



AI in the BOX

Operation Manual

DV-1304-A



Powered by **Direct IP**

Before reading this manual

This operation manual contains basic instructions on installing and using DirectIP AI in the Box, 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 this network camera 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.

Safety Precautions

Important Safeguards

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 wall or ceiling that is not strong enough to sustain the camera. 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.

9. Power Cord 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. If thunder or lightning is common where the equipment is installed, use a surge protection device.

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 hit 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.

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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Other company and product names are registered trademarks of their respective owners.

The information in this manual is believed to be accurate as of the date of publication even though explanations of some functions may not be included. We are not responsible for any problems resulting from the use thereof. The information contained herein is subject to change without notice. Revisions or new editions to this publication may be issued to incorporate such changes.

The software included in this product contains some Open Sources. You may obtain the complete corresponding source code from us. See the Open Source Guide on the software CD (OpenSourceGuide\OpenSourceGuide.pdf) or as a printed document included along with the User's Manual.

Covered by one or more claims of the patents listed at patentlist.accessadvance.com.

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Part 1 – Introduction

Product Features

This AI in the Box (Artificial Intelligent in the Box) analyzes the live video from DirectIP cameras and transmits the video over Ethernet connections. This product offers the following features:

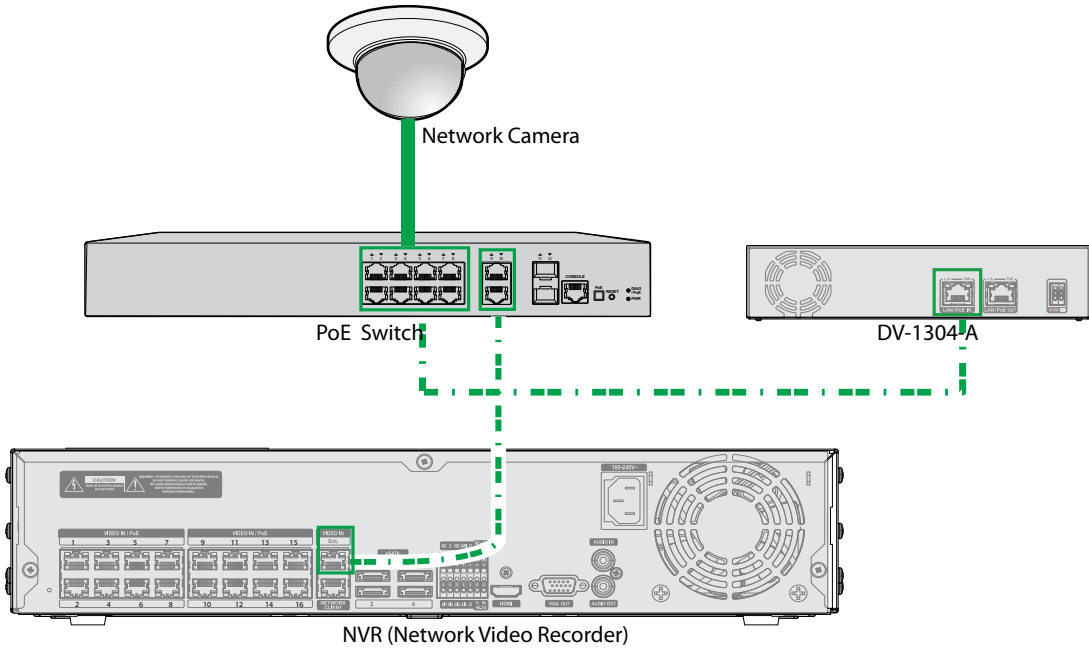
- Video Inputs : 4-channel H.264 and H.265 IP camera
- DirectIP protocol supported
- Convenient firmware upgrades via network
- Firmware duplication and auto recovery functions to enhance system stability
- Various image analysis function such as Object Detection, Intrusion, Loitering, Line Crossing and Face Detection.
 - Object Detection: Detects an object (human, cars, bikes) in the zone set by the user.
 - Intrusion: Detects an object (human, cars, bikes) entering or leaving the zone in the direction set by the direction options (In, Out, In/Out)
 - Loitering: Detects an object (human, cars, bikes) that stays longer than the set time.
 - Line Crossing: Detects an object (human, cars, bikes) which crosses a pre-definded line in the direction set by the direction options (In, Out, In/Out)
 - Face Detection: Detects a human face in the the zone set by the user.
- Configuration of device settings and integrated management of multiple AI Boxes on the NVR (Network Video Recorder)



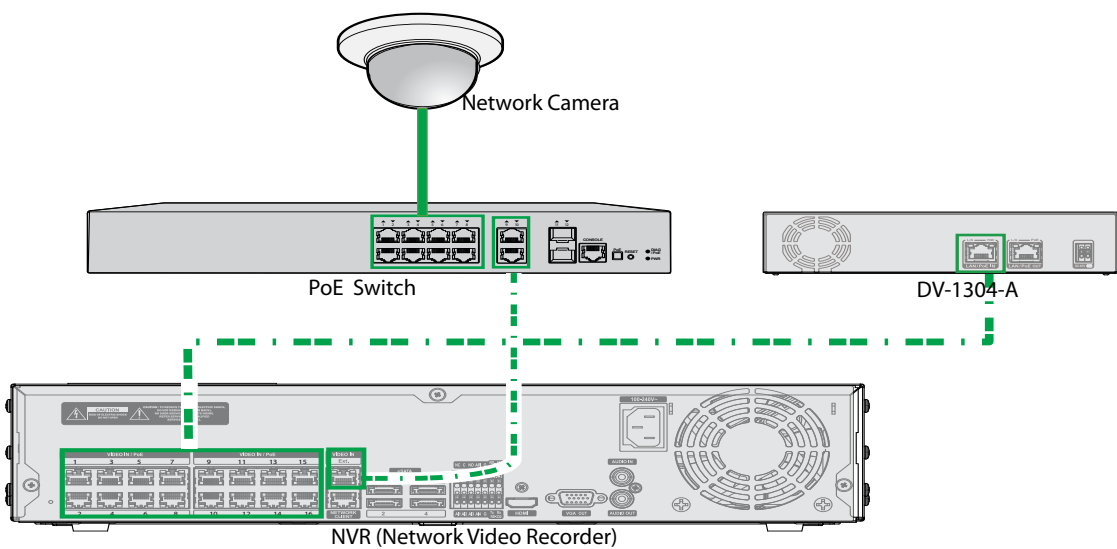
Check the following before connecting the product. (Only for the examples 1,2,3)

- Check if the Switch's PoE power per port supports 30W.
- Check your PoE switch has enough PoE power.

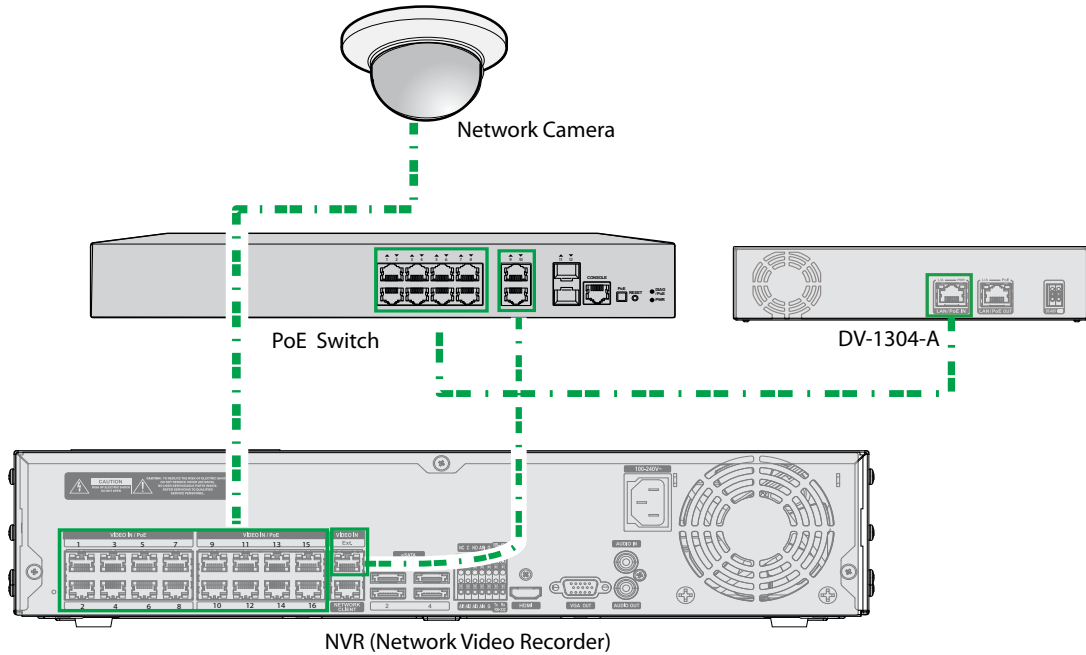
Example 1 : Connection Diagram Using PoE Switch



Example2 : Connection Diagram Using PoE Switch

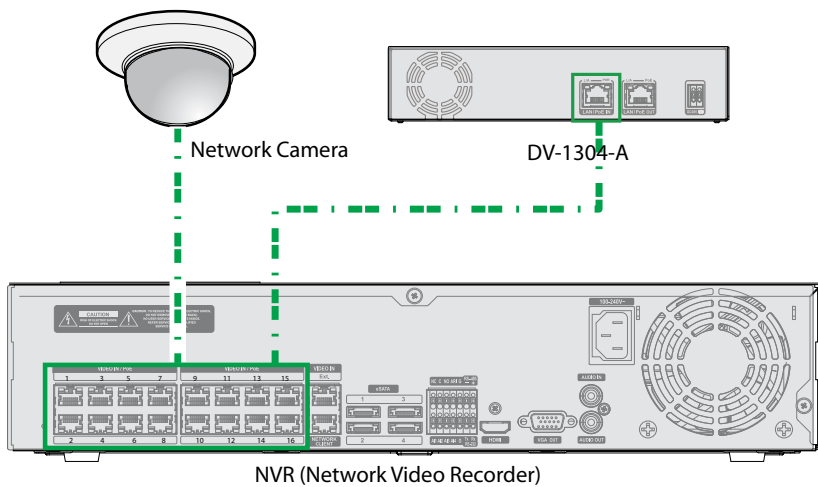


Example 3 : Connection Diagram Using PoE Switch



- Check the following before connecting the product. (Only for the example 4)
- Check if the NVR's PoE power per port supports 30W.
 - Check your NVR has enough PoE power.

Example 4 : Connection Diagram without PoE Switch

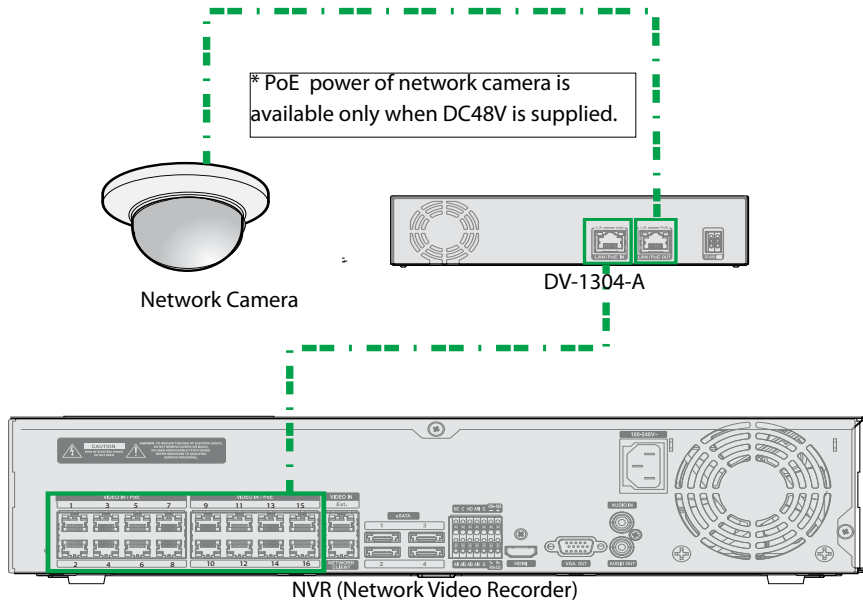



Types of Cables



LAN Cable (Data + PoE Power)

Example 5 : Sonnection Diagram without PoE Switch



Types of Cables	
	LAN Cable (Data + PoE Power)

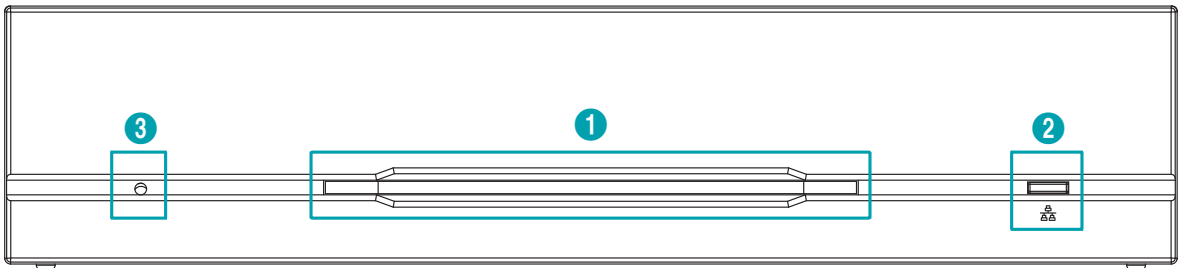
Accessories

Upon unpacking the product, check the contents inside to ensure that all the following contents are included.

- All in the Box
- User Guide and Instruction Manual (This document)
- Rubber Foot (4EA)

Overview

Front Panel



①	Power LED	②	Network LED	③	Factory Reset Switch
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① Power LED

Displays system operating status

② Network LED

Displays network connection status

LED Status Indications

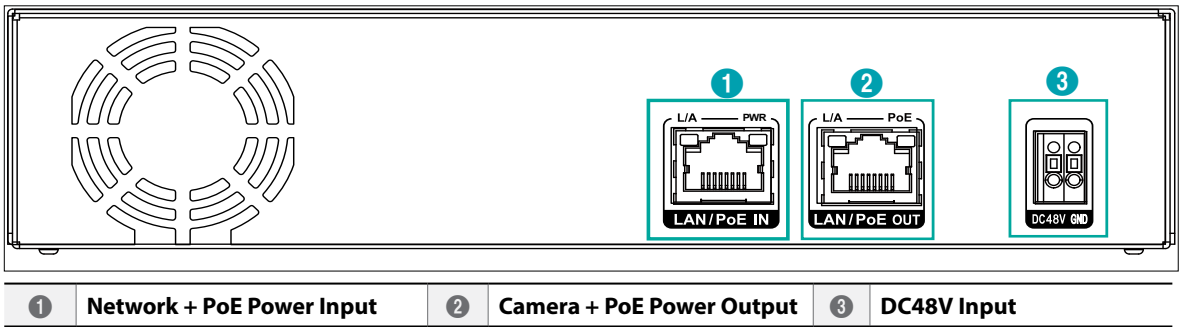
LED	Status	Description
Power LED	Off	No power connection
	Blinking	System booting or upgrading
	On	System operating
Network LED	On / Blinking	Normal network connection

③ Factory Reset Switch

Use to return all settings to the original factory settings. Connect the power and poke a straightened paperclip into the factory reset switch hole. Hold the reset switch until the VA Box's internal buzzer sounds twice. Release the reset switch, and all of the device settings are now at the original settings it had when it left the factory.

- **Factory Reset during system booting:** All of the AI Box's settings are now at the original settings it had when it left the factory.
- **Factory Reset during system operating:** The other settings except for system log are now at the original settings it had when it left the factory.
- **Factory Reset via the IDIS Discovery program:** The other settings except for system log and network settings are now at the original settings it had when it left the factory.
- **Factory Reset via the IDIS Discovery program(including network settings) :** The other settings except for system log are now at the original settings it had when it left the factory.

Rear Panel



① Network + PoE Power In

Connect a Cat5e cable with an RJ-45 jack. The device is capable of connecting to networks via an Ethernet connector and also receives power (PoE) from the NVR.

② Camera + PoE Power Output

Connect a network camera. PoE power of network camera is available only when DC48V is supplied.

③ DC48V Input

Connect the two wires of the power adapter to these ports. Be careful not to cross the DC48V and GND wires. Booting will commence once connected to a power supply.

- ✓ • The network connector is not designed to be connected directly with cable or wire intended for outdoor use.
- ⚠ • Organize the power cable so that it will not cause people to trip over or become damaged from chairs, cabinets, desks, and other objects in the vicinity. Do not run the power cable underneath a rug or carpet.
- Do not connect multiple devices to a single power outlet.
- Please wire within 3m(118") indoors for stable power supply when installing the adapter.

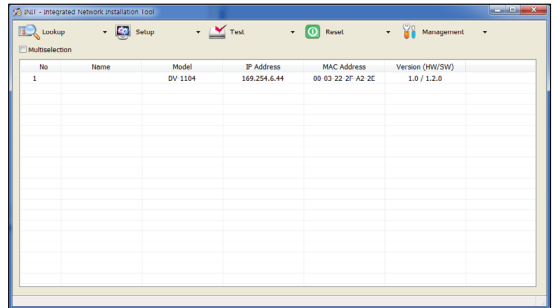
Stream Setting Guide for AI Box Camera


System Requirements

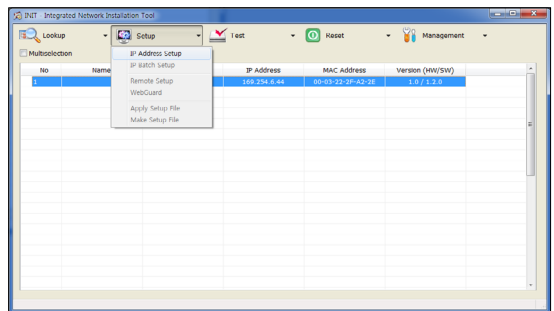
- **Resolution:** 640x360 to 1920x1080
 - **IPS:** 6 or higher
 - **Amount of Data** - 640x360 @ 10ips ~ 30ips
 -1280x720 @ 10ips ~ 15ips
 -1920x1080 @ 10ips
- One of the three streams must match the above conditions.
- How to calculate the amount of data : Resolution (horizontal x vertical) x ips
- **Minimum Requirement**
 - **Resolution:** 640x360
 - **IPS:** 6
 - **Recommended Setting**
 - **Resolution:** 640x360
 - **IPS:** 15 or higher
- If the minimum requirements are not satisfied, analytical performance will be reduced.
- If the amount of data exceeds the maximum setting, the analysis will stop.

Network Setup (Alias IP)

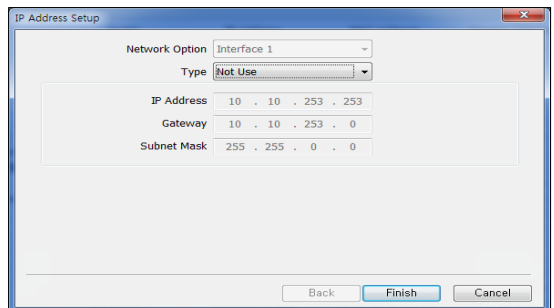
- 1 Launch the IDIS Discovery program and then select the AI in the BOX(DV-1304-A) from the main screen whose settings you wish to change.



- 2 Click on the Setup  icon.



- 3 Select the IP Address Setup from the Setup menu to load the Alias IP setting screen. Alternatively, you can select DV-1304-A from the main screen and then right-click to access the Alias IP setting screen.



- Configure this setting before registering on NVR.
- It supports DHCP and Manual IP settings

Part 2 - Camera Installation

General Guideline for AI Box Camera

In order for the camera and, in effect, AI functions such as Object Detection, Intrusion, Loitering, Line Crossing and Face Detection to operate properly, the following must be applied.



The function of the AI in the Box may cause errors in actual measurements. In the following conditions, the analytical performance may reduce due to faulty detections.

- If there is not sufficient illumination
- If it is difficult to obtain a sufficient view.
- If only part of the object is captured at the edges of the image
- When several extremely fast moving objects appear randomly in the image.
- Not standing straight (e.g., lying down or sitting down)
- When a moving object is too close to the camera.
- When people move as a group and their motions block one another.
- When an object moves fast.
- If an object is reflected on the floor, wall, glass, metal or water
- When the floor is highly reflective or the wall is transparent
- Fisheye analysis is not supported.
- Corridor Format analysis is not recommended.
- When human like figures such as mannequins is recognized as a person

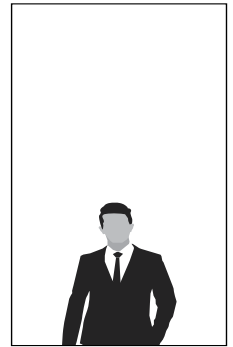
Object Detection, Intrusion, Loitering, Line Crossing

Camera Installation

Install a camera so that an object to detect (human, cars, bikes, etc.) must not be overlapped with other objects.

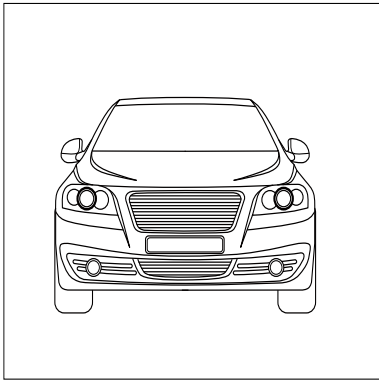
- A camera should be installed so that an object does not tilt more than 30 degree.
- The size of the object on the image should be larger than 1/16th of the image size.
- The minimum size supported for reliable detection is 120 x 68 pixels or higher (1920x1080 resolution)

1) If the object is a human

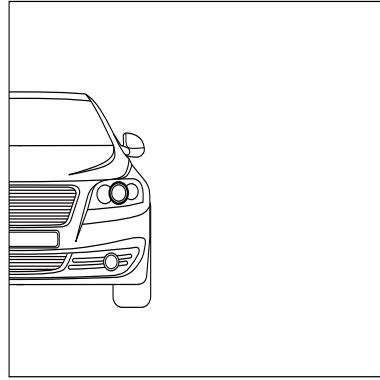


Part 2 - Camera Installation

2) If the object is a car or a bike



○



×



The following conditions can reduce the accuracy of Line Crossing function.

- If the gap between the person in front and the person behind passing through the line is narrow. (same for cars or bikes)
- High density crowds in which objects pass both inside and outside of the line
- The environment in which objects stay or loiter near the line.



The following conditions can reduce the accuracy of Intrusion function.

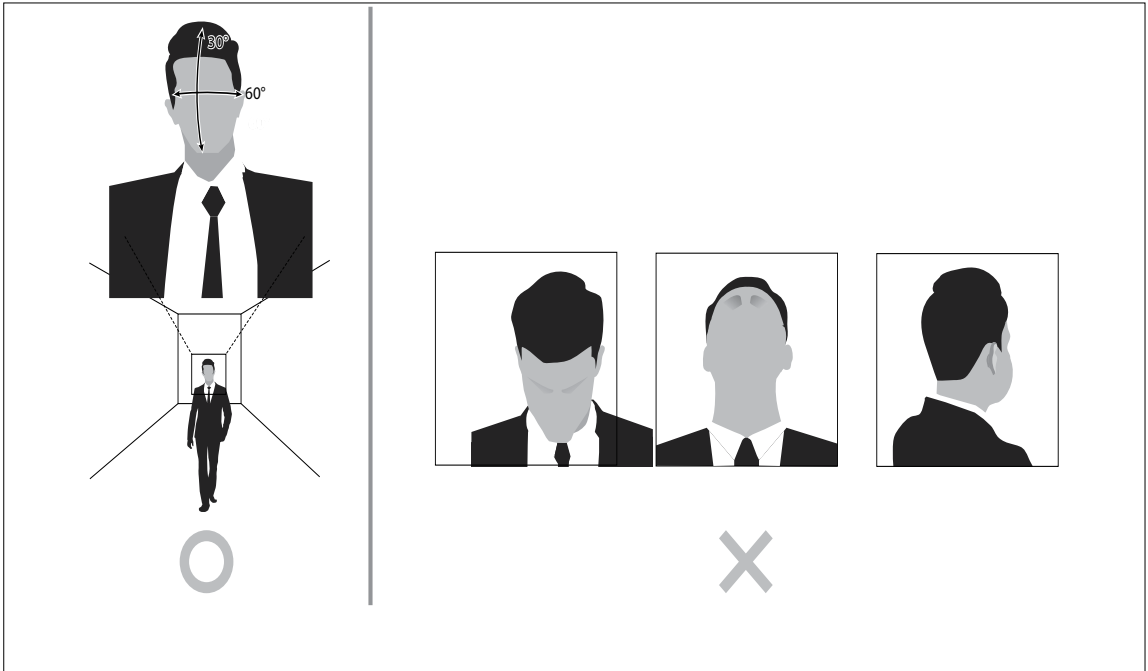
- High density crowds in which objects pass both inside and outside around the boundary of the set zone at the same time.

Face Detection

Camera Installation

To guarantee reliable function of Face Detection, the following requirements must be satisfied.

- It is recommended that the camera be installed at the average height of a person.
- The minimum size supported for face detection in an image is 50 x 50 pixels or higher (1920x1080 resolution)
- Based on the front of a human face, it is detected only within 30° up and down and 60° left and right.



Part 3 - VA in the Box Setting via NVR

<Before You Configure VA settings>

Configure basic VA Box settings and all other system settings.

- ✓ Screen images may vary depending on the model.
- ✓ When using the camera with Intelligent Codec, it could delay the image analysis up to 10 seconds.

- ⚠ When the MAT (Motion Adaptive Transmission) function is active, the image analysis 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.

Camera Protocol

VA Box supports **DirectIP™** protocol.

- **DirectIP™** protocol:
 - Using with a DirectIP™ NVR enables VA Box use without the need to configure network settings.
 - The DirectIP™ NVR also allows you to control all VA Box settings directly from the NVR, without the need for a computer.

- ✓ For more information on configuring VA Box settings from a DirectIP™ NVR, refer to the **Part 3 - VA in the Box Setting via NVR on page 19**.
- For more information about video analysis report, refer the **Part 4 - Video Analysis Report via IDIS Center Program on page <?>**.

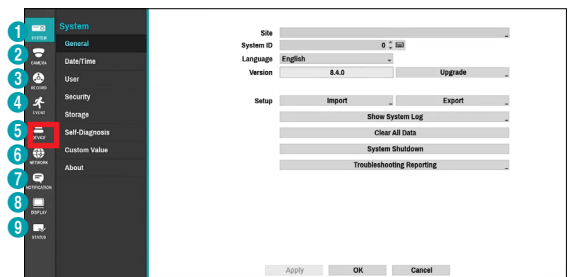
Firmware Upgrade

Refer to the **Firmware Upgrade on page 19** to perform a firmware upgrade.

VA Box Setup

Select **5 Device Setup-VA Box** from the setup menu. Login with an ID that has permission to access the setup menu is needed to access and make changes to the Setup menu.

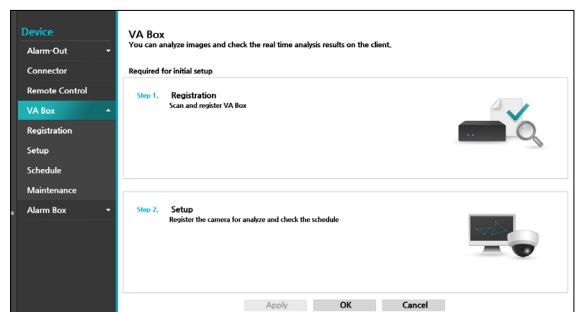
- 1 While in Live mode, press the remote control's **SETUP** button or select Live menu > Setup using the mouse.



- 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.

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.

No.	Title	MAC Address	Address	Model	✕
1	VA BOX1	48:8B:2D:3B:87:87	188.254.192.77	DV-1304-A	✕
2	VA BOX2	48:8B:2D:3B:87:87	188.254.192.77	DV-1304-A	✕
3	VA BOX3	48:8B:2D:3B:87:87	188.254.192.77	DV-1304-A	✕
4	VA BOX4	48:8B:2D:3B:87:87	188.254.192.77	DV-1304-A	✕
5	VA BOX5				✕
6	VA BOX6				✕
7	VA BOX7				✕
8	VA BOX8				✕
9	VA BOX9				✕
10	VA BOX10				✕
11	VA BOX11				✕
12	VA BOX12				✕
13	VA BOX13				✕
14	VA BOX14				✕
15	VA BOX15				✕
16	VA BOX16				✕
17	VA BOX17				✕
18	VA BOX18				✕
19	VA BOX19				✕

Apply OK Cancel Scan

- **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.**

VA Box - Device Scan

Protocol DirectIP
Mode Auto Scan(LAN) Stop

Scanning Devices... Found 4 devices

No.	MAC Address	Address	Model	Registered Device MAC Address	Status
1	48:8B:2D:3B:87:87	188.254.192.77	DV-1304-A(L1)		Registered
2	48:8B:2D:3B:87:87	188.254.192.77	DV-1304-A(L2)		Registered
3	48:8B:2D:3B:87:87	188.254.192.77	DV-1304-A(L3)		Registered
4	48:8B:2D:3B:87:87	188.254.192.77	DV-1304-A(L4)		Registered

Add VA Box Cancel

- **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.

No.	Title	Model	Camera	Analytic Type	Configuration	Reset
1	VA BOX1	DV-1304-A	2. CAM2	Object Detection		Reset
2	VA BOX2	DV-1304-A	3. CAM3	Intrusion		Reset
3	VA BOX3	DV-1304-A	3. CAM3	Loitering		Reset
4	VA BOX4	DV-1304-A	4. CAM4	Line Crossing		Reset
5	VA BOX5	None	None	None		
6	VA BOX6	None	None	None		
7	VA BOX7	None	None	None		
8	VA BOX8	None	None	None		
9	VA BOX9	None	None	None		
10	VA BOX10	None	None	None		
11	VA BOX11	None	None	None		
12	VA BOX12	None	None	None		
13	VA BOX13	None	None	None		
14	VA BOX14	None	None	None		
15	VA BOX15	None	None	None		
16	VA BOX16	None	None	None		
17	VA BOX17	None	None	None		
18	VA BOX18	None	None	None		
19	VA BOX19	None	None	None		
20	VA BOX20	None	None	None		

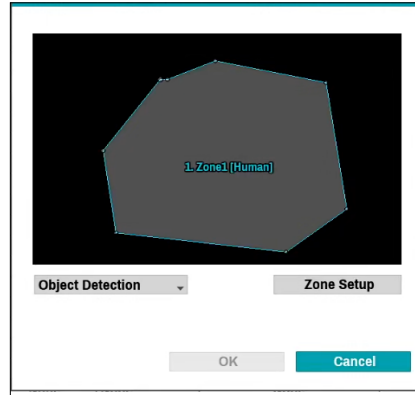
- **Title:** Displays the name of a VA Box.
- **Model:** Indicates the VA Box's model.
 - The video analytics may not be supported depending on the model.
- **Camera:** Select the camera to analyze the video. Only one camera can be set for each VA Box channel.
- **Set up:** The settings appear differently depending on the Analytic Type. Refer to the setting items for each Analytic Type
- **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.
- **Analytic Type:**
 - **DV-1304 :** Select one among People Counting, HeatMap, Social Distancing Violation, Mask Rule Violation and Queue Monitoring.
 - **DV-1304-A :** Select one among Object Detection, Intrusion, Loitering, Line Crossing and Face Detection.

<Types of Video Analytics >

Object Detection

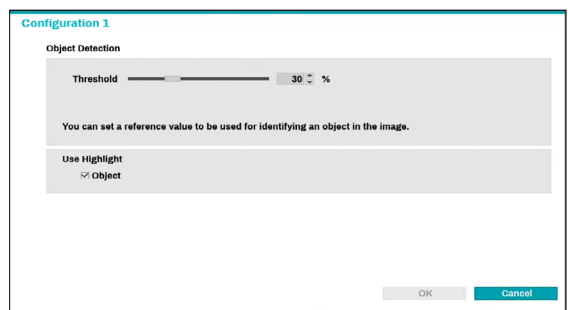
Object Detection technology detects an object (human, cars, bikes) in the zone set by the user.

Drag and drop the vertex to modify a previously set zone or click on the left mouse button to reset the zone.



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

- **Configuration :** Set the environment of Object Detection. Select Object Detection as the video analysis type, and then select Settings.

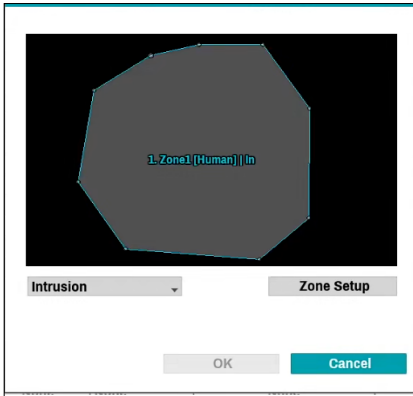


- **Threshold :** Set a reference value that can be recognized as an object in the image.
- **Use Highlight:** In the zone setup screen, values are highlighted in color.

Intrusion

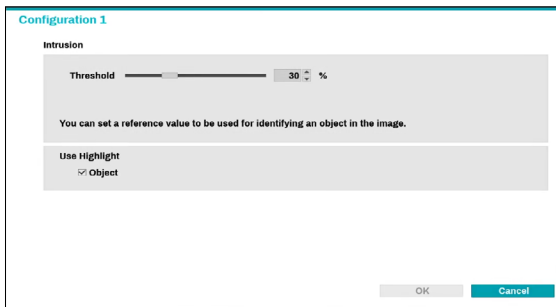
Set direction options (In, Out, In/Out) to detect an object (human, cars, bikes) entering or leaving the zone.

Drag and drop the vertex to modify a previously set zone or click on the left mouse button to reset the zone.



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

- **Configuration** : Set the environment of Intrusion. Select Intrusion as the video analysis type, and then select Settings.

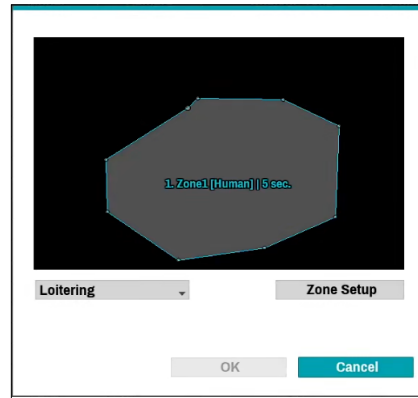


- **Threshold** : Set a reference value that can be recognized as an object in the image.
- **Use Highlight**: In the zone setup screen, values are highlighted in color.

Loitering

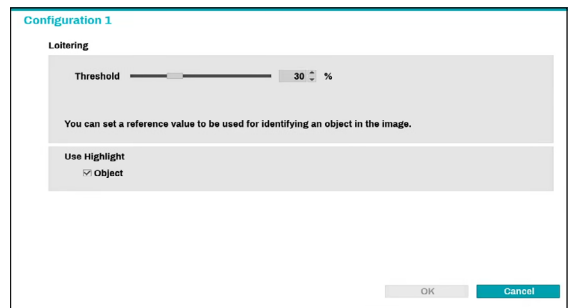
Loitering detection technology detects an object (human, cars, bikes) that stays longer than the set time.

Drag and drop the vertex to modify a previously set zone or click on the left mouse button to reset the zone.



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

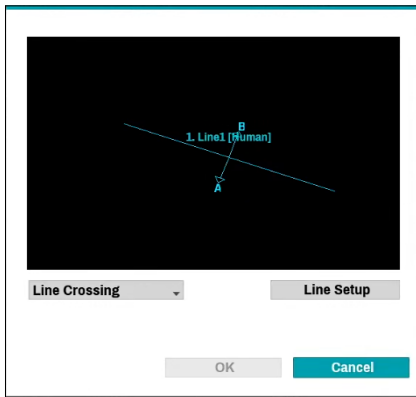
- **Configuration** : Set the environment of Loitering . Select Loitering as the video analysis type, and then select Settings.



- **Threshold** : Set a reference value that can be recognized as an object in the image.
- **Use Highlight**: In the zone setup screen, values are highlighted in color.

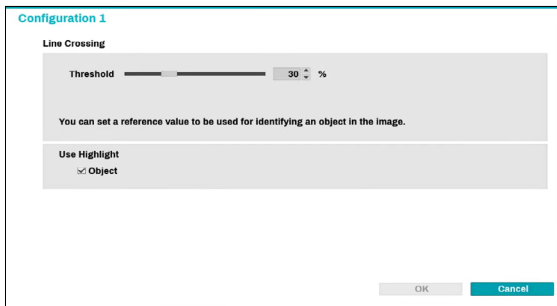
Line Crossing

Set direction options (In, Out, In/Out) to detect an object (human, cars, bikes) which crosses a pre-defined line. Click on the left mouse button to reset the line.



Right-click on the line setup screen to bring up the Line Crossing Menu.

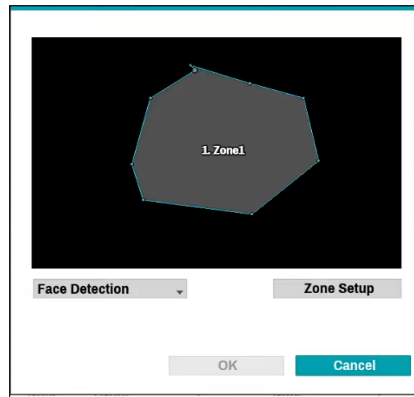
- **Configuration** : Set the environment of Line Crossing. Select Line Crossing as the video analysis type, and then select Settings.



- **Threshold** : Set a reference value that can be recognized as an object in the image.
- **Use Highlight**: In the line setup screen, values are highlighted in color.

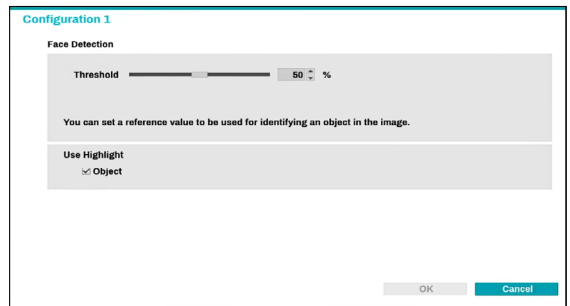
Face Detection

Face Detection technology analyzes faces in an image. Drag and drop the vertex to modify a previously set zone or click on the left mouse button to reset the zone



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

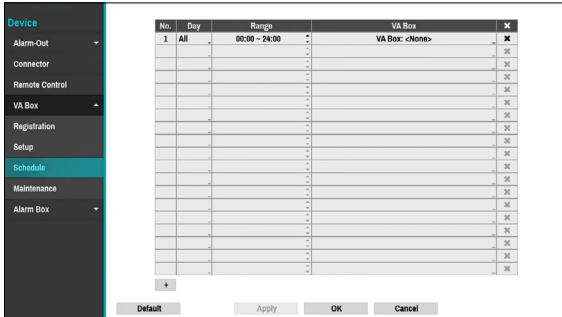
- **Configuration** : Set the environment of Face Detection. Select Face Detection as the video analysis type, and then select Settings.



- **Threshold** : Set a reference value that can be recognized as an object in the image.
- **Use Highlight**: In the zone setup screen, values are highlighted in color.

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_Maintenance

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.



- The VA Box will reboot after the upgrade and then reconnect automatically.

Part 4 - Appendix

Troubleshooting

Problem	Check
Power LED will not turn on	<ul style="list-style-type: none"> • Check the LAN cable. • Check that the power cable is connected or the NVR has power.
The system is unable to recognize network interface	<ul style="list-style-type: none"> • Check the LAN cable. • Check the network LED.

Specifications

Model		DV-1304-A
Video	Input	4ch IP
	Compression	H.264 / H.265
Input/ Output	Ethernet	PoE In/Out Port : 10 Mbps / 100Mbps
	DC48V Input	Terminal Blocks
	LED	Power(Status), Network
	Button/Switch	Reset
Environmental Conditions	Operating Temperature	32°F to 104°F (0°C ~ 40°C)
	Operating Humidity	0% ~ 90%
General	Dimensions (W x H x D)	200mm x 44mm x 157.6mm (7.9" x 1.7" x 6.2")
	Unit Weight	0.88kg (1.94 lb)
	Power Supply	48V _{DC} , PoE
	Power Input	ADAPTOR (INPUT : 100-240V~, 50/60Hz, 1.2A, OUTPUT : 48V _{DC} , 1.0A)
	Power Consumption	48V _{DC} , 0.8A, 38.4W PoE, IEEE 802.3at(Class 4), 25W DC OUTPUT : 48V _{DC} , 0.35A MAX
	Approval	KC, FCC, CE

These product specifications may change without prior notice.



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