NEXCOM

NEXCOM International Co., Ltd.

Intelligent Digital Security
IP Camera
NCr-302-VHR
User Manual

www.nexcom.com

CONTENTS

Preface

Chapter 1: Product Introduction

Chapter 2: Camera Configuration

Chapter 3:
Viewing Live Video via VLC Media Player.............65

PREFACE

Copyright

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Acknowledgements

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Regulatory Compliance Statements

This section provides the FCC compliance statement for Class B devices and describes how to keep the system CE compliant.

Declaration of Conformity

FCC

This equipment has been tested and verified to comply with the limits for a Class B digital device, pursuant to Part 15 of 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 instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area (domestic environment) is likely to cause harmful interference, in which case the user will be required to correct the interference (take adequate measures) at their own expense.

CE

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

RoHS Compliance

NEXCOM RoHS Environmental Policy and Status Update

NEXCOM is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2011/65/EU, to be your trusted green partner and to protect our environment.

RoHS restricts the use of Lead (Pb) < 0.1% or 1,000ppm, Mercury (Hg) < 0.1% or 1,000ppm, Cadmium (Cd) < 0.01% or 100ppm, Hexavalent Chromium (Cr6+) < 0.1% or 1,000ppm, Polybrominated biphenyls (PBB) < 0.1% or 1,000ppm, and Polybrominated diphenyl Ethers (PBDE) < 0.1% or 1,000ppm.

In order to meet the RoHS compliant directives, NEXCOM has established an engineering and manufacturing task force to implement the introduction of green products. The task force will ensure that we follow the standard NEXCOM development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which NEXCOM are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant.

How to recognize NEXCOM RoHS Products?

For existing products where there are non-RoHS and RoHS versions, the suffix "(LF)" will be added to the compliant product name.

All new product models launched after January 2013 will be RoHS compliant. They will use the usual NEXCOM naming convention.

vi NCr-302-VHR User Manual

Warnings

Read and adhere to all warnings, cautions, and notices in this guide and the documentation supplied with the chassis, power supply, and accessory modules. If the instructions for the chassis and power supply are inconsistent with these instructions or the instructions for accessory modules, contact the supplier to find out how you can ensure that your computer meets safety and regulatory requirements.

Cautions

Electrostatic discharge (ESD) can damage system components. Do the described procedures only at an ESD workstation. If no such station is available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.

Safety Information

Before installing and using the device, note the following precautions:

- Read all instructions carefully.
- Do not place the unit on an unstable surface, cart, or stand.
- Follow all warnings and cautions in this manual.
- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- The load of the system unit does not solely rely for support from the rackmounts located on the sides. Firm support from the bottom is highly necessary in order to provide balance stability.
- The network camera is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Installation Recommendations

Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.

Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:

- A Philips screwdriver
- A flat-tipped screwdriver
- A grounding strap
- An anti-static pad

Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nose pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.

Safety Precautions

1. Read these safety instructions carefully.

2. Keep this User Manual for later reference.

3. Disconnect this equipment from any power sources before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.

4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a stable surface during installation. Dropping it or letting it fall may cause damage.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power source.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.

12. Never pour any liquid into an opening. This may cause fire or electrical shock.

13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

14. If one of the following situations arises, get the equipment checked by service personnel:
   a. The power cord or plug is damaged.
   b. Liquid has penetrated into the equipment.
   c. The equipment has been exposed to moisture.
   d. The equipment does not work well, or you cannot get it to work according to the user's manual.
   e. The equipment has been dropped and damaged.
   f. The equipment has obvious signs of breakage.

15. Do not place heavy objects on the equipment.

17. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

Technical Support and Assistance

1. For the most updated information of NEXCOM products, visit NEXCOM's website at www.nexcom.com.

2. For technical issues that require contacting our technical support team or sales representative, please have the following information ready before calling:
   – Product name and serial number
   – Detailed information of the peripheral devices
   – Detailed information of the installed software (operating system, version, application software, etc.)
   – A complete description of the problem
   – The exact wordings of the error messages

Warning!
1. Handling the unit: carry the unit with both hands and handle it with care.

2. Maintenance: to keep the unit clean, use only approved cleaning products or clean with a dry cloth.

Conventions Used in this Manual

Warning:
Information about certain situations, which if not observed, can cause personal injury. This will prevent injury to yourself when performing a task.

Caution:
Information to avoid damaging components or losing data.

Note:
Provides additional information to complete a task easily.

Package Contents

The 3MP Outdoor IR Bullet Camera package contains the following accessories:
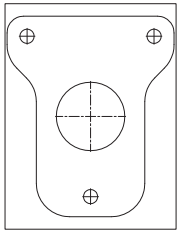
Placement sticker

Quick guide

Dehumidifier packet

Mounting accessory kit
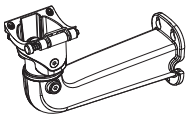
2-axis cable concealed wall mount bracket
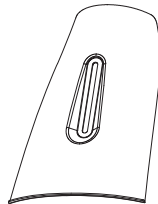
Sunshield

Waterproof connector
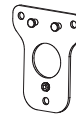
Wall mount base
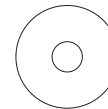
CD (User Manual)

CHAPTER 1: PRODUCT INTRODUCTION

Overview

Key Features

- Progressive scan CMOS sensor at 3 megapixel/1080p full HD resolution
- Multiple H.264 and MJPEG streams
- Easy installation with remote focus and zoom control
- Support Auto-Focus to avoid focus error through human eyes
- Adjustable P-iris to achieve best image quality
- Perfect IR exposure calculation
- WDR [Wide Dynamic Range] to overcome high contrast lighting environment
- Outdoor-ready, IP66/IP67
- Active tampering alarm
- Impact-resistant for IK10
- Excellent low light noise reduction
- ONVIF support
- Extreme weather support (-40°C to 60°C)

Hardware Specifications

Camera

- Image sensor: 1/3" 3 megapixel true WDR progressive scan CMOS sensor
- Lens: Motorized (3-10mm, F1.4) board type
- Iris type: p-iris
- Day and night: Yes
- IR distance: Effective up to 30 meters
- IR wavelength: 850nm (4pcs high power LED)
- IR control: Smart IR
- ICR: Yes
- WDR: Yes
- Image Enhancement
  – Brightness, Contrast, Saturation, Sharpness, Backlight compensation, Mirror, Flip, Day/Night, Anti-flicker

Video

- Video compression: H.264/MJPEG
- Video streaming: triple streaming
  – H.264 Stream 1/ H.264 Stream 2/ MJPEG Stream 3
- Video resolution: 2048 x 1536 to 320 x 240
- Video quality
  – VBR
  – CBR
- Frame rate
  – 2048 x 1536 @ 30 fps
  – 1920 x 1080 @ 60 fps
  – 1280 x 720 @ 60 fps
  – 720 x 576 @ 60 fps
  – 720 x 480 @ 60 fps
  – 640 x 480 @ 60 fps
  – 320 x 240 @ 60 fps

Audio

- Audio streaming: Two-way
- Audio compression: G.711 8KHz/ 16bit
- Audio input: Line-in
- Audio output: Line-out

Network

- Interface: 10/100/1000 Mbps Ethernet, RJ-45
- Supported protocols: HTTP, TCP/IP, UDP, RTP, RTSP, FTP, SMTP, DHCP, DNS, DDNS, NTP, uPnP, ONVIF, IPv4/ v6
- Security: Multi-level passwords/ HTTP encryption

I/O Connector

- Audio in/ out port: Terminal block 1 in/ 1 out
- D I/O: DI x1, DO x1
- RS485: N/A
- Micro SD slot: Yes
- RJ45: Yes

Event Management

- Event trigger: Motion detection, DI, Face detection, Tampering, Ethernet loss
- Notifications: Trigger alarm output, email/ FTP and record video to server or SD card
- Post-recording: Yes
- Pre-recording: Yes

Power

- DC: DC 12V/ AC 24V
- PoE: Yes/ IEEE 802.3af

General

- Power consumption: 13W max.
- Weight: 2kg
- Dimension: 406.22(D) x 161(W) x 263.3(H) mm
- Operating Temp.: -40°C~60°C
- Humidity: 90% RH (no condensation)
- Certification: CE/FCC
- Vandal resistant: IK10
- Outdoor capable: IP66/IP67, built-in heater
- Application: SDK available for application development

DI/O & Function Description

55° Rotate

SB Module
MB Module
Dehumidifier Packet
Bracket Latch

8 PCS LED IR Illuminator Board Plate

360° Rotate

Heater module

Line-out Line-in
Ethernet / PoE
DC12V/ AC24V
Default
Micro SD
Reset
DI/O
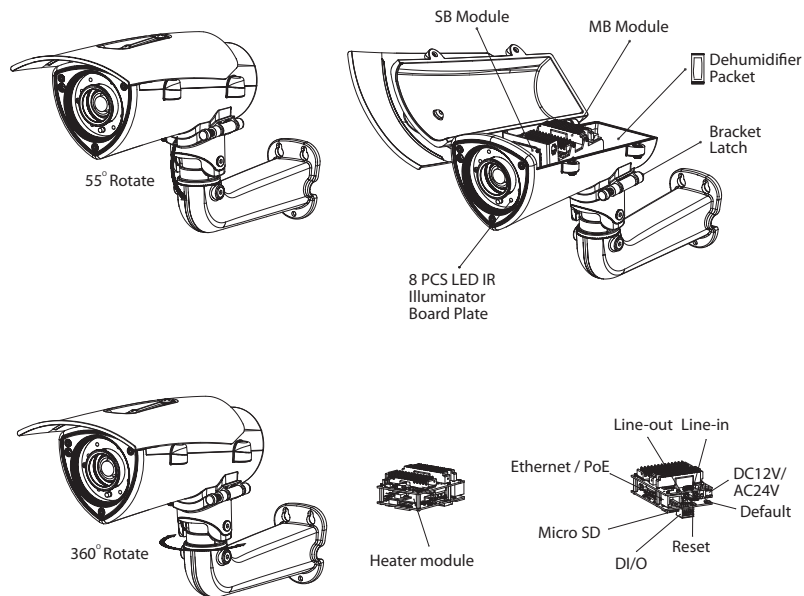
Note:
Default: If the default button has been pressed for 1~4 seconds, the camera will be re-started and all the settings will be reverted to default except IP address. If pressed for over 5 seconds, the camera will be re-started and all the settings will be reverted to default including IP address.
Reset: Press to reset the camera.

DI/O Pin Definition & Waterproof Connector Description

54321
DI/O
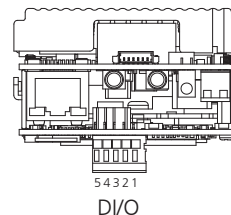
Pin	Description
1	ALM_IN (+)
2	ALM_IN (-)
3	ALM_out_NC
4	ALM_out_COM
5	ALM_out_NO

Gasket
Tightening collar
Waterproof connector
Main body
Seal nut
Strain relief
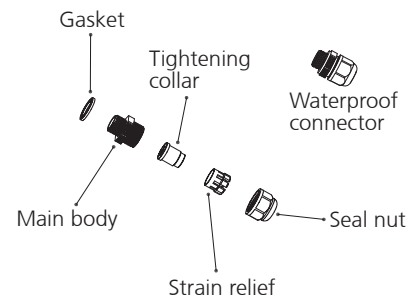
Cable Wiring Description

1. Cable Installation Steps:
2. Run the cable inside the wall mount bracket and out through the cable opening at the front.
3. Press down the push-lock mechanism and secure the camera onto the push-lock. Wire the network cables to the waterproof connector on the right, and wire the line-in, line-out, DC 12V/AV 24V, DI/O and other cables to the waterproof connector on the left. Tighten the waterproof connector after all the cables are secured in place.
4. Secure the camera onto the wall mount bracket using the two screws provided.
5. Open the camera's top cover to access the wired cables. Install the RJ45 connector to the Ethernet cable and plug it into the corresponding port on the MB module.
6. Close the camera's top cover and secure it with the supplied hardware tool to complete.

❶

❷

Push Lock

❸

❹

RJ45   PHONE
        JACK

❺
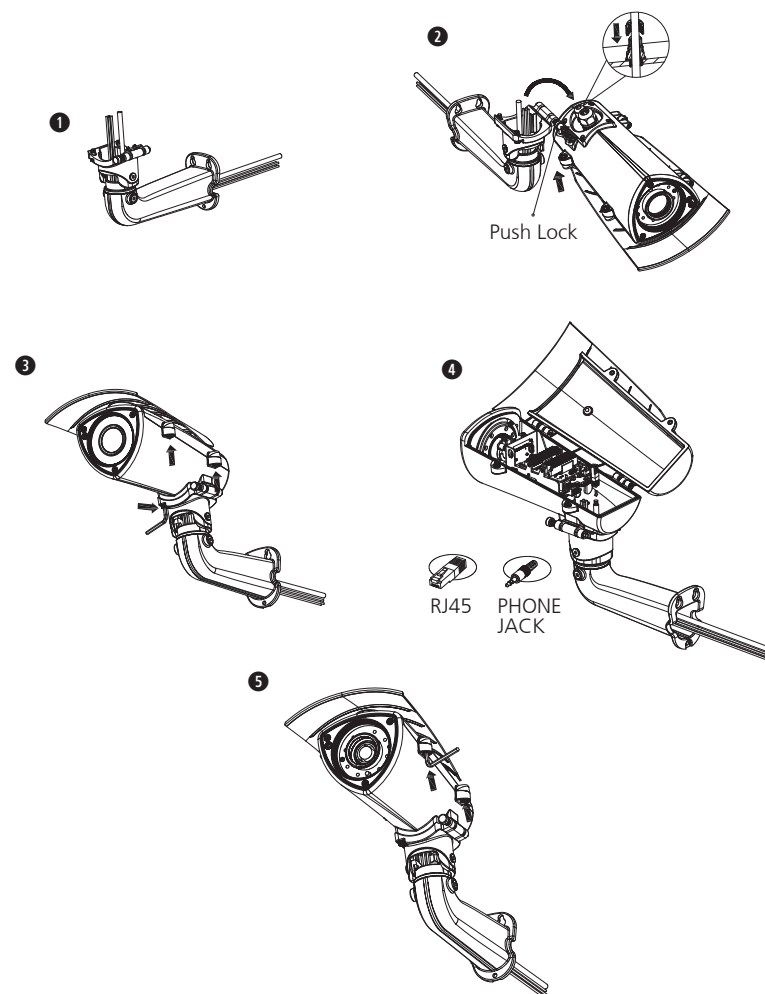
Cable Outlet Description

1. The camera features two waterproof connectors, the left one in the diagram is for PoE connection, while right one is for line in, line out, DC 12V/AC 24V and DI/O connections.
2. The right one features four wire holes. Please cover unused holes with sealing plugs to prevent water from entering.
3. Applicable cable diameter:
4. * Ø 2.5~1.8mm (Right)
5. * Ø 6.9~4.7mm (Left)

Line-out
Line-in
DC12V/AC24V
DI/O

Ethernet
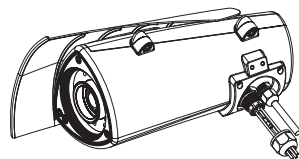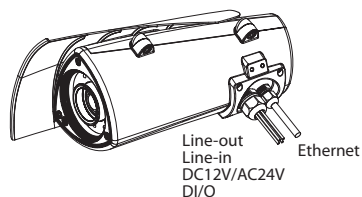
Hardware Installation

1. Position the placement sticker at the desired installation location and use a driller to drill the three holes on the sticker.
2. Insert three screw anchors into the holes then place the wall mount base on top of them with the mounting holes aligned.
3. Open the camera's cover and glue the dehumidifier packet onto the metal bracket using the adhesive sticker on its back, as depicted in the diagram below. Close the camera's cover and ensure the clip is locked in position. Install the sunshield and tighten a torx screw on the side of cover.
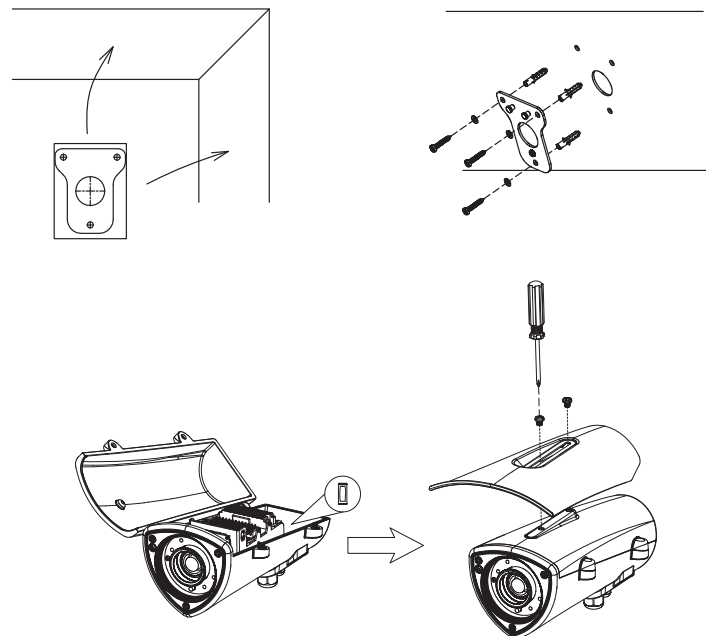
4. Secure the connecting bracket to the camera's rear.
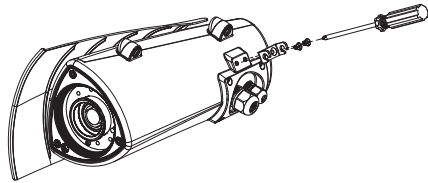
5. Press and hold down the latch on the wall mount bracket and put it into the connecting bracket. Once in place, secure the other side using the supplied hex wrench.

Press
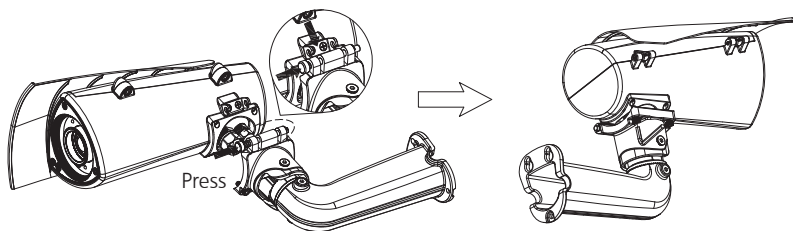
6. Align the mounting holes on the wall mount bracket to the mounting holes on the wall mount plate, then secure it tightly with screws to finish the installation.

7
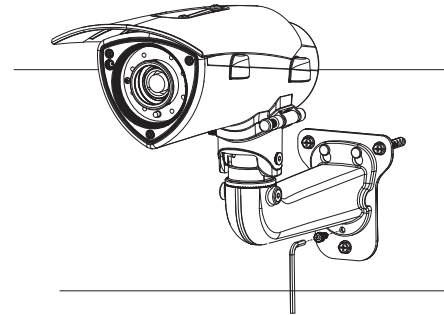
CHAPTER 2: CAMERA CONFIGURATION

Accessing the Camera's Configuration Menu (Graphical User Interface)

The camera's default IP address is 192.168.1.168, make sure the IP address of the computer accessing the camera is on the same network subnet before proceeding.

You can access the camera via a web browser or IP-FINDER software included with the camera. The following information outlines the instructions for each method.

Installing IP-FINDER

Note: If IP-FINDER is already installed, you can skip this section and continue to the next section **IP-FINDER** on page 11.

1. Locate the installation file **IP-FINDER-Setup.msi** on the CD.
2. Once located, double click on the file to start the installation program.
3. Click the **Next** button on the welcome screen to continue.
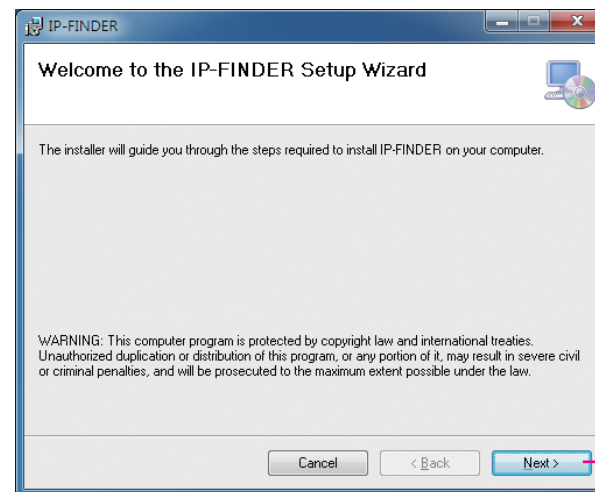
Next button

4. Confirm the directory that the program will be installed on. To specify a different folder, please click on the **Browse** button and locate the desired installation folder.
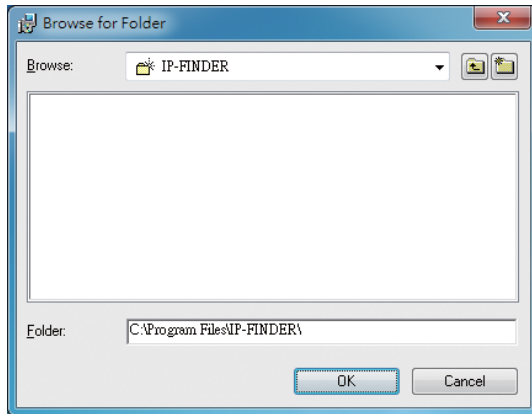
5. To check the available drives you can install the software to and their available and required disk space, please click on the **Disk Cost** button.
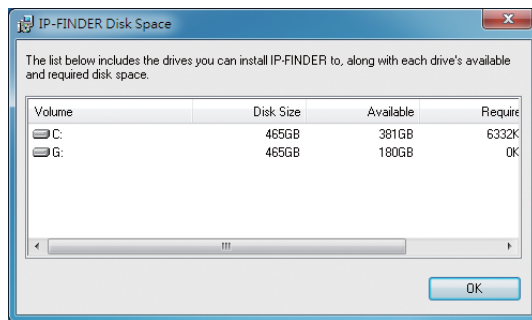
6. Specify which user accounts on the computer can access the program, the options are **Everyone** and **Just me**.

Browse button

Disk Cost button

Next button

User accounts
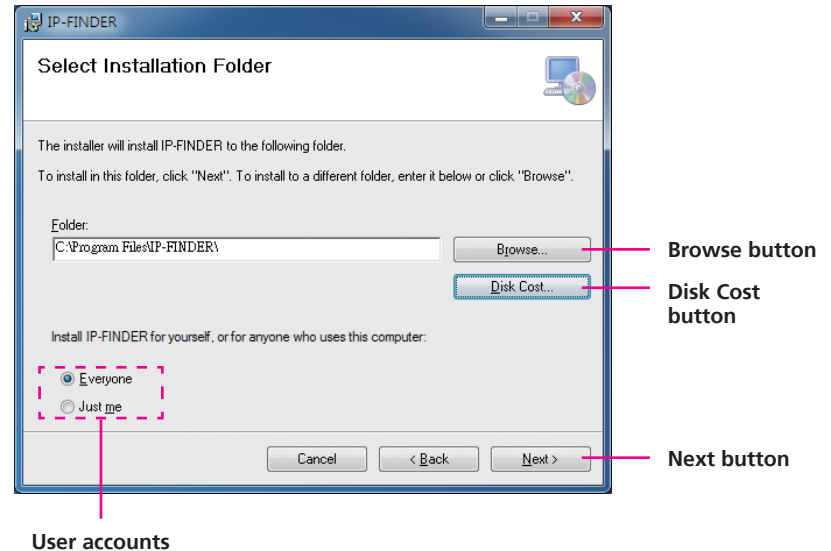
7. Click on the **Next** button to continue.

8. Click on the **Next** button to begin installation.
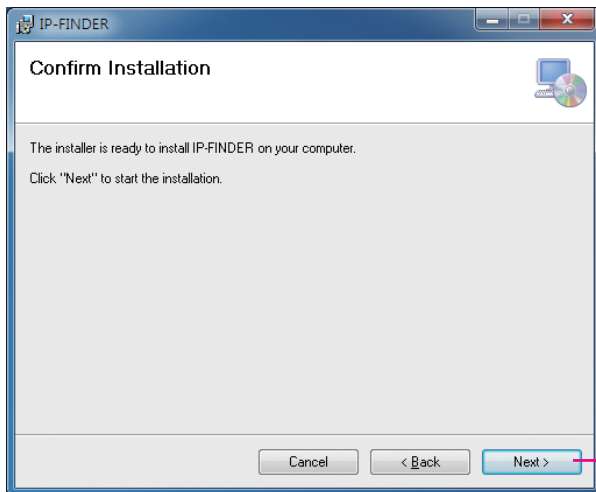
Next button

9. Once the installation process is complete, click on the **Close** button to finish. A shortcut will be created on the desktop.
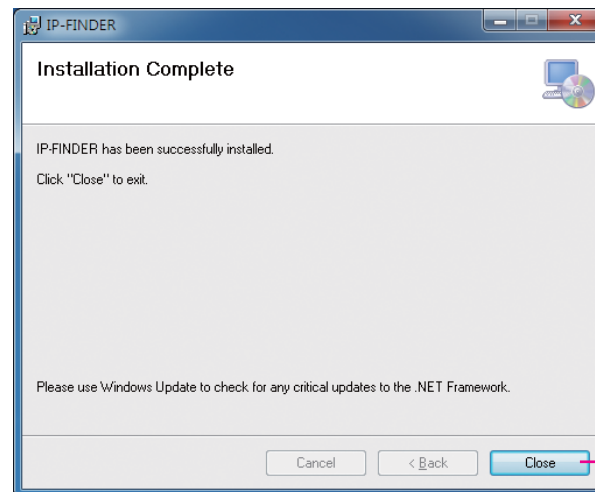
Close button

IP-FINDER

1. Locate and open the IP-FINDER software shortcut on the desktop.

2. When the program is launched, it will begin searching the network for the IP camera automatically (the search will last for up to 90 seconds). You can also manually search cameras by clicking on the **Search** button.
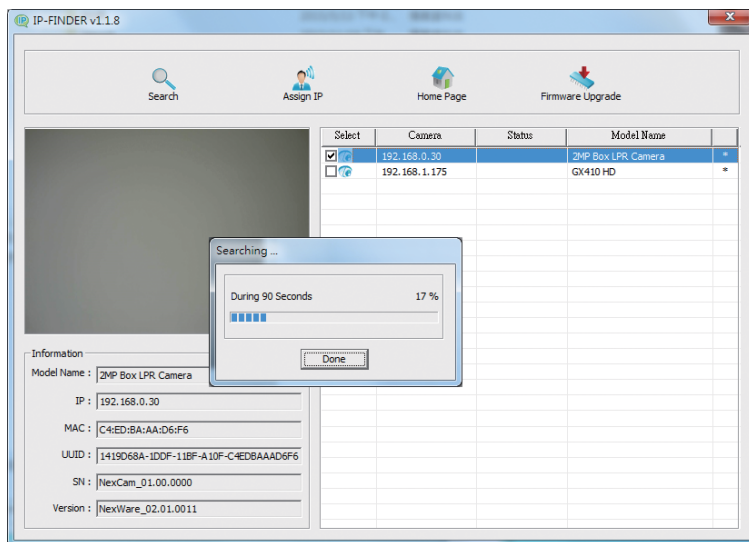
Note: Manual search will last for up to 90 seconds.

3. Once the camera is discovered, it will show the following information:
   - Model name
   - IP address
   - MAC address
   - UUID
   - Serial number
   - Version

4. You can access the menu by double clicking the camera's **IP address** under **Camera List**. The IE will be opened automatically.

Introduction to the IP-FINDER User Interface
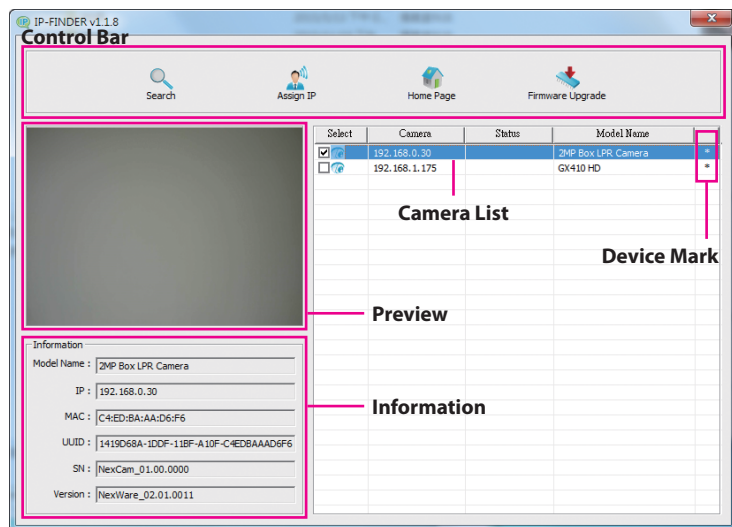
UI Block	Description
Control Bar	Contains **[Search]**, **[Assign IP]**, **[Home Page]** and **[Firmware Upgrade]** buttons.
Preview	Displays the selected camera image.
Information	Displays the selected camera information such as **Model Name**, **IP**, **MAC**, **UUID**, **SN** and **Version**.
Camera List	Lists the cameras discovered by the search function. Each camera shows the "**IP**", "**Status**", "**Model Name**" and "**Device Mark**". Users can also click the column headers to sort the list.
Device Mark	Asterisk sign indicates that this device has "**Preview**", "**Assign IP**" and "**Firmware Upgrade**" functions.

Button Functions

Function	Button	Description
Search	Search	Discovers IP cameras available on the network.
Assign IP	Assign IP	Changes the IP address of the camera.
Home Page	Home Page	Opens the web browser to the home page of the camera.
Firmware Upgrade	Firmware Upgrade	Upgrades the camera firmware.

Search
When the **[Search]** button is clicked, the application will start searching cameras on the network. To stop searching, click the **[Done]** button.

Assign IP
When the **[Assign IP]** button is clicked, a pop-up window "IP Address Configuration" will appear, providing options to use DHCP or static IP address.

Home Page
To view the home page of a particular camera, double click on the camera in the list, the web browser will open and redirect to the home page. To access the home page of two or more cameras, tick the box of the cameras you wish to view and click on the **[Home Page]** button.
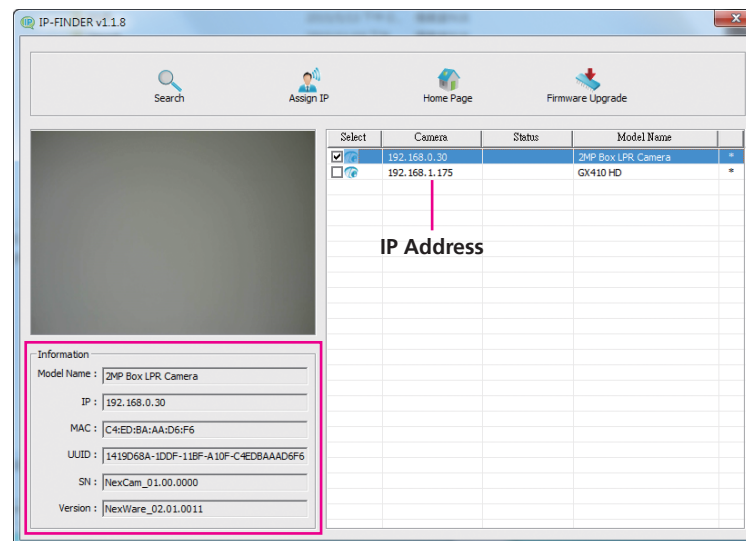
Firmware Upgrade
To update the camera firmware, tick the box of the cameras you wish to update and click on the **[Firmware Upgrade]** button. Follow the on-screen prompts to complete the upgrade. If the camera does not support firmware upgrade, a pop-up window will be displayed.

NOTE: Different IP camera models use different firmwares, **please do NOT update the firmware of different models using the same firmware**.

Web Browser (Internet Explorer)

1. Locate and open the Internet Explorer (IE) shortcut on the desktop.
2. In the address bar, type 192.168.1.168 (default IP address of the camera) and then press the **Enter** button.
3. You will be prompted with a pop-up window asking for login information, type in "**admin**" (default login name) and "**9999**" (default password)
4. Once logged in, you will see the main screen with video stream.
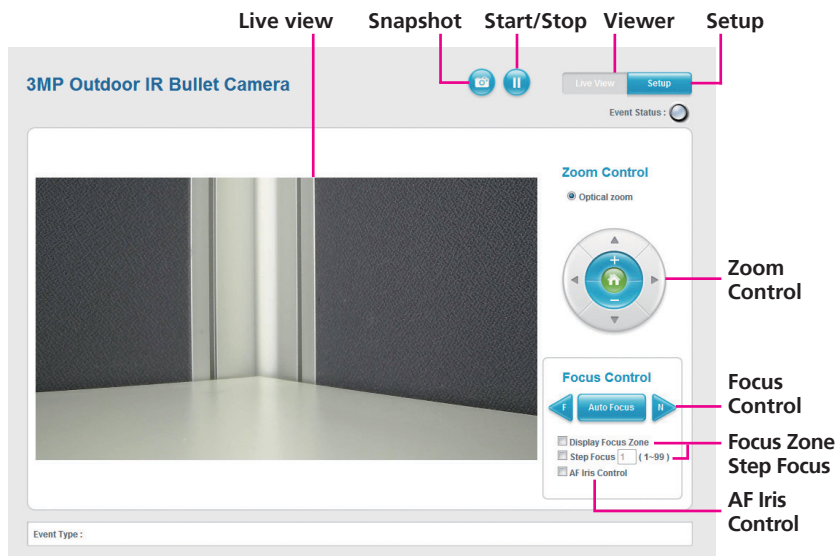
Snapshot
Takes a image snapshot from the camera, you will be prompted to store the image file onto the computer's hard drive.

Start/Stop
Press to stop the live video, press again to restart.

Viewer
Views the live video of the camera.

Setup
Options for configuring the IP camera.

Zoom Control
Buttons used to control zooming function.

Button	Description
(home icon)	Returns the camera back to default position.
(zoom icons)	Adjusts the camera to zoom in or out.

Focus Control
Adjusts the camera's focus. To adjust the focus automatically, press the **Auto Focus** button. To set the focus manually, press the ◄F to focus far objects, and ►N to focus near objects.

Focus Zone
Enables or disables display of focus zone in the center of the live view (cross-hair).

Step Focus
Adjusts the step focus from 1 to 99.

AF Iris Control
Enables or disables automatic aperture adjustment based on built-in parameters.

Configuring the Camera's Setting

1. To configure the camera's setting, click on the **Setup** button on the main screen to enter the configuration menu.
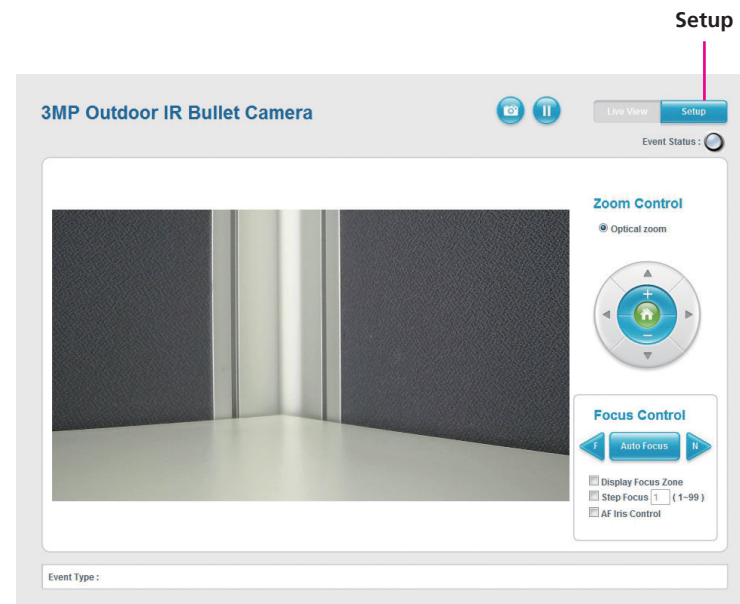
Browsing Through the Configuration Menu

The layout of the configuration menu is split into two sections. All the camera settings are located on the left hand side of the interface, clicking it will open their corresponding sub-menu on the right.

The following are the camera settings available on the left hand side:

- Video
  - Video Stream
  - Camera Settings
  - Overlay Settings
  - Privacy Mask

- Network
  - TCP/IP
  - FTP
  - SMTP
  - Ports
  - HTTPS
  - IPFilter
  - Network Storage

- Events
  - Motion Detection
  - Alarm In/Out Trigger
  - Event Actions

- System
  - Audio Settings
  - Recording Settings
  - User Management
  - SD Card Management
  - Date & Time
  - Firmware Upgrade
  - Maintenance
  - Profile Management

- Advanced Settings

Video

Video Stream

This section configures the settings of the video stream. There are 3 video streams available, the live video from the main screen **Viewer** is stream 1.

Stream 1

Enable 3MP Output
Enables or disables 3MP output. When enabled, the maximum supported frame rate is 30FPS.

Resolution
Configures the resolution of the video stream. The options are **1920x1080(16:9)**, **1280x720(16:9)**, **720x576 (5:4)**, **720x480 (3:2)**, **640x480 (4:3)** and **320x240 (4:3)**.

Frame Rate
Adjusts the frame rate of the video stream, the range is 5~30FPS for 3MP, and 5~60FPS for other resolutions.

Bit Rate Control
Configures the Bit Rate Control mode as **VBR** (variable bit rate), or **CBR** (constant bit rate) for the stream.

Target Bit Rate
If the Bit Rate Control is set to **CBR**, you can manually set the bit rate in this field, the range is 30~20000kbit/s.

GOP Length
Configures the GOP length of the stream. The options are **0.5**, **1**, **2**, **3** and **4**, setting "**0.5 seconds**" will yield the best video quality.

Stream 2

Resolution
Configures the resolution of the video stream. The available options are **1280x720(16:9)**, **720x480(3:2), 720x576(5:4), 640x480(4:3)** and **320x240(4:3)**.

Frame Rate
Adjusts the frame rate of the video stream. Setting **0** will disable the stream.

Bit Rate Control
Configures the Bit Rate Control mode as **VBR** (variable bit rate), or **CBR** (constant bit rate) for the stream.

Target Bit Rate
If the Bit Rate Control is set to **CBR**, you can manually set the bit rate in this field, the range is 30~5000kbit/s.

GOP Length
Configures the GOP length of the stream. The options are **0.5**, **1**, **2**, **3** and **4**, setting "**0.5 seconds**" will yield the best video quality.

Stream 3

Resolution
Displays the resolution of the video stream.

Frame Rate
Adjusts the frame rate of the video stream. Setting **0** will disable the stream.

Quality
Configures the video quality of the stream. The options are **Best**, **Good** and **Normal**.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Camera Settings

This section adjusts the camera's image settings.

Camera Settings   Quick viewer

Image Adjustment

Brightness :	< 128 > (Range = 0~255)
Contrast :	< 128 > (Range = 0~255)
Color Saturation :	< 128 > (Range = 0~255)
Sharpness :	< 128 > (Range = 0~255)
	Default

Mirror & Flip

☐ Enable mirror
☐ Enable flip

Wide Dynamic Range (WDR)

WDR mode :   off ▼

☐ Schedule WDR :

Start time : 13 : 00   End time : 17 : 00   Use mode : off ▼

Please set the non-specified time range, use mode : off ▼

White Balance

White balance mode :   auto ▼

Image Adjustments

Brightness
Configures the brightness of the image, the range is 0 ~ 255, with 0 being the lowest brightness. Press the **<** button to decrease the value, or **>** button to increase the value. The default value is 128.

Contrast
Configures the contrast of the image, the range is 0 ~ 255, with 0 being the lowest contrast. Press the **<** button to decrease the value, or **>** button to increase the value. The default value is 128.

Color Saturation
Configures the color saturation of the image, the range is 0 ~ 255, with 0 being the lowest saturation. Press the **<** button to decrease the value, or **>** button to increase the value. The default value is 128.

Sharpness
Configures the sharpness of the image, the range is 0 ~ 255, with 0 being the lowest sharpness. Press the **<** button to decrease the value, or **>** button to increase the value. The default value is 128.

Default
Default button to discard all the settings applied to Image Adjustments.

QuickViewer

Click this button to open up a small preview window of the live video, you can view the image as you make image adjustments. Click the **Save** button for the changes to take effect.

Mirror & Flip

Enable Mirror

Flip the camera image horizontally.

Enable Flip

Flip the camera image vertically.

Wide Dynamic Range (WDR)

WDR Mode

Enables or disables WDR function, enable this option if the camera is exposed to bright backlight, glare or high contrast lighting. You can specifiy the WDR constrast level as **low**, **middle** or **high**. Selecting **high** will produce the best image quality.

Schedule WDR

Enables or disables WDR function to activate at the specified time. You can configure the **Start Time** and **End Time** in 24-hour format.

Use Mode (During Scheduled Hours)

Selects the WDR constrast level to use during the scheduled time.

Use Mode (Outside of the Scheduled Hours)

Selects the WDR constrast level to use outside of the scheduled time.

Camera Settings Cont.

White Balance

White Balance Mode
Enables or disables the white balance function on the camera. White balance allows the camera to produce more accurate colors under different lighting conditions. The following modes can be selected:

Off:	Disables white balance function.
Auto:	Automatically adjusts the white balance to suit the current lighting condition.
Fixed Outdoor:	Adjusts the white balance for outdoor daylight.
Incandescent:	Adjusts the white balance for indoor light.
Fluorescent:	Adjusts the white balance for fluorescent light.

Exposure

Exposure Mode
This option configures the anti-flickering function of the camera. If the image is suffering from flickering under fluorescent light, selecting **Auto** will allow the camera to automatically adjust the light frequency to match the current fluorescent lighting condition and prevent flickering. You can also manually set it to **Anti-Flicker 50Hz, Anti-Flicker 60Hz** or **Locked.**

Exposure Value Adjust
Adjusts the exposure value on the camera, the range is 0 ~ 255. Press the **<** button to decrease the value, or **>** button to increase the value. The default value is 128.

Enable Slow Shutter
Enables or disables slow shutter on the camera, you can select the shutter speed in drop the list. The options are **1/7**, **1/15**, **1/30**. Selecting a slower shutter speed will improve image quality in low light conditions, but will increase motion blur.

Enable Sens Up
Enables or disables gain setting on the camera, you can select the maximum level of amplification in the drop-down menu. The options are **4x**, **8x**, **16x** and **32x**. A higher value will produce brighter images, but may also increase image noise.

Enable Backlight Compensation
Enables or disables backlight compensation function, enable this option if an image in the camera is too dark.

Day & Night

Configures the day and night mode of the camera.

Auto:	Allows the camera to automatically sense the current lighting level and determine what type of color range it should display.
Forced Color:	Forces the camera to display color regardless of the current lighting level.
Forced Black & White:	Forces the camera to display black & white images regardless of the current lighting level.
External Day & Night:	Controls the Day & Night function through external alarm in/out signal. The options are **Low(Night)** and **High(Night)**.

Schedule Day & Night
Enables day and night mode to activate at the specified time. You can configure the **Start Time** and **End Time** in 24-hour format.

Use Mode (During Scheduled Hours)
Selects the color mode to use during the scheduled time.

Use Mode (Outside of the Scheduled Hours)
Selects the color mode to use outside of the scheduled time.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Camera Settings Cont.

Profile

Provides profiles to save and load camera settings.

Profile

The options are **profile 1 ~ profile 10**.

Profile Rename

Configures a new profile name.

Profile Access

Save Profile

Save the camera settings to the selected profile.

Load Profile

Upload the selected profile settings to the camera.

Profile Export

Export all the settings from the profile selected. The output is a text file named **profile.txt**.

Profile Import

Import settings from a saved profile to the profile selected. The settings will be applied.

Profile All Export

Export all the settings of profiles 1-10 to a text file named **All-profile.txt**.

Profile All Import

Imports settings from a saved profile to all the profiles (profiles 1-10). The settings will be applied.

Overlay Settings

This section configures the text displayed on the live video in **Viewer**.

Overlay Settings

Contents

- [ ] Enble date
- [ ] Enable time
- [ ] Enable text : `text1`
- [ ] Display Camera Name

Save   Reset

Contents

Enable Date
Enables or disables the **Viewer** to display the current date on the bottom right corner.

Enable Time
Enables or disables the **Viewer** to display the current time on the bottom right corner.

Enable Text
Enables or disables the **Viewer** to display text on the upper right corner. The text displayed can be configured in the field box.

Display Camera Name
Enables or disables the **Viewer** to display the camera's name on the upper left corner. The name displayed can be configured in the **Maintenance** menu. For information on **Maintenance** menu, please refer to page 46.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Privacy Mask

This section configures which area of the live video in **Viewer** will be masked for privacy. A total of 3 privacy masks can be configured.

Settings

Privacy Mask Color
Selects the color of the privacy mask. The available colors are **Black** and **White**.

Mask Zones

You can configure up to 3 privacy masks, the instructions below illustrate how to setup 3 privacy masks.

1. Select the color of the mask in the drop-down menu.
2. To create the first mask, check the **Enable mask zone 1**, and on the live video screen below, select the area to mask by holding down the mouse button and drag to make a rectangular square, release the button once the desired area is covered.
3. Press the **Setting Area** button in **Enable mask zone 1** to set this area as mask.
4. You will see the selected area turn black or white, depending on which color was chosen (This example uses black as the mask color).

Rectangular square

5. To create the second and third mask, check the **Enable mask zone 2** and **Enable mask zone 3** options, then repeat steps 2 to 3 outlined earlier.

To delete a mask, check the zone number you like to remove, and press the **Remove** button.

Mask area

Network

TCP/IP

This section configures the network settings of the camera.

TCP/IP

IP Address Configuration

- ○ Enable DHCP
- ● Static IP address
  - IP Address : `192.168.1.168`
  - Subnet Mask : `255.255.255.0`
  - Default Gateway : `192.168.1.254`
  - Primary DNS Server : `192.168.1.1`
  - Secondary DNS Server : `192.168.1.2`
- ☐ Enable IPv6
  - IP Address : `_____`

Current Network Settings

IP Address :	192.168.1.168
Subnet Mask :	255.255.255.0
Default Gateway :	192.168.1.254
Primary DNS Server :	192.168.1.1
Secondary DNS Server :	192.168.1.2

[Save]   [Reset]

IP Address Configuration

Enable DHCP
Enables DHCP, use this feature if the camera is connected to a network with DHCP server.

Static IP Address
To manually configure an IP address, select this option and input the IP address, subnet mask, default gateway, primary and secondary DNS server address.

Enable IPv6
To manually configure an IPv6 address, select this option and input the IPv6 address.

Current Network Settings

Displays the current IP address, subnet mask, default gateway, primary and secondary DNS server address of the camera.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

FTP

This section configures the FTP server address that the camera will connect to.

FTP

FTP Server

Host name or IP address :	192.168.1.1
Upload path :	default_folder
Port Number :	21
Filename Template:	$y-$o-$d_$hms

Login Information

User name:	ftpuser
Password:	••••

Test Remote FTP server

Server status :

[FTP Test]

[Save]   [Reset]

FTP Server

Host Name or IP Address
Specify the host name or IP address of the FTP server.

Upload Path
Specify the directory that the camera will upload data to.

Port Number
Specify the port number of the FTP server.

Filename Template
Displays the format of the filename that will be uploaded to the FTP server when alarm/motion/face detection event triggers. The format of the filename is **yyyy-mm-dd_hour-mm-ss**.

CAUTION!   Please do not change the default filename format in this field.

Login Information

Username
Specify the login username for the FTP server.

Password
Specify the login password for the FTP server.

Test Remote FTP Server

Server Status:
Displays the status of the test connection.

FTP Test
Tests the network connection between the camera and FTP server.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

28 NCr-302-VHR User Manual

SMTP

This section configures the SMTP mail server address that the camera will use for sending emails.

SMTP

SMTP Server

Mail server :   192.168.1.1   (Host name or IP address)
Port Number :   25

Login Information

User Name :   smtpuser
Password :   ●●●●
Email address from :   user@domain.com

To Mail Address

Mail address :   user@domain.com
Mail Test Status :
[Mail Test]

[Save]   [Reset]

SMTP Server

Mail Server
Specify the host name or IP address of the SMTP mail server.

Port Number
Specify the port number of the SMTP mail server.

Login Information

Username
Specify the login username for the SMTP mail server.

Password
Specify the login password for the SMTP mail server.

Email Address From
Specify the email address of the sender.

To Mail Address

Mail Address
Specify the email address to send the email when an event is triggered by motion detection.

Mail Test Status
Displays the status of the test connection.

Mail Test
Tests the network connection between the camera and mail address.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Ports

This section configures the HTTP port number of the web configuration menu and RTSP port number of stream 1 to 3.

Ports

HTTP	
HTTP port :	80 (Range = 80 / 1025~65535)

RTSP	
Stream 1 RTSP port :	554
Path :	rtsp://192.168.1.168:554/live/stream1
Stream 2 RTSP port :	8556
Path :	rtsp://192.168.1.168:8556/live/stream2
Stream 3 RTSP port :	8555
Path :	rtsp://192.168.1.168:8555/live/stream3

(Range = 554 / 1025~65535)

Save   Reset

HTTP

HTTP Port
Configures the HTTP port number of the web configuration menu.

RTSP

Stream 1 to 3 RTSP Port
Configures the RTSP port number of stream 1 to 3, and displays the URL of stream 1 to 3. The range is 554/1025~65535.

Default URL of Stream 1: rtsp://cameraIP:554/live/stream1
Default URL of Stream 2: rtsp://cameraIP:8556/live/stream2
Default URL of Stream 3: rtsp://cameraIP:8555/live/stream3

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

HTTPS

This section configures the HTTPS certificate settings.

HTTPS

Create and Install

| Certificate Request | Self-Signed Certificate |

Created Request

Subject Name		Created

| Property | Remove |

Specify the certificate request to upload: [   ] 瀏覽...
| upload |

Installed Certificate

Subject Name	Created
C=default, ST=default, L=default, O=default, OU=default, CN=default	active

| Property | Remove |

Create and Install

Options to create and install a new CA certification. When setting up a new CA certification for the first time, please delete the default CA certification in the "Installed Certificate" list.

Created Request

Displays the certificate information of the CA certification created.

Installed Certificate

A default certificate is used when none is available. Please delete the default certificate before creating and installing a new CA certification.

IPFilter

This section configures the IP address filtering function.

IP Address Filtering

General

☐ Enable IP address filtering

[Allow ▾] the following IP address

Filtered IP Address

IP Address : [_____] [Add]

Filtered IP Address Setup

[Save] [Reset]

General

Enable IP Address Filtering
Enables or disables the filtering of the specified IP address. Select **Allow** or **Deny** in the drop-down menu to specify the type of filtering rule applied to the IP address entered.

Filtered IP Address

IP Address
Enter the IP address to filter and click the **Add** button to add it to the filter list. To remove an IP address from the filter list, type in the desired IP address and click the **Remove** button.

Filtered IP Address Setup
The IP addresses filtered will be listed here. A total of 255 IP addresses can be added to the list.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Network Storage

This section configures the network storage settings.

Network Storage

Recipient Setup

Network Storage Status:	UnLink !
Network address:	
Share:	
Upload path:	

Login Certificate

User name:	
Password:	

Test And Remove Network Storage

Test Status:

[Test]
[Remove]

[Save]   [Reset]

Recipient Setup

Network Storage Status
Displays the current connection status with the network storage server. (Link OK or UnLink)

Network Address
Specify the IP address of the network storage server.

Share
Specify the shared folder name on the network storage server.

Upload Path
Specify the upload path on the network storage server.

Login Certificate

Username and Password
Specify the login username and password for the network storage server.

Test and Remove Network Storage

Test and Remove
Press the **Test** button to test the network connection with the network storage server to ensure all the above settings are correct. The connection status will be displayed in the "Network Storage Status:" field.

Link OK:	All the settings are correct.
UnLink:	Login failed.

To remove the above settings, press the **Remove** button and then re-enter new information.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Events

Motion Detection

This section configures which area of the live video in **Viewer** will be monitored for detecting motion.
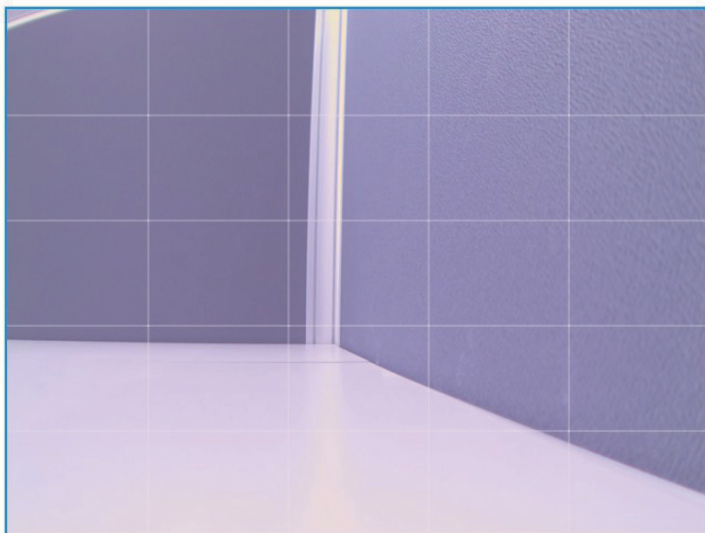
Settings

Enable Motion Detection
Enables or disables motion detection function.

Sensitivity
Configures the sensitivity of motion detection, the sensitivity determines the amount of motion required to trigger an event, the range is 1 to 100, with 1 being the least sensitive. For more information on event, please refer to **Event Actions** on page 37.

Detection Zones

This section shows the live video from the camera, the screen is divided into 5x5 rectangular boxes, to setup motion detection, please follow the instructions below.

1. Check the **Enable motion detection** option, and specify the sensitivity level.
2. In the live video screen below, select the desired area for motion detection by clicking on the rectangular box. The border of the box will turn red indicating that it is selected. You can select multiple boxes, up to 5x5 boxes can be selected.
3. Press the **Save** button once all the desired areas are selected for the changes to take effect.

Motion Detection

Settings

☐ Enable motion detection
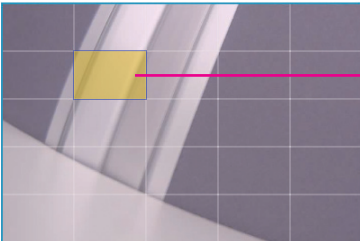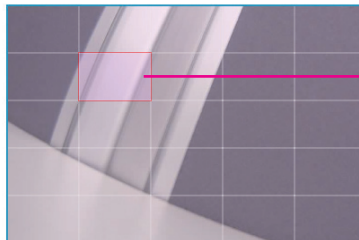Sensitivity : 50   (Range : 1~100)

Detection Zones

Highlighted box

Motion Detection

Settings

☑ Enable motion detection
Sensitivity : 50   (Range : 1~100)

Detection Zones

Area with motion detect enabled

To remove motion detection from an area, click the box to deselect it, then press the **Save** button for the changes to take effect.

Alarm In/Out Trigger

This section configures the IP camera to work with external alarm in/out devices.

Alarm In Out Actions

Alarm In Control

Alarm In mode	Disable
Alarm In Level	Low

Alarm Out Control

Alarm Out mode	User mode
Alarm Out level	Low

[Save] [Reset]

Alarm In Control

Alarm In Mode
Enables or disables monitoring of alarm input. Enable this option if an external sensor device connected to the alarm input requires monitoring.

Alarm In Level
Specify the signal level required for triggering the alarm device connected to the alarm output. The options are **Low** and **High**.

Alarm Out Control

Alarm Out Mode
Specify the alarm out mode, the options are **User Mode** and **Event Mode**. When **User Mode** is selected, the alarm output will be triggered based on user configurations. When **Event Mode** is selected, the alarm output will be triggered based on the configurations set in **Event Actions**. For more information on **Event Actions**, please refer to page 37.

Alarm Out Level
Specify the alarm output action to perform when it is triggered. The options are **Low** and **High**.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Event Actions

This section configures what actions to perform when an event is triggered from motion detection.

Event Actions

General

Streaming Upload for [10] sec (3 seconds pre-recording time included)

When Motion Detection Triggered...

☐ Save stream to SD card
   File format : [AVI ▾]
☐ Upload stream to FTP server
   File format : [AVI ▾]
☐ Upload stream to Network Storage
   File format : [AVI ▾]
☐ Send email notification
☐ Alarm Output

When Alarm In Triggered...

☐ Save stream to SD card
   File format : [AVI ▾]
☐ Upload stream to FTP server
   File format : [AVI ▾]
☐ Upload stream to Network Storage
   File format : [AVI ▾]
☐ Send email notification
☐ Alarm Output

[Save]　[Reset]

General

Specify the duration of the recording time when an event triggers. The maximum supported time is 600 seconds; recording is split into a single 10-second video file, adding up to a total of 60 files.

When Motion Detection Triggered

Save Stream to SD Card
Check this option to store the video stream onto the SD card. Select the desired file format in the drop-down menu, the options are **AVI** and **JPEG**.

Upload Stream to FTP Server
Check this option to upload the video stream to a FTP server. Select the desired file format in the drop-down menu, the options are **AVI** and **JPEG**. For information on configuring the FTP server, please refer to **FTP** on page 27.

Upload Stream to Network Storage
Check this option to upload the recordings to the network storage server. Select the desired file format in the drop-down menu, the options are **AVI** and **M**-**JPEG**.

Send Email Notification
Check this option to send an email notifying the event, for more information on configuring the email address, please refer to **SMTP** on page 29.

Alarm Output
Check this option to activate the device connected to alarm output when motion detection is triggered.

When Alarm In Triggered

Save Stream to SD Card
Check this option to store the video stream onto the SD card. Select the desired file format in the drop-down menu, the options are **AVI** and **JPEG**.

Upload Stream to FTP Server
Check this option to upload the video stream to a FTP server. Select the desired file format in the drop-down menu, the options are **AVI** and **JPEG**. For information on configuring the FTP server, please refer to **FTP** on page 27.

Upload Stream to Network Storage
Check this option to upload the recordings to the network storage server. Select the desired file format in the drop-down menu, the options are **AVI** and **M**-**JPEG**.

Send Email Notification
Check this option to send an email notifying about the alarm event, for more information on configuring the email address, please refer to **SMTP** on page 29.

Alarm Output
Check this option to activate the device connected to alarm output when alarm in is triggered.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

System

Audio

This section is used to configure the audio settings.

Audio

Audio Settings

☐ Audio In Enable
    Audio In Volume : [80] (Range = 1~100)
☐ Audio Out Enable
    Audio Out Volume : [80] (Range = 1~100)

[Save] [Reset]

Audio Settings

Audio In Enable
Enables or disables audio-in on the camera. When enabled, specify the volume in the **Audio In Volume** textbox. The range is 1~100.

Audio Out Enable
Enables or disables audio-out on the camera. When enabled, specify the volume in the **Audio Out Volume** textbox. The range is 1~100.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Recording Settings

This section is used to configure the recording settings of the IP camera.

Recording Settings

AVI File Setting

Stream Source : Stream 2 ▾

Save   Reset

AVI File Setting

Stream Source
Selects which video stream number to record, the options are **Stream 1** and **Stream 2**.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

User Management

This section is used to manage user accounts for accessing the IP camera's web configuration menu.

Enable Network Authentication

Enables or disables the authentication of user login. When disabled, no username and password is required.

Add/Modify User Accounts

To add a user account, type in the username and password (username and password must be at least 1 character), retype the password to confirm, then choose the access level for the account in the **Authority** drop-down menu. You can also provide a description for the account under the **User Information** field.

Access Level
Administrator: Has full control (read/write) over every configuration menu item.
Operator: Has full control (read/write) over every configuration menu item in **Video** and **Event** only.
Viewer: Only has access (read) to the live view of the camera (main screen).

User List

Displays user accounts available on the camera, to edit an account's password, click the **Edit** button, then retype the new password in the **Password** and **Confirm Password** fields.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

SD Card Management

This section is used to manage the SD card.

SD Card Information

If a SD card is installed, this section will display information on the availability of the SD card, and the percentage of the total storage used.

Format

Formats the SD card, all data stored on the SD card will be erased if this option is used.

SD Card Overwrite

Enables or disables overwrite protection for the SD card. Press the **Save** button to apply the setting.

File List

Displays the information of the folders and files stored in the SD card.

Date & Time

This section configures the date and time on the camera.

Date & Time

Current Camera Time

Date : 2013/04/23 Tue   Time : 09:42:03

Time Settings

Time mode :
○ Synchronize with NTP server
⊙ Synchronize with computer time
○ Manually setting
Date : [2013] / [4] / [23]   Time : [9] : [42] : [0]   [AM ▾]
Time zone :
[(GMT+08) Taipei, Beijing, Chongqing, Urumqi, Hong Kong, Perth, Singapore ▾]
☐ Daylight saving
Date : [2013] / [3] / [10]   Time : [2] : [0]   [AM ▾]   [Start]
Date : [2013] / [11] / [3]   Time : [2] : [0]   [AM ▾]   [End]

Date & Time Format

Date format : [YYYY/MM/DD ▾]
Time format : [24Hrs ▾]

NTP Server

NTP server address : [tw.pool.ntp.org]   (Host name or IP address)

[Save]   [Reset]

Current Camera Time

Displays the current date and time on the camera.

Time Settings

Synchronize with NTP Server
Select this option to synchronize the date and time with a NTP server.

Synchronize with Computer Time
Select this option to synchronize the date and time to the computer connected to the camera.

Manually Setting
Select this option to manually configure the date and time.

Time Zone
Select the time zone relevant to your location in the drop-down menu.

Daylight Saving
Select this option to enable daylight saving. The Start/End date and time for daylight saving can be manually configured in the text boxes beneath the option.

Date & Time Format

Date Format
Configures the format that the date will be displayed in. The options are **YYYY/MM/DD**, **MM/DD/YYYY** and **DD/MM/YYYY**.

Time Format
Configures the format that the time will be displayed in. The options are **12Hrs** and **24Hrs**.

NTP Server

NTP Server Address
If **Synchronize with NTP Server** is selected as the time mode, type in the host name or IP address of the NTP server.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Firmware Upgrade

This section is used to update the IP camera's firmware.

Firmware Upgrade

Firmware Version

Application version : NexWare_02.01.0011

Firmware Update

Specify the firmware image file to upgrade : [_____] Browse

Update

Firmware Version

Application Version
Displays the current firmware version.

Update

Specify the Firmware Image File to Upgrade
To update the camera's firmware, click on the **Browse** button and locate the firmware image file, once the file is selected, press the **Update** button to begin.

CAUTION!

The firmware update process will take around 15 minutes to complete, during this time, do not disconnect the network cable, reset or power off the IP camera, as you may damage the device.

45

Maintenance

This section is used to restart the IP camera, or restore it to default or factory default settings.

Maintain

Restart
Click this button to reboot the camera.

Reset to Default
Click this button to restore all the camera's setting back to default except for the network settings.

Reset to Factory Default
Click this button to restore all the camera's setting back to factory default settings.

Camera Name Settings

Camera Name
Specify a name for the camera. The name will be displayed in the upper left corner on the live video stream of the camera. To enable this, make sure the option **Display Camera Name** in the **Overlay Settings** menu is checked. For information on the **Overlay Settings** menu, please refer to page 23.

Camera Configuration

Export
Export all the configuration settings into a file and save it on the computer.

Import
Import a configuration file from the computer to the camera.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Profile Management

This section is used to configure profiles for scheduling recording.

Management

Enable Schedule Profile
Check this option to enable scheduled recording based on the profile selected in the drop-down menu. Press **Save** to confirm the schedule settings. You can set up profile 1~10 separately.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Advanced Settings

This section is used to configure advanced settings of the IP camera.

The following are the advanced settings available on the left hand side:

- Video

  - Camera Settings
  - ROI
  - AE Weights

- Network

  - DDNS
  - SNMP
  - Multicast

- Events

  - Ethernet Lost Detection
  - Face Detection
  - Tampering Detection
  - Event Actions

- System

  - Schedule Recording

- Basic Settings

Video

Camera Settings (Advanced)

This section is used to adjust the camera's advanced image settings.

Chroma & Sharpness Suppression

Enable Chroma Suppression
Enables or disables chroma suppression. Enabling chroma suppression will reduce the image noise captured from low-light environments.

Enable Sharpness Suppression
Enables or disables sharpness suppression. Enabling sharpness suppression will minimize the sharpness caused by noise in low-light captures.

Noise Filter

Enable Noise Filter
Enables or disables noise filter. The options are **Disable**, **Fix** and **Adaptive Optimization**.

Level Control
Adjusts the noise filter level. The range is 1 ~ 10.

Manual White Balance

Note: To adjust the white balance manually, please set the **White Balance Mode** to **Off** in **Basic Settings**.

R/G Gain
Adjusts the warm white balance, the range is 0.0 ~ 10.0 (from yellow to red).

B/G Gain
Adjusts the cold white balance, the range is 0.0 ~ 10.0 (from green to blue).

Camera Settings (Advanced) Cont.

Manual Exposure & Gain

Manual gain : [1] (Range = 1~512)

Manual exposure time : 1 / [60] s (Range = 7~20000)

Note : Manual exposure will be enabled while "Exposure mode" on basic settings is "Locked"

Auto Exposure Configuration

Maximum exposure time : 1 / [7] s (Range = 7~4000)

Maximum sens up gain : [32] (Range = 1~512)

Note : "Exposure mode" on basic settings must be "non-Locked", "slow shutter" or "sens up" is "User define"

P-Iris Control

◉ Auto
○ Manual

Iris value adjust : [<] [100] [>] (Range = 0~100)

Note : 0 = Min. Iris, 100 = Max. Iris

IR Cut Filter (ICR) Control

◉ Auto
○ Day mode
○ Night mode

☐ Schedule ICR :

Start time : [13] : [00]   End time : [17] : [00]   Use mode : [Day mode ▾]

Please set the non-specified time range, use mode : [Day mode ▾]

IR LED Control

◉ Auto control by light sensor
○ Turn-on
○ Turn-off

Manual Exposure & Gain

Note: To adjust the exposure and gain manually, please set the **Exposure Mode** to **Locked** in **Basic Settings**.

Manual Gain

Adjusts the camera's gain manually, the range is 1 ~ 512. Setting a higher value will increase the camera's signal and produce brighter images for low-light environments.

Manual Exposure Time 1:1 and 2:1

Adjusts the camera's exposure manually, the range is 1:1/7 ~ 1:1/20000 and 2:1/7 ~ 2:1/20000, with 1/20000 being the shortest exposure length.

Auto Exposure Configuration

Maximum Exposure Time

Specifies the maximum exposure time when operating in Auto Exposure mode, the range is 1/7 ~ 1/4000, with 1/4000 being the shortest exposure length.

Maximum Sens Up Gain

Specifies the maximum gain when operating in Auto Exposure mode, the range is 1 ~ 512, with 1 being the lowest gain.

P-Iris Control

Auto

When enabled, the P-Iris will adjust the opening automatically based on the lighting levels in the environment.

Manual

Adjust the opening of the iris manually in the range of 0 ~ 100, with 0 being the smallest value.

Camera Settings (Advanced) Cont.

IR Cut Filter (ICR) Control

Auto
Day mode
Night mode

Schedule ICR :
Start time : 13 : 00   End time : 17 : 00   Use mode : Day mode

Please set the non-specified time range, use mode : Day mode

IR LED Control

Auto control by light sensor
Turn-on
Turn-off

Schedule IR :
Start time : 13 : 00   End time : 17 : 00   Use mode : Turn-on

Please set the non-specified time range, use mode : Turn-on

Gamma Control

Default
Gamma value : 0.45   (Range = 0.01~1.00)

Note : Gamma Control will be enabled while "WDR mode" on basic settings is "off"

Save   Reset

IR Cut Filter (ICR) Control

Auto
When enabled, the camera will automatically turn the infrared lights on or off based on the lighting levels in the environment.

Day Mode
Enables day mode and turns the IR cut filter control off.

Night Mode
Enables night mode and turns the IR cut filter control on.

Schedule ICR
Enables or disables IR cut filter control function to activate at the specified time. You can configure the **Start Time** and **End Time** in 24-hour format.

Use Mode (During Scheduled Hours)
Selects the IR cut filter control mode to use during the scheduled time.

Use Mode (Outside of the Scheduled Hours)
Selects the IR cut filter control mode to use outside of the scheduled time.

IR LED Control

Auto Control by Light Sensor
When enabled, the camera will automatically turn the infrared LEDs on or off based on the amount of light received by the image sensor.

Turn-on
Turns the IR LED on.

Turn-off
Turns the IR LED off.

Camera Settings (Advanced) Cont.

IR Cut Filter (ICR) Control

○ Auto
○ Day mode
○ Night mode

☐ Schedule ICR :
Start time : 13 : 00   End time : 17 : 00   Use mode : Day mode ▼

Please set the non-specified time range, use mode : Day mode ▼

IR LED Control

○ Auto control by light sensor
○ Turn-on
○ Turn-off

☐ Schedule IR :
Start time : 13 : 00   End time : 17 : 00   Use mode : Turn-on ▼

Please set the non-specified time range, use mode : Turn-on ▼

Gamma Control

○ Default
○ Gamma value : 0.45   (Range = 0.01~1.00)

Note : Gamma Control will be enabled while "WDR mode" on basic settings is "off"

[Save]   [Reset]

Schedule IR
Enables or disables IR LED control function to activate at the specified time. You can configure the **Start Time** and **End Time** in 24-hour format.

Use Mode (During Scheduled Hours)
Selects the IR LED control mode to use during the scheduled time.

Use Mode (Outside of the Scheduled Hours)
Selects the IR LED control mode to use outside of the scheduled time.

Gamma Control

Default
Activates the default gamma state.

Gamma
Adjusts the gamma manually, the range is 0.01 ~ 1.00, with 0.01 being the lowest value.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Camera Settings (Advanced) Cont.

Profile

Provides profiles to save and load camera settings.

Profile

The options are **profile 1 ~ profile 10**.

Profile Rename

Configures a new profile name.

Profile Access

Save Profile

Save the camera settings to the selected profile.

Load Profile

Upload the selected profile settings to the camera.

Profile Export

Export all the settings from the profile selected. The output is a text file named **profile.txt**.

Profile Import

Import settings from a saved profile to the profile selected. The settings will be applied.

Profile All Export

Export all the settings of profiles 1-10 to a text file named **All-profile.txt**.

Profile All Import

Imports settings from a saved profile to all the profiles (profiles 1-10). The settings will be applied.

ROI

You can configure up to 5 ROI zones. ROI is used to select which areas will be monitored and recorded with higher image quality while using lower image quality for other non-ROI zones to save bandwidth and storage. The instructions below illustrate how to setup 5 ROI zones.
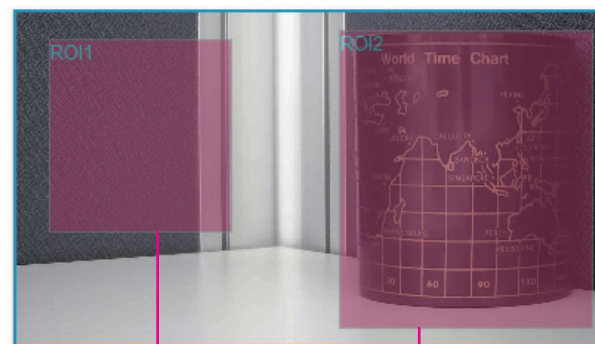
1. To create ROI zone 1, check the **Enable ROI zone 1**, and on the live video screen, select the area to set the ROI by holding down the mouse button and drag to make a rectangular square, release the button once the desired area is covered.
2. Press the **Setting Area** button in **Enable ROI zone 1** to set this area as the ROI.
3. Set the image quality as **High**, **Middle** or **Low** in the drop-down menu.
4. Repeat the above steps to create ROI for zones 2 to 5.

To delete an area, check the ROI zone number you like to remove, and press the **Remove** button.

ROI zone 1   ROI zone 2

Auto Exposure Weights

You can select up to 5 areas and configure the exposure weighting for each area manually. The weighting determines the importance of the area captured, a higher weighting value will increase the sensitivity of the auto exposure.

1. To create an auto exposure area, select **User Define** and check the **Enable Regional weighting 1**.
2. On the live video screen, select the area by holding down the mouse button and drag to make a rectangular square, release the button once the desired area is covered.
3. Press the **Setting Area** button in **Enable Regional weighting 1**.
4. Configure the weighting value in the corresponding textbox, the range is 0 ~ 10.
5. Repeat the above steps to create auto exposure weightings for zones 3 to 5.

To delete an area, check the zone number you like to remove, and press the **Remove** button.

To allow the camera to adjust the exposure automatically, select the **Auto** option.

Background Others
Configures the weighting value of the area outside of the selected zones.
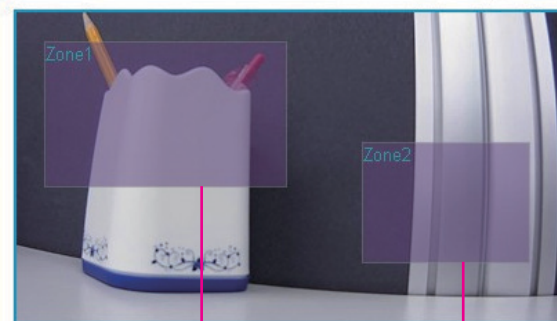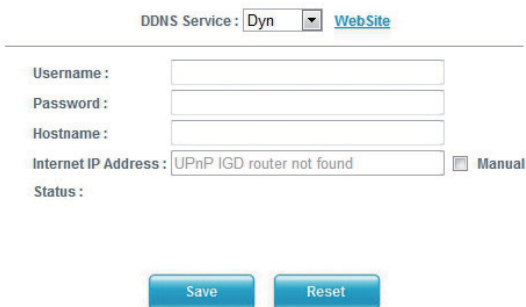

Zone 1   **Zone 2**

Network

DDNS

This section is used to configure DDNS (Dynamic DNS).
Note: Different DDNS service provider may have different input fields.

DDNS Settings

DDNS Service
Select the DDNS service provider from the drop-down menu, the available providers are **Dyn**, **NO-IP**, **dnsExit** and **DtDNS**. The default option is **Disable**.

Web Site
URL link to the selected DDNS service provider's web site.

Username
Username of the DDNS account.

Password
Password of the DDNS account.

Hostname
Hostname of the DDNS account.

Internet IP Address
Displays the IP address assigned when the connection is established.

Manual
Used to manually specify an IP address of a DDNS server.

Status
Displays the connection status of the DDNS service.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

SNMP

Simple Network Management Protocol (SNMP) is a protocol that can be used to manage and monitor SNMP-enabled devices over a network. The SNMPv1, SNMPv2 and SNMPv3 settings for the IP camera can be configured in this page.

SNMP v1/v2

Enable SNMP v1/v2
Enables or disables SNMPv1 and SNMPv2 support.

Read Community
Used to configure the read community string.

Write Community
Used to configure the write community string.

Traps for SNMP v1/v2

Enable Traps
Enables the IP camera to send SNMP trap messages.

Trap Address
Specifies the IP address of the trap server to receive the trap messages.

Trap Community
Used to configure the trap community string.

SNMP v3

Enable SNMP v3
Enables or disables SNMPv3 support.

User name
Used to configure the SNMPv3 username.

User password
Used to configure the SNMPv3 password.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Multicast

The IP camera's video streams can be sent to a multicast IP address group for one-to-many streaming. The multicast settings for the IP camera can be configured in this page.

Settings

Enable Multicast
Enables or disables multicast streaming.

Group Address
Configures the IP address of the multicast group.

RTP Port
Configures the RTP port of the multicast address, this port is used for streaming video and audio data.

RTCP Port
Configures the RTCP port of the multicast address, this port is used for controlling RTP streams.

Path
Configures the URL address of the video stream.

Always Multicast
Check this option to enable the video stream to start multicast streaming without using RTCP.

Audio RTP Port and RTCP Port
Configures the port numbers for RTP audio and RTCP, the range is 1025 ~ 65535.

TTL
Configures the time-to-live threshold of the multicast datagram before it is discarded by the router.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Events

Ethernet Lost Detection

This page is used to configure link failure detection for Ethernet.

Ethernet Lost Detection

Settings
☐ Enable ethernet lost detection
☐ Alarm Output

[Save]   [Reset]

Settings

Enable Ethernet Lost Detection
Enables link failure detection of the Ethernet connection.

> Note: When the camera is connected to and powered by a PoE power source, Ethernet Lost Detection is not available. Please connect the camera to an external AC/DC power when enabling this feature.

Alarm Output
Enables the camera to trigger the device connected to alarm output upon detecting failure of the Ethernet connection.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Face Detection

You can configure the camera to detect faces and trigger the events enabled in the **Event Actions** menu on page 62. The instructions below illustrate how to setup face detection.

1. Check the **Enable Face Detection** and on the live video screen below, select the area for face recognition by holding down the mouse button and drag to make a rectangular square, release the button once the desired area is covered.
2. Press the **Setting Area** button to set this area for face recognition.

To delete the area, press the **Remove** button.

Threshold
Configures the sensitivity of the face recognition, the range is 1~9, with 1 being the least sensitive.

Detect Direction
Configures the direction to detect faces.

Up: Detect faces on the top (90 degrees from the front).
Right: Detect faces on the right (180 degrees from the front).
Left: Detect faces on the left (-180 degrees from the front).
Down: Detect faces on the bottom (-90 degrees from the front).

Detection Box
Configures which detection zones are used for face recognition, the options are **Rectangle**, **ROI** and **Rectangle + ROI**.

Detection Zone
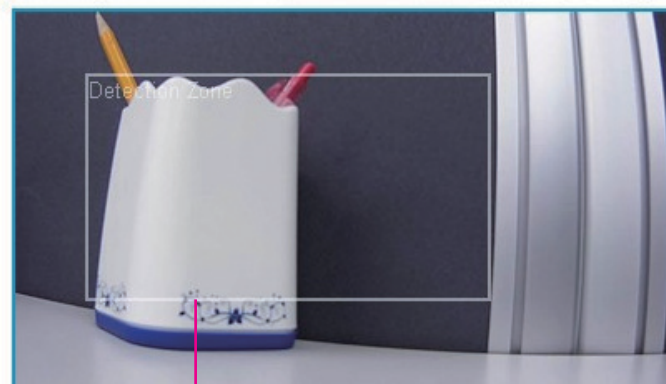
Tampering Detection

This section is used to configure tamper detection settings.

Settings

Enable Tampering Detect
Enables or disables tamper detection. When enabled, the camera will trigger actions enabled in the **Event Actions** menu upon detecting image blurs.

Sensitivity
Configures the sensitivity of the tamper detection, the range is 1~100, with 1 being the least sensitive.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

Event Actions (Advanced)

This section configures what actions to perform when an event is triggered from face detection and tampering detection.

Advanced Event Actions

When Face Detection Triggered...

- ☐ Save stream to SD card
  File format: AVI ▼
- ☐ Upload stream to FTP server
  File format: AVI ▼
- ☐ Upload stream to Network Storage
  File format: AVI ▼
- ☐ Send email notification
- ☐ Alarm Output

When Tampering Detection Triggered...

- ☐ Save stream to SD card
  File format: AVI ▼
- ☐ Upload stream to FTP server
  File format: AVI ▼
- ☐ Upload stream to Network Storage
  File format: AVI ▼
- ☐ Send email notification
- ☐ Alarm Output

[Save] [Reset]

When Face Detection Triggered

Save Stream to SD Card
Check this option to store the video stream onto the SD card. Select the desired file format in the drop-down menu, the options are **AVI** and **JPEG**.

Upload Stream to FTP Server
Check this option to upload the video stream to a FTP server. Select the desired file format in the drop-down menu, the options are **AVI** and **JPEG**. For information on configuring the FTP server, please refer to FTP on page 27.

Upload Stream to Network Storage
Check this option to upload the recordings to the network storage server. Select the desired file format in the drop-down menu, the options are **AVI** and **M**-**JPEG**.

Send Email Notification
Check this option to send an email notifying the event, for more information on configuring the email address, please refer to SMTP on page 29.

Alarm Output
Check this option to activate the device connected to alarm output when face detection is triggered.

When Tampering Detection Triggered

Save Stream to SD Card
Check this option to store the video stream onto the SD card. Select the desired file format in the drop-down menu, the options are **AVI** and **JPEG**.

Upload Stream to FTP Server
Check this option to upload the video stream to a FTP server. Select the desired file format in the drop-down menu, the options are **AVI** and **JPEG**. For information on configuring the FTP server, please refer to FTP on page 27.

Upload Stream to Network Storage
Check this option to upload the recordings to the network storage server. Select the desired file format in the drop-down menu, the options are **AVI** and **M**-**JPEG**.

Send Email Notification
Check this option to send an email notifying about the alarm event, for more information on configuring the email address, please refer to SMTP on page 29.

Alarm Output
Check this option to activate the device connected to alarm output when tampering detection is triggered.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

System

Schedule Recording

This section is used to schedule the recording of the video streams.

Schedule Recording Setting

Enable Schedule Recording
Enables or disables recording of the video stream. When enabled, you can select to record the video stream to a **SD card** or to a **Network Storage**.

Daily
Configures the camera to record at the specified **Start Time** and **End Time**.

Weekly
Configures the camera to record on the specified day and time of the week.

S
Select this to set full-day recording.

D
Select this to cancel full-day recording.

E
Displays the end time of the recording, clicking **E** will allow you to configure the start time and end time.

Save
Save button to apply the configurations, click on this button once all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings applied.

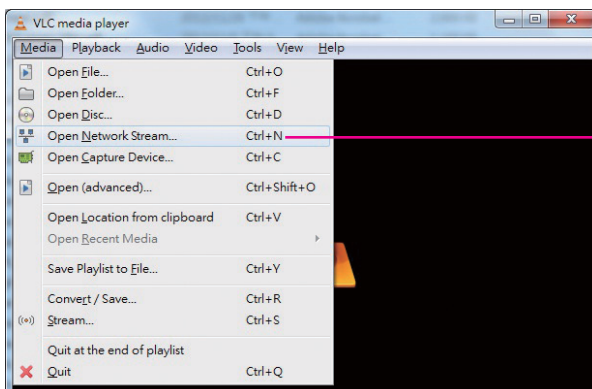# CHAPTER 3: VIEWING LIVE VIDEO VIA VLC MEDIA PLAYER

The IP camera's live video can be viewed by third party media players such as VLC media player by VideoLAN project. To stream the live video from the camera to VLC media player through the network, please follow the instructions below.

1. Locate and open VLC media player.
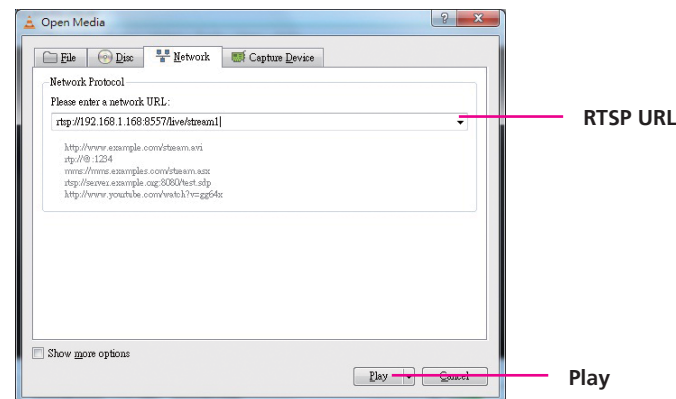2. Go to **Media** -> **Open Network Stream**.
3. Enter the following RTSP URL:

rtsp://192.168.1.168:554/live/stream1

Note: RTSP URL of stream 1, similarly you can view stream 2 and 3 of the camera by entering their corresponding URLs. Please refer to **Ports** on page 30 for more information on the URL link.

4. Press the **Play** button to start streaming.

Open Network Stream

RTSP URL

Play

5. You will be prompted with a pop-up window asking for login information, type in "admin" (default login name) and "9999" (default password)