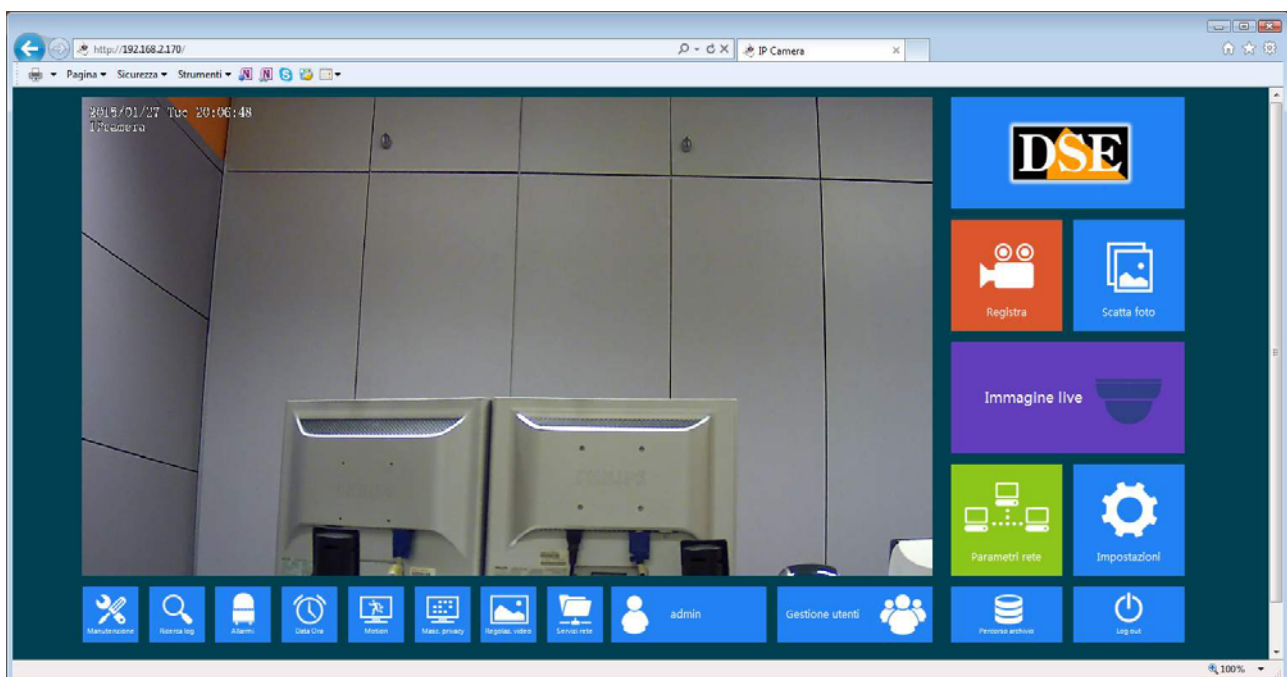


Configuration Options

RK Series IP Cameras



Operative manual

for the installer and for the user

Using the graphical user interface of Internet Explorer.



Introduction

The RK Series cameras boast a number of configurable operating options. E 'can customize these settings by cameras with Internet Explorer.

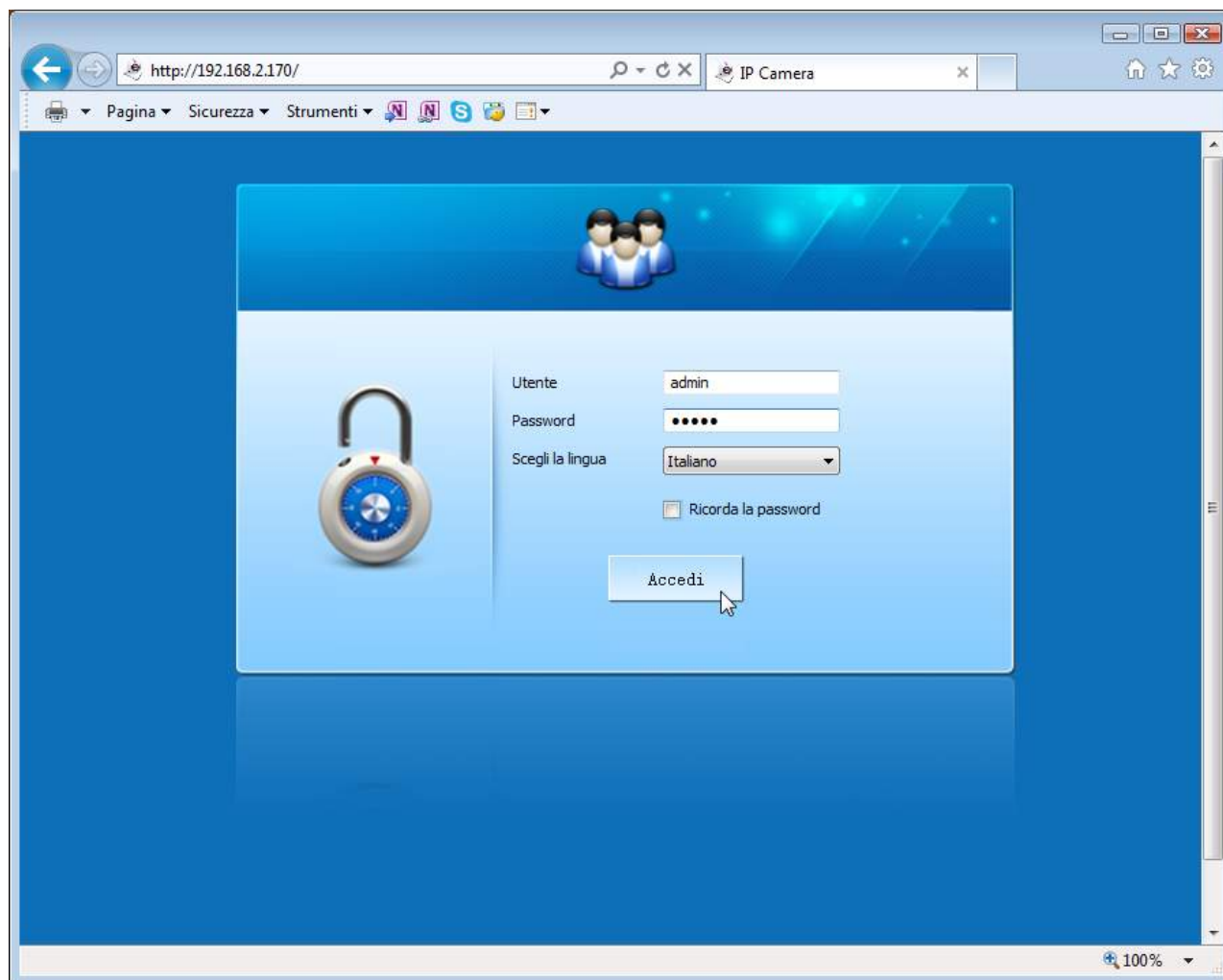
In this manual are explained one by one all the configuration options.

Login with IE browser

In the camera installation manual explains how to access the cameras with your PC using the Internet Explorer browser

If you have never done before access with the browser on your camera should resume the installation manual and follow the instructions to connect successfully.

In this guide we start from the login window to enter the username and password for access.



The RK Series of cameras factory login details are:

USERNAME: admin PASSWORD:

admin

MANUAL CONFIGURATION

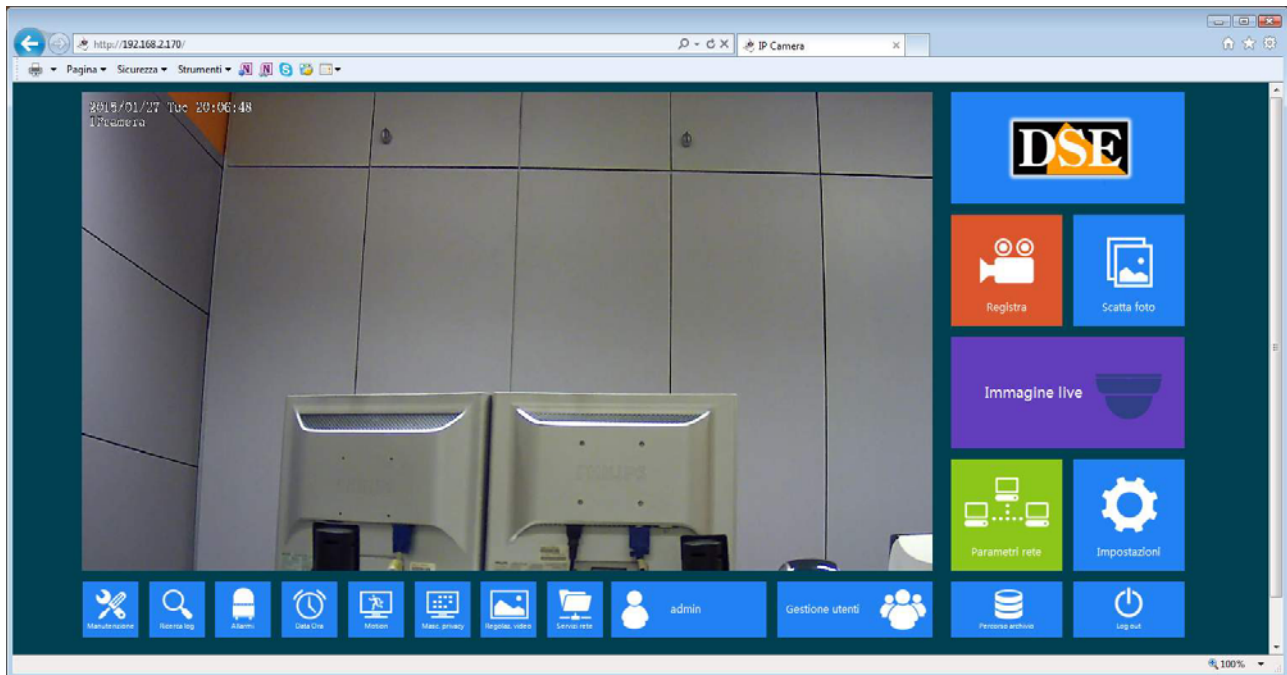
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It 'important to choose the **Italian language** to obtain the interface that is used in this manual

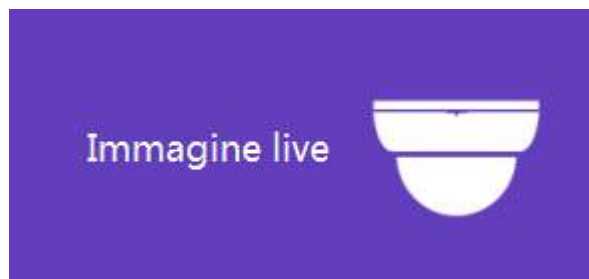
The access to the camera control mask.



Around the display window shows the buttons leading to the various configuration sections.

CAUTION - E 'can connect several clients simultaneously up to a maximum of 15 per camera client.

in live viewing controls

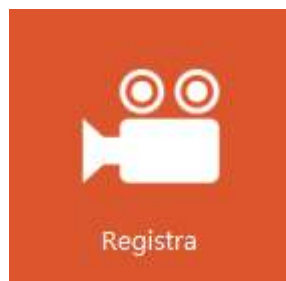


At start of the browser page automatically opens LIVE Vision camera. If this does not happen you need to resume the installation manual and check the correct installation of ActiveX components.

If you have opened other configuration windows, press the button **LIVE IMAGE** to return to live mode.



Pressing the button **TAKE A PICTURE** It saves on the PC the frame that you are seeing at the time. The image is automatically saved in JPG format in the native resolution of the video stream.



When you press the RECORD button you start to save on the PC the movie you are watching in real time. The REC written in red appears at the top right in the image to indicate the current recording. Press the button again to stop recording and save the file. The movie is saved in AVI format in the native resolution of the video stream. Note that registration via Internet Explorer is intended for saving short clips and not

MANUAL CONFIGURATION

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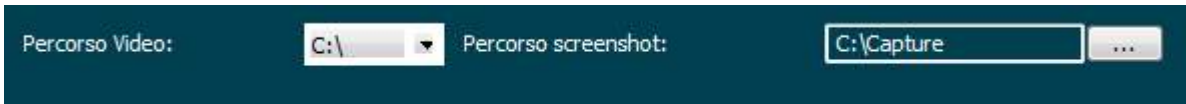


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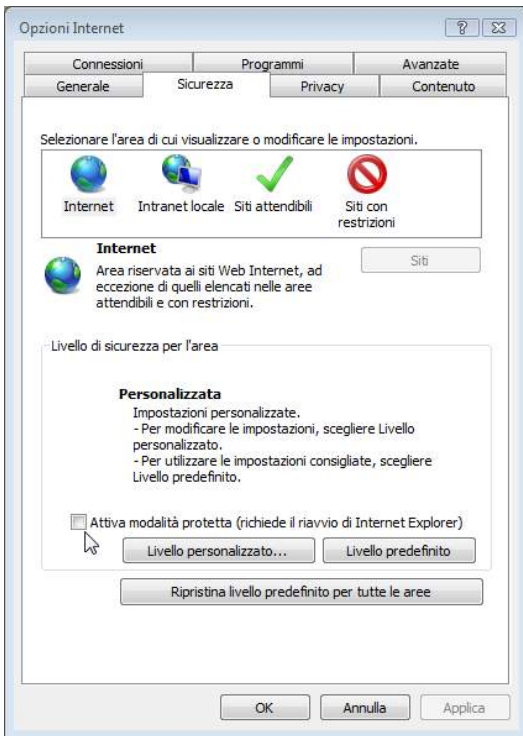
for continuous recording 24 hours 24 for which you must use an NVR.



By pressing this button you can define the save folder of images and video



If you encounter a malfunction of the capture check that you have not enabled the option ACTIVE MODE 'PROTECTED in the browser's security settings

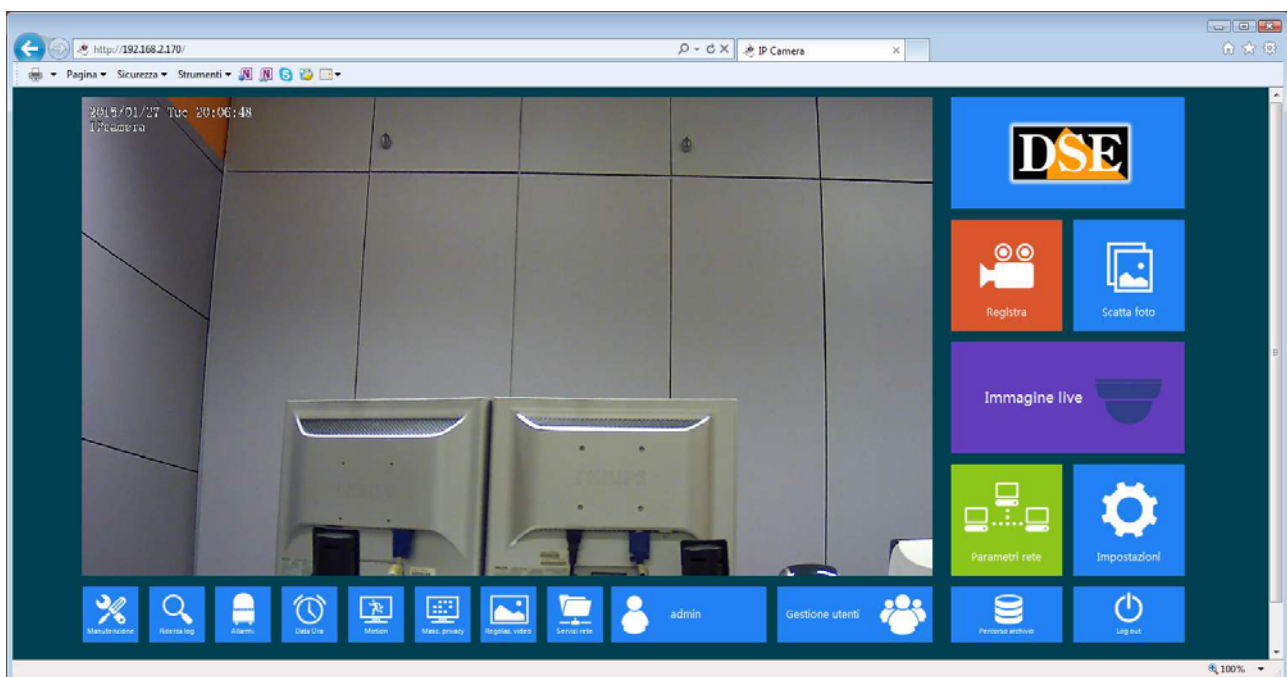




CONFIGURATION

All the camera configuration pages are accessed via the web interface buttons.

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 RK series, with slight variations according to the facilities and the individual model-specific functions.



SETTINGS



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 which require 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.

On a local network typically by adjusting the streaming to engage a maximum of 2000/3000 Kbps per camera you get one FullHD streaming of good quality and can be connected to many cameras without introducing much latency.



The parameters on the left relate to the overall operation of the camera

NAME ROOM - E 'can assign a distinctive name of the camera

STREAM TYPE - 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. In this box you can choose to use one, two or three streams. This choice modifies the underlying field in an automatic way.

CODE - Depending on your previous choice here you will find the combinations of 1,2 or 3 resolutions to be assigned to 1,2,3 stream.

These cameras only use dynamic compression H264, compressions older as MPG4 MJPEG and have been abandoned. As a rule, you will choose the main stream in maximum FullHD resolution and stream 2 and possibly 3 at 352x288 resolution for use with low bandwidth available

GUY - Here you set the resolution that will be used by the camera only in the live viewing window of the browser Internet Explorer.

H264 PROFILE - Allows you to choose the type of compression H264: High-Profile (recommended) or Main-Profile.

SETTINGS OSD - Here you can define your overlays to display the image. E 'can choose to show the time (defining the format) and / or the camera name (editable). The OSD POSITION box determines where the overlay. The function

MANUAL CONFIGURATION

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MIRROR activates the tilting of the image normally used in the second half behind the observer or when the camera is mounted upside down for installation requirements.

STREAM 1,2,3 - in these folders are set further details about the camera's video stream, the number and resolution we have already seen in the previous steps.

FRAME RATE - The number of frames per second that make up the video stream (max. 25/30 - min. 5). Consider that 25/30 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.

BITRATE CONTROL - 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, the camera maintains a constant bit rate that can be set in the box above. In the VBR mode instead of changing the bit rate camera in different operating conditions in order to maintain a constant video quality.

BITRATE - It represents the maximum bandwidth that the camera deal with its video streaming. As a rule should not exceed the value of 3000/4000 Kbps

The RANGE FRAME - E 'the interval between 2 consecutive Key-Frame in the H.264 compression and can be set from 1 to 10 seconds. A shorter interval corresponds greater accuracy in the temporal position of the video but greater use of bandwidth. And 'it recommended a very low value.



NETWORK PARAMETERS



In this section you define all of the camera's network settings.

Utilizza DHCP

| | | | |
|-------------|---------------|-----------------|------|
| IndirizzoIP | 192.168.2.170 | Porta HTTP | 80 |
| Netmask | 255.255.255.0 | Porta RTSP | 554 |
| Gateway | 192.168.2.1 | Porta cellulare | 6666 |
| DNS | 192.168.2.1 | | |

P2P

FREEIP

| | | |
|---------------|---------|-------------|
| | | |
| 9844020619169 | IOS APP | Android APP |

Typically, these parameters are programmed during installation with IPCSEARCH program.

DHCP USES: The cameras support both manual IP address assignment is automatic assignment from a DHCP server on the network. The latter is typically not used because it could cause the change in the address time of the camera.

IP ADDRESS / NETMASK / GATEWAY: The classics are parameters that allow the device to communicate with your network. Normally these parameters are assigned during the installation with the IPCSEARCH software as illustrated in the installation manual.

DNS - And 'the DNS server address that allows the camera to interpret the site addresses

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web. It is assigned by the Internet Service Provider (ISP) to your network.

P2P - This function can be enabled if you want to access the web via the camera using the WWW.FREEIP.COM cloud server as shown in the installation manual. The first QR code on the left shows the SERIAL NUMBER of the camera that is already registered on the server. The second and third QR code allow you to download the mobile application.

HTTP PORT - And 'the port used by the camera for connecting with your browser. The default port 80 is used by the browser normally unless you specify a different port. If you change this port will need to specify the new port in the browser address bar to each link. For example, to connect to the address 192.168.2.120 on the gate 72 should be inserted `http://192.168.2.120:72`

PORT RTSP: And 'the port used for video streaming with RTSP protocol to clients such as VLC, etc. REALPLAYER Factory: 554

CELL PHONE HOLDER: And 'the port used in the connection to 3G mobile devices. Factory: 6666

For more information about network ports see the installation manual.



NETWORK SERVICES



In this section we define the settings of the various network protocols that the camera is able to use.

Il server richiede autenticazione

| | | | | | |
|--------------|--|-------------|--|---------------------------|---|
| Nome utente | <input type="text" value="User@domain.com"/> | FTP Server | <input type="text" value="192.168.1.1"/> | Porta | <input type="text" value="21"/> |
| Password | <input type="password" value="••••••••"/> | Nome utente | <input type="text" value="admin"/> | | |
| Mittente | <input type="text" value="User@domain.com"/> | Password | <input type="password" value="•••••"/> | | |
| SMTP Server | <input type="text" value="SMTP.domain.com"/> | Porta | <input type="text" value="25"/> | Posizione del salvataggio | <input type="text" value="Default_Folder"/> |
| Destinatario | <input type="text" value="User@domain.com"/> | | | | |

Abilita DDNS

| | | | | | |
|--------------------|--|----------------|---|---|--|
| Tipo DDNS: | <input type="text" value="No-IP"/> | Nome dominio: | <input type="text" value="User.no-ip.org"/> | | |
| DDNS Account: | <input type="text" value="admin"/> | DDNS Password: | <input type="password" value="•••••"/> | | |
| Stato connessione: | <input type="text" value="Login effettuato"/> | | Tipo servizi: | <input type="text" value="Utente ordinario"/> | |
| Links al provider: | <input type="text" value="No-IP DDNS to apply"/> | | <input type="text" value="No-IP DDNS to help"/> | | |

Abilita protocollo

Autenticazione con password Video

Abilita GB

SEND MAIL

The first 5 boxes on the upper left regarding the transmission of e-mail in case of alarm.

The RK cameras can send alarm EMAIL following an event generated by the motion detection and attach a picture or video clip.

THE SERVER REQUIRES AUTHENTICATION - Enable if the SMTP server requires password checking by sending emails.

USERNAME / 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 - the return address that will appear in the email sent by the camera.

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

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DOOR - Port used for sending emails (usually 25)

RECIPIENT - Recipient's email address

UPLOAD FTP

The upper-right boxes relate to the automatic sending of images to an FTP site on alarm. The RK cameras can upload images or video on a website via FTP following an event generated by motion detection.

FTP SERVER - Address of the FTP server

DOOR - FTP communication port (usually 21)

USERNAME / PASSWORD - Access credentials to the FTP server

POSITION OF THE RESCUE - Server Directory to upload files

DDNS

To connect to an IP camera through the Internet typically passes through the NVR in charge of managing remote access. However, it is also possible to make a direct access to the camera where it can be useful.

If remote access is handled directly by the camera it is definitely 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 at that moment.

The RK 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:

ENABLE DDNS - Enable Service

TYPE DDNS - Supplier of DDNS service. Are supported: No-IP and Dyndns

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

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

Recall that an alternative to the DDNS service you can always use the cloud server P2P WWW.FREEIP.COM whose use is free as it is included with the camera, as shown in the installation manual.

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AUTHENTICATION WITH VIDEO PASSWORD - If the camera connects a DVR or software with ONVIF standards can be obtained or not the correct password access to view streaming video. If this option is disabled a ONVIF DVR will be able to receive streaming video even without entering the correct login credentials. This option also has validity in connection with RTSP client.

The other items on this page are used and relate to undocumented specific applications.

ADJUSTING VIDEO



In this section we define the camera's DSP settings acting directly on video performance and quality of recovery.

BRIGHT / Contrast / Saturation / Sharpness - Adjust the camera image directly allowing to compensate for any non-optimal situations.

RESTORING DEFAULT - Restore the factory settings in case the result of the previous manual settings is not satisfactory.

REMOVAL FILTER IR - All cameras in this range include day / night function with automatic removal of IR filter (ICR). To understand the importance of this feature it must first remember that all color cameras mounted in front of the sensor an IR filter to reduce the passage of infrared components of light that are not visible to the human eye.

Without using the IR filter in the camera would produce strange colors, not corresponding to those



we're used to seeing.

In a color camera devoid of day / night function, the IR cut filter presence makes it impossible to use the infrared lighting.

In order to allow the passage of infrared light in the night mode, the cameras of this series integrate a mechanical device capable of **physically removing the IR cut filter at nightfall. This is called ICR (Infrared Cut-Filter Removable) and ensures the camera performance day / night.**

The camera automatically switches day / night depending on the ambient light. In the night mode, the recovery takes place in B / N and turn on the IR illuminators. With this parameter adjusts the reaction speed of the camera when removing the filter in response to a variation in brightness. It is a necessary delay to avoid accidental switching.

NOISE REDUCTION 3D - Function for Digital Video noise reduction if any.

WHITE BALANCE - In this window it is defined as the white balance in order to make the realistic white color in all lighting situations. The AUTO mode is recommended for most applications.

In case of particular and can set the MANUAL mode lighting that offers the possibility to establish the white tone manually with the sliders below RED / GREEN / BLUE

RULES 'OF EXPOSURE - In this window, you define the behavior of the electronic shutter (diaphragm). The AUTO mode is recommended for most applications.

In special cases it is possible to set the MANUAL mode that offers the possibility of setting the aperture time manually SHUTTER in the box below. It should be noted that with manual setting, the camera will not be able to adapt to changes in brightness. You can set times from 1 second to 1/10000 sec.

In manual setting it is also activates the GAIN CONTROL (AGC) which increases the yield of low brightness of the camera, however, by introducing an inevitable video noise.

BACKLIGHT COMPENSATION - This function is used to improve the visibility of a dark subject against a bright background such as a customer walks into a store taken in front.

ANTI FLICKER - Improves shooting a TV screen by avoiding striped effect.

IRIS CONTROLS - available for manual setting goals

METHOD 'IRCUT - Defines the management of day / night mode. the following options: AUTO LDR (automatic day / night transition Depending on the sensor between the LEDs), VIDEO AUTO (automatic day / night transition by analyzing video), COLORS (always daylight mode) WHITE / BLACK are available (always night mode). As a rule, we recommend the LDR AUTO option.

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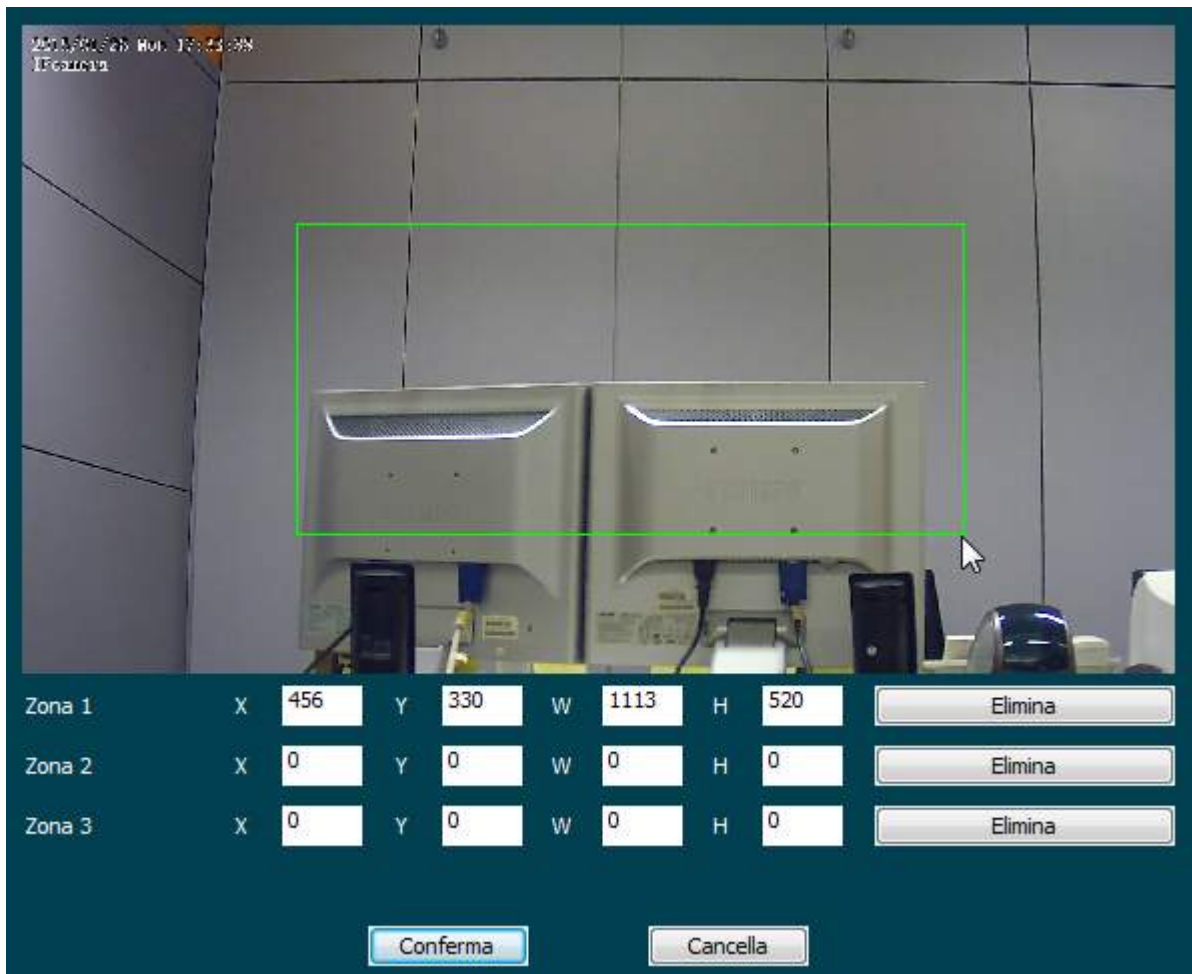
BRIGHT 'WHITE / BLACK COLOR - Defines the brightness threshold at which switching occurs from B / N Color (night / day).

WDR LEVEL - WDR (Wide Dynamic Range) allows to improve vision when they are present in the image areas with different brightness, for example in the case of a remote in an arcade.

PRIVACY MASKS



In this section you can set the disguises in the second half for privacy reasons

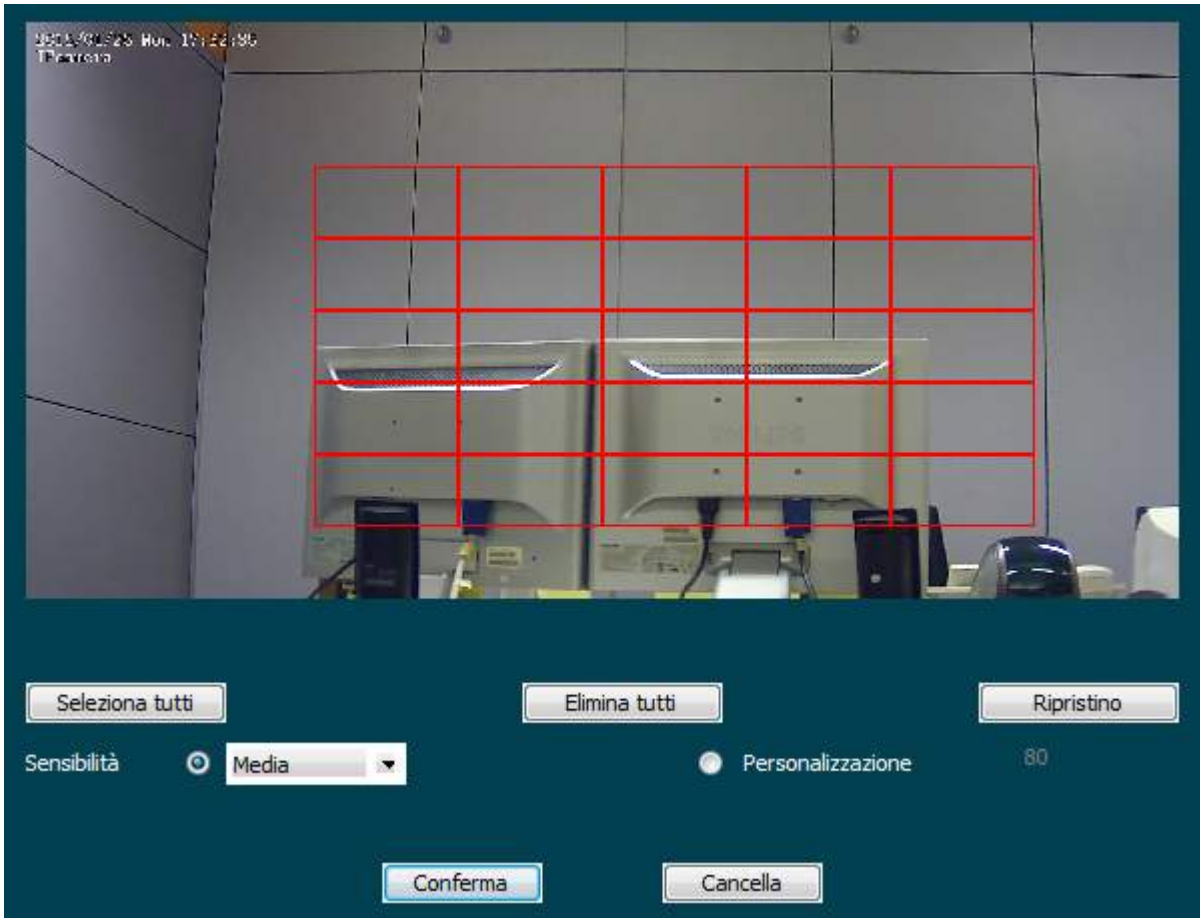


If the camera shooting can adversely affect the privacy of those who is resumed, for example, when the field of view of the camera includes a property of others, or in the surveillance on jobs, it is possible to mask the shooting areas. You can set up to three masks by dragging the mouse on the screen. Press confirm to activate masking.

MOTION DETECTION



In this section we define the detection capability of the camera motion



The RK cameras are able to detect the presence of a moving subject in the shooting field and trigger alarm actions to be specified in the ALARMS section.

In this section is defined, by dragging the mouse on the screen, the area in which the detection will be valid. In addition it sets the sensitivity of detection so as to avoid false alarms. You can choose the default values (High, Medium, Low), or set a more refined value from 1 to 99.



DATE HOUR



In this section we set the date and time of the camera that is optionally shown in overlay and is necessary to a correct operation of various functions.

The screenshot shows a configuration window with a dark blue background. At the top, there is a dropdown menu for 'Fuso orario' (Time Zone) set to 'GMT+01 Berlino, Stoccolma, Roma, Berna, Bruxelles, Vienna, Parigi, Madrid, Amsterdam'. Below this, there are two rows of input fields for 'Ora telecamera' (Camera Time). The first row shows 'Data' (Date) as '2015/01/26' and 'Ora' (Time) as '17:31:51'. The second row shows 'Data' as '2015/01/26' and 'Ora' as '17:32:08'. Underneath, there are three radio button options for 'Impostazioni ora' (Time Settings): 'Impostazioni manuali' (selected), 'Sincronizzare con orario computer' (Synchronize with PC clock), and 'Sincronizzare con server SNTP' (Synchronize with SNTP server). The 'Sincronizzare con server SNTP' option has a text input field for 'Server SNTP' containing 'time.windows.com'. At the bottom, there are two buttons: 'Conferma' (Confirm) and 'Cancella' (Cancel).

The cameras support three types of settings: Manual adjustment, synchronization with your PC clock and automatic Obtaining from NTP Server.

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

ORA CAMERA - The current date and stored in the camera's time

MANUAL SETTINGS - Here you can set the time and date manually and transfer them to the camera by pressing CONFIRM.

SYNCHRONIZED WITH TIME PC - Here you can view the date and time on the PC and send them to the camera by pressing CONFIRM

SYNCHRONIZED WITH SERVER SNTP - Here it is possible to make sure that the camera automatically synchronize the time and date via the Internet with a SNTP server (Network Time Protocol) chosen from the available list.



ALARMS



The cameras are able to handle 2 alarm conditions: motion detection (MOTION) and the network disconnection. This section enables the management of alarms and set the alarm actions to perform.

| | | |
|--|-----------------|------------|
| <input checked="" type="checkbox"/> Abilita allarmi | Durata allarme: | 30 secondi |
| <input checked="" type="checkbox"/> Motion detection | | |
| <input type="checkbox"/> Rete non connessa | | |
| <input type="checkbox"/> Upload FTP | Formato: | JPEG |
| <input checked="" type="checkbox"/> E-mail SMTP | Formato: | AVI |

Conferma Cancella

ENABLE ALARMS - Enable alarm management

ALARM DURATION - Defines the duration of the event of alarm 10 seconds to 10 minutes and also unlimited

MOTION DETECTION - Enable motion detection whose parameters are set in the section MOTION

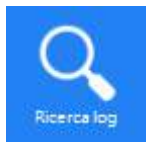
NETWORK NOT CONNECTED - Enables the detection of the network disconnection

UPLOAD FTP - Enable an FTP server in case of alarm. In the FORMAT box you can decide whether to send only one photo choosing JPG or AVI movie choosing. The FTP settings are among the NETWORK SERVICES.

EMAIL SMTP - Enables sending email in case of alarm. In the FORMAT box you can decide whether to send only one message, or attach the photo (JPG) or video (AVI). The SMTP settings are among the NETWORK SERVICES.



SEARCH LOG

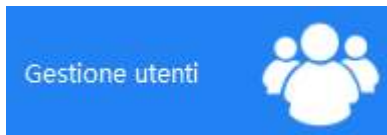


The cameras record all alarm events, technical and programming in an event log that you can see in this section

| ID | Orario | Descrizione evento |
|----|---------------------|-----------------------------|
| 1 | 2015-01-26 17:02:46 | admin login on 192.168.2.27 |
| 2 | 2015-01-26 17:02:27 | Set Time |
| 3 | 2015-01-26 16:59:00 | admin login on 192.168.2.28 |
| 4 | 2015-01-26 16:58:59 | Set Time |
| 5 | 2015-01-26 16:56:46 | admin login on 192.168.2.28 |
| 6 | 2015-01-26 16:56:46 | Set Time |
| 7 | 2015-01-26 16:46:11 | admin login on 192.168.2.28 |
| 8 | 2015-01-26 16:46:09 | Set Time |
| 9 | 2015-01-26 16:45:38 | admin login on 192.168.2.28 |
| 10 | 2015-01-26 16:45:36 | Set Time |
| 11 | 2015-01-26 16:39:29 | admin login on 192.168.2.28 |
| 12 | 2015-01-26 16:39:50 | Set Time |
| 13 | 2015-01-26 16:37:08 | System is running now |
| 14 | 2015-01-26 16:36:41 | Set IP |



USER MANAGEMENT



In this section, you configure the camera access password

Nome utente Password Conferma password

Amministratore Utente ordinario Solo visione

| Nome utente | Autorizzazione | Modifica | Elimina |
|-------------|----------------|----------|---------|
| admin | Amministratore | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Each camera can recognize up to 16 different users.
And 'possible to add new users in the other boxes (min 4 characters for user name and password)

- Each user has an access level that can be combined:
- ADMINISTRATOR** - Access to all functions
 - ORDINARY USER** - Access to all functions except the setting of users
 - VIEW ONLY** - LIVE Access to one vision, inhibited access to configuration.

MAINTENANCE



In this section we make the update and reset operations

| | |
|--|--|
| Riavvia dispositivo | <input type="button" value="Riavvia dispositivo"/> |
| Ripristina impostazioni di fabbrica | <input type="button" value="Ripristina impostazioni di fabbrica"/> |
| Riavvio pianificato | <input type="text" value="Mai"/> a <input type="text" value="00:00"/> <input type="button" value="Salva"/> |
| Versione firmware | <input type="text" value="A5S66_IMX222_X_4.1.47.4"/> |
| Versione software | <input type="text" value="4.1.47.3"/> |
| File firmware | <input type="text"/> <input type="button" value="Cerca..."/> |
| <input type="button" value="Aggiornamento"/> | |

RESTART - Make a device is restarted,

RESET FACTORY - Delete all user configurations and returns the camera to the default settings.

RESTART SCHEDULED - E 'can set a periodic reboot of the camera with a daily or weekly basis. Required by some applications.

FIRMWARE / SOFTWARE - Release info

FIRMWARE FILE - Allows you to search the camera firmware update file and upload it to the camera with the UPDATE button. This operation is to be performed only on the instructions of our technical department.