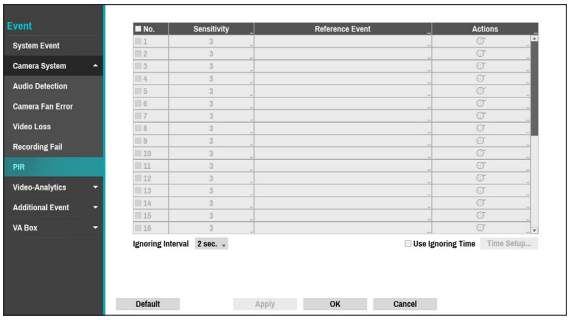


- **Activation Time**: Specify how long recording fail has to last in order for it to be considered as an event. When the recording fail is not detected for the specified duration of time, it will not be considered as an event.
- **Actions**: Specify which actions to take when a Recording Fail event occurs.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to **Event** or **Time & Event** mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, HTTP, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

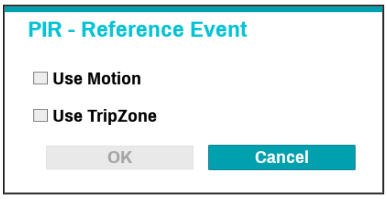
In order to use the Callback feature, the NVR must be registered on the remote program.

Camera System_PIR

This event occurs when the PIR sensor mounted on the camera is used to sense motion. Since the PIR sensor detects the temperature of the human, it can detect motion even in dark places without light.



- **No.:** Select which cameras to apply PIR to.
- **Sensitivity**: Set sensitivity settings between 1 (Low) and 5 (High).
- **Reference Event**: Set condition for event to occur using the PIR sensor. A PIR event occurs when a motion occurs after an event set as a reference event has occurred. You can set Motion and Trip Zone as reference events.



- **Actions:** Specify which actions to take when a PIR event occurs.

  – **Record:** Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.

  – **Alarm-Out:** Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.

  – **Notify:** Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.

  – **PTZ:** Moves the PTZ camera to a specific preset position when an event occurs.

  – **Event Monitoring:** Selects the cameras to monitor when an event occurs.

- In order to use the Callback feature, the NVR must be registered on the remote program.
- In case of the camera that not supports face detection event, the face detection feature will be disabled.

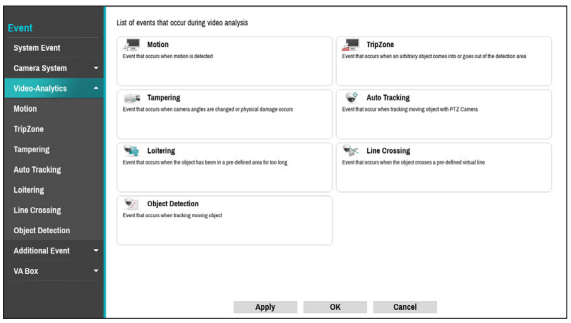
- **Ignoring Interval:** The system does not produce event log entries or issue remote notifications regarding event for the spcified time after the initial motion was detected. Set the value between 1 sec and 5 secs or choose Never.

Ignoring interval setting does not affect the motion detection recording.

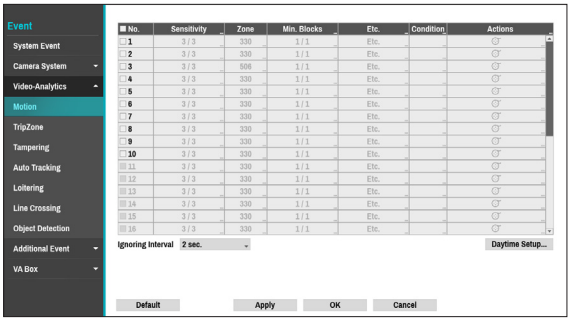
- **Use Ignoring Time**: Select **Time Setup** to specify the PIR detection ignore time. PIR detection will be disabled during the specified time frame.

Video-Analytics

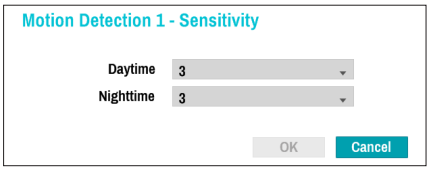
Event lists that occur through video analysis include Motion, Tampering, TripZone, Auto Tracking, Loitering, Line Crossing and Object Detection events.



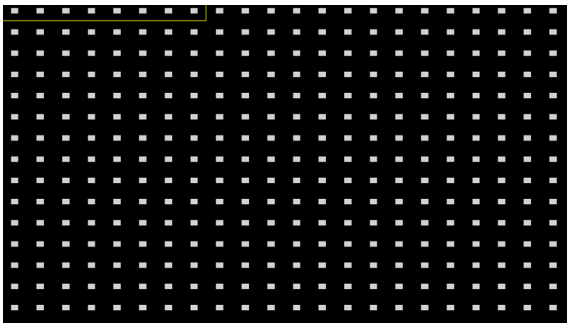
Video-Analytics_Motion



- **No.**: Select which cameras to apply Motion Detection to.
- **Sensitivity**: Set daytime and nighttime sensitivity settings between 1 (Low) and 5 (High).

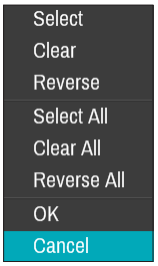


- **Zone**: Define the motion detection block.



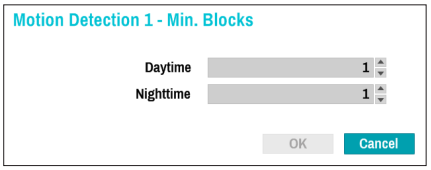
Use the remote control's arrow buttons to move the block selection window up, down, left, and right. The selection window consists of 8 blocks per row. Select/deselect individual blocks using the **Camera** buttons. You can use the mouse to drag the zone and then select, clear, or reverse the selection.

From the zone selection screen, press the ↵ button on the remote control or right-click on the mouse to open up the Zone Setup menu.



- **Select**: Confirm the block selection in the selection window.
- **Clear**: Clear the block selection in the selection window.
- **Reverse**: Clear the blocks selected within the selection window and select all unselected blocks within the selection window.
- **Select All**: Select all blocks.
- **Clear All**: Clear all block selections.
- **Reverse All**: Clear all selected blocks within the screen and select all unselected blocks within the screen.
- **OK**: Save the changes and exit the menu.
- **Cancel**: Exit the menu without saving the changes.

- **Min. Blocks**: Motion needs to be detected in more than the specified number of blocks in order to trigger a Motion Detection event. You may select a value between 1 and the number of blocks selected under **Zone** for daytime and nighttime, each.

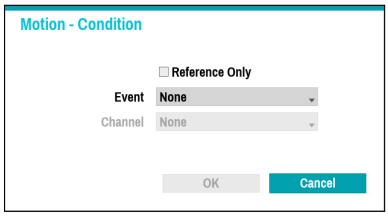


- **Etc**: Select Etc to detect an event on PTZ movement.

- **Actions**: Specify which actions to take when motion is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

In order to use the Callback feature, the NVR must be registered on the remote program.

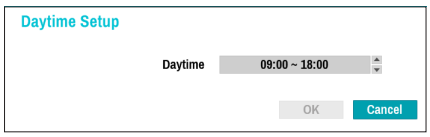
- **Motion Condition:** When a specific event occurs, you can set the condition that determines whether to operate motion according to the status of other events.



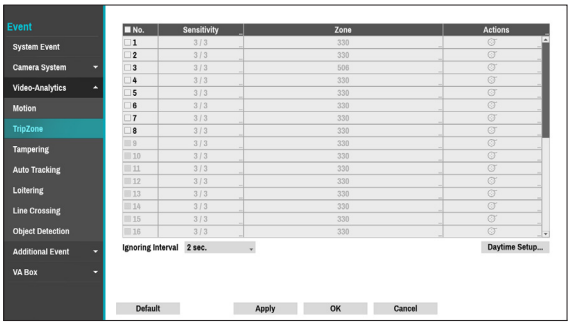
  - **Reference Only**: Set the event to be the subject of a reference.
  - **Event**: Set the reference event.
  - **Channel**: Set the reference channel.
- **Ignoring Interval**: The system does not produce event log entries or issue remote notifications regarding motion detected for the time specified after the initial motion was detected. Set the value between 1 sec and 5 secs or choose **Never**.

  Ignoring Interval does not affect motion detection recording.

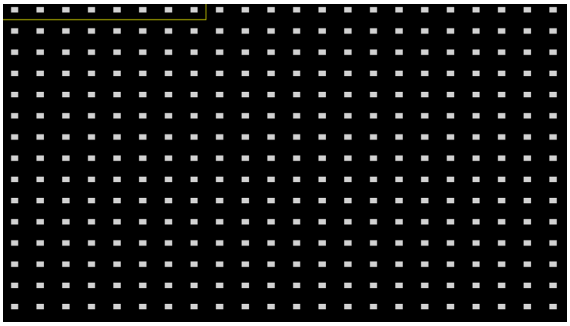
- **Daytime Setup**: Specify when daytime starts and ends. Adjust the time frame in 15-minute increments. Times outside the specified range will be assumed as nighttime by the system.



Video-Analytics_Trip Zone

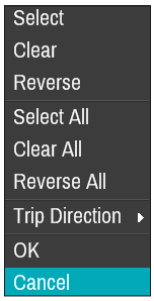


- **No.**: Select which cameras to apply Trip Zone to.
- **Sensitivity**: Set daytime and nighttime sensitivity settings between 1 (Low) and 5 (High).
- **Zone**: Define the motion detection block.



Use the remote control's arrow buttons to move the block selection window up, down, left, and right. The selection window consists of 8 blocks per row. Select/deselect individual blocks using the **Camera** buttons. You can use the mouse to drag the zone and then select, clear, or reverse the selection.

From the zone selection screen, press the ↵ button on the remote control or right-click on the mouse to open up the Zone Setup menu.



- **Select**: Confirm the block selection in the selection window.
- **Clear**: Clear the block selection in the selection window.
- **Reverse**: Clear the blocks selected within the selection window and select all unselected blocks within the selection window.
- **Select All**: Select all blocks.
- **Clear All**: Clear all block selections.
- **Reverse All**: Clear all selected blocks within the screen and select all unselected blocks within the screen.
- **Trip Direction**: Define in which direction the motion has to occur in order for it to be considered an event. Select In for movements from outside the selection area in or Out for movements from inside the selection area out.
- **OK**: Save the changes and exit the menu.
- **Cancel**: Exit the menu without saving the changes.

- **Actions**: Specify which actions to take when Trip Zone is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

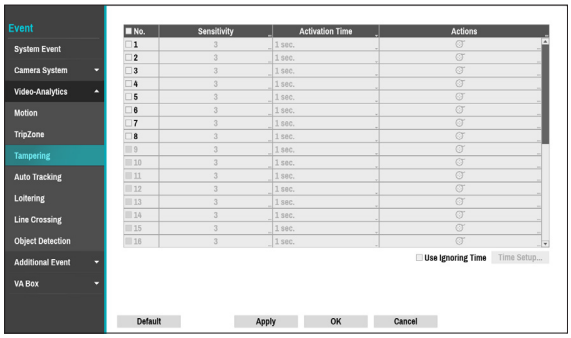
In order to use the Callback feature, the NVR must be registered on the remote program.

- **Trip Zone Ignoring Interval**: The system does not produce event log entries or issues remote notifications regarding Trip Zone events detected during the specified time following the initial Trip Zone event. Set a value between 1 sec and 5 secs or choose Never.

Trip Zone Ignoring Time does not affect Trip Zone recording.

- **Daytime Setup**: Specify when daytime starts and ends. Adjust the time frame in 15-minute increments. Times outside the specified range will be assumed as nighttime by the system.

Video-Analytics_Tampering



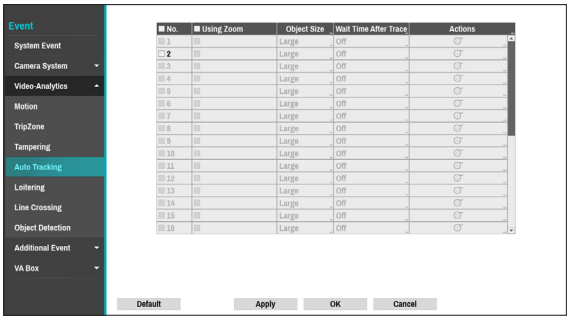
- **No.**: Select which cameras to apply Tampering to.
- **Sensitivity**: Set to between 1 (Low) and 5 (High).
- **Activation Time**: Specify how long tampering detection needs to last in order for it to be considered an event. Tampering detections that do not last for the specified duration of time will not be considered as events.
- **Actions**: Specify which actions to take when Tampering is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to **Event** or **Time & Event** mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

In order to use the Callback feature, the NVR must be registered on the remote program.

- **Use Ignoring Time**: Select **Time Setup** to specify the tampering detection ignore time. Tampering detection will be disabled during the specified time frame.

Video-Analytics_Auto Tracking

When the PTZ camera detects a moving object, the camera operates the PTZ to track the mobing object. Auto tracking event occur simultaneously when the PTZ camera tracks an object.



- **No.:** Select which cameras to apply Auto Tracking to.
- **Using Zoom**: When tracking an object, the PTZ zooms in the object.
- **Obejct Size:** Set the zoom level when using auto tracking. The larger the object size is set, the larger the object will be displayed on the screen.

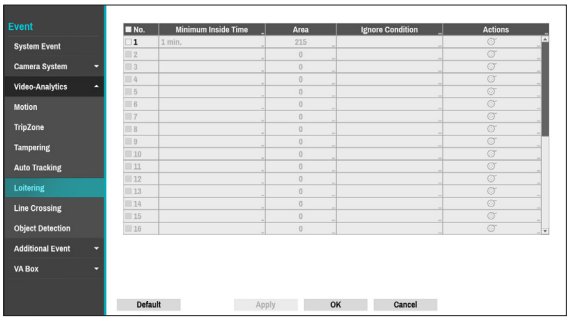
This setting is enabled only when the Zoom function is on.

- **Wait Time After Trace:** After the object tracking is completed, the camera monitors the end poistion for a set period of time and then moves the PTZ to the initial position.

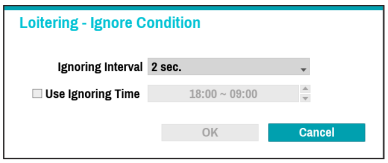
- If you do not set this function, the PTZ will not move to the initial position after auto tracking ends.
- Only some PTZ cameras support this event. Please contact the manufacturer for availability of this event.
- When setting the PTZ with an linked action in the Action tab, the camera where the event occurs cannot be set to PTZ linked action camera. For instance, when setting PTZ on the Auto Tracking-Actions(no.8) tab, you cannot set PTZ of no.8 camera.

- **Actions**: Specify which actions to take when Alarm-In is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

Video-Analytics_Loitering



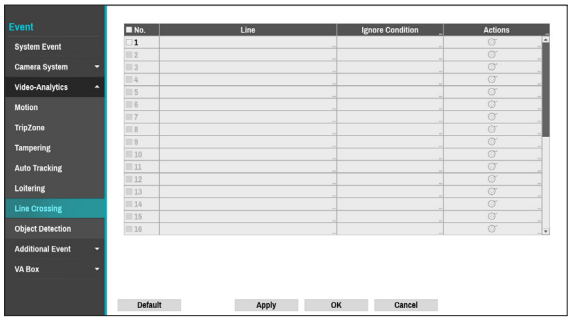
- **No.**: Select which cameras to apply Loitering to.
- **Minimum Inside Time**: An event occurs when object loiters within the area for a set period of time after the object has been detected.
- **Area**: Set the area to monitor the movement of objects.
- **Ignore Condition**: Set the condition to ignore them when the events occur.



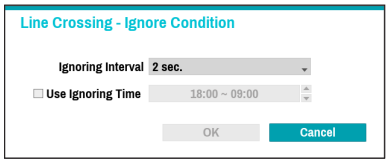
  - **Ignore Condition**: The system does not produce event log entries or issue remote notifications regarding event for the spcified time after the initial event was detected. Set the value between 1 sec and 5 secs or choose Never. **Ignore Condition** does not affect Loitering recording.
  - **Use Ignoring Time**: Loitering detection will be disabled during the specified time.
- **Actions**: Specify which actions to take when Tampering is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to **Event** or **Time & Event** mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

In order to use the Callback feature, the NVR must be registered on the remote program.

Video-Analytics_Line Crossing



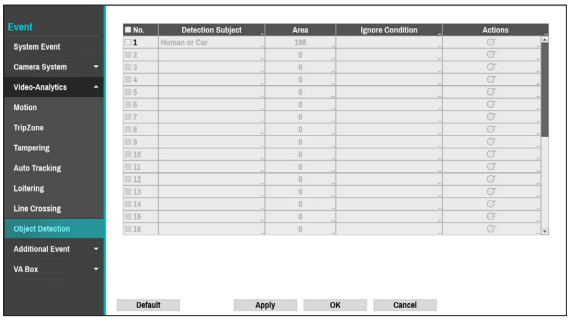
- **No.**: Select which cameras to apply Line Crossing to.
- **Line**: Set a line to raise an event when crossing the line. Line can be set to one-way or two-way directions.
- **Ignore Condition**: Set the condition to ignore them when the events occur.



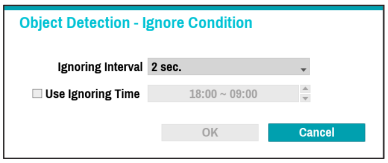
  - **Ignore Condition**: The system does not produce event log entries or issue remote notifications regarding event for the spcified time after the initial event was detected. Set the value between 1 sec and 5 secs or choose Never. **Ignore Condition** does not affect Line Crossing recording.
  - **Use Ignoring Time**: Crossing Line function will be disabled during the specified time.
- **Actions**: Specify which actions to take when Tampering is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to **Event** or **Time & Event** mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

In order to use the Callback feature, the NVR must be registered on the remote program.

Video-Analytics_Object Detection



- **No.**: Select which cameras to apply Object Detection to.
- **Detection Subject**: Set an object to be detected. You can choose either All / Human / Car / Human or Car. In case of All, objects other than people and cars are also detected.
- **Area**: Set an area to detect objects.
- **Ignore Condition**: Set the condition to ignore them when the events occur.



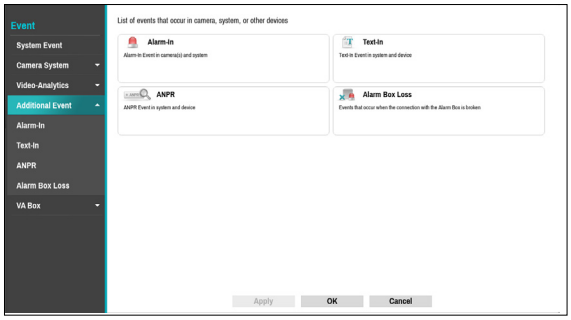
  - **Ignore Condition**: The system does not produce event log entries or issue remote notifications regarding event for the spcified time after the initial event was detected. Set the value between 1 sec and 5 secs or choose Never. **Ignore Condition** does not affect Object Detection recording.
  - **Use Ignoring Time**: Object Detection function will be disabled during the specified time.

- **Actions**: Specify which actions to take when Tampering is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to **Event** or **Time & Event** mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

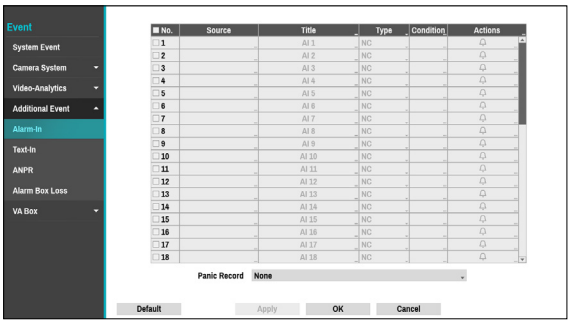
In order to use the Callback feature, the NVR must be registered on the remote program.

Additional Event

A list of events that occur in the camera, system and other device.



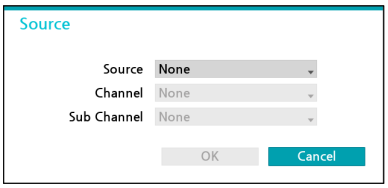
Additional Event_Alarm-In



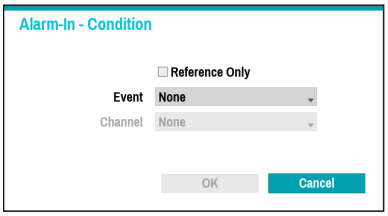
- **No.**: Enable / disable alarm-ins.

This option includes both local and network camera alarm-ins. 1 through 16 are network camera alarm-ins, whereas 17 through 20 are local alarm-ins.

- **Source**: Specify the device to use for Alarm-In event.



  - **Channel**: Set the channel of the source you set.
  - **Sub Channel**: Set the sub channel of the source you set.
- **Title**: Use the virtual keyboard to enter titles.
- **Type**: Change the alarm-in type.
- **Alarm-In - Condition:** When a specific event occurs, you can set the condition that determines whether to operate motion according to the status of other events.

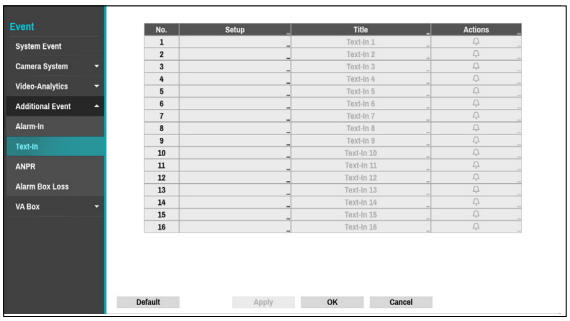


  - **Reference Only**: Set the event to be the subject of a reference.
  - **Event**: Set the reference event.
  - **Channel**: Set the reference channel.

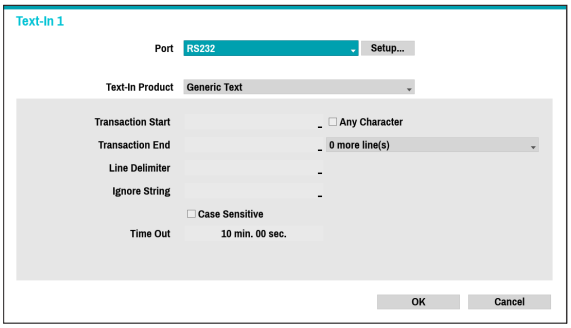
- **Actions**: Specify which actions to take when Alarm-In is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

- In order to use the Callback feature, the NVR must be registered on the remote program.
- Select **Panic Record** to specify which alarm-in channels to use. Panic Record commences when the corresponding alarm-in occurs and terminates when the alarm-in is deactivated.

Additional Event_Text-In



- **Setup**: Configure text-in devices.



- It's possible to batch configure all text-in devices with the exception for port settings.
- An influx of large amounts of text-in data from multiple channels can hinder system performance.

- **Text-In Product**: The setup window is updated so that the portion below the port setting matches the corresponding text-in device. Displayed screenshot illustrates Generic Text settings.
- **Transaction Start**: Once **Transaction Start** has been designated, the system will recognize the specified string as the beginning of a transaction. You can choose the Any Character setting. Under this setting, any character will trigger the system into recognizing the start of a new transaction.
- **Transaction End**: Once **Transaction End** has been designated, the system will recognize the specified string as the end of a transaction. Select **0 more line(s)** next to Transaction End and specify a value between 1 and 10. The system will recognize the specified Transaction End string plus the number of lines as being the end of a transaction.

- **Line Delimiter**: Designate a string to mark the end of a line. You can enter control strings by selecting ⇧ and then entering ^, followed by a letter. For example, Carriage Return is ^M and Line Feed (new line) is ^J.
- **Ignore String**: Specify a string to ignore from transaction records.
- **Case Sensitive**: Ignores case in strings designated under **Transaction Start**, **Transaction End**, **Line Delimiter**, and **Ignore String**.

Case Sensitive does not apply to control strings.

- **Time Out**: Once **Time Out** has been enabled, the system will assume the end of a transaction if no new string is entered within the specified duration of time. Select between 5 secs and 15 mins.

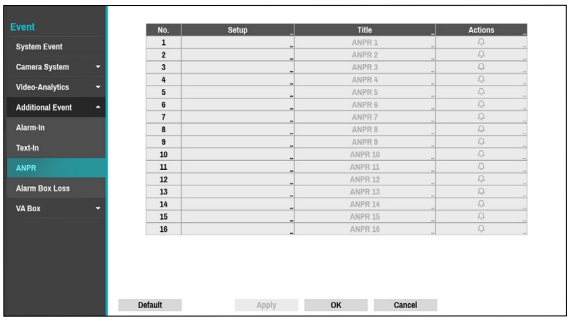
Selecting RS-232, RS-485, USB-Serial 1 through 8, or LAN 1 through 16 as the port activates the Port Setup button. Select **Setup** and configure the **Baud Rate**, **Data Bit**, **Stop Bit**, and **Parity** settings.

- If any one of LAN1 through 16 has been selected as the port, select the Port Setup button and configure the network port setting.
- If using a USB-serial port, the Text-In feature may malfunction if the USB cable is removed while the system is in operation.

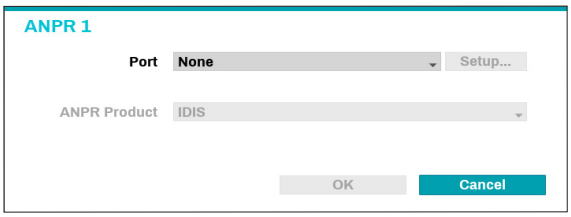
- **Title**: Designate a name for the text-in device.
- **Actions**: Specify which actions to take when text-in is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

In order to use the Callback feature, the NVR must be registered on the remote program.

Additional Event_ANPR



- **Setup:** Configure ANPR devices.

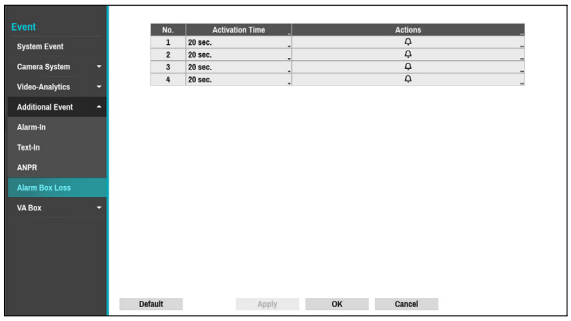


- **Port**: If any one of the LANs has been selected as the port, select the Port Setup button and configure the network port setting.
- **ANPR Product**: Configure the product to apply ANPR function.
- **Actions**: Specify which actions to take when ANPR event occurs.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify:** Configure to be notified of events by Mail, LAN1 through 5, Push, HTTP, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

In order to use the Callback feature, the NVR must be registered on the remote program.

Additional Event_Alarm Box Loss

This event occurs when alarm box device is disconnected.



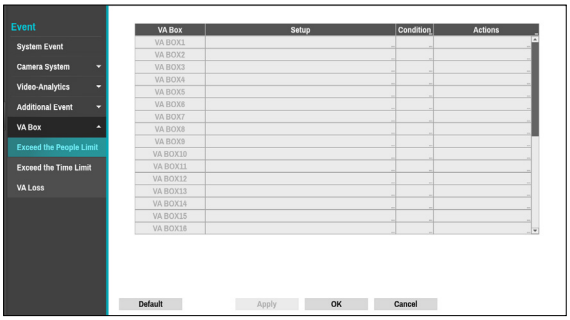
- **No.**: Select which cameras to apply Alarm Box Loss to.
- **Activation Time**: Specify how long Alarm Box Loss has to last in order for it to be considered as an event. When Alarm Box Loss is not detected for the specified duration of time, it will not be considered as an event.
- **Actions**: Specify which actions to take when Tampering is detected.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to **Event** or **Time & Event** mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify**: Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

In order to use the Callback feature, the NVR must be registered on the remote program.

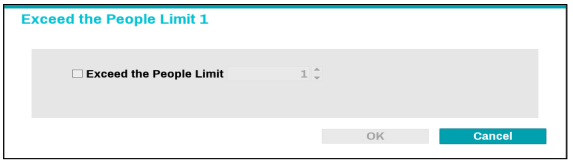
VA Box

A list of events that occur on VA Box.

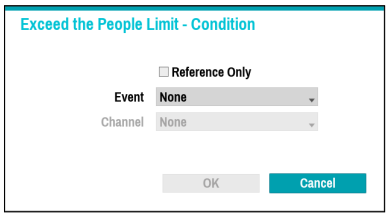
VA Box_Exceed the People Limit



- **Setup**: Configure Exceed the People Limit event.



  - **Exceed the People Limit**: When the number of selected people in a defined area (zone) exceeds the limit, an event occurs.
- **Exceed the People Limit - Condition:** When a specific event occurs, you can set the condition that determines whether to operate motion according to the status of other events.



– **Reference Only**: Set the event to be the subject of a reference.

– **Event**: Set the reference event.

– **Channel**: Set the reference channel.

- **Actions:** Specify which actions to take when an event occurs.

– **Record:** Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.

– **Alarm-Out:** Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.

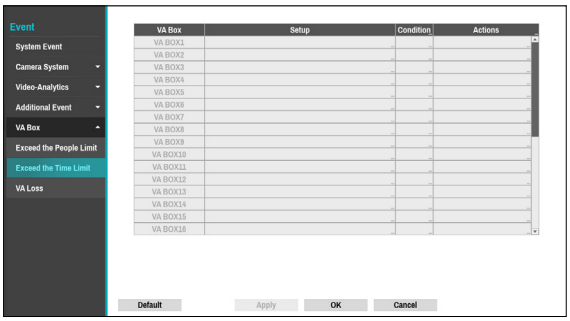
–**Notify:** Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.

– **PTZ:** Moves the PTZ camera to a specific preset position when an event occurs.

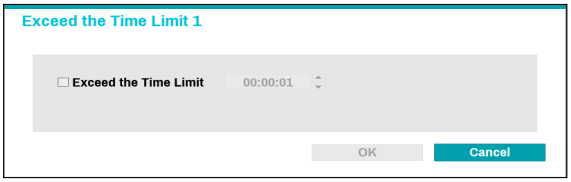
– **Event Monitoring:** Selects the cameras to monitor when an event occurs.

- In order to use the Callback feature, the NVR must be registered on the remote program.
- In order to use the Exceed the People Limit feature, Queue Management should be set on the channel.

VA Box_Exceed the Time Limit

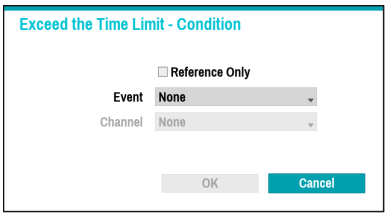


- **Setup**: Configure Exceed the Time Limit event.



– **Exceed the Time Limit**: When people stay in a defined area longer than the time set, an event occurs.

- **Exceed the Time Limit - Condition:** When a specific event occurs, you can set the condition that determines whether to operate motion according to the status of other events.



– **Reference Only**: Set the event to be the subject of a reference.

– **Event**: Set the reference event.

– **Channel**: Set the reference channel.

- **Actions:** Specify which actions to take when an event occurs.

  – **Record:** Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to Event or Time & Event mode, the selected cameras will begin linked recording when an event occurs.

  – **Alarm-Out:** Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.

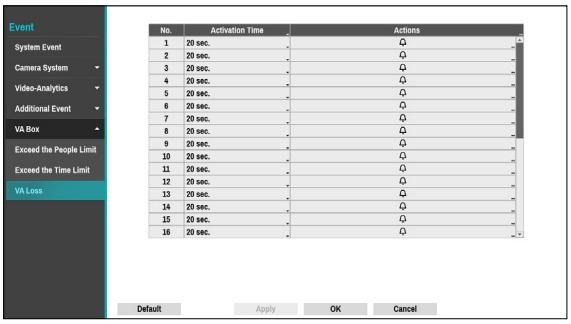
  –**Notify:** Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.

  – **PTZ:** Moves the PTZ camera to a specific preset position when an event occurs.

  – **Event Monitoring:** Selects the cameras to monitor when an event occurs.

  - In order to use the Callback feature, the NVR must be registered on the remote program.
  - In order to use the Exceed the Time Limit feature, Queue Management should be set on the channel.

VA Box_VA Loss



- **Activation Time**: Specify how long VA loss has to last in order for it to be considered as an event. When the VA loss is not detected for the specified duration of time, it will not be considered as an event.
- **Actions**: Specify which actions to take when a VA loss event occurs.
  - **Record**: Specify which cameras to begin linked recording on when an event occurs. If the schedule is set to **Event** or **Time & Event** mode, the selected cameras will begin linked recording when an event occurs.
  - **Alarm-Out**: Designate event-triggered alarm-out channels (each for the NVR and camera) and beeps.
  - **Notify:** Configure to be notified of events by Mail, LAN1 through 5, Push, FTP, and/or Alert Window.
  - **PTZ**: Moves the PTZ camera to a specific preset position when an event occurs.
  - **Event Monitoring:** Selects the cameras to monitor when an event occurs.

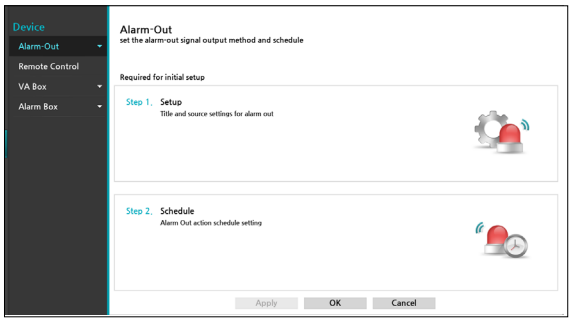
In order to use the Callback feature, the NVR must be registered on the remote program.

Device Setup

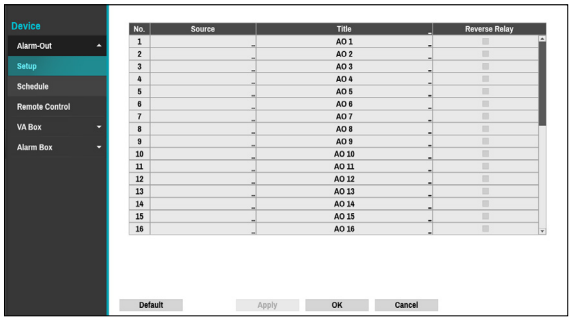
Refer to the **Menu Use on page 33** for basic information on using the Setup menus.

Alarm-Out

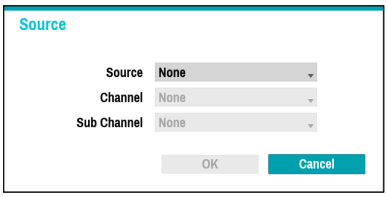
A list of events for setting up Alarm-Out.



Alarm-Out_Setup



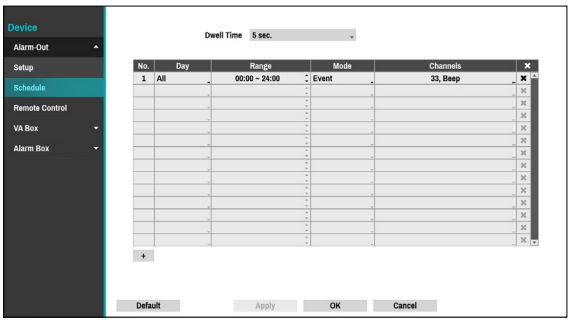
- **Source**: Specify the device to use for Alarm-In event.



  - **Channel**: Set the channel of the source you set.
  - **Sub Channel**: Set the sub channel of the source you set.

- **Title**: Designate a name for the alarm-out event
- **Reverse Relay**: Reverse the alarm-out type of the device you set at the source.

Alarm-Out_Schedule



Click the + icon at the bottom left corner of the screen to add a schedule.

You can apply different schedules for different **Day**s of the week.

Select ☒ icon to delete the schedule.

- **Dwell Time**: Select a value between 5 secs and 15 mins as the alarm-out duration.
- **Title**: Designate a name for the alarm-out.
- **Range**: Change the schedule time frame.
- **Mode**: Select **Event**, **On**, or **Off**.

Event	Generates an alarm-out when an event occurs.
On	Alarm-out is always on.
Off	Alarm-out is always off.

- **Channels**: Configure alarm-out port and beep settings.

Remote Control

- **Port**: Select **None**, **RS232** or **RS485.** Click the **Setup** button and then select the correct **Baud Rate**, **Parity**, **Data Bits** and **Stop Bits** for the device you are connecting to the NVR. You can select the device from the **Remote Control Product** list. If the **RS232** port and RS485 port are in use for PTZ control, networking or text input, the remote keyboard cannot be configured. A warning message window will appear when other devices are using the same port, such as PTZ control, networking or text input. The message warns that you cannot use another device because the ports overlap.

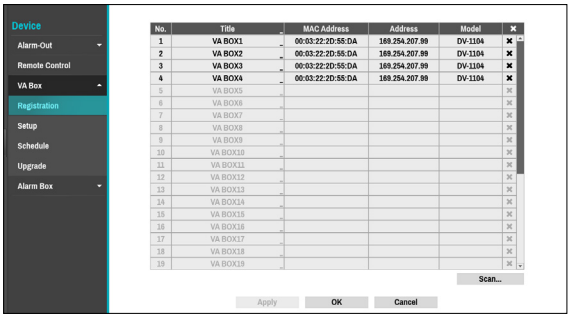
VA Box

By analyzing camera images, you can check real-time analysis results from a client program such as the IDIS Center.

VA Box can only analyze the video from the camera using H.264 and H.265.

VA BOX_Registration

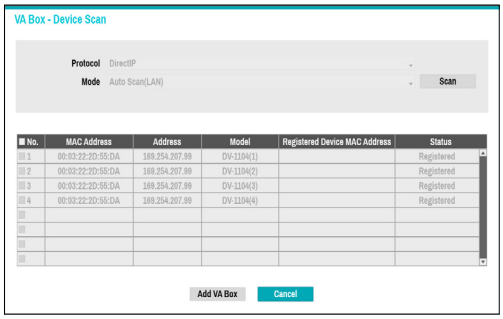
You can register VA Box at remote locales.



- **Title:** Edit the VA Box's name.
- **MAC Address**: Displays the VA Box's MAC address registered to the NVR.
- **Address**: Displays the VA Box's IP address registered to the NVR.
- **Model**: Indicates the VA Box's model.
- **Scan**: Select to scan and register the device connected to the NVR.

Device Scan

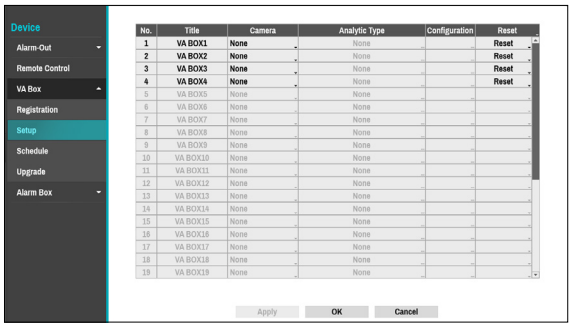
Scan the device under **VA BOX- Registration - Scan.**



- **No.**: Select the number of the registered VA Box and click the **Add Box** button to register the camera.
- **MAC Address**: Displays the scanned device's MAC address.
- **Address**: Displays the scanned device's IP address.
- **Model**: Indicates the device model.
- **Registered Device MAC Address**: Displays the MAC address of the NVR to have registered VA Box.
- **Status**: "Registered" indicates the VA Box is registered to the NVR and "Not registered" indicates the VA Box is not registered to the NVR.

VA BOX_Setup

Configure VA Box-related settings.



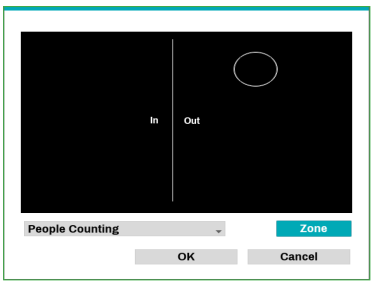
- **Title**: Displays the name of a VA Box.
- **Camera**: Select the camera to analyze the video. Only one camera can be set for each VA Box channel.

  The video analytics may not be supported depending on the model.

- **Analytic Type**: Select one among People Counting, HeatMap and Queue Management. A single video analysis function is available for each VA Box channel.

People Counting

Count the number of people passing through the line on the live screen.



Right-click on the zone setup screen to bring up the People Counting Menu.

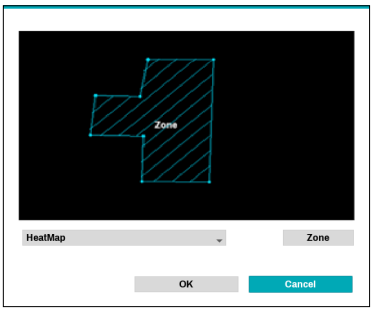
- **Crossing Line**: Set a virtual border to count the floating population.
- **Head:** Set the size of a head on the screen based on the floating population.

  A miscount may occur when a head is set too large or too small.

- **Freeze :** You can pause or resume the live screen by pressing it.
- **Save :** Save the changes and exit the menu.
- **Cancel :** Exit the setup screen without saving the changes.

HeatMap

Analyze the movement frequency in the zone of the live screen. Use the left mouse button to define the zone. Drag and drop the vertex to modify a previously set zone and click on the left mouse button to reset the zone.



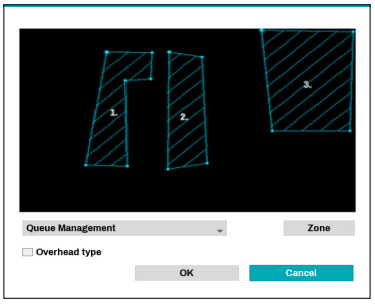
Lines cannot cross when setting the zone.

Right-click on the zone setup screen to bring up the HeatMap Menu.

- **Undo :** Return to the previously set zone.
  Save: Save the changes and exit the menu.
- **Cancel :** Exit the setup screen without saving the changes.

Queue Management

Count and manage time and the number of people who have stayed in the set zone. Use the left mouse button to define the zone. Drag and drop the vertex to modify a previously set zone and click on the left mouse button to reset the zone. You can create a maximum of five zones.



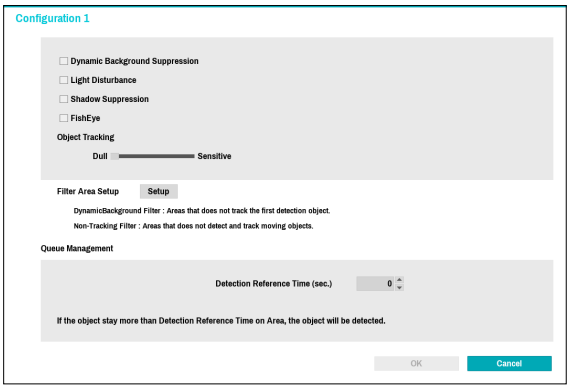
Lines cannot cross when setting the zone.

- **Overhead Type**: Set the size of a head on the screen to detect only the person.

Right-click on the zone setup screen to bring up the Queue Management Menu.

- **Head** : Set the head size of the person.
- **Freeze :** You can pause or resume the live screen by pressing it.
- **Delete** : Delete the zone selected in the image.
- **Undo :** Return to the previously set zone.
- **Edit name:** Set the name of the zone.
- **Save :** Save the changes and exit the menu.
- **Cancel :** Exit the setup screen without saving the changes.

- **Configuration**: Configure the details of the VA Box. Select the VA Box's **Analytic Type** first before you use this setup.



- **Dynamic Background Suppression :** Recognize the objects (people) even if the background is moving.
- **Light Disturbance :** Recognize the objects in the lighting conditions such as sunlight.
- **Shadow Suppression :** Set not to recognize the shadow as an object.
- **FishEye :** When the camera is tilted, recognize the lower and upper body together, not separately.
- **Object Tracking:** The object tracking slider sets the sensitivity. The closer the level is to the **Sensitive**, the more sensitively the device can track the movement.

- **Filter Area Setup**
  - **Dynamic Background Filter :** Do not detect the new object in the dynamic background filter area. When an already detected object moves into the area, it can track the movement.
  - **Non-Tracking Filter :** Do not detect the new object in the non-tracking filter area. When an already detected object moves into the area, the track will be released.

    Filter Area Setup function is only supported if the **Analytic Type** is set to People Counting or Queue Management.
  - **Cooldown :** Indicate on the screen the HeatMap information recorded before **Cooldown**.
  - **Record Duration :** Set the recording interval to save the HeatMap data.

    Cooldown and Recording function are only supported if the **Analytic Type** is set to HeatMap.

– **Detection Reference Time (sec.) :** Set the time to detect objects in the queue management zone. It detects when the objects (people) stay longer than the time frame set in the defined area.

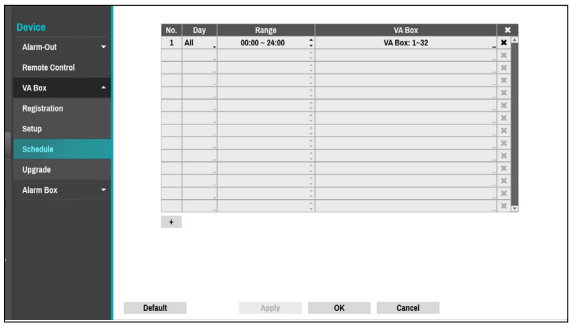
Detection Reference Time (sec.) is only supported if the **Analytic Type** is set to Queue Management.

- **Reset:** Resets the port or VA Box.
  – **PoE Reset:** Control the PoE Switch's port. This option is available when connecting to Video In/ PoE port or using a DirectIP™ PoE Switch (optional). Select PoE Reset to reboot VA Box.
  – **Soft Reset:** Reboots VA Box.

Use a client program such as IDIS Center to check the analysis results.

VA BOX_Schedule

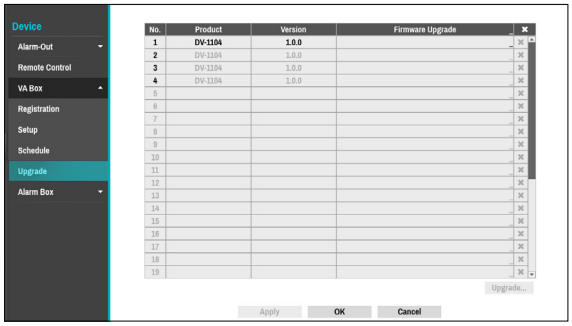
Configure the schedule of the VA Box. Select the + button on the bottom left of the screen to add a schedule. Select Day to specify the Day setting or select All. Select Scope to specify the time frame.



Deleting the schedules stops the real-time video analysis.

VA BOX_Upgrade

When using NetFS, select Firmware Upgrade. You can select USB storage or NetFS. If not using NetFS, you can select USB storage only. Select USB storage to display USB search window and then select the corresponding upgrade package from the storage device connected to the NVR's USB port. After selecting an upgrade package, select Apply to upgrade the VA Box.



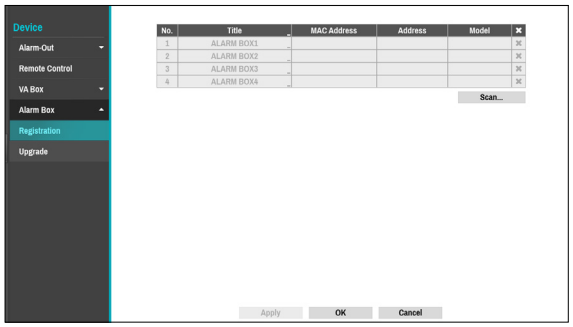
- If an upgrade attempt fails, an upgrade failure message will be displayed. Refer to **Error Code Types in the installation manual** for more details.
- The VA Box will reboot after the upgrade and then reconnect automatically.

Alarm Box

It is a device that can be registered in the NVR for the expansion of the Alarm In / Out device. (IDIS Alarm Box Model Name: AL-1112)

Alarm Box_Registration

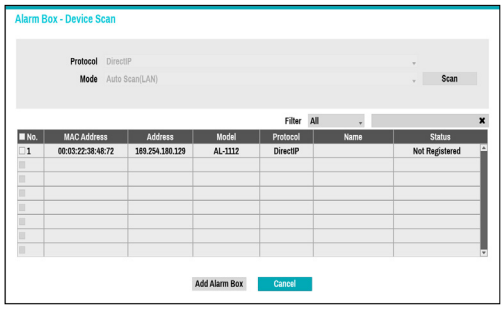
You can register the Alarm box on NVR.



- **Title:** Edit the Alarm Box's name.
- **MAC Address**: Displays the Alarm Box's MAC address registered to the NVR.
- **Address**: Displays the Alarm Box's IP address registered to the NVR.
- **Model**: Indicates the Alarm Box's model.
- **Scan**: Select to scan and register the device connected to the NVR.

Device Scan

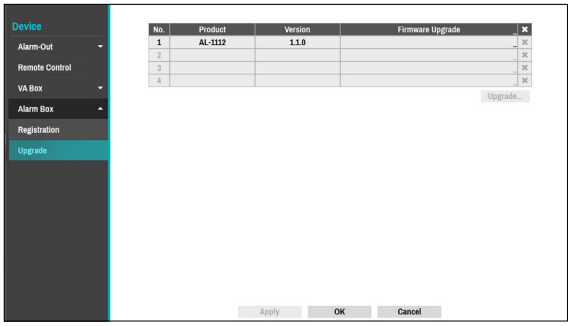
Scan the device under **Alarm Box-Registration** - **Scan**.



- **No.**: Select the the number of the scanned Alarm box and click the **Add Alarm Box** button to register the device.
- **MAC Address**: Displays the scanned device's MAC address.
- **Address**: Displays the scanned device's IP address.
- **Model**: Indicates the device model.
- **Protocol**: Displays the scanned device's protocol.
- **Name**: The "Registered" indicates the VA Box is registered to the NVR and "Not registered" indicates the VA Box is not registered to the NVR.
- **Status**: "Registered" indicates the Alarm Box is registered to the NVR and "Not registered" indicates the Alarm Box is not registered to the NVR.

Alarm Box_Upgrade

When using NetFS, select Firmware Upgrade. You can select USB storage or NetFS. If not using NetFS, you can select USB storage only. Select USB storage to display USB search window and then select the corresponding upgrade package from the storage device connected to the NVR's USB port. After selecting an upgrade package, select Apply to upgrade the Alarm Box.

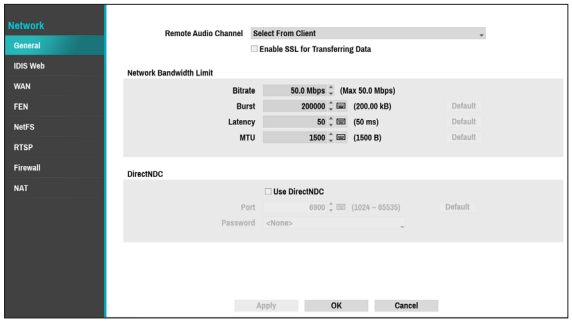


- If an upgrade attempt fails, an upgrade failure message will be displayed. Refer to **Error Code Types in the installation manual** for more details.
- The Alarm Box will reboot after the upgrade and then reconnect automatically.

Network Setup

Refer to the **Menu Use on page 33** for basic information on using the Setup menus.

General



- **Remote Audio Channel**: Transmits the selected channel's audio to the remote program. Select **Select From Client** to stream audio of the channel selected on the remote program.

Audio skipping and sync issues can occur under poor network conditions.

- **Enable SSL for Transferring Data**: Applies SSL (Secure Sockets Layer) protection on remote viewing and recording data transmissions.

  - If using the SSL feature, it will not be possible to connect to the NVR from a remote program or a network keyboard that does not support SSL.
  - Changing the SSL setting temporarily severs all remote connections to the NVR in order to apply the change.
  - This product contains content developed by OpenSSL Project for use in Open SSL Toolkit (http://www.openssl.org/).

- **Network Bandwidth Limit**: Configure the network bandwidth sent to the remote lccale.
  - **Bitrate**: Set the size of the bandwidth.
  - **Burst**: Set the burst-byte or buffer byte size.
  - **Latency**: Set the latency.
  - **MTU**: Set the maximum transmission unit (MTU).

If you configured **Network Bandwidth Limit**, the live video may not display smoothly in a remote program.

- **DirectNDC**: Use Direct Network Display Control (NDC) by clicking the **Use DirectNDC** button to toggle between On and Off. You will be able to change the settings if Use DirectNDC is enabled. DirectNDC service allows you to access the NVR and control it remotely using a PC or mobile devices via Ethernet.
  - **Port**: Configure the port number of the DirectNDC server.
  - **Password**: Configure the **Password** to connect to the NVR from a remote locale.

Up to three users at a time can access a NVR remotely via DirectNDC service.

Key	Function
←	Press the ← to move to the left in the menu. This is the same as pressing the Left arrow button on the front panel or the remote control.
→	Press the → to move to the right in the menu. This is the same as pressing the Right arrow buttons on the front panel or the remote control.
↑	Press the ↑ to move up in the menu. This is the same as pressing the Up arrow button on the front panel or the remote control.
↓	Press the ↓ to move down in the menu. This is the same as pressing the Down arrow button on the front panel or the remote control.
Enter or Return	Press the Enter or Return key to select the highlighted item or complete an entry that you have made during system setup. This is the same as pressing the Play/Pause button on the front panel or the remote control.

Character Input, Delete, BackSpace, Space	They play the same role as a keyboard input.
Esc	Press the Esc to escape the sequence.
F1	Press the F1 key to perform the panic recording . This is the same as pressing the PANIC button on the front panel or the remote control.
F2	Press the F2 key to reset all NVR outputs while the alarm has been activated including the built-in buzzer. This is the same as pressing the ALARM button on the front panel or the remote control.
F3	Press the F3 key to initiate PTZ mode. This is the same as pressing the PTZ button on the front panel or the remote control.
F4 or PaceUP/ PageDown	Press the F4 or PageUp or PageDown key to toggle between different display formats. This is the same as pressing the LAYOUT button on the front panel or the remote control.
F5	Press the F5 key to refresh the current DirectNDC screen.
F6	Press the F6 key to switch to the search mode. This is the same as pressing the Search Mode Button on the front panel or the CALENDER button the remote control.
F10 or Windows	Press the F10 or Windows key to display the Live Monitoring menu or Search menu on the screen. This is the same as pressing the MENU button on the front panel or the remote control.
Home	Press the Home key to copy video clips. This is the same as pressing the CLIP COPY button on the front panel.

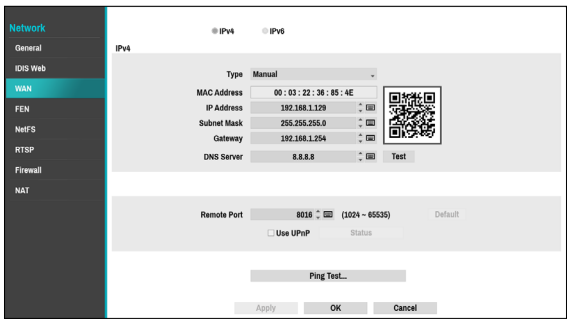
IDIS Web

- **Use IDIS Web Service**: If you wish to use IDIS Web, select **IDIS Web - Use IDIS Web Service**. Select IDIS Web - IDIS Web Port and choose a port number between 1024 and 65535. The port number can also be entered using the virtual keyboard. For more information on IDIS Web, refer to the **Part 4 - IDIS Web on page 117**.
- **Use SSL**: When connecting to IDIS Web, the way of HTTPS communication is enabled.

WAN

Designate the IP address type as **IPv4_Manual, IPv4_DHCP, IPv6_None** or **IPv6_Link-local**.

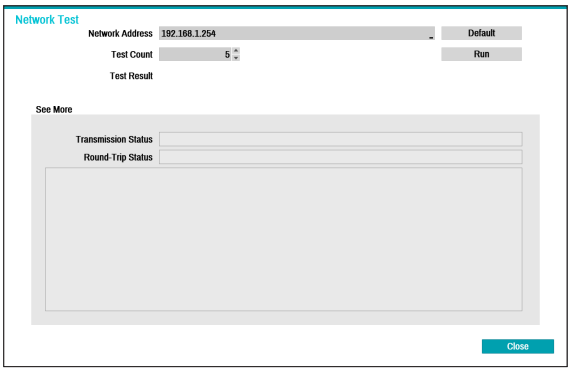
IPv4_Manual



- Set **Type** to Manual.

- **Manual** lets you configure related settings manually. Configure **IP Address**, **Gateway**, and **Subnet Mask** settings manually using the remote control's arrow buttons or the virtual keyboard.
- When registering NVR with the IDIS mobile application, you can easily enter the IP address using the QR code.

- **DNS Server**: Enter the DNS server's IP address. The IP address can also be entered using the virtual keyboard.
- **Remote Port**: The port used by the remote program to connect to the NVR. Choose a value between 1024 and 65535. The port number can also be entered using the virtual keyboard.
- **Ping Test**: Select to test the current WAN settings you made.



1. Enter the IP address of the NVR.
2. Adjust the frequency of the ping test.
3. Select **Run** to do the test. The test result is displayed.
4. Select **Close** to exit.

- If using a firewall, select Change Port to change the port number to one that is permitted by the firewall.
- Changing the port temporarily severs the NVR's remote connection.

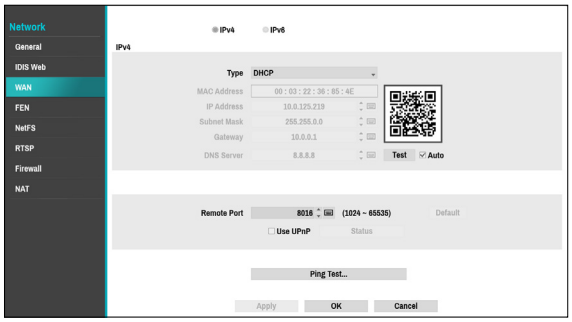
Remote point IP and port settings on the remote program must also be changed in order for it to connect to the NVR.

- To use the **UPnP** (Universal Plug and Play) feature, select **Use UPnP**. If using an IP router (or NAT), UPnP service allows the device to automatically forward the port to the NVR.

- This port is used to access a port that has a private IP address.
- In order to use the UPnP service, the IP router (or NAT) must support UPnP port forwarding and have the relevant options enabled.
- Port number cannot be changed with **Use UPnP** selected.

- **Status**: Indicates the number of the port forwarded by the IP router (or NAT) to the NVR via UPnP service.

IPv4_DHCP



Select **DHCP** and then **Save** to retrieve IP address and other network settings automatically from the DHCP server. Once the network settings have been retrieved, the NVR's current IP address is displayed in the IP Address field.

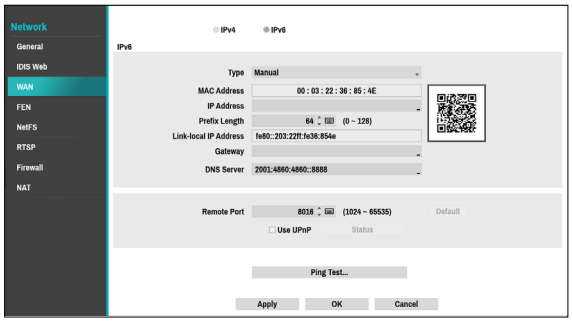
- It may not be possible to retrieve the IP address if there is no DHCP server. If this is the case, contact your network administrator.
- With DHCP, the NVR's IP address might change with each startup.
- When registering NVR with the IDIS mobile application, you can easily enter the IP address using the QR code.

There is a limit to the number of users allowed to connect remotely at the same time. Contact the service center for more information.

IPv6_None

Select **None** and then **save** to disaple IPv6 mode.

IPv6_Manual



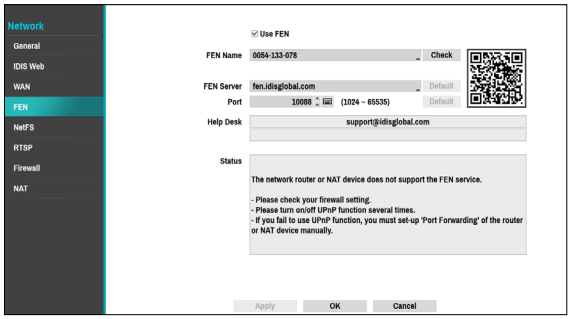
- **Manual** lets you configure related settings manually. Configure **IP Address**, **Prefix Length, Gateway**, and **DNS Server** settings manually using the remote control's arrow buttons or the virtual keyboard.
- When registering NVR with the IDIS mobile application, you can easily enter the IP address using the QR code.

IPv6_Link-local

Configure the Link-local address. It is used by nodes when communicating with neighboring nodes on the same link.

FEN

If using a dynamic IP address, FEN service makes it easy to connect to the NVR from a remote program without having to configure dynamic IP or router settings.



- **Use FEN**: Check if you wish to use FEN service.
- **FEN Name**: After entering the NVR name you wish to register on the FEN server, check and register the entered name. This is a unique NVR name that will be registered on the FEN server.

  - You will not be able to save FEN settings unless you click on the Check button next to the NVR Name field and check the entered name's availability.
  - You will be prompted with an error message if you do not enter NVR name or enter a name already registered to the FEN Server.
  - If the device name contains the #, \, and/or % symbol, it might not be able to connect to the NVR from the IDIS Web program.
  - When registering NVR with the IDIS mobile application, you can easily enter the IP address using the QR code.

- **FEN Server**: Enter the FEN server's IP address or domain name.

  If you have configured the DNS Server setting under **Network - WAN**, you can enter the FEN server's domain name instead of its IP address in the **FEN Server** field.

- **Port**: Specify the FEN server's port number.

  If using an IP router (or NAT), port configuration and other network functions will depend on the usage method of the IP router (or NAT).

- **Status**: Used to check the status of the device being registered to the FEN server.

Select **Save** after making changes to register the NVR's name to the FEN server.

If FEN has been configured correctly, the FEN server's help desk information will be displayed in the **Help Desk** field the next time you access the FEN Setup screen.

NetFS

This allows you to register NetFS sites for the following functions:

- Upload or download files to upgrade, import/export of a setup file, log export, self-diagnosis export, or file print on an FTP site. The related settings are as follows:

  : (Setup) in the live monitoring mode - System menu - General tab - Upgrade, Import, Export or SystemLog - Self-Diagnosis Export

  : (Setup) in the live monitoring mode - System menu - Self-Diagnosis Export

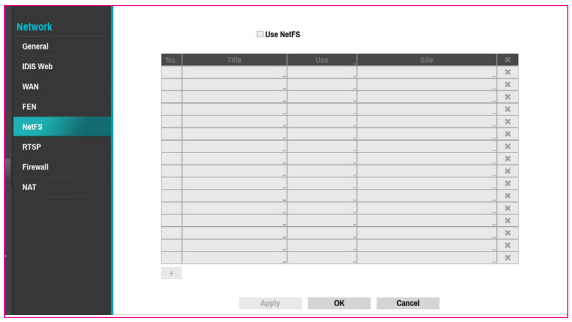
  : in the search mode - (Print)
- Upload clip-copy files to an FTP site. The related settings are as follows:

  : (Export) in the search mode - A-B Clip-Copy or Clip-Copy.
- FTP notification of an event detection (system events excluded). The related settings are as follows:

  : (Setup) in the live monitoring mode - Notification menu - FTP tab - FTP setting,

  : (Setup) in the live monitoring mode - Event menu - Actions – Notify (FTP) setting)

- It is recommended that you use FileZilla and smallFtp servers.
- This feature is supported only in the passive mode (PASV) of the FTP site.

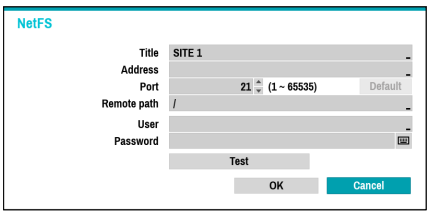


Select Use NetFS to use the **NETFS feature**. Click the + icon at the bottom of the list to add up to 16 FTP sites.

- **Title**: Check if you wish to use FEN service.
- **Use**: Select the usage for the NetFS feature.
  - N/A : Disables the NetFS feature.
  - ALL: Enables the NetFS feature.
  - Upgrade: Allows you to use the upgrade file that was uploaded to the NetFS site.
  - Setup: Allows you to import or export a setup file that was uploaded to the NetFS site.
  - System Log – Allows you to save system logs to the NetFS site.
  - Clip-Copy – Allows you to manually copy video clips or automatically copy event-detected video clips to the NetFS site.
  - Print – Allows you to save images as a PDF file to the NetFS site.
- **Site**: Enter NetFS site information.

- When you delete an FTP site from the NetFS setup screen in the Network menu, the FTP site in the FTP setup screen in notification will be deleted, too.
- When you change the usage to anything other than ALL or Clip-Copy, the FTP notification function will be disabled.
- Select the icon to delete the existing NetFS site.

Enter information about the NetFS site using the virtual keyboard and then click the **test** buton to test the current NetFS site.



- **Title:** Enter the NetFS site name using the virtual keyboard.
- **Address**: Enter the NetFS address using the virtual keyboard.
- **Port**: Configure the port to connect to the NetFS site.
- **Remote path**: Enter a folder path to the NetFS site using the virtual keyboard.
- **User** / **Password**: Enter the user and password to access the NetFS site using the virtual keyboard.
- **Test**: Test the current NetFS site settings you have entered.

RTSP

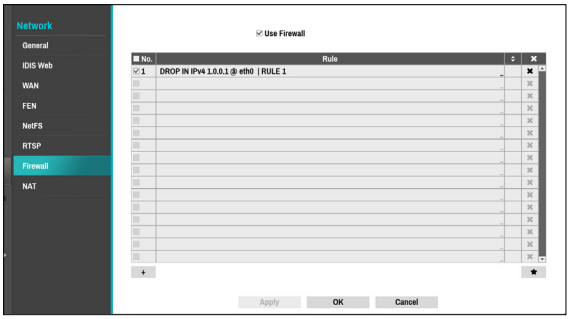
RTSP service allows you to monitor real-time using the Real-Time Streaming Protocol.

- **RTSP Port**: Set the port number of the RTSP server obtained from your system administrator.
- **RTP Port**: Set the start/end port number of the RTP server obtained from your system administrator.

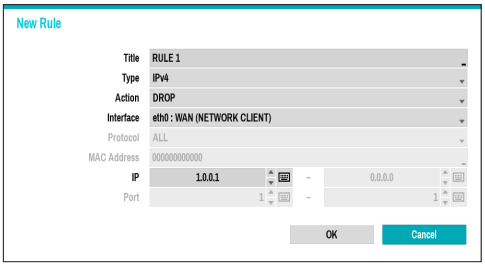
- You can access a remote NVR and monitor live video images using media players, such as VLC Player, supporting RTSP service. Start the media player on your local PC and enter "rtsp://ID:Password@IP address:RTSP port number/trackID=channel number" (e.g.: rtsp://admin:@10.0.152.35:554/trackID=1)
- Video display on certain media players may not be smooth depending on the network status.
- RTSP service might not be supported, depending on the type of media player.

Firewall

Setting up a customized firewall rule set, it allows or denies access such as specific MAC address, IP address and receiving network port of the NVR.



Select **Use Firewall** to activate firewall function. Click the + icon at the bottom of the list to set up a firewall rule.

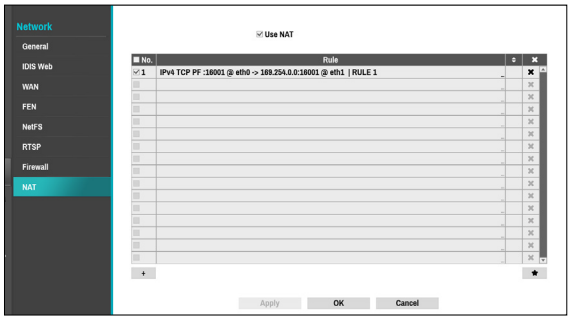


- **Title:** Edit the name of the rule.
- **Type:** Set the IP address, the MAC address or the network port.
- **Action:** Select which actions to apply this firewall rule to.
  - **Drop:** Discard the packet that matches all the specified conditions.
  - **Reject:** Deny the packet that matches all the specified conditions and send back an ACK packet telling it that the "packet was dropped" to the sender.
  - **Accept:** Allow the packet that matches all the specified conditions.
- **Interface:** Specify the ethernet interface. It refers to a WAN (Network Client) or VIN (Video-In).
- **Mac Address:** If the rule is set to MAC address, enter the sending MAC address
- **IP:** If the type of the rule is set to IPv4 or within the IPv4 scope, enter the sending IP address.
- **Port:** If the type of the rule is set to port or within the port scope, enter the receiving network port number of NVR.

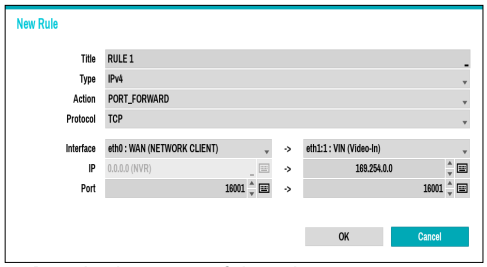
NAT

NAT function is to connect to the camera which is internal VIN network from the physically divided WAN network PC (WebSetup / IDIS Web / IDIS Center program / RTSP).

To connect to the camera WebSetup / IDIS Web / IDIS Center program / RTSP function, you need to configure the NAT rule to forward ports from NVR port number to the camera port number.



Select **Use NAT** to activate NAT function. Click the + icon at the bottom of the list to set up a NAT rule.



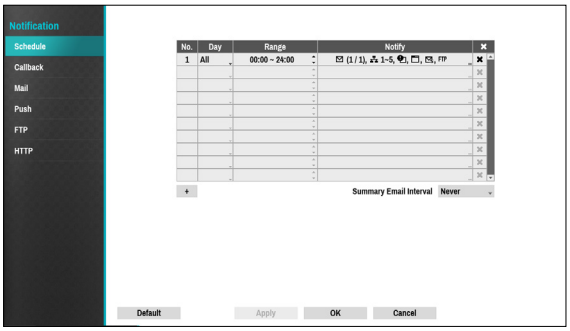
- **Title:** Edit the name of the rule.
- **Type:** Set the IP address, the MAC address or the network port.
- **Action:** Select which actions to apply this NAT rule to.
  - **PORT_FORWARD:** Allow the access by combining an external TCP/UDP port with an internal port.
- **Protocol:** Set the network protocol to apply the rule to.
- **Interface:** Specify the ethernet interface. It refers to a WAN (Network Client) or VIN (Video-In).
- **IP:** If the type of the rule is set to IPv4 or within the IPv4 scope, enter the sending IP address.
- **Port:** If the type of the rule is set to port or within the port scope, enter the receiving network port number of NVR.

It is not possible to set an interface from VIN to WAN direction. For more information on NAT, refer to **NAT Configuration Guide on page 124**.

Notification Setup

Schedule

Select the + icon at the lower left corner of the screen to add a notification schedule.



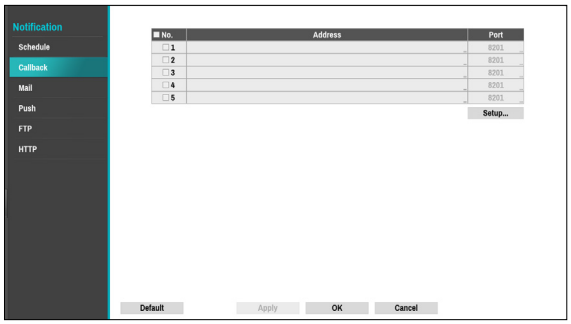
- **Day**: Add different schedules for different days of the week.
- **Range**: Change the event notification time frame.
- **Notify**: Select which notifications to generate when an event occurs. Select **Mail**, **LAN 1 through 5**, **Push**, **HTTP, FTP**, and/or **Summary**.

- In order to use the **Notification** (Callback) feature, the NVR must be registered on the remote program.
- Select the icon to delete the existing schedule.

- **Summary Email Interval**: Transmit event summary emails to a remote destination at specified intervals.

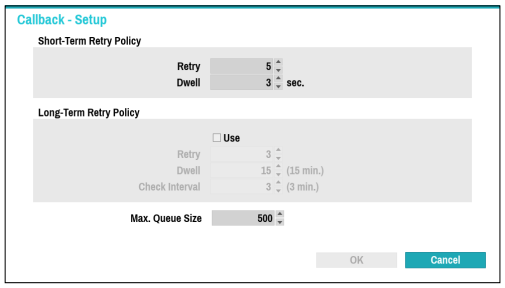
Callback

Configure Callback settings.



Enter the IP address of the receiving server and set **Retry** to between 1 and 10 in case of connection failure.

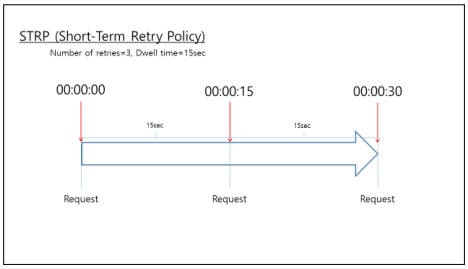
Select the Setup... button at the lower right corner of the screen to configure Callback Retry Policy.

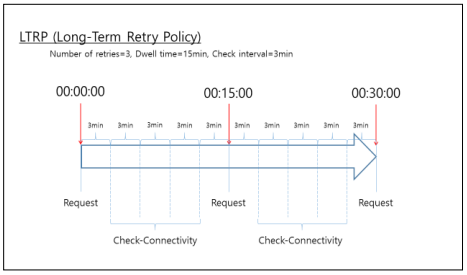


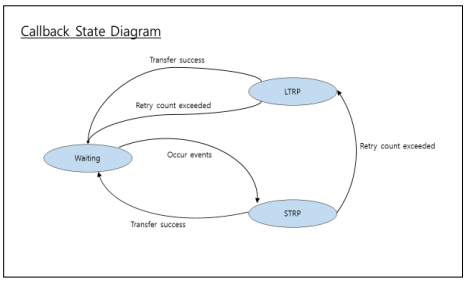
- **Short-Term Retry Policy**: Configure short-term policy to retry a callback event.
  - **Retry:** Number of times to retry a callback event.
  - **Dwell:** Wait time (in seconds) between retry attempts
- **Long-Term Retry Policy**
  - **Use:** Configure long-term policy to retry a callback event.
  - **Retry:** Number of times to retry a callback event.
  - **Dwell:** Wait time (in minutes) between retry attempts
  - **Check Interval:** Interval time (in minutes) to check failover.

  In a general wired network communication environment, not a wireless (mobile) / satellite communication environment where communications failures are frequent, long-term retry policies (LTRPs) are not required, except for particular cases.

- **Max. Queue Size** : Determine the maximum number that can be processing events. You can limit from 300 to 1000 queues. For more information on Callback Retry Policy, refer to the graph below.

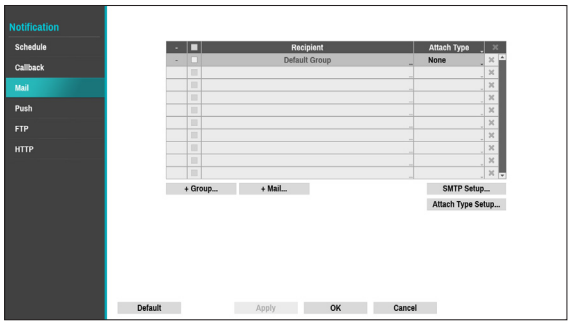




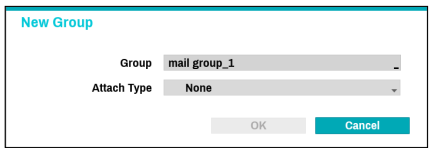


Mail

Configure Mail settings.



- **+Group**: Add a recipient group and select the image file format attached to an email.

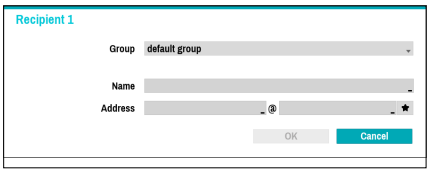


A virtual keyboard appears allowing you to enter the Group name. You can select between CBF and MP4. When selecting CBF, the NVR will attach an event detected video clip to an email. When selecting MP4, the NVR will attach the event detected image file (MP4 format) to an email.

- Be careful when interconnecting with 3rd-party solutions and systems, since email notification is a Best-effort service, not a Guarantee service.
- Email notification does not guarantee real-time due to SMTP protocol.

- **+Mail**: Add a mail recipient

Select the group name and then assign the **Group** to Recipient. Enter the recipient's e-mail address and mail server provider. Select the ★ icon to select the mail server provider from a list of registered SMTP mail server providers.



The recipient's mail address must be in the correct email format and contain the @ symbol.

Select the **Attach Type** to attach event recordings to outgoing mails to an account that belongs to that group.

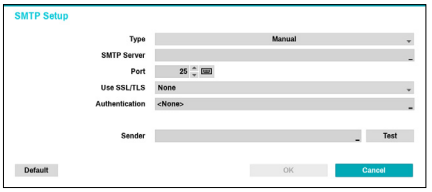
Select the ✕ icon to remove the account and added group.

SMTP Setup

Select **SMTP Setup** at the bottom right corner of the screen to configure an SMTP server.

1 Select the SMTP server **Type**.

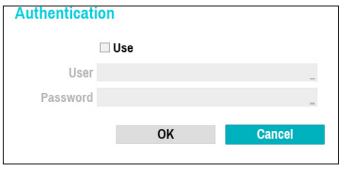
2 Enter the **SMTP Server**'s IP address or domain name and then configure the **Port** and **Sender** settings.



Default SMTP server port number is **25**. Select **Test** to send out a test mail using the current settings.
Select SS/TLS or STARTTLS, depending a method of supporting a secure connection.

- If you have configured the DNS Server setting under **Network - WAN**, you can enter the STMP server's domain name instead of its IP address in the **SMTP Server** field.
- Address entered under **Sender** must be in the correct email format and include the @ symbol.

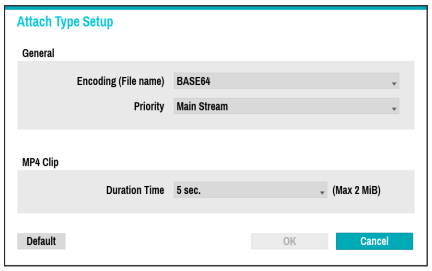
If user authentication is required by the SMTP server, select **Use** and then enter the **User** and **Password** information.



3 Select **OK** to apply and exit.

This product contains content developed by OpenSSL Project for use in Open SSL Toolkit (http://www.openssl.org/).

Attach Type Setup



- **Encoding (File name)**: Set the encoding for the name of the attached files to BASE64 or PLAIN-TEXT.
- **Priority**: Set the stream video for email and FTP attached files to Main Stream or Sub Stream.
- **MP4 Clip**: When sending an e-mail, event recordings will be attached and you can set the time to record MP4 clips.

Event recordings are attached only for the event that the camera generates.

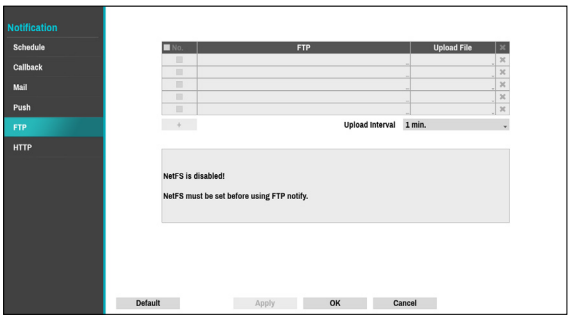
Push

Configure Push settings.

Select **Push** to use Push feature.
The Push feature sends out event-related messages to mobile phone.

Enable to receive the event occurred in NVR on the mobile phone(Android, iOS). The NVR must be registered and set in mobile phone.

FTP

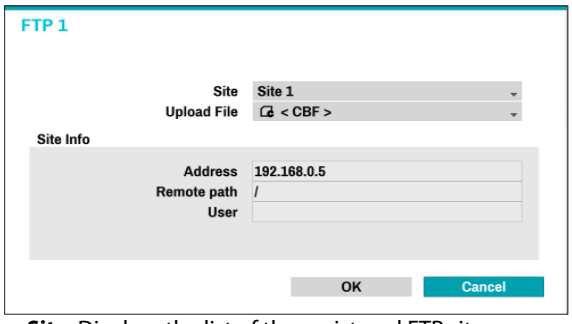


The FTP feature uploads event-detected images or video clips to the FTP site when an event occurs. Click the + icon at the bottom of the list to add an FTP site.

- **FTP**: Enter the FTP site information using the virtual keyboard.
- **Upload File**: Select the file format to be uploaded to the FTP site.

Up to 5 FTP sites can be registered.

Click the + icon at the bottom of the list to add an FTP site.

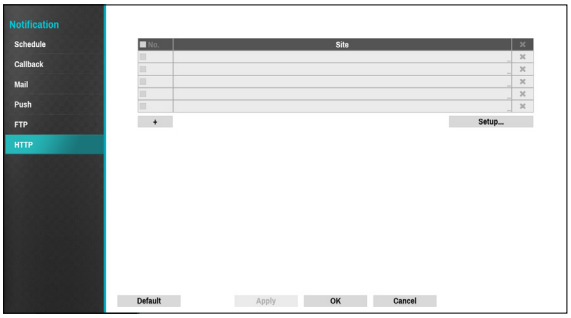


- **Site**: Displays the list of the registered FTP sites. Select an FTP site from the list. If the Use settings of the NetFS site are set to anything other than **ALL** or **Clip-Copy**, you cannot select the FTP site. You can change the Use settings or register other FTP sites in the NetFS setup screen in the Network menu.
- **Upload File**: Select between **CBF** and **MP4**. When you select **CBF**, the NVR will upload an event detected video clip to the FTP site. When you select **MP4**, the NVR will attach an event-detected video clip to the FTP site.
- **Site Information**: Displays information for the FTP site.

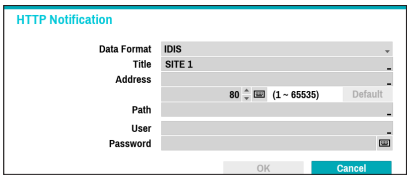
- For the FTP notification to work properly, the related settings should be configured as follows:
  - Network menu - NetFS tab - Use setting
  - Event menu - Actions - FTP setting
- When you delete an FTP site from the NetFS setup screen in the Network menu, the FTP site in the FTP setup screen in the Notification menu will be deleted, too.
- Be careful when interconnecting with 3rd-party solutions and systems, since event uploading is a Best-effort service, not a Guarantee service.
- Event upload does not guarantee real-time due to the characteristic of the feature.
- The FTP notification is not supported for system events.
- If upload fails several times, the images or video clips are deleted.
- When the NVR boots, all images and video clips are deleted even if they were not uploaded yet.

HTTP

Notify or forward the events on remote HTTP servers. The event and NVR information are sent to HTTP servers in a JSON format.



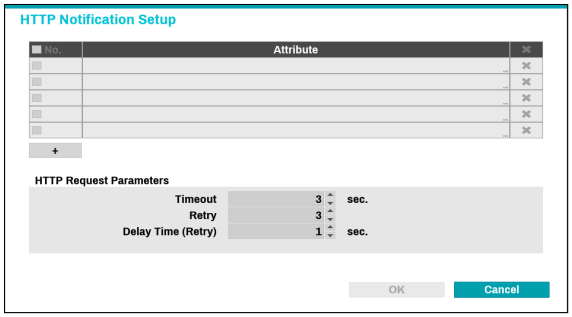
Click the + icon at the bottom of the list to enter the HTTP server information.



- **Data Format**: Set the data format of transmitted messages.
- **Title**: Enter the name of the HTTP site.
- **Address**: Enter the address of HTTP notifications.
- **Path**: Enter the path of HTTP server address.
- **User / Password**: Enter the user and password to access the HTTP site.

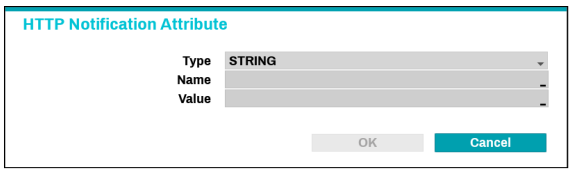
HTTP Notification Setup

An attribute and parameters must be included when sending the http requests. Click the **Setup**... icon at a bottom right corner of the window. When the following window appears, click the **+** button to set the HTTP attributes such as the type, name and value.



- **HTTP Request Parameters**: Set a specific response to an HTTP request.
  - **Timeout**: Set the maximum time allowed for connection.
  - **Retry**: Set the number of times to reconnect when a connection fails.
  - **Delay Time (Retry)**: Configure the time interval between each retry attempt (initial delay between retry attempts)

HTTP Notification Attribute



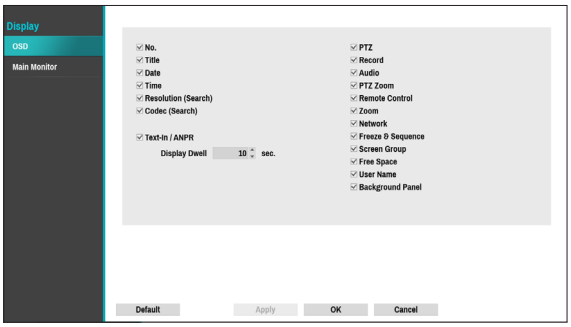
- **Type**: Select the corresponding type such as BOOL, INT32, FLOAT32 and STRING.
- **Name**: Enter the name of HTTP notification attribute.
- **Value**: Enter the value of HTTP notification attribute.

Display Setup

Refer to the **Menu Use on page 33** for basic information on using the Setup menus.

OSD

Show OSD (On Screen Display) information on the bottom of the screen.



Status

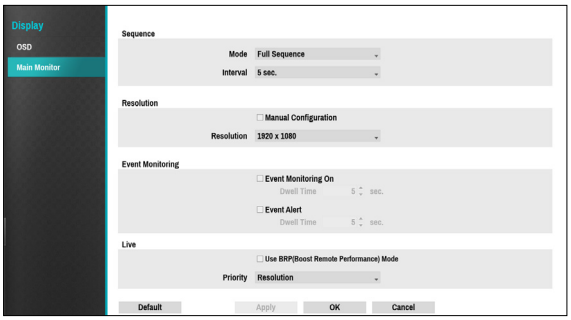
- **Date** and **Time**: Displays the date and time.
- **Remote Control**: Displays remote control receptivity.
- **Network**: Displays the icon when the unit is connected to a network via Ethernet.
- **Free Space**: Displays whether or not the NVR is in the recycle mode, and displays the available storage space when not in the recycle mode.
- **User Name**: Displays the current user logged in.
- **Background Panel**: Displays background panel at the bottom of the screen in black.

Camera

- **No.**: Displays the camera number on the upper left corner of the camera screen.
- **Title**: Displays the camera name on the upper left corner of the camera screen.
- **Record**: Displays recording and schedule icons.
- **Audio**: Displays the icon on channels generating audio.tkfkd60
- **PTZ**: Displays the icon on PTZ cameras.
- **PTZ Zoom**: Displays the zoom magnification (e.g. x2, x3, etc.)
- **Text-In / ANPR**: Displays data received from text-in and ANPR devices. Select **Display Dwell** and specify how long to display data. Data are shown on the single screen only.
- **Resolution (Search)**: Displays the recording resolution in Playback mode.
- **Codec (Search)**: Displays the codec information in Playback mode.
- **Zoom**: Displays a zoomed in state.
- **Freeze & Sequence**: Displays freeze and sequence icons.
- **Screen Group**: Displays the current screen's group.

Main Monitor

Configure monitor-related settings.



- **Mode**: Select **Full Sequence** or **Cameo Sequence**.
- **Interval**: Select between 3 secs and 2 mins. For more information on Sequence, refer to the **8 Sequence on page 25**.
- **Manual Configuration**: Set the resolution manually regardless of the resolution supported by the monitor.
- **Resolution**: Select from 3840 x 2160, 1920 x 1200, 1920 x 1080, 1680 x 1050 and 1600 x 1200.
- **Event Monitoring On**: With Event Monitoring enabled, the camera screen linking event monitoring is shown. For more information on Event Monitoring, refer to the **Event Monitoring on page 29**.
- **Event Alert**: With Event Alert selected, the red line appears on the top of the camera screen linking event monitoring when an event occurs.

  - Supported resolutions may be restricted depending on the monitor.
  - 3840 x 2160 @ 50/60Hz resolution is supported only in HDMI 2.0 monitor.
  - We recommend using 3840 x 2160 or 1920 x 1080 resolution.
  - If you use a VGA monitor as the main display, we recommend that you use a resolution of 1920 x 1080 or below.
  - HDMI deep color feature is not supported.

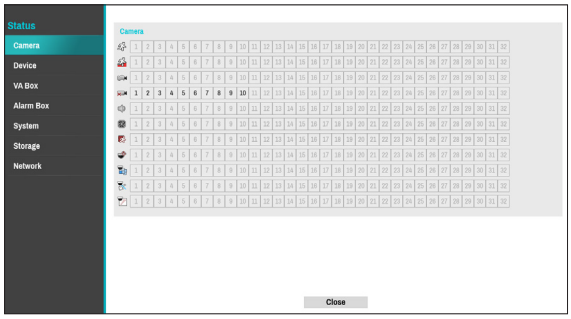
- **Use BRP(Boost Remote Performance) mode** : With BRP mode on, the camera full screen does not display in live mode and the network bandwidth can limit to 100Mbps.
- **Priority** : Select the camera's live stream priority, either resolution or frame rate.

Status Setup

Refer to the **Menu Use on page 33** for basic information on using the Setup menus.

Camera

This screen displays an overview of camera events. When an event occurs, the corresponding channel flashes for 5 seconds.

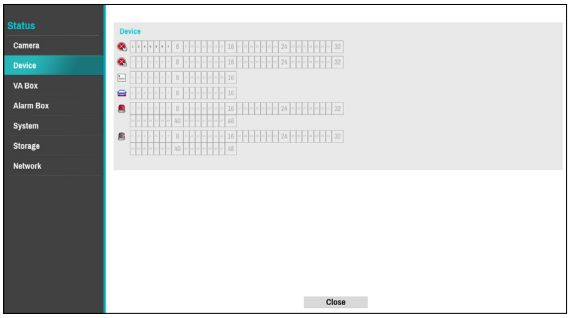


Event Types

	Motion		Trip Zone
	Tampering		Video Loss
	Audio Detection		Fan Error
	PIR		Auto Tracking
	Loitering		Line Crossing
	Obejct Detection		

Device

This screen displays an overview of device events. When an event occurs, the corresponding channel flashes for 5 seconds.



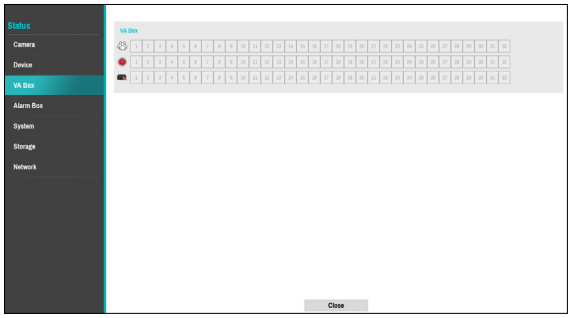
Event Types

	Recording Fail		Text-In
	ANPR		Alarm-In
	**Recording Fail of Main Stream		**Recording Fail of Sub Stream
	Check Alarm-In		

** The two events are supported by some products only.

VA Box

This screen displays an overview of VA Box events. When an event occurs, the corresponding channel flashes for 5 seconds.

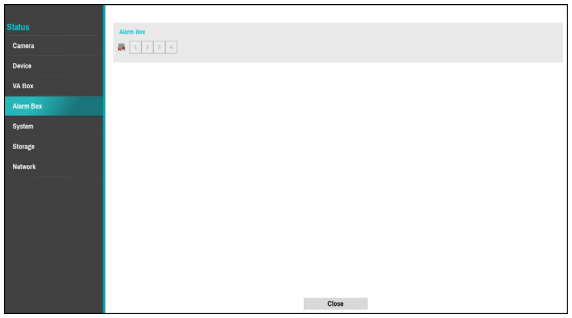


Event Types

	Exceed the Time Limit		Exceed the People Limit
	VA Loss		

Alarm Box

This screen displays an overview of Alarm Box events. When an event occurs, the corresponding channel flashes for 5 seconds.



	Alarm Box Loss		

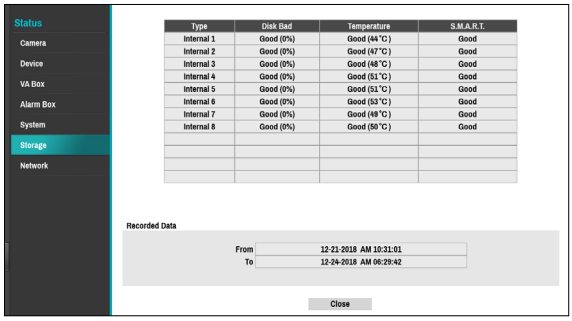
System

This screen displays an overview of system events. When an event occurs, the corresponding channel flashes for 5 seconds.

- **Panic Record**: Displays event status based on current Panic Record status.
- **Check Recording**: Displays event status based on **System Monitoring** settings. For more information, refer to the **Video-Analytics_Motion on page 67**.
- **Disk Almost Full**/**Disk Full**: If the storage device is not in **Recycle** status, event status is displayed when the amount of disk space specified under **System Monitoring** is reached and when the disk becomes 100% full. For more information, refer to the **Video-Analytics_Motion on page 67**.
- **Disk Partially Almost Full / Disk Partially Full:** If the storage device is not in Recycle status, event status is displayed when a disk in one of multiple quota groups reaches a specified capacity or disk usage reaches a specified capacity under System - Monitoring. For more information, refer to the **Mirror Configuration Error on page 42**.
- **Fan Error**: Event is indicated when the cooling fan cannot reach a certain RPM or fails for longer than 50 seconds.
- **eSATA Disconnected**: Event status is displayed when an eSATA device is abruptly disconnected.
- **Disk Config Change**: It will be highlighted when the NVR reboots after the hard disk drive has been replaced.
- **RAID Broken:** Event status is displayed when the mirroring configuration is broken.
- **Degrade:** Event status is displayed when one of the HDDs composing mirroring is in error.
- **No Storage Found:** It will be highlighted when no recordable storage device has been found.

Storage

Indicates each disk's status.



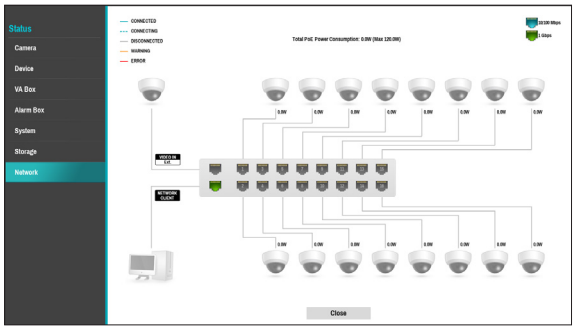
Configure Disk Bad and Disk Temperature settings under **Setup** > **System** > **Monitoring**.

Disk Bad	Not Formatted	A disk that has never been used before.
	Good	• Disk performing normally. • If the HDD is partially damaged, indicates the bad sector percentage.
	Error	• If the HDD's bad sector ratio is higher than as designated by the user. • Generates a system event.
Temperature	N/A	Unable to detect the disk's temperature.
	Good	Operating within normal temperature range.
	Bad	• Disk temperature higher than as designated by the user. • Generates a system event.
S.M.A.R.T.	N/A	A disk that does not support S.M.A.R.T.
	Good	A disk with normal S.M.A.R.T. status.
	Bad	A disk with abnormal S.M.A.R.T. status. Possibility of damage within 24 hours.

- Check all data's storage time information under **Recording Data**.
- Clicking the temperature, S.M.A.R.T can check the each HDD information.

Network

This page provides a complete overview of the network status in real-time.



Information shown include camera connection status, LAN port link status, power consumption, number of connected clients, and network connection info.

Camera Connection	indicates the camera is connected. indicates the camera is not connected. Clicking the image displays the camera's channel number. Clicking the image displays status information of the device connected to the NVR.
Network Switch	indicates a network switch is connected to the LAN port and shows how many cameras are connected. Clicking the image displays the camera's channel number. Clicking the image displays status information of the device connected to the NVR.
Video Encoder	indicates a video encoder is connected to the LAN port and shows how many cameras are connected. Clicking the image displays the camera's channel number. Clicking the image displays status information of the device connected to the NVR.
Video Analytics Box	indicates a video analytics box is connected.
Alarm Box	indicates an alarm box is connected.
LAN Port Link	indicates a camera or a network switch is connected. indicates neither is connected.
LAN Port Speed	indicates 10/100Mbps and indicates 1Gbps.

Power Consumption	If receiving power from the NVR, the actual amount of power consumed by each camera is indicated under each camera icon. Total power consumption is shown at the top of the screen in the following format: **[PoE Power Consumption: 27.0W (Max 120.0W)]** Ports 1 through 16 in PoE-enabled products support PoE. VIDEO IN Ext. (VIDEO IN Ext.) and NETWORK CLIENT (NETWORK CLIENT) ports do not support PoE.
Number of Connected Clients	Indicates whether there are clients connected to the NVR via an external network and how many clients are connected. indicates at least one client is connected. indicates no client is connected.
Network Connection Info	Indicates network connection statuses (connected, connecting, disconnected, and connection error) using following lines: (WARNING: When PoE switch is connected and network bandwidth is less than 100Mbps) (ERROR: When PoE switch is connected and network bandwidth is less than 10Mbps)

Part 3 - Search

Time-Lapse Search

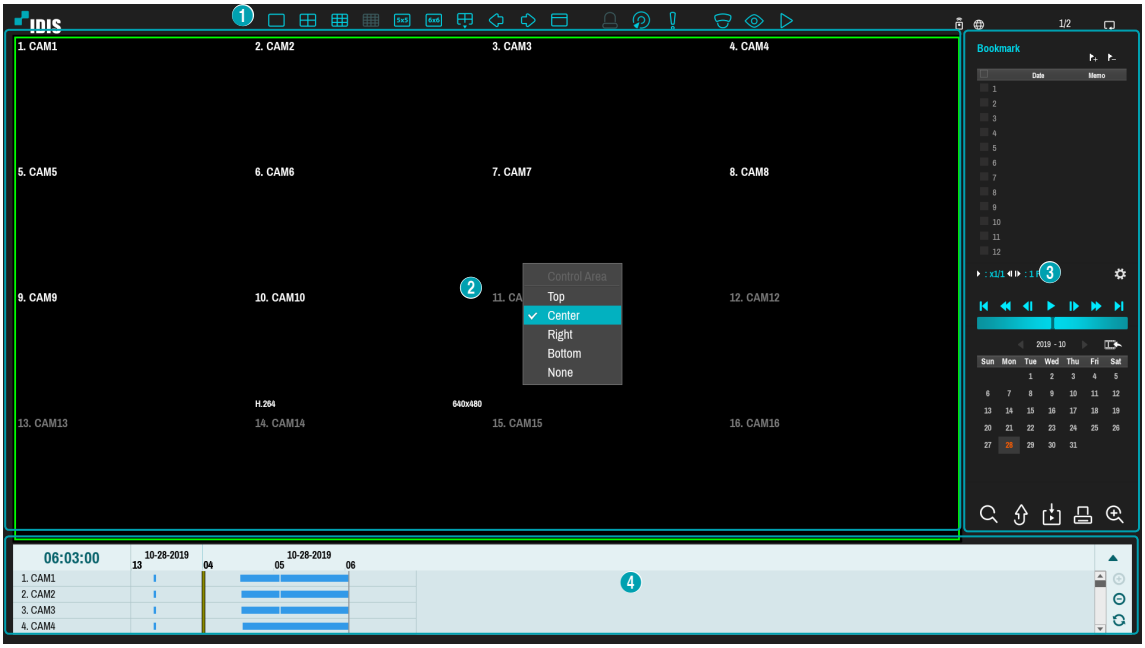
While in Live mode, select the **Search Mode** icon and select **Time-Laspe Search**, **Event Log Search** or **Thumbnail Search**.

1 Select **Menu** while in Search mode to display a menu from which you can select **Control Area**.

2 Press **Menu** once more to move the **Control Area**.

3 In 2 seconds after moving the **Control Area**, the **Control Area** becomes selected and the corresponding menu disappears.

4 After selecting the desired **Control Area**, use the arrow buttons on the front panel or the remote control to select the menus and options. Search menu can also be displayed by placing the mouse cursor on the upper portion of the screen.



The **Control Area** consists of **Top**, **Center**, **Right**, **Bottom**, and **None**.

① **Top**: Activates top Search menu. Use the arrow buttons to select an option.
② **Center**: Activates the middle screen section. Use the arrow buttons to select a camera.
③ **Right**: Activates the control buttons on the right. Use the arrow buttons to select Bookmark, Play, Calendar Search, and other control buttons.
④ **Bottom**: Activates the bottom record table. Use the arrow buttons to select a record table.
⑤ **None**: Activates the arrow and playback buttons as a recording function.

The error OSD "OUT OF CODEC MEMORY" is displayed when codec decoder is out of memory. The solution is as follows.

1. Select the video channel to change the screen layout to a single screen.
2. Alternatively, change the screen layout to the channels with fewer cameras. If there is no video to be played in the layout, use **Edit Group** function to change the camera position.
3. Or change to live mode and re-enter search mode.

Search Menu

① **Layout**

Used to change the screen layout to single screen, corridor format, 2x2,1+5, 1+7, 3x3, 1+12, 4x4, 5x5, or 6x6.

② **Previous/Next Group**

Loads the previous/next screen group.

③ **Display**

- **Full Screen On:** Display the screen with a 16: 9 aspect ratio. When you place the mouse at the bottom of the screen, the interface screen releated to playback will appear. Refer to detailed explanations on the next page.
- **Full Screen OFF:** Display Time-Lapse Seacrh screen.
- **Camera OSD On/Off**: Enables/disables the camera OSD feature.
- **Status OSD On/Off**: Enables/disables the status OSD feature.
- **Aspect Ratio On/Off**: Setting On displays video on the camera screen in its original ratio.

④ **Alarm**

Pressing this button while the alarm has been activated resets all NVR alarm outputs, including the built-in buzzer.

⑤ **Database**

- **Record**: Search recording data contained in the main recording device.
- **Record Protection:** Protect the recording data even if overwriting is enabled.
- **Other**: Search data recorded while disks used in other systems were connected.

⑥ **Panic Record**

Use the Panic Record feature.

⑦ **Camera**

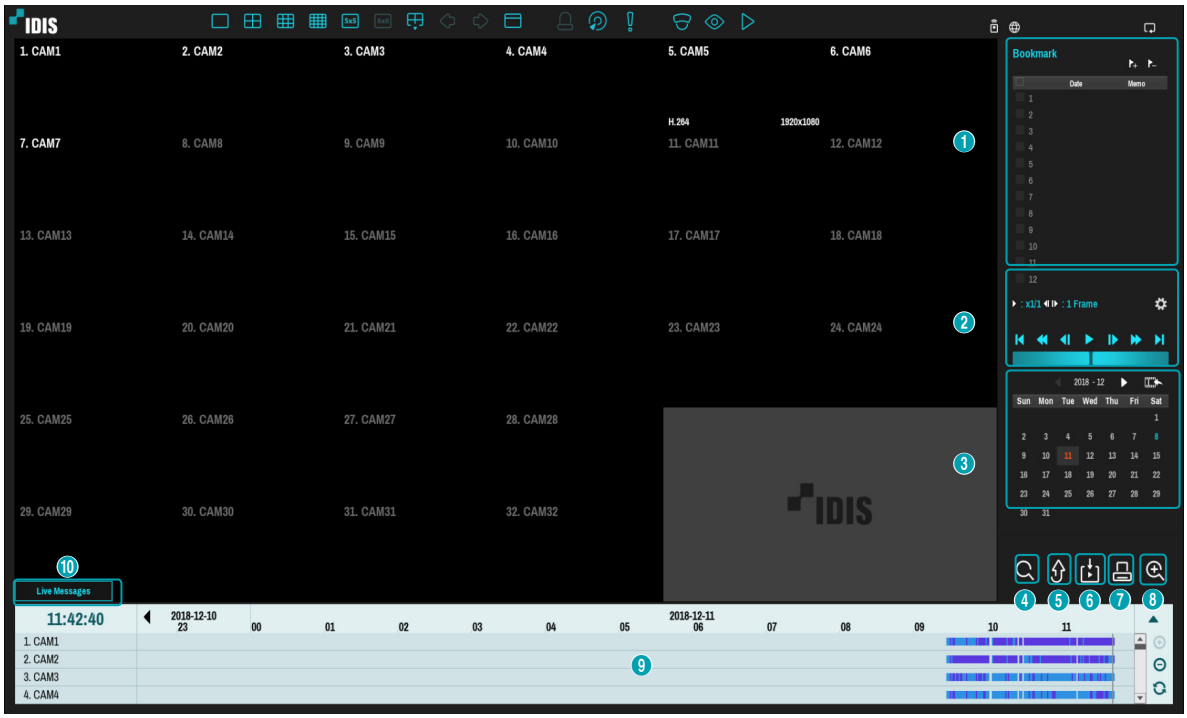
Select a camera channel and display it as a single screen.

⑧ **Live Mode**

Activates Live mode.

⑨ **Search Mode**

Search by changing Time-Lapse Search and Event Log Search and Thumbnail search.



① Bookmark

Select the icon to add a bookmark to the current playback position.

Select a bookmark from the Bookmark setup window on the right side of the Time-Lapse Search mode screen to move to the registered playback position.

Select Bookmark list and then the icon to delete the corresponding bookmark.

The maximum number of bookmarks that can be saved is 12.

② Playback Controls

Play and scan through video recordings. Playback controls have the same functions as their remote control counterparts.

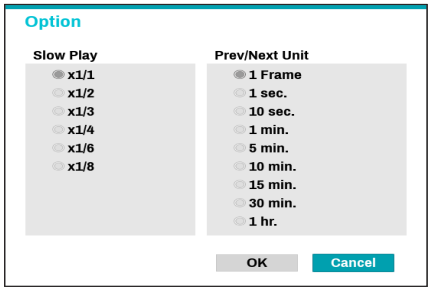
- **Jog Shuttle**

  Adjust the playback method and speed.

  Jog shuttle's vertical indicator indicates the current playback direction and speed. Vertical indicator placement to the right of the center means the video is being played back in the forward direction. Placement to the left means the opposite. Farther away the vertical indicator from the center, faster the playback speed. Click and drag the vertical indicator to adjust the playback speed. Releasing the mouse button returns the vertical indicator to the center and stops video playback.

- **Option**

  Clicking icon to set Slow Play and Previous/Next Unit.



- **Slow Play**

  Search the playback screen at low speeds. Select the desired playback speed (x1/1, x1/2, x1/3, x1/4, x1/6, x1/8) and then select Play.

- **Prev/Next Unit**

  Set the movement range of the previous and next unit. Select the desired unit (From 1 Frame to 1 hour).

③ Calendar Search

Use the calendar to search for video recordings by specific dates.

Dates containing video recordings are highlighted in light blue. Selecting a date containing video recording data loads the earliest recording from that date (paused state). Selected date is highlighted in orange. Clicking icon on the right side of the calender changes the calendar to the date of the current playback screen.

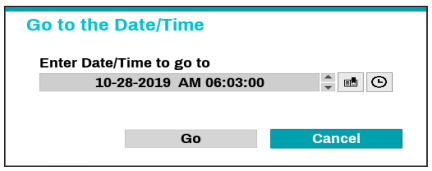
④ Event Search

Selecting Event Search provides Motion Search and Text-In Search options.

- **Motion Search**: Perform Motion Search. (This function supports only in single screen.)
- **Text-In Search**: Perform Text-In Search.
- **ANPR Search**: Perform ANPR Search.

⑤ Move

Search video recordings based on date and time. Specify the date and time and then select Go to jump to the corresponding video recording.



Select a (bookmark) button on the right side to move to the saved bookmark position.

⑥ Clip-Copy

- **A-B Clip Copy**: Designate a start point and an end point and copy the data in between.
- **Clip Copy**: Opens up the Clip Copy Setup window for designating points A and B.

⑦ Print

Save the current image as a .pdf file.

⑧ Zoom

Zoom in.

⑨ Record Table

Display the current channel's recording information.

Recording date and time are shown on the top of the search window. The gray indicator line on Record Table indicates the current playback position. Use the arrow buttons on the remote control to move the current playback position in units of individual sectors. Alternatively, use the mouse to jump to the desired playback position.

- Farther back the data is on the record table, the more recent it is.
- If the system's clock is changed to a previous date and time, it is possible for multiple recordings with the identical time stamp to exist. Overlapped segments are highlighted in yellow.

Selecting ▲ or ▼ on the upper right portion of the Time-Lapse search window changes the size of search window and displays all or minimum channels.

Using the scroll, the information of other channels which is not shown can be checked in the minimum size of Time-Lapse search window.

Select ⊕ (zoom-in) to compose recording data in 1-minute segments and select ⊖ (zoom-out) to compose recording data in 3-minute segments. Selecting zoom-out displays more time in one screen than zoom-in screen.

If recording from points in time prior or after the time frame displayed on the screen is available, scrolls appear on both ends of the date and time information line. Scroll using the arrow buttons on the remote control or by dragging with the mouse to check recording data.

Display the latest update recording information when selecting ⟳ (Refresh).

Recording Data Bar Colors

Blue	Time Lapse Recording
Purple	Event Recording
Yellow	Pre-Event Recording
Red	Panic Recording
Green	- Faulty recording due to a temporary disruption in device connection - Smart Failover Recording

⑩ **Live Messages**

Display a message to make it easier for users to recognize critical events and system information that happen in real time.

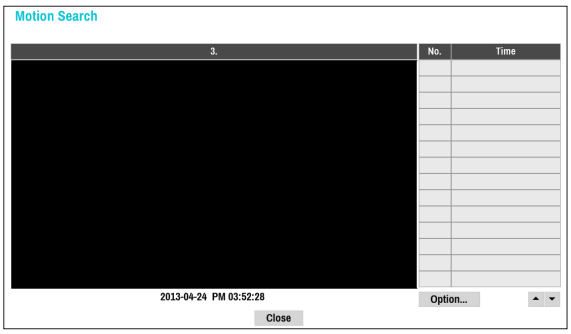
Context Menu

Select the Menu button or right-click on the Camera screen to access the context menu.

- **Zoom**: Zoom in.
- **Audio**: Enable/disable audio. Audio playback of the selected camera is available in full screen mode only.
- **Dewarping:** Dewarp the fisheye camera image (Only some device types are supported).
- **Show**/**Hide Text-In**: Show/hide text-in information contained in the recording.
- **Edit Group**: Rearrange the split screen layout.
- **Live Messages**: Receive the message in real time
- **Show**/**Hide ANPR**: Show/hide ANPR information contained in the recording.

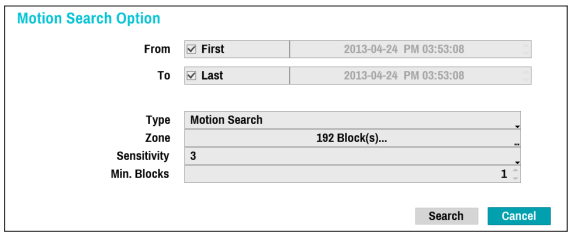
Motion Search

Select **Motion Search** from the Search menu to bring up the Motion Search Setup window.



Motion Search cannot be performed while using a split screen layout. Select Single Screen mode.

Select **Option...** to configure Motion Search options.



- Select **First** under **From** and **Last** under **To** to search the recording from start to finish. Alternatively, you can uncheck the **First** and **Last** options and specify the search time frame manually.
- **Type**: **Motion Search** looks for motion in the selected area by comparing individual frames against their preceding frames. This means slow and gradual movements, no matter how long they persist, will not be recognized. In contrast, **Museum Search** looks for changes in the specified area by using the **From** frame as a reference. Museum Search, therefore, recognizes even minute deviations from the original **From** frame.
- The **Zone** setting can be configured in the identical manner as the Zone setting under System Setup - Motion Detection. For more information, refer to the **Video-Analytics_Motion on page 67**.

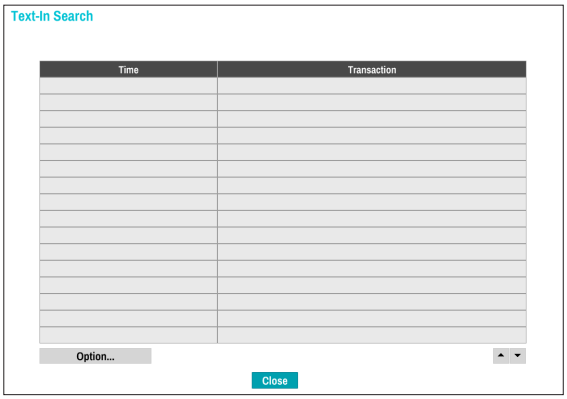
  Museum Search may not function properly if the edge of the object is included in the **Zone**. For more accurate search results, set the inside of the object's edge as the detection zone.

- **Sensitivity**: Set to between 1 (Low) and 5 (High).
- **Min. Blocks**: The **Min. Blocks** option is available with Motion Search only.

Once all the options have been configured, select **Search**. Select search results entry to display the video recording on the left. To play the recording, exit the setup window by selecting **Close**.

Text-In Search

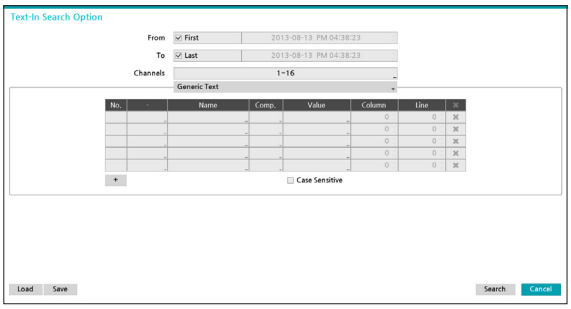
Select **Text-In Search** from the Search menu to bring up the Text-In Search window.



Select a **Transaction** to display the video recording that corresponds to the selected time and date (paused state).

Text-in information is superimposed on the screen at normal playback speed. The information is not shown under any other playback speed.

Select **Option...** to configure Text-In Search options.

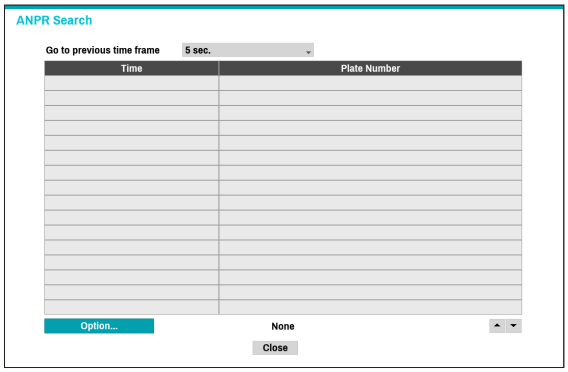


- Select **First** under **From** and **Last** under **To** to search the recording from start to finish. Alternatively, you can uncheck the **First** and **Last** options and specify the search time frame manually.
- **Channels**: Select a channel.
- Select **Text-In Device** to select a device type.
- **+ Button**: Add a search variable.
- **Case Sensitive**: Configure case sensitivity.
- **Load**: Retrieve stored search option settings.
- **Save**: Save the current search option settings.

Once all the options have been configured, select **Search** to begin the search and return to the **Text-In Search** setup window.

ANPR Search

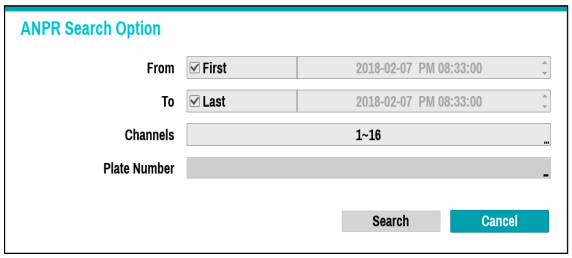
Select **ANPR Search** from the Search menu to bring up the ANPR Search window.



Select a **Plate Number** to display the video recording that corresponds to the selected time and date (paused state).

ANPR information is superimposed on the screen at normal playback speed. The information is not shown under any other playback speed.

Select **Option...** to configure ANPR Search option.



- Select **First** under **From** and **Last** under **To** to search the recording from start to finish. Alternatively, you can uncheck the **First** and **Last** options and specify the search time frame manually.
- **Channels**: Select a channel.
- **Plate Number**: Search plate number recognition results including text input.

Once all the options have been configured, select **Search** to begin the search and return to the **ANPR Search** window.

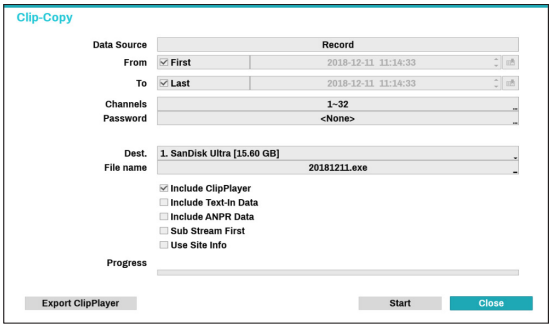
Clip Copy

Clip Copy

Select **Clip-Copy** – **Clip Copy** from the Search menu or press the remote control's **CLIP COPY** button while in Live or Playback mode to open up the **Clip Copy** setup window. Specify the **From** and **To** settings.

A-B Clip Copy

Designate a start point and an end point and copy the data in between. Select **Clip-Copy** – **A-B Clip Copy** from the Search menu to set point A. The icon will appear on the status indicator area on the upper right corner of the screen. Select **Clip-Copy** – **A-B Clip Copy** once again to set point B. The Clip Copy Setup window will appear. Select A and B points are automatically applied as **From** and **To** values.



- **Channels**: Specify which channel to save the recording to.
- **Password**: Enable password protection for the saved video clip and assign a password.
- **Dest.**: Select which storage media to use. If NetFS feature is in use, you can upload video clips to the registered FTP site.

  - When you clip-copy to the NetFS site, the capacity of NetFS site and Disk cannot be found.
  - The maximum size limit for clip-copy files is 30 GB.
  - If the video clip is uploaded after you clip-copy, the video clips will be deleted.
  - If the files are the same files, the video clips cannot be copied.

- **File name**: Designate a name for the file. The name may be up to 63 characters in length.

Special characters such as \, /, :, ;, *, ?, !, ", <, >, and | are not permitted.

- **Include ClipPlayer:** Enabling this option will save the video clip as an .exe file with clipplayer.
- **Include Text-In Data**: Enabling this option will save the video clip along with any available text-in data.
- **Include ANPR Data:** Enabling this option will save the video clip along with any available ANPR data.
- **Sub Stream First:** If the vido clip has dural recording information, the sub stream is saved first.
- **Use Site Info**: Adds **Site** info to the Clip Copy file's name.

Special characters contained in the location info (such as \, /, :, ;, *, ?, !, ", <, >, and |) will be replaced with _ when the information is added to the file name.

- **Export Clipplayer**: Enabling this option will save the copied clip(.cbf) as a clipplayer to be played.

Selecting **Start** displays a calculation on the size of the data to be copied. Check the calculation and then select **Continue** to proceed. While Clip Copy is in progress, you can select **Cancel** to cancel the process or select **Close** to allow the window to run in the background. Selecting **Close** does not cancel Clip Copy. Once the process is complete, you will be prompted with a confirmation window.

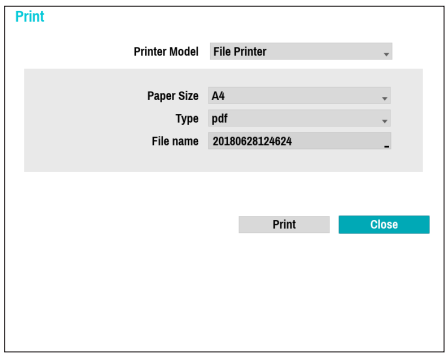
- **One-Touch Clip Copy** configures the storage range automatically based on the storage drive's capacity. If there is insufficient space available on the selected storage device, you will only be able to Clip Copy an amount of data equaling the remaining space available on the storage device.
- The NVR displays the volume as 30GB regardless of the actual disk volume and the maximum size limit on Clip Copy files is 30GB. Clip Copying a segment that is more than 2GB in size produces multiple files that are up to 2GB in size, each.
- Clip Copy files can be played back on Windows systems. For more information, refer to the IDIS Center operation manual.
- For USB flash memory devices, the NVR supports the FAT32 file format only.

Do not disconnect the USB cable or power off the USB device while USB Clip Copy is in progress. Doing so can cause the NVR to malfunction or critically damage the external USB device's file system. You may be prompted with an error message when trying to back up on the device. If so, you will need to restart the NVR. If the USB hard disk's file system has been damaged, restarting the NVR will not solve the problem and the aforementioned error message will continue to be displayed each time you attempt a backup. If this is the case, you will need to format the HDD or use a recovery program to repair the damage to the drive's file system.

Print

Print the current image.

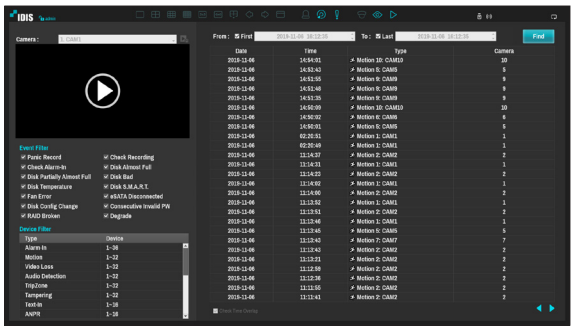
While in **Search Mode**, select **Pause** to pause playback. Select **Print** from the Search menu to open up the Print Setup window.



- **Printer Model**
  - **File Printer**: Saves the current frame to the USB storage device or the NetFS site as a .pdf file that can be printed on a printer connected to a computer.
- **Paper Size**: Select the desired paper size.
- **File name**: Designate a name for the file.

Event Log Search

Select **Search Mode** > **Event Log Search** to bring up the Event Log Search window.



Select an eent to display the recording made on the selected time and date (paused state). Select the Play button in the middle of the screen to start playing back the recording. Use the drop-down menu above to load recordings from other cameras.

- Selecting the specific event displays the screen to be stationary. By clicking the button on the camera right, you can copy the event.
- You can uncheck the **First** and **Last** options at the top of the Event Log Search window and specify the search time frame manually.

Select First for From and Last for To to select the entire recording from start to end.

- If designating **From** or **To** settings manually, you will be able to enable/disable the **Check Time Overlap** option.
- **Exceed the People Limit**: Select which channels to search Exceed the People Limit events in.
- **Exceed the Time Limit**: Select which channels to search Exceed the Time Limit events in.

If the system's clock has been changed and the designated **From** or **To** point exists at more than one location, you will have to choose one. Only the events that took place between the selected **From** and **To** points will be searched. If **Check Time Overlap** has not been selected, events from the entire **From** and **To** range will be searched.

- Use event filters to include/exclude specific system events such as **Panic Record**, **Check Recording**, **Check Alarm-In**, **Disk Almost Full**, **Disk Bad**, **Disk Temperature**, **Disk S.M.A.R.T.**, **Fan Error**, **eSATA Disconnected** and **Disk Config Change** from the search.

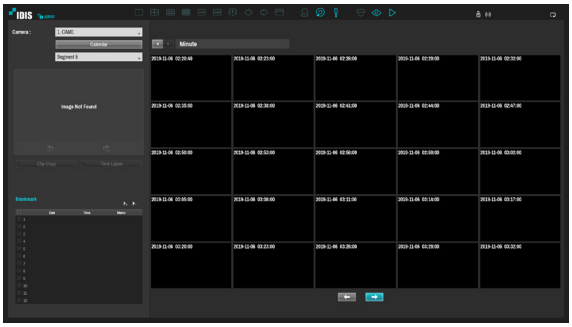
Device Filter

- **Alarm-In**: Select which channels to search alarm-in events in.
- **Motion**: Select which channels to search motion detection events in.
- **Video Loss**: Select which channels to search video loss events in.
- **Audio Detection**: Select which channels to search audio detection events in.
- **Trip Zone**: Select which channels to search trip zone events in.
- **Tampering**: Select which channels to search tampering events in.
- **Text-In**: Select which channels to search text-in events in.
- **ANPR**: Select which channels to search ANPR events in.
- **Record Channel**: Select which record channels to search events in.
- **Recording Fail**: Select which channels to search recording fail events in.
- **VA Loss**: Select which channels to search VA loss events in.
- **Camera Fan Error**: Select which channels to search Camera Fan Error events in.
- **PIR**: Select which channels to search PIR events in.
- **Auto Tracking**: Select which channels to search Auto Tracking events in.
- **Loitering**: Select which channels to search Loitering events in.
- **Line Crossing**: Select which channels to search Line Crossing events in.
- **Object Detection**: Select which channels to search Object Detection events in.
- **Alarm Box Loss:** Select which channels to search Alarm Box Loss events in.

Selected record channels are searched for events with at least one linked recording. If no camera is selected, only the events with no linked recording camera are searched.

Thumbnail Search

Select **Search Mode** > **Thumbnail Search** to bring up the thumbnail Search window.

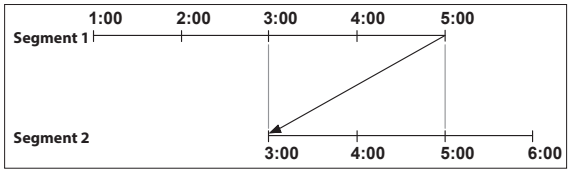


- Click Calendar on the left side of the screen to search for video recording specific dates. Dates containing video recordings are highlighted in black. Selected date is highlighted in blue.
- Click on the next to the Calendar button to search the video recording in detail. It allows you to search the video recording in Day -> Hour -> Minutes -> Seconds or Seconds -> Minutes -> Hour -> Day.
- Selected the specific event displays the screen to be stationary. By clicking the play button on the middle of the screen, you can play the video recording. Also, By clicking 10 or 10 , you can jump to the recording in 10 seconds.
- Clicking Clip-Copy displays the Clip Copy Setup window to designate points A and B.
- Click Time Lapse to go to the time lapse mode. For more information on time-lapse search, refer to the section under to the **Time-Lapse Search on page 105**.
- Select the icon to add a bookmark to the current playback position. Select a bookmark from the Bookmark setup window on the right side of the Time-Lapse Search mode screen to move to the registered playback position. Select Bookmark list and then the icon to delete the corresponding bookmark.

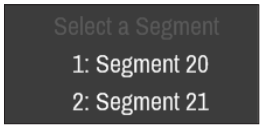
Overlapped Recording Search

If the system's clock is changed to a point in the past, overlapping recordings may be produced. Overlapped recordings have to be searched in segments.

For example, making a recording from 1 o'clock to 5 o'clock, changing the system's clock at 5 o'clock to 3 o'clock, and then continuing to record until 6 o'clock produces two recordings that overlap between 3 o'clock and 5 o'clock. This results in two segments for the period between 3 and 5.



When searching overlapped video recordings, you can choose a specific point in time or a time frame. If you use the **Go to the Date/Time** option and select a point within the overlapped time period (**4 o'clock**, for example), you must specify **4 o'clock** in which of the two existing segments.



If you use the **Event Log Search** or **Motion Detection** option and select a time frame within the overlapped time period (**4 o'clock to 5 o'clock**, for example), you must choose between the two redundant sets of From and To values. Selectable search ranges are as follows:

- 4 o'clock in segment 1 to 5 o'clock in segment 1
- 4 o'clock in segment 1 to 5 o'clock in segment 2
- 4 o'clock in segment 2 to 5 o'clock in segment 2

Part 4 - IDIS Web

IDIS Web is a program that allows you to view and search video from remote locations over the Internet and can be accessed on a regular web browser such as Internet Explorer.

System requirements for running IDIS Web are as follows:

- OS: Microsoft® Windows® XP (Service Pack 3), Microsoft® Windows® Vista (Service Pack 1), Microsoft® Windows® 7 (Home Premium, Professional, Ultimate), Microsoft® Windows® 8 (Pro, Enterprise) or Microsoft® Windows® 10 (Home, Pro)
- CPU: Intel Pentium IV 2.4GHz or above (Core 2 Duo E4600 recommended)
- RAM: 1GB or more
- VGA: 128MB or more (1280x1024, 24bpp or above)
- Internet Explorer: Ver. 7.0 or above (32-Bit)

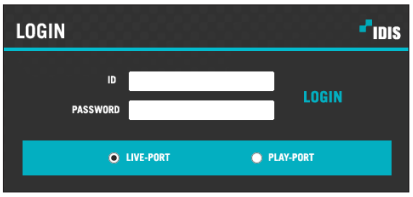
- IDIS Web only works with Microsoft Internet Explorer and will NOT work with other browsers.
- IDIS Web does not work in Microsoft® Windows® 8 metro UI.

1 Launch Internet Explorer and then enter the following information in the address bar.

- http://IP Address:Port Number (NVR system's IP address and IDIS Web port number configured under Network > General (Default Value: 12088))
- http://fen.idisglobal.com/FEN Name (FEN Name: NVR name configured on the FEN server)
- http:/web.idisglobal.com (will be prompted to enter NVR's IP address or FEN name registered to the FEN server upon login)

Contact your network administrator for the IP address of the NVR you wish to connect to and the IDIS Web port number.

2 When prompted with the IDIS Web login window, select **LIVE-PORT** or **PLAY-PORT** as the desired mode. Enter the ID and password and click **LOGIN** to sign in using the selected mode.

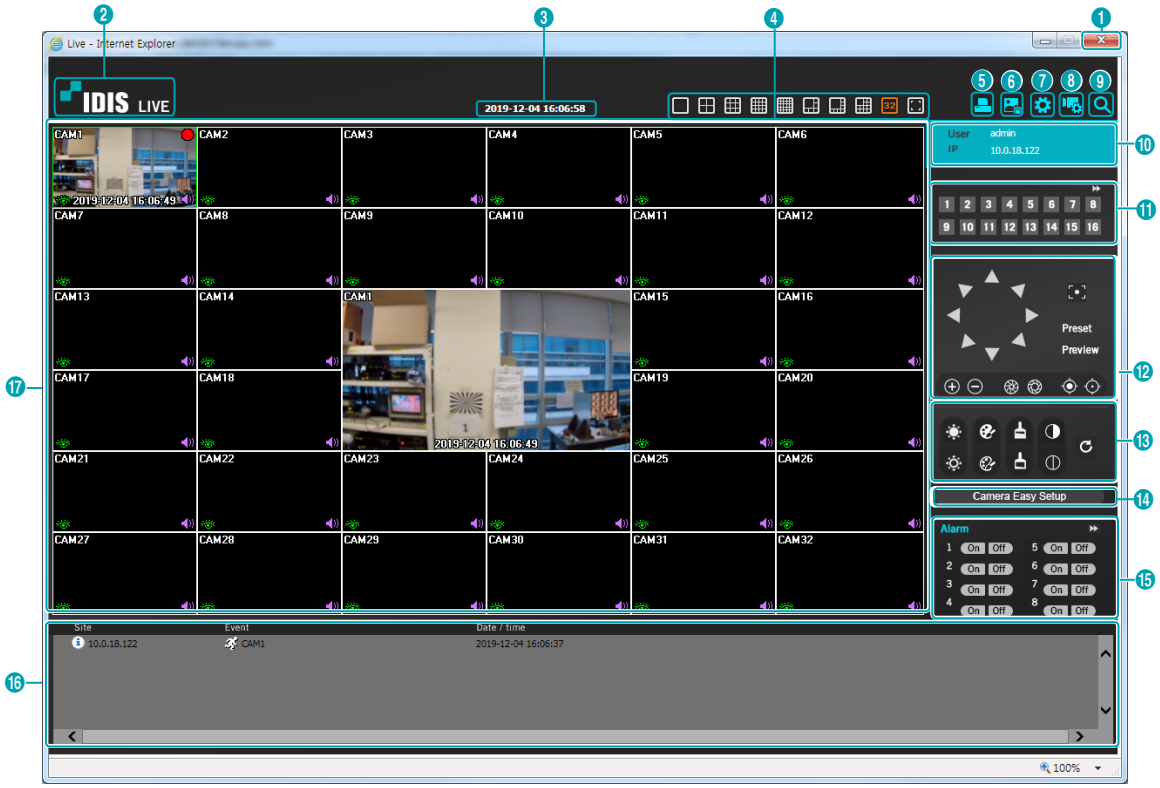


If connecting by entering http://web.idisglobal.com, enter the NVR's IP address in the Device Address field. Selecting the Use FEN Service option on the login window allows you to enter the NVR name registered to the FEN server instead of its IP address. You will be prompted to enter the FEN server's address and port number under Setup.

- Do not close the login window while IDIS Web is running. Switching over to Web Live or Web Search mode can cause a script error, requiring you to restart the IDIS Web program.
- If running IDIS Web, the bottom section of the screen may get cut off if the address bar or the status bar is shown. In this case, change Internet Options so that the address bar or the status bar is hidden. (**Tools** → **Internet Options** → **Security** → **Custom level...** → **Allow websites to open windows without address or status bars** (**Enable**))
- To use IDIS Web on Microsoft Windows Vista or above, launch Internet Explorer by right-clicking on the icon and selecting the **Run as administrator** option. Otherwise, certain IDIS Web functions might not be available.
- Launching a new version of IDIS Web for the first time can cause Internet Explorer to load information from the previous version. In this case, navigate to **Tools** → **Internet Options** → **General**, delete temporary Internet files, and then restart IDIS Web.
- On Microsoft Windows Vista or above, lowered image transmission rate can prevent the screen from being displayed or updated. In this case, we recommend that you disable the computer's auto tuning function. Open the command prompt as an administrator. (**Start** → **Accessories** → **Command Prompt** → **Right-Click** and then select **Run as administrator**) Type in "**netsh int tcp set global autotuninglevel=disable**" and then press Enter. Restart the computer to apply the change. To enable auto tuning again, launch the command prompt as an administrator and then type in "**netsh int tcp set global autotuninglevel=normal**". Restart the computer to apply the change.

Web Live Mode

A remote web monitoring program that allows you to monitor images from remote locales in real-time.



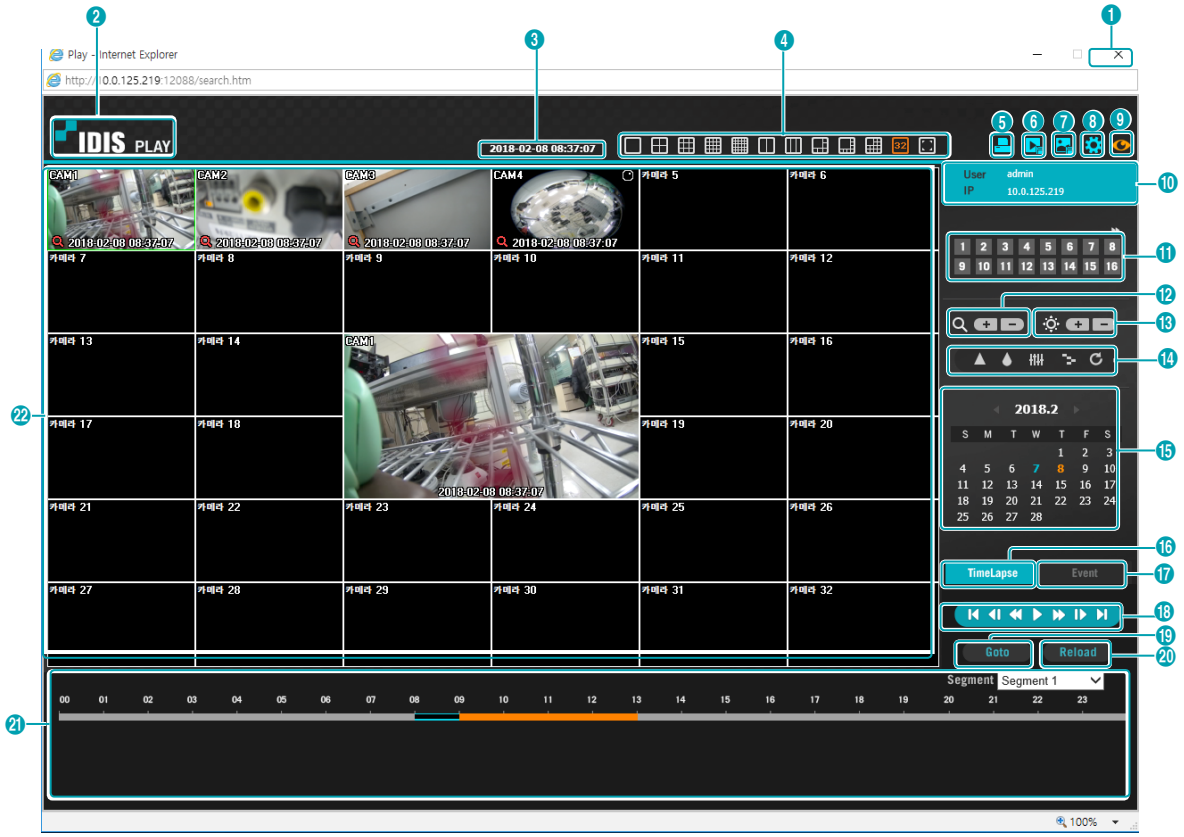
❶	Press to terminate IDIS Web.
❷	Place the mouse pointer on the IDIS logo to check IDIS Web's version.
❸	Displays the current time.
❹	Select the desired mode. Changing the mode places the selected camera in the first cell of the layout that will be changed.
❺	Click to print the current video screen using a printer connected to the computer.
❻	Click to save the current video screen as an image file.
❼	Click to configure rendering mode, OSD settings and AlarmOut beep. Select rendering mode to adjust the video output rate or select which OSD elements to display on the screen from the OSD list. Select between Beep On and Beep Off to turn on/off the AlarmOut beep.
❽	Click to configure event, camera, stream settings, etc of NVR at remote locales.
❾	Click to switch over to Web Search mode.
❿	Shows login information.

⓫	Select the camera you wish to monitor. Use the arrow buttons to navigate to the previous/next camera group.
⓬	Used to control a PTZ camera at a remote location.
⓭	Used to adjust live video quality.
⓮	Used to configure camera easy setup. Select from presets or custom setup for the video mode according to daytime/nighttime. ● **Preset**: Select from Natural, Vivid or De Noise. ● **User Custom**: Manually configure the values of each setting (Sharpness, Contrast, Colors and Brightness).
⓯	Controls remote alarm out devices. Use the arrow buttons to navigate to the previous/next alarm group.
⓰	Event status window at the bottom of the screen displays a list of events detected at remote locales.
⓱	Select a camera from the screen and right-click to bring up the pop-up menu. ● **Change Camera Title**: Used to change the camera's name. Renaming the camera in Web Live mode does not affect the camera's name on the remote system. If no name is entered for the camera, the name used at the remote locale is shown on the screen. ● **Enable Audio**: Enables audio transmission with remote locales. Select to display buttons. Enables transmission of audio to the remote locale via microphone. Enables playback of audio from the remote locale on speakers. Enables two-way audio communication with the remote locale. Disables audio transmission. If the remote locale connected to supports audio transmission, icon appears on the corresponding camera screen. ● **Aspect Ratio**: Changes the aspect ratio of the video displayed on the screen. – **Fit to Screen**: Fit the video to the size of the camera screen. – **Fit to Aspect Ratio**: Resizes camera screen to original aspect ratio of the video. – **Half Size (x0.5) - 4 Times Bigger (x4)**: Displays the camera videos in the selected size based on the original size of the video. For example, original size (x1) displays the video in its original size. Half size (x0.5) through 4 times larger (x4) options are only available if there is enough space on the camera screen to accommodate the selected size. ● **Anti-Aliasing Screen**: Removes stair step effect (blocks) that is caused when zooming a video to improve overall quality of video output.

Web Search Mode

A remote web search program that allows you to search for recordings from remote locales in real-time.

While in Web Search mode, connection to remote locales will terminate automatically after 30 minutes of inactivity.



❶	Press to terminate IDIS Web.
❷	Place the mouse pointer on the IDIS logo to check IDIS Web's version.
❸	Displays time information of the video recording from the remote NVR.
❹	Select the desired mode.
❺	Click to print the current video screen using a printer connected to the computer.
❻	Click to save the video recording as an executable file.
❼	Click to save the current video screen as an image file.

❽	Click to configure rendering mode, OSD settings, responsiveness preference to time-precision setting and dual-stream playback priority. Select rendering mode to adjust the video output rate or select which OSD elements to display on the screen from the OSD list. Select **Other Setup** to prefer responsiveness to time-precision when performing the GoTo function on a Long-GOP image. Select from Dynamic Control, Main Stream Priority or Sub Stream Priority to set the dual-stream playback priority.
❾	Click to switch over to Web Live mode.
❿	Shows login information.
⓫	Select the camera you wish to search. Use the arrow buttons to navigate to the previous/next camera group.
⓬	Zoom in or out on the video.
⓭	Adjust image brightness.
⓮	Apply image filters (Sharpen, Blur, Equalizer, Interpolation, and Revert) to the images. Image calibration is applied only during the paused state.
⓯	Use the calendar to search for video recordings by specific dates. Dates containing video recordings are highlighted in light blue. Selecting a date containing video recording data loads the earliest recording from that date(paused state). Selected date is highlighted in orange.
⓰	Select TimeLapse to enable time lapse search mode and search/play back video recordings in chronological order. In Time Lapse Search mode, search is conducted by selecting days on the calendar. The time table at the bottom displays recording data information for the selected date. Select a point in time to display video from that moment. If multiple recordings are available for the selected point in time, you can select the desired segment.
⓱	Select Event to enable event search mode and search for events matching user-designated parameters.
⓲	Use the playback controls to play back video. Go to First / Play by Frame (forwards) Rewind / Fast Forward Play by Frame (backwards) / Go to Last Play/Pause
⓳	Click Goto to designate recent recordings you wish to search and then jump to a specific point in the recording.
⓴	Click Reload to reload recent video recordings from remote locales.
㉑	Indicates the selected camera's recording data on a time bar. If the camera's system clock has been changed to a point in the past and more than one recording exists at the same point in time as a result, you will be able to choose which segment to search from the segment menu on the upper right portion of the time table.

㉒	Select a camera from the screen and right-click to bring up the pop-up menu. ● **Change Camera Title**: Used to change the camera's name. Renaming the camera in Web Search mode does not affect the camera's name on the remote system. If no name is entered for the camera, the name used at the remote locale is shown on the screen. ● **Enable Audio**: If audio was recorded with the video, enabling this option plays audio upon playback (limited to single-screen playback). ● **Aspect Ratio**: Changes the aspect ratio of the video displayed on the screen. ● **Anti-Aliasing Screen**: Removes stair step effect (blocks) that is caused when zooming a video to improve overall quality of video output.

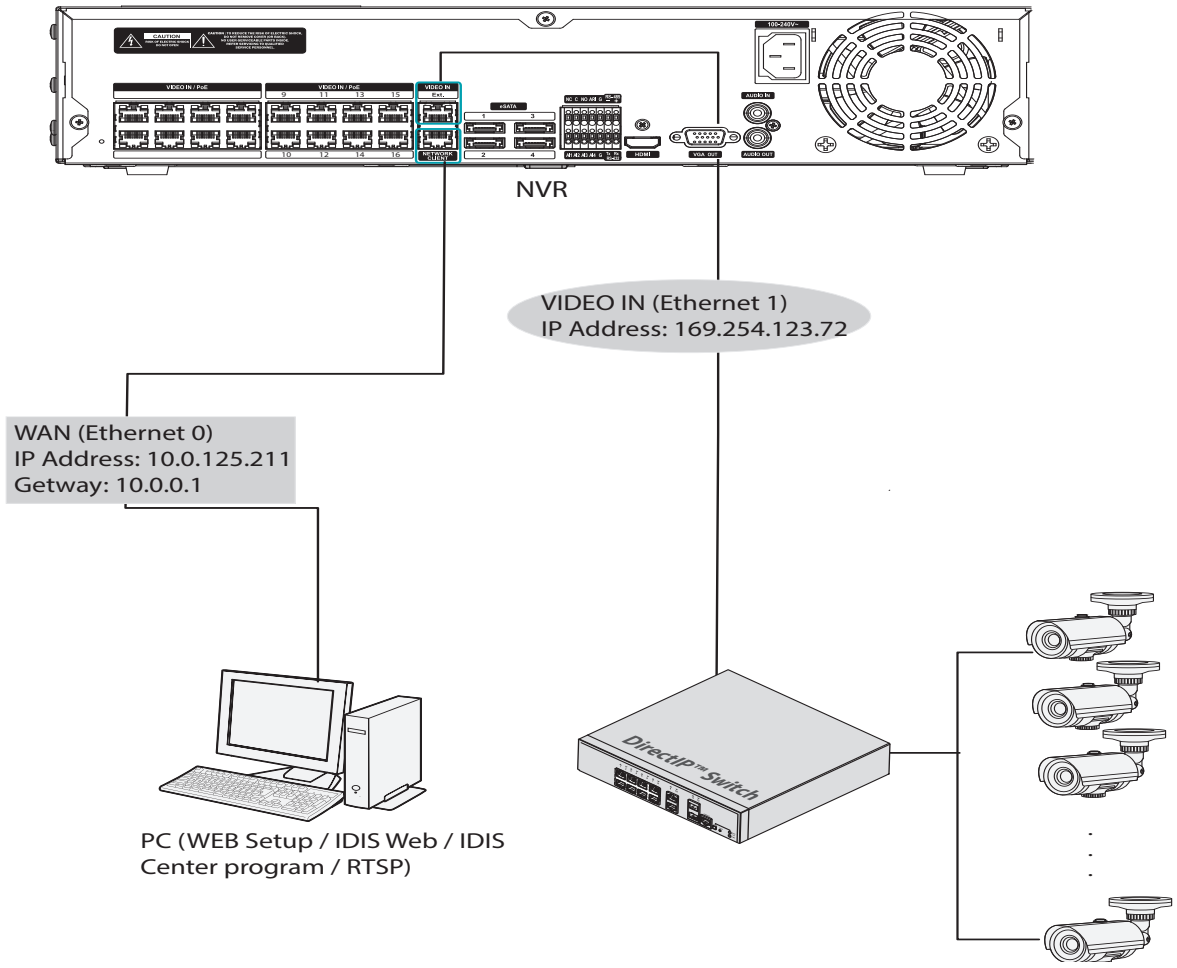
Part 5 - Appendix

NAT Function Example

NAT function is to connect to the camera which is internal VIN network from the physically divided WAN network PC (WebSetup / IDIS Web / IDIS Center program / RTSP).

To connect to the camera WebSetup / IDIS Web / IDIS Center program / RTSP function, you need to configure the NAT rule to forward ports from NVR port number to the camera port number.

NAT Configuration Guide

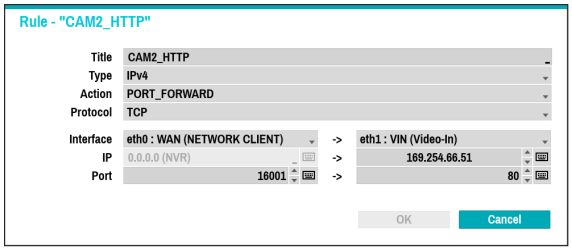


- To use NAT function, the camera gateway address must be set to the VIN network IP address of the NVR.
- For more information on the IP address of the camera and port number, refer to the WebSetup page of the camera manual. Also, check the IP address of the camera in the NVR or default port number on the camera manual.

Camera WebSetup Connection

Access the WebSetup of the camera which is internal VIN network from the PC.

Port Forward through 2 routers "NVR Port Number and HTTP Port Number of the Camera"

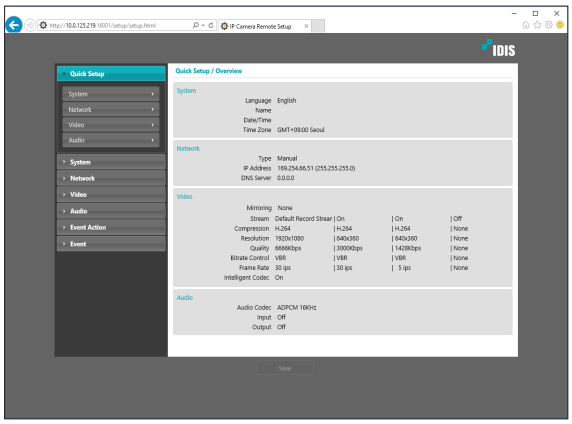


Eth 0: WAN Port : 16001
Eth 1: VIN IP : IP address of the camera
Eth 1: VIN Port : HTTP port number of the camera

Approach

You can access the WebSetup page through the following address.: **http://NVR IP address: HTTP Port Number of the Camera/setup/setup.html**

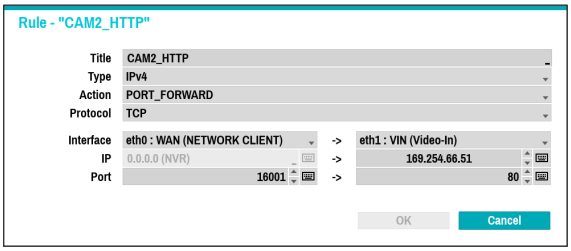
Enter the HTTP port number of the camera **16001** to have port forwarded.



IDIS Web Connection through IDIS Camera

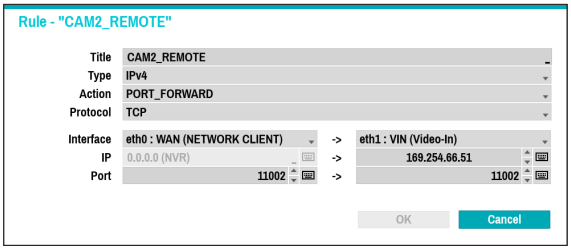
Access the IDIS Web of the camera which is internal VIN network from the PC.

Port Forward through 2 routers "NVR Port Number and HTTP Port Number of the Camera"



Eth 0: WAN Port : 16001
Eth 1: VIN IP : IP address of the camera
Eth 1: VIN Port : HTTP port number of the camera

Port Forward through 2 routers "NVR Port Number and Remote Port Number of the Camera"



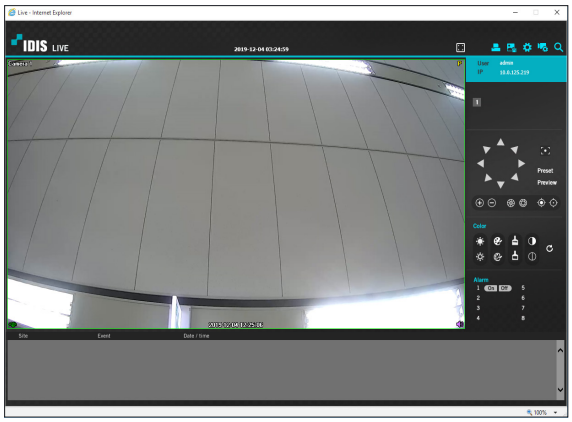
Eth 0: WAN Port : 11002
Eth 1: VIN IP : The IP address of the camera
Eth 1: VIN Port : Remote port number of the camera

Eth0 port number and the remote port number of the camera must be same.

Approach

You can monitor live videos through the following address.: **http://NVR IP Address: HTTP Port Number of the Camera**

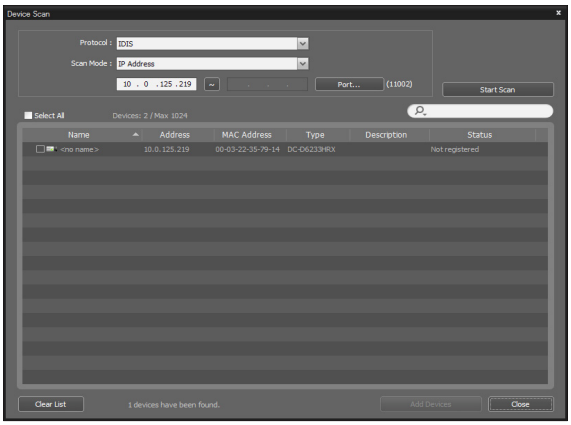
Enter the HTTP port number of the camera **16001** to have port forwarded.



Approach

You can monitoring live videos by using the IDIS Center program.

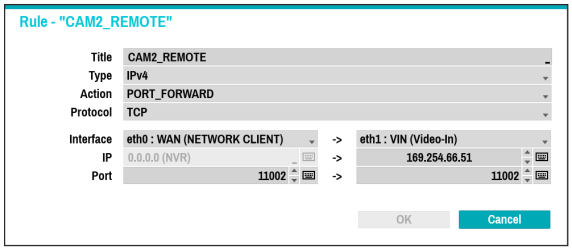
Enter the remote port number of the camera **11002** to have port forwarded.



IDIS Center Program Connection through IDIS Camera

Connect to view the video of the camera which is internal VIN network from the clients such as the IDIS Center program.

Port Forward through 2 routers "NVR Port Number and Remote Port Number of the Camera"



Eth 0: WAN Port : 11002

Eth 1: VIN IP : IP address of the camera

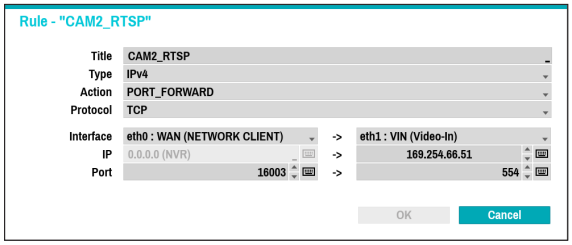
Eth 1: VIN Port : Remote port number of the camera

Eth0 port number and the remote port number of the camera must be same.

RTSP Connection through IDIS Camera

Connect the video of the camera which is internal VIN network by using the RTSP player from the PC.

Port Forward through 2 routers "NVR Port Number and RTSP Port Number of the Camera



Eth 0: WAN Port : 16003
Eth 1: VIN IP : IP address of the camera
Eth 1: VIN Port : Remote port number of the camera

Approach

Access RTSP function using media players, such as VLC Player. You can monitor live video images through the following address**.: rtsp://NVR IP Address: RTSP Port Number of the Camera/trackID=channel number**

Enter the RTSP port number of the camera **16003** to have port forwarded.

For more information on RTSP function, refer to **RTSP on page 92** and camera manual.

IDIS Co., Ltd.

For more information, please visit at
www.idisglobal.com