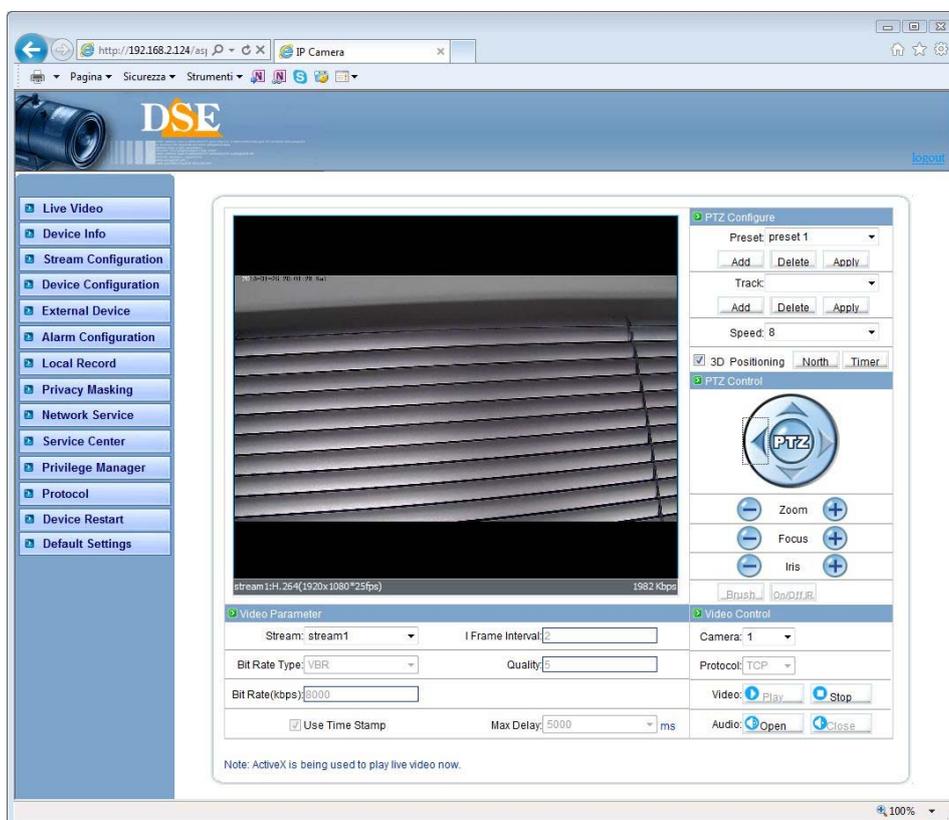




Configuration Options

IP Cameras RH SERIES





Introduction

The RH Series cameras boast a number of configurable operating options. Unlike the majority of network cameras on the market the RH series cameras allow you to customize these settings by cameras with different types of client.

And 'possible to completely configure the cameras from a PC using any browser (IE, Chrome, Safari etc.), or through the NetVMS supervision software. It 'also possible to configure smartphone with the free DSE Smartlive application. In this manual we are explained one by one all the configuration options by referring **access by PC with the browser**.

The same options can be found both in the same NetVMS software application DSE Smartlive, which are dedicated to specific content in the CD manual.

with browser access

In the camera installation manual explains how to access the cameras with your PC using a web browser

Thanks to Flash technology, supported by RH series cameras can use the browser of your choice, such as INTERNET EXPLORER, SAFARI, FIREFOX, CHROME etc.



To access the camera using the Internet browser just type the address in the browser bar as in the following example:



A window will appear first log-in for entering username and password for access.



The RH Series of cameras factory login details are:

USERNAME: admin PASSWORD:

admin

The access to the camera control mask.

MANUAL CONFIGURATION

STANDARD RH - IP CAMERAS ONVIF



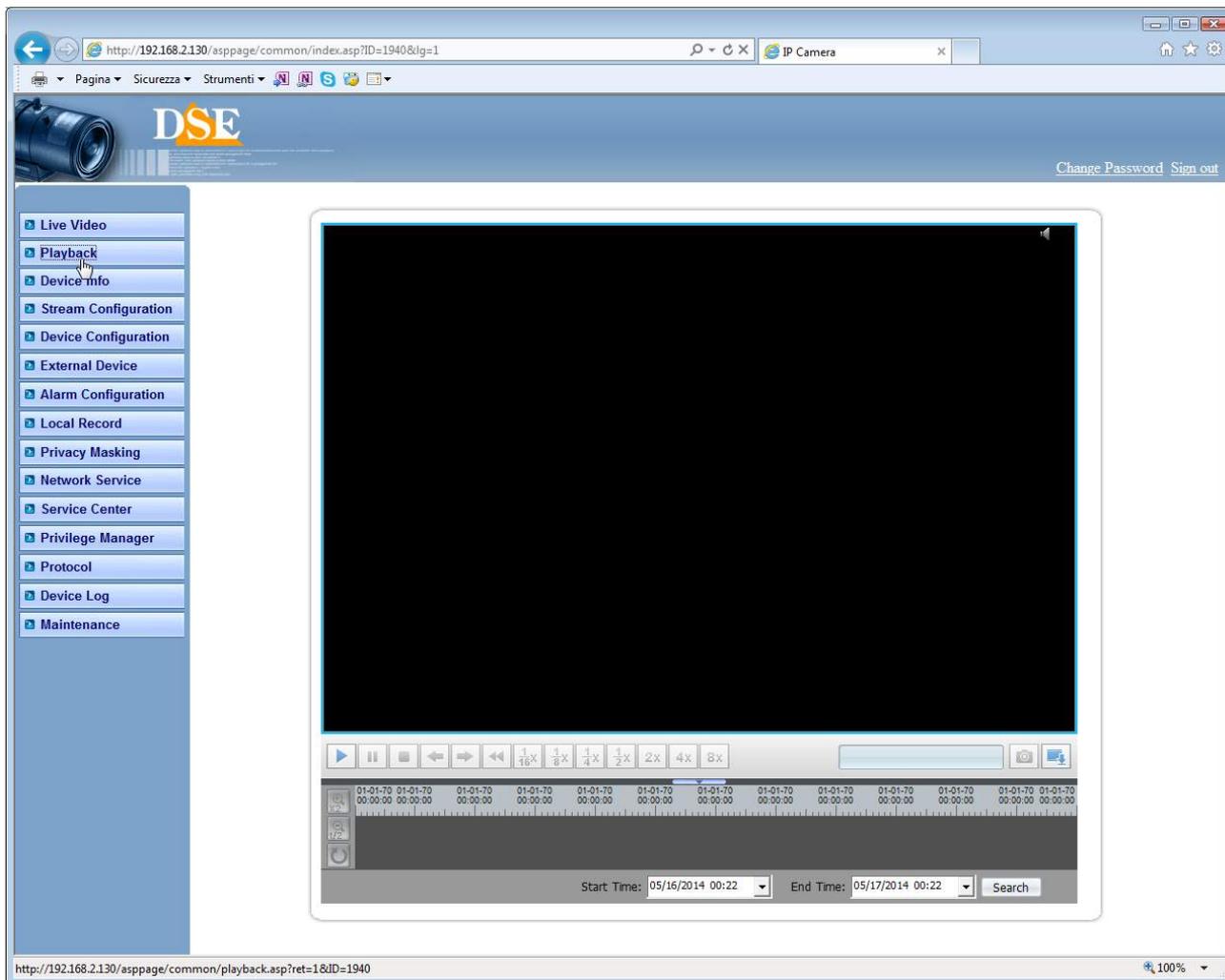
Page: 4

On the left side of the window are The camera configuration buttons which will be discussed in this manual.

CAUTION - E 'can connect several clients simultaneously up to a maximum of 10 per camera client.

Playback

As of firmware version 1.8 via the web interface can play back movies recorded on the built-in SD card into the camera (predisposed models)

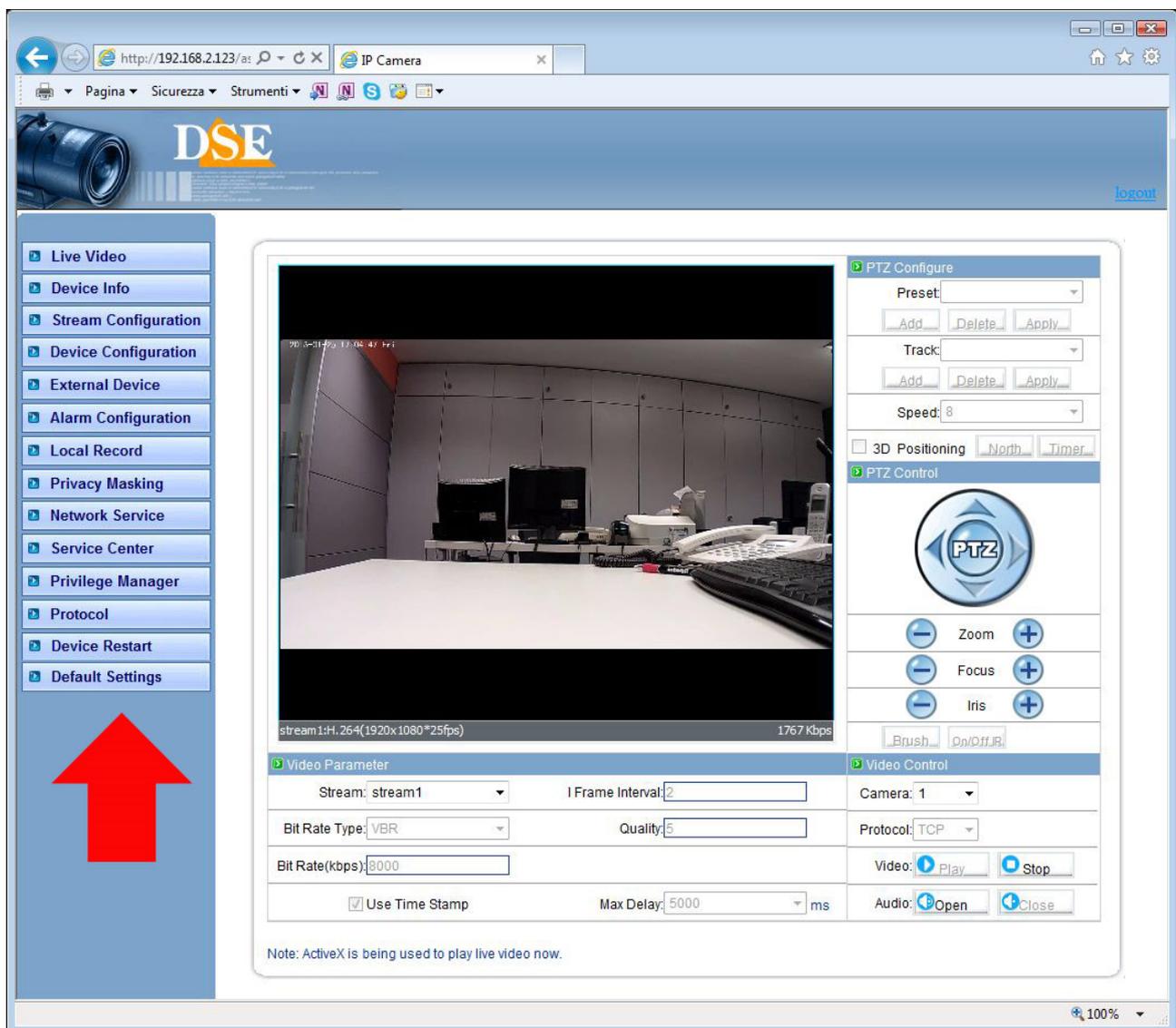




Camera Configuration

All the camera setup pages are accessible via the buttons on the left of the web interface screen.

Here in this chapter we will analyze one by one all the options that are located in these folders. The options are the same for all cameras of the RH series, with slight variations according to the facilities and the individual model-specific functions.





DEVICE INFO

Device Info

Device

Device ID:

Device Name:

Manufacturer

Device Type:

Manufacturer Name:

Version

Hardware Version:

Software Version:

Hardware

Video Channel(s):

Alarm Input(s):

Alarm Output(s):

Serial Port(s):

Note: The device ID is unique. Please don't change it unless special requirement.

This window shows all the camera data and its capabilities.

The top two parameters can be edited. You should not change the device ID which is a unique identifier of the camera while you can set the camera name based on its location so you can easily identify. To set a new name, type it into the text box and press SET.

Other data in the window are read-only and provide information on the hardware and software version of the camera and the range of accessories.

STREAM CONFIGURATION

In this section you will set all the parameters that regulate the camera video stream and determining their heaviness in terms of bandwidth requirement available. It is a fundamental adjustment in the economy of a CCTV system over IP and is often mistakenly overlooked with the result of burdening the client and obtain long latencies (delays between action and image).

The cameras fact are delivered with factory settings that require a

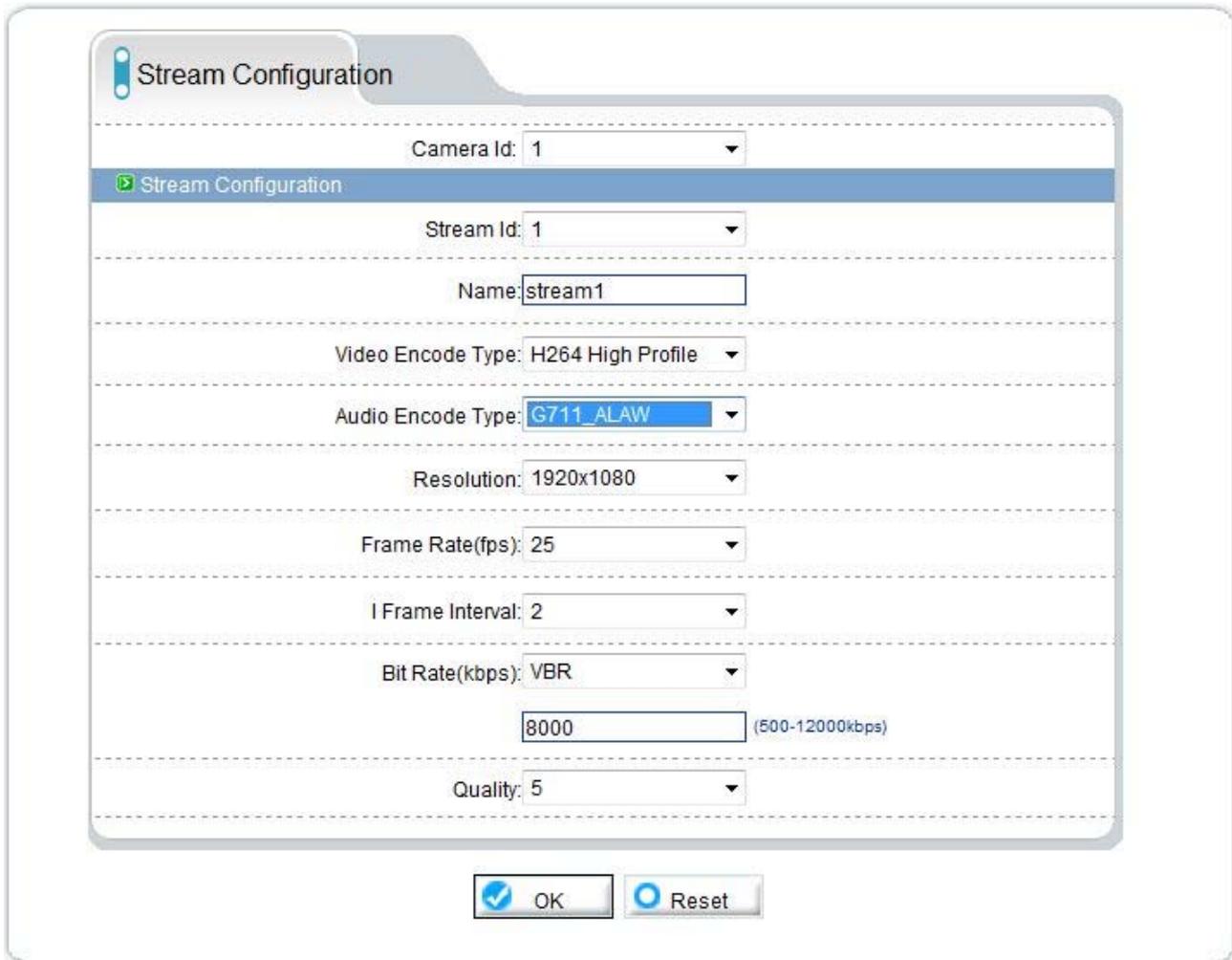


considerable bandwidth consumption in order to show the user the highest quality video. However, it is not said that these settings are totally exploitable in the context in which it is located. The first factor to consider is the network transfer capacity. The local networks typically support large transfer bandwidth and allow the use of streams in full HD, as opposed to connect through the Internet requires the use of a lighter stream low resolution to avoid excessive loss of frames.

The second factor to consider is the device used as a client (PC, cell phone, etc.). More will be fast to its processing capacity, the more elevated the band that will be able to develop without causing excessive latency (delay) of the reproduction.

The third factor is of course the number of cameras that the client should be able to play.

If you connected to a PC multiple cameras simultaneously with the software NetVMS Show us one at a time and adjust the bandwidth occupied by the streaming that appears superimposed intervening in the settings of the camera so as to maintain it at a value not excessive. On a local network typically by adjusting the streaming to engage a maximum of 1000/2000 Kbps per camera you get one FullHD streaming of good quality and can be connected to many cameras without introducing much latency.



The image shows a 'Stream Configuration' dialog box with the following fields and options:

- Camera Id: 1
- Stream Configuration (selected)
- Stream Id: 1
- Name: stream1
- Video Encode Type: H264 High Profile
- Audio Encode Type: G711_ALAW
- Resolution: 1920x1080
- Frame Rate(fps): 25
- I Frame Interval: 2
- Bit Rate(kbps): VBR
- 8000 (500-12000kbps)
- Quality: 5

Buttons: OK (checked), Reset

Each camera can generate up to three different types of video streams that you can choose from the client when making the connection. This way you can easily adapt to the bandwidth that you have available. For example, if we have access to the camera through a mobile connection with low bandwidth availability we will choose to receive a stream with low resolution and frame rate.

STREAM ID - Select the stream to be programmed: 1,2 or 3. The stream 1 is the main stream in H264 and higher resolution to be used in the connection of the internal network. Stream 2 is a lighter stream at reduced resolution may be used in connection via the Internet. Streaming 3 finally is static compression MJPEG high quality but remarkable bandwidth, normally not recommended for normal applications.

NAME - Assign a custom identification name to the stream

ENCODE VIDEO / AUDIO ENCODE - Select the video and audio compression. Streams 1 and 2 use dynamic compression H264, while the stream 3 is reserved for MJPEG, static compression can provide higher video quality but also high bandwidth consumption.

RESOLUTION - Defines the resolution 1920x1080 (Full HD) or 640x360, the latter by



preferable with small bandwidth availability in the case of mobile telephones. From the Stream 2, normally reserved for the connection bandwidth limited only resolution available is 640x360

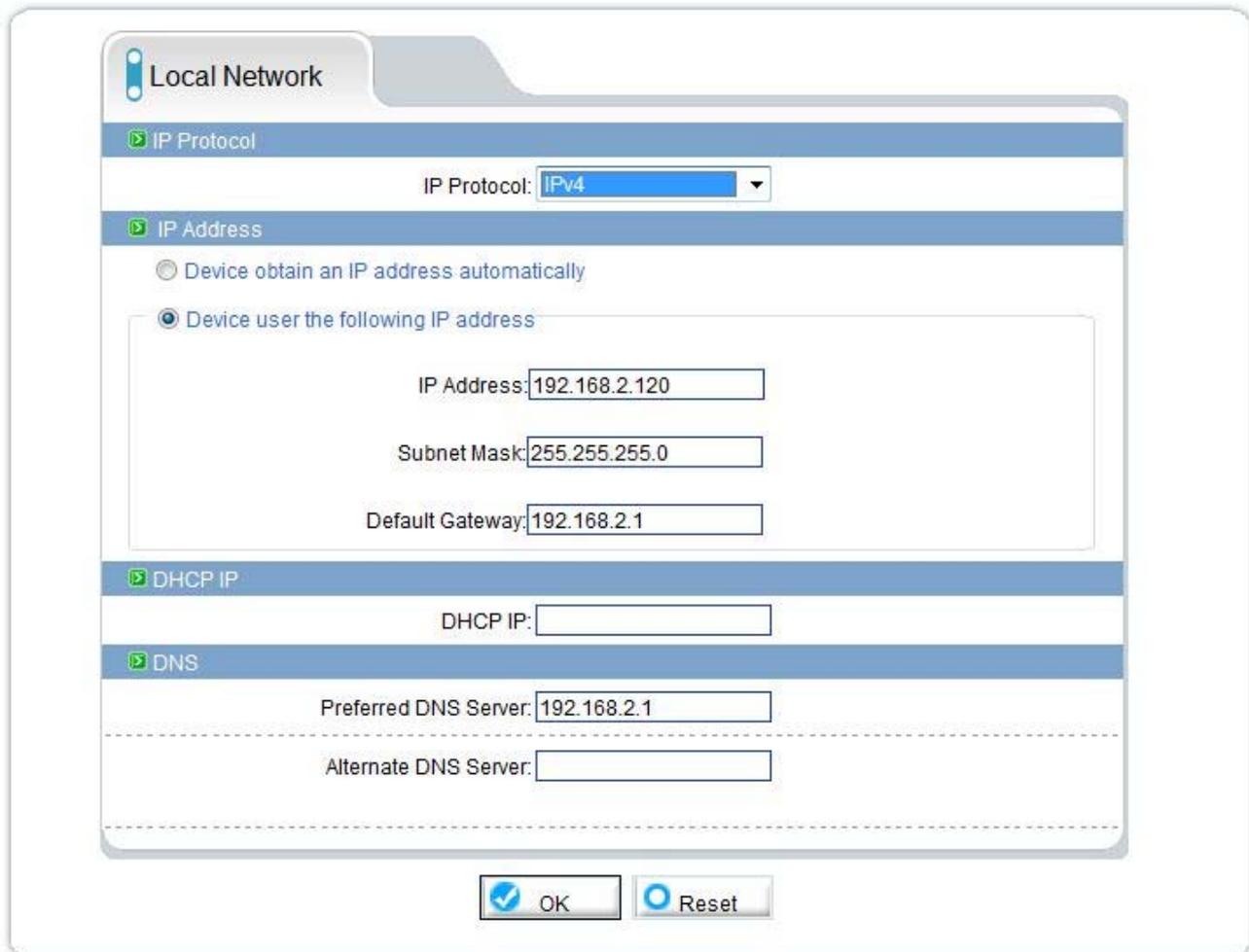
FRAME RATE - The number of frames per second that make up the video stream (max. 25 streams 1-2 and max 12 for the stream to MJPEG 3). Consider that 25 f / sec corresponds to the so-called real-time ie the television standard in which the human eye does not perceive the individual frames but a single uninterrupted sequence. Generally you can reduce this parameter up to 10/12 f / sec without perceiving large video fluidity differences and thus saving a lot of bandwidth.

The FRAME INTERVAL - E 'the interval between two consecutive I-Frame in the H.264 compression and can be set to 1.2 or 3 seconds. A shorter interval corresponds greater accuracy in the location of the video but greater use of bandwidth. Recommended Value: 2.

BIT RATE - This section gives the possibility to choose between two different bandwidth management mode occupied: **CONSTANT BIT RATE (CBR)** and **VARIABLE BIT RATE (VBR)**. In the CBR mode (available for streams 1 and 2) the camera maintains a constant bit rate that can be set in the box below between 500 and 12000 Kbps (default 8000 Kb). In the VBR mode instead of changing the bit rate camera in different operating conditions in order to maintain a constant video quality. In this mode, you set the maximum bandwidth to be occupied and video quality to keep (from 1 to 9, recommended: 5/7). If you decrease the quality below the value 5 you will notice a greater pixelization due to the increased compression. It is recommended to set video quality in VBR above 7 with a low bit-rate value.

The VBR is always advisable. By using it the camera will occupy more bandwidth (up to the maximum threshold) if you are in the presence of a lot of movement and reduce the occupied bandwidth in the case of still images.

DEVICE CONFIGURATION / LOCAL NETWORK



The screenshot shows a web-based configuration interface for a local network. The title is "Local Network". It is divided into several sections:

- IP Protocol:** A dropdown menu set to "IPv4".
- IP Address:** Two radio buttons. The first is "Device obtain an IP address automatically" (unselected). The second is "Device user the following IP address" (selected). Below this are three input fields: "IP Address" (192.168.2.120), "Subnet Mask" (255.255.255.0), and "Default Gateway" (192.168.2.1).
- DHCP IP:** A single input field for "DHCP IP" (empty).
- DNS:** Two input fields: "Preferred DNS Server" (192.168.2.1) and "Alternate DNS Server" (empty).

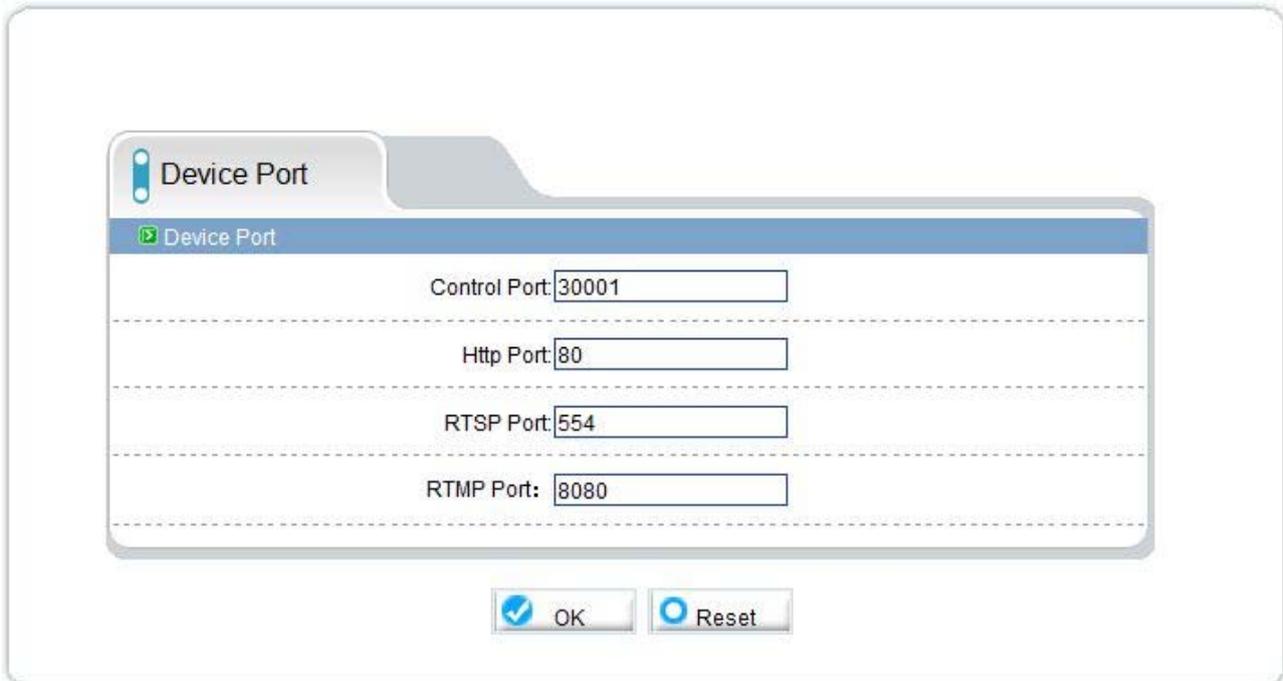
At the bottom, there are two buttons: "OK" (with a checkmark icon) and "Reset" (with a circular arrow icon).

On this screen, you set the parameters of the local network LAN. Typically, these parameters are programmed during installation with IP SEARCH program.

IP PROTOCOL: The cameras support both TCP / IP IPv4 and IPv6. Before choosing this second version is necessary to ensure that it is supported by your network.

IP ADDRESS / SUBNET MASK / DEFAULT GATEWAY: The classics are parameters that allow the device to communicate with your network. The cameras support both a fixed IP address automatic assignment in DHCP. The fixed IP address is usually preferred in safety applications as from the guarantee that the address will remain invariable even during blackouts and avoids the need to reconfigure the recording devices.

DEVICE CONFIGURATION / DEVICE PORT



In this window, you set the communication ports used by the camera. And 'advisable to not change them unless absolutely necessary.

CONTROL PORT: used for commands and streaming video

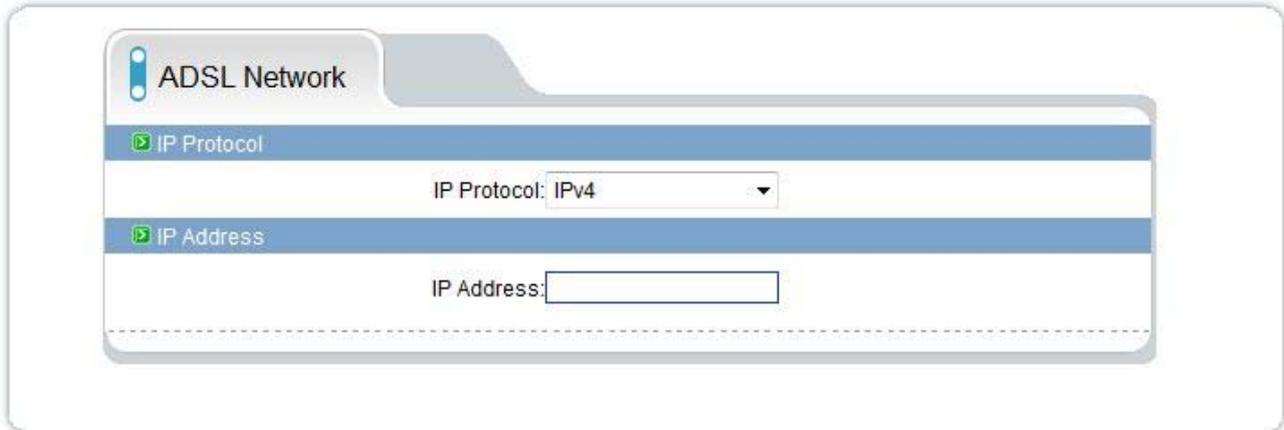
HTTP PORT: the port used by browsers. The default port 80 is used by the browser normally. If you change it you will need to specify the new port in the browser address bar. For example, to connect to the address 192.168.2.120 on port 72 enter `http://192.168.2.120:72`

RTSP PORT: the port used for video streaming with RTSP protocol used when the client uses this protocol (like the browser ActiveX mode).

RTMP PORT: the port used for video streaming with Flash technology The main motivation to change these ports is the need to make available multiple cameras through a router. In this case, each camera must assign a CONTROL PORT and an HTTP PORT different.

For more information see the installation manual.

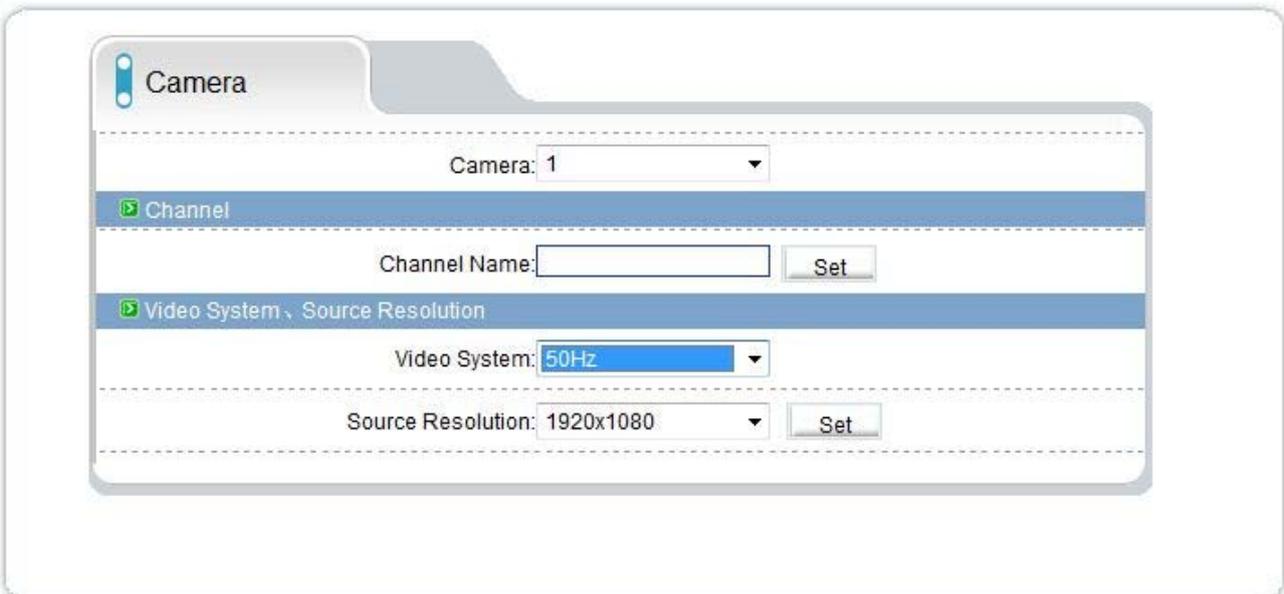
DEVICE CONFIGURATION / ADSL NETWORK



The screenshot shows the 'ADSL Network' configuration window. It has a tab labeled 'ADSL Network'. Below the tab, there are two expandable sections: 'IP Protocol' and 'IP Address'. The 'IP Protocol' section is expanded, showing a dropdown menu with 'IPv4' selected. The 'IP Address' section is also expanded, showing an empty text input field.

If the camera is connected to an ADSL router and you enable the PPPoE function to establish the Internet connection without the use of a PC, in this window, after a log in successfully, you will see the IP address of the WAN side .

DEVICE CONFIGURATION / CAMERA



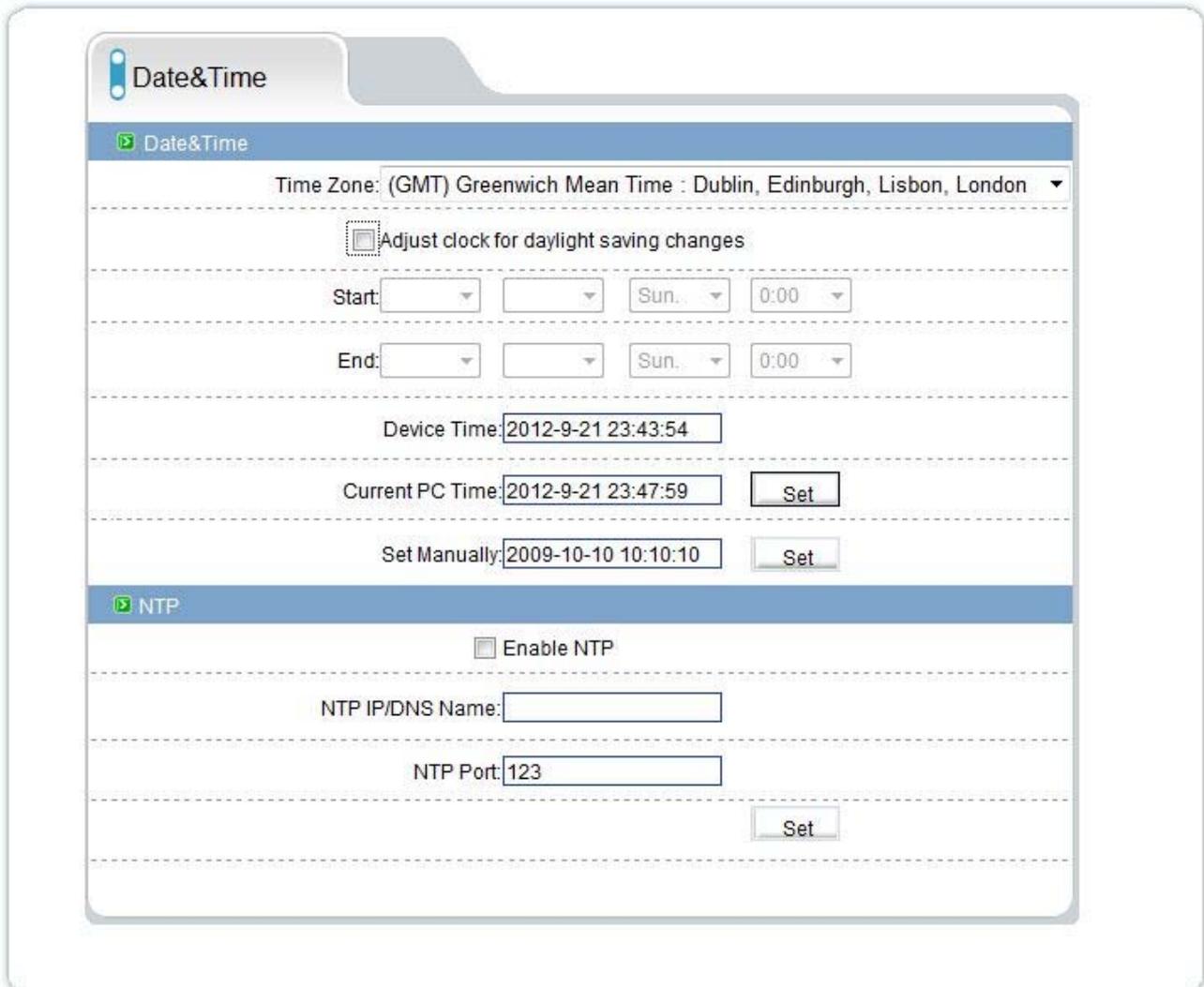
The screenshot shows the 'Camera' configuration window. It has a tab labeled 'Camera'. Below the tab, there are several configuration options: 'Camera' (dropdown menu with '1' selected), 'Channel' (expandable section), 'Channel Name' (text input field with a 'Set' button), 'Video System \ Source Resolution' (expandable section), 'Video System' (dropdown menu with '50Hz' selected), and 'Source Resolution' (dropdown menu with '1920x1080' selected and a 'Set' button).

CHANNEL NAME - E 'can set the video channel name that you may want to bring up an overlay in the OSD programming page (see below).

VIDEO SYSTEM - Choice of the European frequency 50 Hz or 60 Hz Americana.

SOURCE RESOLUTION - Native resolution of the camera. The RH Series cameras incorporate the resolution FULL HD 1920x1080 in 16.:9. The range of RH IP cameras no longer supports the old 4: 3 format typical of analog CCTV.

DEVICE CONFIGURATION / DATE & TIME



This window is used to set the date and time on the camera. The cameras support three types of settings: Automatic Obtaining by NTP Server, Synchronization with the PC clock and manual setting

TIME ZONE - Select the reference time zone. For Italy GMT + 1.

ADJUST CLOCK FOR DAYLIGHT SAVING - Allows you to set the beginning and end of summer time so that the camera will automatically adapt. In Italy and in all EU countries daylight saving time begins on the last Sunday in March and ends on the last Sunday in October.

DEVICE TIME - The current date and stored in the camera's time

PC TIME - The time of the client computer on which you are working. Pressing SET may be trasferita the camera.

Set Manually - Here you can set the time and date manually and transfer them to the camera by pressing SET.

ENABLE NTP - you 'can make sure that the camera automatically synchronize the time and date via the internet with an NTP (Network Time Protocol), chosen from the many available on the net.



E 'can indicate the domain of the NTP server and the port to use.

DEVICE CONFIGURATION / OSD

In this window you program what indications to appear superimposed on the video during the LIVE display. E 'can enable overlay the following items: DEVICE NAME, CHANNEL ID and CHANNEL NAME The text was set in earlier pages of programming. E 'it can also show superimposed date and time (in various formats) and ultimately a user-personalized text (CUSTOM), such as a name that identifies the installation as a whole.

For each item you can define the position on the screen indicating that the line (ROW) and column (COLUMN) bring up the overlay. The column 0 and row 0 correspond to the upper left, increasing the value ROW / COLUMN there moves proportionally from the top-left axis vertical and horizontal respectively.

The only overlay enabled Factory is the date and time. When inserting other overlays check that they do not themselves cause to those that may be generated by video recording software.

DEVICE CONFIGURATION / MICROPHONE



The screenshot shows a web-based configuration interface for a camera's microphone. At the top, there is a tab labeled "Microphone". Below the tab, there are several settings:

- Camera:** A dropdown menu showing "1".
- Microphone:** A sub-tab with a green microphone icon.
- Enable Microphone:** A checkbox that is checked.
- Microphone Type:** A dropdown menu showing "Internal".
- Microphone Volume:** A dropdown menu showing "0".

At the bottom of the interface, there are two buttons: "OK" (with a blue checkmark icon) and "Reset" (with a blue circular arrow icon).

All RH Series cameras are capable of handling audio bidirectionally. In this tab there are the settings for the microphone for audio recording

ENABLE MICROPHONE - Enable sound management in the camera

MICROPHONE TYPE - If the camera is equipped with built-in microphone here it is possible to choose between the built-in microphone and the external source LINE IN. If the camera does not have a built-in microphone is available only the external audio input.

MICROPHONE VOLUME - E 'can set the gain of the microphone (1 ... 100) in order to adapt to the size and noise of the environment.

DEVICE CONFIGURATION / PTZ DOME



The motorized cameras speed dome RH series are equipped with an RS485 port that allows to control the movements with a keyboard for speed dome with Pelco P / D protocol. In this window it is possible to insert the RS485 address of the camera by typing on the keyboard to be able to be controlled. The communication data is then set in the section EXTERNAL DEVICE.

DEVICE CONFIGURATION / BNC OUTPUT



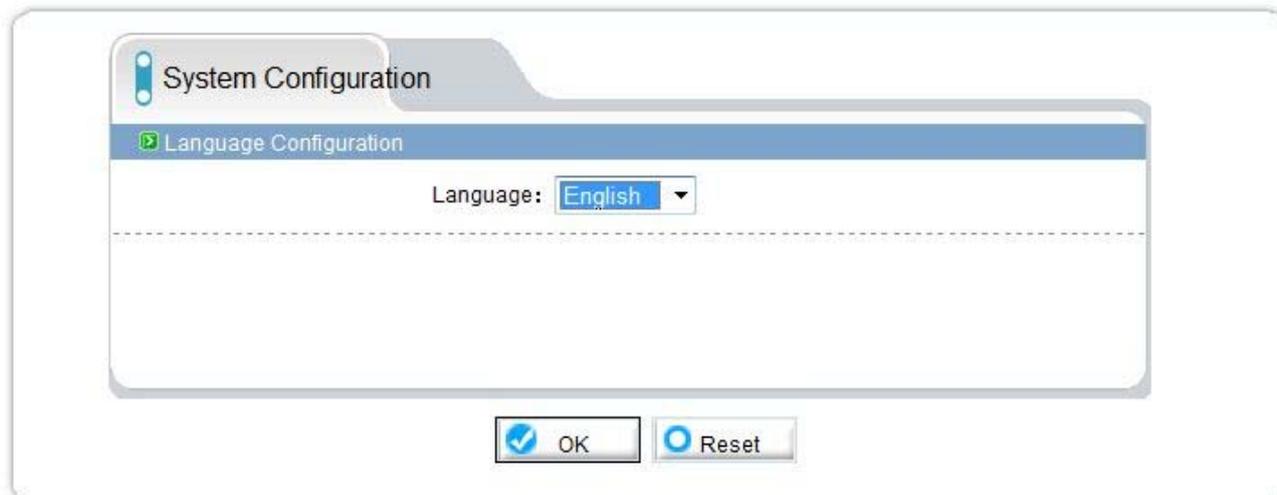
The RH Series cameras are equipped with BNC output that provides an analog composite video to connect a local monitor useful for example to adjust the camera lens in place without having to access the web via video. On this page you can enable or disable this output. If the BNC output is not used it is advisable to disable it in order to not unnecessarily CPU resources.

DEVICE CONFIGURATION / SYSTEM SERVICE

This page contains some features for debugging that are used by our technicians but have no functionality for the user. It is recommended not to enable these features if you do not

on the instructions of our technical staff.

DEVICE CONFIGURATION / LANGUAGE

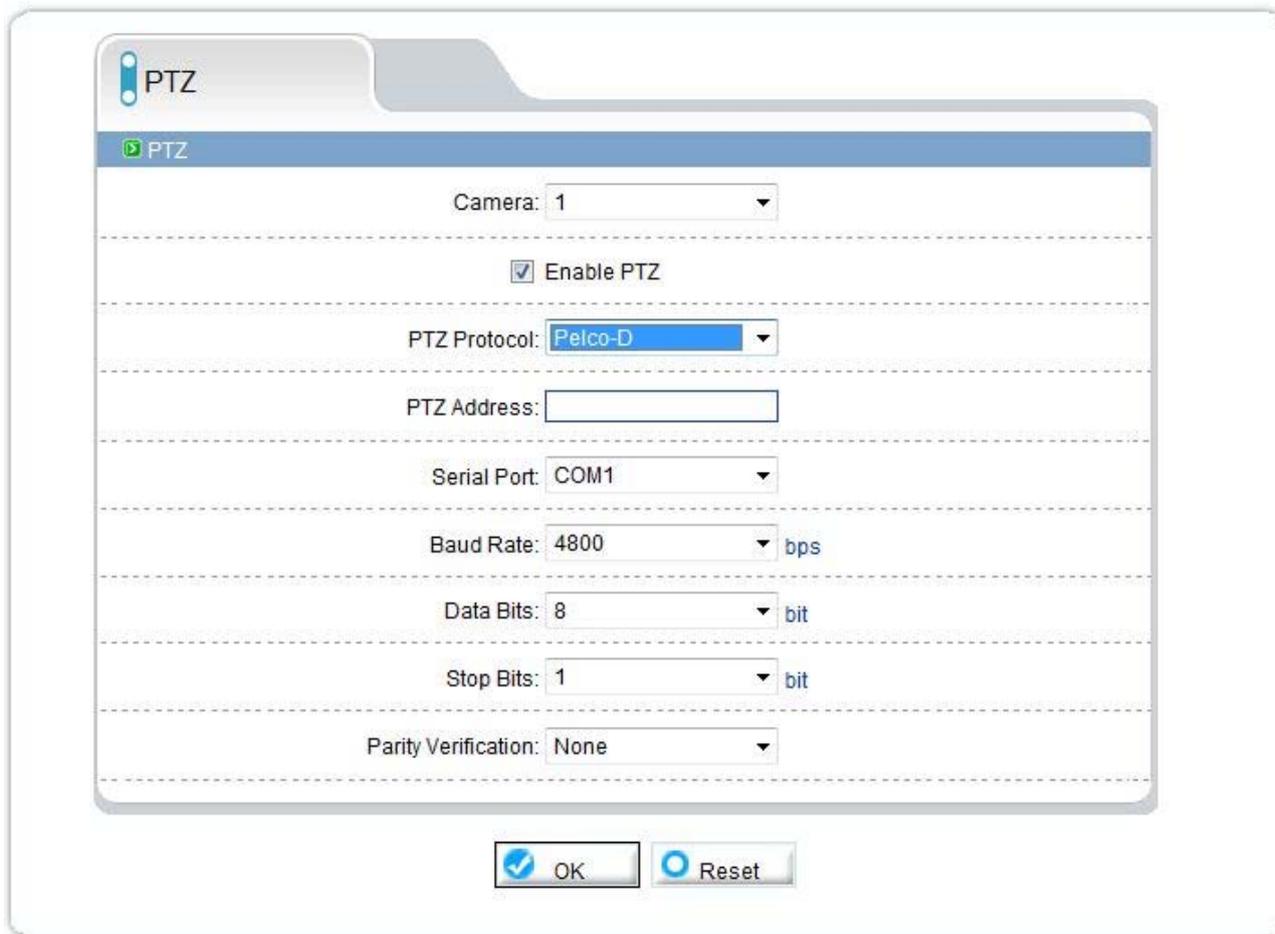


Selection of the language in which the camera uses OSD overlays. It allows you to manage non-standard of some foreign language characters.

Italy To keep the setting

International Factory (English).

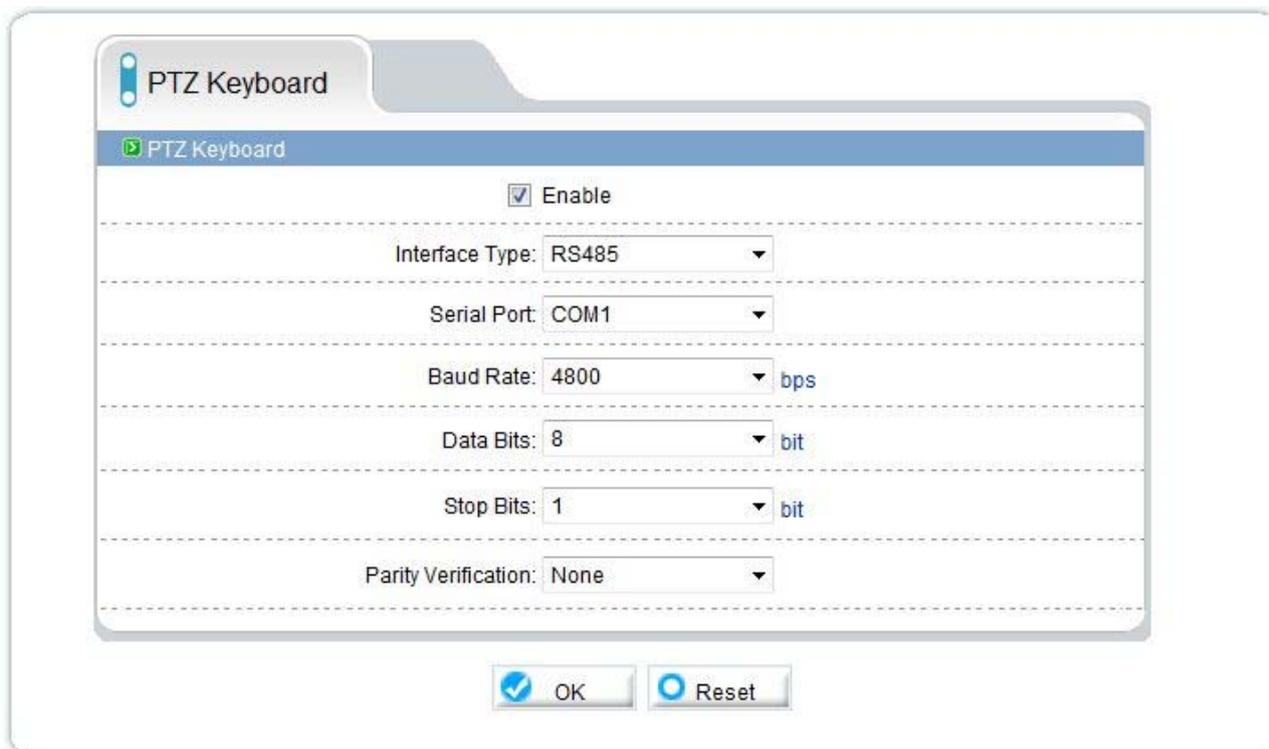
EXTERNAL DEVICE / PTZ



The screenshot shows a web interface for PTZ configuration. At the top left, there is a 'PTZ' tab with a blue icon. Below it, a blue header bar also contains 'PTZ'. The main configuration area is white with a dashed horizontal line separator between each field. The fields are: 'Camera: 1' (dropdown), 'Enable PTZ' (checked checkbox), 'PTZ Protocol: Pelco-D' (dropdown), 'PTZ Address:' (empty text input), 'Serial Port: COM1' (dropdown), 'Baud Rate: 4800' (dropdown) with 'bps' to its right, 'Data Bits: 8' (dropdown) with 'bit' to its right, 'Stop Bits: 1' (dropdown) with 'bit' to its right, and 'Parity Verification: None' (dropdown). At the bottom, there are two buttons: 'OK' with a blue checkmark icon and 'Reset' with a blue circular arrow icon.

Some RH series cameras are equipped with an RS485 port which can be used to control external motorized devices such as the PAN / TILT unit to power the camera. On this page you can set the unit address to be controlled via RS485 and the data communication protocol to be used on the RS485 port. They supported the common protocols Pelco P and Pelco D with all the communication speed Refer to the manual to be controlled to set the settings so consistent with it.

EXTERNAL DEVICE / PTZ KEYBOARD



PTZ Keyboard

Enable

Interface Type: RS485

Serial Port: COM1

Baud Rate: 4800 bps

Data Bits: 8 bit

Stop Bits: 1 bit

Parity Verification: None

In the dome camera, the RS485 port provided on board is used to connect the control keyboards with Pelco P / D attarverso protocol which it is possible to move the camera. On this page you can set the communication parameters. The camera address is set in the section instead DEVICE CONFIGURATION / PTZ DOME

EXTERNAL DEVICE / CASH REGISTER



Cash Registers

Enable

Row: Column:

Channel:

1

Interface Type:

Serial Port:

Baud Rate: bps

Data Bits: bit

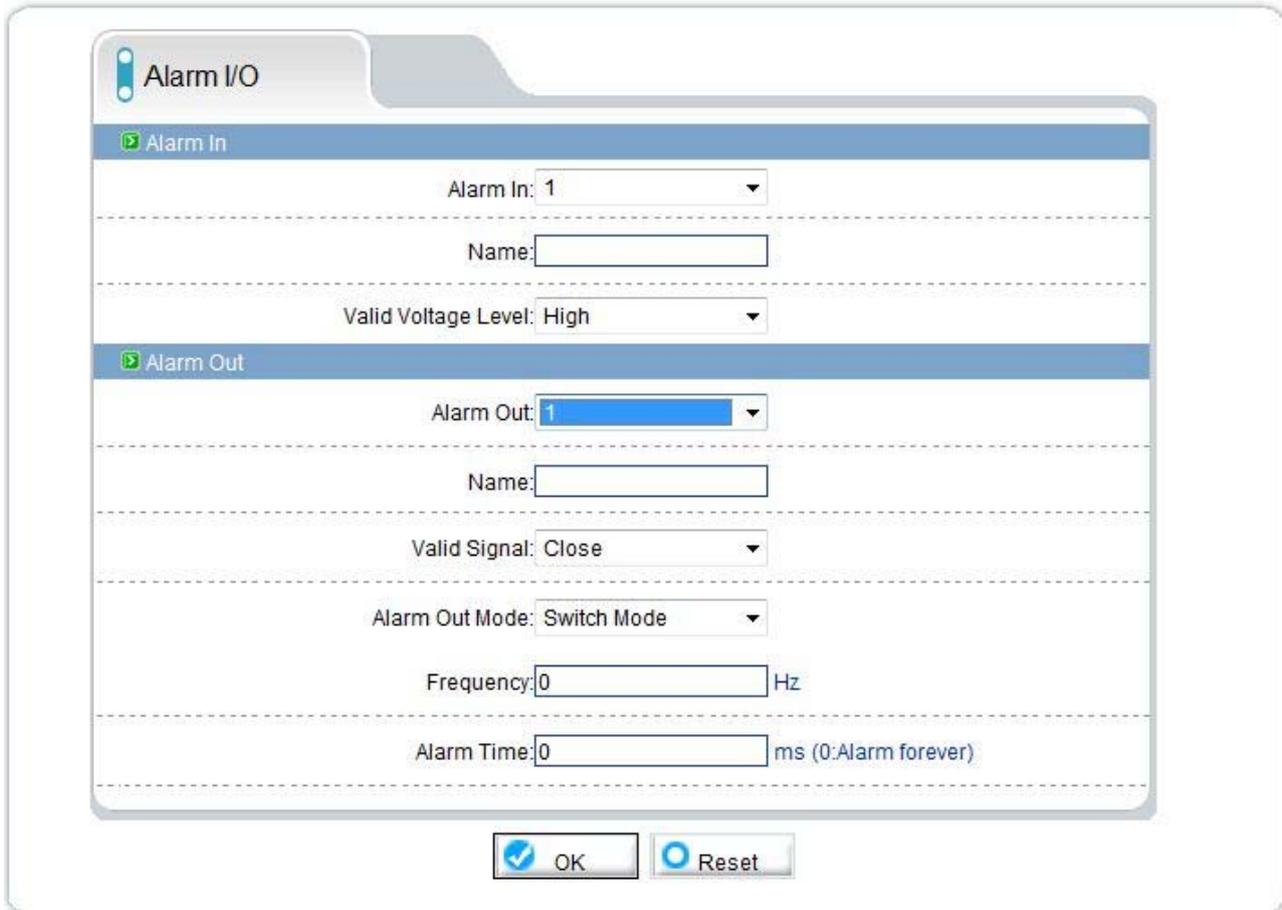
Stop Bits: bit

Parity Verification:

The RS485 port available in some cameras RH Series can be used not only for connecting Pan Tilt units and external keyboards, also to interface the camera with a cash register so you can record video overlay in the cash flow. Here you can set the X / Y coordinates where to bring up the overlay and all communication parameters.

WARNING - To support this function need for specific external drives. Contact our technical service.

ALARM CONFIGURATION / ALARM I / O



Alarm I/O

Alarm In

Alarm In: 1

Name:

Valid Voltage Level: High

Alarm Out

Alarm Out: 1

Name:

Valid Signal: Close

Alarm Out Mode: Switch Mode

Frequency: 0 Hz

Alarm Time: 0 ms (0:Alarm forever)

OK Reset

Some RH series cameras have alarm inputs and outputs that are configurable in this section. For correct wiring, refer to the installation manual.

ALARM IN - Select the camera alarm input.

NAME - Edit an input distinctive name

VALID VOLTAGE LEVEL - It determines the type of operation. With HIGH is meant that the alarm is active in the presence of voltage.

With LOW it means that the alarm is active to miss the tension.

ALARM OUT - Select the alarm output

NAME - Edit output a distinctive name

VALID SIGNAL - Determines the operation of the alarm contact. CLOSE it indicates that the contact is normally open (NO) and closes in the event of an alarm. OPEN indicates that the contact is normally closed (NC) and opens in the event of an alarm.

ALARM MODE OUT - Indicates the output drive mode. SWITCH MODE indicates that the relay closes or opens (depending on its logic) in a continuous manner for the entire duration of scheduled activation. **PULSE MODE** It indicates that the relay is activated in an intermittent manner with the ON / OFF periods. If you activate the PULSE mode you can set in the box below the frequency of pulsations.

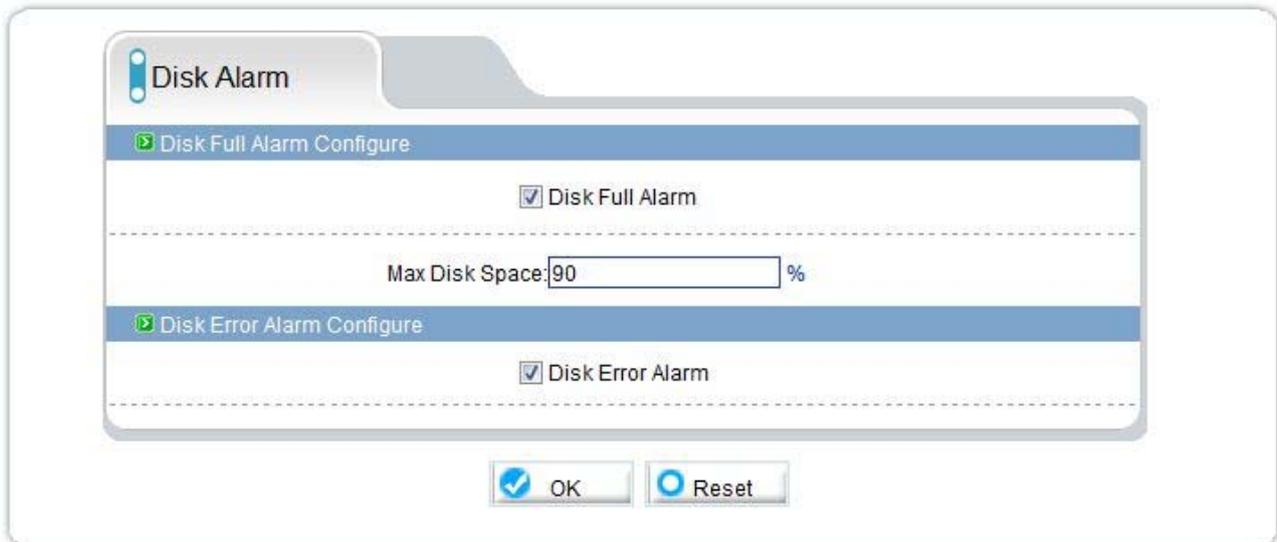


FREQUENCY - The frequency of the output pulse is expressed in Hz, ie the number of periods of an imaginary square wave which regulates the intermittently. The minimum settable value is 1, which means that the output, in the space of a second, will be active for half a second and the remaining half a second off.

ALARM TIME - E 'the duration of activation of the output in case of alarm in milliseconds. Eg. to make sure that the output to 10 seconds after an alarm: set

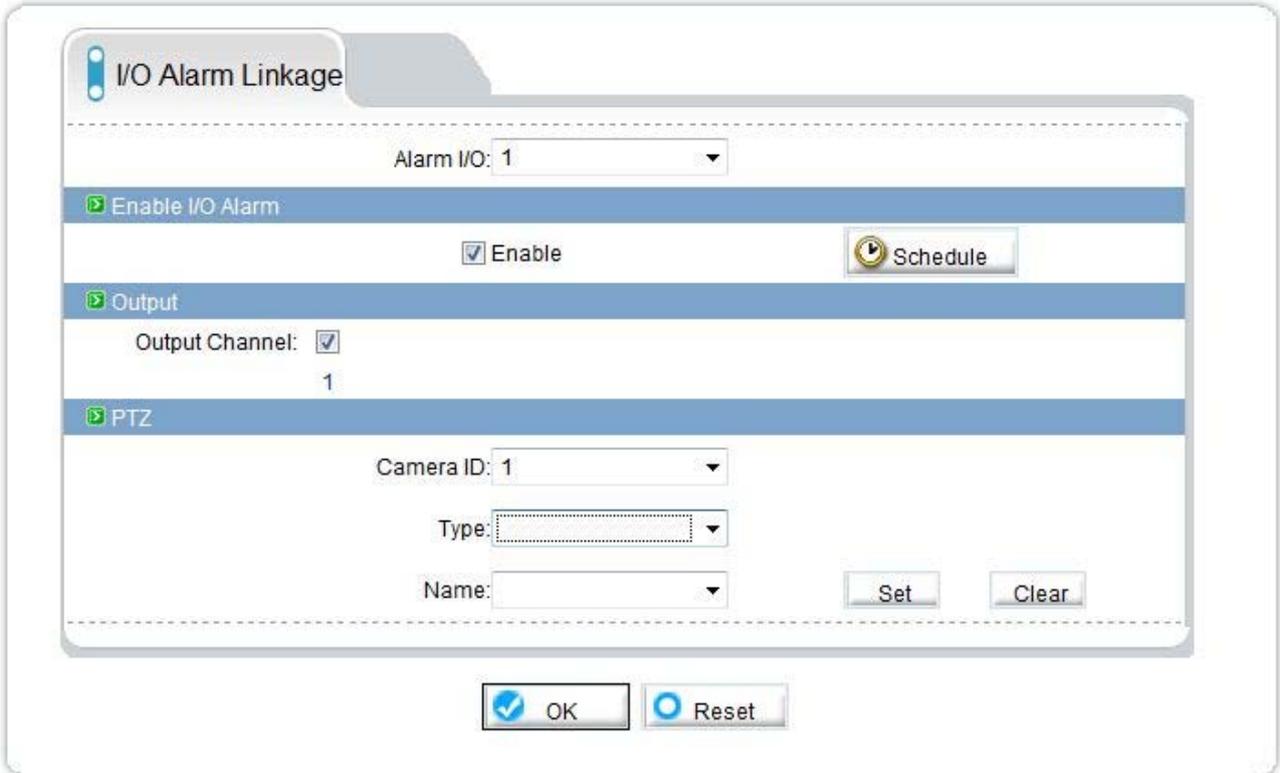
10000. The duration of the activation takes effect both in the case of continuous drive mode and intermittent. Enter 0 if you do not want to set a time limit on the duration of activation.

ALARM CONFIGURATION / DISK ALARM



The RH cameras can accommodate within them a microSD memory to record images independently. In this section you can define whether an alarm in case of almost full memory (set the percentage) or in the case of writing errors (SD card needed replacing)

ALARM CONFIGURATION / I / O ALARM LINKAGE

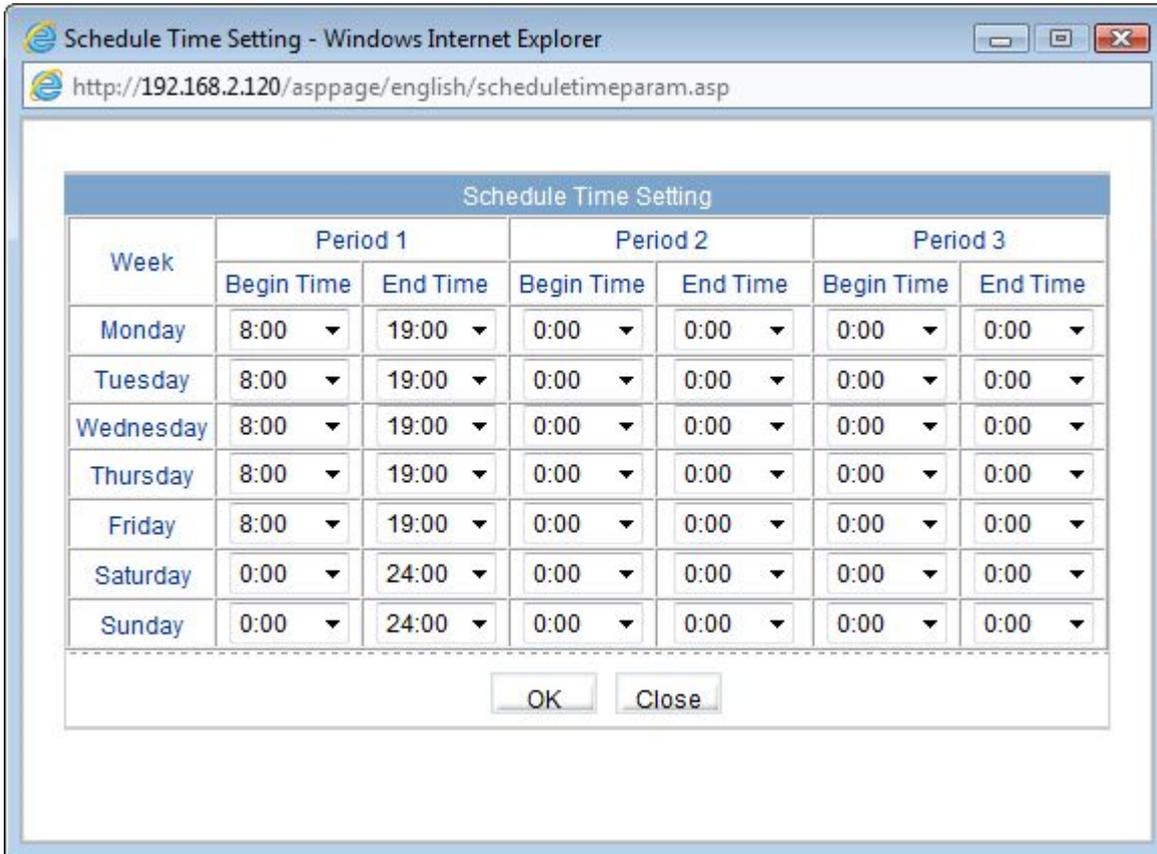


The screenshot shows the 'I/O Alarm Linkage' configuration window. At the top, there is a tab labeled 'I/O Alarm Linkage'. Below the tab, the 'Alarm I/O' is set to '1'. The 'Enable I/O Alarm' section has a checked 'Enable' checkbox and a 'Schedule' button. The 'Output' section has a checked 'Output Channel' checkbox and the value '1'. The 'PTZ' section has 'Camera ID' set to '1', 'Type' as an empty dropdown, and 'Name' as an empty dropdown. There are 'Set' and 'Clear' buttons next to the 'Name' dropdown. At the bottom of the window, there are 'OK' and 'Reset' buttons.

In this section it is possible to determine the actions to be performed in case of external input activation of the alarm operation of which has been programmed just above.

ENABLE - Enable input is used to generate alarms

SCHEDULE - you can make sure that the alarm function is enabled only at certain times of the day or week. For each day of the week there are 3 time slots in which to enable the activation of alarms. In the example that follows in the figure it is enabled the alarm function on weekdays from 8 to 19 and all day during the weekend. CAUTION - The factory is not enabled any time slot. At least one set to be able to activate the detection



OUTPUT CHANNEL - Defines whether to activate the alarm outputs when the alarm input is activated

PTZ - In the speed dome motorized cameras it is possible after the trigger input alarm invoke an automatic shift function (preset, tour, scan, track / pattern). These cameras are for this reason equipped with a number of inputs in order to control the camera has moved according to the activation of sensors

local or
microswitches.

CONFIGURATION ALARM / MOTION ALARM



Motion Alarm

Camera ID: 1

Motion Parameter

Enable Schedule Motion Area

Output

Output Channel: 1

PTZ

Camera ID: 1

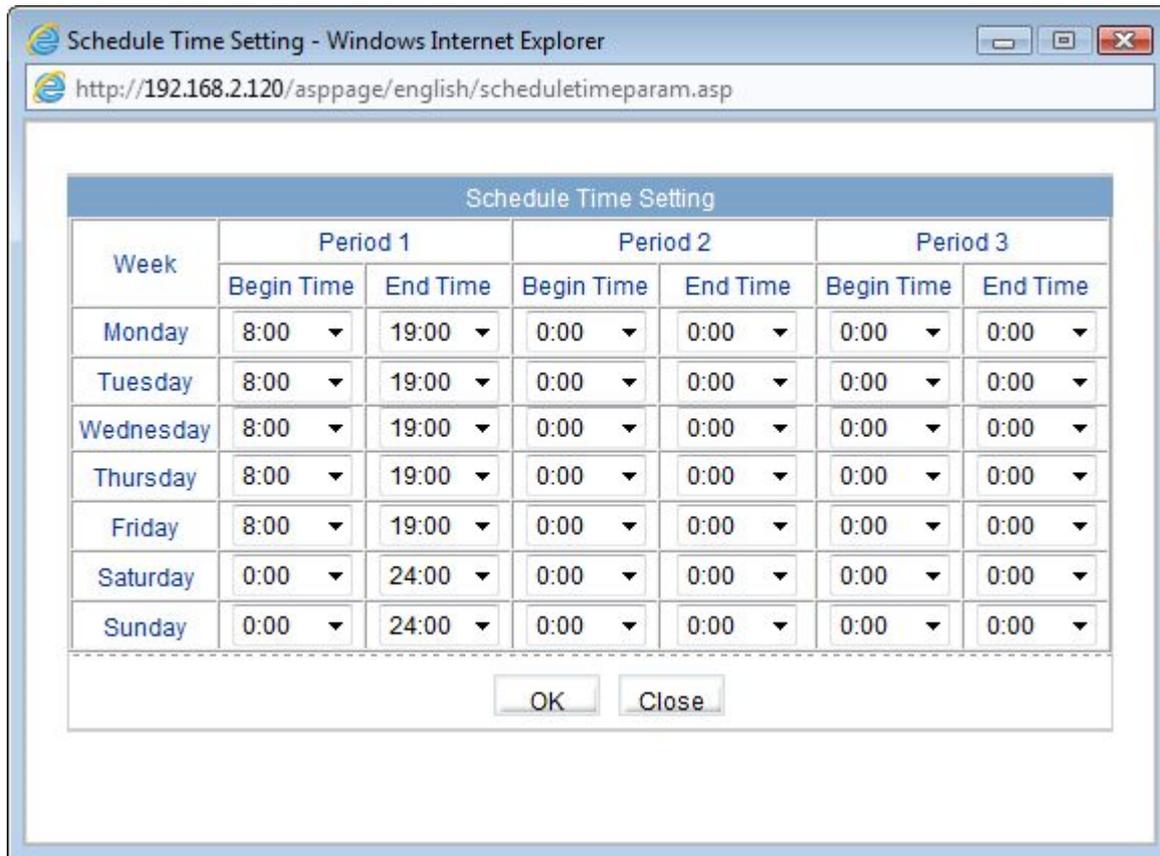
Type: _____

Name: _____

The RH cameras are able to detect an intrusion through the analysis of the recorded and generate significant alarm actions. In this section you can set the parameters of the Motion Detection and determine the actions to take in case of alarm MOTION.

ENABLE - Enables the use of the MOTION DETECTION to generate alarms

SCHEDULE - you can make sure that MOTION is enabled only at certain times of the day or week. For each day of the week there are 3 time slots in which to enable the activation of alarms. In the example that follows in the figure it is enabled the alarm function on weekdays from 8 to 19 and all day during the weekend. **CAUTION** - The factory is not enabled any time slot. At least one set to be able to activate the detection



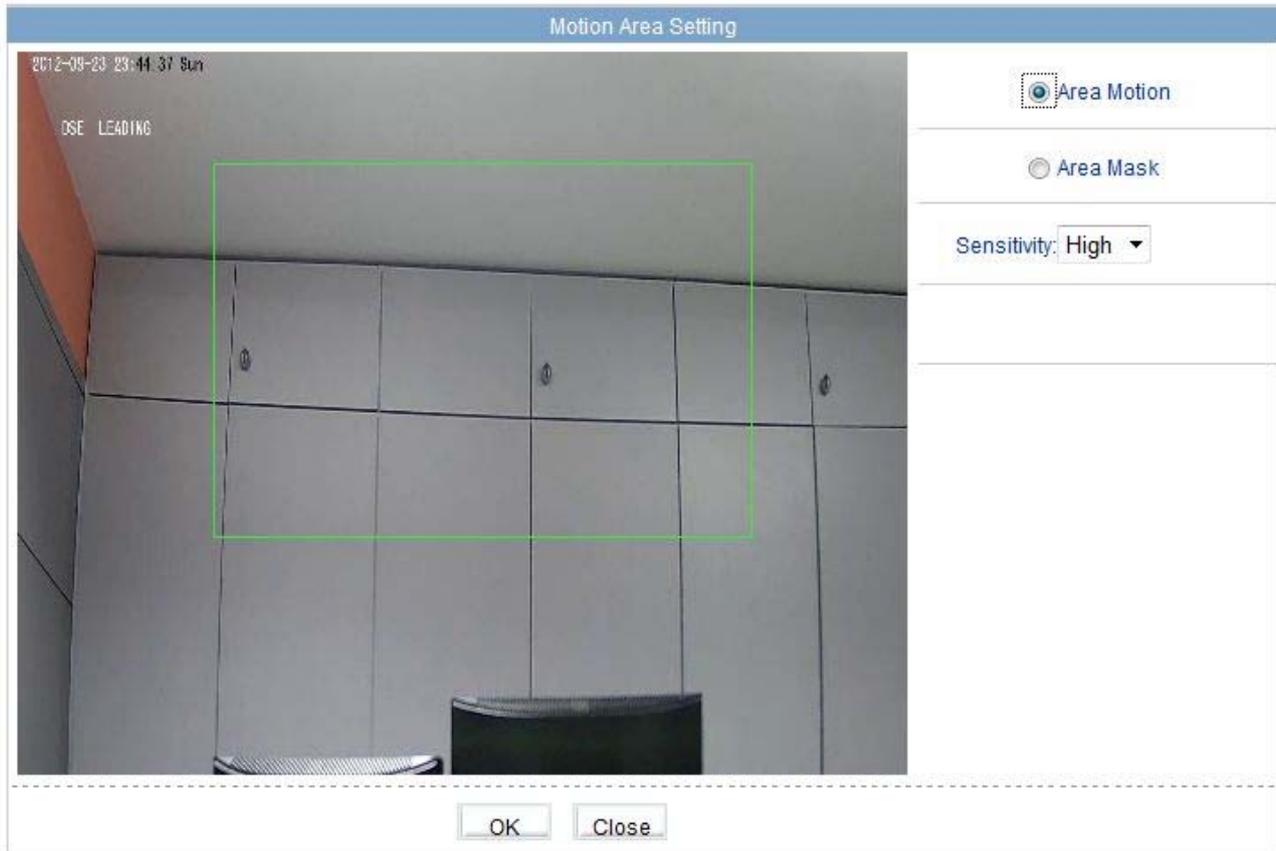
MOTION AREA

By pressing this button you can select the area to consider in motion detection. E 'can act in two ways

MOTION AREA - Drag the mouse on the screen to define the area where the survey will be valid. To remove the mask, click the right mouse button.

MASK AREA - Drag the mouse on the screen to define the area where it will NOT valid detection. To remove the mask, click the right mouse button.

SENSITIVITY - Adjust the sensitivity of detection Low, Medium, High.



OUTPUT CHANNEL - Defines whether to activate an alarm output when motion is triggered

PTZ - In the motorized speed dome cameras it is possible by following the activation of the motion invoke an automatic shift function (preset, tour, scan, track / pattern).

ALARM CONFIGURATION / SETTING ALARM





Set the idle time to maintain compulsory between one alarm and the next.

LOCAL RECORD / RECORD POLICY

The RH cameras can accommodate a microSD card inside to record video locally on the camera. In this section you set the recording options.

Record Policy

Camera ID: 1

Schedule Record

Enable

24*7H Record Schedule Record

Alarm Record

Enable Locked Files

Pre Record: 5 Sec (0-30Sec)

Post Record: 5 Sec

I/O Alarm, Alarm In:
1

Motion Alarm, Channel:
1

Record Quality

Stream: stream1

Resolution: 1920x1080

Frame Rate(fps): 25

I Frame Interval: 2

Bit Rate Type: VBR

Bit Rate(kbps): 8000

Quality: 5

Record Rule

Record Audio

Storage Rule: Save Days

Number of Days: 0

SCHEDULE RECORD - The first section allows you to set continuous recording or



Timed. Clicking 24 * 7H RECORD the camera always records on SD card 24 hours a 24. Alternatively you can choose SCHEDULE RECORD to set up recording at specific times depending on the day of the week.

ALARM RECORD - The second section allows to set the recording parameters in case of alarm (motion or input). Click ENABLE to enable this type of recording. Click the entry of alarm (I / O ALARM) and / or MOTION ALARM to make sure that the recording takes place after the trigger input or external of the motion detection. If you set a time in seconds in the PRE-POST RECORD RECORD spaces and will also record the images before and after the event (max. 30 sec.). The LOCKED FILES option to prevent valuable recordings in the alarm being overwritten.

RECORD QUALITY - Choose which of the three streams managed by the camera will be recorded on the SD card

RECORD AUDIO - Click to enable audio recording.

STORAGE RULE - E 'can decide whether to record continuously on the SD card, overwriting older images at the end of the ability or set the maximum number of days to keep in memory to enforce any recommendations relating to privacy.

LOCAL RECORD / RECORD DIRECTORY

The RH cameras are able to record video independently without the need for external recorders. The videos can be stored on three types of support:

MICRO SD-CARD INTERNAL - Inserted in the camera slot

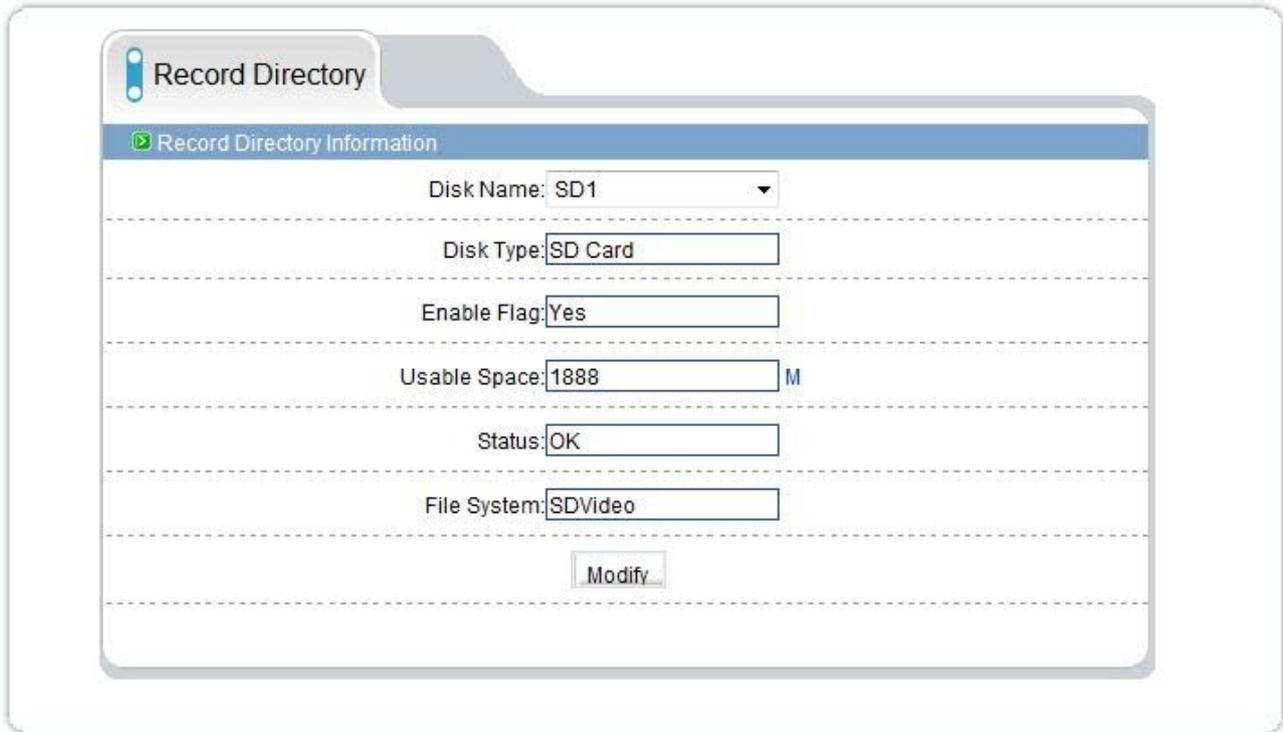
FTP - Uploading to an FTP server

NAS - Archiving on a network storage device (Network Attached Storage)

CAUTION: Note that the camera does not perform recording on the local media at once so it is good to choose one of these media. In the case it is enabled more than one, the camera will record on the first support enabled and will pass to the second only in case it proves impossible to record on the first.

FILING ON SD CARD

In the first DISK NAME box to choose SD card



This section displays the status of SD internal memory state. If it is the first time you insert the SD card must format by pressing MODIFY



Click FORMAT and wait for the formatting is complete. There are 2 modes of file system for formatting: SD Video and EXT3. For practical purposes the two file systems are equivalent: SD Video is a proprietary file system and EXT3 file system is used by GNU / Linux systems.

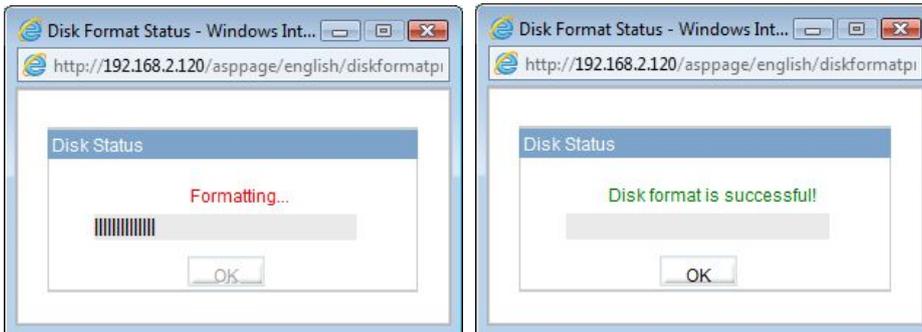
CAUTION - To be able to proceed with formatting is necessary that the scheduled recordings and / or are suspended alarm, by acting on the buttons enables / disables the corresponding sections of the RECORD POLICY table already illustrated above.

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STANDARD RH - IP CAMERAS ONVIF



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The camera records on SD card based on the previously already seen settings. Note that you can not remove the SD card and read it with a PC because of the different file system. For viewing of the recordings on the SD card to make the remote search using the NetVMS program that allows both to see the recorded files is to export and save them to your PC in .TS format playable with Free VLC player or the player to player included in the camera CD. It is recommended to use the Player to the correct audio playback.

ARCHIVE VIA FTP

In the first DISK NAME box, select FTP and click MODIFY

In the window you can enter all the access parameters of the FTP server: address, port, and login information. FREE SPACE In the box you can insert a memory space to be left free to avoid taking up the entire hard drive of the server and put in difficulty the operating system.

FILING ON NAS

The storage on a NAS on the network is very convenient because it allows you to record images without taking an always running PC. In the first DISK NAME box, click NAS and click



MODIFY

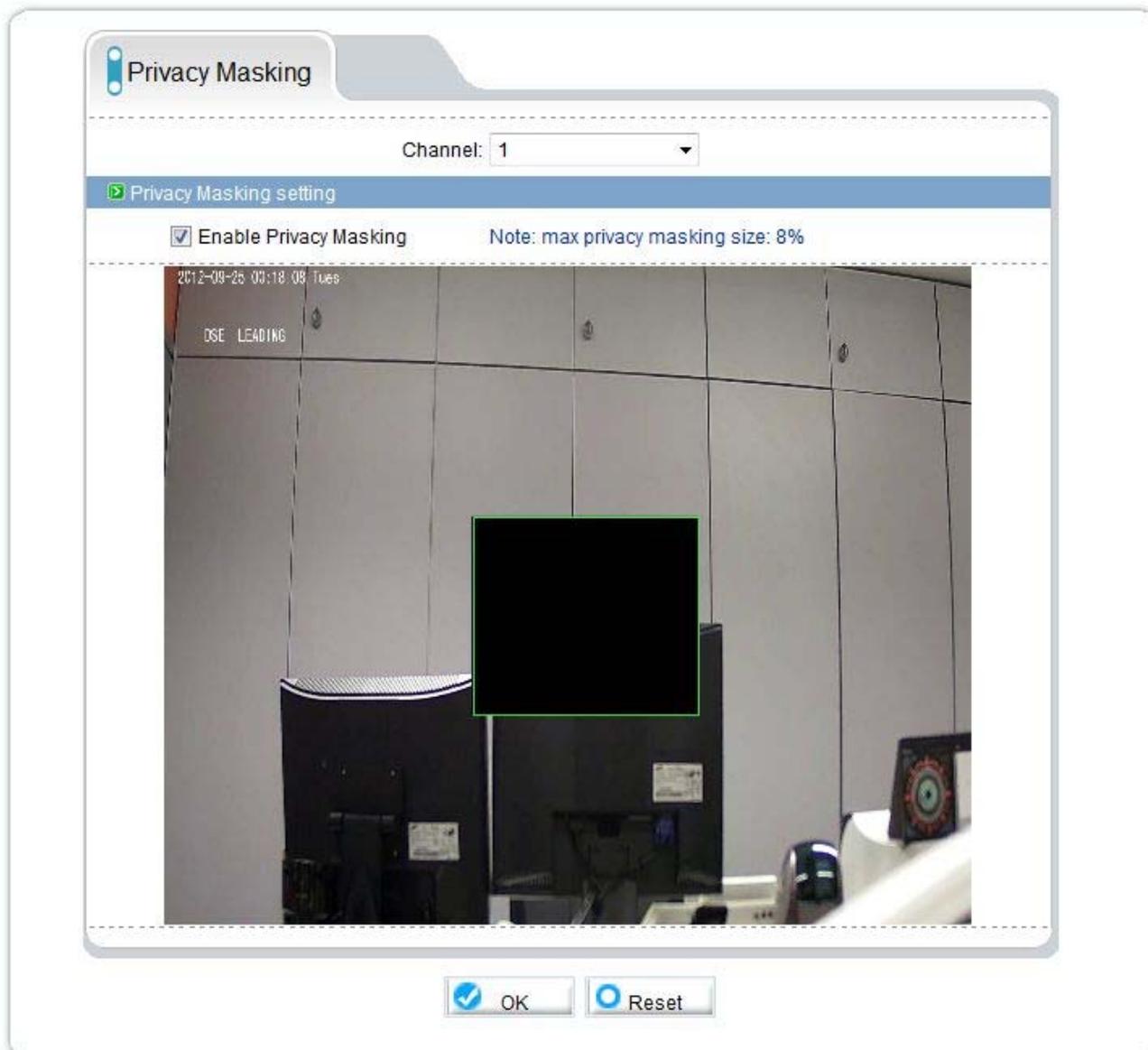
The image shows a 'Record Path Modify' dialog box with the following fields and options:

- Enable
- IP: 192.168.2.210
- Path: /DSE video
- Accounts: DSE
- Password: [masked]
- Confirm Password: [masked]
- File System: cifs (dropdown menu)
- Use All Space
- Free Space: 5000 Megabyte(s)
- Buttons: OK, Close

In the window you can enter all the relevant parameters of the drive network storage: address, location, and access data. And 'possible to manage CIFS and NFS file systems. FREE SPACE In the box you can insert a memory space to be left free to avoid taking up all the space available in the NAS. Alternatively it is possible to choose USE ALL SPACE to allow the use of the whole memory capacity.

PRIVACY MASKING

The RH cameras allow you to set privacy zones to mask images to view that jeopardize the privacy, such as a worker to work in a company



Click ENABLE PRIVACY MASKING to enable the feature, then dragging the mouse to draw the perimeter of the area you want to mask.

You can set multiple masks, but their total area can not exceed 8% of the total image. To eliminate the masks to use the RESET button.

Any change requires you to press the OK button to apply.

NETWORK SERVICE / PPPoE



The RH cameras are usually connected to a network that has access to the Internet run by other equipment. However, you can imagine to install an even alone camera, directly connected to an ADSL modem for Internet access. And 'the case of remote cameras, for example, used for traffic control.

In this case, the camera is able to make the LOG IN to gain access to the Internet using PPPoE. Click ENABLE PPPoE to enable this feature and enter your log in credentials. When you turn the camera will automatically log in to establish the connection to the Internet.

SERVICE NETWORK / DDNS

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To connect to an IP camera through the Internet is highly advisable to have a fixed IP address so that you always know the exact address to connect. If it can not get from your provider, all cameras in the range support services DDNS (Dynamic DNS) that allow you to constantly monitor the machine's IP address. These services, also available for free, provide the user with a domain name that you type into your browser. The DDNS provider redirects communication to the IP address that the camera has



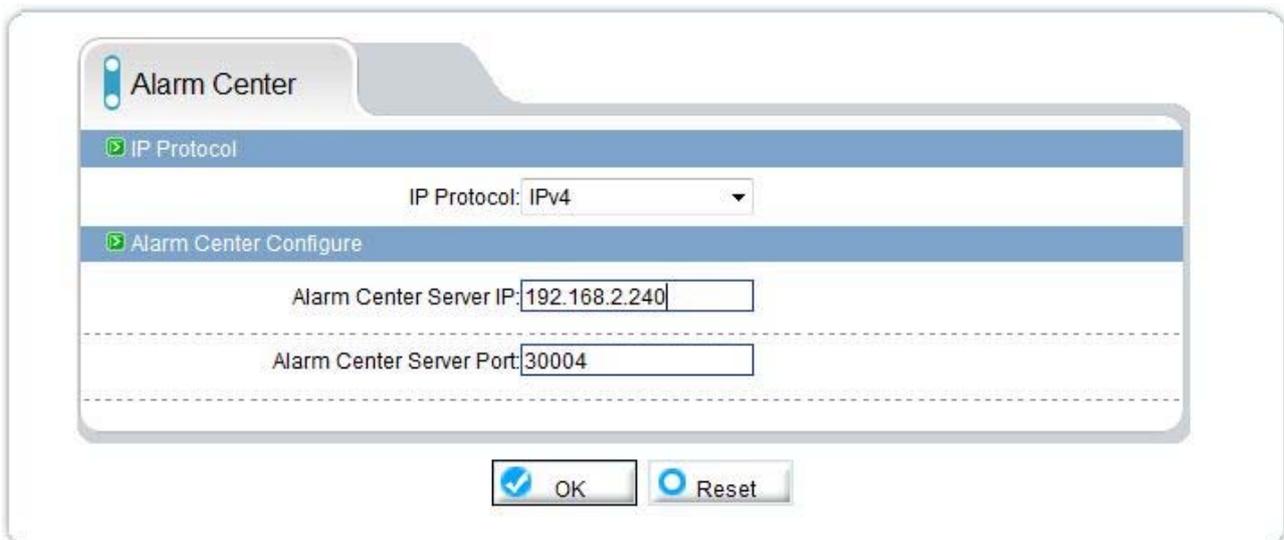
The RH Series cameras support the most common DDNS services and are able to send to the DDNS provider periodically Internet IP address assigned to them. You can set the following parameters:

PROVIDER: Supplier of DDNS service. At the time of publication of this manual, the www.dyndns.com services are available and www.3322.org

DOMAIN NAME: personal domain name that is assigned by the DDNS provider to the device

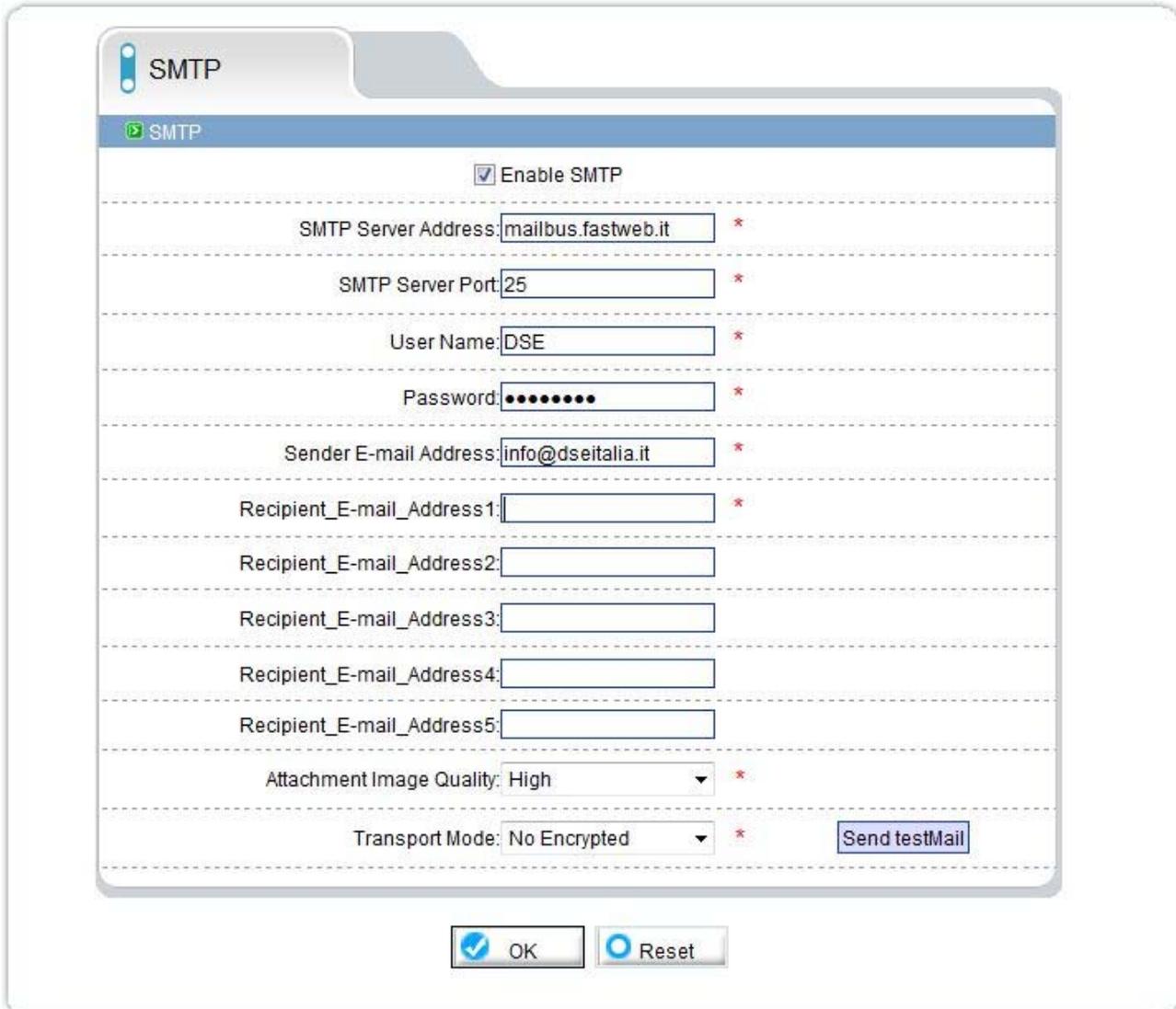
ACCOUNTS / PASSWORD: account authentication for access to the service.

SERVICE CENTER / ALARM CENTER



The RH series cameras are able to send alarm messages to the NetVMS control software (see separate manual). In this section you set the IP address of the PC where you install the software and NetVMS the communications port used for sending alarms to default in the software is the 30004.

SERVICE CENTER / SMTP



The screenshot shows the SMTP configuration window. At the top, there is a tab labeled 'SMTP' and a sub-tab also labeled 'SMTP'. Below this, there is a checkbox for 'Enable SMTP' which is checked. The configuration fields are as follows:

- SMTP Server Address: mailbus.fastweb.it *
- SMTP Server Port: 25 *
- User Name: DSE *
- Password: [masked] *
- Sender E-mail Address: info@dseitalia.it *
- Recipient_E-mail_Address1: [empty] *
- Recipient_E-mail_Address2: [empty]
- Recipient_E-mail_Address3: [empty]
- Recipient_E-mail_Address4: [empty]
- Recipient_E-mail_Address5: [empty]
- Attachment Image Quality: High *
- Transport Mode: No Encrypted *

At the bottom right of the configuration area, there is a 'Send testMail' button. Below the configuration area, there are two buttons: 'OK' and 'Reset'.

The RH cameras can send alarm emails following an event generated by the entry of alarm or motion detection. The e-mail is attached a JPEG photos taken instant the event began. In this tab you set the SMTP server and the recipients to send the message (max. 5). To set the parameters to check with your Internet provider. Also ensure that the provider does not prevent sending email from any device other than the mail client with spam purposes.

SMTP ENABLE - Enables sending email

SMTP SERVER - Name of the SMTP server that is used for sending email

SMTP SERVER PORT - Port used for sending emails (usually 25)

USER NAME / PASSWORD - If the SMTP server requires a user name and password to send email, you can enter them. Typically Italian provider does not require this authentication.



SENDER EMAIL ADDRESS - the return address that will appear in the email

posted by

camera.

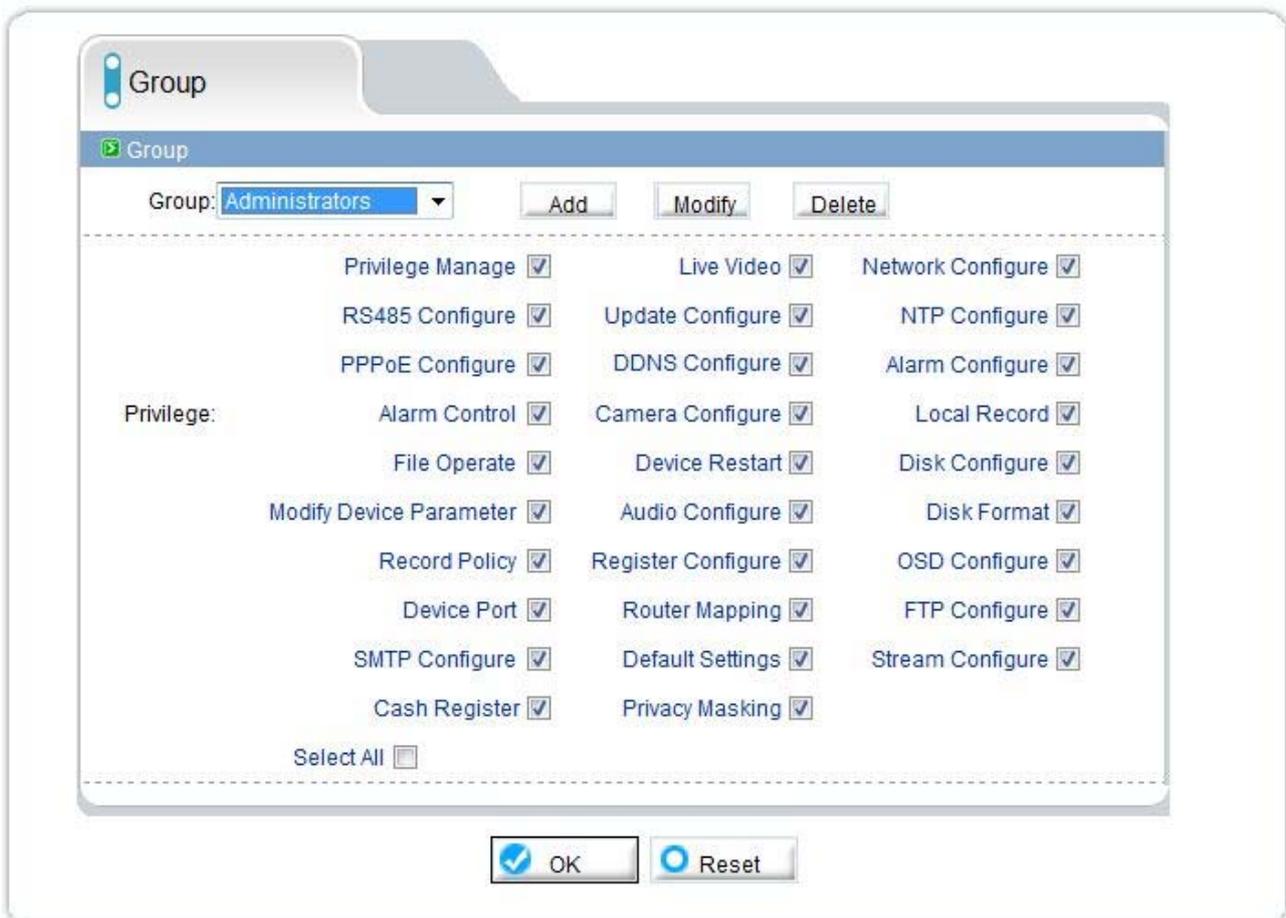
RECIPIENT E-MAIL ADDRESS - Max. 5 recipient addresses

ATTACHMENT IMAGE QUALITY - attached image quality. A higher quality corresponds most file size and therefore more time was needed for sending.

TRANSPORT MODE - The cameras support sending emails encrypted with SSL encryption and STARTTLS

SEND TEST MAIL - And 'you can send an email test to check the proper functioning

PRIVILEGE MANAGER / GROUP



Access to the camera is protected by a log-in procedure. In this section you set of user groups to each of which corresponds to a level of personalized access. There are already three groups of factory set up users.

ADMINISTRATOR - Full access to all functions. You can not eliminate

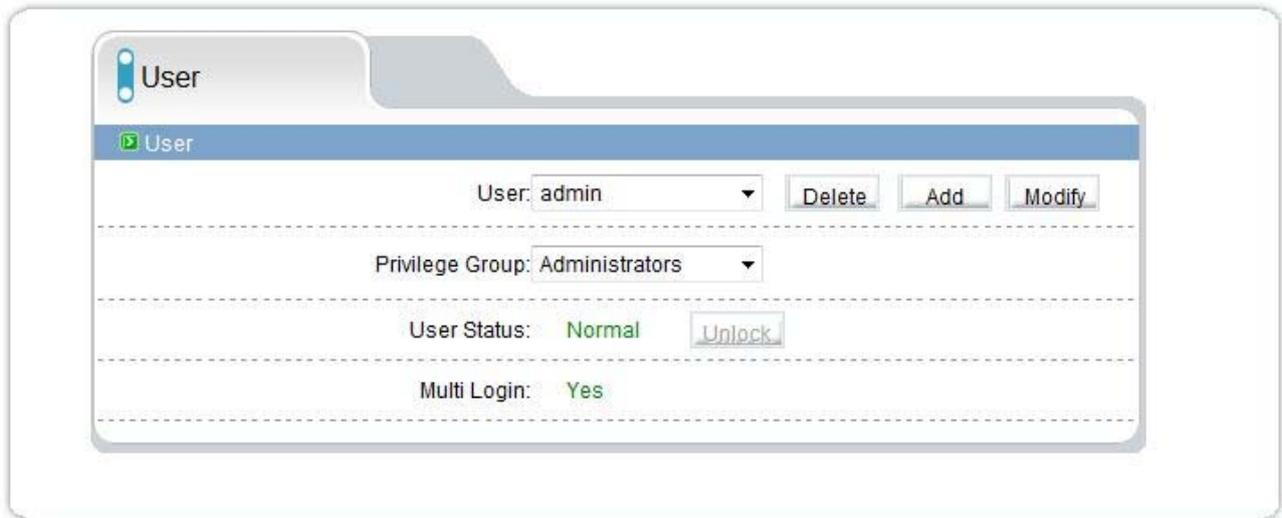
OPERATOR - Access to all functions except those of the administrative level (changing codes etc.)

AVERAGE USER - Access to display only



You can change the qualification of the individual groups and also create new custom.

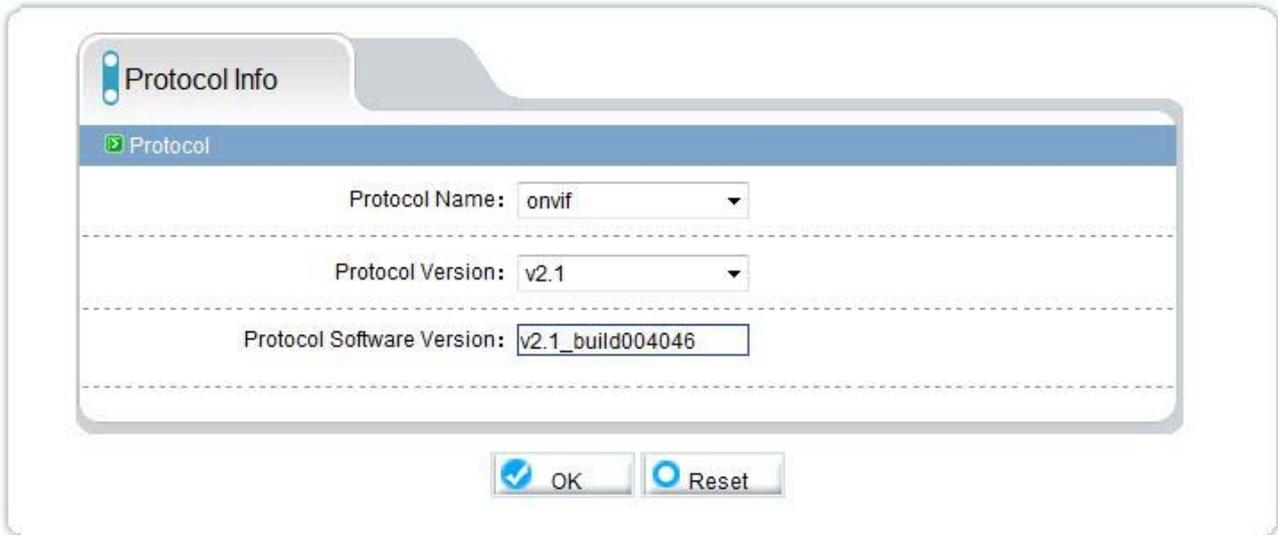
PRIVILEGE MANAGER / USER



On this page you create users who can access the camera using the buttons ADD, MODIFY, DELETE. Each user can be combined with a pre-set group that determines its access to the camera level. The LOG-IN MULTI option allows the user to log in simultaneously from multiple locations (client) simultaneously. As of firmware version 1.8 you can not change the admin password in this section. To do this act on the CHANGE PASSWORD button at the top right.



PROTOCOL



This window defines the protocol used by the camera in the conversation with the client. The RH cameras use the ONVIF protocol that has established itself as a universal standard in the world of IP cameras. The full ONVIF integration allows you to use the RH cameras with the majority of software platforms for recording and NVR on the market. The ONVIF latest version at the time of publication of this manual is 2.1.

PROTOCOL / SECURITY



The ONVIF protocol provides the ability to use as a security option user verification.

DEVICE RESTART

This window allows you to reboot the camera

DEFAULT SETTING

This window allows you to restore the factory settings.



CMOS Sensor Configuration

The configuration of the browser buttons allow you to define all the settings of the camera with the exception of those which relate to the detection of C-MOS sensor behavior. The C-MOS sensor settings allow to intervene on the visual rendering of the camera correcting any video yield issues.

To access the C-MOS's settings, you click the right button in the live video pane and choose SENSOR CONFIG.

A window opens with several folders is explained in detail in the separate manual on the CD.