



User Manual

4CH/8CH Super HD 4.0MP Network Video Recorder

4.0MP Network Camera

(For NVR)

Thank you for purchasing the Reolink Network Video Surveillance (4CH/8CH) Product .

For the latest User Manual, Product Updates and more information about the products , please visit our website at :

<https://reolink.com/>



CAUTION



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



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the products ' 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.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF THE PLUG TO THE WIDE SLOT AND FULLY INSERT.

GETTING STARTED



We have developed user friendly products and documentation. Please read the Quick Start Guide and User Manual before you install this product.



Consumer Guides and Video Tutorials are available on our web site at <https://reolink.com/>



If you require further installation assistance, please contact a professional installer.



Please note that once the components of this product have been unsealed, you cannot return this product without the original packaging.

FCC Verification

Note: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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 or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

These devices comply with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- These devices may not cause harmful interference, and
- These devices must accept any interference received, including interference that may cause undesired operation.

Important Note :

All jurisdictions have specific laws and regulations relating to the use of cameras. Before using any camera for any purpose, it is the buyer's responsibility to be aware of all applicable laws and regulations that prohibit or limit the use of cameras and to comply with the applicable laws and regulations.

FCC Regulation (for USA):

Prohibition against eavesdropping

Except for the operations of law enforcement officers conducted under lawful authority, no person shall use, either directly or indirectly, a device operated pursuant to the provisions of this Part for the purpose of overhearing or recording the private conversations of others unless such use is authorized by all of the parties engaging in the conversation.

WARNING

Modifications not approved by the party responsible for compliance could void user's authority to operate the equipment.

IMPORTANT SAFETY INSTRUCTIONS

- Make sure product is fixed correctly and stable if fastened in place
- Do not operate if wires and terminals are exposed
- Do not cover vents on the side or back of the NVR and allow adequate space for ventilation

RoHS:

This product is fully compliant with the European Union Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment ("RoHS") Directive (2002/95/EC). The RoHS directive prohibits the sale of electronic equipment containing certain hazardous substances such as lead, cadmium, mercury, and hexavalent chromium, PBB, and PBDE in the European Union.

BATTERY INFORMATION

This product contains a removable battery. If you need to replace or dispose of the internal battery.

The battery is located on the main board of the NVR. It is a primary lithium CR2032 button cell.

To access, remove and/or replace the battery:

- Ensure the NVR is turned OFF. NEVER open the NVR's case while power is connected.
- Remove the five screws holding the cover on the NVR.
- If replacing the battery, ensure that it is an exact match for **size, type** and **capacity**.
- Be sure to safely dispose of the battery. The process for battery disposal/recycling varies from location to location, please check with the relevant local authority for method.

BATTERY SAFETY INSTRUCTIONS

- Do **NOT** attempt to open, puncture, disassemble or modify the battery in any way.
- Do **NOT** subject it to sudden shock or heat.
- Do **NOT** dispose of battery in fire.



Network Video Recorder Features

- SUPER HD 4.0 Mega pixels Resolution
- Real-time Recording at 4.0MP 2512*1520 Resolution
- Simultaneous Playback and Live view on the same screen
- Selectable area Zoom during Live and Playback display
- Easy Camera Installation using Power over Ethernet (CAT5) cable
- 24/7 100% Duty Cycle Hard Disc Drive
- Expandable High Capacity Storage - up to 3TB
- Mirror Hard Drive Recording - secure your recordings by backing up footage to an internal hard drive at the same time as recording to the primary hard drive
- HDMI output resolution 1080P & VGA output for simple connection to HDTVs (HDMI cable included)
- View, Record, Playback, Backup & Remotely control the system simultaneously

Connectivity Features

- Latest Reolink p2p technology
- Instant Mobile Viewing on compatible Smartphones Dedicated iPad® and Android tablet apps with multi-channel live viewing and playback
- ReoLink Easy Connect Internet Set-up Wizard
- Reolink Client Software
 - PC (Windows 7, 8) compatible using client software (included) & web browser.
 - Mac remote client software (included) and Safari web browser.
- Instant e-mail alerts with snap shot attachments of event and web link

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The system comes with the following components:



4 Channel NVR
1TB Hard Drive (Installed)



Bullet Camera



Ethernet Cable



POE Cable



Optical Mouse



Power Adapter



HDMI Cable



Quick Start Guide



CD

Front Panel



Power LED : Solid red indicates the NVR is supplied with power and turned on.

HDD LED : Blinking green indicates the NVR is writing to / reading from the installed hard drive.

USB : For connecting the USB mouse .

Play/Stop : to play or stop the selected Channel .

Quad: Switch between display 1 CH and display 4 CH on the Monitor

Menu : Open the Menu windows

Select : start to use the selected item function

Direction Arrow : Choose the items on the menu .

Rear Panel



VGA : For connecting a television or PC monitor with a VGA input (make sure the monitor you use supports the resolution you set in the menu).

HDMI : The primary video output of the NVR.

Network (LAN) Port : connect the NVR to your router or network switch for Internet connectivity.

USB 2.0 : For connecting the USB mouse .

POE Camera Ports : Plug the Video and Power cable for each camera in to one of these sockets

DC 48V Power Input : Plug the DC power adapter into this socket to provide power to the NVR and Cameras

eSATA: An easy way to connect an additional Hard Driver for extra storage.

Audio Out : For connecting speakers .

You can follow below steps to connect your system :

Step 1 : Connect the NVR to a Monitor or TV

Use the HDMI cable (supplied) to connect your NVR to the TV HDMI port .
Or VGA : Use the HDMI cable (supplied) to connect your NVR to the TV HDMI port .



Step 2 : Connect the IP Cameras



Connect the camera's LAN Video port to any POE Camera port on the NVR using the Ethernet cables provided.

You can also purchase longer LAN cables if required.

Camera **Reset** button: It enables you to reset the camera's admin password back to factory default.



Please make sure POE Cable is 8 pin network Cable, for some Cable is 4 pin only . 4 Pin cable can't be used for POE Camera .

Step 3 : Connect to your network

Connect an Ethernet cable from the LAN port on the NVR to LAN port on your router.



Step 4 : Connect the Mouse

Connect the mouse to the USB port.



The USB Mouse

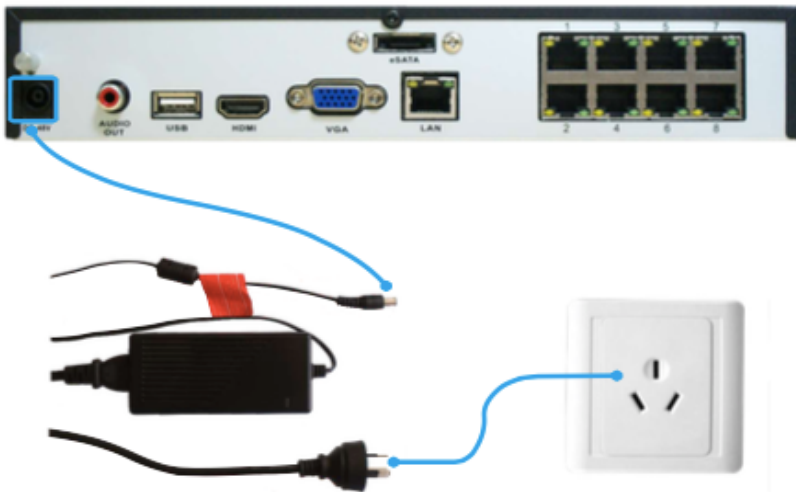
Left click: Selects an item or confirms a choice.

Right click: Opens the menu bar from the live viewing screen.
Returns one “step” from a submenu.

Opens a context menu in some settings screens.

The Scroll Wheel: Can be used to adjust the values of sliders and scales when highlighted by the mouse.

Step 5 : Connect the Power Adapter



Please use the supplied power adapter . For POE NVR device , it is 48 voltage .

Camera voltage is 12V only . Please don't use the NVR 48V power adapter directly to Camera , Otherwise , it will burn the camera .

The Setup Wizard will run automatically the first time you start the NVR.

The wizard will guide you through all the settings you need to get your NVR up and working, specifically:

- Choosing your Language
- Setting Video Format and Resolution
- Setting the Date Format and your Time Zone
- Configuring your email account settings so that the NVR can send you alerts and the NVR UID
- Synchronizing the NVR's time with an online server
- Choosing the settings for Daylight Savings Time (DST)
- Changing the NVR's Admin account default password

General Configuration

Setup Wizard

General configuration

Language: English

Video Standard: PAL

Resolution: 1024*768

Time Zone: ((GMT+08:00) Beijing)

Menu Date Format: DD/MM/YYYY

UID: M6W8VD5L5973V4LD4P7J

QR Code

Previous Next Cancel

Language: Choose the language you'd like the menu system to be displayed in.

Video Standard: Choose between **NTSC** (USA, Canada, Mexico, Japan, Korea and some other regions) or **PAL** (UK, Europe, Australia and some other areas). If this is set incorrectly, images from your cameras will be distorted, black and white.

Resolution: How many pixels the NVR will output. Typically, you'll want to set this to be equal to the native resolution of your monitor/television.

Time Zone: Choose the time zone you're in. It's really important to select the right time zone if you're using NTP (Network Time Protocol).

Some common time zones:In the USA

EST (EasternStandardTime) is GMT-5:00, PST(PacificStandardTime) is GMT-8:00.

UK is GMT +0:00, and the East Coast of Australia is GMT +10:00.

Menu Date Format: How you'd like the date to be displayed.

UID: This is the NVR's **Unique ID**entifier number which will be used later to connect your PC or SmartPhone to the NVR using Reolink p2p technology.

Camera



The screenshot shows a window titled "Setup Wizard" with a tab labeled "Device List". Inside the window is a table with the following columns: Index, IP Address, MAC Address, Name, and Channel. There are 7 rows of data. The "Name" column contains text input fields with various names like "mdq", "Camera1", "SWNHD-820CAM", "DVR", "VN_Mozart390", and "HVR". The "Channel" column shows "Channel6", "Channel7", "Channel8", and "Disconnect" for the remaining rows. At the bottom right of the table area is a "Refresh" button. At the bottom of the window are three buttons: "Previous", "Next", and "Cancel".

Index	IP Address	MAC Address	Name	Channel
1	192.168.2.9:9000	00:0A:3C:1F:7C:DE	mdq	Channel6
2	192.168.2.10:9000	00:0A:3C:D1:63:2A	Camera1	Channel7
3	192.168.2.20:80	8C:E7:48:E8:1E:94	SWNHD-820CAM	Channel8
4	192.168.2.35:9000	EC:71:DB:40:6B:07	DVR	Disconnect
5	192.168.2.87:9000	EC:71:DB:93:FC:C4	Camera1	Disconnect
6	192.168.2.121:80	00:0A:3C:20:DE:B9	VN_Mozart390	Disconnect
7	192.168.2.126:9000	EC:71:DB:9A:FC:86	HVR	Disconnect

Here you can see a list of cameras are connected to the NVR .

IP Address: Displays the unique IP number and port number that is assigned to the network camera.

MAC Address: The Media Access Control address. This is a unique code which nothing else should share. You can't change this one - it's hard set when the camera ships out.

Name: All cameras default name "Camera1". change a name will help you easily identify the camera . Also, camera IP address may sometimes change if the NVR or router was rebooted, the assigned camera name will always stay the same (unless if you change it).

Channel: The channel to which the camera has been assigned.

E-mail

If you want the NVR to send email alerts as alarm events are detected, then you need to configure an outgoing email server for the NVR and choose an email address for it .

We recommend creating an account with Gmail specifically for the NVR.

These instructions assume you're using a Gmail account.

Enable SSL or TLS: Enable.

SMTP Port: The SMTP port of your email server. Gmail's is 465 (*this value will self-populate*)

SMTP Server: The SMTP address of your email server. There are 3 preset options to select from: *smtp.gmail.com*, *smtp.live.com* or *smtp.mail.yahoo.com*

Sender Address: The email address you want your NVR to send alerts from. For example, *your_email@gmail.com*

Sender Password: The password of your sending email address.

Recipient Address : Enter an email address for the NVR to send alerts to (usually your personal email address).

Attach Picture: When selected, the NVR will attach a still image to better illustrate what has caused the alarm/alert state.

Interval: The minimum amount of time that must elapse after the NVR sends an email alert before it can be triggered again.

Test: To check if you've set up email alerts properly, click the Test button. If your connection and email details are ok, you will see a message on the NVR screen confirming the email was sent successfully. After a short delay, you will also receive an e-mail in your inbox ([Recipient's Address](#)) informing you that email alerts from the NVR has been set up. If the test is unsuccessful, please check your sender's address/ password and recipient's address and try again.

UID: This is the NVR's **Unique ID**entifier number. We will use this UID to configure the Reolink app & software and connect to your NVR. You can click the **Send UID** button to receive an email containing the UID (that's assuming your email details are configured) or alternatively just make a note of the UID on a piece of paper or save it to a text file using NotePad application on your computer.

Send UID: When you've finished testing your email, click the **Send UID** button to send the NVR UID to your email address ([Recipient's Address](#)) so you can use it for access from ReoLink on your PC etc.

The screenshot shows the 'System time configuration' window in the Setup Wizard. It includes fields for NTP (unchecked), Synchronize Every (14400 Minutes), NTP Server (91.226.136.136), NTP Port (123), and System Time (11-04-2014). There is a 'Sync' button and a 'Previous' button at the bottom.

NTP stands for “Network Time Protocol”. It’s a way for the NVR to connect to the Internet and automatically update and maintain accurate time.

There’s no requirement to use NTP, but it’s easy to setup and free to use, so there’s really no reason not to.

NTP Server: The server you’d like to use for NTP. They’re all quite comparable in terms of reliability and accuracy, so unless you’ve got some kind of master plan for world domination (which is affected by the time, for some reason) then the default (**pool.ntp.org**) works fine.

NTP Port: The default is **123**. You should only change this if you’re using a different NTP server, and you know they use a different port. *If you’re using **pool.ntp.org**, ensure the port is 123.*

Sync: Triggers the NVR to automatically synchronize its internal clock with the time server immediately. If your NVR is connected to the Internet and the network is correctly configured, this will update almost instantly.

System Time: The NVR’s current date and time.

Note: Make sure your time offset is set correctly or both your NVRs normal time and DST time may be out.

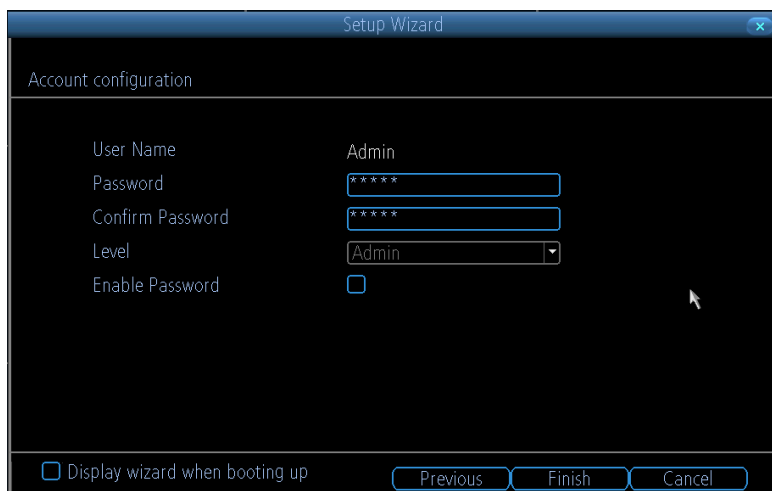
DST

The screenshot shows the 'DST configuration' window in the Setup Wizard. It includes fields for Enable (unchecked), Offset (1 Hour), Start Time (Mar. 2nd Sun 2:00:00), and End Time (Oct. The last Sun 2:00:00). There are 'Previous', 'Next', and 'Cancel' buttons at the bottom.

If your time zone observes daylight saving time and you want your NVR’s clock to be updated automatically when daylight saving time starts and ends, make sure the **Enable** checkbox is selected.

Offset: The amount by which the time changes during DST. For the vast majority of locations, the offset is one hour, but exceptions to this rule exist.

Start Time / End Time: When DST begins and ends in your locale.



Here you need to create a password of the **Admin** account for on-going protection against unauthorized access, The default password here is blank , you must create a new password to continue .


User Name: The NVR's default administration account, which is always called "Admin". You can't change the **Admin** user name.

Password: The password you'd like to be associated with the **Admin** account. A password can be between 1 and 8 characters in length, and consists of numbers only (**no letters or symbols**). **The default password is blank , so you must create new password to continue .**

Confirm Password: Re-enter the password to ensure accuracy.

Level: This field is greyed out because the **Admin** account always has the highest level of access. There are two additional access levels available - Guest and Operator.

Enable Password: Select this if you want to be prompted for the user account's password when accessing the main menu.

Display wizard when booting up (checkbox): Select this if you want the NVR to automatically run the configuration wizard when it boots up. You can also run the wizard at any time by clicking the  icon on the NVR menu bar.

DEFAULT PASSWORD INFORMATION

To ensure your privacy, this NVR supports password protection.

The default, all-access username is 'admin', the default password is '**blank**'.

To ensure your ongoing privacy, you must create a new password to continue. Choose something that you'll remember, but that others would be unlikely to guess.

IMPORTANT NOTICE - Do NOT lose or forget your password. To ensure that your NVR has the best security possible, password recovery has been designed to be a complicated and time consuming process. Only a select number of staff at the Technical Support Telephone Helpdesk can assist. Password retrieval can take several days, which means you will NOT be able to access your NVR during this time.

Finishing the Setup Wizard

When you click **Finish**, the NVR will update and save your settings. It may reboot while doing so.

With the free Reolink app , you can turn your iOS or Android mobile device into a monitoring center for your NVR security system . You can monitor your home at any time from any place . With the latest p2p technology , you can connect NVR so easy , it only takes minutes to get it up and running .

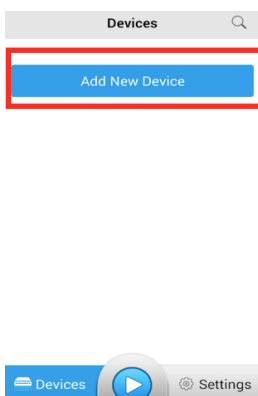
Scan one of the QR code to download the relevant app for your mobile device. You can also go to app store to download Reolink for Handsets and Tablets . Follow the on-screen instructions for installation and accept any license requirements that may appear .



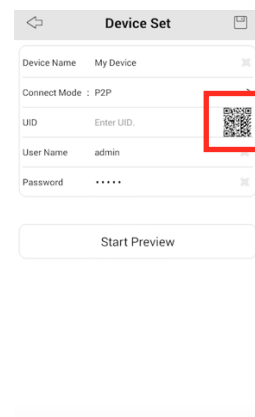
1, After downloading and installing the app, go to the location the app is stored and tap the icon to run .



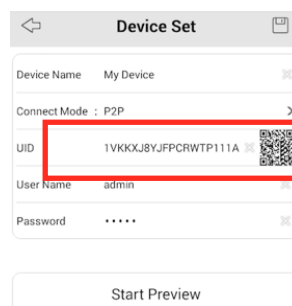
2, When you first start the app , you will see this screen, Tap “ Add New Device ”



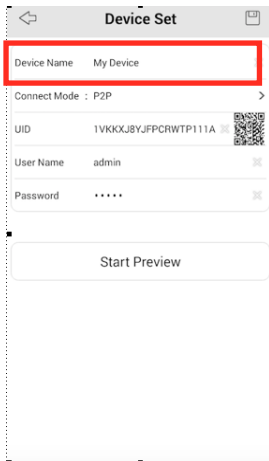
3, Tap the QR code icon to open the scanning page. Hold your mobile over the QR code sticker on top of your NVR .



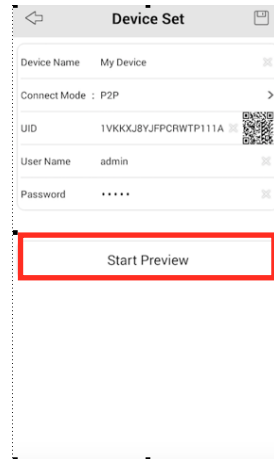
4, The UID of your NVR will automatically be entered .



5, Tap “Device Name” to name your NVR .
Enter the password the one that you created in the setup wizard or create a new password here .



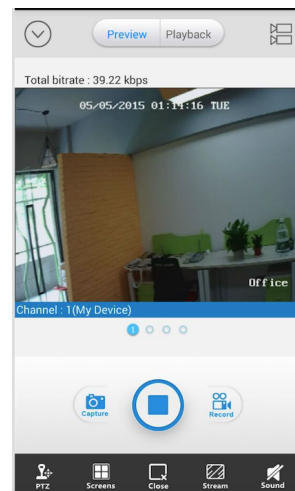
7, when the app has successfully connected with your NVR , tap the “Start preview” button .
If the app fails to connect , make sure the UID and your log-in details are correct .



6, Tap the “Save” Button at the top-right to save .
The app will verify and test your connection .



8 You will now see a live view of all your cameras connected . Have a look at the instructions below to get yourself familiar with the various options.



Menu button (Arrow down)- you can access to options such as add, edit and delete a device. You can also access built-in manual , version information and check the playback video recorded to your mobile device . Tap the play button to exit the menu.

Preview Button - Tap this to access live view mode . A red border will surround the currently selected camera .

Playback Button - Tap this to remotely playback video recorded to your NVR

Camera list - you can access to the camera list to enable or disable the cameras available

Live view Screen - Selecting a camera you can take a snapshot or record video directly to your mobile device. You can also control a PTZ camera and

Blue Dot - Shows which camera or group you are viewing.

Capture Button - Take a snapshot of the selected camera and save image to your mobile device

Play/Stop Button - Stop/Stat all cameras ,Stop live view of all the cameras . Tap again to restart all cameras .

Record Button - Record video of the selected cameras to your mobile device; Tap the button again to stop record.

PTZ - Control any PTZ camera that is connected

Channel - You can select 1/4/9/16 cameras to view at the same time .

Stop/Start - Stop/Start selected camera ,Stop live view of selected camera. Tap again to restart the camera .

Stream- Video Quality ,you can change the live view image video quality

Sound - Enable / Disable Audio

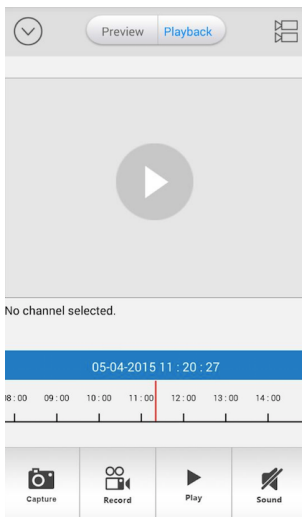
change video quality settings, Double tap a camera to view it full screen , Double tap again to return .

Local Playback

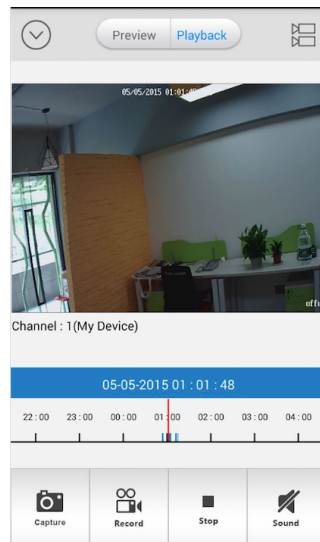
Local playback - To play video files that are directly recorded to your mobile device , you can find where you install the App , and find the file from File-> storage -> Reolink ,Tap on one of the files to play .


Remote Playback

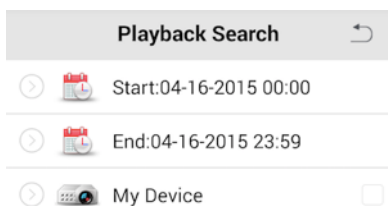
A ,Tap on “playback” Button ,
you will see this screen .



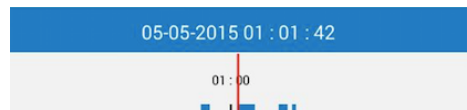
You will see below screen



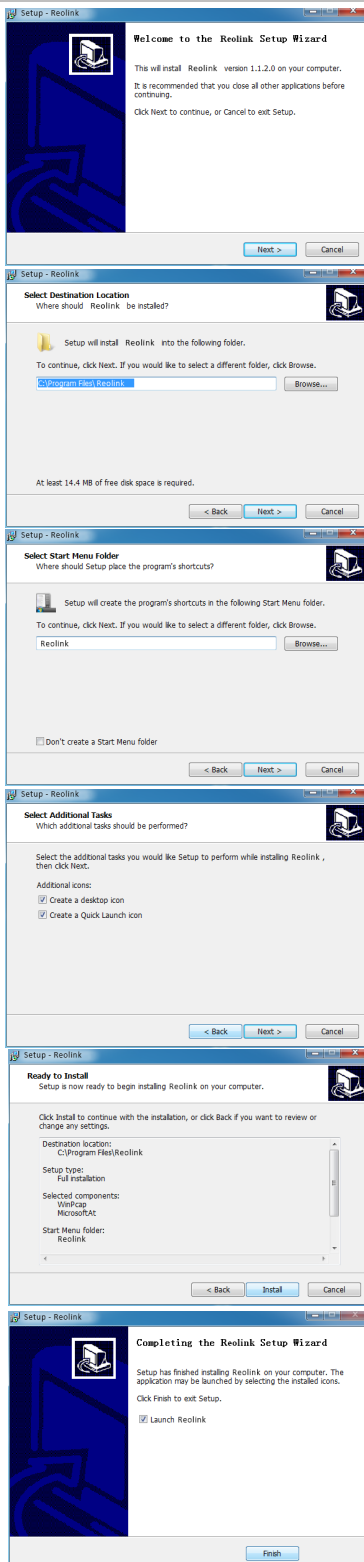
1.Tap the Camera List icon  to select the start and end time & date and the camera that you would like to remotely playback



D , Slide the timeline scroll to choose the file you want to play . You can also drag to magnify the timeline scroll as below sample to see time details .



2. Select the start time & date
3. Select the end time & date
- 4.Tap the > button and elect the camera . Only 1 camera can be selected when searching .
- 5.Tap Start Search to display the files that fit with your search criteria .



Reo-link Software

The *Reolink* software will allow you to:

- view images from your NVR in real-time,
- playback recorded footage,
- copy footage to your local PC and
- adjust settings and configure the NVR.

In fact, the *Reolink* software is so powerful, you don't even need to connect a monitor to the NVR if there's a computer on the local network that you're running *Reolink* on.

For quick and easy configuration of the NVR's settings, recording quality and schedule, we suggest using the remote interface in *Reolink*.

How to install Reo-link:

- Insert the included CD into your computer.
- Locate the file called **Reolink** and run this file.
- you may be asked by UAC (User Account Control) to allow Reolink to "make changes" to your system. Select **Allow** or **Continue**.
- You'll see an installation wizard. Simply follow the prompts to install the software.
- Once the ReoLink software is installed, it should automatically detect your NVR on your network.

Minimum PC Requirements:

2.0GHz or faster CPU

1GB or more RAM

10/100Mbps Network

Internet connection

1024x768 resolution

Supported Operating Systems

Microsoft Windows XP, Microsoft Windows Vista,

Microsoft Windows 7

Setup your PC (Windows)

Log on to Reo-link

To connect from your PC to your NVR, make sure your NVR is on and all connections are ok.

Get UID

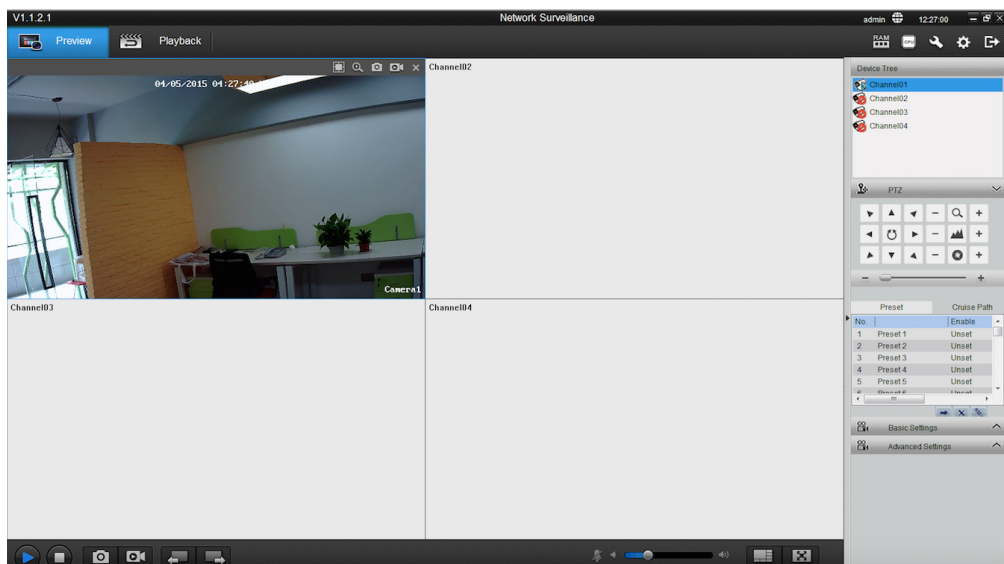
- if your NVR is in the same LAN network with your PC , you can click Search to auto get the UID
- You can also manually type the UID under the UID QR code which on the cover of NVR to UID field , or
- Copy the UID from e-mail which was send to your mail account during the Setup Wizard .

[illegible]

Then, enter your **Username** (the default of **admin** is already entered) and **Password** (default is **blank**), you need use the password which you create on Setup Wizard or create a new password here to continue , then click **Login**. After a few seconds, you will see your cameras live on your PC.

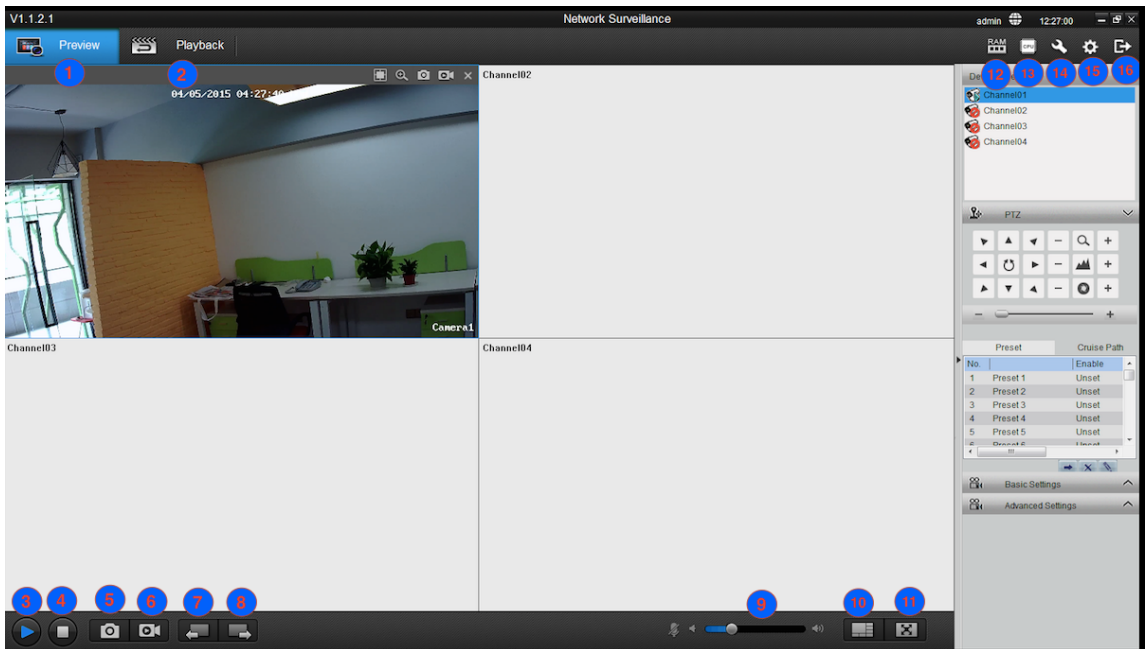
Reo-link Interface

After you successful log on to ReoLink, you will see the following screen:



Using the Live View Screen

Live View is the default mode for the NVR. The NVR can display video feeds from up to four or eight cameras depending on model .






- 1-Preview and 2-Playback Tab: you can switch from the Preview and playback Tab to view live or the record file .
- 3-Play : you can choose play Main Stream / Sub Stream or system Auto choose
- 4-Stop : manual Stop the live view channel
- 5-Snap: Capture the image of the Channel which you choose
- 6-Record : Initiates manual recording, and stop recording
- 7-Previous Page and 8-Next Page : During multi-channel view , you can choose which group of channel to display.
- 9-Sound : you can enable and disable the sound ,and adjust the volume of the sound
- 10-Channel Display : You can choose 1 Channel / 4 Channel / 8 Channel view , max channel is dependent on how many channels your NVR can support .
- 11-Full Screen : Double click to expand a full screen view of the windows. Click Esc to exit full Screen view .
- 12-RAM: Hang your mouse over Ram icon , it will Shows the memory loading performance
- 13-CPU: Hang your mouse over CPU icon ,it will Shows the CPU loading performance
- 14-Local Setting: can setting the record/Download/Capture path of the file
- Device Setting : Can setting display / Recording/ Network / Alarm /System / Search / Device
- Logout : Close Client software .

For more details , we will explain in the following manual.

Client Software - Preview



Click  to compress the image to center or click  to stretch image fit the full windows .

Click  to show the Digital zoom page . Here you can click



choose the zoom region



Zoom In




Zoom Out






restore zoom back to default setting



exit Digital zoom

Click Capture button  to take a snapshot of the image

Record Button :  Manual start record or stop record of the selected  channel . During the recording, on Device Tree area, status icon next to device name will show record icon on the device .

Click  to close the selected windows .

Click Screw look



Local Settings button on the upper right of the screen , you will see below pages .

Record Path: C:\RecordFile [Browse]

Download Path: C:\DownloadFile [Browse]

Capture Path: C:\Capture [Browse]

Recording file size (MB, 30~2048): 2048

Hard disk space warning (MB): 2048

Video recording folder size (GB): ☐ 100

☐ Convert to AVI

[OK]

The local Setting screen is where you can customize how ReoLink will store and process footage on the local PC when you download it from the NVR.

Record Path: Where ReoLink will save recordings if you select **Record** from the **Preview** screen.

Download Path: Where ReoLink will save footage that you've downloaded from the NVR.

Snapshot Path: Where ReoLink will save still images captured using the **snapshot** function.

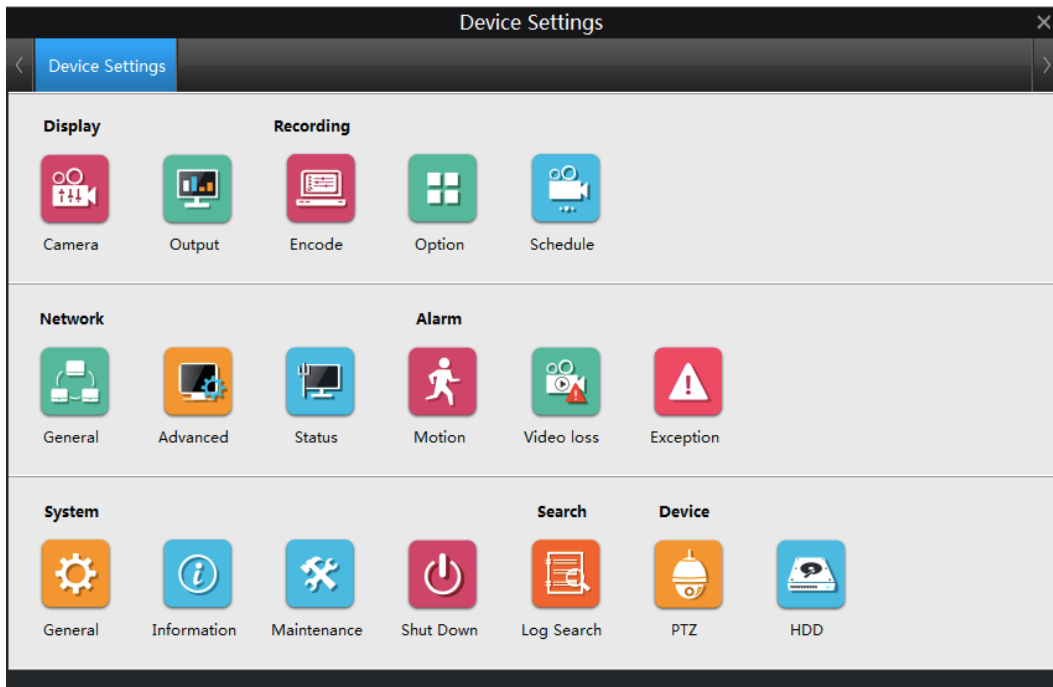
Convert to AVI: When selected, ReoLink will use your PC to **transcode** footage from the NVR's native format (H.264) into a format that your computer (indeed, almost any computer) will be able to playback without special software.

After finish Setting , click OK , Popup box will note "Save Succeed"!

Click the Gear Look



icon on the upper right of the screen , you will open the Device setting page .



On this page , we can set the following parameters :

Display —> Camera , Output

Recording —> Encode , Options , schedule

Network —> General , Advanced ,Status

Alarm —> Motion , Video Loss ,Exception

System —> General , Information , Maintenance ,Shut Down

Search —> Log Search

Device —> PTZ, HDD

Click Camera icon, you will see below

A screenshot of a 'Device Settings' window with a 'Display Camera' tab selected. The window contains a 'Camera' section with several settings: 'Channel' (dropdown menu showing 'Channel01'), 'Channel Name' (checkbox checked, text field showing 'Camera1'), 'Position Settings' (dropdown menu showing 'Lower Right'), 'Date/Time' (checkbox checked), 'Position Settings' (dropdown menu showing 'Top Center'), and 'Mask' (checkbox checked). Below these settings is a 'Setup' button. At the bottom of the window are 'Copy To' and 'OK' buttons.

Channel : Choose the Channel you want to Set

Channel Name : Enable to show channel name or disable , you can rename the Channel here .

Position Settings : you can put the Channel name on the upper left , lower Left , upper Right , lower Right , top Center or Bottom Center .

Date /Time : Enable or disable to show the date and time on the screen .

Mask (Check Box): Turns the masking function on or off.

Mask (Setup): Creates a black privacy overlay which masks part of your images. Will affect recordings.

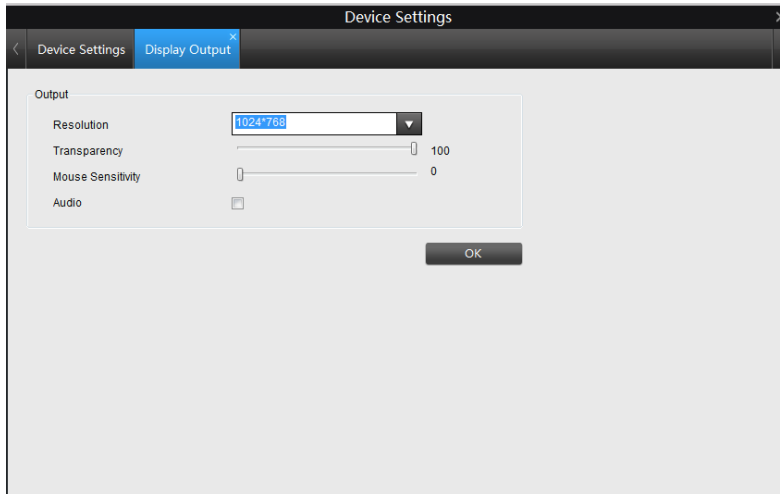
Click OK to keep the settings , also you can copy the above settings to other channels , choose checkbox on the copy to windows , then click OK.

On the bottom of windows will show , Channel Setting Succeed.

The **Display Output** menu is where you can control how the NVR is going to deliver an image to your television, screen or monitor. You'll be able to adjust items such as:



- screen resolution and position on your monitor
- the appearance of the menus, and
- the sensitivity of the USB mouse.



Resolution: This should be set as high as possible, but equal to or lower than the maximum resolution your screen/monitor can display. The NVR has many formats available, in four different aspect ratios:

Standard (4:3) - 1024 x 768

Standard (5:4) - 1280 x 1024, or 1400 x 1050

Widescreen (16:10) -1280 x 800, 1440 x 900, or 1680 x 1050

Widescreen (16:9) - 1280 x 720 (720p), 1600 x 900, or 1920 x 1080 (1080p)

Note: Most televisions are 16:9 widescreen. Computer monitors are still commonly produced in multiple aspect ratios, with 4:3, 16:9 and 16:10 being the most popular aspects.

Standard Monitor via VGA: Use one of the 4:3 formats to correctly align the NVR's output on your screen. Using a widescreen format will "stretch" the image vertically.

Widescreen Monitor via VGA: use the widescreen (16:9 or 16:10) format. If your monitor can't display those resolutions, you might need to enable letter-boxing on your monitor and use a 4:3 format.

PC Monitor via HDMI: Choose a format appropriate for your monitor. If it's a widescreen, use a widescreen format.

Widescreen Plasma/LCD HDTV via HDMI: The resolution should be set to the maximum your television can *process* not *display*. Check your television's documentation to learn this value. If your television can't display 1080p, then use 720p instead.

Transparency: You can set the NVR's menus to be partially transparent- in case you need to keep an eye on things while adjusting settings .

Mouse Sensitivity: How sensitive the mouse will be. On lowest, large and dramatic arm movements are required to move the mouse but a few inches onscreen. At the other end of the spectrum, a tiny bump or knock can send the cursor from one side of the screen to the other. Try somewhere around the lower end for starters, and then increase it little by little if it's moving too slowly.

Audio: Click the check box to allow display output with Audio .

Device will restart after changing the output parameters ,click OK to continue .

The **Recording: Encode** menu allows you to alter and customize how the NVR records footage and “encodes” the files. You can choose and alter:



- the resolution (per channel),
- the frame rate (how many images per second the NVR records), and
- the data-rate of each video stream. The higher the data rate, the “better” your images will look, but the more space they’ll require on your HDD.

Channel : The channel feed you want to alter the settings for.

Stream Type: Whether you’re editing the parameters for the mainstream or the sub-stream.

Main-Stream: the video feed that the NVR will record and display. This is the higher-quality stream.

Sub-Stream: the video stream that the NVR will send to remote devices via a network or the Internet. It is the lower-quality stream as a reduction in video size makes it easier to send over a network.

Record Audio: recording with Audio

Resolution: How many “little dots” are going to make up your image.

Frame Rate: The number of frames per second (fps) that the NVR will record. Reducing the number of frames per second will **not** save hard drive space but potentially **will** improve the data-rate per frame.

Max. BitRate(Kbps): The actual amount of data that the NVR will use to record video. The higher the bitrate, the more space each recording will take up on the hard disk. Generally speaking, recordings encoded at higher bitrates will be of better quality, especially when recording movement.

The screenshot shows the 'Record Encode' settings window. The 'Channel' is set to 'Channel01', 'Stream Type' is 'Main Stream', 'Record Audio' is unchecked, 'Resolution' is '1080P', 'Frame Rate' is '25', and 'Maximum Bitrate' is '4096'. The 'Copy To' and 'OK' buttons are visible at the bottom.

The main-stream uses a variable bitrate to record video - the more movement occurs in the video, the higher the bitrate will have to be. When there’s little movement in view, the NVR will automatically reduce the bitrate to conserve HDD space.

If the amount of movement in a recording would require a higher bitrate to accurately record than what you’ve selected as the maximum, the NVR will attempt to preserve as much of the quality as possible by applying compression to the image. This compression will take the form of irregular, fuzzy blocks over segments or the entire image. If you encounter this, it indicates that you might need to increase the overall bitrate.

If you’ve set a high bitrate but a low frame rate, the NVR will still use all the data it can, resulting in potentially higher quality per frame than at higher frame rates.

The sub-stream uses a constant bit-rate to makes the video easier to stream over a network or the Internet.

Note: Both the main-stream and the sub-stream are always operating - in fact, the sub-stream forms part of the main- stream. The options will affect the output quality of each stream, but won’t change which one is being used in different circumstances.



Device Settings

< Device Settings Record Option X

Option

Overwrite ☒

Pre-record ☒

Post-record 2 Minutes ▼

Pack Duration 60 min ▼

OK

Overwrite: When enabled, the NVR will record over the files already stored on the hard drive. The NVR will always record over the **oldest** files on your hard drive first.

Using the overwrite option is advisable, as the NVR will always be able to record events as they happen. However, it does mean that you'll need to get important events off the HDD before they're overwritten.

Pre-Record: While Pre-Record is enabled, the NVR will record a few seconds **before** an event occurs. It's a little like making the NVR psychic. If you're using **Motion Detection** (recommended) based recording as your primary recording method(s), then it's a really good idea to use Pre-Record - sometimes, if an event is fast enough, it might have left view before the NVR can trigger a recording. With Pre-Record, there's almost no chance you'll miss it.

Post-Record: How long after an event occurs that the NVR will continue to record. It can be very useful - for example, if an intruder or potential target triggers the motion detection but pauses in view, having post-record enabled will get a much better look at them. 30 seconds is the recommended length for the post-record setting, but it can be set higher (the options are 1, 2, 5 or 10 minutes) depending on your unique circumstances.

Pack Duration: *Pack Duration* is a measurement of how long the NVR will record for before splitting the output file into discrete units. "Packs" are something like the chapter numbers on a DVD - though the video is broken up into separate units, it will still play through as one continuous movie (unless interrupted by the schedule or motion detection turning the recording on or off). If you don't want to worry about setting Pack Durations, you can leave it on the default value; it will make little difference to the day-to-day running of the NVR.



Device Settings

Record Schedule

Record Schedule

Channel: Channel01

Enable Schedule: ☒

Hour	00	06	12	18	23
Sunday	Green	Green	Green	Blue	White
Monday	Green	Green	Green	Blue	White
Tuesday	Green	Green	Green	Blue	White
Wednesday	Green	Green	Green	Blue	White
Thursday	Green	Green	Green	Blue	White
Friday	Green	Green	Green	Blue	White
Saturday	Green	Green	Green	Blue	White

☒ Normal
 ☒ Motion
 ☐ None

Copy To OK

This example image shows some of the NVR's recording modes. If the NVR was started with this schedule, the selected channel (in this case CH1) would:

- Record based on Motion from midnight (00:00) to 2pm (14:00).
- Record constantly from 2pm (14:00) until 7pm (19:00).
- Not record anything from 7pm (19:00) to midnight(00:00).

Important Guidelines

The schedule presented on-screen applies to **one channel only** over **one whole week**.

Use the **Copy To** functions to quickly assign identical schedule layouts to multiple channels at once.

Be careful when program your schedule. It's one of the most important aspects of setting up your NVR, and if it's wrong in any way, it could lead to disastrous complications later.

Copy To (Channel): This will allow you to copy the schedule from the channel you're editing to another channel or channels.

Note: The Action Options for Motion Detection will affect the way the schedule works.

By default, all channels are armed to use Motion Detection as their recording mode.

Recording Modes:

There are three types of recording to choose from.

Normal: The NVR will constantly record for any period where **Normal** is selected. You won't miss anything, but constant recording will fill your hard drive very quickly. Typically, we suggest Motion as a better recording mode for most users.

Motion: The recommended recording setting for most applications. The NVR will only record when it detects something moving in front of a camera, and will then only record footage from the camera(s) that do detect motion unless you alter your Action settings to include other channels.



Network Access: Here you can choose between the three different types of networks that the NVR can be connected to. The three types of networks are:

DHCP: DHCP is a system where one device on your network (usually a router) will automatically assign IP addresses to devices connected to the network.

STATIC: Static networks require all devices to have their IP addresses manually defined, as there is no device dedicated to automatically assigning addresses.

PPPoE: An advanced protocol that allows the NVR to be more directly connected via a DSL modem. This is an option for advanced users only.

IP Address: Just as houses and businesses need to have an address which identifies their location on the road network, so too do computers and other devices need addresses to identify their position on the electronic network. The NVR uses IPv4 addressing, which consists of four groups of numbers between 0 and 255, separated by periods. For example, a typical IP address might be “192.168.1.24” or something similar. The most important thing when setting the IP address is that nothing else on your network shares that IP address.

Subnet Mask: If the IP address is like a street address, then a subnetwork is like your neighborhood. This will be formatted in a similar way to the IP address (ie. four numbers up to 255 separated by periods) but contain very different numbers. In the above example, the Subnet Mask might be something like: “255.255.255.0”.

Gateway: This is the address of the “way to the Internet” - to continue the road analogy, this is like your local access point to the highway. This is an IP address in the same format as the others, and is typically very similar to the IP address of the NVR. To continue the above examples, it might be something such as: “192.168.1.254”.

Auto DNS / Static DNS: Choose how you’d like to define your DNS servers. We recommend leaving it on Auto unless you’ve got a specific reason not to.

Auto DNS: The NVR will automatically choose a DNS server. This is the recommended setting.

Static DNS: If you need to manually define a DNS server, then choose Static DNS. This is recommended for advanced users only.

Preferred DNS Server: “Domain Name System”. Everything on the Internet is located via an IP address - however, for ease of use, we associate domain names (such as “www.exampledomainname.com”) with those IP addresses. This index is accessible in many locations online, and we call those locations “DNS servers”.

Alternate DNS Server: A backup DNS server. This is here as a redundancy - your NVR will probably work without one.

MAC Address: The *Media Access Control* address. This is a unique code which nothing else should share. You can’t change this one - it’s pre-set when the NVR ships out.

Note: Many of the following networking settings are not required when using ReoLink P2P for remote access.



DDNS: The place to configure the NVR to automatically update a dynamic DNS service. If you want to remotely access the NVR via the Internet, you'll probably need to configure a DDNS account.

NTP: Network Time Protocol. If you've got the NVR connected to the Internet, you can have it automatically sync time with an online server.

Email Settings: Where configure the NVR to work with an email account of your choice. This must be correctly configured for the NVR's auto-email feature to work.

IP Filter: An advanced feature which allows you to exercise precise control over what devices/IP address are allowed to communicate with the NVR and which are not. Recommended for **advanced users only**.

Media Port: NVR will use server port to send information through. The most important things are:

You'll need to enable UPnP on your router so your router can selectively open these ports, allowing the NVR to communicate via the Internet. If your router doesn't support UPnP, You can either get a new router (which support UPnP) or you can manually forward ports from the router to the NVR. Port forwarding is a technical and involved process, recommended only for the technically inclined.

Nothing else uses this port. The default port number is 9000, which is not used by many other devices/programs. However, particularly if you have another NVR or NVR-like device, something might be using this port already. **If this is the case, change this value to be unique.**

HTTP Port: This is the port through which you will be able to log in to the NVR. It will need to be forwarded properly in order to ensure smooth, latency-free communication. The default value is "85", as this port is seldom used by other devices. If another device on your network using this port, please change to other port. This is the port number you'll need to remember when logging in remotely from a remote PC via the HTTP interface.

[What port number\(s\) should I use?](#)

If the default port numbers are in use (85 and/or 9000) if 85 is already taken, try 86 or 87.

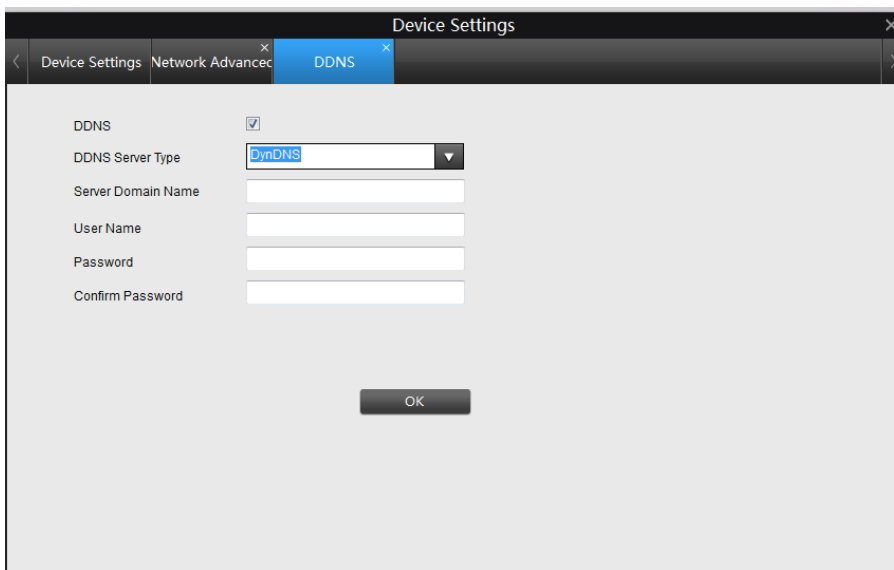
There's no "right" port number, any port number will work, avoid using port numbers 80, 81, 82, 88, 90, and 99 as these are often used by other devices.

RTSP Port: Real Time Streaming Protocol", you can use this port send the streaming file to Realplayer, the default RTSP port is 554

UPnP enable (This feature is not required if you are using ReoLink P2P to access the NVR): UPnP makes configuring your network easier and faster. To use the UPnP setting on the NVR, you'll need a router which supports this feature, with UPnP enabled. Note that many routers which do support UPnP do not come with the feature enabled by default. You may need to ask your Internet service provider to turn it on.

When UPnP is enabled on your NVR and your router, the Ports that the NVR requires to be open for access to and from the Internet will automatically be opened and closed as necessary by your router, saving you the trouble of manually forwarding these ports. If UPnP is not enabled, or your router does not support this feature, you'll need to forward the ports the NVR uses from the router to the NVR - since this is a technically challenging process, we strongly recommend using UPnP if possible.

UID: The NVR's **U**nique **I**Dentifier code for P2P. For convenience, you can have this code sent to your email account by clicking the **Send UID** button(provided that you've already set up your email account).



The screenshot shows a 'Device Settings' window with three tabs: 'Device Settings', 'Network Advanced', and 'DDNS'. The 'DDNS' tab is selected. Inside the tab, there is a 'DDNS' section with a checked checkbox. Below it, the 'DDNS Server Type' is set to 'DynDNS' in a dropdown menu. There are four text input fields for 'Server Domain Name', 'User Name', 'Password', and 'Confirm Password'. An 'OK' button is located at the bottom center of the window.

In much the same way as your home network can use static or dynamic IP addresses, many Internet providers don't issue (or charge more for) a static IP address for users. The easiest way to find out is to contact your Internet service provider. Alternately, you can access the www.whatismyip.com service, make a note of your IP, then reboot your router/gateway. This should refresh your Internet connection. If your IP address changes, you have a dynamic IP address. If it stays the same, you may have a static IP - contact your ISP to confirm.

DDNS Type: Choose the server that you're using.

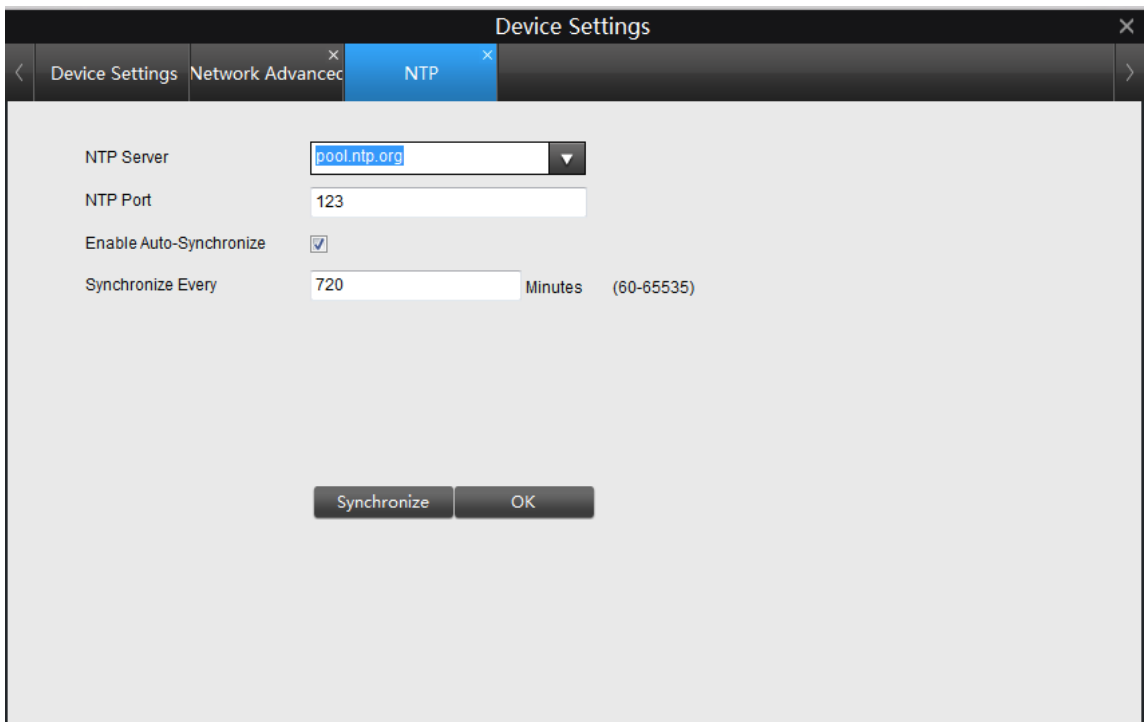
Server Domain Name: Enter the host name that you set up in your DDNS service. This is the address you use to access your network.

Username and Password: Enter the username and password you setup with your DDNS server. These do not have to match your username/password combination in either your NVR or router (for the sake of security, we suggest making them different).

Confirm Password: Retype the password to confirm

If the test is unsuccessful, a message will appear onscreen informing you that the "Update was Unsuccessful". This could mean there's a problem with your network setup, or there's a problem with the DDNS Account Name and Password you're using.

NTP Setup



The screenshot shows a 'Device Settings' window with a tabbed interface. The 'NTP' tab is selected, showing the following configuration options:

- NTP Server:** A dropdown menu with 'pool.ntp.org' selected.
- NTP Port:** A text input field containing '123'.
- Enable Auto-Synchronize:** A checked checkbox.
- Synchronize Every:** A text input field containing '720', followed by the unit 'Minutes' and a range '(60-65535)'.

At the bottom of the window are two buttons: 'Synchronize' and 'OK'.

NTP Server: The server you intend to use to access the current date and time. The default is **pool.ntp.org**.

NTP Port: The port that the NTP server uses. The default for pool.ntp.org is **123**.

Enable Auto-Synchronize : click the checkbox to enable Auto-Sync

Synchronize Every : to set the Sync interval time .

Particularly important if you've enabled NTP - set this to the time zone where you happen to be. For example, people in eastern Australia (Canberra, Sydney and Melbourne) choose GMT+10:00, whilst the Eastern Time zone in the USA and Canada is GMT-05:00. (GMT stands for Greenwich Mean Time - it's the baseline that keeps all the different time zones in sync.)

NOTE: Some NTP servers are NOT fully compatible with DST (Daylight Savings Time). This may cause your system to double-count adding one or removing one more hour than they should, or cancel each other out. You may need to intentionally change your time zone to compensate, or simply not use NTP and DST simultaneously.

We suggest using Gmail as your email client - it's quite easy to set up an account and use it solely for the NVR. Other email servers may not work correctly - many interpret the procedurally generated email from the NVR as *spam* and block the mail from being sent.

The screenshot shows the 'E-mail' configuration window in a device settings application. The window has a title bar 'Device Settings' and three tabs: 'Device Settings', 'Network Advanced', and 'E-mail'. The 'E-mail' tab is selected. The configuration fields are as follows:

- Enable SSL or TLS:** A checkbox that is checked.
- SMTP Server:** A text field containing 'smtp.gmail.com'.
- SMTP Port:** A text field containing '465'.
- Sender Address:** An empty text field.
- Password:** An empty text field.
- Recipient Address 1:** An empty text field.
- Recipient Address 2:** An empty text field.
- Recipient Address 3:** An empty text field.
- Attach Picture:** A checkbox that is checked.
- Interval:** A dropdown menu showing '5 Minutes'.

At the bottom of the window are two buttons: 'Email Test' and 'OK'.

For the Auto-Mail function to work correctly, the NVR will need to be correctly configured with the details of the email servers and addresses you want to use.

Enable SSL or TLS: Whether the email server you're using requires a secure link. This is **on** by default, and should be left on if you're using any of the preset email servers.

SMTP Server: There are three preset options to choose from, Gmail (smtp.gmail.com), Windows Live Mail (smtp.live.com) and Yahoo Mail (smtp.mail.yahoo.com).

You'll need to setup an account with one of these email providers. All offer free email accounts. To signup, visit the email provider's website:

Gmail (Google): smtp.gmail.com

Yahoo Mail: smtp.mail.yahoo.com

Windows Live Mail (Hotmail): smtp.live.com

The NVR will automatically adjust some settings to make configuration significantly easier.

Other (check-box): This is for user who want to use a different email server, typically the outgoing email server of their ISP. If you want to use your ISP's outgoing email, then you'll need to contact your ISP to learn the correct values for the other fields.

SMTP Port: The SMTP port used by the email provider of your choice. This field will automatically self-populate if you use one of the presets.

Sender Address: The address you're sending the email **from**. This will be the username you've set

up for the email server you're using, followed by "@" and then the email server. For example: "youraddress@gmail.com" or similar.

Sender Password: The password for the outgoing email account.

Recipient Address: The email address you want the NVR to send emails to. This can be any email address you like, however, bear in mind that the NVR might send a large number of automatic emails under certain conditions.

Attach Picture: When this is selected, the NVR will attach a small image to each email alert. For motion-based email alerts, this will be an image of whatever triggered the motion detection.

Interval: The length of time that must elapse after the NVR sends an email alert before it will send another.

Short **Interval** settings are likely to lead to huge numbers of alerts being sent by the NVR - perhaps even several emails for one event (if that one event lasts longer than the interval setting). On the other hand, a long interval setting might mean you'll miss a specific update that you needed. There's no right answer, and you'll probably have to fine-tune this setting to get the results you're after - it'll be different for everyone's unique circumstances.

The screenshot shows a web-based configuration interface for a device. At the top, there's a dark header bar with the title "Device Settings" and a close button (X). Below the header, there's a navigation bar with three tabs: "Device Settings", "Network Advanced", and "IP Filter". The "IP Filter" tab is currently selected and highlighted in blue. The main content area is light gray and contains the following elements:

- A "Type" label followed by a dropdown menu showing "None".
- A text input field with three asterisks (*) and an "Add" button.
- A table with two columns: "No." and "IP". The table has 10 empty rows.
- At the bottom, there are three buttons: "Delete", "Delete All", and "OK".

The **IP Filter** can be used to modify which IP addresses have permission to talk to the NVR and which do not.

This is an advanced feature, and is recommended for advanced users only.



Device Settings

Device SettingsNetwork Status

Network Status

IP Address	192.168.1.100
Subnet Mask	255.255.255.0
Gateway	192.168.1.1
Preferred DNS	202.96.134.133
Alternate DNS	202.96.128.68

Here you can find the network information refers to IP Address / Subnet Mask / Gateway / Preferred DNS / Alternate DNS.

For more details , you can refer to Device Setting -> Network -> General .



How Motion Detection Works

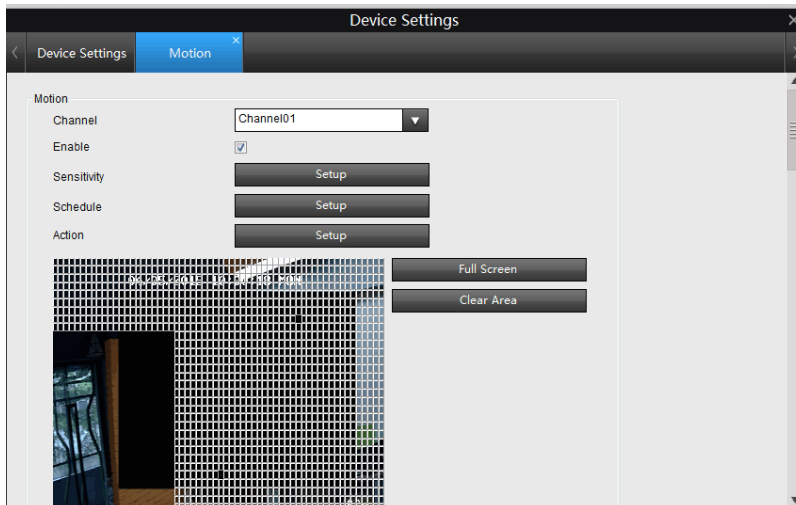
The way that the NVR looks for motion is quite straight forward - it's a process where it compares one frame with the next. A certain amount of "difference" between these two "frames" is interpreted as motion.

As a result, the NVR is able to detect when there is a change in the picture. However, this does not necessarily need to be something moving in the frame. For example, a light being turned on or off, a lightning flash or even the sun coming out momentarily on a cloudy day might be enough to trigger the motion detection on the NVR. However, as these events last only a moment (and are relatively rare) they will only create a few very short redundant clips, which will not take up too much space or pose a problem with scanning through footage.

For this reason, **don't use PTZ systems and motion detection simultaneously**. The NVR will interpret the camera moving as 'motion' and record. This is particularly true when using Cruise Mode - as the camera is moving almost continually, so too is the NVR recording almost continually!

Here, you'll be able to set the motion detection features of the NVR for each channel. We suggest that motion detection is, under most circumstances, the most practical recording method for the NVR to employ.

How it Works: Once motion detection has been enabled for a channel, it will register to the NVR as a **Motion Event**. Thus, you can use the Motion recording mode in the schedule to trigger the NVR to record when motion detection triggers an alarm signal.



Enable: Whether or not motion detection is enabled on a specific channel. Each channel can be configured independently of one another.

Sensitivity: If the motion detection sensitivity is **too sensitive**, then the NVR will record too frequently or continually - any benefit of motion detection will be lost. If the motion detection sensitivity is not sensitive enough, then the NVR will not record when it should and may not record anything at all.

Here you can setting sensitivity on different time , for example , night time sensitivity is higher and day time sensitivity is lower for frequent movement on the daytime .

Schedule: you can set the motion detection schedule time here , one box means 1 hour.

Action: Here you can define what will happen when the camera you've selected detects motion. You can enable Audio Warning , and send e-mail when motion happen .

Note: If you've used the Copy-To feature to copy from one camera to another, remember that you'll still need to set the *Action* for each channel independently - that information isn't copied.

Full Screen: Setting the motion detection area , you can drag the box to un-choose the area. For example , you can using the grid to cover your front door , so your front door will be set as the motion detection area ,

Clear Area : Clear Area means no area for motion detection .

Period	Start Time	End Time	Sensitivity Value
1	00:00	05:00	10
2	06:00	12:00	10
3	12:00	18:00	10
4	18:00	23:59	10

Sensitivity: The Sensitivity setting is controlled by a slider, allowing you to set a value between 0 and 50. The lower the number, the more sensitive the motion detection will be.

There are **four time periods** which you can define different motion sensitivity values for. You can change each period starts and ends to best match the changing lighting conditions in your location.

values between 5 - 10 will give good results in the daytime.

At night, you may get numerous false triggers unless you raise the sensitivity setting, perhaps as high as 25 - 30. This is because

when cameras use active infrared night vision, they dramatically increase the gain controls to the image sensor. This creates a level of “noise” in the camera’s images, which are interpreted by the NVR as motion.

By default, the day is divided into four periods:

00:00 (Midnight) - 06:00 (6:00 AM)

06:00 (6:00 AM) - 12:00 (Midday)

12:00 (Midday) - 18:00 (6:00 PM)

18:00 (6:00 PM) - 00:00 (Midnight)

You might need to shift the beginning and ends times to best suit the lighting changes at your location.

The start and end times can be set to anything you like, provided the different time periods don’t overlap and there’s no gap between one ending and the next starting.

There’s no requirement for all four time periods to have different sensitivity levels, although we suggest that usually gives the best performance.

To find the best sensitivity values for different times of day/ night, it’s best to test the system during different time periods. Get an able-bodied volunteer to move about in front of the cameras you’d like to tune the sensitivity for. The ideal sensitivity level is when your volunteer moving about always triggers the motion detection, but there are no false triggers (or very few) when your volunteer isn’t moving about.

False Triggers

Setting the motion detection at high sensitivity levels (4 or lower) increases the frequency of false alarms. On the other hand, low sensitivity levels (20 or higher) increase the risk that a significant motion event (such as an intruder) will not trigger the motion detection to record.

Check the Motion Detection settings both during the day and at night. In low-light conditions (or when your cameras are using infrared night vision) the NVR may be more or less sensitive to motion, depending on your unique circumstances. The difference might be very dramatic!

Weather

The weather conditions are going to affect your motion detection. Dramatic weather phenomenon such as heavy rain, strong winds, lightning and so on, may trigger the motion detection with surprising frequency.

On the other hand, things like fog, mist and other obscuring kinds of weather might mask or obscure something moving to the point that the NVR fails to detect them.

Here are a few steps you can take to minimize the amount of noise in your images.

- Try adjusting the Image Settings to fine-tune the brightness and contrast to get a more stable image.
- Limit the motion sensitive area to only the areas in view that a target could be. In particular, large featureless areas in the camera’s view are the ones most likely to give false triggers - turning off the motion sensitivity to any area a target cannot move in front of will help reduce false triggers.

Note: The motion detection feature will seem more sensitive at night, particularly when using low-light or active infrared cameras. We recommend that you test your motion detection sensitivity both during the day and at night to ensure your sensitivity setting is suitable for either lighting condition.

Motion Detection - Schedule

Here you can set the schedule time 7 day 24 hours a week , red box means when motion detect , it will alarm .

The 'Schedule' window displays a 7x24 grid for setting motion detection schedule. The columns represent hours from 00 to 23, and the rows represent days from Sunday to Saturday. All cells in the grid are currently red, indicating that motion detection is enabled for all days and times. A legend at the bottom right shows a red box for 'Alarm' and a white box for 'None'. 'OK' and 'Cancel' buttons are at the bottom.

Action: The action you'd like the NVR to take when motion occurs. It's set in the same way as the Action for any other event.

Audio Warning: The NVR will use its internal buzzer to emit an alarm tone. It sounds like an old computer indicating an error, or a large truck backing up.

Send Email: The NVR will send an auto-email alert when the event type you've selected occurs.

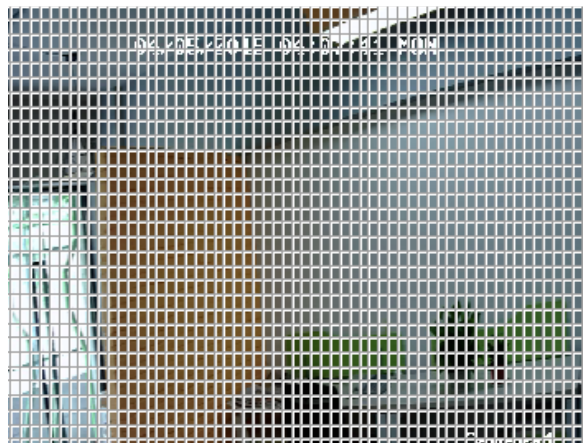
The 'Action' window shows options for what happens when motion is detected. The 'Audio Warning' checkbox is checked. The 'Send Email' checkbox is unchecked. The 'Channel' dropdown is set to 'All'. The 'Triggered Recording' section shows checkboxes for channels 1, 2, 3, and 4, with channel 1 checked. 'OK' and 'Cancel' buttons are at the bottom.

Click **Full Screen** , you will see a grid of white boxes. The outlined boxes mark the area that is sensitive to motion. The area without the white outlines is not sensitive to motion. Click mouse to select and click again to de-select .

Use the mouse to move the cursor around the screen. By pressing select an area in the grid, you can toggle motion detection ON or OFF in that location.

Areas marked by white boxes will be sensitive to motion, those not marked will not be.

Click and drag to select the area you want to select or de-select.



Click **Clear Area** to clear up the motion Area .



Device Settings

Video loss

Video Loss Alarm

Channel: Channel01

Enable: ☒

Schedule: Setup

Action: Setup

Copy To OK

Video Loss is regarded as a potential alarm event, and is considered to occur any time that the NVR doesn't receive an active video signal on any of its inputs.

The default behavior of the NVR, when a channel has no incoming video signal, is simply to display "Video Loss" in white text on a black background over the associated channel. If you're not using all the inputs on your NVR, then some channels will be in "permanent" Video Loss state. Just be sure that you don't Enable a video loss action for these channels.

Channel: Which channel/camera you'd like to set the Video Loss behavior for.

Enable: Whether the selected channel has video loss monitoring active or not.

Schedule: Alters when the current **Video Loss Action** will be active.

Action: The action you'd like the NVR to take when this event occurs. It's set in the same way as the Action for any other event.

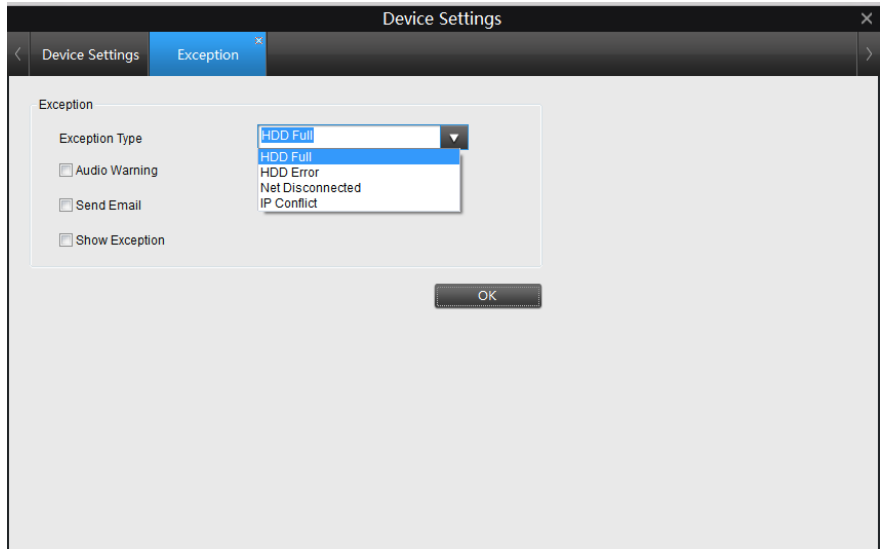
Alarm: Video Loss - Action

Audio Warning: The NVR will use its internal buzzer to emit an alarm tone. It sounds like an old computer indicating an error, or a large truck backing up.

Send Email: The NVR will send an auto-email alert when the event type you've selected occurs.



An **Exception** is any deviation from the NVR's normal behavior - phrased another way, it's like saying the NVR's been working fine **except** for these events



Exception Type: What event type you'd like the NVR to react to. By configuring the **Action** for these events, you can create any combination of audio alerts (see below) or auto-emails to be sent for different event types.

- **HDD Full:** As the name suggests, this event occurs when the NVR runs out of space on the hard drive to save new footage. This event is redundant if you've got overwrite enabled, as the NVR will automatically delete old footage to ensure it can continue to record.

- **HDD Error:** Occurs when the NVR has trouble accessing its hard drives, or when it cannot detect one at all. This error could be generated by either an internal hard drive, or an external one connected to the eSATA port.

- **Net Disconnected:** Will occur if the NVR has problems connecting to the Internet. This may indicate a problem with the NVR's configuration, a fault with your network or a problem with your Internet Service Provider (ISP).

- **IP Conflict:** This event will occur if the NVR detects another device on the same network with a conflicting IP address. It's a little like two houses with the same number being on the same street - one house might get the other's mail, or get woken up at all hours of the night being asked if someone named "Big Bob" lives there. Basically, it indicates that two devices are trying to use the same IP address. This shouldn't occur if you're using DHCP addressing, unless one or more devices is set to use a STATIC IP (the static addressing method overrides the automatic assignment process).

Audio Warning: The NVR will use its internal buzzer to emit an alarm tone. It sounds like an old computer indicating an error, or a large truck backing up.

Send Email: The NVR will send an auto-email alert when the event type you've selected occurs.

Show Exception: The NVR will display the icon Error at the bottom right corner of the main screen when the event type that you've selected occurs. Click on the icon to access the Event Log and know more about the exception that occurred.



Video Standard: Here you can choose between PAL and NTSC. PAL is used in Western Europe and Australia, NTSC is used in the US, Canada and Japan. If the NVR's picture is black and white, flickering or similar, then this is probably caused by the video system being set incorrectly.

Time Zone: Particularly important if you've enabled NTP - set this to the time zone where you happen to be. For example, people in eastern Australia (Canberra, Sydney and Melbourne) choose GMT+10:00, whilst the Eastern Time zone in the USA and Canada is GMT-05:00. (GMT stands for Greenwich Mean Time - it's the baseline that keeps all the different time zones in sync.)

Date Format: The format of the date (eg. DD/MM/YYYY or MM/DD/YYYY and so on).

System Time: This can be edited manually, or set to update automatically by using NTP

Synchronize Local time : After click this button , NVR time will sync with local PC time .

DST Setting: As the standards for daylight savings differ from country to country, and often state to state, you might need to manually tell the NVR exactly when it commences and ends in your locality. First, turn DST on. We suggest setting the **Daylight Saving Time Mode to Date**, and manually entering the dates and times that daylight savings time applies to and from, in your locality.

Note: Some NTP servers are NOT fully compatible with DST. This may cause your system to double-count adding one or removing one more hour than they should, or cancel each other out. You may need to intentionally change your time zone to compensate, or simply not use NTP and DST simultaneously.

Enable Password: When enabled, the NVR will require a password to access, even for local users. It's advisable to enable password protection

Device Name: Differentiates your NVR from other devices. If you don't have any other NVR's or similar devices, then you can leave this as-is. If you've got multiple NVRs running on the same network, then it's a great idea to give each a unique ID.

A screenshot of a 'Device Settings' window. The 'System Information' tab is selected. It displays a table of system information fields and their values.

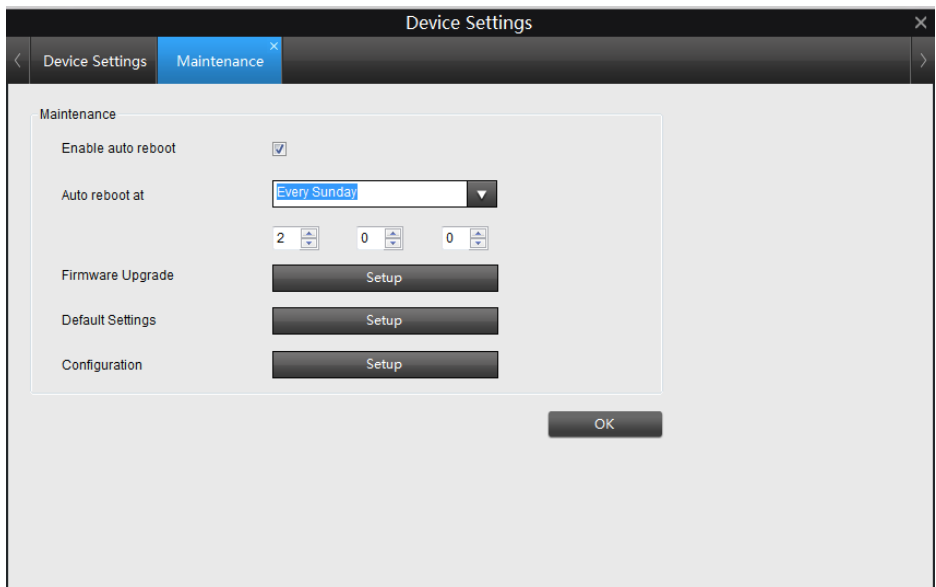
Information	
Device Name	NVR
Model	NVR4
Build No.	build 1410
Hw No.	H2M
Cfg version	v2.0
Fw Version	
Details	NVR600

If you're looking at the System Information screen, you've probably been directed to do so by Technical Support.

If we haven't told you to come here, you might be wondering what all the information means. On a day-to-day level, the answer is "very little". However, if you're still curious:

Device Name: The name that the NVR considers to be its own, and what it will use to register an IP address with your DHCP host.

The remaining information is for use by Technical Support, in the event that you require assistance. The various model and build numbers help us track down any known issues, or catalogue new issues as they come to light. It also helps us figure out if you're running the most recent firmware on the NVR, and whether you'd benefit from an upgrade.



To maintain the operational integrity of the NVR, it is suggested that it be rebooted periodically. In much the same way that a computer can become unstable if left on for an extremely long time, the NVR can become unstable. It is strongly suggested that the NVR be rebooted at least once per week. However, as this can be a hassle (particularly if the NVR is stashed away somewhere inconvenient) you can set the NVR up to reboot itself.

Enable auto reboot: Will automatically shut the NVR down and restart it at a certain time of the day or week.

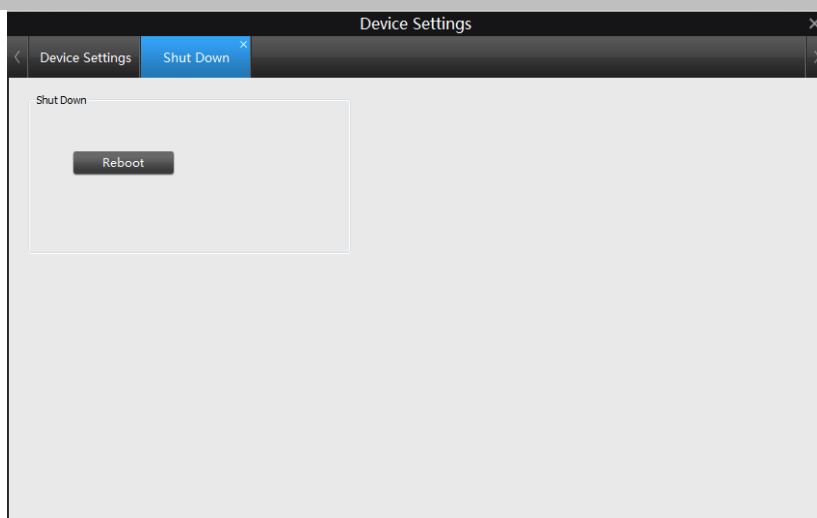
Auto reboot at: Choose when you'd like the NVR to reboot. Typically, this will be a time when it's unlikely there'll be any activity for the NVR to record.

Firmware Upgrade : Instructs the NVR to update its firmware. You'll only need to use this option if instructed to do so by Reolink Technical Support. (Remember to Export your configuration first so you don't have to re-set everything!)

Default Settings : Loads the factory default settings.

This must be done after a firmware upgrade to ensure proper operation of the NVR. You can retain your settings, recording schedule and so on by using the Import/Export Configuration function *before* upgrading the firmware.

Configuration : Creates a file containing all the settings you've customized, including your recording preferences, schedule, user-list and so on.



Shutting Down

If you want to shut down or reboot the NVR, or simply log out of the user account you're logged in as, access the Shutdown menu which is accessible via the main menu.

To ensure the integrity of your data and recordings, always select **Shut Down** when powering off the NVR.



Device Settings

Device Settings Log Search

Log Search

User Name	Record Time	Type	Parameter
none	2015-05-04 11:41:39	Startup	System
none	2015-05-04 11:41:39	Local CFG	Input
none	2015-05-04 11:41:40	HDD error	N/A

User All Type All

Start time 2015/ 5/ 4 End time 2015/ 5/ 4

0 0 0 23 59 59

Search

The Log **Search** menu will show you recordings that were triggered by the NVR detecting motion. Typically, the majority of recordings based upon “Events” are likely to be recordings triggered by the NVR’s **motion detection** feature.

The search function operates in the same way as the main playback search: the only difference is you’ll select an **Event Type** rather than a **Video Type**.



Device Settings

Device SettingsPTZ

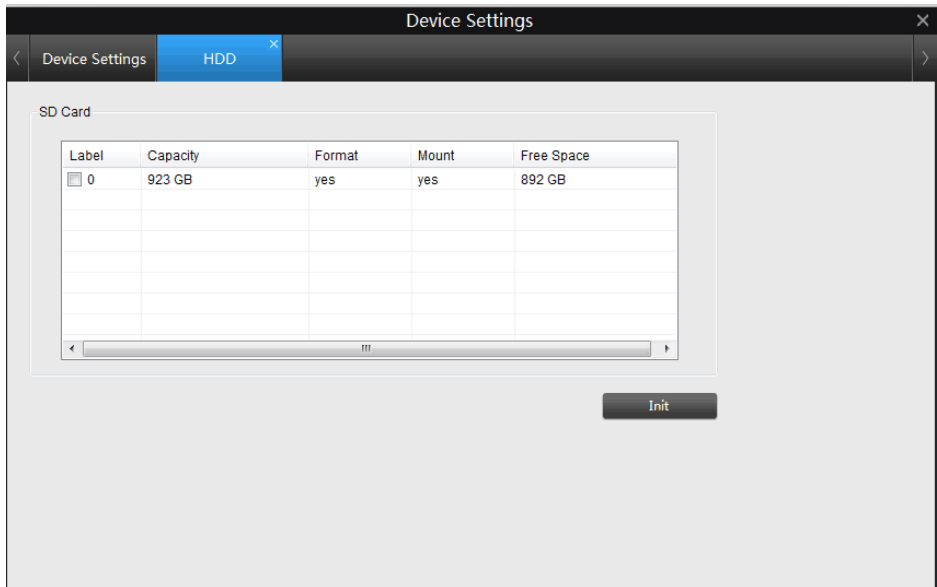
PTZ

Channel	Channel01
Baudrate	9600
Data Bit	8
Stop Bit	1
Parity	None
Flow Ctrl	None
PTZ Protocol	TC_PELCO_D
Address(0-255)	1

Copy ToOK

You can set the PTZ device Specification here , this function only valid when you connect with PTZ function devices .

Baud rate: baud rate is the number of symbol changes made to the transmission medium per second using a digitally [modulated](#) signal or a [line code](#).



Init.: Initializes the hard drive. You'll only need to do this for drives once, assuming that it's not already initialized. If the **Mount** column reads "**No**" then choose **Init.** to initialize the drive.

Label: A quick way of differentiating between hard drives. For the first setup, there will usually only be one hard drive - you can always add and initialize another hard drive later (connected via the eSATA port).

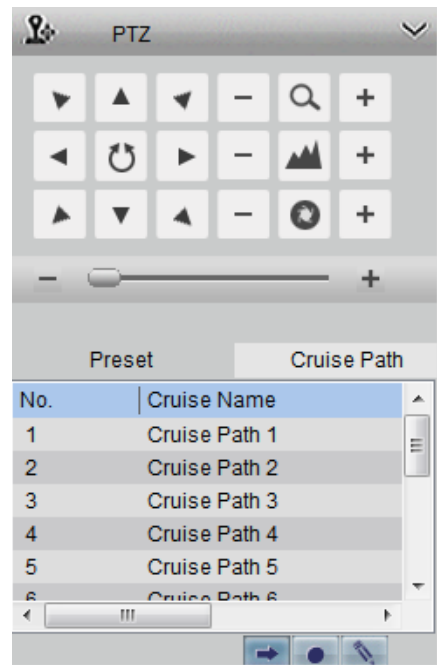
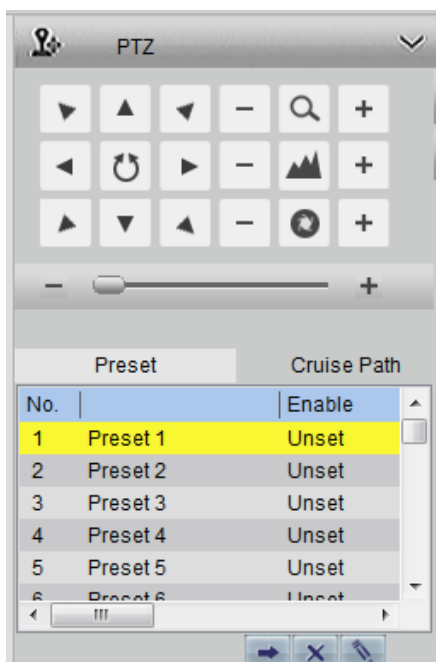
Capacity: The total amount of space on the hard drive. This will typically be slightly less than the rated capacity of the hard drive as a fraction of the space is required by the file allocation table (FAT).

Format: Whether the hard drive has been formatted to operate with the NVR. When the hard drive is formatted appropriately, this will simply read "yes". If it says anything else, such as an ominous "no", then select the disk and choose **Format**.

Mount: Whether the drive has been initialized and is detected by the NVR. If the drive isn't mounted then it needs to be **initialized** (see above).

Free Space: The amount of available space on the hard drive.

Warning! Don't initialize a drive that already has data on it, as the initialization process will erase any information on the drive.

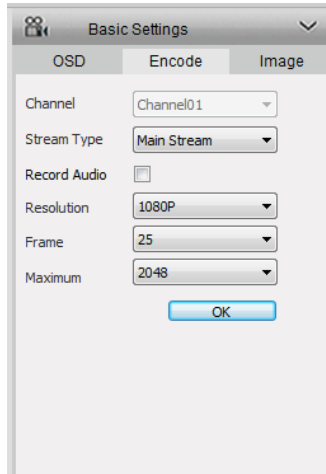
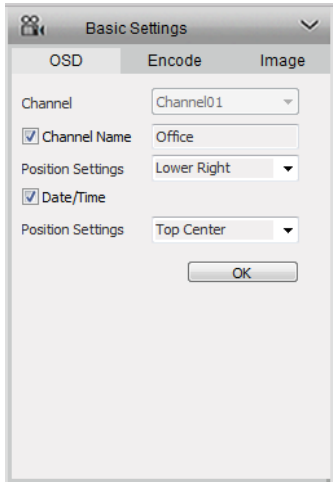


Preset : When user's device have Pan/Tilt function , you can regard 1 target position as a preset , for example , front door , windows , counter , back yard etc. The set position can be saved on device . If you set front door as preset 1 , you can directly click preset 1 , then camera will turn to front door .

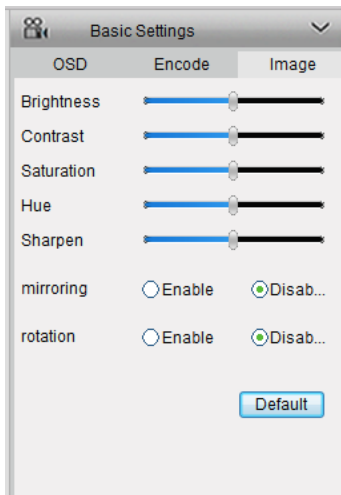
Cruise Path : How the PT Cam turn around . we need to set preset position first . For example , for cruise path can start from preset 1 , then to preset 5 , preset 7 , then back to preset 1 .

Basic Settings - OSD - Please refer to Device Setting -> Display -> Camera

Basic Settings - Encode - Please refer to Recording -> Encode



Basic Settings - Image



Brightness: Changes how light the image appears to be.

Contrast: Increases the difference between the blackest black and the whitest white in the image. **Saturation:** Alters how much color is displayed in the image. The higher the saturation, the more bright and vivid colors will appear to be.

Hue: Changes the color mix of the image (this can have very dramatic results).

Sharpen : Sharpen image to increase the Signal Noise Ratio .

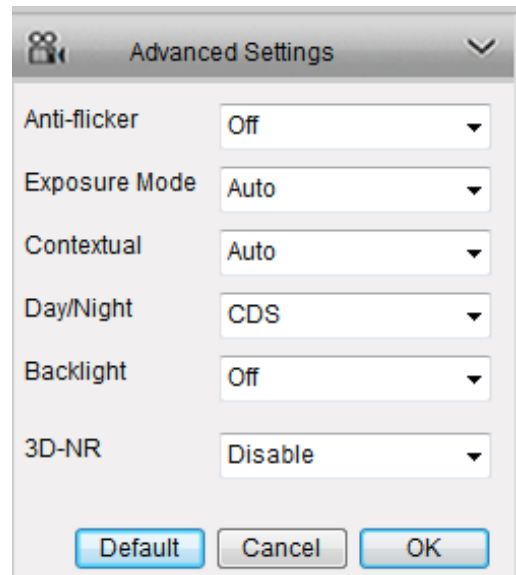
Mirroring: Change the orientation of the image to be horizontally reversed.

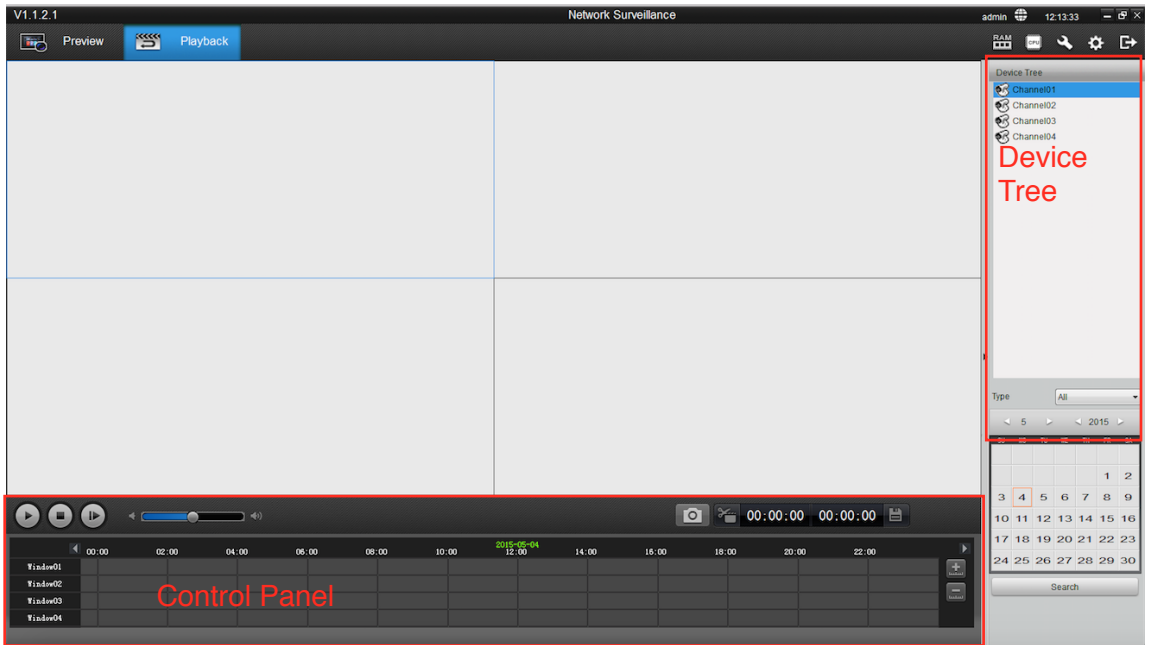
Rotation: Turn the image up side down.

Notice : Your image settings **will** affect your recordings!

Advanced Settings: Adjust various camera settings according to the environment where the camera is installed.

- **Anti-flicker:** Use this feature if some devices such as TV screens and lights are flickering. For USA and Canada, set this to 60Hz. For Australia and the UK, set this to 50Hz. Outdoor mode is also available.
- **Exposure Mode:** Select the exposure level of the camera based on pre-defined conditions. Select Manual to adjust shutter speed and gain value of the camera manually.
- **Contextual:** Change the way the camera processes white balance to correct image colors. Auto, Day, Night or Manual (adjust the red and blue gain manually).
- **Day/Night:** Set the camera's color mode during different times of the day and night - AGC(Auto set by image sensor, Color (Always in Day mode), Black&White (Always in Night mode) or CDS (Auto set by light sensor).
- **Backlight:** Optimize brightness and contrast levels to compensate for differences between dark and bright objects using either BLC or WDR mode. This may improve image clarity in high contrast situations but should be tested at different times of the day and night to ensure there is no negative effect.
- **3D-NR:** 3D-Noise Ratio: if Enabled can decrease the noise of the image .







Here is a general view of the Playback windows .

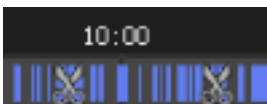
1. From Device tree area , choose the channel you want to play ,double click the channel , it will show the play signal on the selected channel ,
2. Choose the Type you want to playback , it can be Schedule , Motion, Trigger Alarm, Manual Alarm and Manual Record
3. Choose the date of the file , then click Search
4. You will find below related show on the bottom timeline windows (Control Panel)



5. Drag the timeline , then click Play button to play the file . You can choose to play Main Stream or Sub Stream

Cut Playback

Click  Cut Button , it will turns Blue , meanwhile , you will find 2  scissors , Drag the scissors to the place where you want to cut the file like below



Click Storage Button , then Click Yes to allow download .

Warranty Terms & Conditions

Reolink warrants this product against defects in workmanship and material for a period of one (1) year from its original purchase date. You must present your receipt as proof of date of purchase for warranty validation. Any unit which proves defective during the stated period will be repaired without charge for parts or labour or replaced at the sole discretion of Reolink. The end user is responsible for all freight charges incurred to send the product to Reolink's repair centre. The end user is responsible for all shipping costs incurred when shipping from and to any country other than the country of origin.

The warranty does not cover any incidental, accidental or consequential damages arising from the use of or the inability to use this product. Any costs associated with the fitting or removal of this product by a tradesman or other person or any other costs associated with its use are the responsibility of the end user. This warranty applies to the original purchaser of the product only and is not transferable to any third party. Unauthorized end user or third party modifications to any component or evidence of misuse or abuse of the device will render all warranties void.

By law some countries do not allow limitations on certain exclusions in this warranty. Where applicable by local laws, regulations and legal rights will take precedence.