



OWNER'S MANUAL

# Network Camera

Please read this manual carefully before operating your set and retain it for future reference.

MODELS

RNDF-BP02A

RNDF-BP01A

RNUF-BP01A



170727 (V1.0)

## Introduction

The LG Innotek Network Camera is designed to use on an Ethernet network and must be assigned an IP address to make it accessible.

This manual contains instructions on how to manage the LG Innotek Network Camera in your networking environment. Some knowledge of networking environments would be beneficial to the reader.

Some information contained in this manual may differ from the actual product. The content of this manual is subject to change without prior notice

When there is a problem, do not try to solve yourself. Please contact authorized service center.

## Features Chart

This table shows the differences between the models.

Item	SD card	Alarm IN/OUT	Audio IN	Audio OUT
RNDF-BP02A	Micro SD card	Yes	Yes	Yes
RNDF-BP01A	Micro SD card	No	Yes	Yes
RNUF-BP01A	No	No	No	No

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# Overview

## Product Description

An IP camera is a digital online surveillance camera embedded with web server and capable of independent operation, giving user access to real-time monitoring through web browser or client software from any place across the world.

IP camera is based on the latest solution, an integrated media processing platform for audio/video acquisition, compression and network transmission on a single board. It is in compliance with H.264/ H265 High Profile encoding standards. Any remote user can have access to real-time monitoring by entering the IP address or domain name of the IP camera in web browser. This network camera solution is applicable to residential or business environment as well as a wide range of situations requiring remote network video monitoring and transmission. The IP camera products are easy to install and operate.

The IP cameras can be managed by several users with different authorization levels.

IP cameras allows mobile detection, and sends e-mail and snapshot taken in case of emergency. And store the image or video snapshot in SD card for retrieval for the SD card slot equipped models.

## Recommended Requirements

Operating system: Windows 7/Windows 8/Windows 2008 (32/64-bit),

Windows 2003/Windows XP/Windows 2000 (32-bit)

CPU: Intel Core Duo II dual-core processor or higher

Memory: 1G or more

Video memory: 256M or more

Display: 1024 × 768 or higher resolution

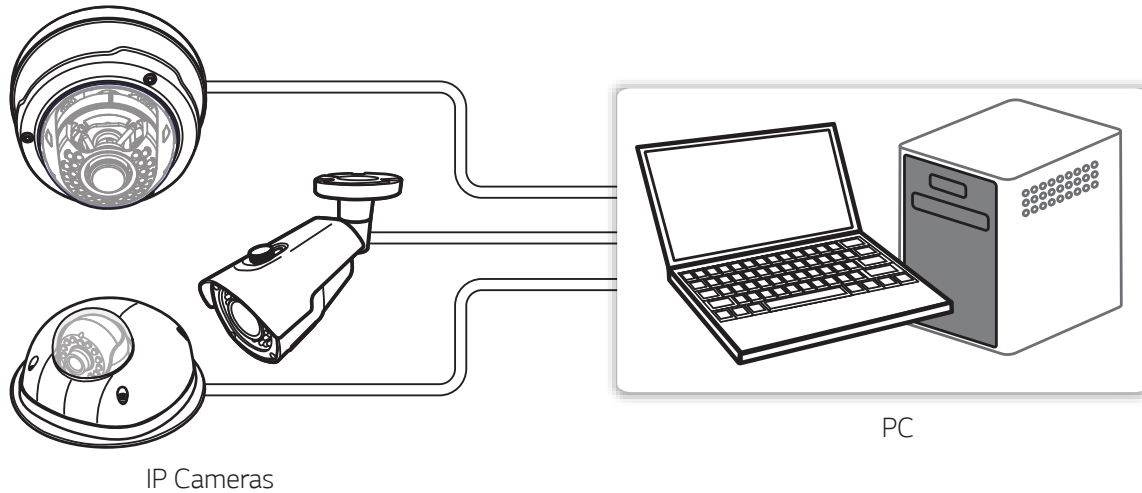
IE: IE 6.0 or higher version

## Device Connection

IP cameras can be connected with one of the methods described below.

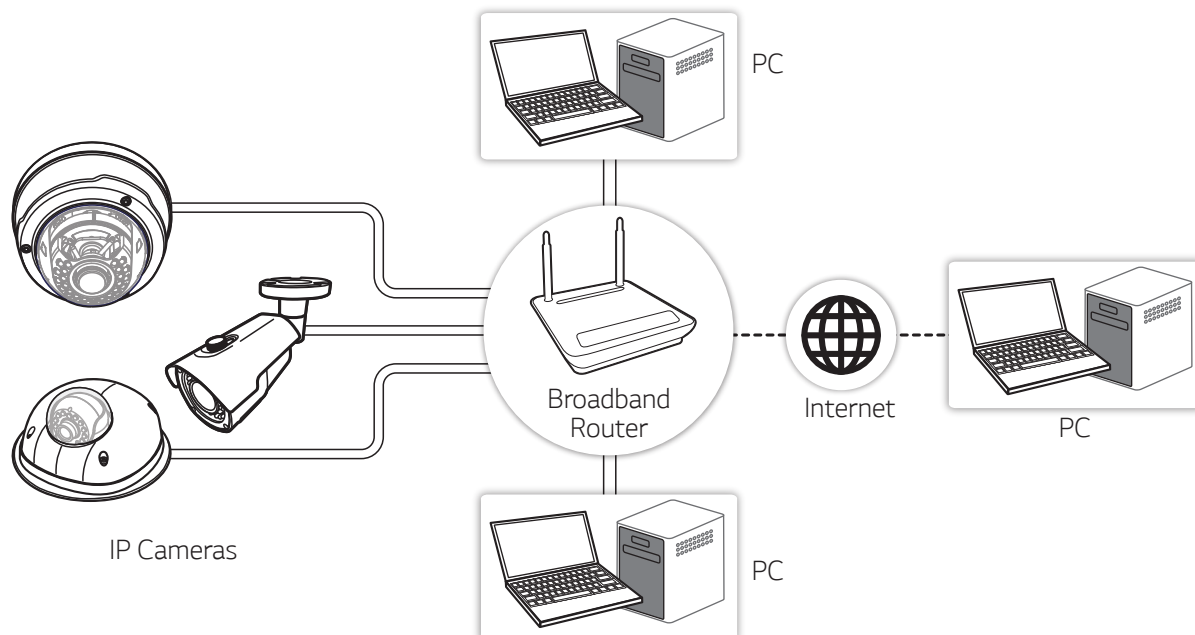
### Connection to PC

Connect IP camera to PC via straight-through network cable, with power input connected to a DC 12V adaptor, and set the IP addresses of the PC and IP camera in one network segment.



### Connection to router/switch

This is more commonly used in connecting the IP camera to Internet, where the camera and PC are connected to LAN ports of broadband router, with gateway of the camera set to the IP address of the router.



# Device Operation

## Accessing the IP camera

You can access the IP camera by following the below steps.

### Install LVi510 Program

It is recommended to use LVi510 for the web monitoring. Otherwise, it is required to install the IP Utility to search the IP addresses of IP cameras.

### Discover the IP camera using the IP Utility

The IP Utility can automatically discover and display IP cameras on your network. The IP Utility shows the MAC address, IP address, Model name and so on.

1. Run the IP Utility program.
2. Click the [Search] button or select the [Search] option in the Device search menu.  
After a few seconds the found LG IP devices gets displayed in the IP Utility window.

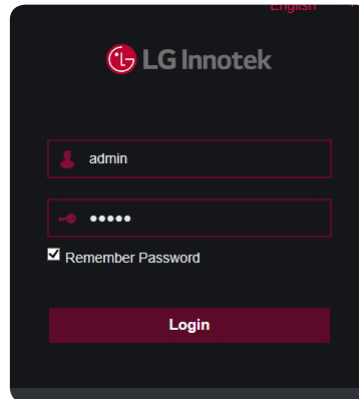
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#### NOTE

- The computer running the IP Utility must be on the same network segment (physical subnet) as the LG IP device.
  - The IP utility and LVi510 program can be downloaded through internet. Visit <http://secu-iot.lginnotek.com/> and find them and download to your PC.
-

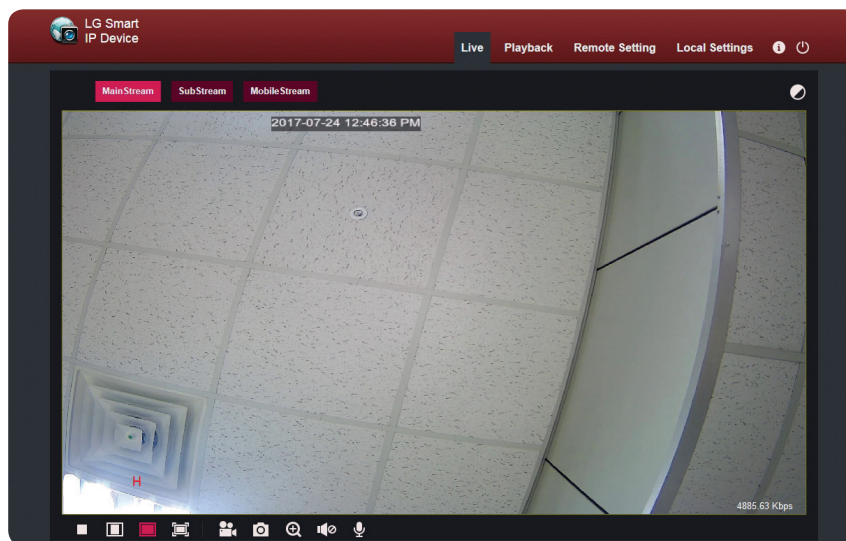
## Logging in to the Web Viewer

1. Run the IP Utility and find the IP camera.
2. When the IP cameras appear in the IP Utility window, double-click IP address or right click on the same IP address and select "Connect to Web Page" to start the web viewer. When accessing the web viewer, the window for login will be shown.



When you access the IP camera for the first time, related plug-in components must be installed. The pop-up plug-in installation dialog box is automatically load from the browser.

3. Enter the user name and password. (Note that the default user name and password are "admin.")
4. Click [Login] to display main page of web viewer.

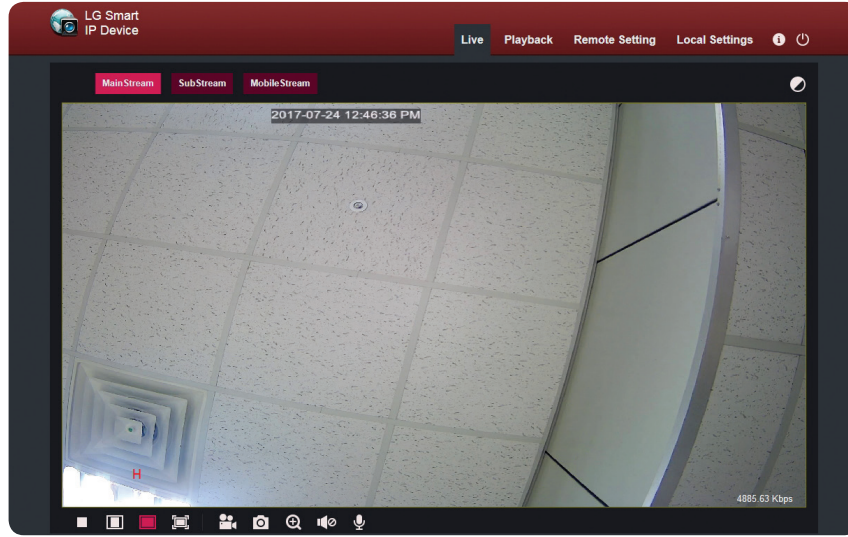


### NOTE

- Default password must be changed for security after initial connection.
- Check the browser cookies settings to use the [Remember Password].
- If web viewer is required to be updated, it needs more time to display according to the network conditions.
- If you connect the web viewer for the first time, the Security Warning window is displayed to install the web viewer program. You must install the web viewer program for using the IP camera.
- If your computer or network is protected by a proxy or firewall, the proxy or firewall settings can prevent the web viewer program. Change the proxy or firewall settings to activate the web viewer program.
- Please use IE browser of windows and make sure the version above 9.0. Do not use any other browser.
- You can also access the Web Viewer by entering the IP address of the IP camera in the browser directly.













# Live Screen

Enter your user name ('admin' by default) and password ('admin' by default) and then press [Login] to open a live video image as shown below:



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Operating

Item	Description
MainStream/ SubStream/ MobileStream	Click one of the stream options among [MainStream], [SubStream] and [Mobile Stream].
Live	Displays the live video image in the browser.
Playback	Read the recording file from SD card, and then playback on the browser. (RNUF-BP01A does not support this function.)
Remote Setting	Access to device setting menu, for customized setting of various device settings.
Local Settings	For setting of snapshot, video file type and storage path.
	Help information (including current user, Web browser and plug-in versions)
	Click the button to logout and returning to the login page.
	Click the button to show color adjustment menu. You can set [Hue], [Bright], [Contrast], [Saturation] and [Sharpness] options of the live screen.
	Click the button to stop live video and click the button again to show the live video.
	Click the button to adjust the screen to its original aspect ratio.
	Click the button to display video screen to fit windows.
	Click the button to display video image to your monitor in full screen.
	Click the button to start recording live video on you PC.
	Click the button to take a snapshot of the video image.
	Click the button and drag on the video image to zoom in the dragged area.
	Click the button to show volume control menu. You can adjust the volume and mute function. (applicable models only)
	Click the button to turn on the voice intercom. (applicable models only)















## Playback Screen (applicable models only)

Read the recording file from SD card, and then playback on the browser.  
Select [Playback] to enter the playback page as shown in the figure below.



Operating

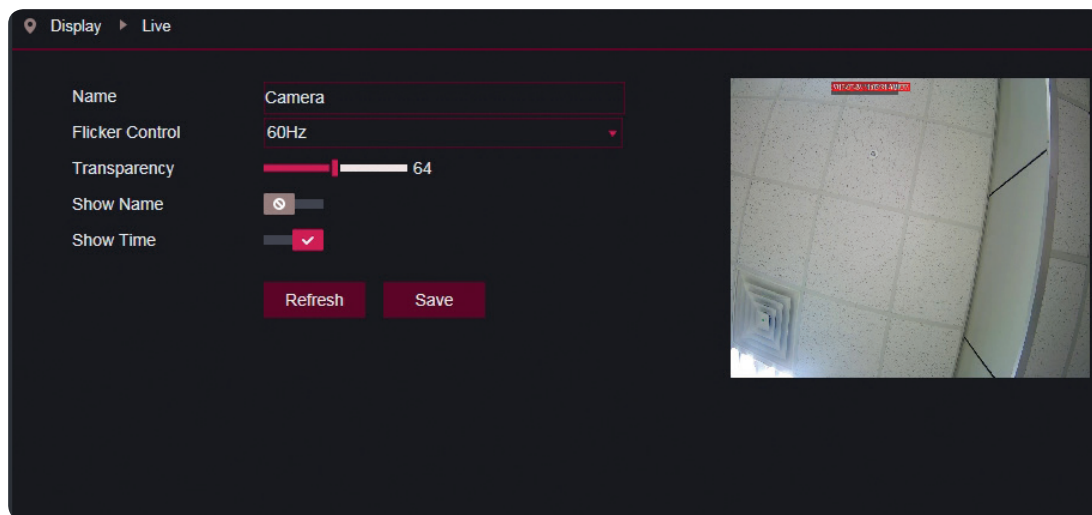
Item	Description
Calendar	Select a date of the video recorded.
Type	Select the type of the recording.
Search	Search the video with the selected date and type.
	Click the button to play/pause the video playback.
	Click the button to stop video playback.
	Click the button to move to next frame.
	Click the button to start recording the video on you PC.
	Click the button to take a snapshot of the video.
	Click the button to download the recording file.
	Click the button to change the playback speed.
	Click the button to show volume control menu. You can adjust the volume and mute function. (applicable models only)
	Click the button and drag on the video image to zoom in the dragged area.
	Click the button to adjust the screen to its original aspect ratio.
	Click the button to display video images to fit windows.
	Click the button to display video image to your monitor in full screen.

# Remote Setting Screen

## Display settings

### Live

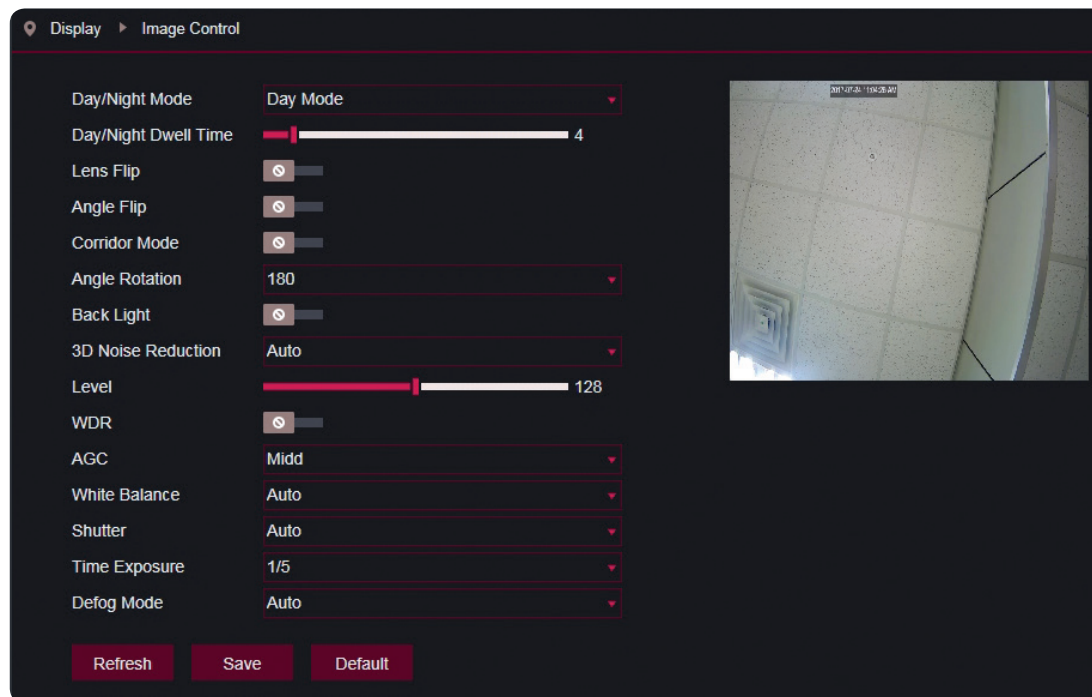
Select [Remote Setting] > [Display] > [Live] to enter the setting page as shown in the figure below.



Item	Description
Name	Enter the camera name.
Flicker control	Set the flicker control option to 50Hz or 60Hz.
Transparency	Set the transparency of channel name and time on the live screen. The smaller value indicates the higher transparency.
Show Name	Display or hide the camera name on the screen.
Show Time	Display or hide the current date and time on the screen.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

## Image Control

Select [Remote Setting] > [Display] > [Image Control] to enter the setting page as shown in the figure below.



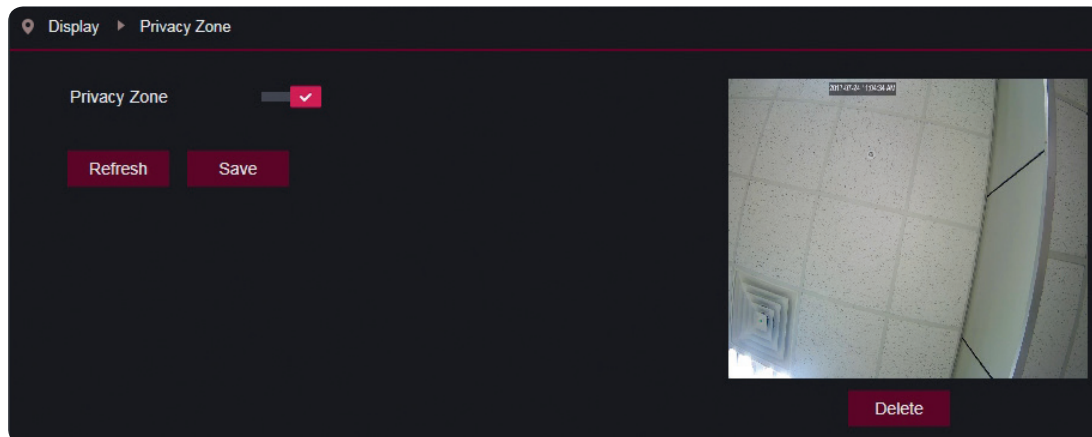
2

Operating

Item	Description
Day/Night Mode	Set the mode to [Auto Mode], [Day Mode] or [Night Mode].
Day/Night Dwell Time	Set the delay time for the mode changes.
Lens Flip	Enable or disable the lens flip.
Angle Flip	Enable or disable the angle flip.
Corridor Mode	Enable or disable the corridor mode.
Angle Rotation	Rotate the camera angle to 0 or 180 degree.
Back Light	Enable or disable the back light option.
3D Noise Reduction	Set the option to [Disable], [Auto] or [Manual].
Level	Set the 3D noise reduction value when [3D Noise Reduction] option is set to [Manual].
WDR	Enable or disable the back WDR.
AGC	Set the option to [OFF], [Low], [Midd] or [High].
White Balance	Set the option to [Auto], [Manual] or [Indoor].
Shutter	Set the option to [Auto] or [Manual].
Time Exposure	Set the time exposure option. (from 1/5 to 1/20000)
Defog Mode	Set the option to [Disable], [Auto] or [Manual].
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.
Default	Set all the options to its original default.

## Privacy Zone

Select [Remote Setting] > [Display] > [Privacy Zone] to enter the setting page as shown in the figure below.



Item	Description
Privacy Zone	Enable or disable the privacy zone.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.
Delete	Select an area on the mini screen and click the button to delete the area.

### Making a mask area

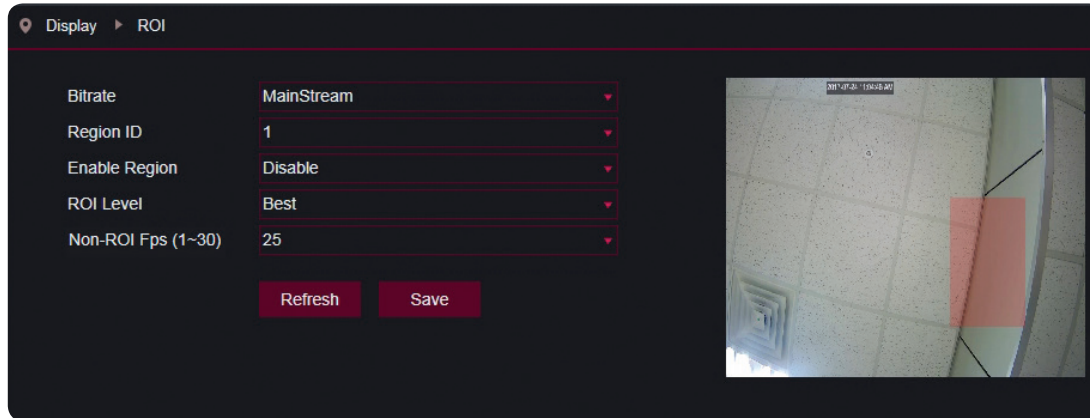
1. Click [Privacy Zone] to enable the option.
2. Drag the mouse on the screen to make a mask area.
3. Click [Save] to finish the setting.

### Deleting a mask area

1. Click a mask area on the mini screen to select
2. Drag the mouse on the screen to make a mask area.
3. Click [Delete] to delete the mask area.

## ROI (Region of interest)

Select [Remote Setting] > [Display] > [ROI] to enter the setting page as shown in the figure below.



Item	Description
Bitrate	Select a bitrate type effective for ROI among [MainStream], [SubStream] and [MobileStream].
Region ID	Up to 8 ROI regions can be set in one bit stream.
Enable Region	Enable or disable the region.
ROI Level	Set ROI level in one bit stream. The higher value indicates the better quality image in ROI region (From [Lowest] to [Best]).
None ROI Fps (1~30)	Set frame rate out of RIO area. The smaller value indicates the higher quality image in ROI region. Range of frame rate is in relation to video standard and resolution. (Different non-ROI frame rates may be allocated to different ROI regions, but the minimum value among them is used as the frame rate to be applied for the non-ROI area.)
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

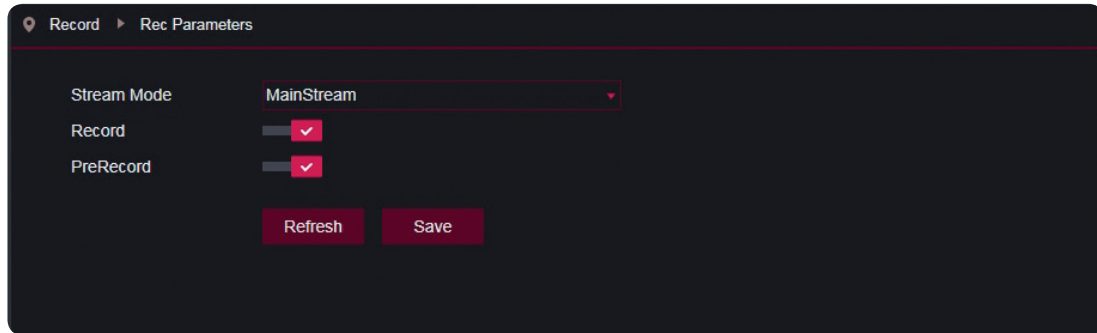
### Making a region of interest

1. Select the [Bitrate] option.
2. Select a [Region ID] from 1 to 8.
3. Drag the mouse on the screen to make a ROI area.
4. Press down and hold the left mouse button and move the ROI area.
5. Click [Save] to finish the ROI setting.

## Record Settings (applicable models only)

### Rec Parameters

Select [Remote Setting] > [Record] > [Rec Parameters] to enter the setting page as shown in the figure below.



Operating

Item	Description
Stream Mode	Select the stream mode option between [MainStream] and [SubStream].
Record	Enable or disable the record option.
PreRecord	Enable or disable the pre-record option.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

### Schedule

Select [Remote Setting] > [Record] > [Schedule] to enter the setting page as shown in the figure below.



One cell in the table is 30 minutes, first line is normal record, second line is motion detection alarm, third line is alarm record. User can setup according to private requirement to choose different record type and time.

## Network Settings

### Network Setting

Select [Remote Setting] > [Network] > [Network] to enter the setting page as shown in the figure below.

Network > Network

Type: Static

Client Port: 9988

HTTP Port: 80

IP Address: 192.168.0.168

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.1

DNS 1: 156.147.151.32

DNS 2: 0.0.0.0

UPNP:

Port Range: 1024~65535 ( Client Port , HTTP Port )

Refresh Save

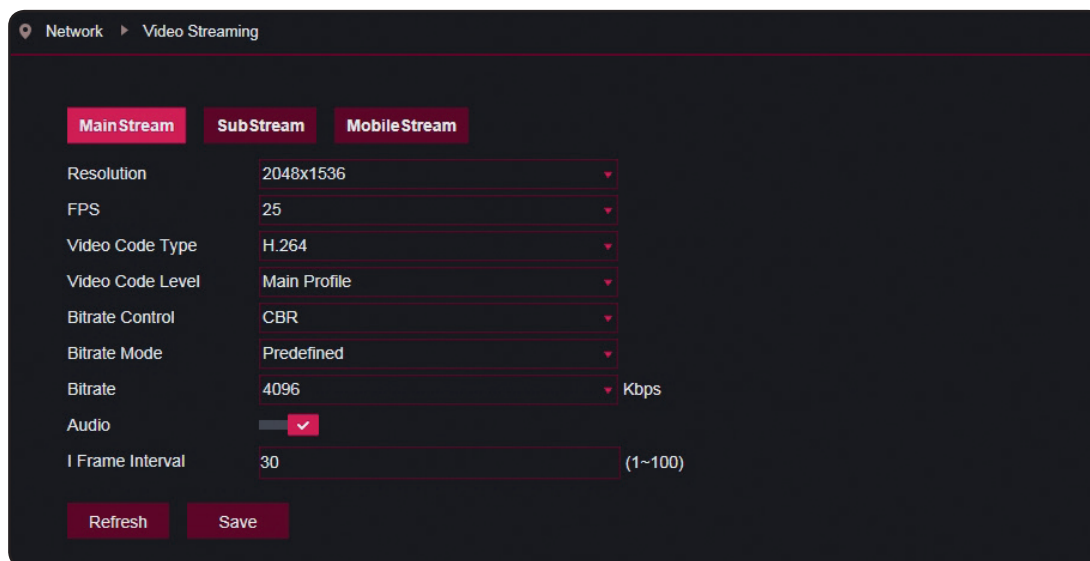
Item	Description
Type	Set the option to [DHCP], [PPPoE] or [Static].
Client Port	Set the client port number in the field.
HTTP Port	Set the HTTP port number in the field.
IP Address	Set the IP address of the camera in the field.
Subnet Mask	Set the subnetmask of the camera in the field.
Gateway	Set the gateway of the camera in the field.
DNS1	Set the preferred DNS server in the field.
DNS2	Set the alternate DNS server in the field.
UPNP	Enable or disable UPNP function for the device.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

#### NOTE

To enable UPNP, the client port and HTTP port should be set to a value from 1024 to 65535. The client port is used for connection of proprietary mobile client.

## Video Streaming

Select [Remote Setting] > [Network] > [Video Streaming] to enter the setting page as shown in the figure below. Before setting the video streaming setup, select a video stream among [MainStream], [SubStream] and [MobileStream] on top of the menu.

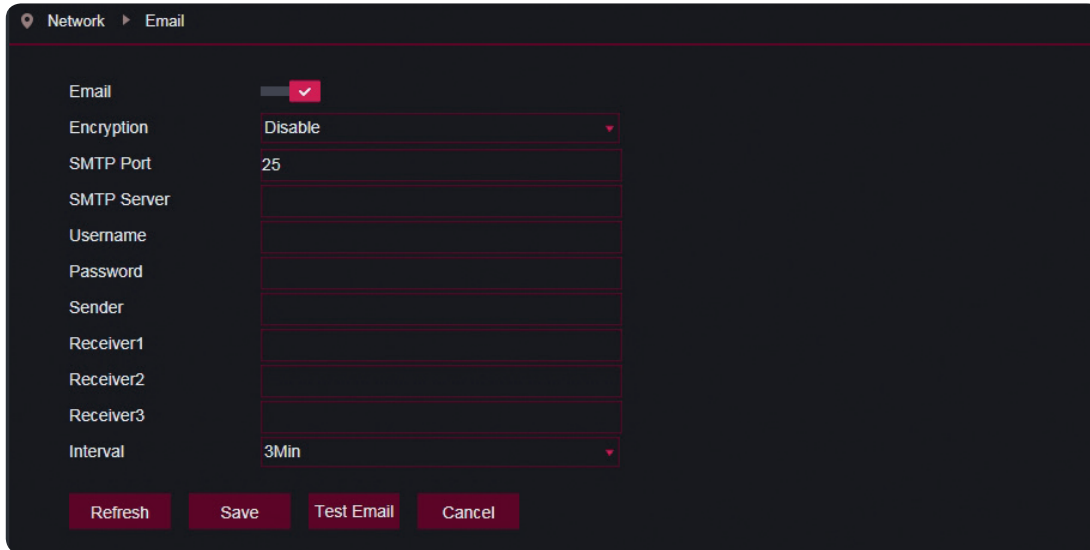


Item	Description
Enable	Enable or disable the [MobileStream] video. The MobileStream video become black screen when you set this option to disable.
Resolution	Set resolutions for each video stream. The highest resolution for [MainStream] video is 2048 × 1536. The highest resolution for [SubStream] video is 1280 × 720. The highest resolution for [MobileStream] video is 640×480.
FPS	Select the frame rate of each video stream. When refresh rate is 50Hz, the maximum available frame rate is 25 fps. When refresh rate is 60Hz, the maximum available frame rate is 30 fps.
Video Code Type	Set video encoding (H265/H264) for each video stream.
Video Code Level	Set video code level to [Baseline], [Main Profile] or [High Profile].
Bitrate Control	Set constant bitrate (CBR) or variable bitrate (VBR) for video stream.
Bitrate Mode	Set bit stream value by choosing fixed value or customizing it.
Bitrate	Range of MainStream : From 256 to 8192 Range of SubStream : From 128 to 4096 Range of MobileStream : From 8 to 1536
Audio	Enable or disable audio for each video stream. (applicable models only)
I Frame Interval	Set the I frame interval value. (from 1 to 100)
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.



## Email

Select [Remote Setting] > [Network] > [Email] to enter the setting page as shown in the figure below.

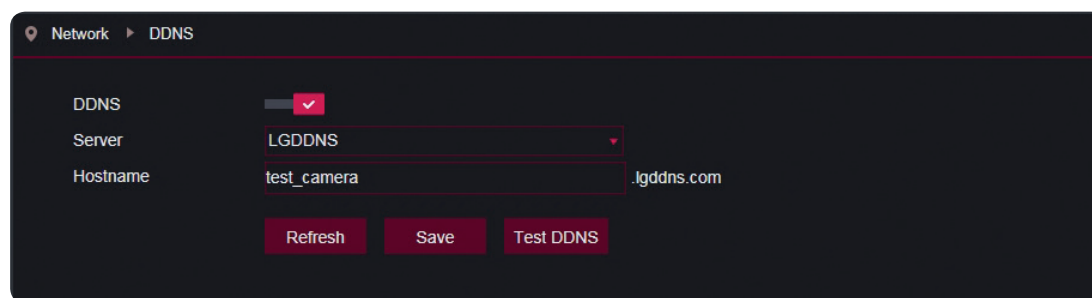


Operating

Item	Description
Email	Enable or disable the [Email] function.
Encryption	Set the encryption option to [Disable], [SSL], [TLS] or [AUTO].
SMTP Port	Enter the mail server port number.
SMTP Server	Enter the address of mail server.
User name	Enter the user name.
Password	Enter the password of sending mail.
Sender	Enter the address of receiving mail.
Receiver 1,2,3	Enter the mail receivers on each field. User can set this option up to 3 receivers.
Interval	Time interval for sending mail (1 minute, 3 minute, 5 minute or 10 minute).
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.
Test Email	Click the button to test whether the Email is properly sending to the recipient's mailbox.
Cancel	Click the button to cancel the Email setting.

## DDNS

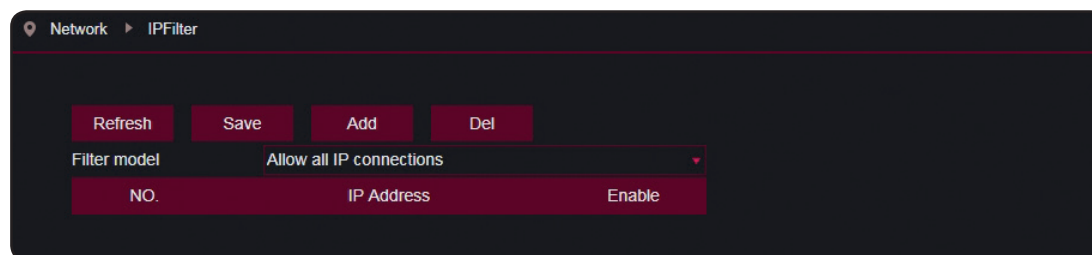
Select [Remote Setting] > [Network] > [DDNS] to enter the setting page as shown in the figure below. Dynamic DNS (DDNS) settings are used with server for access from an extranet.



Item	Description
DDNS	Enable or disable the [DDNS] function.
Server	Set the name of active server.
Host Name	Enter the name of the user.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.
Test DDNS	Click the button to test the DDNS server.

## IP Filter

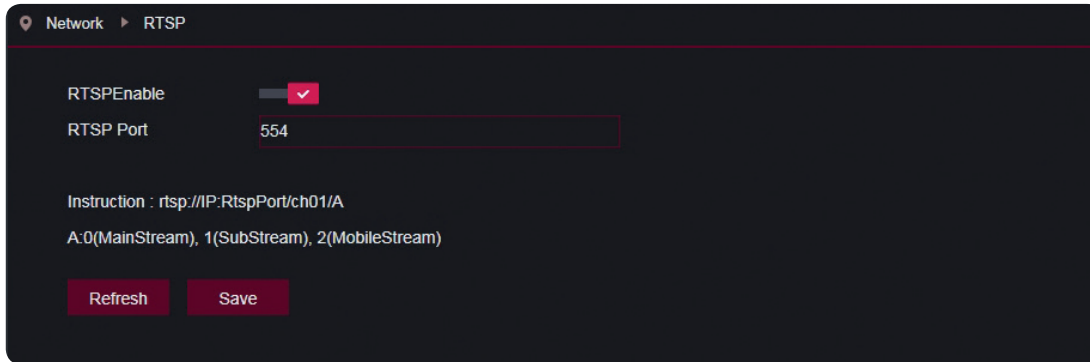
Select [Remote Setting] > [Network] > [IP Filter] to enter the setting page as shown in the figure below.



Item	Description
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.
Add	Add a row in the IP filter list.
Del	Delete the selected row in the IP filter list.
Filter model	Select a filter model. (There are three options to select.)

## RTSP

Select [Remote Setting] > [Network] > [RTSP] to enter the setting page as shown in the figure below.

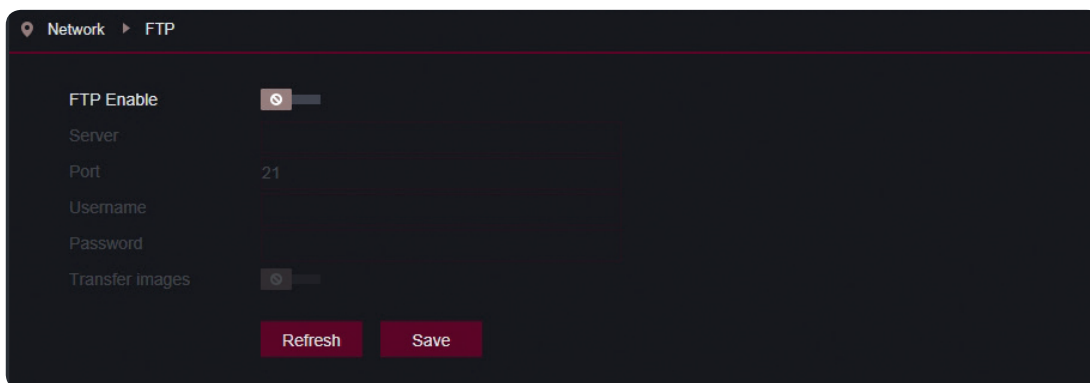


Item	Description
RTSPEnable	Enable or disable the [RTSP] function. The camera will not be found with ONVIF when this option is disabled.
RTSP Port	The default port number is 554, and it can be changed to other value from 1024 and 65535. System restart is required, if you change the value.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

## FTP

This function is used with alarm function to upload images or videos to the FTP server.

Select [Remote Setting] > [Network] > [FTP] to enter the setting page as shown in the figure below.



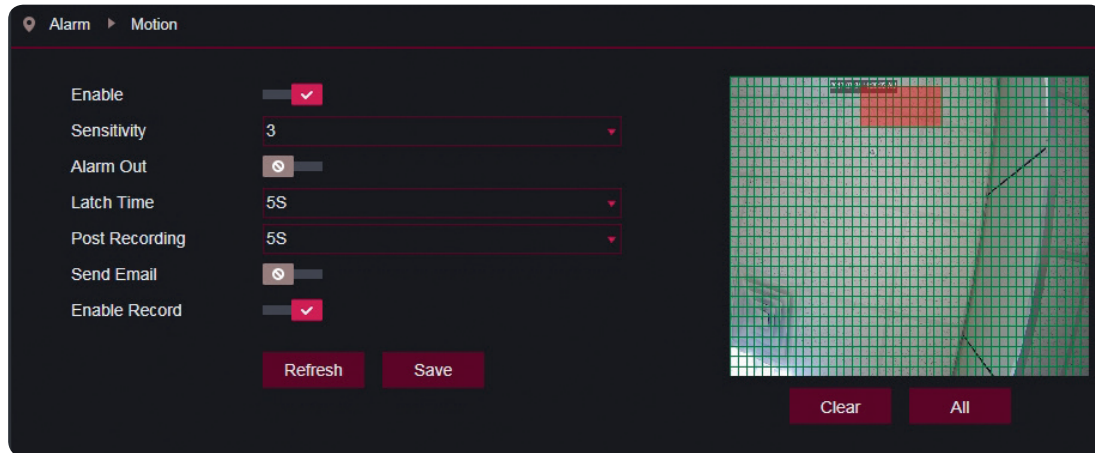
Item	Description
FTP Enable	Enable or disable the [FTP] function.
Server	Enter the address of FTP server.
Port	Enter the FTP service port number. The default number is 21.
Username	Enter the user name for access to FTP service.
Password	Enter the password for access to FTP service.
Transfer images	Enable or disable the checking transmit images.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.



## Alarm Settings

### Motion

Select [Remote Setting] > [Alarm] > [Motion] to enter the setting page as shown in the figure below.



Item	Description
Enable	Enable or disable the motion detection.
Sensitivity	Set the sensitivity option (from 1 to 8, the higher value indicates the more sensitive).
Alarm Out	Enable or disable the [Alarm Out] function. (applicable models only)
Latch Time	Select the latch time option. (from 5S to 30S)
Post Recording	Select the post recording time option. (from 5S to 30S, applicable models only)
Send Email	Enable or disable the Email sending.
Enable Record	Enable or disable the recording function. (applicable models only)
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.
All	Select all the areas.
Clear	Deselect all the areas.

#### Setting the motion detection

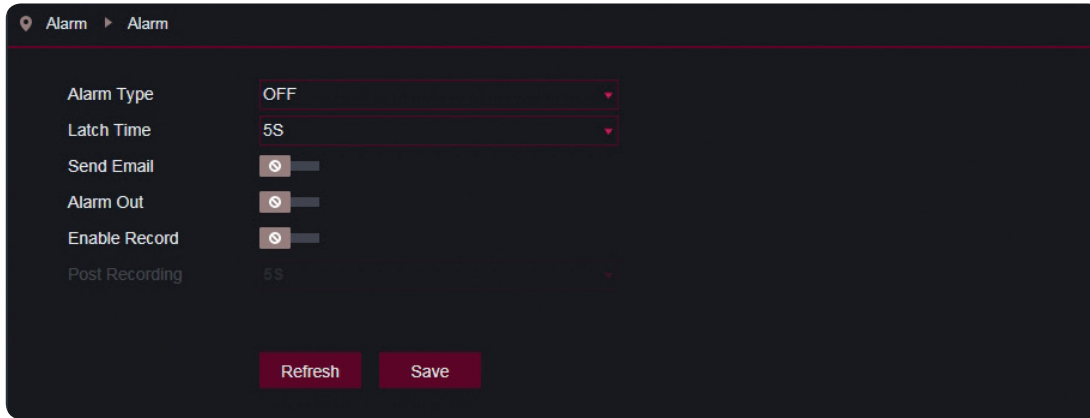
1. Enable the motion detection.
2. Press down and hold the left mouse button and drag out an area for motion detection.
3. Set the sensitivity for motion detection.
4. Used with SMTP to enable mail delivery.
5. Click on Save to apply the settings.

#### NOTE

When any object moves within the target area, a letter "M" in green color will be displayed on the video.

### Alarm (applicable models only)

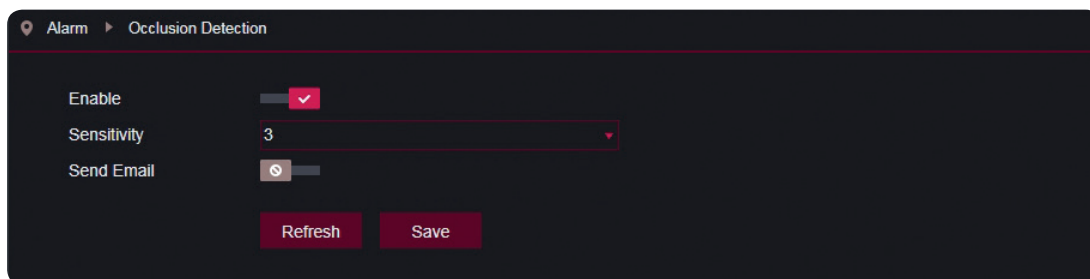
Select [Remote Setting] > [Alarm] > [Alarm] to enter the setting page as shown in the figure below.



Item	Description
Alarm Type	Select the alarm type [OFF] : Disable alarm function. [Normally-Open] : Enable when the alarm port is connected. [Normally-Close] : Enable when the alarm port is disconnected.
Latch Time	Select the latch time option. (from 5S to 30S)
Send Email	Enable or disable the Email sending.
Alarm Out	Enable or disable the alarm output.
Enable Record	Enable or disable the recording function.
Post Recording	Select the post recording time option. (from 5S to 30S)
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

### Occlusion Detection

Select [Remote Setting] > [Alarm] > [Occlusion Detection] to enter the setting page as shown in the figure below.



Item	Description
Enable	Enable or disable the occlusion detection.
Sensitivity	Set the sensitivity option (from 1 to 6, higher value indicates more sensitive).
Send Email	Enable or disable the Email sending.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

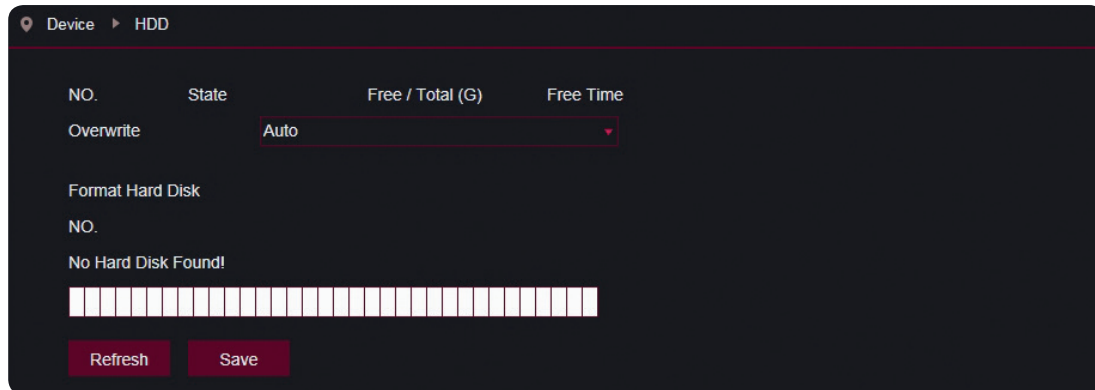


## Device Settings

### HDD (applicable models only)

Before setting this menu, insert a SD card to the camera. The camera will automatically detect the total capacity and balance capacity of SD card and give the information of available record time.

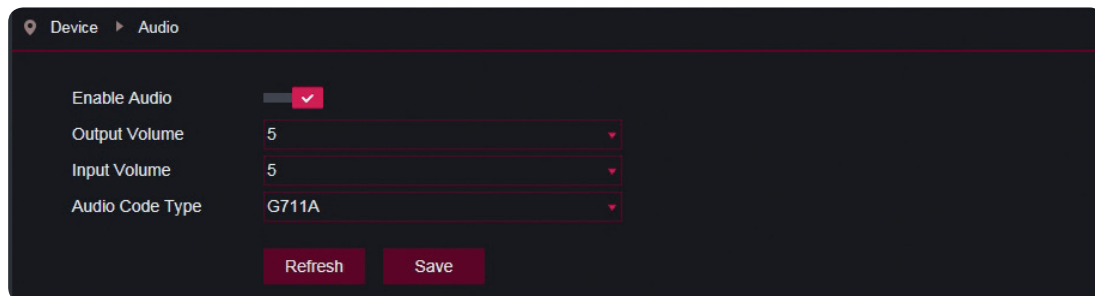
Select [Remote Setting] > [Device] > [HDD] to enter the setting page as shown in the figure below.



Item	Description
Overwrite	Select [Auto] or [Close] to enable or disable the option. When there is no space to record in the SD card, select [Auto] to overwrite the SD card.
Format Hard Disk	Format SD card.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

### Audio (applicable models only)

Select [Remote Setting] > [Device] > [Audio] to enter the setting page as shown in the figure below.



Item	Description
Enable Audio	Enable or disable the audio.
Output Volume	Select a volume level of audio output.
Input Volume	Select a volume level of microphone.
Audio Code Type	Select a audio code type. (G711A/G711U/ADPCM/G726 16k/G726 24k/G726 32k/G726 40k)
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

#### NOTE

If you enable the audio function, the [Audio] option in the [Video Streaming] menu is enabled automatically.

## Log

Select [Remote Setting] > [Device] > [Log] to enter the setting page as shown in the figure below.

Device > Log

Major Type: All Log

Begin Time: 2017-07-24 00:00:00

End Time: 2017-07-24 23:59:59

No.	Time	Operation	Log Info
1	2017-07-24 11:00:00	admin Login Success	
2	2017-07-24 10:57:56	admin Login Success	
3	2017-07-24 10:56:19	Lenscover End	
4	2017-07-24 10:56:14	Motion End	
5	2017-07-24 10:56:09	System Setup	
6	2017-07-24 10:56:09	Lenscover Begin	
7	2017-07-24 10:56:09	Motion Begin	
8	2017-07-24 10:56:07	Network Up	
9	2017-07-24 06:40:00	Lenscover End	
10	2017-07-24 06:39:59	Motion End	

First Page Prev 1 2 Next Last

Total 2 Pages, Goto

Item	Description
Major Type	Select the major log type you want to search in the pull-down menu.
Minor Type	Select the Minor log type you want to search in the pull-down menu.
Begin Time	Choose the start date/time for retrieval.
End Time	Choose the end date/time for retrieval.
Search	Displays the related logs which meets all the selected conditions in the table.

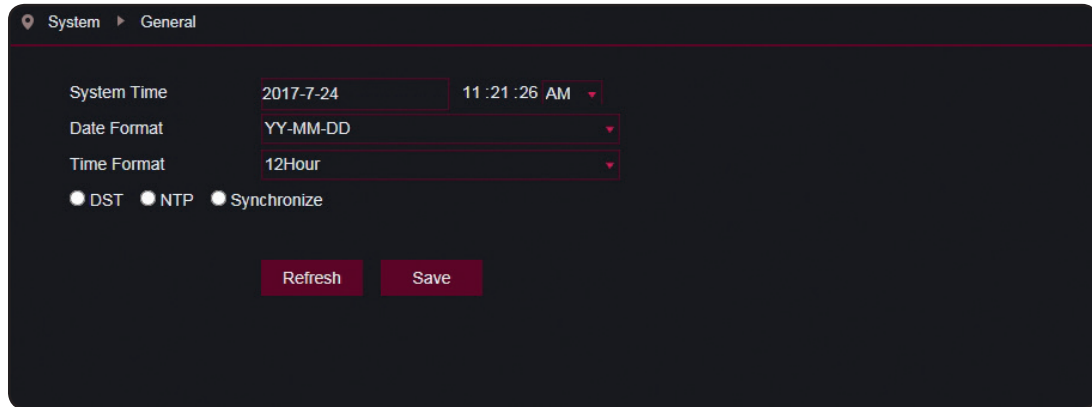
2

Operating

## System Settings

### General

The system time, date format and time format contained in the basic information can be manually set and saved. Select [Remote Setting] > [System] > [General] to enter the setting page as shown in the figure below.



2

Operating

Item	Description
System Time	Set the time and date for the system.
Date Format	Select a date format. (MM/DD/YY, YY/MM/DD or DD/MM/YY)
Time Format	Select a time format. (24Hour or 12Hour)
DST	Enable the [Daylight Savings Time] (DST) option to enable DST correction. Set [Daylight Time Mode], [Time Offset], [Start Time] and [End Time] and click [Save] to correct time in accordance with the settings.
NTP	Enable the [Enable NTP] option, input the address of time server and choose a time zone and then save the setting. The system will correct time in accordance with the time server.
Synchronize	The device will use PC as a time server to correct time.
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.



## Users

Select [Remote Setting] > [System] > [Users] to enter the setting page as shown in the figure below.

NO.	Username	Password	Active
1	admin	Enable	Enable
2	user1	Disable	Disable
3	user2	Disable	Disable
4	user3	Disable	Disable
5	user4	Disable	Disable
6	user5	Disable	Disable
7	user6	Disable	Disable

### Adding a user

1. Select a row in the user list.
2. Enter the username in the [Username] field.
3. Enter the password in the [Password] and [Confirm] fields. The password filled in both fields must be the same.
4. Enable the [Active] and [Password] option
5. Click [Save] to finish the user setting.

### Information

Select [Remote Setting] > [System] > [Info] to enter the setting page as shown in the figure below.

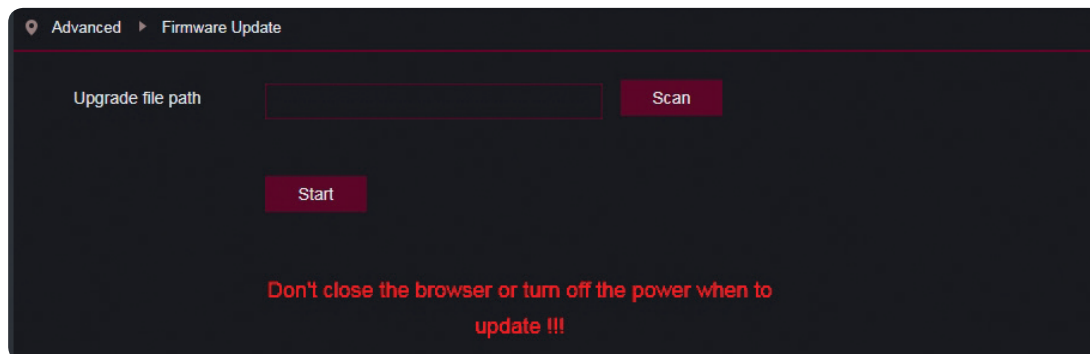
Device ID	000000
Device Name	RNDF-BP02A
Device Type	IP CAMERA
Hardware Version	RS-CM-137A
Software Version	V2.1.3.4_170718
IE Client Version	V1.0.2.68_170718
MAC Address	00-23-63-69-1C-3B
P2P ID	RSV1612034986466

Displays the system information of the device, including device type, MAC address and software version.

## Advanced Settings

### Firmware Update

Select [Remote Setting] > [Advanced] > [Firmware Update] to enter the setting page as shown in the figure below.



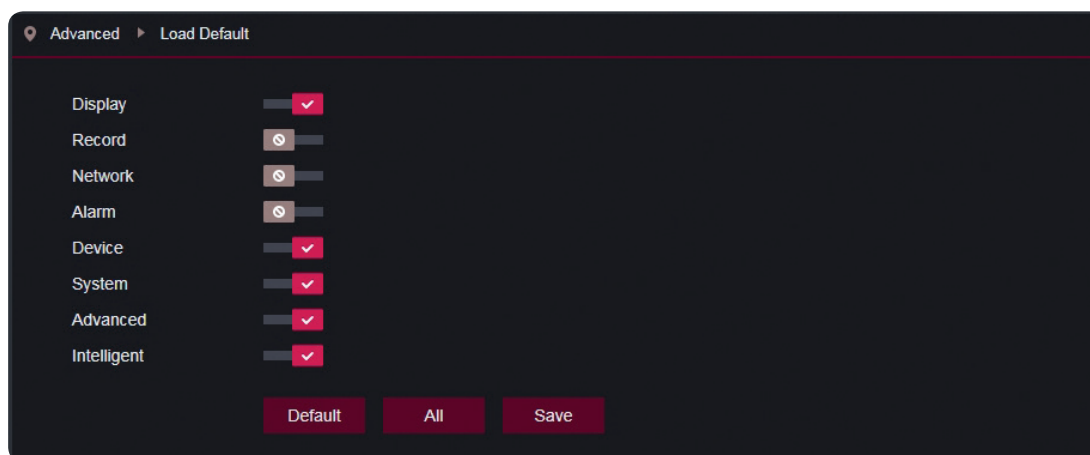
Click [Scan] and select an update file, and then click [Start] to start firmware updating. Update will be unavailable if the update files do not match the target device.

#### **i** NOTE

Do not turn off the power for 2 minutes which the browser is automatically closed and reconnected during firmware update. The IP camera may not work.

### Load Default

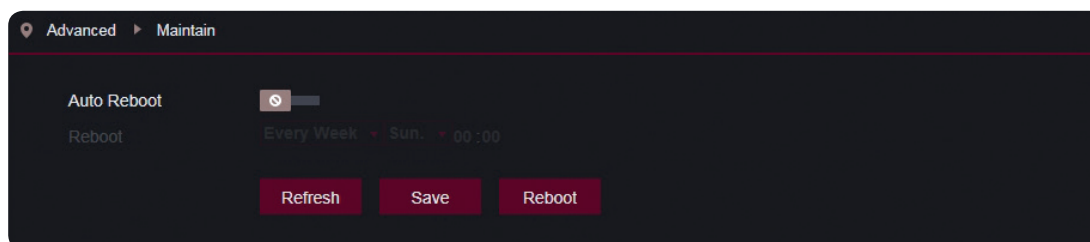
Select [Remote Setting] > [Advanced] > [Load Default] to enter the setting page as shown in the figure below.



Check relevant options and click [Save] to recover the default factory settings for the options as checked.

### Maintain

Select [Remote Setting] > [Advanced] > [Maintain] to enter the setting page as shown in the figure below.



You can set regular restart or manual restart of the device.

#### Regular Restart

Enable the [Auto Reboot] option, set the interval and click [Save] to finish the setting.

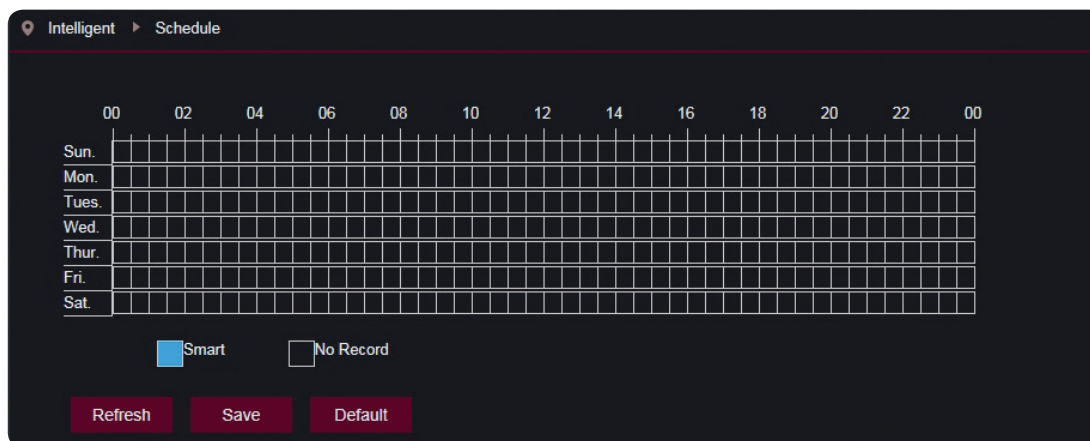
#### Manual Restart

Click [Reboot] to display pop-up message. Enter the password and Click [OK] to restart the system.

## Intelligent Settings

### Schedule

Select [Remote Setting] > [Intelligent] > [Schedule] to enter the setting page as shown in the figure below.



One cell in the table is 30 minutes. In the scheduled time, recording will be stored into the SD card when an event of detection setting (PID, LCD, SOD, FD or CC) is occurred.

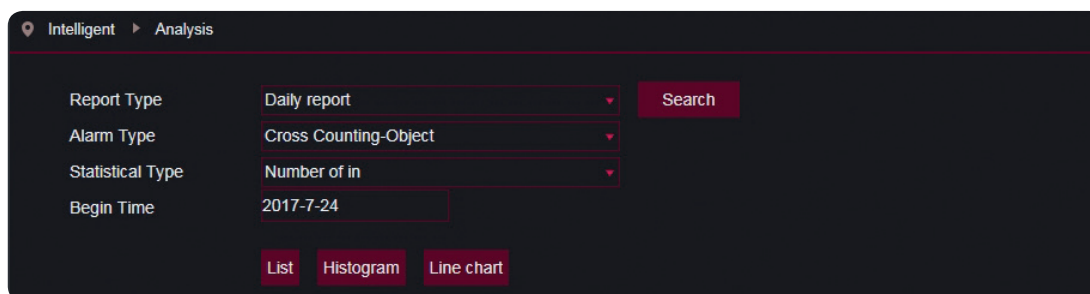
**NOTE**

- The [Record] and [PreRecord] option in [Remote Setting] > [Record] > [Rec Parameters] should be enabled for schedule recording.
- The [Enable Record] option on each detection (PID, LCD, SOD, FD or CC) setting should be enabled. Refer to page 28 for more information.

### Analysis

You can make statistical report of cross-counting(CC) detection occurrence on this page.

Select [Remote Setting] > [Intelligent] > [Analysis] to enter the setting page as shown in the figure below.

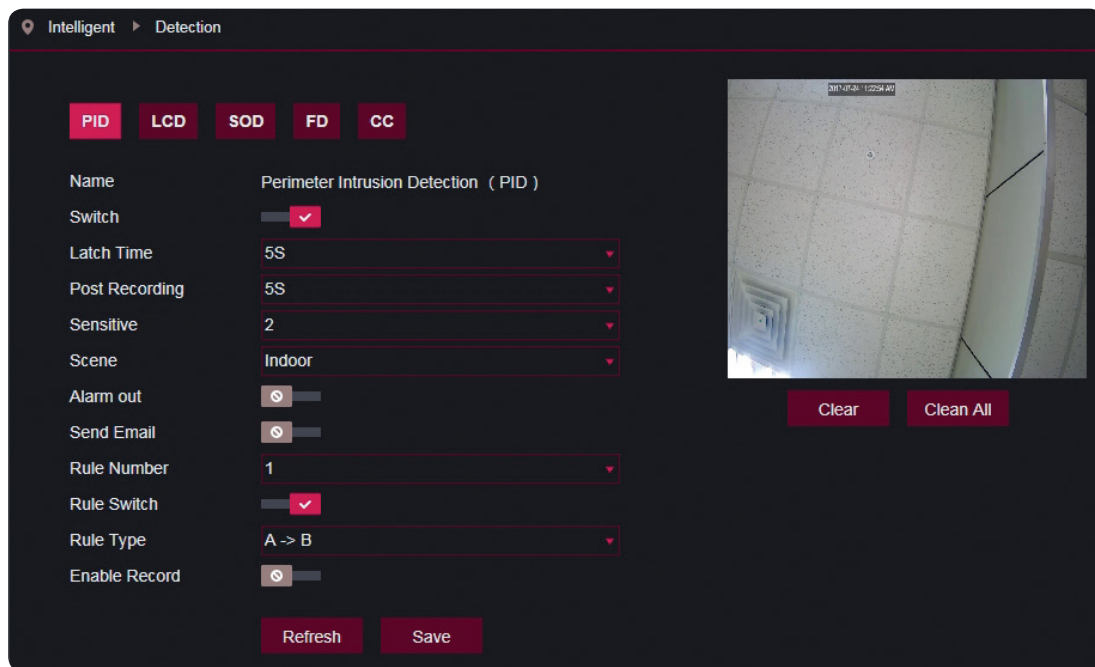


Item	Description
Report Type	Set ta report type option to [Daily report], [Weekly report], [Monthly report] or [Annual report].
Alarm Type	This option is not changeable. The option value is always [Cross Counting-Object].
Statistical Type	Select a statistical type. Number of in : Analysis for movement of cross-counting direction. Number of out : Analysis for movement of reverse direction.
Begin Time	Choose the start date of the statical analysis period.
List/Histogram /Line Chart	Select a form of result.



## Detection

Select [Remote Setting] > [Intelligent] > [Detection] to enter the setting page as shown in the figure below. Before setting the detection settings, select the detection type on top of the menu. (PID, LCD, SOD, FD or CC)



Item	Description
Name	Displays the detection type
Switch	Enable or disable the detection.
Latch Time	Select the latch time option from 5S to 30S.
Post Recording	Select the post recording option from 5S to 30S. (applicable models only)
Sensitivity	Set the sensitivity option (from 1 to 4, The higher value indicates the more sensitive).
Scene	User can choose indoor or outdoor according to real situation.
Alarm Out	Enable or disable the [Alarm Out] function. (applicable models only)
Send Email	Enable or disable the Email sending.
Rule Number	Select a number for the detection rule.
Rule Switch	Enable or disable the detection rule.
Rule Type	Select a rule type for the selected rule number. (A->B, A<-B or A<->B) A->B means can detect A to B direction moving, B->A means can detect B to A direction moving, A<->B means can detect both directions moving.
Enable Record	Enable or disable the recording function. (applicable models only)
Refresh	Return to the unsaved settings to the previous setting.
Save	Save the settings.

# Specifications

RNDF-BP02A			
Camera	Image Device	1/3" Progressive Scan CMOS	
	Lens Type	2.8-12mm Vari-Focal Lens	
	Day / Night	ICR	
	Minimum illumination	Color	: 0.6Lux @(F1.2,AGC ON)
		B/W	: 0 Lux with IR LED on
	IR Distance	20m	
Image Enhance	Backlight compensation, Saturation, Brightness, Contrast, Sharpness, White balance, Exposure, Flip or Rotate Mode, Corridor, Privacy mask		
Video / Audio	Compression	H.265 / H.264 / MJPEG	
	Resolutions	3MP(2048*1536), 1296P(2304*1296), 1080P, 960P, 720P(1280*720)	
	Maximum Frame rate	60Hz : 30fps @ 3MP, 1296P, 1080P, 960P, 720P 50Hz : 25fps @ 3MP, 1296P, 1080P, 960P, 720P	
	Multi-Streaming	Up to 3	
	ROI (Smart-Codec)	Support (Up to 8 zones)	
	Video Analytics	Perimeter, Line Crossing, Stationary Object, Face Detection, Cross Counting	
	Text Overlay	Support	
	Audio Compression	G711A, G711U, ADPCM, G726	
2-way Audio	Support		
Event	Event Trigger	Motion Detection, Port Alarm	
	Event Notification	Relay Out, Email, FTP	
	Pre-Alarm Recording	Support	
Interface	Analog Out	1 BNC Out	
	Audio In / Out	1 In / 1 Out	
	Alarm In / Out	1 In / 1 Out	
	SD Slot	Micro SD (Up to 128GB)	
Network	Ethernet	RJ-45 10, 100 BASE-T	
	Security	Password protection, IP Filter	
	Open Protocol	ONVIF	
	Protocol	TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, Bonjour	
	Integrated Software	Mobile Application(iPhone, iPad, Android)	
	Connections	Max. 10	
General	Power Source	DC 12V, PoE	
	Maximum Power Consumption	5W (DC 12V), 6W (PoE 48V)	
	Maximum Input Current	417mA (DC 12V), 125mA (PoE)	
	Operating conditions	-10°C ~ 60°C 0% RH to 95% RH	
	Protection	IP66, IK10	
	Dimensions	146.9 x 146.9 x 112.5 mm	
	Weight	844 g	

RNDF-BP01A		
Camera	Image Device	1/3" Progressive Scan CMOS
	Lens Type	3.6mm Fixed Lens
	Day / Night	ICR
	Minimum illumination	Color : 0.7Lux @(F1.2,AGC ON)
		B/W : 0 Lux with IR LED on
	IR Distance	10m
Image Enhance	Backlight compensation, Saturation, Brightness, Contrast, Sharpness, White balance, Exposure, Flip or Rotate Mode, Corridor, Privacy mask	
Video / Audio	Compression	H.265 / H.264 / MJPEG
	Resolutions	3MP(2048*1536), 1296P(2304*1296), 1080P, 960P, 720P(1280*720)
	Maximum Frame rate	60Hz : 30fps @ 3MP, 1296P, 1080P, 960P, 720P 50Hz : 25fps @ 3MP, 1296P, 1080P, 960P, 720P
	Multi-Streaming	Up to 3
	ROI (Smart-Codec)	Support (Up to 8 zones)
	Video Analytics	Perimeter, Line Crossing, Stationary Object, Face Detection, Cross Counting
	Text Overlay	Support
	Audio Compression	G711A, G711U, ADPCM, G726
	2-way Audio	Support
Event	Event Trigger	Motion Detection
	Event Notification	Email, FTP
	Pre-Alarm Recording	Support
Interface	Analog Out	1 BNC Out
	Audio In / Out	1 In / 1 Out
	SD Slot	Micro SD (Up to 128GB)
Network	Ethernet	RJ-45 10, 100 BASE-T
	Security	Password protection, IP Filter
	Open Protocol	ONVIF
	Protocol	TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, Bonjour
	Integrated Software	Mobile Application(iPhone, iPad, Android)
	Connections	Max. 10
General	Power Source	DC 12V, PoE
	Maximum Power Consumption	5W (DC 12V), 6W (PoE 48V)
	Maximum Input Current	417mA (DC 12V), 125mA (PoE)
	Operating conditions	-10°C ~ 60°C 0% RH to 95% RH
	Protection	IP66
	Dimensions	119.5 x 63.8 mm
	Weight	390 g

RNUF-BP01A		
Camera	Image Device	1/3" Progressive Scan CMOS
	Lens Type	2.8-12mm Vari-Focal Lens
	Day / Night	ICR
	Minimum illumination	Color : 0.6Lux @(F1.2,AGC ON)
		B/W : 0 Lux with IR LED on
	IR Distance	20m
Image Enhance	Backlight compensation, Saturation, Brightness, Contrast, Sharpness, White balance, Exposure, Flip or Rotate Mode, Corridor, Privacy mask	
Video / Audio	Compression	H.265 / H.264 / MJPEG
	Resolutions	3MP(2048*1536), 1296P(2304*1296), 1080P, 960P, 720P(1280*720)
	Maximum Frame rate	60Hz : 30fps @ 3MP, 1296P, 1080P, 960P, 720P
		50Hz : 25fps @ 3MP, 1296P, 1080P, 960P, 720P
	Multi-Streaming	Up to 3
	ROI (Smart-Codec)	Support (Up to 8 zones)
	Video Analytics	Perimeter, Line Crossing, Stationary Object, Face Detection, Cross Counting
Text Overlay	Support	
Event	Event Trigger	Motion Detection
	Event Notification	Email, FTP
	Pre-Alarm Recording	Support
Network	Ethernet	RJ-45 10, 100 BASE-T
	Security	Password protection, IP Filter
	Open Protocol	ONVIF
	Protocol	TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, Bonjour
	Integrated Software	Mobile Application(iPhone, iPad, Android)
	Connections	Max. 10
General	Power Source	DC 12V, PoE
	Maximum Power Consumption	5W (DC 12V), 6W (PoE 48V)
	Maximum Input Current	417mA (DC 12V), 125mA (PoE)
	Operating conditions	-10°C ~ 60°C 0% RH to 95% RH
	Protection	IP66
	Dimensions	237 x 74.54 x 101.53 mm
	Weight	650 g

Note that design and specification of this unit may change from the manual as quality and improvement without prior notice.

### Open Source Notice Information

To obtain the source code under GPL, LGPL, MPL and other open source licenses, that is contained in this product, please visit <http://secu-iot.lginnotek.com>.

In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download.

