Alarm Box

Operation Manual

AL-1112

Powered by **Direct IP**®

Before reading this manual

This is a basic installation and operation manual for use of an IDIS alarm box. 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 manual.
- The information in this document is believed to be accurate as of the date of publication even though explanation about some functions may not be incorporated. The manufacturer is 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.
- It is recommended that first-time users of this alarm box 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 Symbols

Symbol	Publication	Description
---	**IEC60417, No.5031**	Direct current

In-Text

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

Safety Precautions

WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK,

DO NOT REMOVE COVER (OR BACK).

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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. Placing and 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.

Do not place this equipment in an enclosed space. Sufficient ventilation is required to prevent an increase in ambient temperature which can cause malfunction or the risk of fire.

7. 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.

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

9. 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.

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

11. 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.

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

13. 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.

14. 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.

15. 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.

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

17. 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.

18. 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.

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.

Copyright

Registered Trademarks

IDIS is a registered trademark of IDIS Co., Ltd.

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

This product contains software built partially on open-source content. Codes for the corresponding open-source content are available for download depending on whether or not the source is publicly available under a license policy. For more information, refer to **System > General** page. 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).

Table of Contents

Part 1 - Remote Setup

Product Features

This alarm box offers the following features:

- DirectIP™ protocol supported
- Extend alarm terminal of recording equipment
- Easy connection with network
- Support PoE and DC, AC power
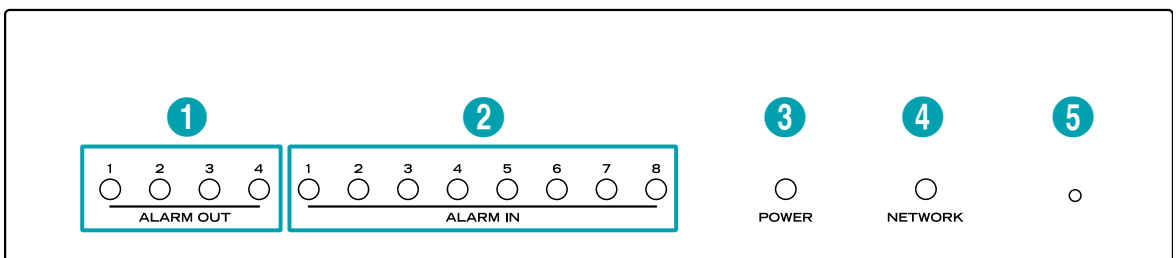- Check current alarm status via front LED

Accessories

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

- Alarm Box
- User Guide and Instruction Manual (This document)
- Terminal blocks (4ea)
- Install bracket
- Rubber

Overview

Front Panel

❶	**Alarm Out LED**	❷	**Alarm In LED**	❸	**Power LED**	❹	**Network LED**
❺	**Factory Reset Switch**						

① **Alarm Out LED**

Displays alarm out status

② **Alarm In LED**

Displays alarm in status

③ **Power LED**

Displays system operating status

④ **Network LED**

Displays network connection status

LED Status Indications

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

⑤ **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 alarm in/out LED blinks several times. Release the reset switch, and all of the encoder's settings are now at the original settings it had when it left the factory.

- **Factory Reset during system booting**: All of the encoder'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 protocol and 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 protocol, 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 protocol and system log are now at the original settings it had when it left the factory.

Rear Panel
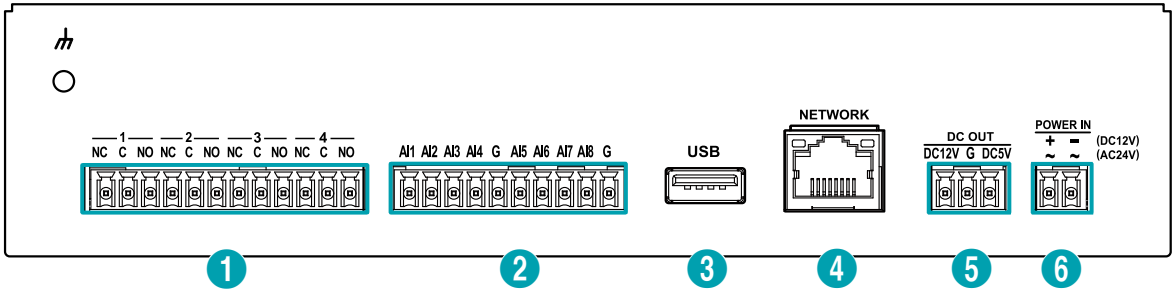
❶	**Alarm Out**	❷	**Alarm In**	❸	**USB Port**	❹	**Network In**
❺	**DC Out**	❻	**Power In**				

④ **Network In**

Connect a network cable with an RJ-45 jack. The alarm box is capable of connecting to networks via an Ethernet connector and also receives PoE power from the network cable.

⑤ **DC Out**

Connect this to low power devices such as sensors.

⚠ DC out cannot connect more than 12V/300mA and 5V/400mA power.

⑥ **Power In**

Power can be input separately if PoE power is not supported. Use either 12VDC or 24VAC power supply. Connect the two wires of the power adapter to the terminal block (2 pin) provided with the alarm box. If DC12V is used, separate the + and - (GND) wires.

Booting will commence once connected to a power supply.

✓ Connect the wire or cable to the terminal blocks supplied with the alarm box and then connect it to the corresponding terminal block on the product.

⚠ • Ground the power port's ground terminal before 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.

Part 2 - Remote Setup

Configure basic alarm box settings and all other system settings.

✓ Screen images may vary depending on the model.

Protocol

Alarm box supports **DirectIP™** and **IDIS** protocols.

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

  ✓ For more information on configuring alarm box settings from a DirectIP™ NVR, refer to the NVR's **operation manual**.

- **IDIS** protocol:
 - Control the camera over the network from software installed on a computer or a separate NVR.

Remote Setup

1 Launch the IDIS Discovery program and then from the main screen, select a network device whose settings you wish to change.

2 Click on the **Setup** 🖳 icon.

3 Select **Remote Setup** from the **Setup** menu to load the **Remote Setup** screen. Alternatively, you can select **Network Device** from the main screen and then right-click to access the **Remote Setup** screen.

✓
- System settings can also be changed using a remote program.
- Remote Setup works with the following web browsers when the web browsers support HTML5: Microsoft Internet Explorer version 10 or later, Google Chrome, Mozilla Firefox, or Apple Safari. It may not work properly with Microsoft Internet Explorer version 9.0 or earlier. It is recommended that you update the web browser to the latest version. When you launch **Remote Setup** on a Microsoft Internet Explorer version 10 or later supporting HTML5 and the **Remote Setup** screen does not appear, check if the web browser's document mode is set to **9** or higher or **Edge**. You can check the document mode as follows: Press the **F12** key on the keyboard → click the **Document mode** 🔧▾ icon.
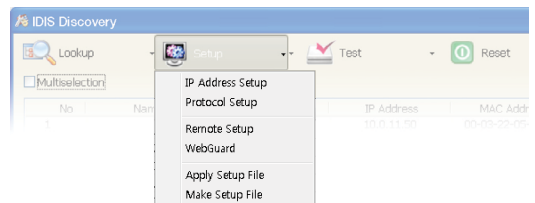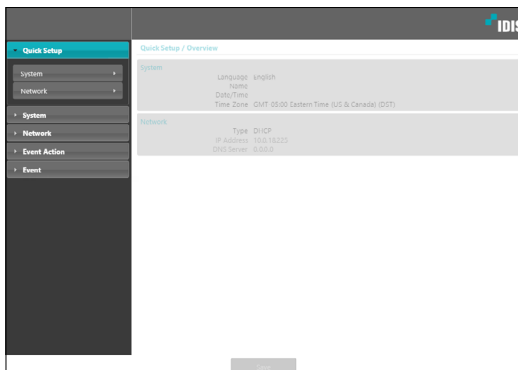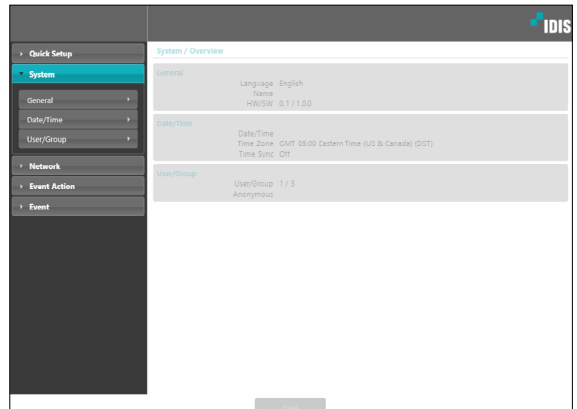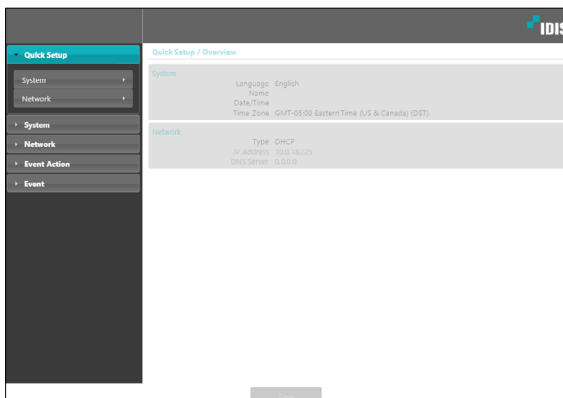
From the Remote Setup screen, select the menu on the left to display the current settings. Select an option under the menu to change the corresponding settings. Once you have changed the settings, click **Save** to apply the settings.

Quick Setup

Quick Setup allows you to set up **System**, **Network**, and other basic settings needed for alarm box use.

System

Change the alarm box's system information, add users/groups, and/or import/export settings.

General

- **Language**: Select the language you wish to use for remote setup.

- **Name**: Enter a name for the alarm box. (Up to 31 alphanumeric characters, including spaces)

- **Note**: Enter a description for the alarm box.

- **HW Version/SW Version**: Indicates the alarm box's hardware and software versions.

- **Miscellaneous**
  - **Opensource Licenses:** Click **View** to see the information of opensource licenses.

- **Setup**
  - **Load Default Setup**: Restores all settings other than Date/Time to their factory defaults. Select Include Network Setup to load default network settings as well. For more information on network setup, refer to the **Network on page 13**.
  - **Import Setup**: Open a setup file and apply its settings to the alarm box. Click on the button and then select a setup file. Select Include Network Setup to apply the file's network setup settings. For more information on network setup, refer to the **Network on page 13**.
  - **Export Setup**: Export the current settings as a .dat file. Click on the button and then enter a file name.

    - **Load Default Setup** and **Import Setup** options are available only to users belonging to the **Administrator** group.
    - When applying the settings of a setup file, do not select the **Include Network Setup** option if the network settings contained in the selected file is currently being used by a different alarm box. Doing so can interfere with establishing a connection with the other alarm box.
    - If IP Address, Port, and/or SSL settings have been changed, click **Save** to apply the current settings, and then restart Remote Setup. If you do not restart Remote Setup, the changes afterwards will not be applied.

Date/Time
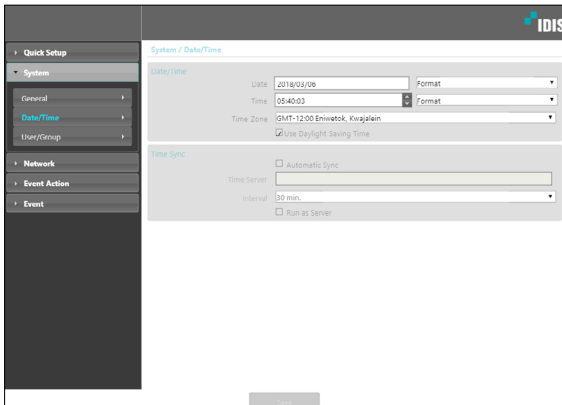
- **Date/Time**: Change the alarm box's date/time settings and display formats and configure the time zone and daylight saving time settings. Click **Save** to apply the changes right away.
- **Time Sync**
    - **Automatic Sync**: Select to synchronize the system's time with the time server at a specified interval. Enter the time server's IP address or domain name and then specify the interval.
    - **Run as Server**: Select to run the alarm box as a time server. Other devices will then be able to synchronize its time setting with this camera's time setting.

    > If you wish to enter a domain name instead of an IP address for the **Time Server** setting, DNS server must be configured during **Network** setup.

User/Group
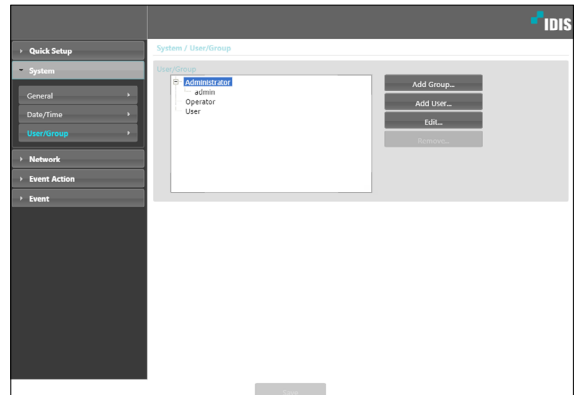
- **User/Group**: Change remote alarm box control permission settings for users and user groups.
    - **Add Group**: Add a new user group. Designate a name for the group and then specify control authorities.
    - **Add User**: Add a new user. Designate a name for the user, select which group to add the user to, and then enter a connection password.
    - **Edit**: Edit group authorities and/or user passwords. Select a group or user and then click on the button.
    - **Remove**: Delete groups or users. Select a group of user you wish to delete and then click on the button.

    > - **User/Group** settings can only be configured by users belonging to the **Administrator** group.
   > - There is no default password for the **Administrator** group's **admin** user.
    > - Standard groups (**Administrator**, **Operator**, and **User**) cannot be edited or deleted.
    > - Group authorities that can be assigned are as follows:
    >   - **Upgrade**: Upgrade the system.
    >   - **Setup**: Configure the system's settings.
    >   - **Alarm-Out Control**: Reset alarm outs.

Network
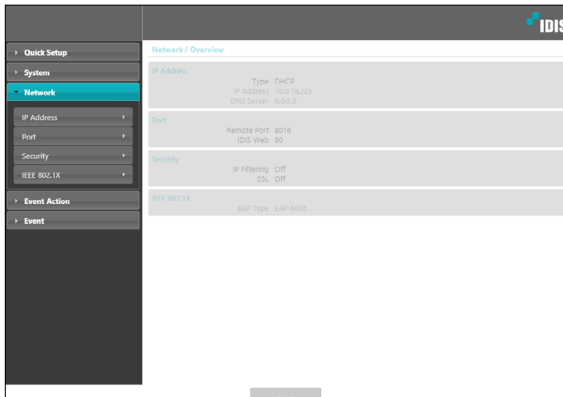
Change the network settings and enable security features.
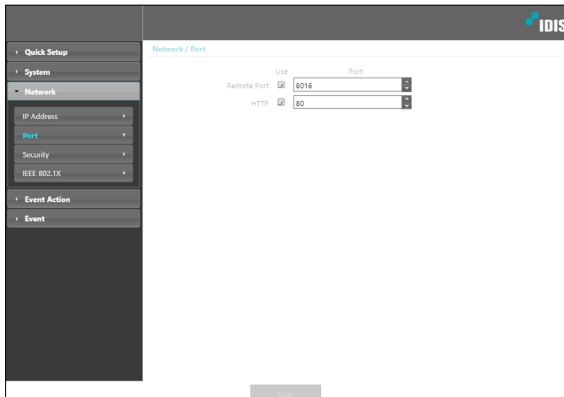
IP Address
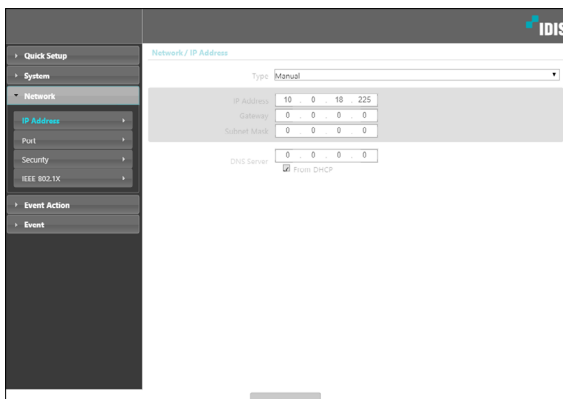
- **Type**: Select the type of network you are using. If this option has been changed, click **Save** to apply the current settings, and then restart Remote Setup. If you do not restart Remote Setup, the changes afterwards will not be applied.
  - **Manual**: Select if using a static IP. You will then be able to configure the related settings manually.
  - **DHCP**: Select if connected to the network using DHCP. Click **Save** to retrieve IP address and other network settings automatically from the DHCP server.
- **DNS Server**: Enter the DNS server's IP address. By using the DNS server, you will be able to use domain names instead of IP addresses when configuring the time. If the alarm box is connected to the network via DHCP, select the **From DHCP** option to retrieve the DNS server's IP address from the DHCP server automatically. The updated address will be displayed upon the subsequent connection.

Contact your network administrator for more information on the alarm box's network connection type, the DNS server's IP address, and other related information.

13

Port

- **Use/Port**: Enable/disable ports and designate corresponding port numbers. **Remote Port** and **HTTP** ports are enabled by default and cannot be disabled. When the HTTP port is enabled, you can run the alarm box's Remote Setup. If this option has been changed, click **Save** to apply the current settings, and then restart Remote Setup. If you do not restart Remote Setup, the changes afterwards will not be applied.

> Each port number must be unique. It is not allowed to use the same port number for more than one function.

> Port numbers of the remote program must be updated whenever the camera's port numbers are changed.

Security
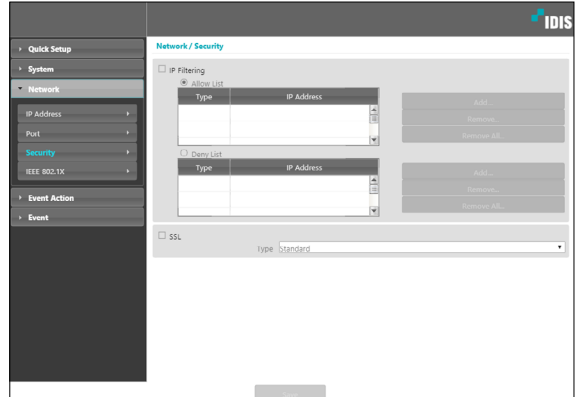
- **IP Filtering**: Select this option to enable IP Filtering. IP Filtering allows alarm box access from certain IP addresses and blocks access from others.
  - **Add**: Add new IP addresses to Allow List or Deny List. Select the **Host** option to add one IP address at a time. Select the **Group** option to define a range of IP addresses you wish to add.
  - **Remove/Remove All**: Remove individual or all IP addresses from Allow List or Deny List.

- **SSL**: Select this option to enable SSL (Secure Sockets Layer). Enabling this option applies SSL protocol protection on data transmitted out. However, programs and systems that do not support SSL will not be able to connect to the device. If this option has been changed, click **Save** to apply the current settings, and then restart Remote Setup. If you do not restart Remote Setup, the changes afterwards will not be applied.

> - Time server's IP address must be added to Allow List under **IP Filtering** in order to use Time Sync feature. No connection to the alarm box will be permitted whatsoever from IP addresses added to **Deny List**.
> - Enabling the **SSL** option may place a greater load on the external system, depending on the level of security being used.
> - This product contains software developed by Open SSL Project for use in Open SSL Toolkit. (http://www.openssl.org/)

IEEE 802.1X

Select the **IEEE 802.1X** option to enable IEEE 802.1X network connection authentication.

- **Certificates**: Upload a certificate or a private key. You may be prompted to enter a password for the private key.

- **Settings**: Configure EAP (Extensible Authentication Protocol) settings.

    - **EAP Type**: Choose a network connection authentication method. Selected method must be identical to the authentication method used on the authentication server.

    - **EAPOL Version**: Choose EAP authentication's version.

    - **EAP Identity/EAP Password**: Enter authentication ID and password.

> The authentication server and AP must support IEEE 802.1X authentication in order for the IEEE 802.1X network connection authentication feature to function properly.
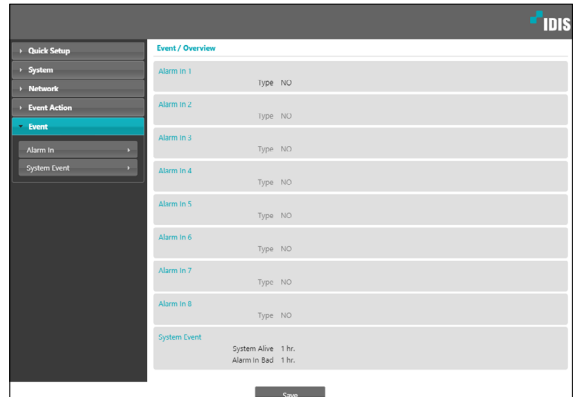
Event Action

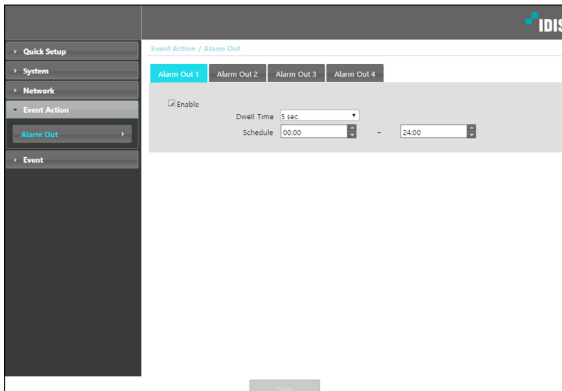Designate event detection alert actions.
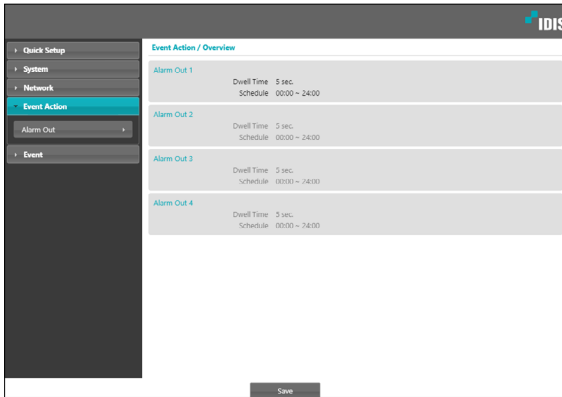
Event

Configure event detection settings.
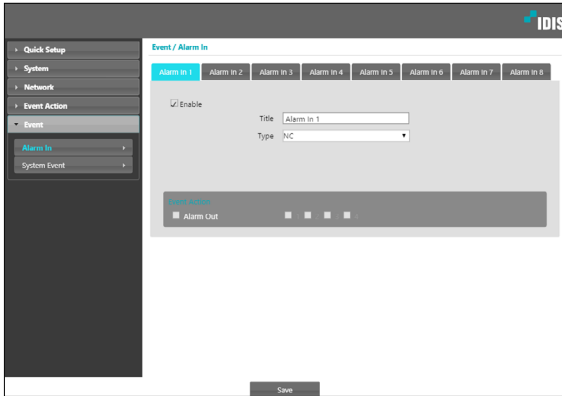

Alarm out

Select **Alarm Out** to enable alarm out.

- **Dwell Time**: Designate the alarm out duration. When an event occurs, alarm out will be generated for the specified duration.
- **Schedule**: Specify the alarm out schedule. Alarm out is generated during the specified period only.

Alarm In

Select **Alarm In** to enable alarm in event. With alarm in event enabled, alarm in detections by the alarm in connector will be assumed as events.


- **Title**: Enter the alarm-in device's name.
- **Type**: Select the alarm in type.
- **Event Action**: Select an alarm in event alert action.
  - **Alarm Out**: Select if you wish to generate an alarm out.

    Event Action settings must be configured correctly in order to perform event actions.
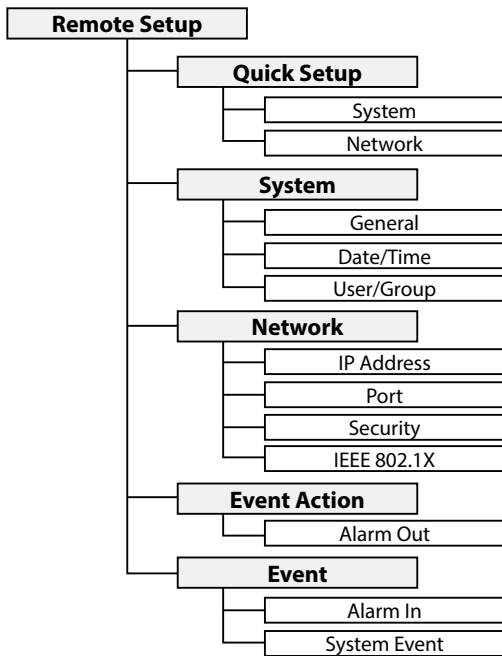
System Event.

Select **System Event** and configure system event settings. With system event enabled, system status and alarm in status will be checked periodically and corresponding alerts will be generated.
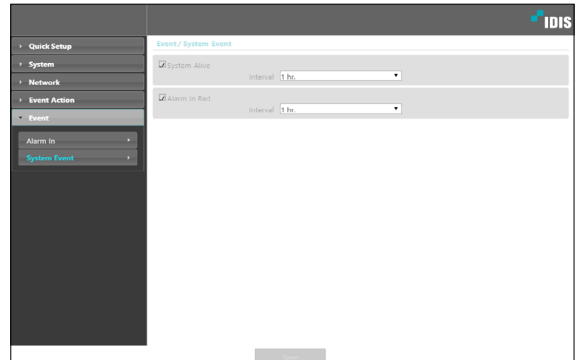
- **System Alive**: Select to check the system status and then set up a schedule.
- **Alarm In Bad:** Select to check the alarm in status and then set up a schedule.

Part 3 - Appendix

Setup Menu Tree (Remote Setup)

```
Remote Setup
    ├── Quick Setup
    │       ├── System
    │       └── Network
    ├── System
    │       ├── General
    │       ├── Date/Time
    │       └── User/Group
    ├── Network
    │       ├── IP Address
    │       ├── Port
    │       ├── Security
    │       └── IEEE 802.1X
    ├── Event Action
    │       └── Alarm Out
    └── Event
            ├── Alarm In
            └── System Event
```

Troubleshooting

Problem	Check
Power LED will not turn on	• Check the LAN cable. • Check that the power cable is connected or the NVR has power.
The system is unable to recognize network interface	• Check the LAN cable. • Check the network LED.

Specifications

Alarm	**Input**	8 Digital-Input channels
		- including GND (1ea per 4 alarm ins)
		- Dry contact, Wet contact
		High : Open or DC 3V ~ DC 30V
		LOW : Short or DC 0V ~ DC 1.8V
	Output	4 Relay-out channels (NC, NO, COMMON)
Inputs/ Outputs	**Ethernet**	10/100Mbps, 802.3at (Class 4)
	LED	Power(Status), Network, Alarm In/Out
	USB	1ea (rear panel)
	DC Output	DC12V/300mA, DC5V/300mA
	Switch	Reset
Environmental Conditions	**Operating Temperature**	14°F to 122°F (-10℃ ~ 50℃)
	Booting Temperature	32°F to 122°F (0℃ ~ 50℃)
	Operating Humidity	0% ~ 90%
General	**Dimensions (W x H x D)**	7.9" x 1.7" x 5.7" (200mm x 44mm x 145mm)
	Unit Weight	1.69 lbs. (0.77kg)
	Power Supply	In - RJ-45, PoE(802.3at), terminal block, 12VDC, 24VAC
		Out - terminal block, 12VDC, 5VDC (12V,GND, 5V)
	Power Consumption	PoE : 802.3at Class4, 24VAC/1.34A(19W), 12VDC/1.64A(20W)
	Approval	FCC, CE

☑ These product specifications may change without prior notice.

Index

C

D

I

R

S

T

U

IDIS Co., Ltd.

For more information, please visit at