

# Network Video Recorder

Quick Guide



# 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 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.

### 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. Dispose of used batteries according to the instructions.

### 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).

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



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.

## 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.

Manufacturer reserves all rights concerning this operation manual.

Use or duplication of this operation manual in part or whole without the prior consent of manufacturer is strictly prohibited.

Contents of this operation manual are subject to change without prior notice for reasons such as functionality enhancements.

- This manual covers the 4-, 8- and 16-channel network video recorders. For simplicity, the illustrations and descriptions in this manual refer to the 16-channel model.
- This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).

The information in this manual is believed to be accurate as of the date of publication. 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.

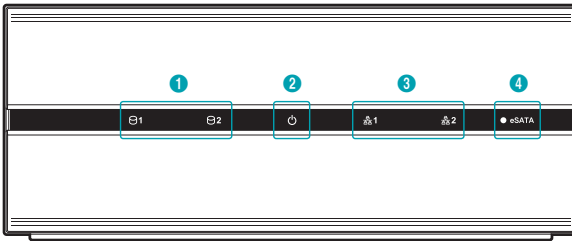
# Accessories

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

Item		
Network Video Recorder	Power Cable	Quick Guide
Operation Manual and remote Program CD	Rack-mount Kit	SATA2 Cables
Assembly Screws for Adding Hard Disk Drives		

# Overview

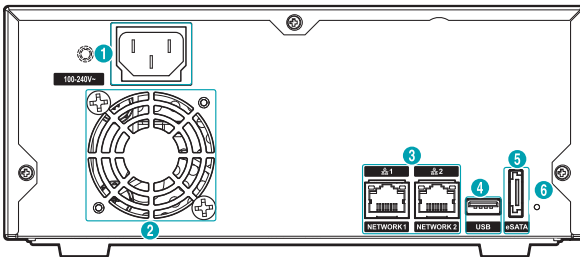
## Front Panel



1	HDD LED	2	Power LED
3	Network LED	4	eSATA LED

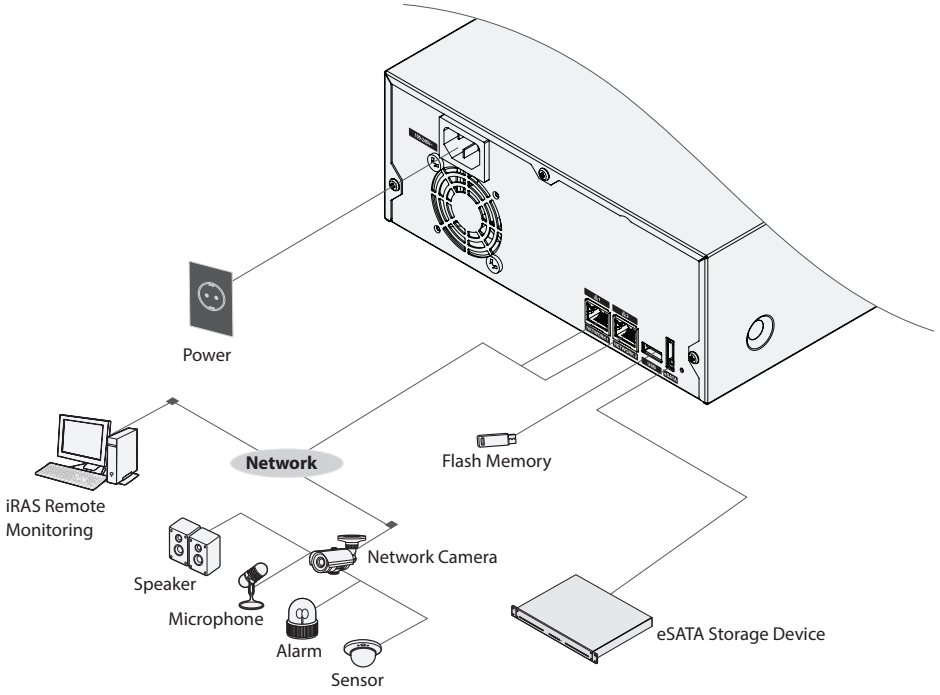
For more details on front panel LEDs, refer to the operation manual.

## Rear Panel



1	Power In Port	2	Vent	3	Network Ports
4	USB Port	5	eSATA Port	6	Factory Reset Button

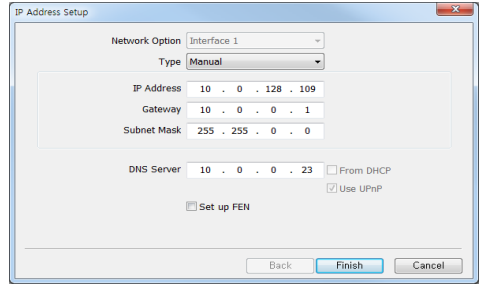
Connections on the Rear Panel



# Installation

You can connect the NVR system remotely only via network connection. This requires installing the following programs in your PC.

- **INIT Program:** Allows you to set up network information of the NVR system for remote connection.
- **iRAS Program:** Allows you to set up the NVR system, to monitor video of the NVR system and to play back video recorded in the NVR system.

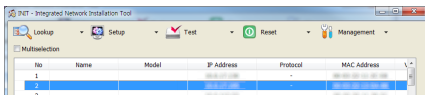



## INIT Program

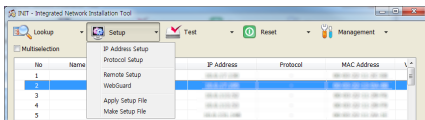
The INIT program does not require installation procedures, and double clicking the executable file runs the INIT program. Refer to the INIT user manual for details about the INIT program.

- ✓ The INIT program provides the following functions only: Lookup, Setup → IP Address Setup, Management → Upgrade.

- 1 Check that the NVR system is operating.
- 2 Insert the installation CD and run the INIT program by double clicking the **INIT.exe** file in the INIT folder.
- 3 Select the NVR system to connect.



- 4 Click the Setup icon  in the Main screen, select **IP Address Setup**. You will be required to enter the login information (The default user ID is **admin** and there is no default password.).



- 5 Enter the network information when the **IP Address Setup** screen appears. You can check the network information including the administration port number of the NVR system by selecting the NVR system, clicking the right mouse button and selecting **Properties** on the Main screen.

## iRAS Program

### System Requirements

#### Recommended Requirements

- Operating System: Microsoft® Windows® 7 64-bit (Home Premium, Professional, Ultimate) (Microsoft® Windows® 8 (Pro, Enterprise) compatible)
- CPU: Intel Core™ i5-3570K 3.30 GHz or faster
- RAM: 4GB or more
- VGA: ATI Radeon™ HD 7700 or NVIDIA GeForce GTX650 or higher (1280x1024, 32bpp or higher), multi monitor
- Hard Disk Drive: 6 GB or more free space
- LAN: Gigabit Ethernet or faster

#### Minimum Requirements

- Operating System: Microsoft® Windows® XP Home SP 3
- CPU: Intel Core™ 2 Duo E7200 2.53 GHz or faster
- RAM: 1.5 GB or more
- VGA: ATI Radeon™ HD 2400 or NVIDIA GeForce FX5500 or higher (1024x768, 24bpp or higher)
- Hard Disk Drive: 1 GB or more free space
- LAN: 10/100 Mbps Ethernet or faster

- ✓ The iRAS program operates under 32-bit operating system. When you install it under 64-bit of Microsoft® Windows® Vista or later operating system, it is installed and operates in 32-bit compatibility mode.

### Installation

- ✓ Disable your PC's Windows power saving function: Start menu → Power Options → set both Turn off the display and Put the computer to sleep to Never (Power Options → Power Schemes tab → set both Turn off monitor and Turn off hard disks to Never when using the Microsoft® Windows® XP operating system).

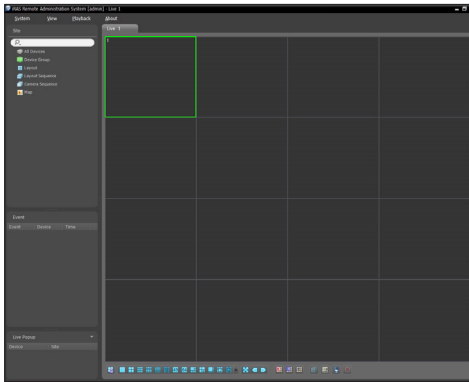


If an older version of iRAS software is installed on your computer, a screen appears asking you to upgrade the software. In this case, you are required to upgrade the software according to the instructions in the screen.

- 1 Insert the software CD in the PC.
- 2 Run the setup.exe file in the Setup folder of the software CD. Refer to the iRAS user's manual for instructions on the installation.

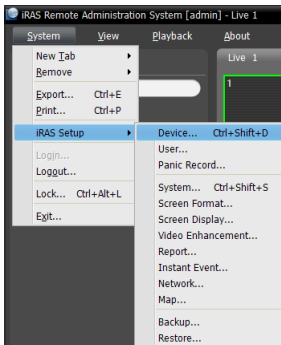
## Getting Started

Run the iRAS program, and log in. The default user ID is **admin** and there is no default password.

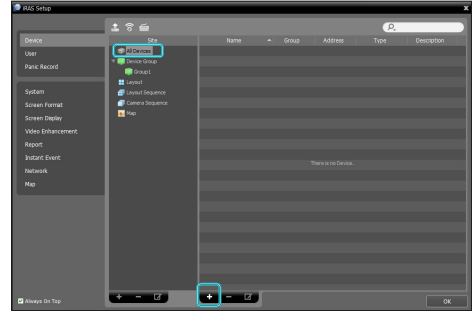


To connect to the NVR system, register the NVR on the iRAS program as follows:

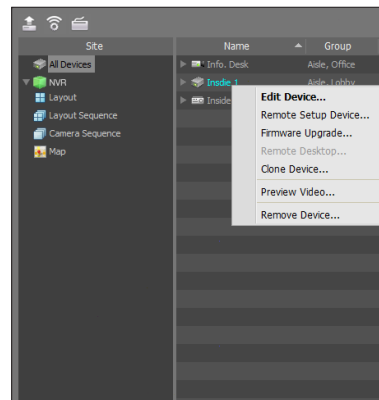
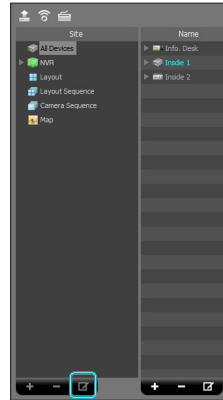
- 1 Go to the **System** menu → Select **iRAS Setup** → Select **Device**.



- 2 Click **All Devices** in the **Site** panel, and then the **+** button at the bottom of the **Site** List panel. The Device Scan window appears, and you can register the NVR. Refer to the iRAS user's manual (3.2 Registering Devices) for details about registering the NVR.



- 3 Click an **NVR** in the **Site** List panel. Click the  button at the bottom of the **Site** List panel, or click the right mouse button to display the device menu.



- 4 Click **Remote Setup Device** to change the NVR's settings. The following Setup screen appears.

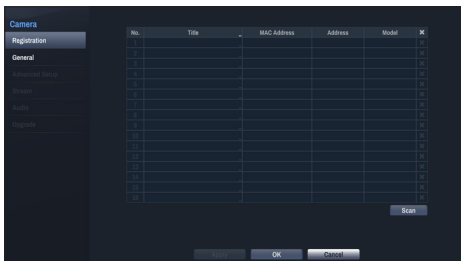
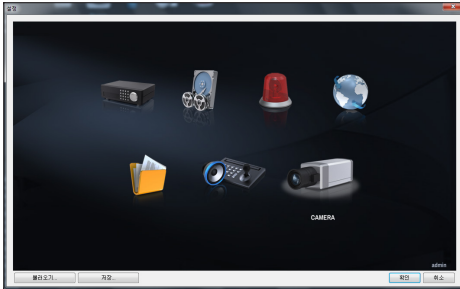


- ✓ If you have changed the password of the NVR in the last connection to the NVR, you should apply the change in the iRAS program, also. Click **Edit Device** in the device menu and enter the new password.

## Camera Registration

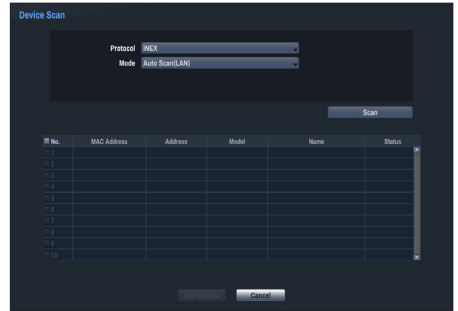
- ✓ While one user scans or registers cameras, other users cannot scan or register cameras.

Click the **CAMERA** menu in the Setup screen.

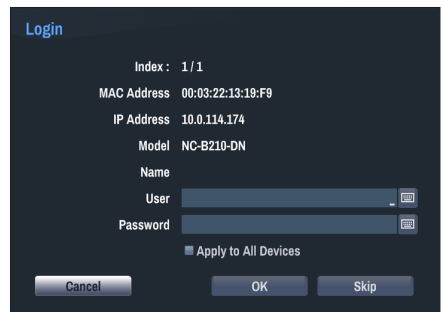


- **No., Title, MAC Address, Address, Model:** Displays the number, title, MAC address, IP address and model of a selected camera.

- **Scan:** Click the button to register cameras.



- **Protocol:** Select the protocol or manufacturer of the camera to scan.
- **Mode:** Select the scan mode. Clicking the Scan button displays the results in the list. If the IP address range of the camera is different from that of the NVR system, the NVR considers the IP address invalid. In this case, you must change the camera's IP address to register the camera.
- **Auto Scan (LAN):** Lists cameras in a LAN environment.
- **IP Address Scan:** Allows you to enter the IP address of a camera. You can search more than one camera at a time by entering a range of IP addresses. 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.
- : Select the cameras to register by checking the box beside each camera name in the list. Clicking the **Add Camera** button displays the following **Login** screen.

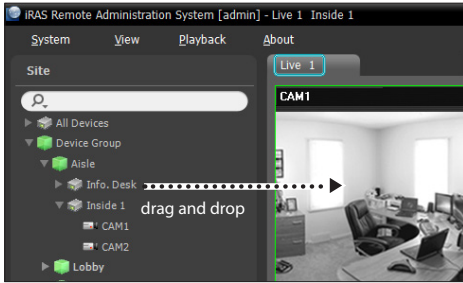


- **User, Password:** Enter the user ID and password for the connection to the camera.
- **Apply to All Devices:** Select to apply the same user ID and password to all selected cameras if you selected more than one camera and the selected cameras have the same user ID and password.



# Basic Feature

## Live Monitoring



## Video Recording

Video recording will only take place if all the connections are made correctly.

## Panic Recording

You can control panic recording on/off on the iRAS program. For more information, refer to the iRAS user's manual. 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.

- ✓ 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.

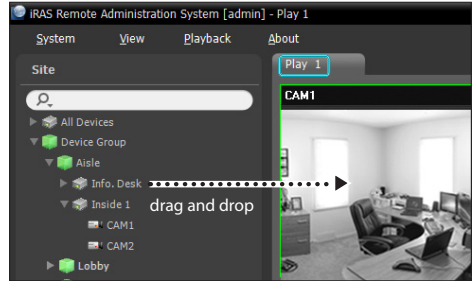
⚠ Panic Recording will not take place if recording mode is not set to **Recycle** and the HDD has reached 100% of its capacity.

## Audio Recording

If the Record Audio option under **Record Setup > General** has been enabled the camera will record audio along with video.

⚠ Check your local laws and regulations on making audio recordings.

## Video Recording Playback



- ✓ 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.

# WebGuard

WebGuard 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.

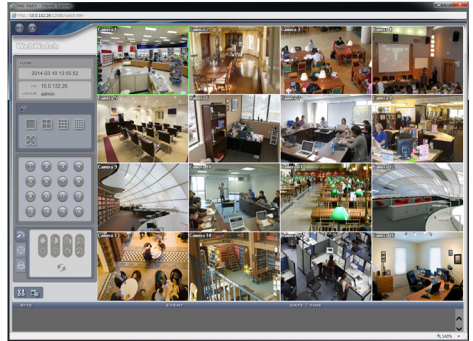
System requirements for running WebGuard are as follows:

	Recommended
<b>OS</b>	Microsoft® Windows® XP (Service Pack 3), Microsoft® Windows® Vista (Service Pack 1), Microsoft® Windows® 7 (Home Premium, Professional, Ultimate) or Microsoft® Windows® 8 (Pro, Enterprise)
<b>CPU</b>	Intel Pentium IV 2.4GHz or above (Core 2 Duo E4600 recommended)
<b>RAM</b>	1GB or more
<b>VGA</b>	128MB or more (1280x1024, 24bpp or above)
<b>Internet Explorer</b>	Ver. 7.0 or above (32-Bit)

- ✓ WebGuard only works with Microsoft Internet Explorer and will NOT work with other browsers.
- WebGuard does not work in Microsoft® Windows® 8 metro UI.

## Setup WebGuard

- 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 WebGuard port number configured under Network > General (Default Value: 12088))
  - Or http://FEN server address/FEN Name
  - Or http://www.dvronline.net (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 WebGuard port number.
- 2 When prompted with the WebGuard login window, select **WEBWATCH** or **WEBSEARCH** as the desired mode. Enter the ID and password and click **LOGIN** to sign in using the selected mode. If connecting by entering http://www.dvronline.net, enter the NVR's IP address in the Device Address field. Selecting the **Use DVRNS** option on the login window allows you to enter the FEN 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.

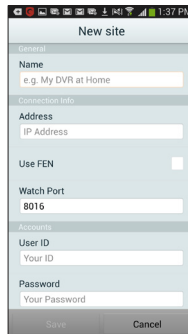


## RAS Mobile

- ⚠ This service requires heavy data traffic, and using a Wi-Fi connection is recommended. Using wireless internet (3G, LTE) may result in excessive data charges.

### Android OS device

- 1 Open the **Play Store**(Google Play) on your Android device.
- 2 In **Play Store** (Google Play), enter **RAS Mobile** in the search field.
- 3 Install RAS Mobile program and open it.
- 4 The start-up menu appears when pressing the Menu button on your mobile device.
- 5 Register the device by pressing **Add Remote Host** and entering the device (network camera) information.



- **General:** Enter a name of the device to be used in RAS Mobile.

- **Connection Info**

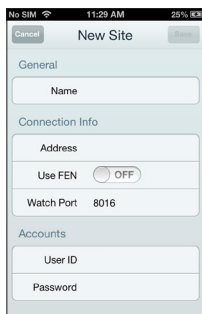
- **Use FEN:** Select the check box. Deselect the checkbox if FEN is not enabled on the device. If the device is using an additional FEN server, press **Settings** in the start-up menu and enter the FEN server information. (Default site: dvrnames.net, Default port number: 10088). For more details, contact your FEN server administrator.

- **Address, Watch Port:** Enter the FEN name used to register the device to FEN. If FEN feature is not enabled on the device, deselect **FEN** checkbox and enter the device's IP address. For port number, using the default value is recommended.

- **Accounts:** Enter the User ID and Password used to login to the device. (Default value of User ID: **admin**, No default value of password)

## iOS device

- 1 Open the **App Store** on your device.
- 2 Enter **RAS Mobile I** in the search filed of the **App Store**.
- 3 Install RAS Mobile program and open it.
- 4 Register the device by pressing + button and entering the device (NVR) information.



- **General:** Enter a name of the device to be used in RAS Mobile app.
- **Connection Info:** Turn **Use FEN ON** and enter the FEN name used to register the device to the FEN. If FEN feature is not enabled on the device, turn **Use FEN OFF** and enter the device's IP address. For port number, using the default value is recommended.
- **Accounts:** Enter the User ID and Password used to login to the device. (Default value of User ID: **admin**, No default value of password).

## Specifications

These product specifications may change without prior notice.

General	
<b>Exterior Dimensions (W x H x D)</b>	8.7" x 3.5" x 11.7" (220mm x 88mm x 297mm)
<b>Weight (Main Unit)</b>	6.97lbs. (3.16kg) (with 2 HDDs)
<b>Weight (Packaging)</b>	10.49lbs. (4.76kg) (with 2 HDDs)
<b>Packaging Dimensions (W x H x D)</b>	12.8" x 7.5" x 16.4" (325 mm x 190 mm x 416 mm)
<b>Working Temperature</b>	5°C – 40°C
<b>Operating Humidity</b>	0% – 90%
<b>Power</b>	100V~240V
<b>Power Consumption</b>	Max. 60W (with 2 HDDs)
<b>Certifications</b>	FCC, UL, CE, CB

Video	
<b>Video In</b>	4/8/16 Network Camera
<b>Recording Resolution</b>	1920x1080, 1280x720, 704x480, 352x240
<b>Recording Speed (IPS)</b>	4-ch Model: max. 120ips @ full HD 8-ch Model: max. 240ips @ full HD 16-ch Model: max. 480ips @ full HD

I/O	
<b>Alarm In</b>	Network camera alarm in
<b>Alarm Out</b>	Network camera alarm out
<b>Internal Buzzer</b>	80dB at 10cm
<b>Network Connection</b>	10Mbps/100Mbps/1Gbps Ethernet
<b>Audio In</b>	Network camera audio in
<b>Audio Out</b>	Network camera audio out
<b>Text In</b>	Network or USB connection only

Connectors	
<b>Video In</b>	Ethernet: 2 Ports
<b>Ethernet Port</b>	2 RJ-45
<b>eSATA Ports</b>	1 eSATA Port
<b>USB Ports</b>	1 x USB 2.0 (5V, less than 0.5A)

Storage	
<b>Internal Storage</b>	2 SATA2 bays
<b>External Storage</b>	1 eSATA Port
<b>Clip Copy Device</b>	USB Memory