

RK SERIES

DVR and NVR



Installation manual - Menu 6.0

How to install the system

How to network and connect cameras How to use live and playback

How to connect with common clients

Contents of the manual

The RK series DVRs and NVRs are video recording systems for CCTV video surveillance.

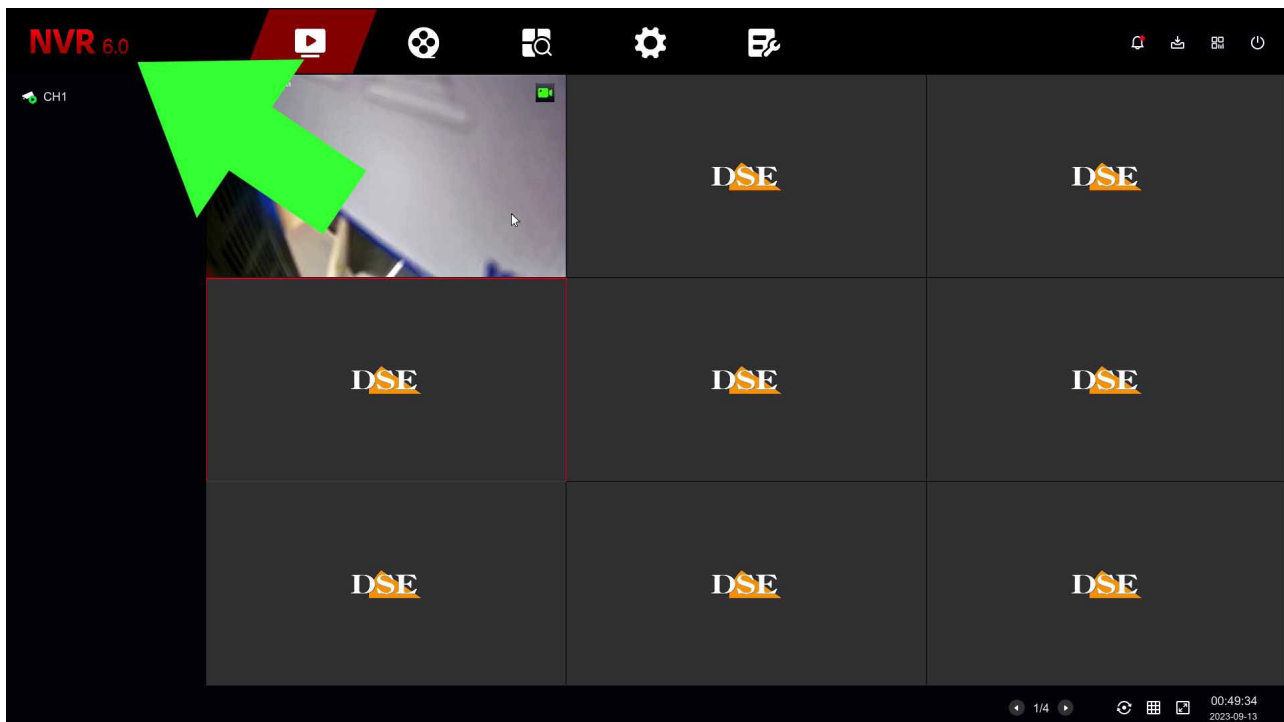
NVR models are used to connect IP cameras

The DVR models have BNC inputs to connect analog cameras AHD, CVI, TVI, CVBS but they can also manage IP cameras.

This manual explains how to install the video recorder, how to connect the cameras and how to use the essential functions. It also explains how to connect to the municipalities from a computer client.

For advanced configuration, remote access from IoVedo.RK app and IoVedo.RK software reference to the specific manuals.

This manual refers to NVRs/DVRs with **graphical interface Version 6.0** that you see here under



If your NVR/DVR has a different interface, for example 5.0 or earlier, you can download the specific manual for your version, or you can continue reading this manual considering that you will find the same options on your screen, just with different graphics.



Prepare the cameras

Before installing a DVR or NVR you must have the cameras to connect available. Self you connect analog cameras you need to supply them with power and then connect the video signal with a coaxial cable or a twisted pair with balun. If you connect IP cameras to the network you must first configure their IP address.

For these operations you must follow the camera manual.

Install the Hard Disk

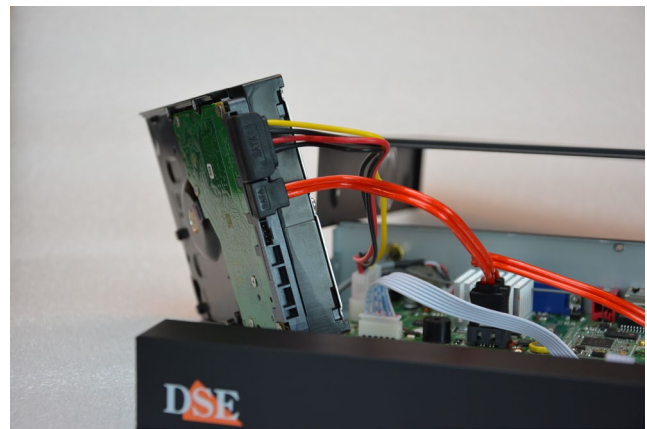
If you want your system to be able to record, you need to install a Hard Disk inside the video recorder. Any 3.5" SATA hard disk for computers is fine, but for more duration, it would be advisable to purchase a specific model for video recording.

The maximum capacity of the hard disk that you can mount is 8 TB.

Depending on the model, you can house from 1 to 8 Hard Disks inside the video recorder. You can easily understand the direction in which the disk should be mounted by observing the holes on the bottom of the DVR/NVR.



Remove the cover by unscrewing the side screws e rear

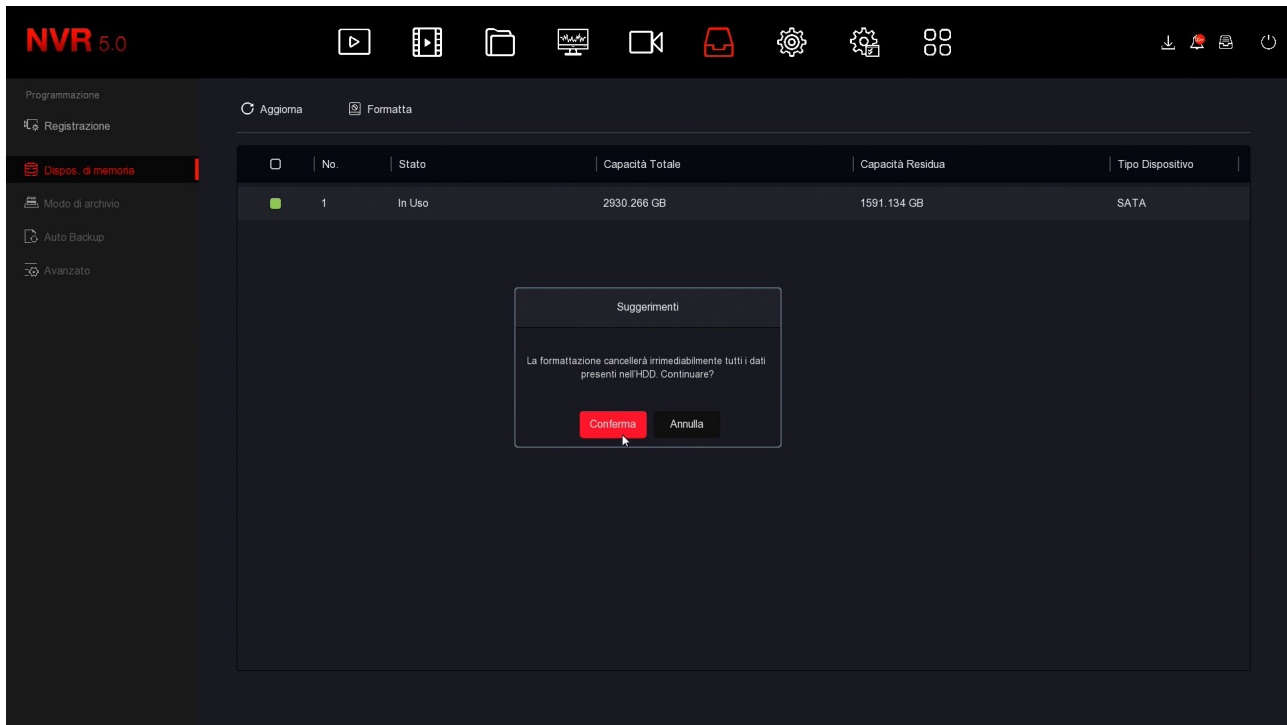


Connect the hard disk with the two cables power and data you find inside. If there there are multiple doors, choose any pair.



Secure the hard disk with the 4 screws provided screw in from underneath the VCR

At the next startup, the NVR/DVR will reveal the new installed Hard Disk and ask you to start formatting to be able to use it.

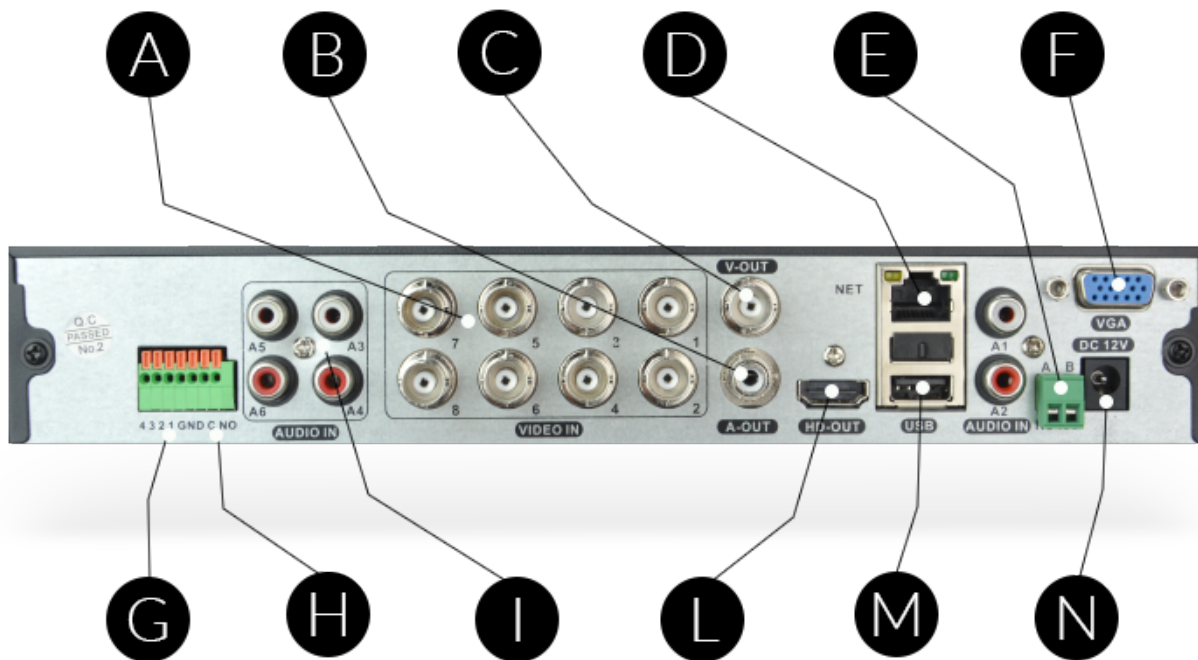


ATTENTION – The power consumption of a hard disk varies considerably depending on its capacity. Our video recorders are supplied with a power supply suitable for a normal hard disk 1 or 2TB, usually the most used size. If you install a higher hard disk or more than one hard disk, it is best to replace the standard power supply with one of greater power.

Connect a DVR

If you have purchased a DVR, your device can manage both analogue cameras and its own BNC inputs, both IP cameras, via the network port.

These are the rear connections. The equipment varies based on the model you purchased.



A | VIDEO IN–You can connect any type of camera to these BNC-type video inputs analogue in AHD, CVI or TVI technology, up to the maximum resolution managed by your model of DVR. You can also connect old CVBS analog cameras. The only cameras with BNC connection that you cannot connect are SDI digital cameras.

B | TO OUT–You can connect a speaker to this RCA connector to broadcast the audio DVR. Remember that the HDMI monitor output also conducts audio so if you connect a TV via HDMI you can hear audio without connecting a speaker to this output.

C | V-OUT–To this BNC output you can connect an analog monitor, the AV input of a TV and any device capable of receiving CVBS analog video. This output has low resolution and it is not recommended to use it for the main monitor. The resolution of this release it is not enough to be able to operate in the configuration menu.

D | NET–It is the RJ45 network port. To be able to view your cameras via the Internet, or to

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connect IP cameras, you need to connect the DVR to your network. You need to use a regular network cable straight type and insert it on one side into the NET port of the DVR and on the other into a free port on your router or switch. The DVR is factory set to automatically configure itself on the network (DHCP).

And | AB RS485–This is the RS485 serial port to which you can connect the control pair for control analog or AHD motorized cameras. Although our most recent Motorized analog cameras support movement control along the video cable by selecting UTC command protocol, the older motorized analog cameras require these two additional cables for control. The RS485 BUS is a twisted pair that connect all the analog motorized units of your system in cascade. You can find it in the manual of the camera, more information on how it should be connected, always respecting the terminal A(+) and B(-) that you find on the camera. You will then need to configure the transmission protocol, in the PTZ configuration of the DVR, depending on the camera. The protocol must be selected PelcoD standard, the speed, normally 1200,2400,4800 or 9600 bauds, and the address on the bus, of factory 1. See your motorized camera manual for more information.

Motorized IP cameras do not require this connection because they are controlled via the network cable.

F | VGA–You can connect a computer monitor that has this type to this output of door. This output supports the maximum resolution of 1920x1080 FullHD.

G | INPUTS–You can connect alarm contacts to these terminals as explained later

H | EXIT–You can connect the alarm output to these terminals as explained later

I | A1..A4–You can connect audio signals from cameras to these RCA inputs analogue or microphones. Remember that these audio inputs are only active for BNC channels because IP cameras require the microphone to be connected to the camera.

L | HD OUT–This is the HDMI output for the monitor. Almost all TVs and PC monitors have this connection port. If you connect a TV, to see the images you must remember to select the external HDMI input you used for the NVR on your TV. Generally yes is done by pressing the SOURCE button on the remote control. These DVRs are supplied from the factory with a low output resolution that you can increase up to 4K to match the maximum monitor resolution. This operation is explained better later in the manual Remember that the HDMI cable cannot be longer than a few meters. To connect a monitor Remote HDMI from NVR you need to use HDMI transmission device.

M | USB–To the USB ports you can connect the mouse included with the DVR and USB memories, such as USB sticks or hard disks to back up video files. All DVRs also feature of a front USB port.

N | DC 12V–Connect the included 12VDC power supply here. Be careful not to confuse the DVR/NVR power supply, which has at least 2A of power, with other smaller ones you have

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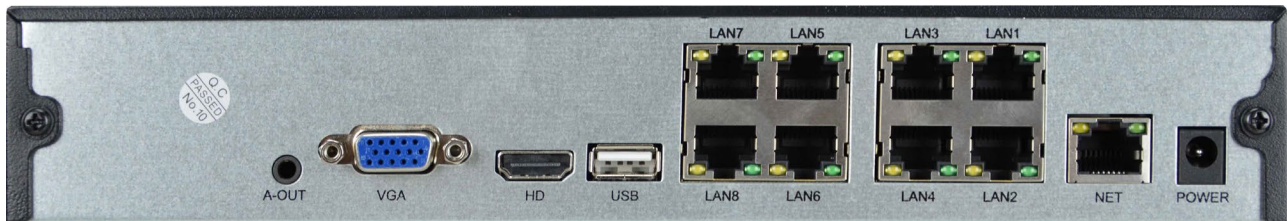
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perhaps purchased for the cameras, because this would lead to malfunctions. If you feed the DVR with our centralized power supply in the box you must consider that the individual outputs are limited to 1A and therefore at least 3 must be connected in parallel to be able to supply adequate power to the DVR.

Connect an NVR

If you have purchased an NVR your video recorder can only manage IP network cameras.

These are the rear connections. The equipment varies based on the model you purchased.



A-OUT-You can connect an external speaker to this minijack connector for diffusion the audio. Remember that the HDMI monitor output also conducts audio so if you connect a TV via HDMI you can hear audio without connecting this output.

VGA-You can connect a computer monitor to this output. This output supports the maximum resolution of 1920x1080 FullHD.

HD-This is the HDMI output for the monitor. Almost all TVs and PC monitors have this connection port. If you connect a TV, to see the images you must remember to select into your TV the external HDMI input you used for the NVR. Typically this is done by pressing the SOURCE button on the remote control. These DVRs are supplied from the factory with a resolution in low output which you can increase up to 4K to match the maximum resolution of the monitors.

Remember that the HDMI cable cannot be longer than a few meters. To connect a monitor to distance from the NVR you must use an HDMI transmission device.

USB-You can connect the mouse included with the DVR and USB sticks for back up to the USB ports of video files. Many DVRs/NVRs also have a front USB port. You can too connect USB disks to record on external HDDs

NET or LAN or WAN-It is the RJ45 network port. To be able to view your cameras via the Internet, or to connect external IP cameras, you need to connect the NVR to your network, for example to your router, via this port. You must use a normal straight-type network cable and insert it from a side into the network port of the NVR and on the other side to a free port on your router or switch. The NVR is factory set to automatically configure the network (DHCP).

LAN1..8orPOE1..8- Some NVR models have POE ports to connect cameras. You can connect the IP cameras you want the NVR to manage here. The NVR provides POE power to cameras. If you connect our RK Series cameras to these ports, are configured automatically (plug and play). If you connect other cameras you will have to first assign it an IP address suitable for the internal network of the NVR.

You cannot connect other network devices, such as switches or routers, to these ports.

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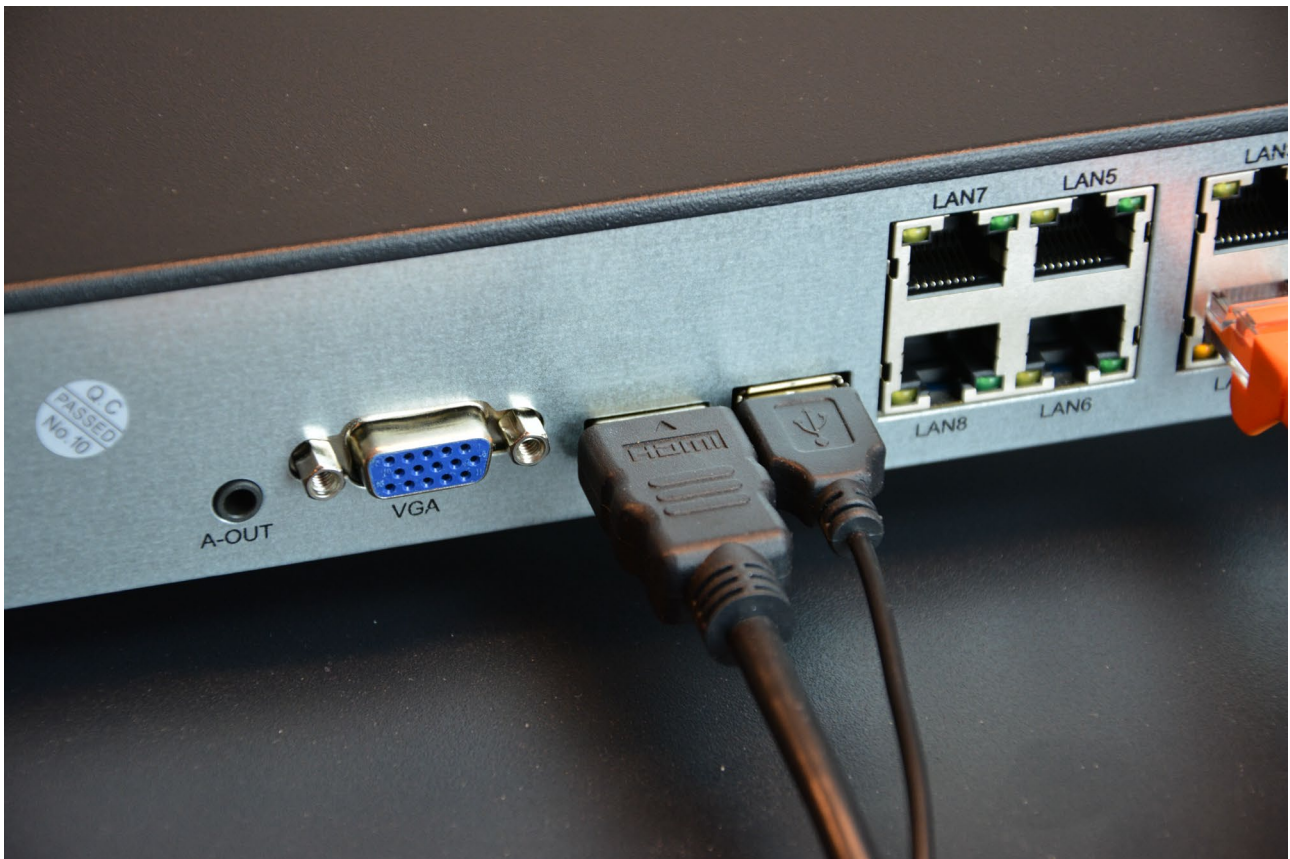
DC 12V–Connect the included 12VDC power supply here

Connect your monitor

Although the DVR/NVR can work without a monitor, you must connect one at least for configuration operations.

You can use a computer monitor or a TV. The main monitor port, with higher resolution, it's the HDMI port you find in all modern televisions and computer monitors.

There's also a VGA port if you need to connect a PC monitor from a few years ago.



DVRs/NVRs are factory programmed to provide low resolution (1280x1024) so to be compatible with all monitors. Once you have connected the monitor and started the DVR/NVR you it is best to increase the video output resolution to the maximum supported by your monitor (usually FullHD 1920x1080 or 4K 3840x2160).

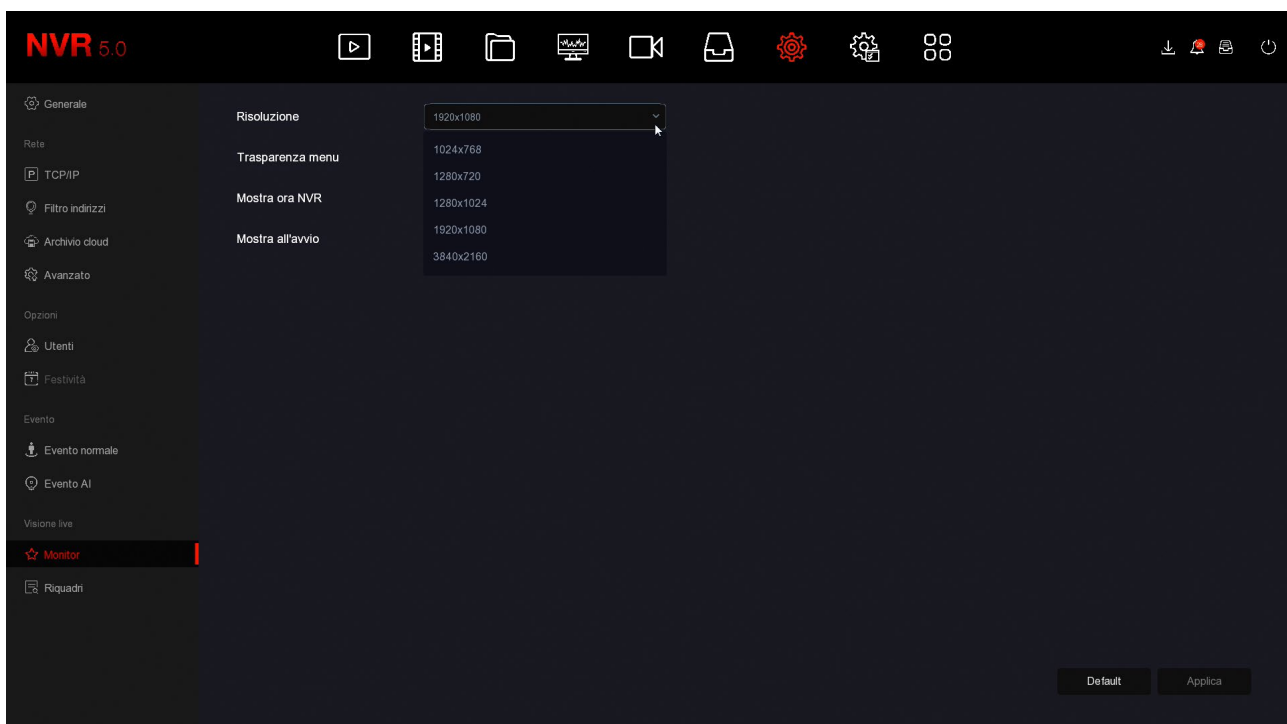
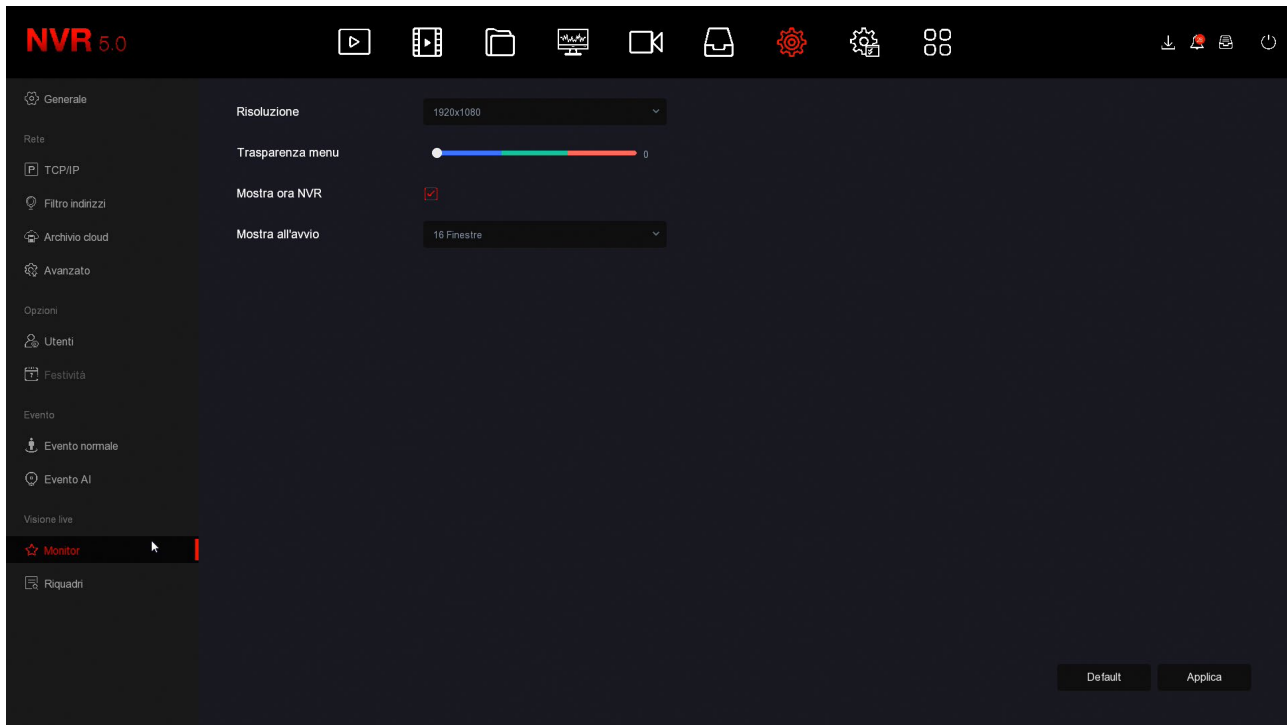
If when you start the DVR/NVR you only see the DSE logo and then nothing else it is because the monitor does not support the device video resolution. You have to connect another monitor and then possibly modify the video resolution in the configuration

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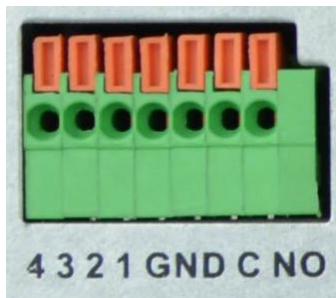


Remember that the HDMI cable cannot be longer than a few meters. To connect a monitor to distance from the NVR you must use an HDMI transmission device.

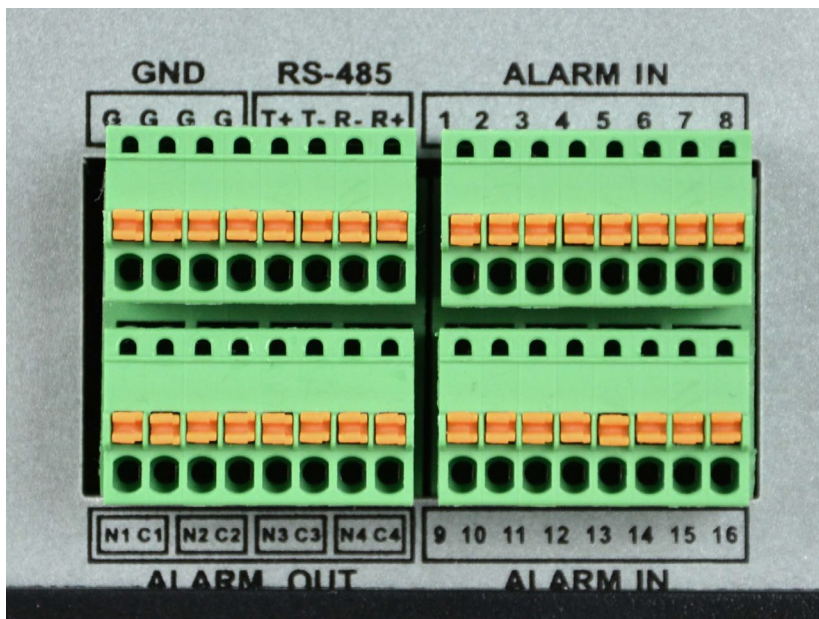
Connect alarm I/O

Some DVRs/NVRs are equipped with alarm inputs and outputs and have a dedicated rear terminal block. The layout of the terminals varies from model to model, we see here two examples.

Example 4I+1O



Example 16I+4O



ALARM IN – The alarm inputs are used to connect external contacts that can activate alarms with which to start recording and send reports. The contact must be connected between the input terminal (1,2,3,4 etc) and a GND terminal in the terminal block. If the terminal block has more G or GND terminals you can choose any one.

In configuration you can set NO or NC operation (normally open or normally closed) of the input so as to trigger the alarm when the contact closes (NO) or when it opens (NC).

ALARM OUT – The alarm outputs are used to activate external devices such as alarms



acoustics, lighting etc. The outputs are Normally Open (NO) clean contacts connect between the two output terminals. In models with a single output you will use terminals C and NO. THE models with multiple outputs have two terminals for each output (C1-N1, C2-N2 etc.). In the DVR/NVR configuration you can set the events that cause the shutdown output contact and also the closing duration.



Make the first ignition

As soon as you connect the power plug, the DVR/NVR starts up and displays an image on the screen. DVRs and NVRs for video surveillance do not have a power switch because they are designed to always stay on. If you don't see the image you need to check the cable and monitor settings. If your monitor has particular resolution, it may not be compatible.

When you turn it on for the first time, one starts **wizard** which helps you configure the options main features of your system in minutes.

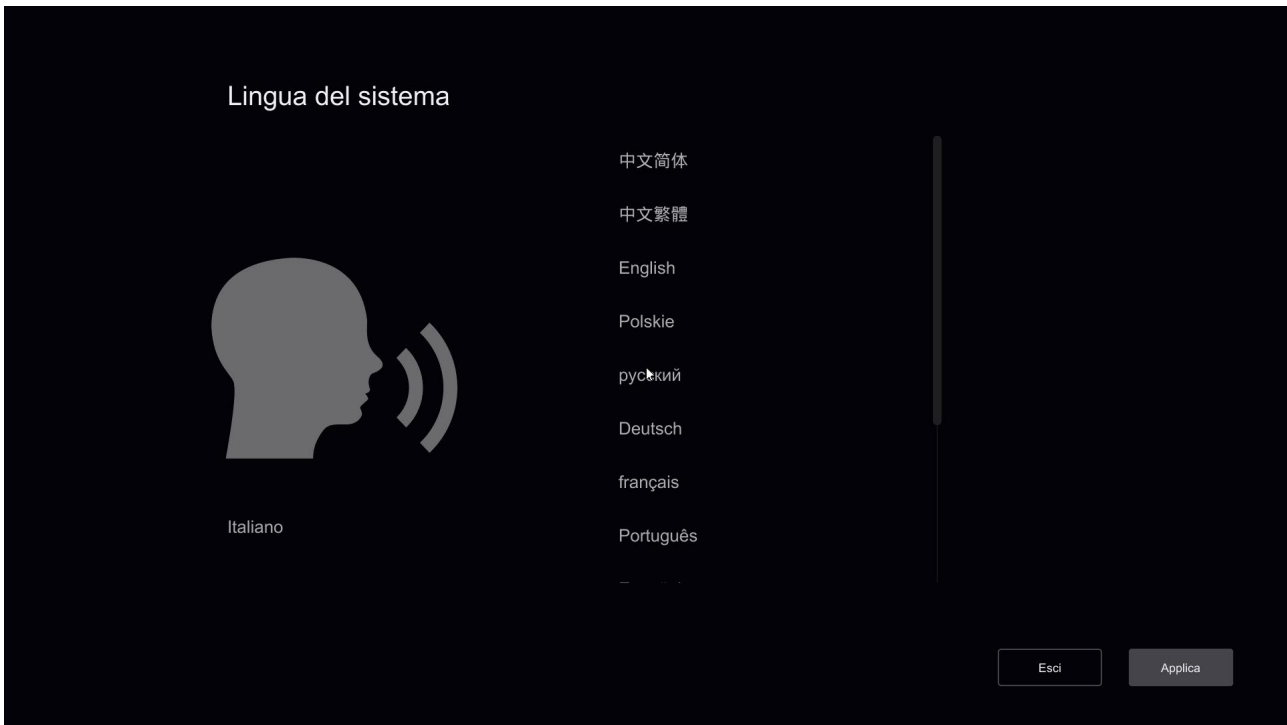
This part of the manual briefly describes the options available in the wizard. A more detailed description can be found in the configuration manual.

All the options that you configure in the setup wizard are also accessible in a second moment in the configuration menu.

Wizard

1 - CHOOSE YOUR LANGUAGE

When turned on, the guided configuration procedure begins. After using it once, you can disable it in the DVR/NVR configuration to prevent it from appearing in future startups. The first option to choose is the menu language. Over 20 languages are available. In this manual refers to the factory Italian language.



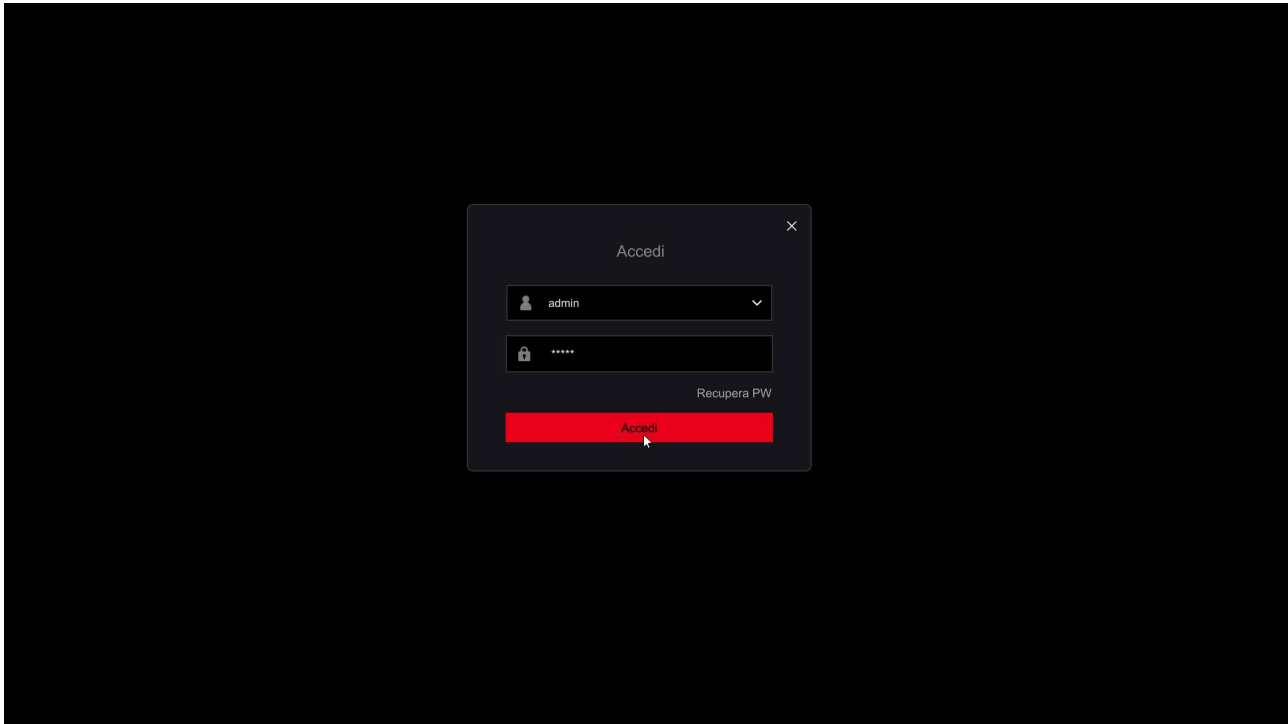
2 - LOG IN TO THE SYSTEM

Enter the factory password to access the DVR/NVR:

USER: admin

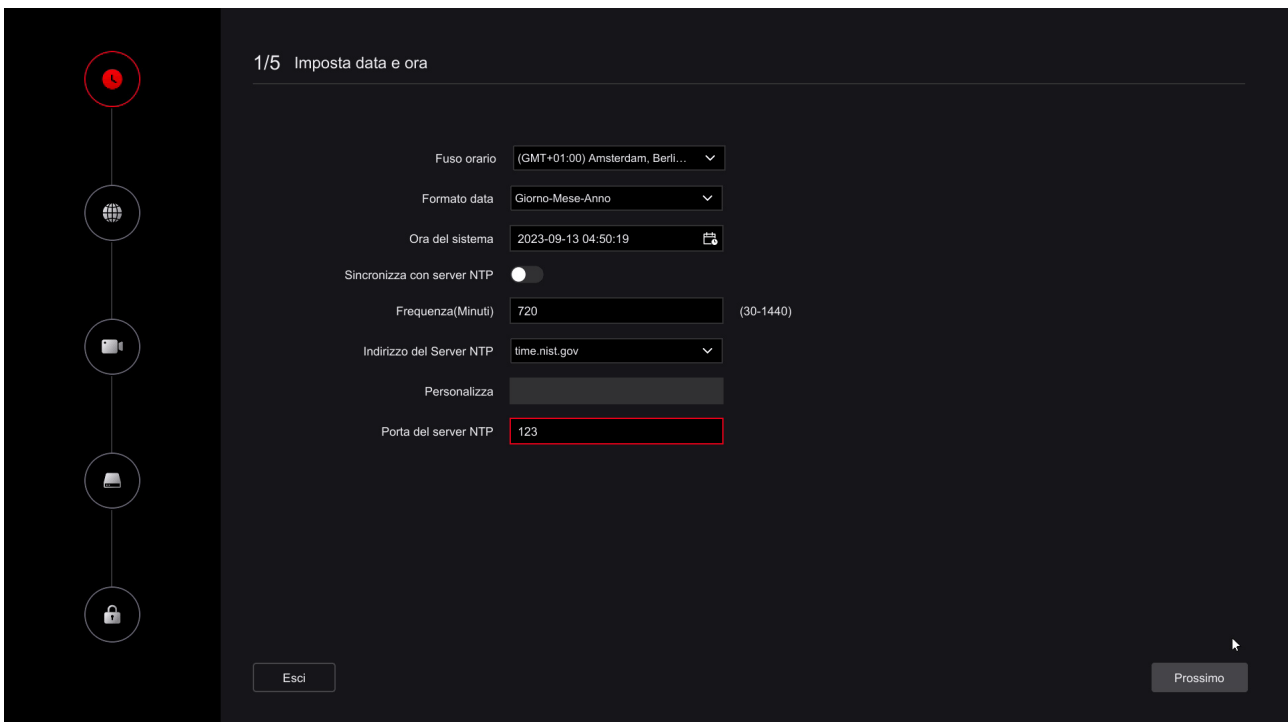
PASSWORD: 12345

Then press LOGIN.



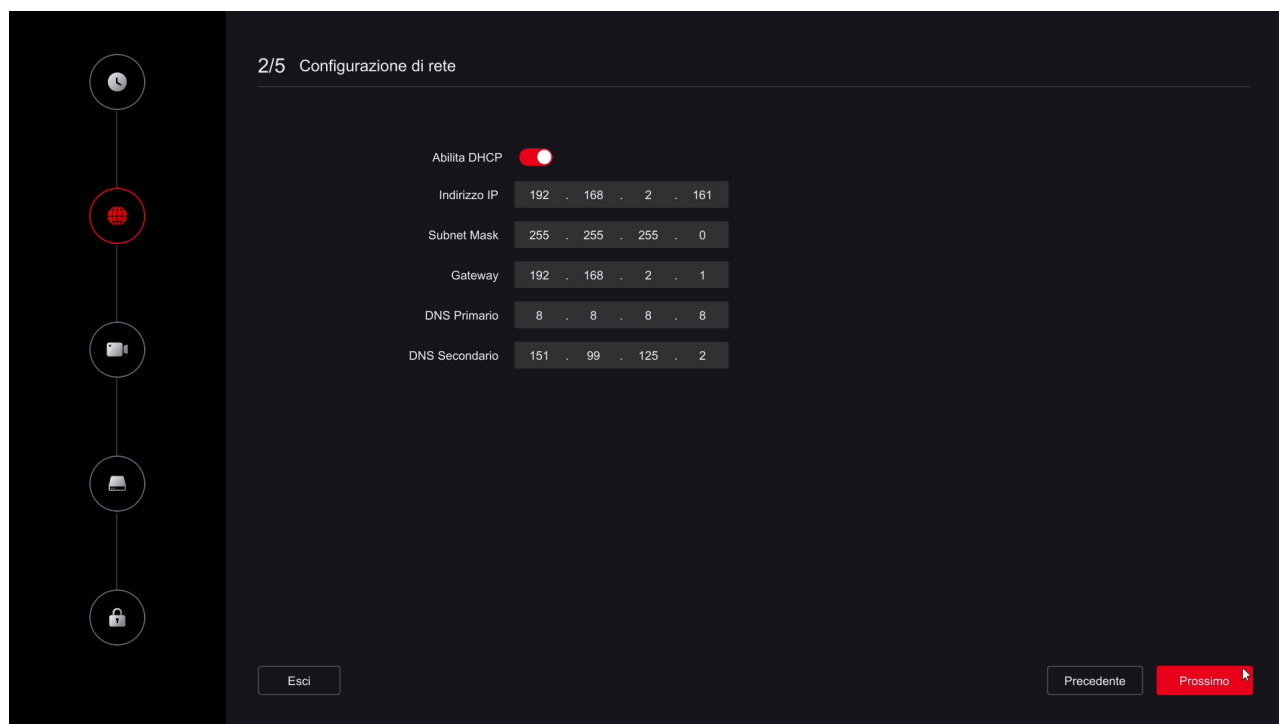
3 – SET DATE AND TIME

First you need to set the system date and time. Choose the Italian time zone GMT+1 and the Day/Month/Year format. Other items are explained in the setup manual and you can also activate them later.



4 – SET UP THE NETWORK

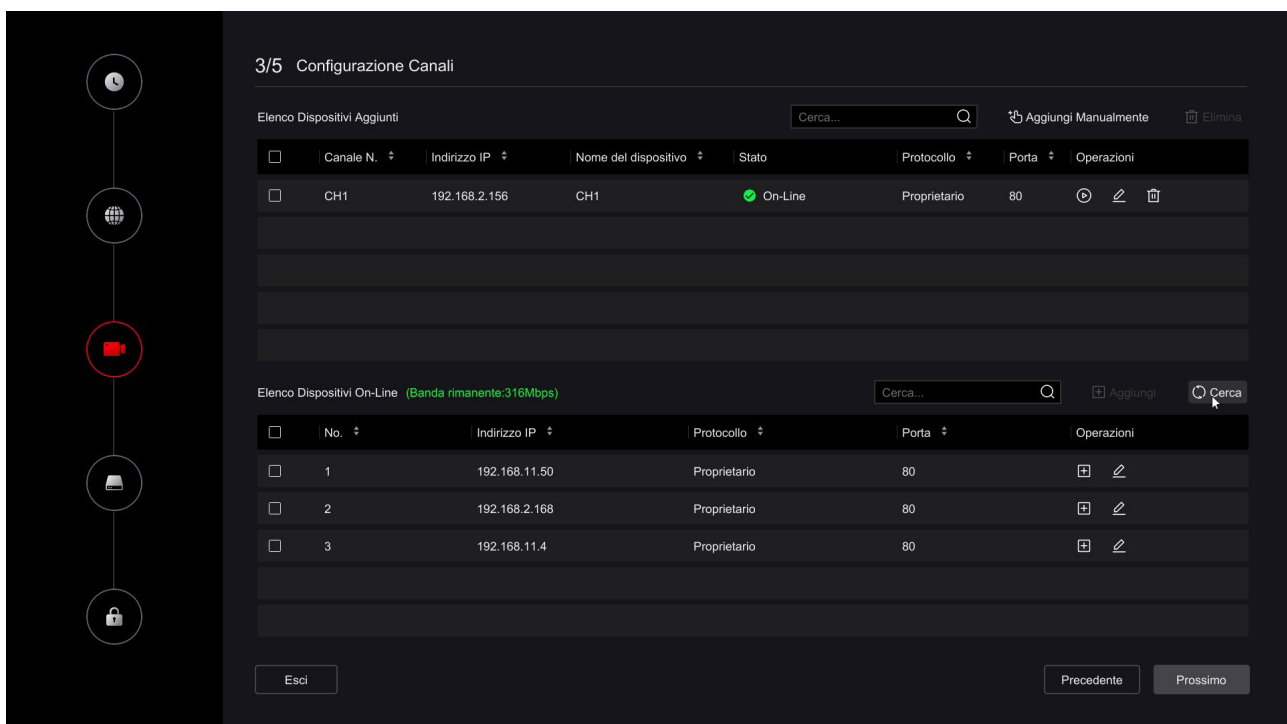
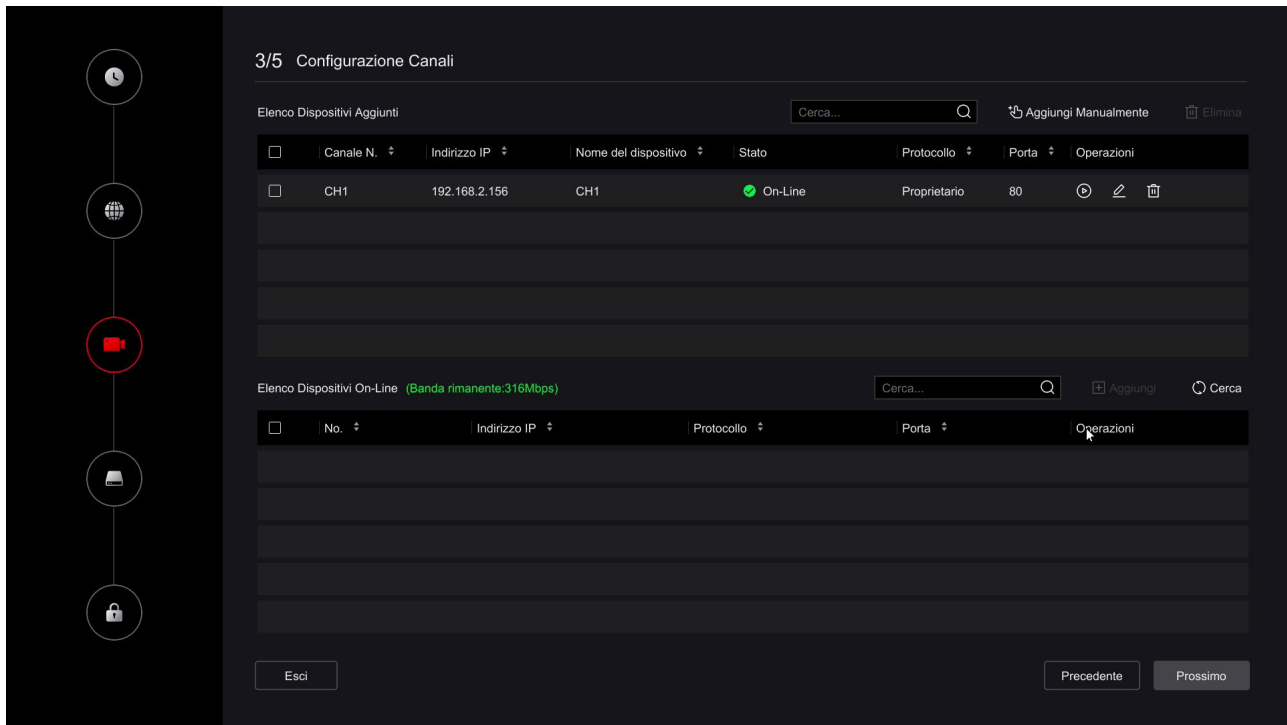
In this step you can set the network parameters for the DVR/NVR that allow it to communicate with the external network connected to its network port, mainly with the router. Self you are not sure what parameters to enter, leave the factory option DHCP enabled which allows it to the DVR/NVR to obtain the parameters automatically from the network router. You always can change them later.



5 – ADD THE CAMERAS

Analog cameras connect to BNC ports and are immediately available. Even the IP cameras that you connect to the POE ports of the NVRs that are equipped with them are configured automatically. Cameras already added to the NVR appear in the table above.

If you want to connect IP cameras connected to an external network to your DVR/NVR, these are not possible they can self-configure, you must first configure them appropriately in the network external. In this section of the procedure, you can add the IP cameras you have connected on your network outside the recorder. You have to press the button **near**to track down the cameras in the network, which will appear in the table below, where you can select them by add them to the DVR/NVR. The details of this operation, with the various cases, are explained later and also in the configuration manual. If you are not ready to add the cameras you can go ahead and do it later.



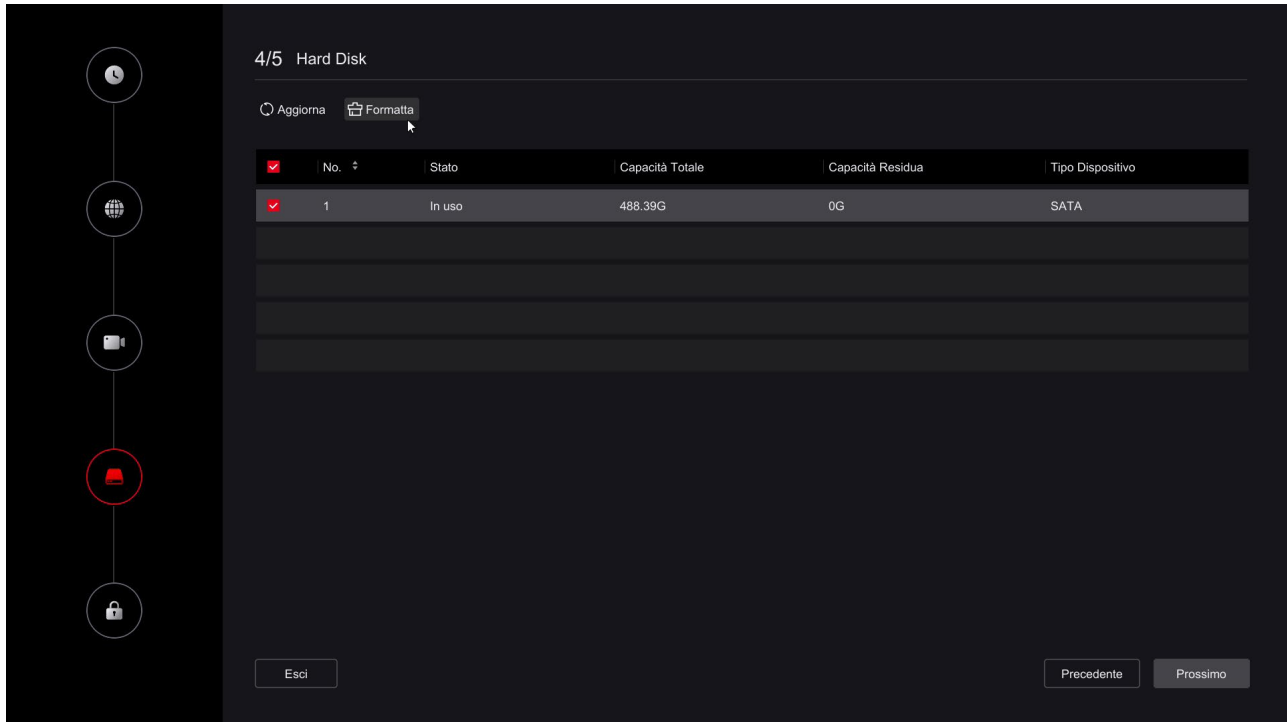
6 – FORMAT the HARD DISK

In this step you should find the hard disk that you inserted into the DVR/NVR.

Select it and click FORMAT to allow the DVR/NVR to use it. If you don't find

the hard disk in the list check that the two internal cables are connected and that the power supply of the

DVR/NVR is the correct one, possibly try replacing the hard disk because it could be broken.



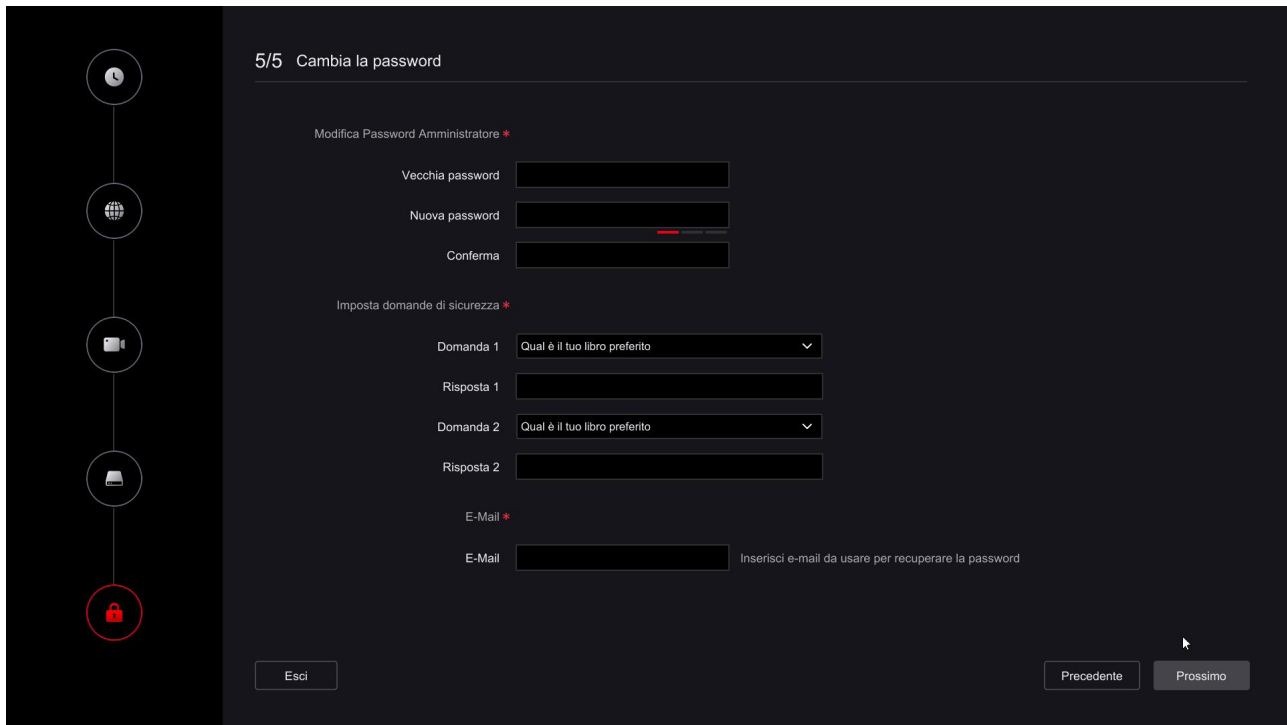
7 – SET THE PASSWORD

In this final step you can possibly change your login password NVR/DVR. If you want to do it, first you have to make sure you don't forget it, because yes it is a security device and to recover a forgotten password, you will have to contact us and go through a fairly laborious procedure.

The password must contain at least 8 characters with a letter and a number inside.

You also need to set up answers to security questions and your recovery email, which you they will allow you to easily recover your password via email if you forget it.

If you are not ready to change your password you can press EXIT



5/5 Cambia la password

Modifica Password Amministratore *

Vecchia password

Nuova password

Conferma

Imposta domande di sicurezza *

Domanda 1 Qual è il tuo libro preferito

Risposta 1

Domanda 2 Qual è il tuo libro preferito

Risposta 2

E-Mail *

E-Mail Inserisci e-mail da usare per recuperare la password

Esci Precedente Prossimo

FINISHED!

At the end of the wizard your CCTV system is already working. Later in the manual you will find other basic configurations. In the configuration manual you will find all the options of the advanced setup menu.

Connect the NVR to your network

To be able to connect to the surveillance system via PC or mobile phone or to manage IP cameras installed on the network you must connect the DVR/NVR to your network. To do this use a network cable and connect **the external NETWORK port**, which depending on the model is indicated as **NET, LAN or WAN**, to a free port on your router or switch. Check that the port LEDs are on turn on, this means that the hardware connection is correct.



If your NVR has POE LAN ports for cameras, do not use them to connect the external network because it won't work. The external network, towards your Internet router, must be connected to the port external network, which is the only one in your DVR/NVR or in any case separate from the others.

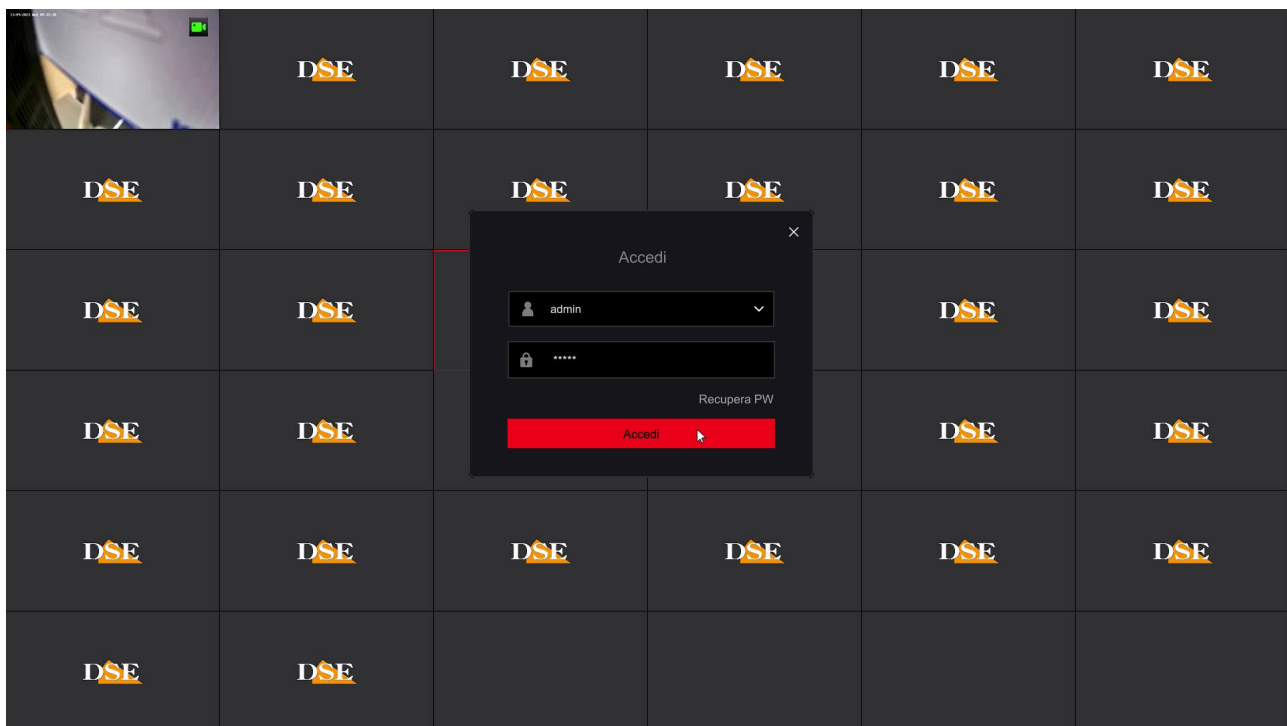
Check the network parameters of your DVR/NVR

Your DVR/NVR configures itself on the network automatically (DHCP), then receives directly address and network configuration from your router. You don't have to worry about entering any parameter.

However, before connecting remotely with PCs and mobile phones it is a good idea to check the network situation. To do this follow these instructions

1 - ACCESS THE NVR MENU

Right click and log in



Enter the factory password:

USER: admin

PASSWORD: 12345

Or your new password that you set.

2 - SHOW THE CONTROL MENU

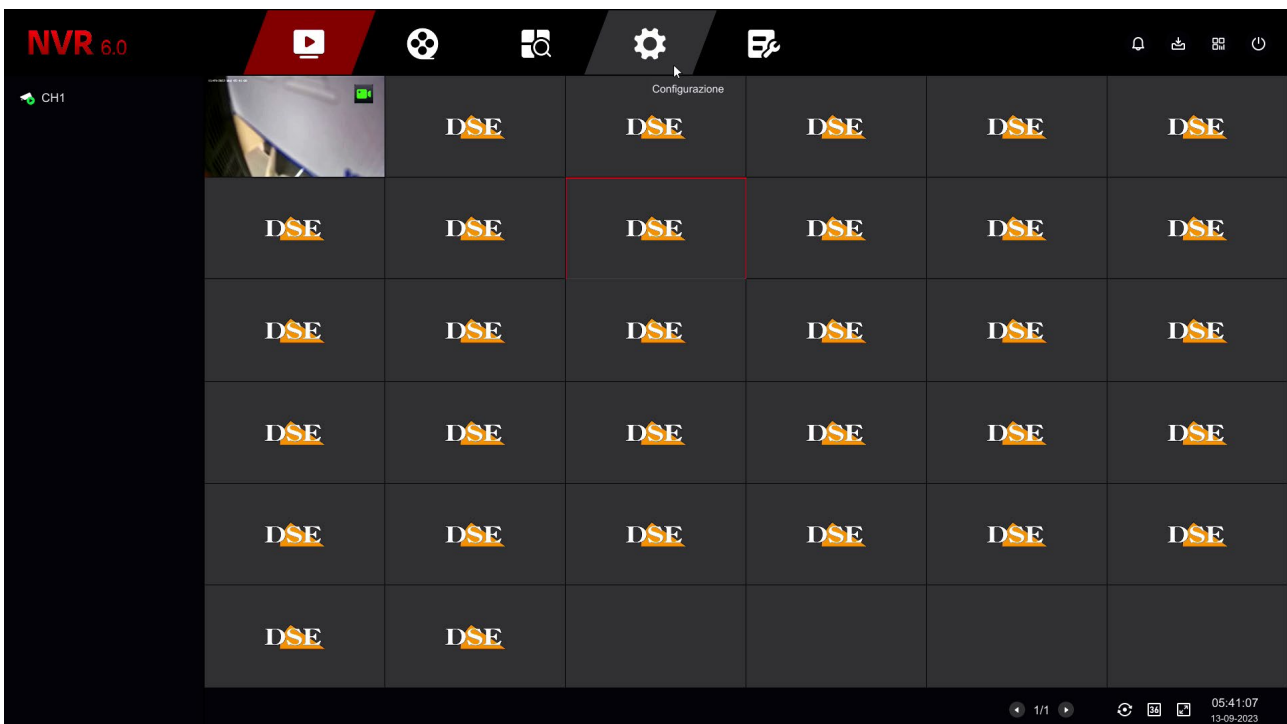
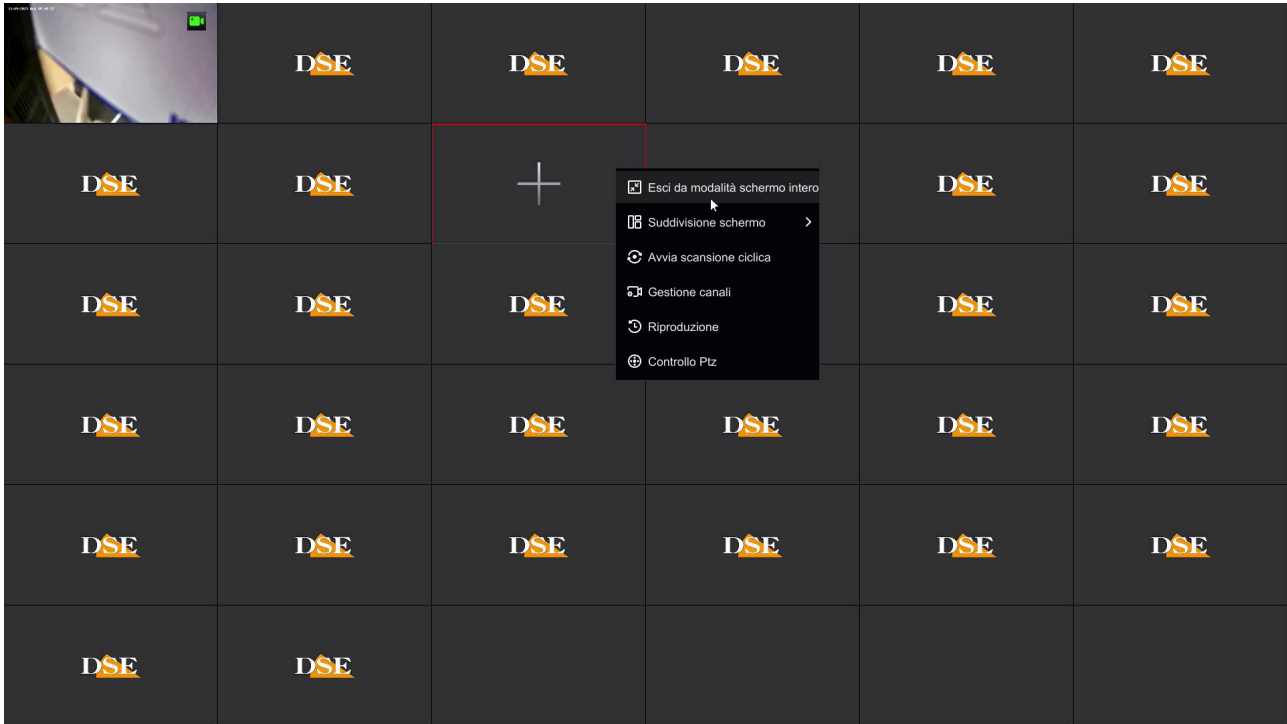
Right-click to exit full-screen mode and show the menu buttons

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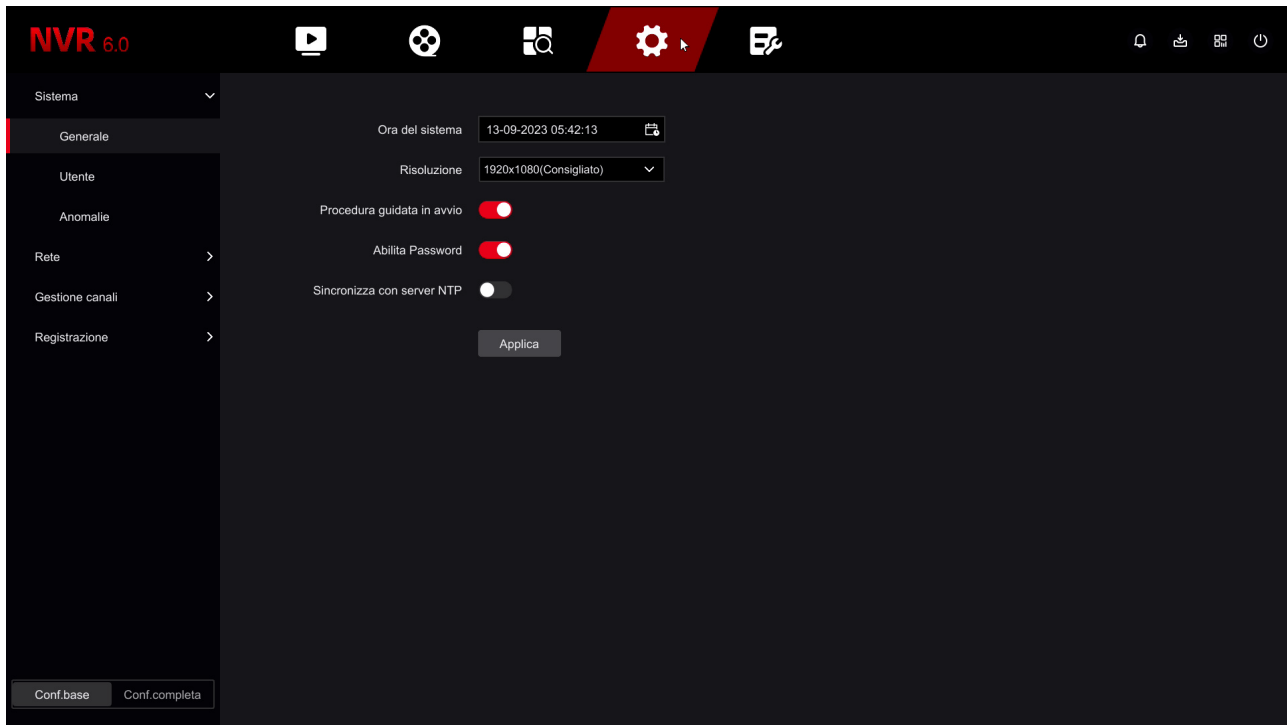


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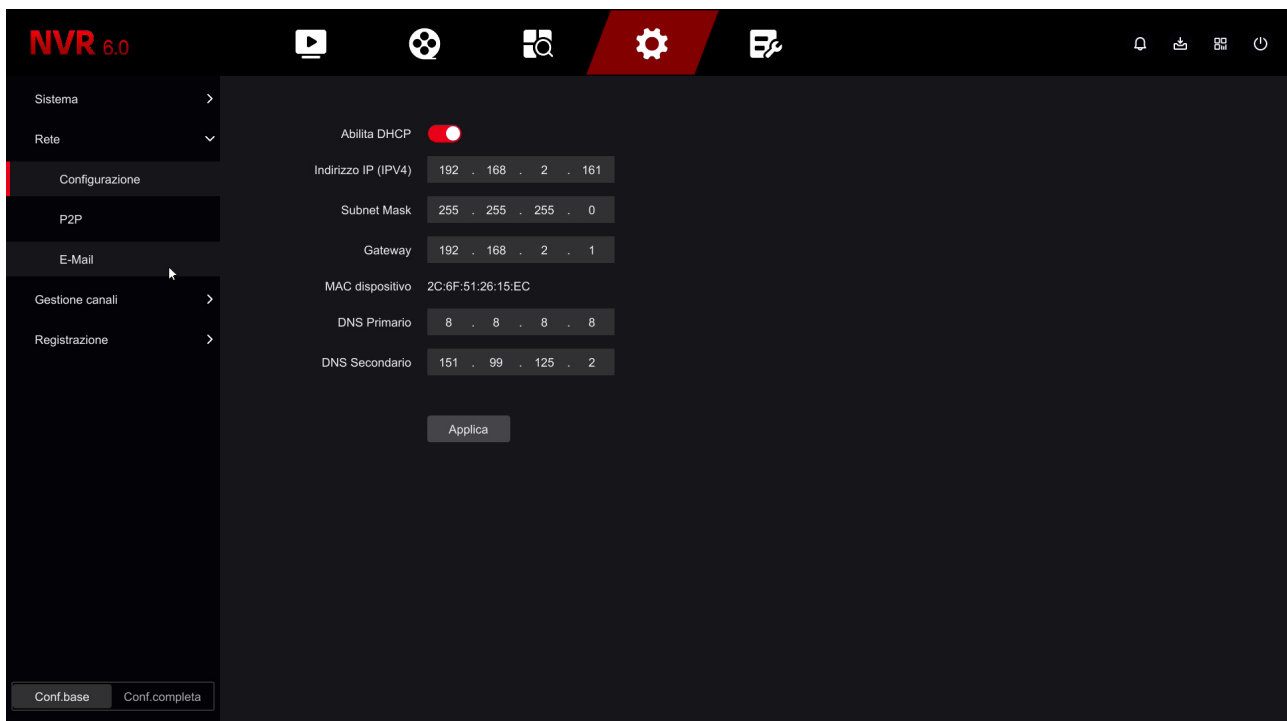


3 – OPEN THE NETWORK WINDOW TO CHECK THE IP ADDRESS

Click THE SETTINGS ICON at the top by clicking the gear icon.



Now, in the left menu, choose NETWORK

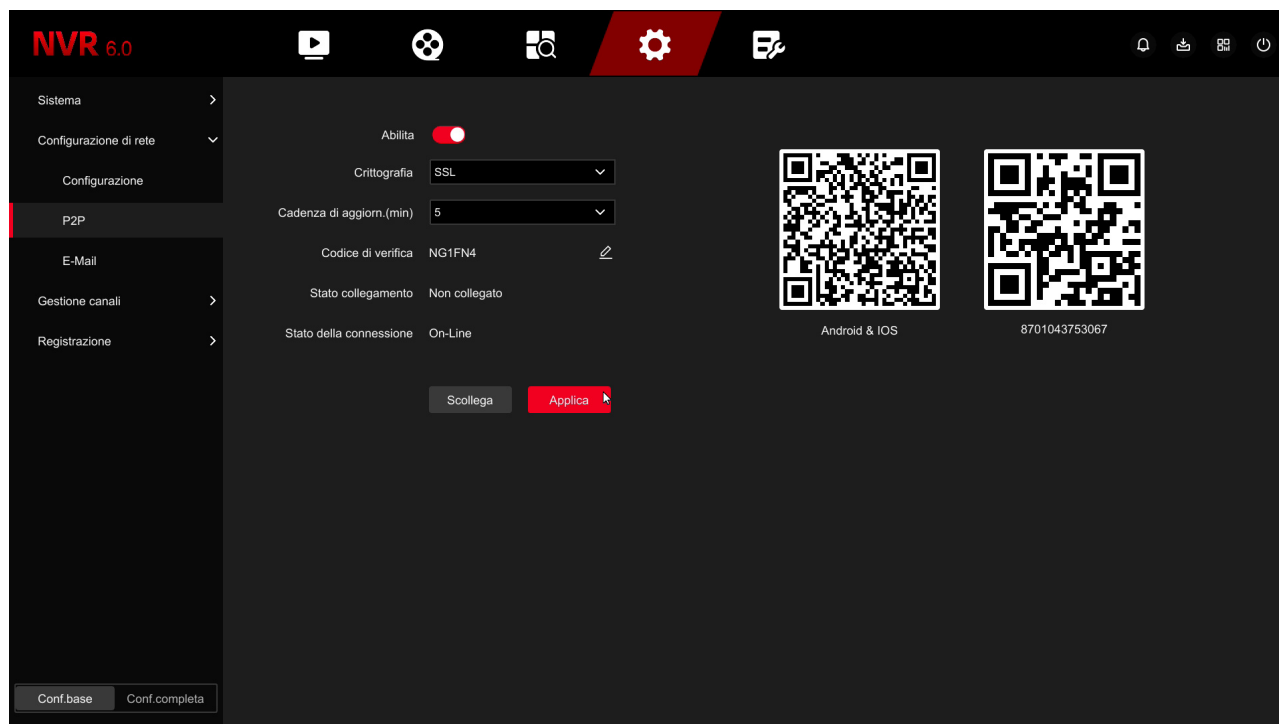


In this window, check that DHCP is checked and take note of the IP address your NVR has taken over within the network (first line at the top). It will be useful if you want to log in to the NVR from within your network, without going through the Internet. If your network is not connected to a router, or other device that acts as a DHCP server,

you cannot use the DHCP option and must set a manual address. This situation is explained better in the configuration manual.

4 – GO TO THE P2P WINDOW TO CHECK THE CONNECTION TO THE SERVER

After checking the IP address of your NVR, still in the NETWORK section, open the folder P2P



On this page you must enable the P2P function, which is essential to be able to connect easily with our app. After enabling the function, with the selector at the top, wait a few minutes then exit and return to this page to verify that it is **state of connection to the server is ONLINE**, like in this example above. This means that the NVR is communicating well via the Internet with our P2P cloud server which will allow you to access via the Internet without configuration or static IP. If the status is not ONLINE but OFFLINE double check your network configuration because it means your DVR/NVR fails to access the Internet.

The VERIFICATION CODE box is the captcha code used to load the device in our IoVedo.RK app. If you do not enter anything in this box, the captcha code to use in the app it will be the factory one found on the product label. If you want you can customize the 6 letter/number captcha code by typing it in this box. If you want the appliance can be added to the app without requiring the captcha, enter the code in this box ABCDEF.

LINK STATUS shows whether the device has already been linked to an account on the app. Self

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the device is linked to an app account that is not yours, for example the previous one owner, you can disconnect it with the UNCONNECT button to be able to reload it in your account.

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Connect analog cameras

If you have purchased a DVR from this range, you will find the BNC ports on the back to connect the cameras. DVRs support all analog video formats available today:

AHD, CVI, TVI up to 8MP and traditional CVBS.

The DVR is programmed by default to recognize the video format automatically there is no need to configure anything and simply connect the rear BNC connector.



ATTENTION: HD-SDI digital cameras, although they use the same BNC connector as analog cameras are not compatible.

When you connect a new camera, the DVR displays the overlay for a few seconds format and resolution of the camera video signal. Many analog cameras they allow you to change the video format and its resolution by using the on-board button of the camera.

UTC MENU CONTROL OF ANALOG CAMERAS

The latest AHD, CVI and TVI cameras have an internal setup menu that

It is usually controlled with the button on the camera.

These DVRs allow you to control the camera's internal OSD menu with the mouse

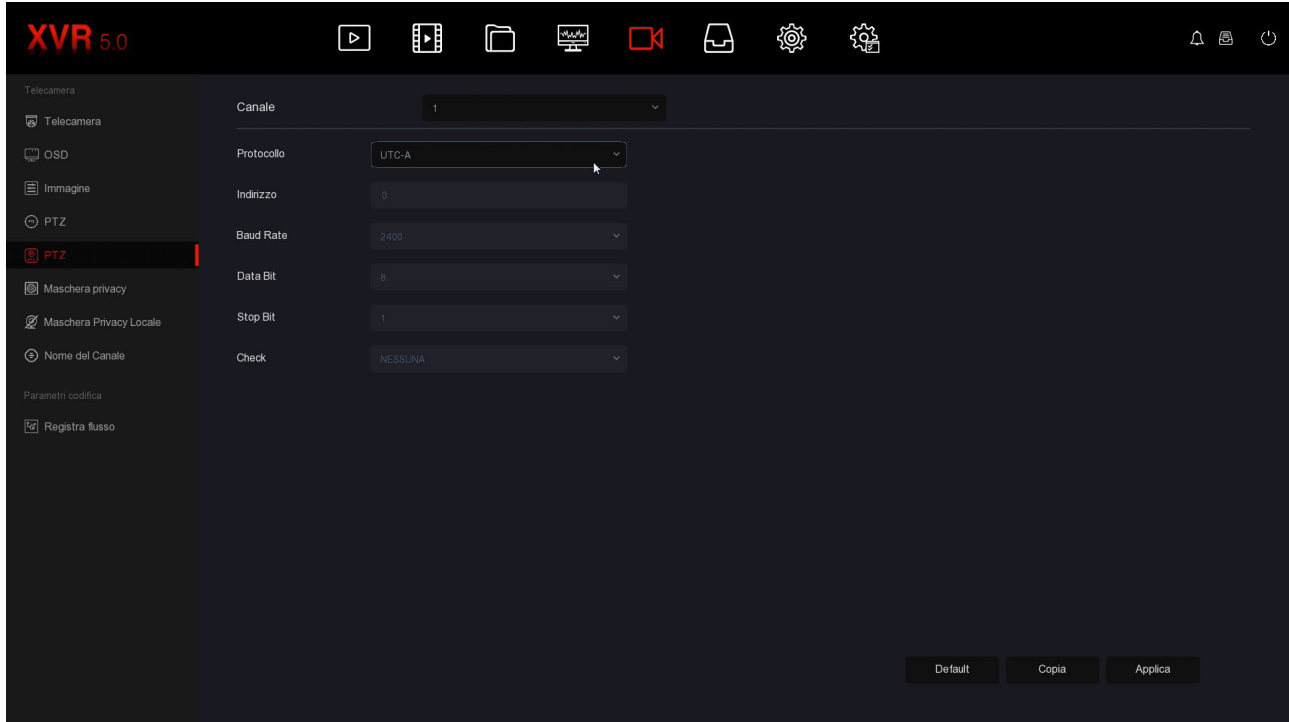
DVR thanks to the UTC protocol that passes along the video cable. The camera is necessary you support the UTC protocol to take advantage of this feature.

The UTC protocol is a standard that allows commands to be sent to the camera along the video cable, without having to prepare additional cables in addition to the traditional video+power cables.

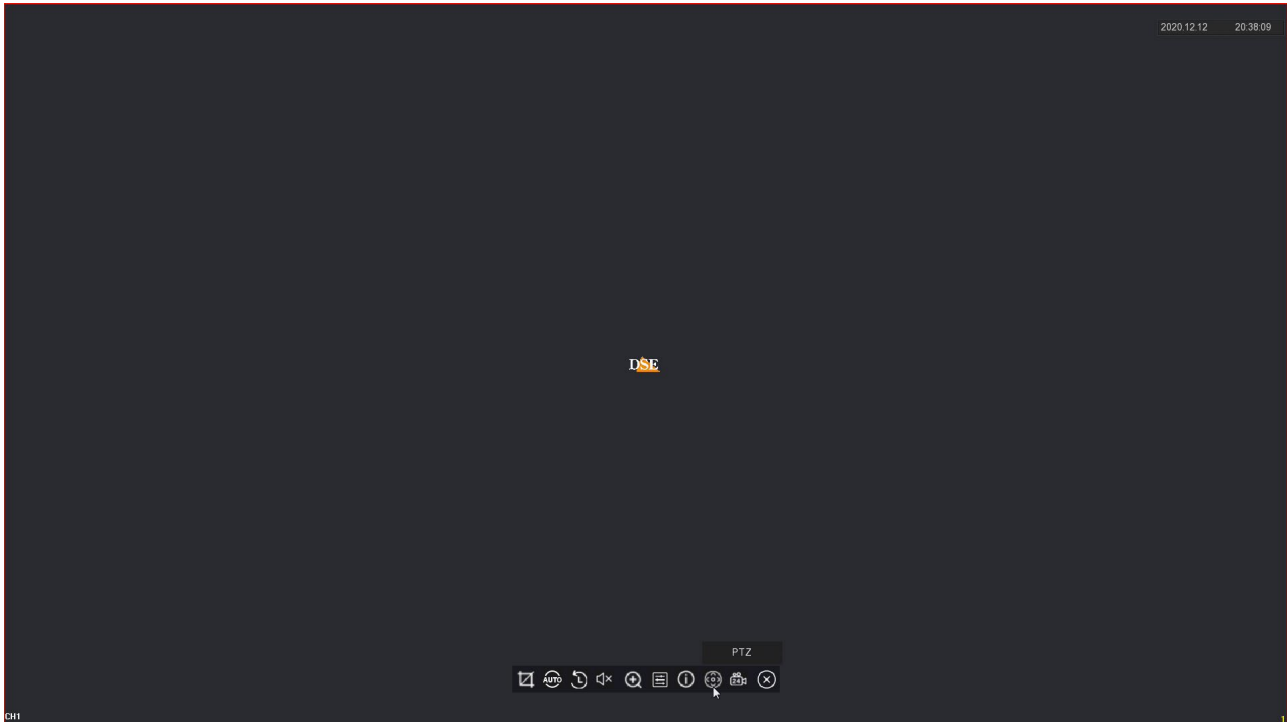
Works on all types of analog video cabling, both coaxial and twisted cable with balun.

To use UTC control you must enable the UTC protocol in the channel's PTZ settings. From

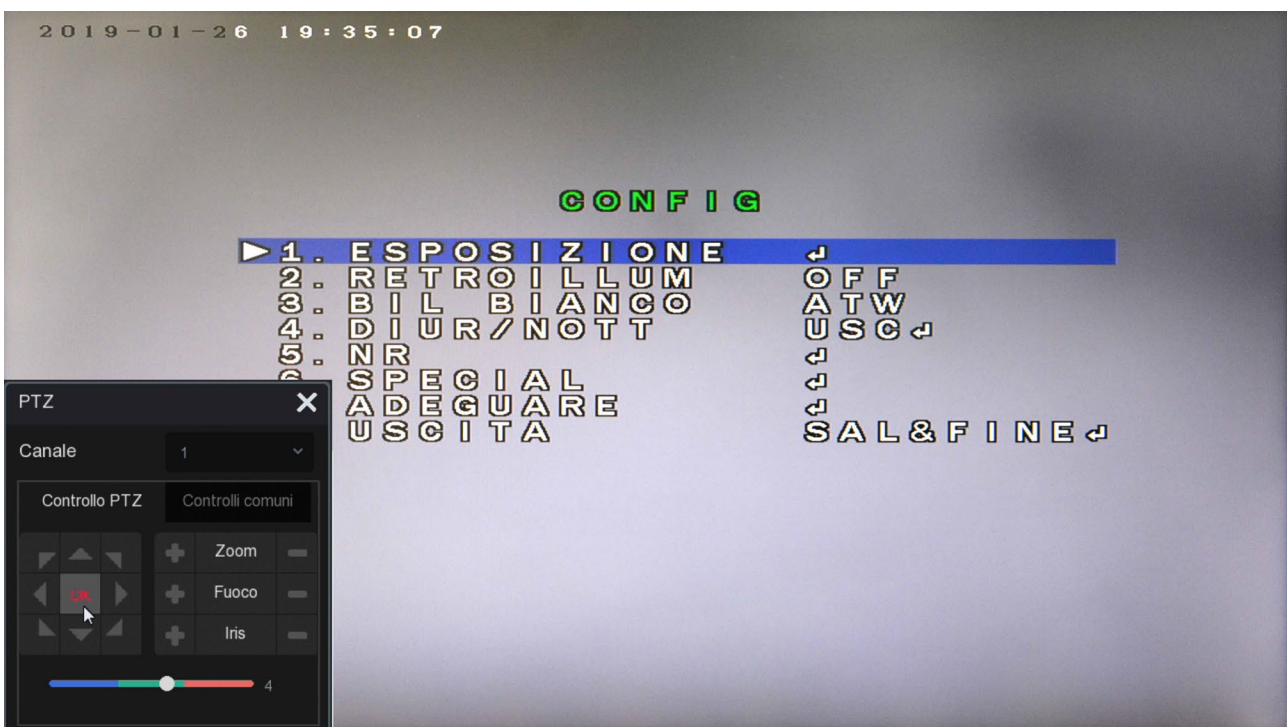
This protocol is already set on all channels at the factory, so you can limit yourself to a simple one verify.



To control the camera's OSD menu you need to bring the camera to full screen, click to make the channel menu appear and then choose PTZ to open the panel PTZ control.



To open the camera's OSD menu you must press the central ENTER button in the middle arrows.



ZOOM CONTROL VIA UTC IN ANALOG CAMERAS

Many analog cameras are equipped with a motorized lens that is adjusted by operating the



button located on the camera cable. These DVRs also allow you to adjust the zoom remotely, via the UTC protocol, which passes together with the video signal and does not require additional cables. The camera must support zoom control via UTC to be able to use this function.

The UTC protocol is already enabled on all factory channels, as seen previously, therefore you don't have to do anything in the settings but just open the PTZ panel and control the zoom with it +/- buttons

PTZ CONTROL VIA UTC IN ANALOG CAMERAS

The latest motorized analog cameras in our range accept the command of movements via the UTC protocol that passes along the video cable. Be careful that only some analog motorized cameras accept this type of command, others require it an additional RS485 twisted pair.

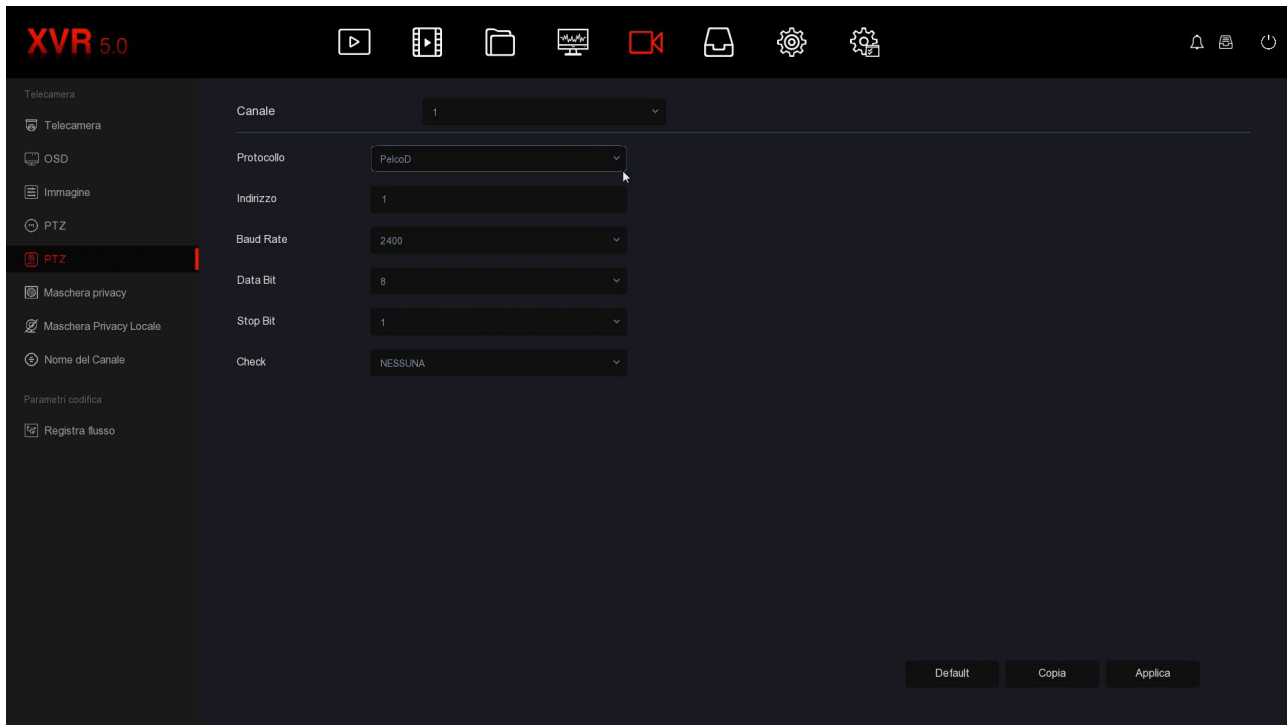
These DVRs allow you to control camera movements remotely via the UTC protocol, which passes together with the video signal and does not require additional cables.

The UTC protocol is already enabled on all factory channels, as seen previously, therefore you don't have to do anything in the settings but just open the PTZ panel and control the movements with arrows and target with +/- buttons

PTZ CONTROL OF ANALOG CAMERAS VIA RS485

Analog motorized cameras that do not support commands via UTC are controlled via commands sent through the rear RS485 port. These cameras require a twisted pair control cable in addition to traditional Video+Power wiring.

First you need to set the communication parameters that allow the DVR to talk to the camera. Entering the channel menu and PTZ settings. Our DVRs support RS485 command with PelcoD and PelcoP protocols supported by almost all motorized cameras with transmission speeds from 2400 to 921600 baud



CHANNEL – Select the camera input you want to control

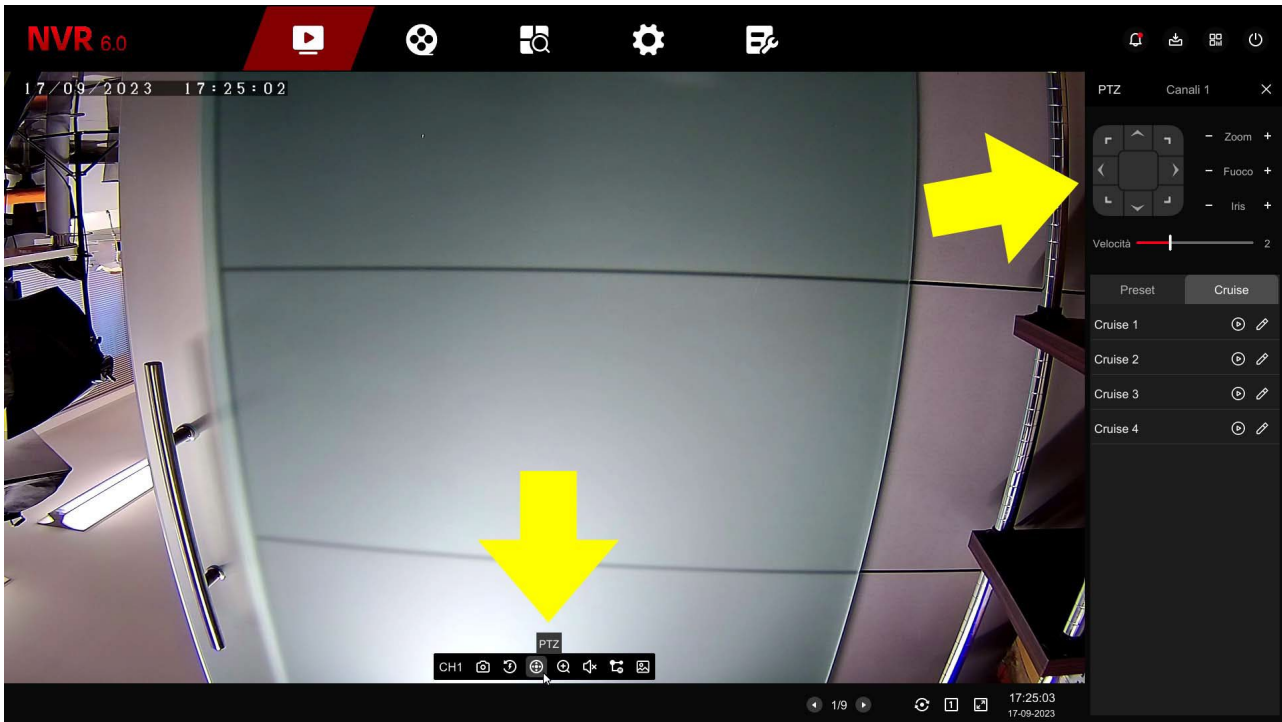
PROTOCOL – Choose PelcoD for all our PTZ cameras. You can also choose PelcoP for cameras from other manufacturers.

ADDRESS – Each camera placed along the RS485 bus must have an ID address from 1 to 255. As a rule, the cameras have the address 1 at the factory but you can change it by acting on the camera.

BAUD RATE / DATA BIT / STOP BIT / CHECK PARITY – These are the parameters communication that the DVR will use to communicate with your camera. The most important is the speed (Baud Rate) that you can choose in the camera. The most common speeds are 2400, 4800, 9600 bps. Check the manual of your PTZ camera to know the parameters from insert. Generally the address and speed in the camera are set with microswitches and are often indicated as an overlay when the camera is started.

To control the movements of motorized cameras you have to bring the camera full screen, right click to bring up the command bar and finally click PTZ.

This opens the movement control window on the right.

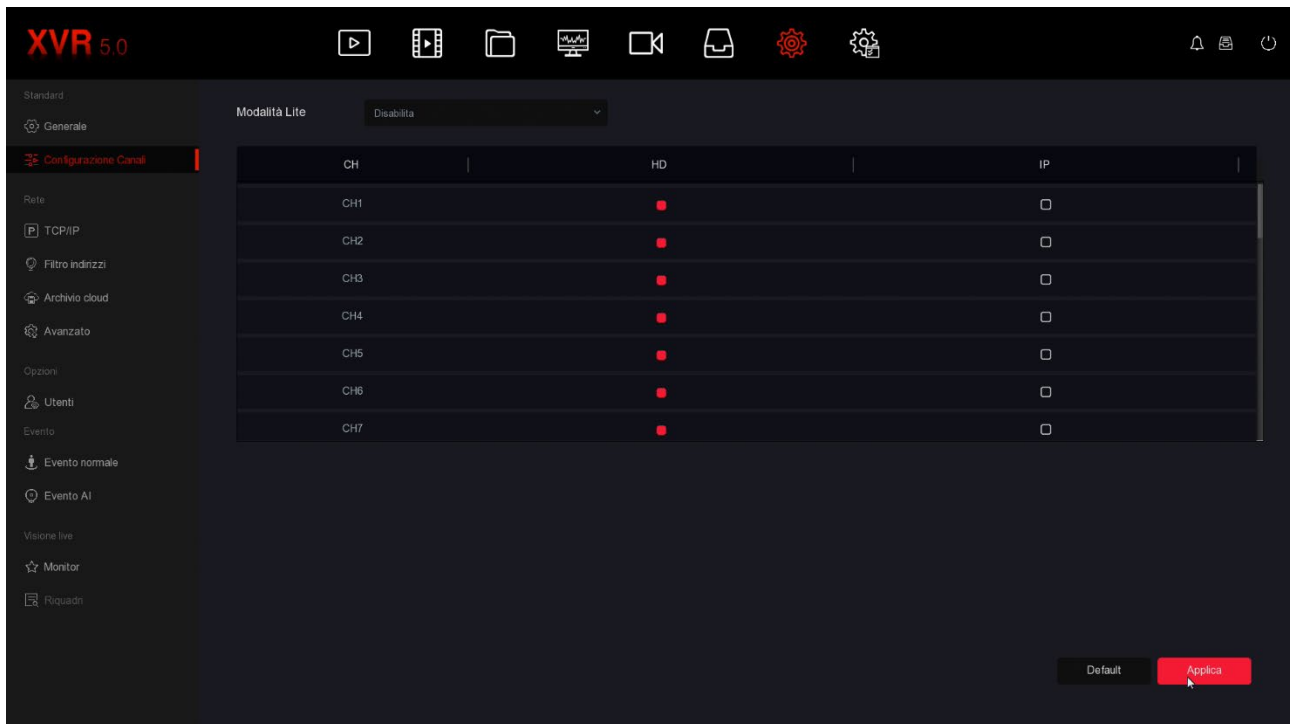


You can rotate the camera with the arrows and control the lens with the Zoom, Focus, Iris. You can also recall and set the automatic preset and cruise movements. The commands of this window are explained in detail in the configuration manual.

Enable IP channels on your DVR

If you have purchased an NVR you can only manage IP cameras that you must have in advance installed on the network, each with its own address.

DVRs with BNC ports can also handle IP cameras in addition to BNC channels. You can too disable the BNC channels you don't use to increase the number of IP channels. To do this you have to click CONFIGURATION ... CHANNEL CONFIGURATION



DVRs are supplied from the factory with all analogue channels enabled so you can use them all rear BNCs. Almost all of our DVRs allow you to connect additional ones

IP cameras, in addition to analogue ones. Also, if you don't use some BNC channels you can disable them in this table and a certain number of IP channels will automatically be enabled.

Obviously if you disable an analog channel, the related BNC can no longer be used.

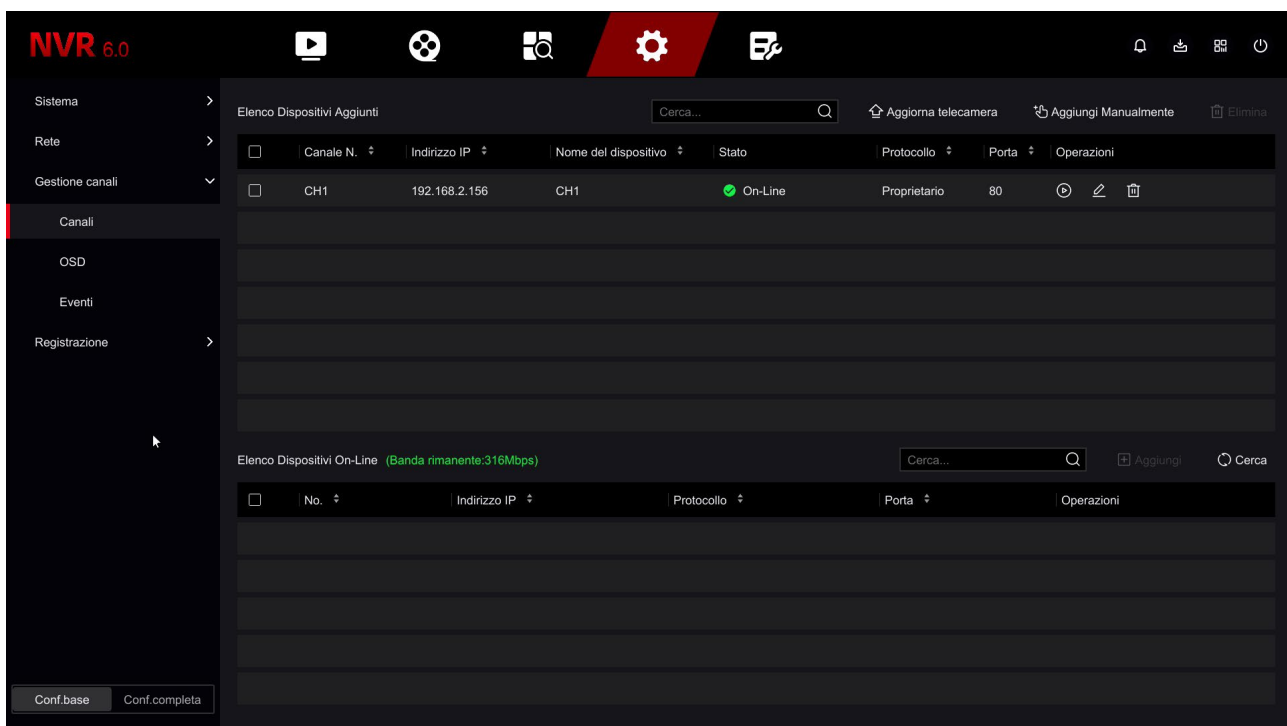
It seems like an obvious clarification, but it needs to be remembered because if you connect one in the future BNC camera to that input and you won't see it working, you might think the DVR is fault and needlessly request a repair.

Connect IP cameras to the network

If you have purchased an NVR or a DVR you can manage IP cameras connected to your router's network via switch or wifi.

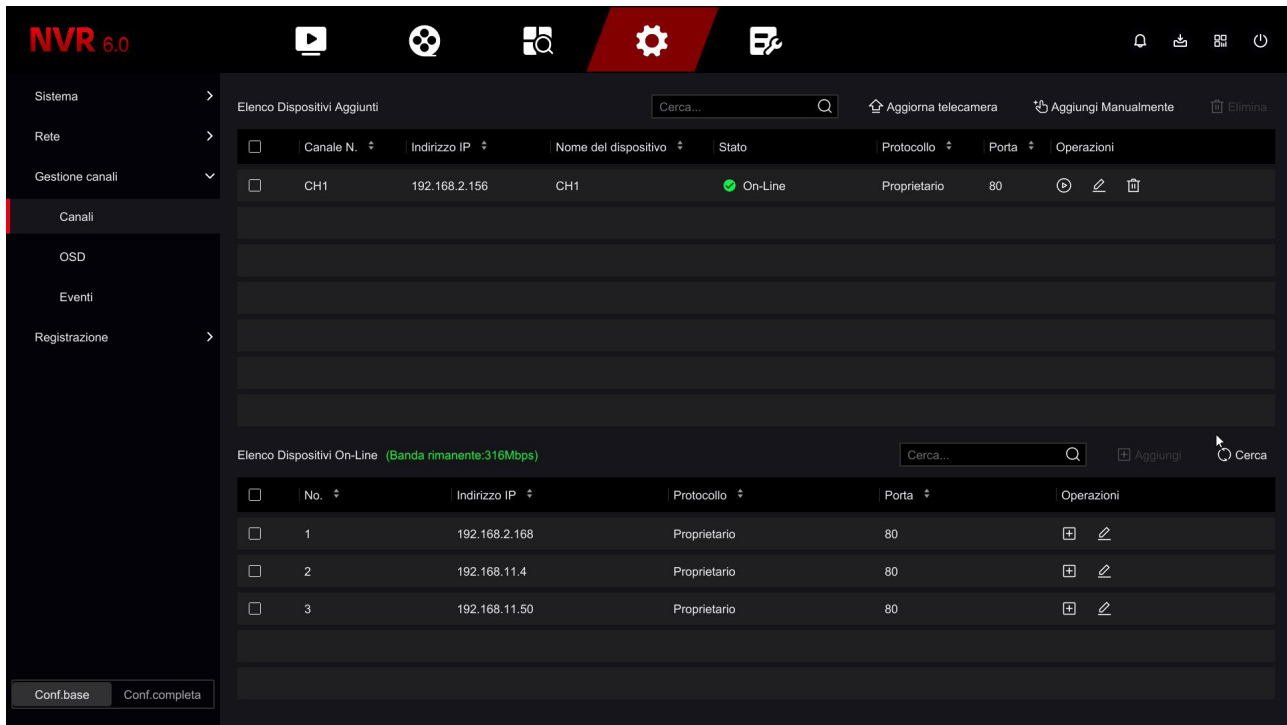
Before adding an IP camera you must have configured it on the network, using the appropriate ones configuration software, as explained in the camera manual.

To add an IP camera to your DVR/NVR you must enter the settings menu, as already seen previously, and choose CHANNEL MANAGEMENT

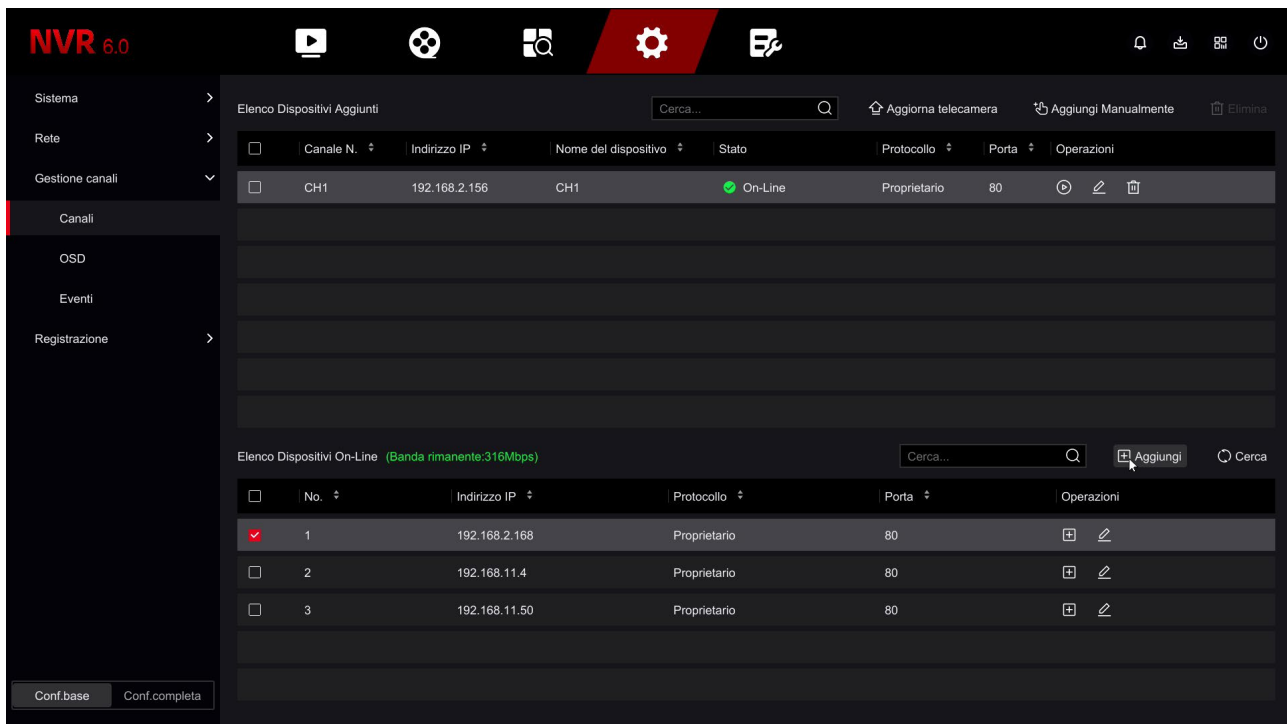


The window consists of an upper table showing the devices already added to the NVR and a lower table, where the cameras present on the network appear. You have to click the button SEARCH to search for cameras on the network.

Wait for the search to complete and at the end you will find, in the list of the table below, all DSE cameras and also ONVIF cameras from other brands that the DVR/NVR has detected on the LAN to which it is connected.

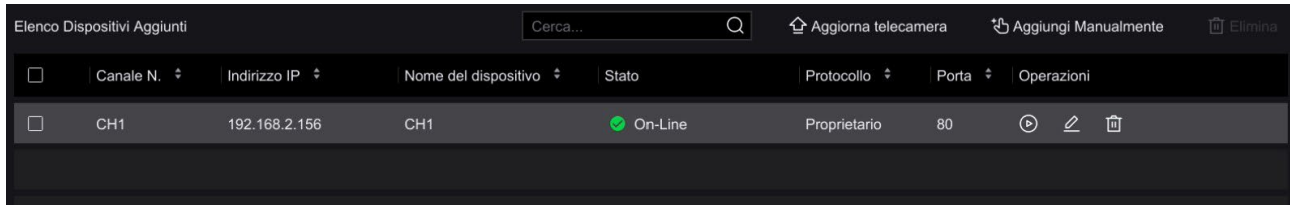


Select the camera you want in the table below and click ADD to insert it into video recorder.

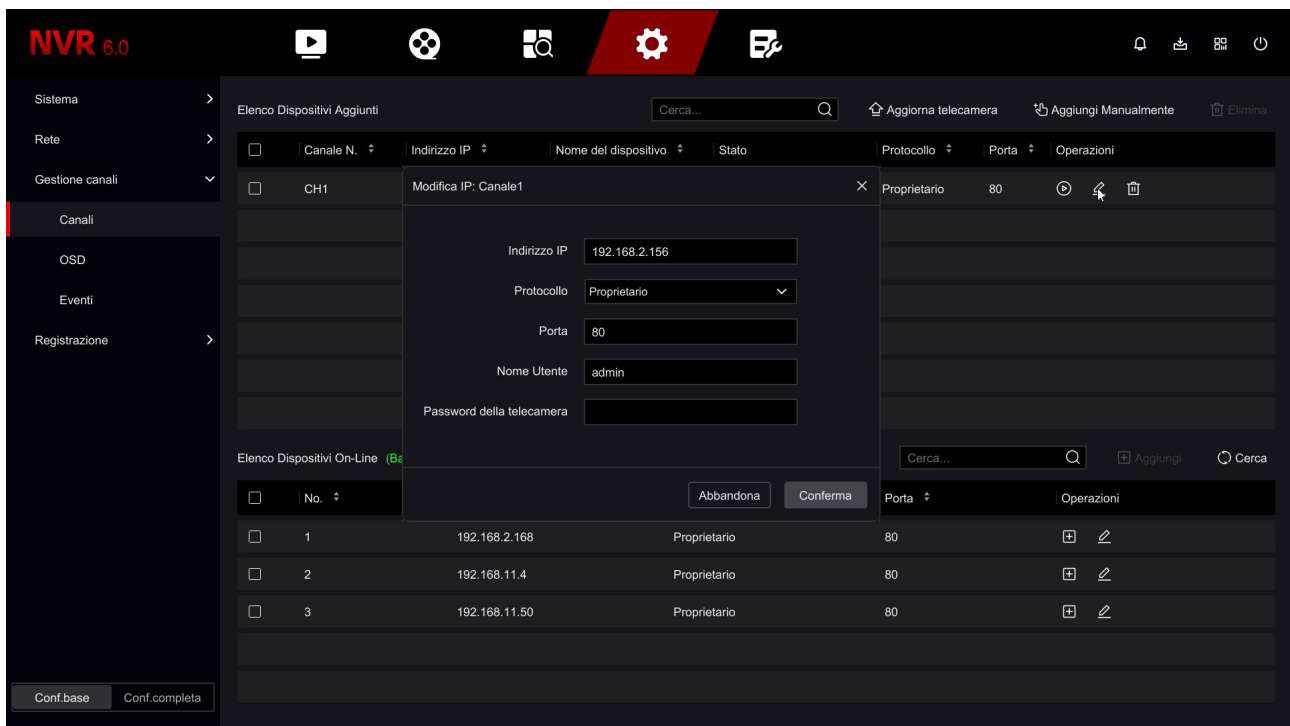


The camera thus appears in the upper table.

Once the camera has been added, check that the green ONLINE icon appears, as in the photo below, because this certifies that the connection has occurred.



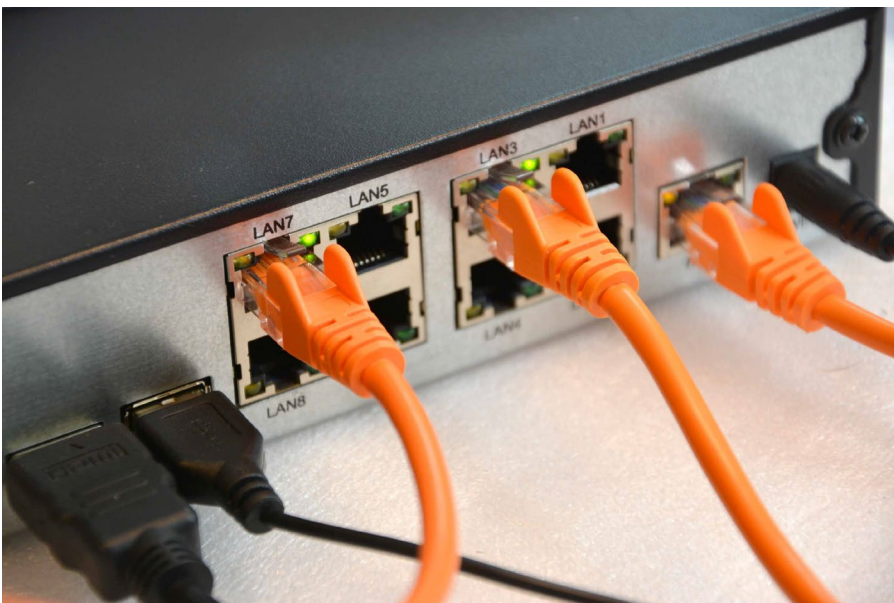
If the STATUS indicator remains in error there is something wrong with the configuration camera automatic failed. You must then click on the button EDIT and change connection parameters. Start by entering your password correct access to the camera, then check the manual for the ONVIF port that yours uses camera.



If the camera does not connect even after checking the password and port, enter the setup the camera with the browser and check that it is the main stream and the substream have the same H264 or H265 compression and try using a different resolution.

Connect IP cameras to the POE ports of the NVR

If you have purchased an NVR with integrated POE ports you can connect the IP cameras directly to the LAN ports on the back of the NVR. It's a very simple operation because the NVR configures the camera automatically.



ATTENTION - Unlike other DVRs and NVRs in this range, NVRs with POE ports are supplied with a special power supply that provides **52VDC**. Be careful not to mistake it for error with another of our standard 12VDC power supplies because the POE outputs for the cameras they would not work properly

CONNECT RK SERIES CAMERAS (PLUG&PLAY)

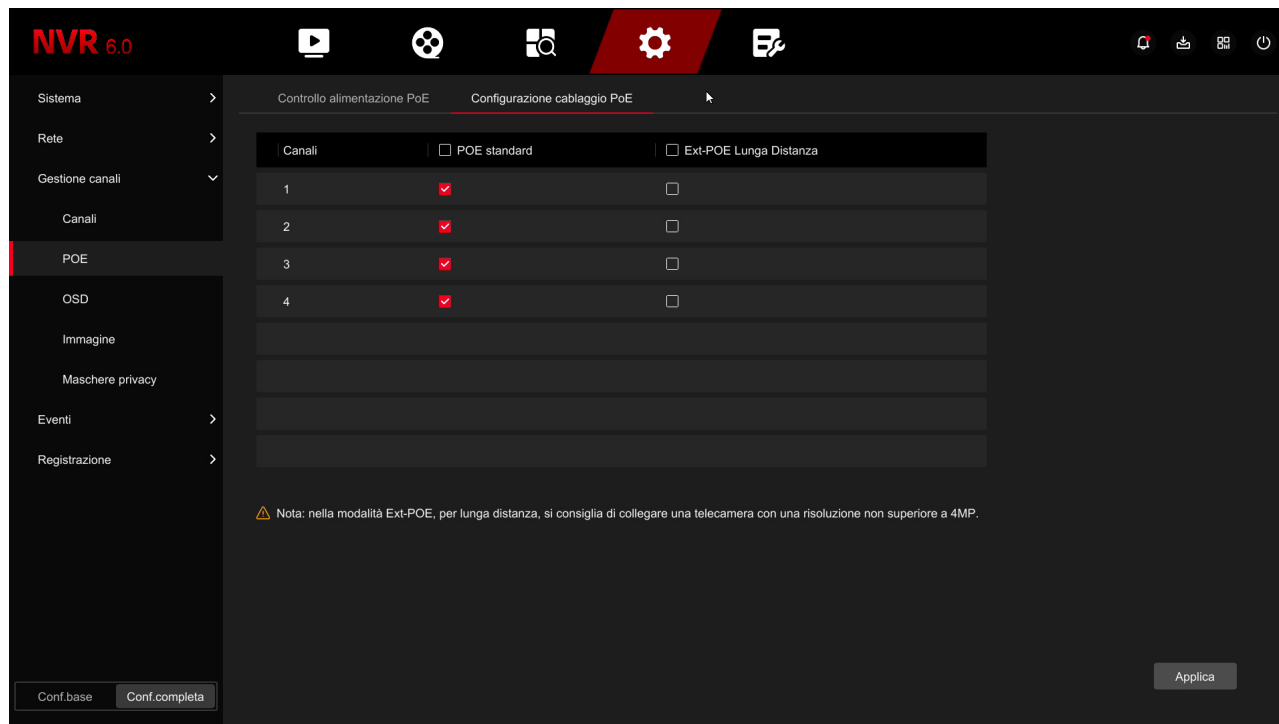
If you connect one of our RK series cameras to the NVR with POE ports, recognition is complete plug&play. You can take the new IP camera out of the box and connect it directly to one LAN port of the NVR without doing any preliminary configuration. The NVR takes care of it automatically assign the address to the camera and correctly configure the network settings. Wait about a minute and you will see the camera image appear on the monitor, in the box corresponding to the POE port in which you inserted it.

CHECK THE CONFIGURATION OF THE POE PORTS OF THE NVR

In video recorders with 4,8 or 16 PoE ports, channels 1-4,1-8 or 1-16, depending on the model, are factory-matched to the rear POE ports of the NVR in order to auto-configure the cameras

RK series that will be connected.

If you don't use some POE ports on the NVR, for example because you connect the cameras to your network instead of the NVR, you can disconnect some channels from the rear POE ports by intervening in this one CHANNEL MANAGEMENT/POE configuration page



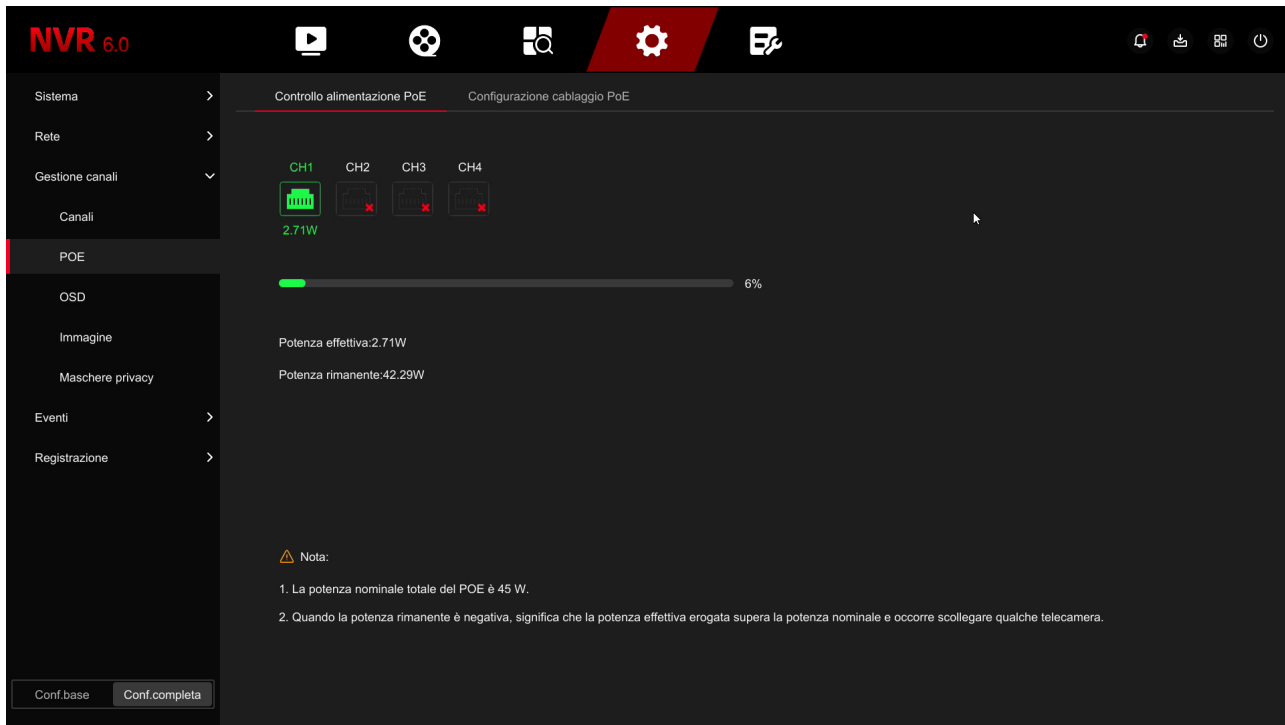
In this example above we see the factory setting of an NVR with 4 POE ports. THE channels 1,2,3,4 are connected, with the red tick, to the rear POE ports for which it is provided standard POE cabling (max distance 100 metres). If, for example, you don't use POE 3 ports and 4 you can remove the check next to these channels. So channels 3 and 4 will be free to be used with external cameras.

In this table you can also set one or more POE ports for wired use

EXTENDED POE, up to 250 m. The Extended POE mode allows you to reach 250 m of cabling, limiting the maximum channel bandwidth to 10 MB.

CHECK THE STATUS OF THE POE PORTS OF THE NVR

In video recorders with PO ports you can check the situation of the power delivered for each brings in real time to this page



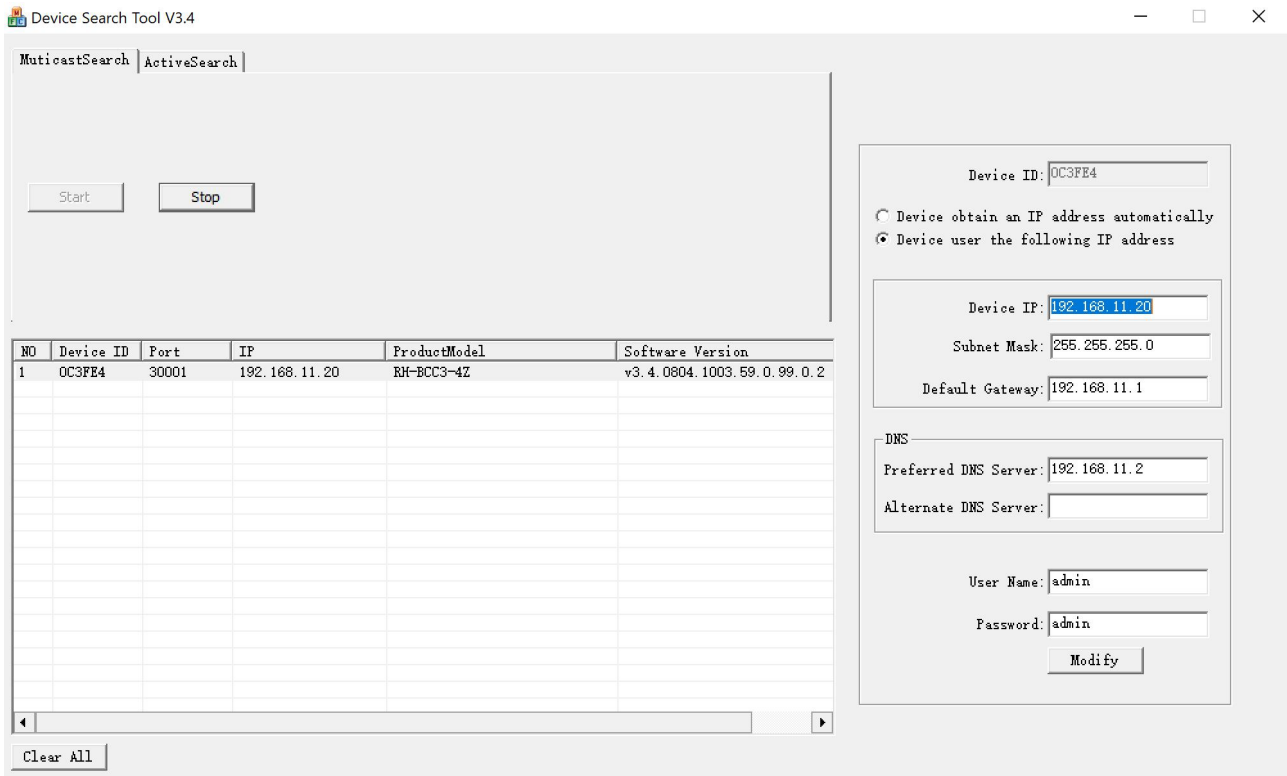
CONNECT ONVIF CAMERAS

If you connect a camera of a range other than our RK series to the POE ports of the NVR, or an Onvif camera from another brand, you must first configure it manually because the self-configuration mode **Plug and play only works with our Series cameras**

RK. Connect the camera to your external network and use the configuration program camera to assign a fixed IP address of the type 192.168.11.---, for example 192.168.11.20.

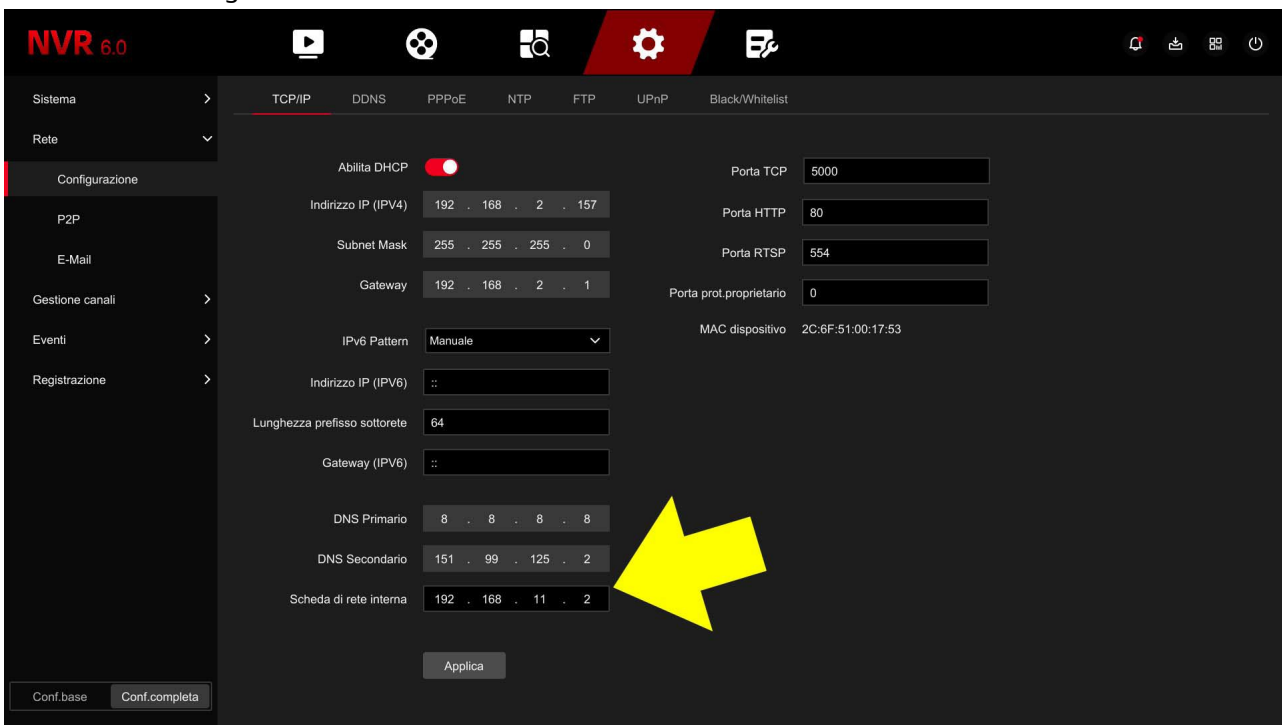
192.168.11.--- is the address class that the factory NVR uses to manage its internal network.

Enter the other network parameters as in the example below, where we use our own RH Series camera.

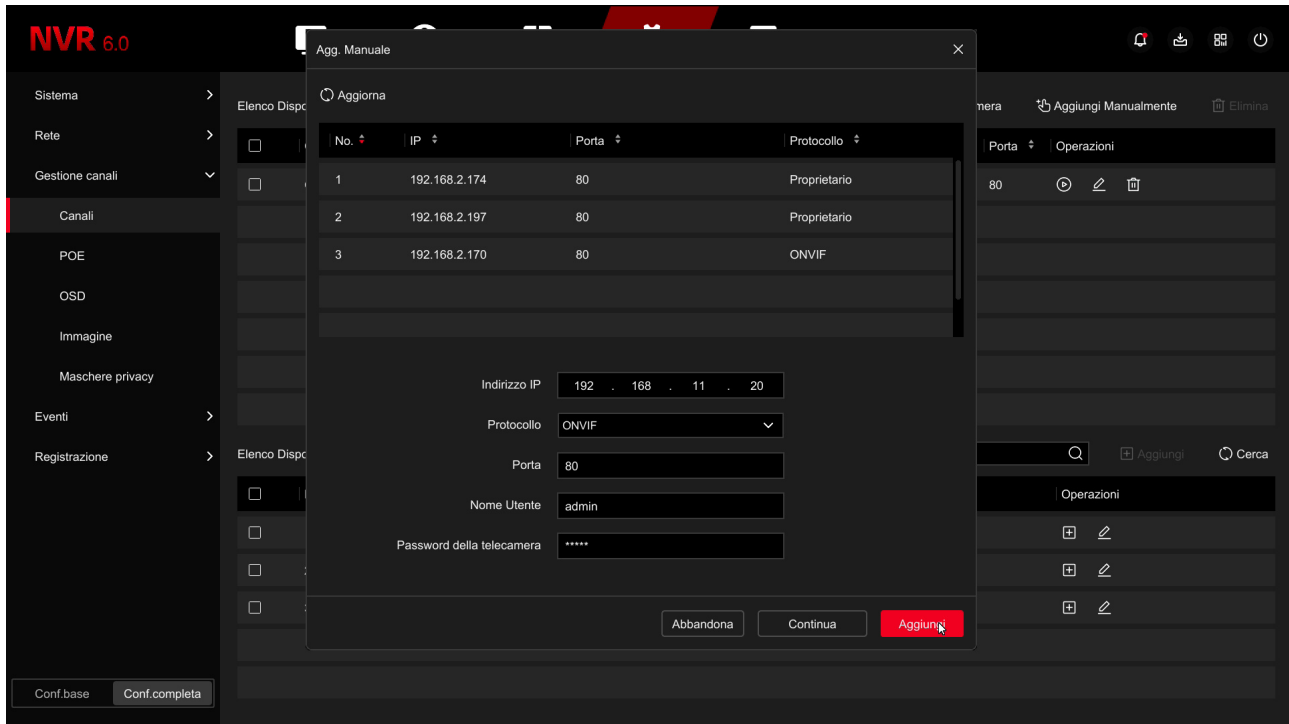


NVRs use this 192.168.11.xxx class to address cameras connected to its network.

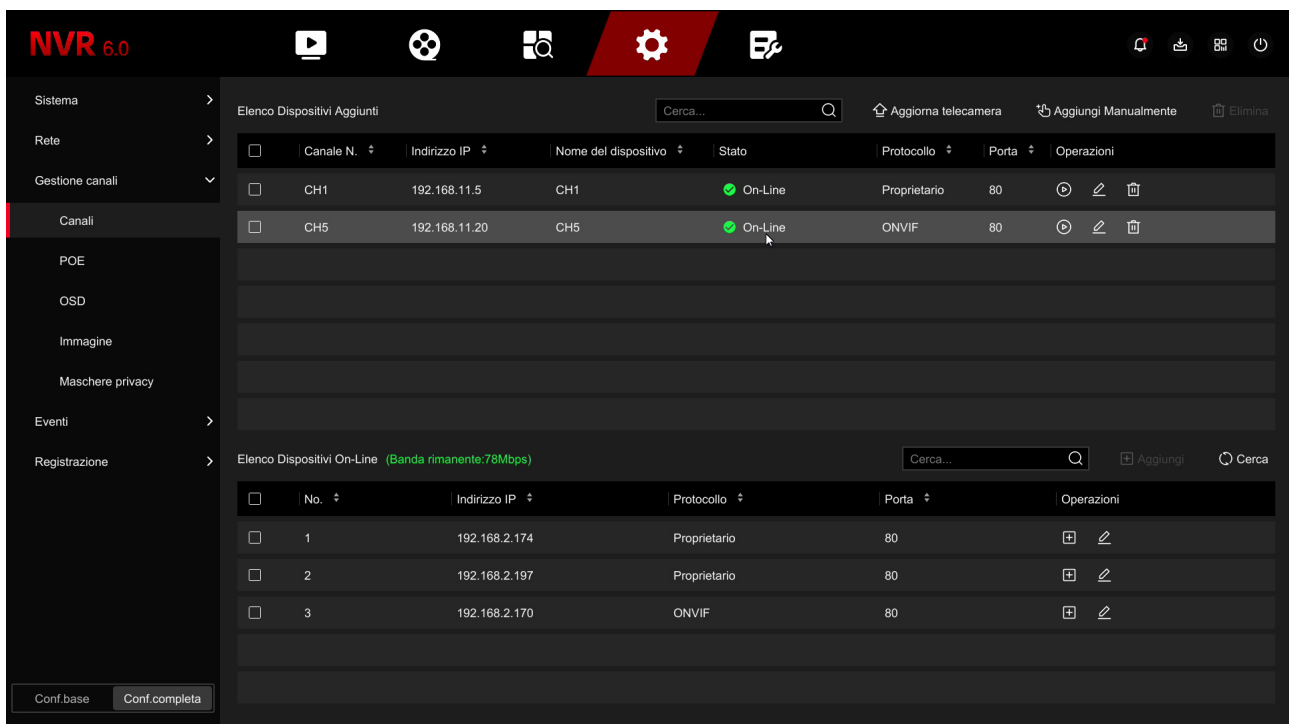
There are no particular reasons to modify this class, but if you want to do it it can be done in NVR network configuration



Once the IP has been assigned to the camera, connect the camera to a POE port of the NVR, open CHANNEL MANAGEMENT and click the ADD MANUALLY button, entering the correct parameters connection to the camera, as in the following example



Below you see the final situation of an RK camera connected in plug and play with protocol owner and a camera from other manufacturers connected manually with onvif protocol



Connect wifi IP cameras to wifi NVRs

If you have purchased an NVR with integrated wifi you can connect wifi cameras directly to the network wifi of the NVR without using your external wifi network.

Connecting wifi cameras is very simple and Plug&Play if you purchase one of our cameras RK or RKK series wifi. However, if you want to connect a different type of Onvif wifi camera, you will have to proceed with manual configuration.

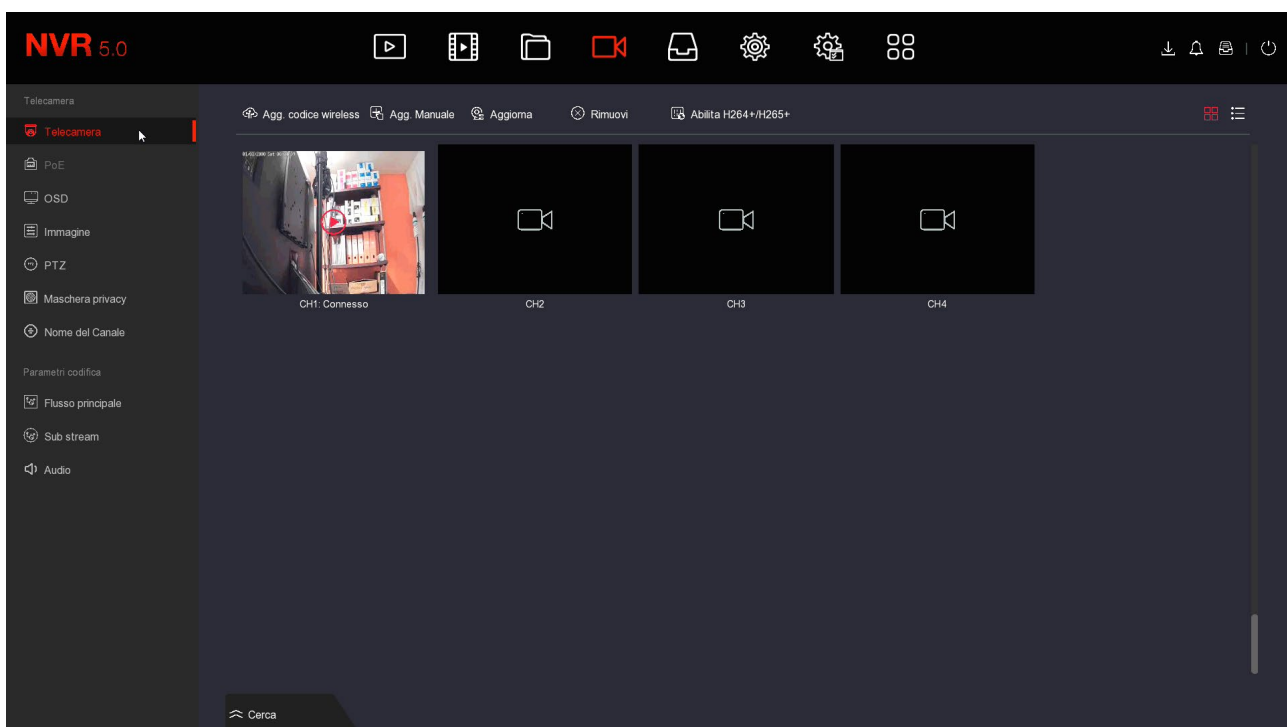
ADD AN RKK SERIES CAMERA - WITHOUT NETWORK SOCKET

RKK cameras can only work with our WIFI NVRs and are not equipped with mains socket, but a pairing button.

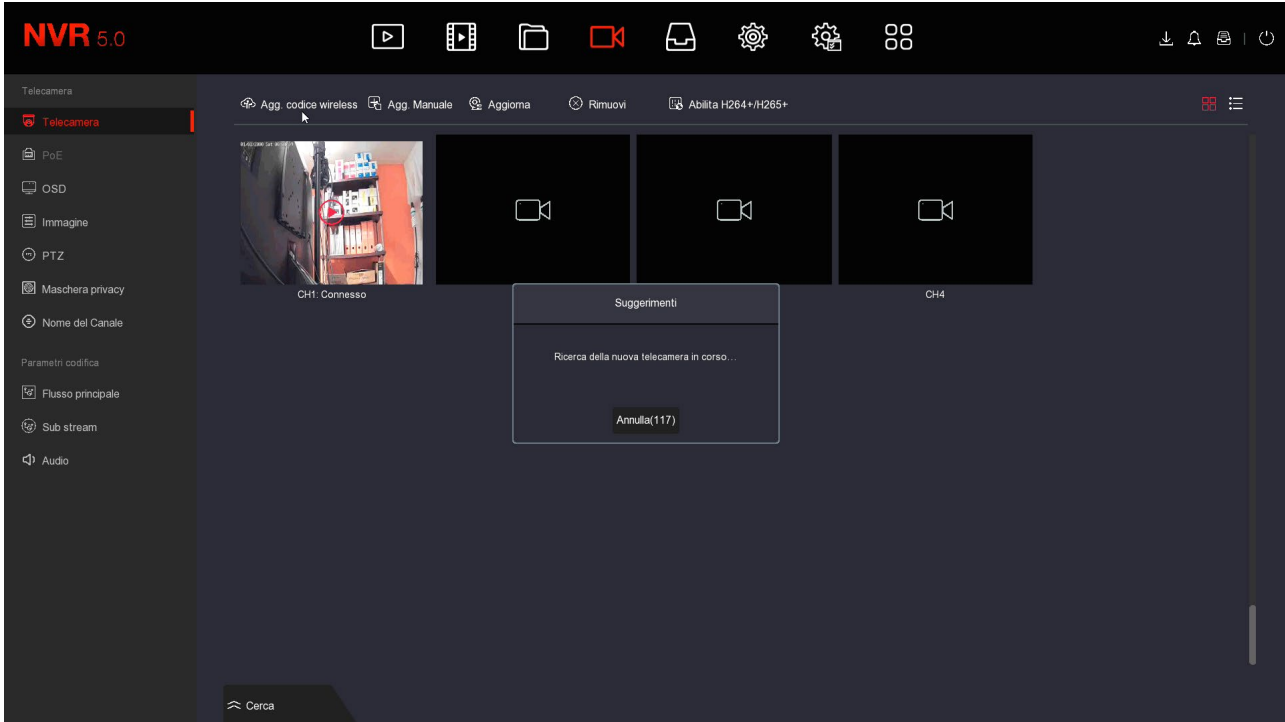
1 – Power the new camera with its power supply

2 – Open the NVR MENU and access the CAMERAS section

In this example it is a system with 2 cameras to which we want to add one third.



3 - Press the ADD button. WIRELESS CODE to start camera search from pair. A window opens with a 120 second timer.



4 - Before the 120 seconds expire, press the button present among the connections of the camera, next to the power connector. Hold for 10 seconds until when the camera LEDs start flashing.



DONE - Wait for automatic pairing to complete. The camera is now connected to the NVR and you can use it over wifi like the others.

CONNECT AN RK SERIES WIFI CAMERAS WITH NETWORK PORT

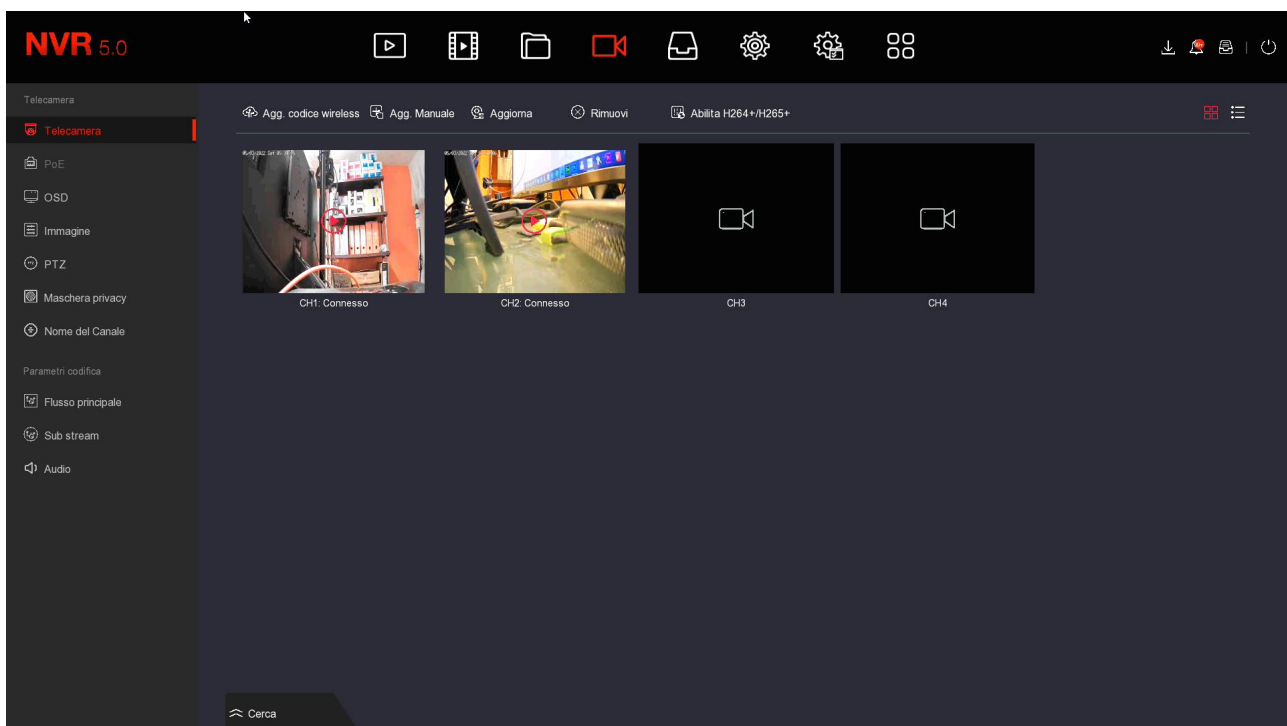
If you connect one of our standard RK series cameras, equipped with a network port, to the wifi NVR, Pairing to the wifi NVR is carried out by initially connecting the camera via cable to the NVR. Recognition is totally plug&play. You can take the new IP camera out of the box and connect it directly following these instructions.

1 – Power the new camera with its power supply and connect it with a network cable to one rear network port of the NVR. If your NVR only has one WAN port, connect it there new camera, temporarily disconnecting the external network or router.

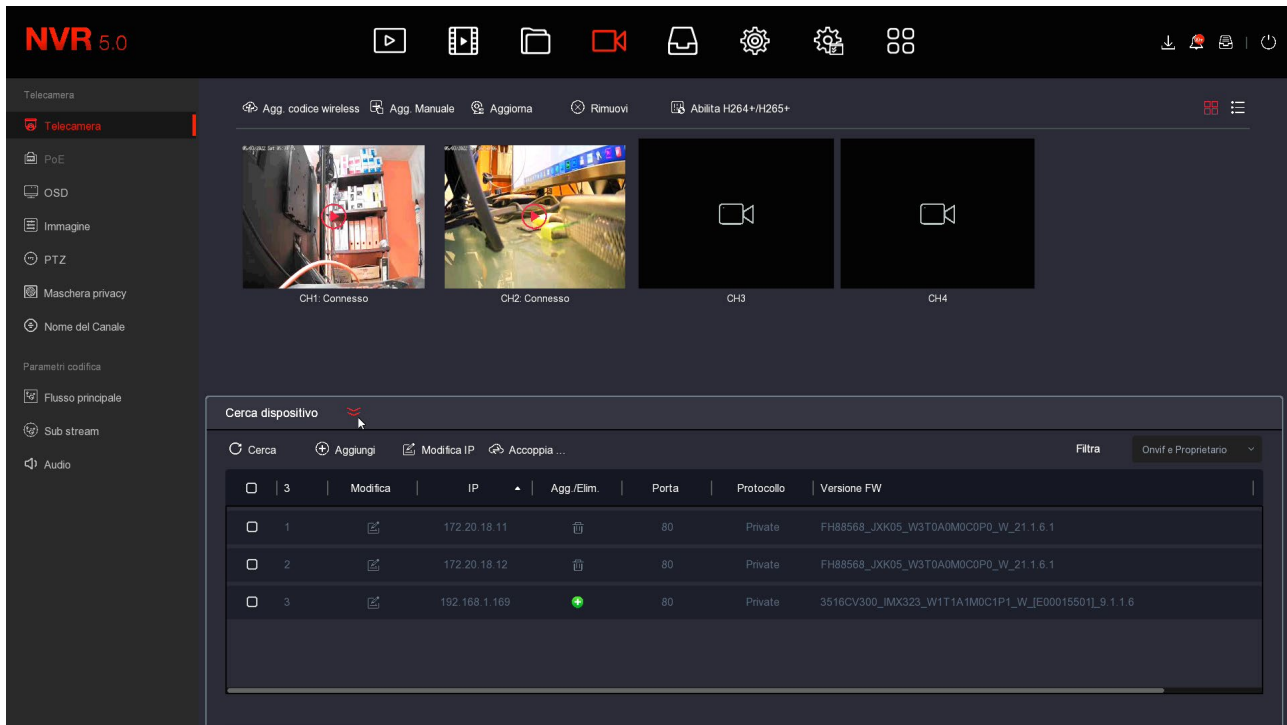
If your NVR has a WAN network port and other LAN ports connect the new camera to one free door any.

2 – Open the NVR MENU and access the CAMERAS section

In this example it is a system with 2 cameras connected and functioning to which we want to add a third.

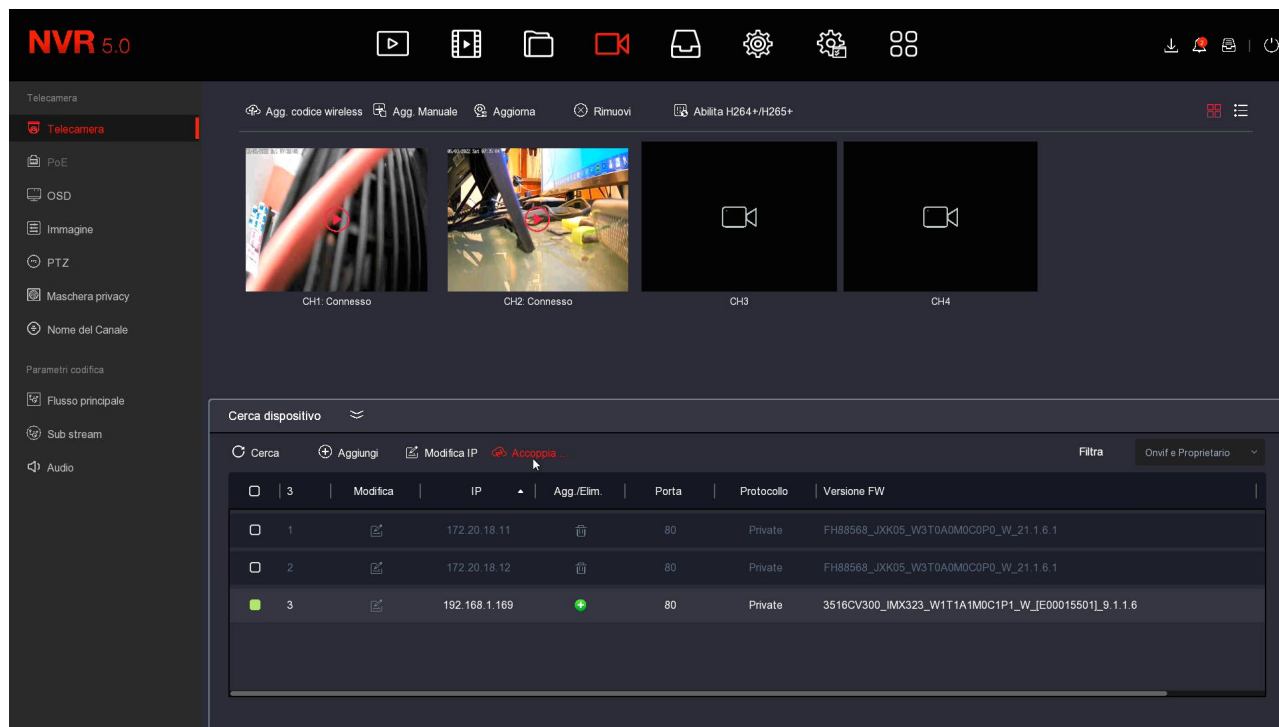


3 - Press the SEARCH button at the bottom of the window to start the camera search



In the FILTER box, at the top right, leave the basic setting ONVIF AND OWNER.
The NVR searches for RK cameras and will find, in addition to any wifi cameras already installed, even the new one that you connected with the cable. Probably this new one camera will have a completely different address than those already installed, but not worry; the NVR will configure the camera automatically.

4 – Select the new camera and then click the PAIR button. Wait for the completion of pairing and close the window by right-clicking.



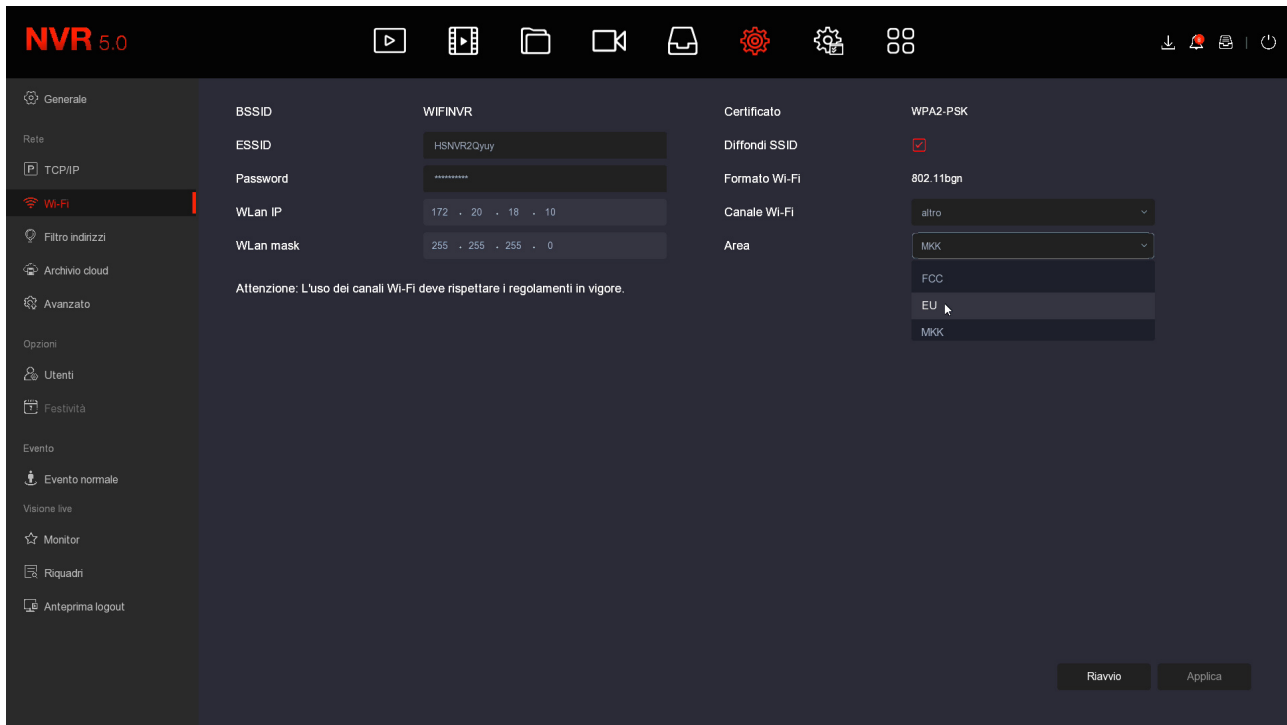
FINISHED – Now you can disconnect the network cable between the camera and the NVR and use the camera via WiFi like the others.

CONNECT ONVIF WIFI CAMERAS

If you want to connect an onvif wifi camera that is not part of our RK series to a wifi NVR, for example one of our PTZ wifi cameras, or a wifi camera from another manufacturer, you can do this by following the camera instructions to connect the camera to a wifi network. Generally these instructions tell you how to connect the camera to your home wifi network, but you can do the same by connecting to the NVR's wifi network instead.

Before you can proceed, however, you must carry out some preliminary configurations on the NVR make the wifi network that he generates visible to the outside.

1 – Enter the NVR menu SYSTEM CONFIGURATION - WIFI section. In this window move the reference area of the wifi network from MKK to EU. Then press confirm and restart the NVR. Now the NVR's wifi network will also be visible to external devices. You can try searching for wifi networks with your smartphone to make sure of the presence of this new network.



2 – Connect the camera to the NVR's wifi network following the camera's instructions. Generally you will have to enter the computer camera configuration and act in the configuration Wifi.

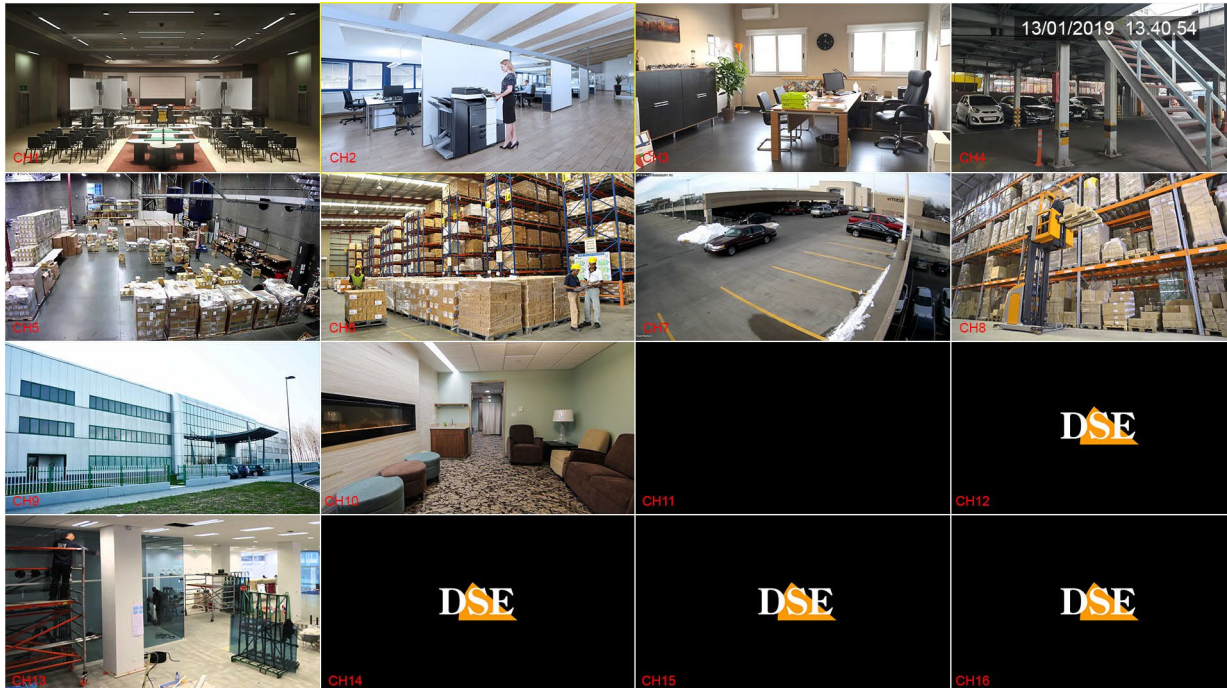
The NVR's WiFi page, which you see in the following photo, provides you with the network connection data wifi of the NVR, which you need to use to connect the camera. The ESSID is the name of the NVR's wifi network and the login password is revealed by pressing SHOW. The factory WiFi password of our NVRs is "lspassword" making sure that the first letter is a lowercase L.

You can connect any onvif wifi IP camera to the NVR and also different wifi devices, such as example of WiFi signal repeaters to enhance the transmission range

3 – Now that you have connected your wifi camera to the NVR's wifi network you can add it to the NVR channel configuration by searching for it on the network, like any network camera, like we have already explained at the beginning of this chapter.

Viewing live cameras

Now that you have installed your video recorder you can see the cameras on the monitor. In this chapter we give you some tips to make the most of live viewing.



The factory view includes multiview of all cameras in full screen. You can easily change this basic view.

RIGHT BUTTON MENU

In live view you can right-click to show the context menu.

EXIT FULL SCREEN MODE – Click to show all control buttons around to live images

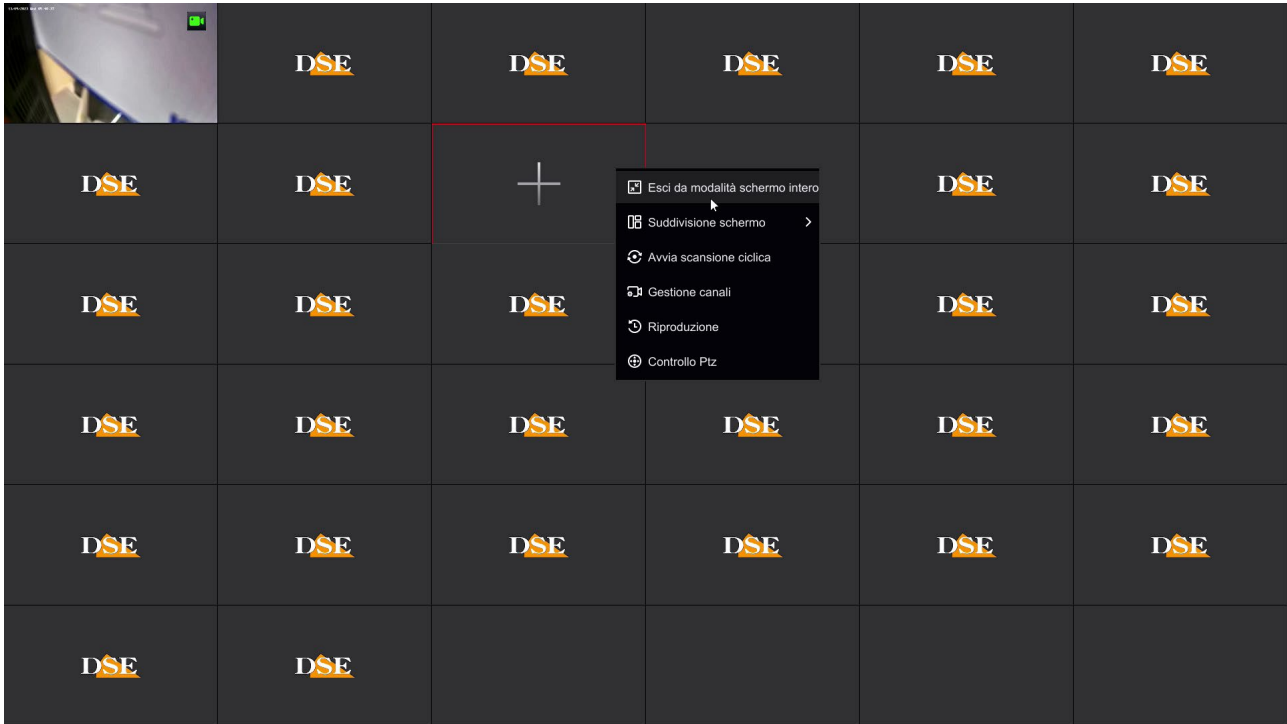
SCREEN SPLIT – Change the screen split to a different number of dials. Different divisions are available depending on the device.

START CYCLIC SCAN – Here you launch the cyclic scan of the cameras on the screen. The Scan modes are configured in the settings

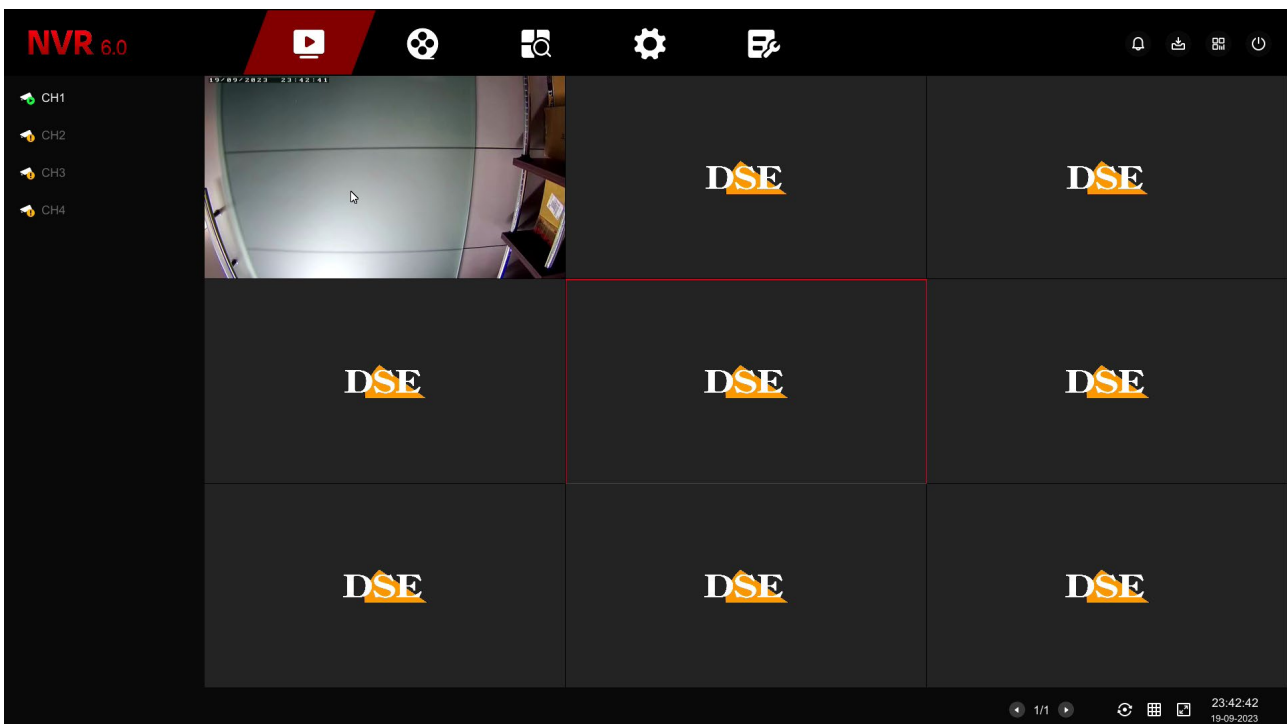
CHANNEL MANAGEMENT – Directly opens the channel configuration page for adding cameras

PLAYBACK – Opens the playback page directly

PTZ CONTROL – Exits full screen mode and shows the control panel for PTZ motorized cameras



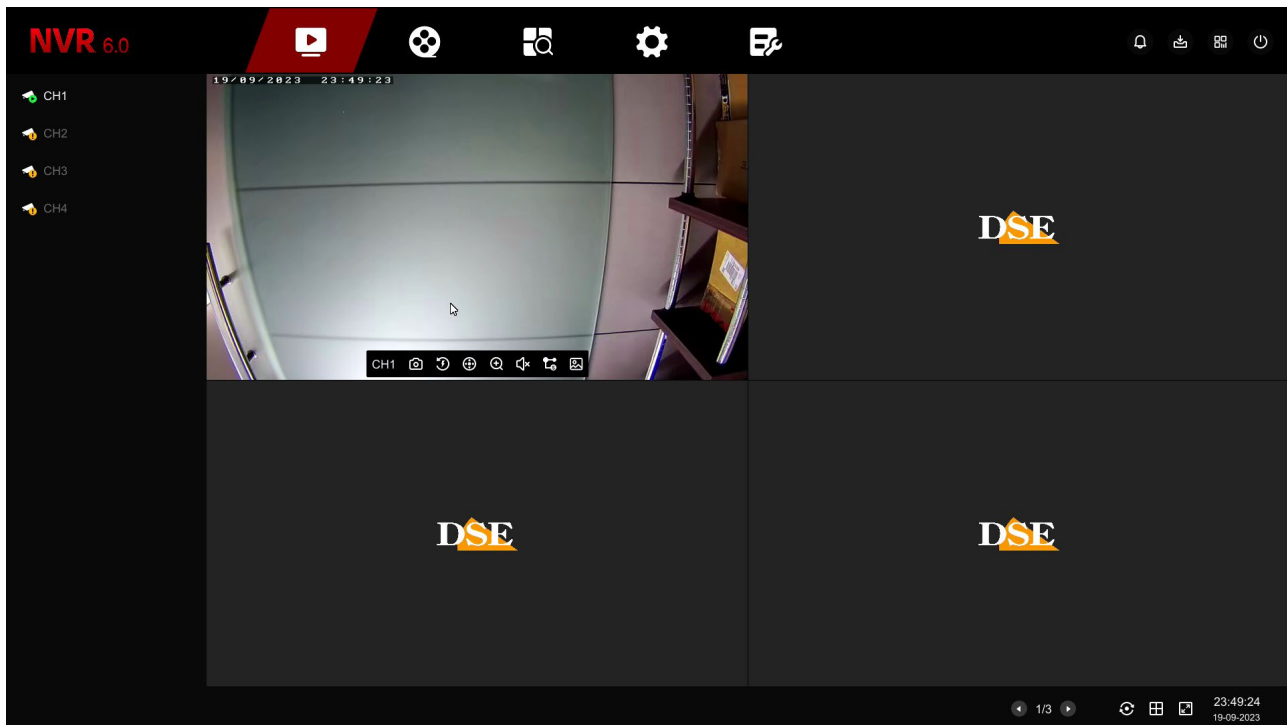
Exiting full screen mode displays the control buttons.



Some of the commands in the menu are available at the bottom right of the window right click described above.



Moving the mouse over a live panel brings up a bar of controls relating to that channel



1 2 3 4 5 6 7

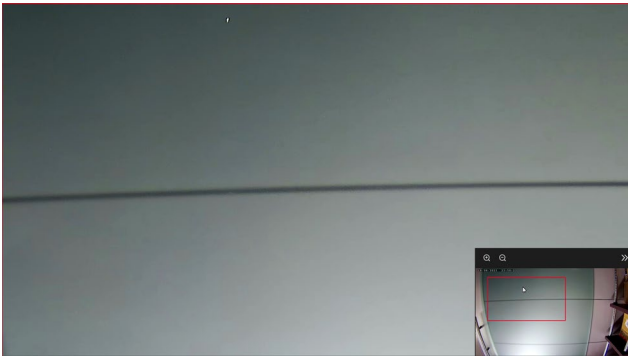


1 - CAPTURE - Save a photo of the image in real time

2 - QUICK PLAY - If you press this icon you will automatically play the last 5 minutes of recording. It's a very convenient function to immediately review what it is just happened.

3 - PTZ - With this button you open the panel for PTZ control of motorized cameras.

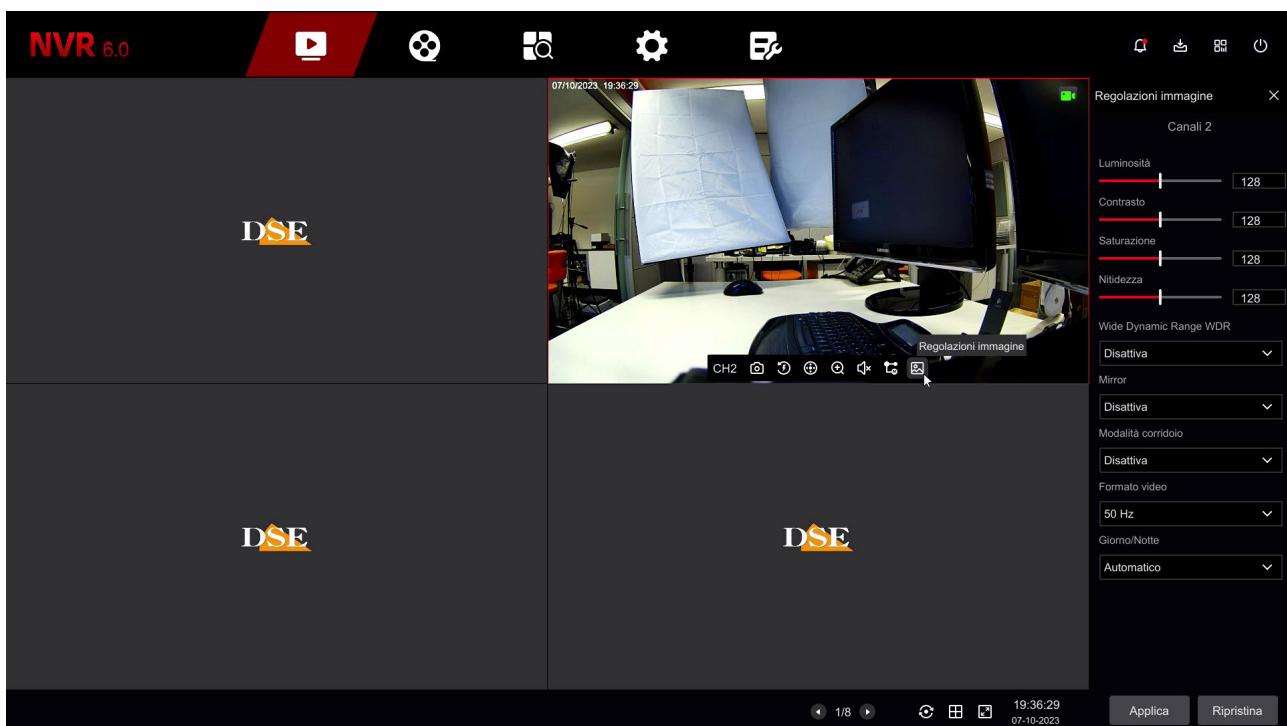
4 - DIGITAL ZOOM - If you activate this function you open the camera in full screen mode digital zoom where you can define a zoom box on the image and then move it in the screen like a magnifying glass. Right click to return to normal vision.



5 – AUDIO – Press this icon to activate playback of the channel's audio and adjust the volume. To hear the audio you must have connected a speaker to the audio output of the DVR/NVR or a TV to the HDMI output.

6 – STREAM – Here you can choose whether to receive the main or secondary stream. Normally the DVR/NVR uses the main stream in full screen view and the secondary stream in multivision.

7 – ADJUSTMENTS - This button opens the panel for adjusting the video parameters of the image



CHANNEL ICONS

During live viewing, some overlay icons indicate the status of the channel



Channel recording



Motion detection alarm channel



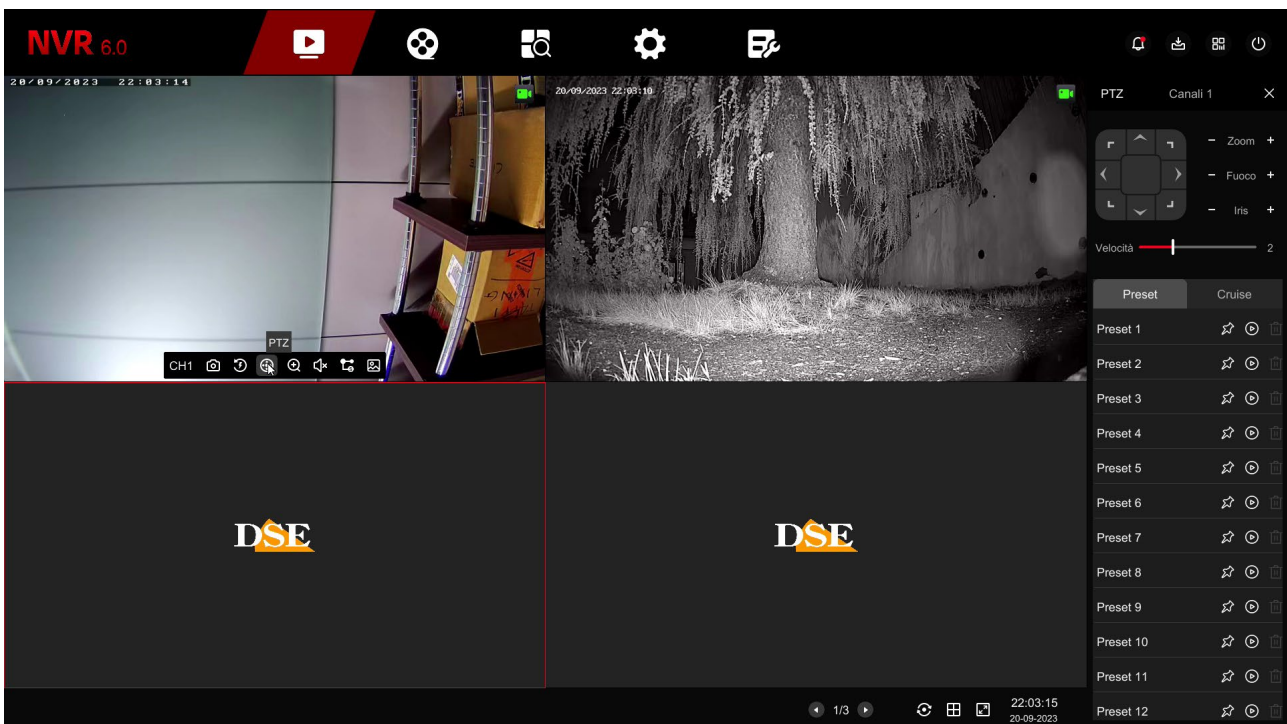
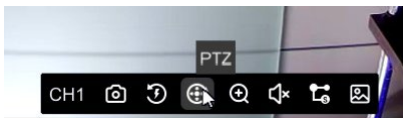
Intelligent human detection alarm channel

PTZ CONTROL

With the PTZ button open the side panel of PTZ controls to control the cameras motorized, both analogue and IP. You can also use this panel to control the UTC menu of analog cameras.

To use this panel with analog cameras you need to set PTZ settings correctly as explained above in this manual.

The PTZ command runs automatically on a single full-screen camera



CHANNEL – Select the camera to control

ARROWS – Directional shifts

SPEED – Adjusts the speed of movement, if the camera supports this adjustment

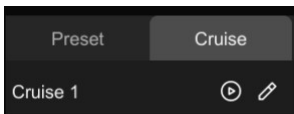
ZOOM – FOCUS – IRIS – Motorized lens controls. Some of these commands might

may not be effective depending on the camera settings.

PRESET – You can set and recall a preset, i.e. a pre-positioning, set in the camera. To set a preset, position the camera where you want and press the icon pin. To recall the preset, press the play icon



CRUISE – You can set and recall a tour or cruise, i.e. a pre-configured scan between several presets. Use the pencil button to set the cruise and add the different presets, each with its residence time. You can start cruise with the play icon.

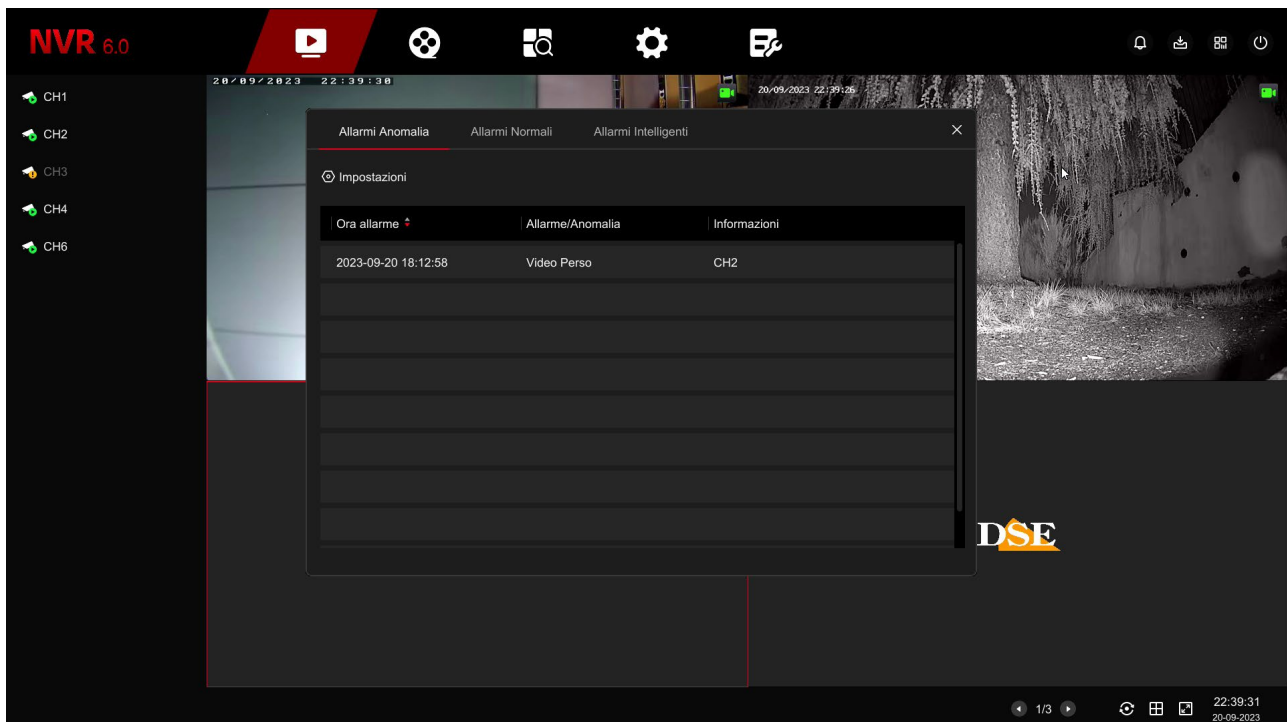


GENERAL BUTTONS

At the top right there are some buttons for quick access to popup windows

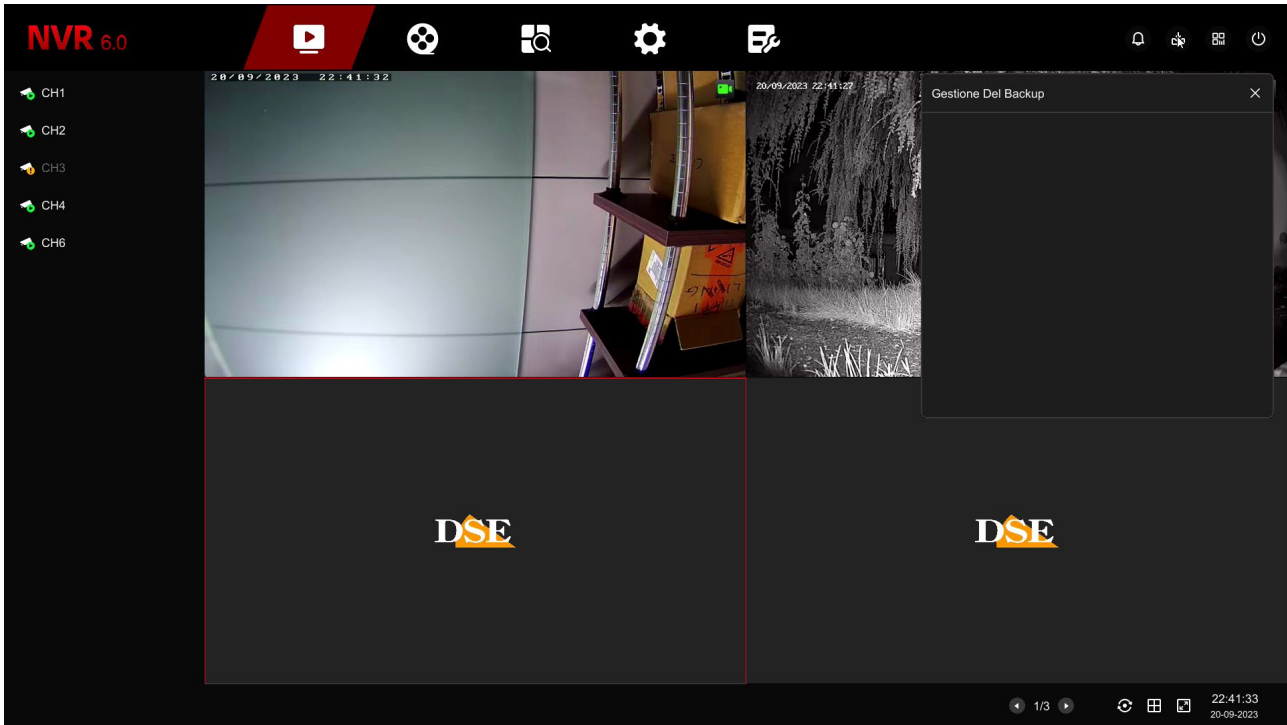


opens a popup panel with the log of the latest Alarms divided by Anomalies - Motion - AI

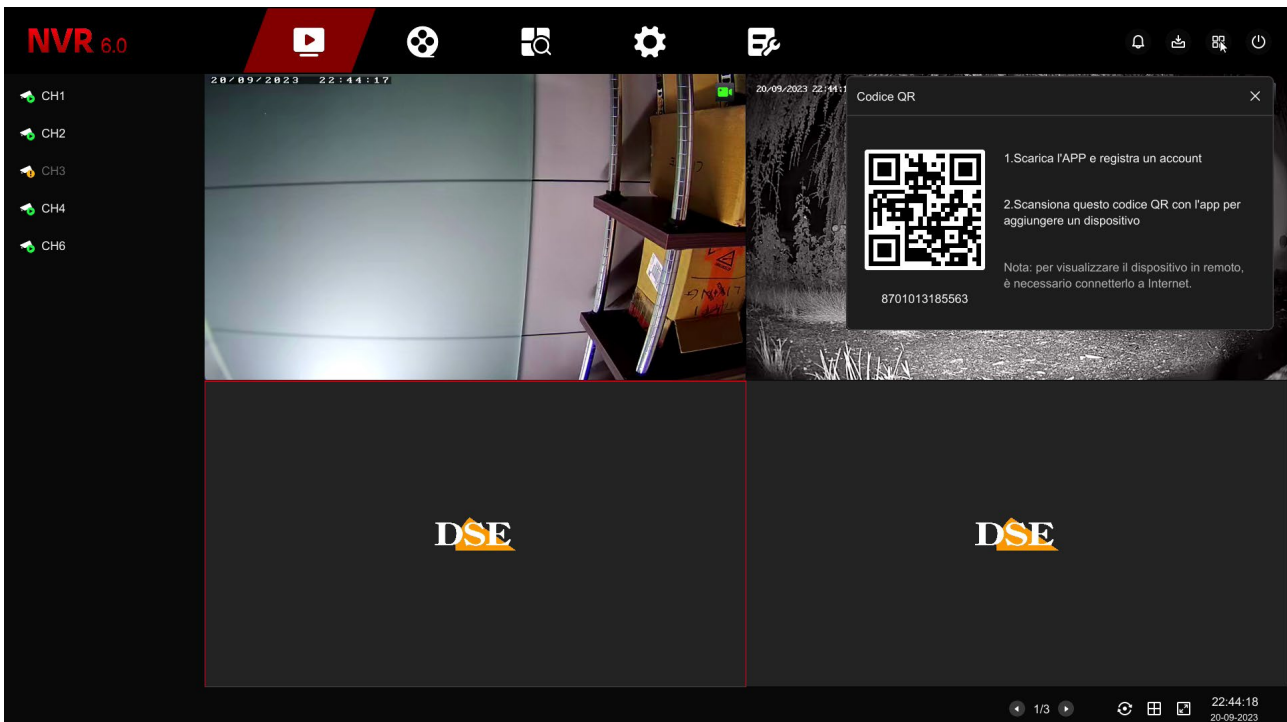




opens a pop-up Panel showing the ongoing backup progress



shows the QR code with the device serial number, the same as shown on the product labels, which you will use to add the device to the IoVedo.RK app



INSTALLATION MANUAL

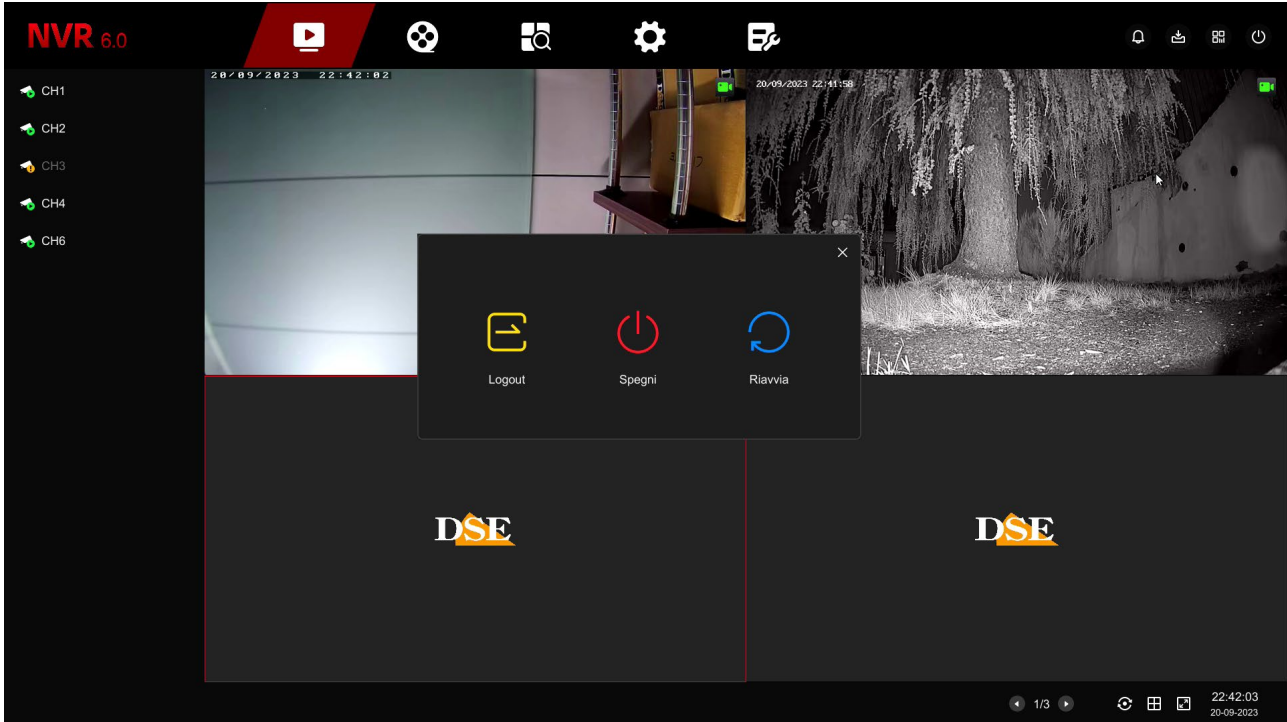
RK SERIES – DVR and NVR GUI 6.0



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opens a popup panel where you can: Log out, Restart and Shut down

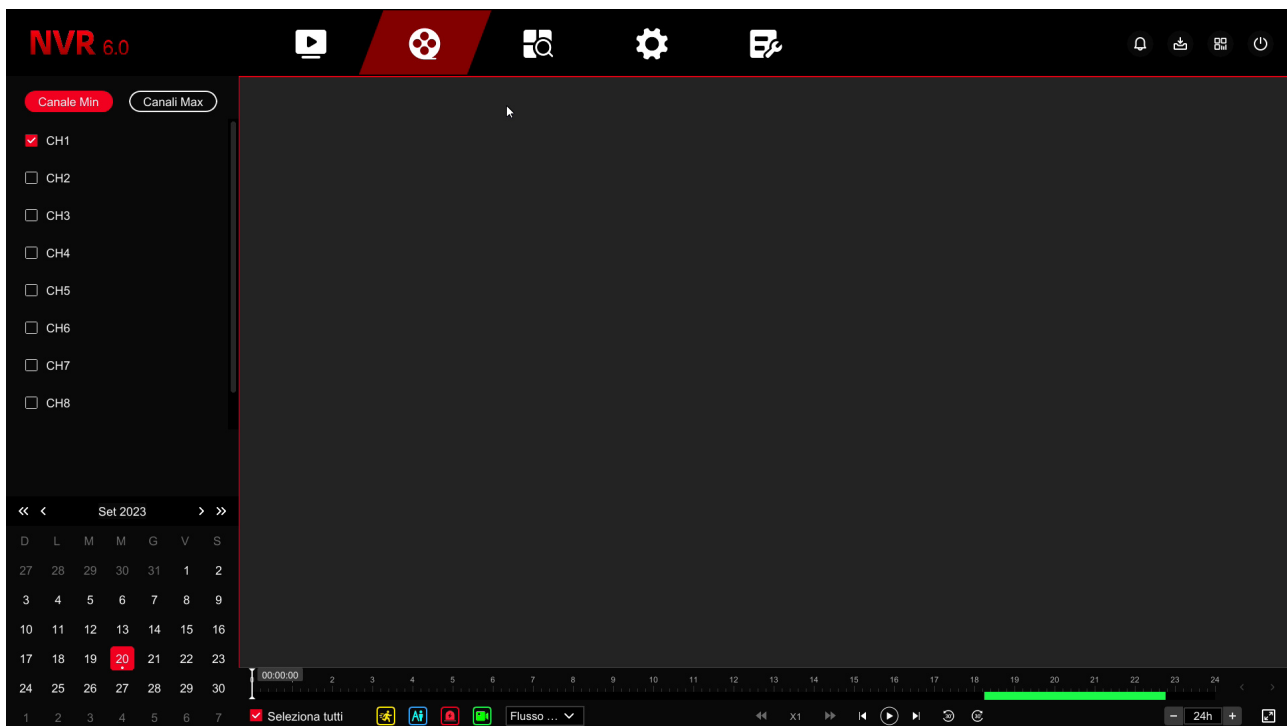


Review recordings

To review the recordings archived by your NVR/DVR, perform the following operations.

1 – OPEN THE PLAYBACK WINDOW

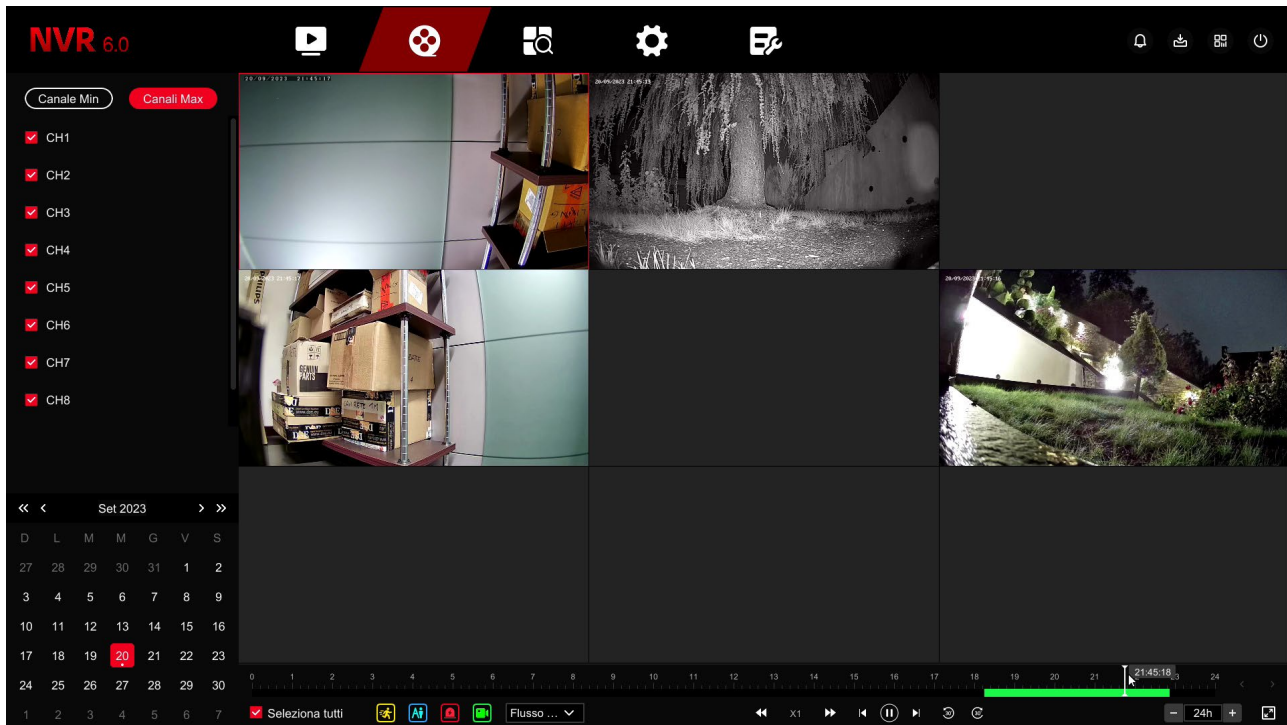
Click the PLAY icon, the second one in the top menu



2 – CHOOSE THE DAY AND THE CAMERA YOU WANT TO SEE AGAIN

Choose the day you are interested in reviewing in the calendar on the left. The days they contain recordings are marked with a colored dot. Click on one of these. Over the calendar, select the channels you want to play. They will appear automatically in the timeline at the bottom representing the 24 hours of the day

Each NVR/DVR has a maximum number of cameras that can be played simultaneously. Self click MAX CHANNELS. the maximum number of playable channels will be activated simultaneously from your device.



3 – PLAY THE INSTANT YOU WANT TO SEE AGAIN

In the time bar at the bottom you will find the 24 hours of the day. Recordings are shown with different colors based on the type of recording. The most common are the green bar for the continuous recording and the yellow bar for recordings made with detection of movement.

If you want you can filter the recording types by disabling the colored icons



Green (Continuous recording)

Red (Recording from alarm input)

Light blue (Recording in intelligent detection – human detection)

Yellow (Motion detection recording)

Click wherever you want in the time bar to play the images at that exact moment.

With the box at the bottom right you can vary the scale of the timeline



4 – CHECK PLAYBACK

During playback, with the play buttons at the bottom you can play

sped up or slowed down and stop or pause playback.



Speed up to 16x or slow down to 1/8x (slow motion)



Forward and backward frame by frame

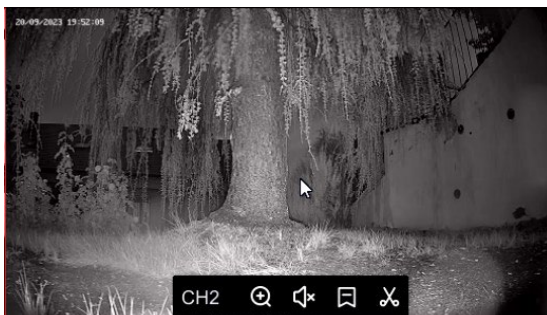


Play/Pause



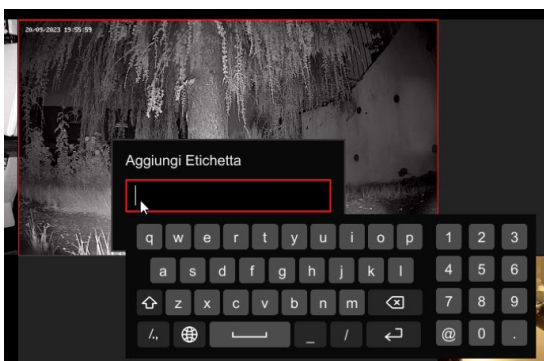
Forward and backward by 30 seconds

If you move the mouse over a camera during playback a control menu appears specific to that channel



1 2 3 4

- 1 - Activate digital zoom by bringing the camera to full screen
- 2 - Enable channel audio playback during playback
- 3 - Inserts a label at that playback instant to mark a moment important. You can quickly search for labels in the file search section that comes explained in the next chapter.



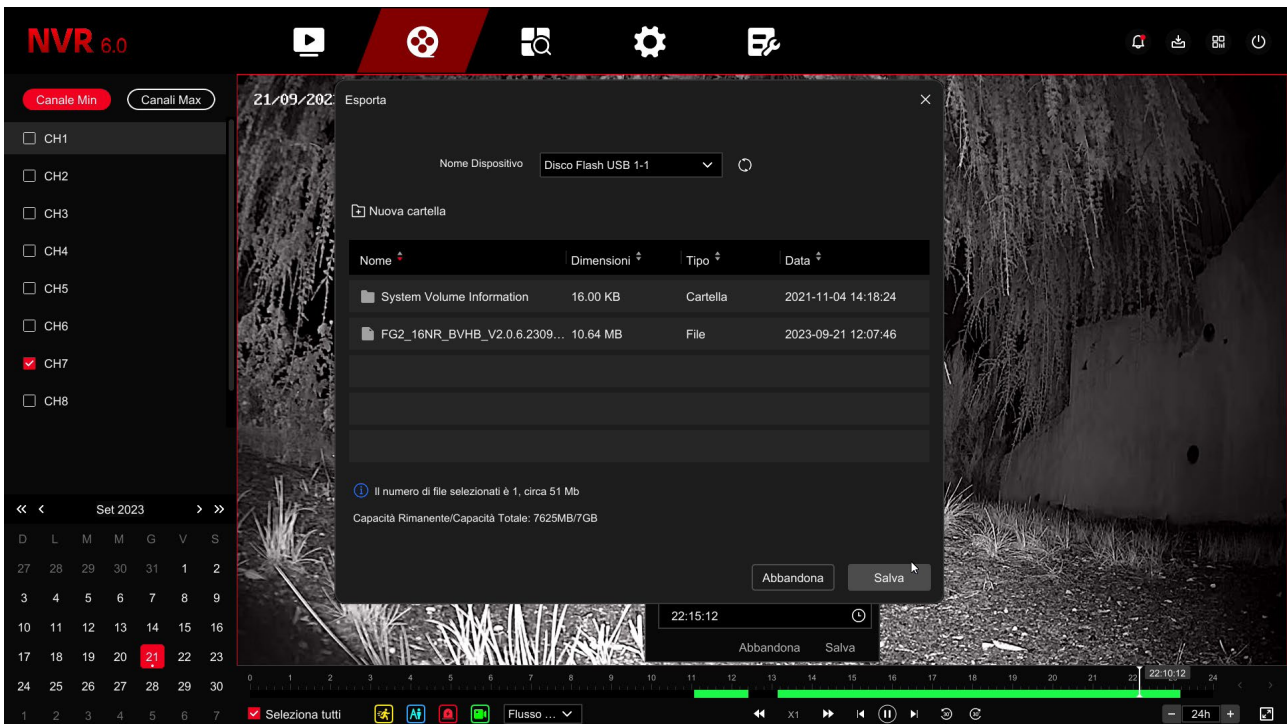
- 4 - With the scissors button you can define the beginning and end of a video clip to export to a flash drive with the SAVE button

INSTALLATION MANUAL

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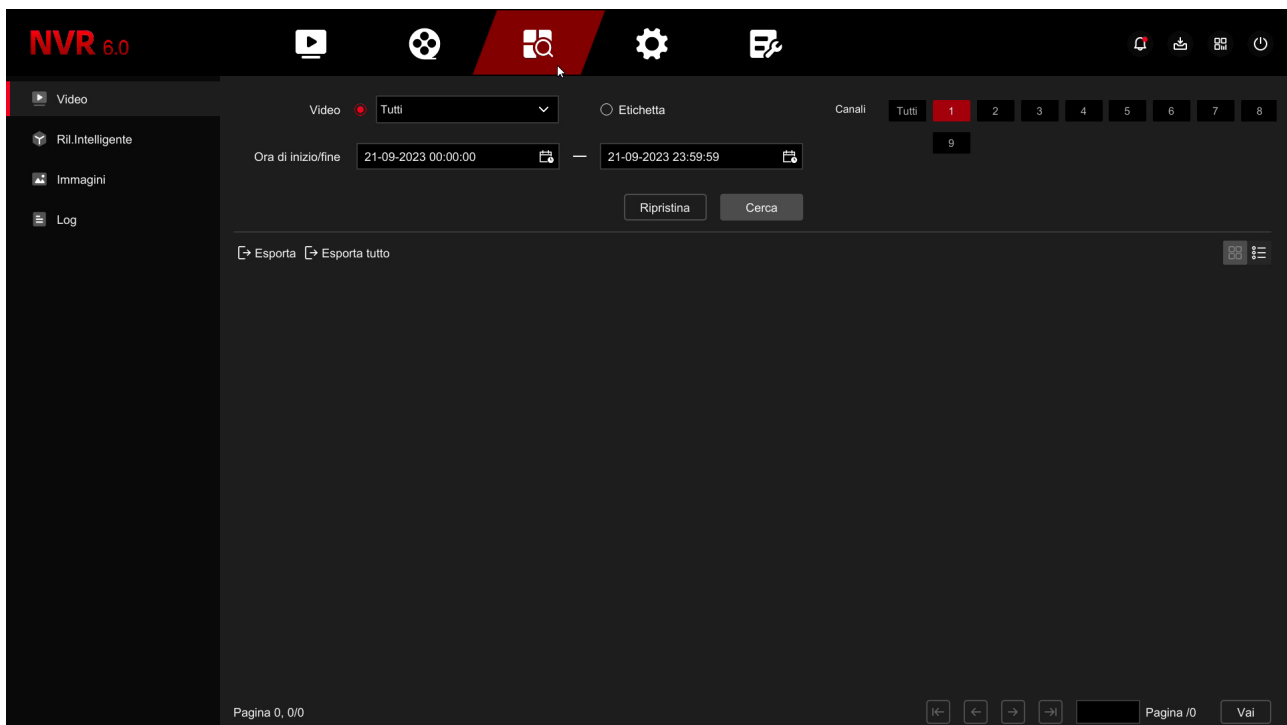


Search and backup of files

In this section you can search for video files recorded following alarm events, such as motion detection or human detection, and export them to external memories. Run the following operations.

1 – OPEN THE SEARCH WINDOW

Click the search icon, the third one at the top in the menu



2 – SEARCH FOR FILES

You can search for files based on date/time, channel and event type. You have 4 pages available research:

VIDEO – In this section you can search for normal video recordings: continue, up motion detection and alarm input. In this section you can also search for labels set during playback.

RIL. INTELLIGENT - In this section you can search video recordings for detections intelligent: line crossing, human intrusion, crowding, permanence.

IMAGES - In this section you can search for photos taken by the camera on the occasion of detections or on a timed basis

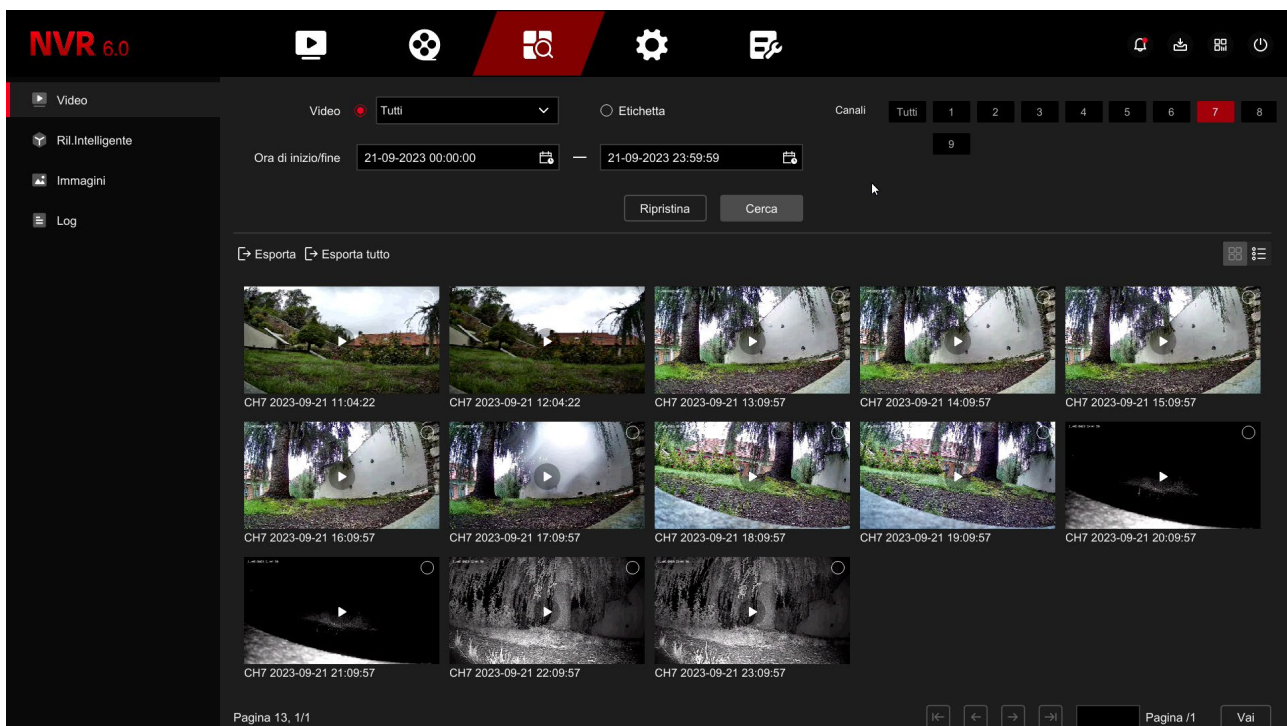
LOG – In this section you can consult the event memory of the device which includes the

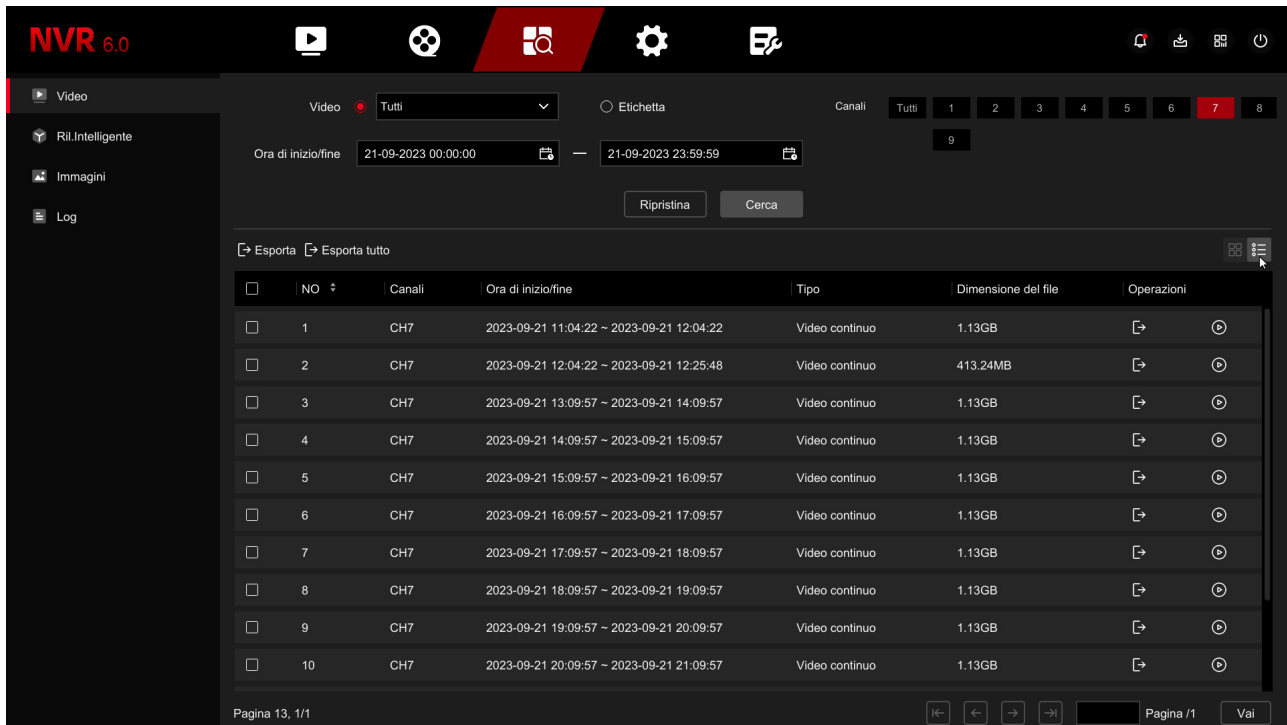
alarms, anomalies, user operations and configuration changes.

On each search page you can specify the channel and time interval. Eventually you can filter by type of event, among those managed.





















3 – MANAGE FILES

With the button you can switch from list view to thumbnail view





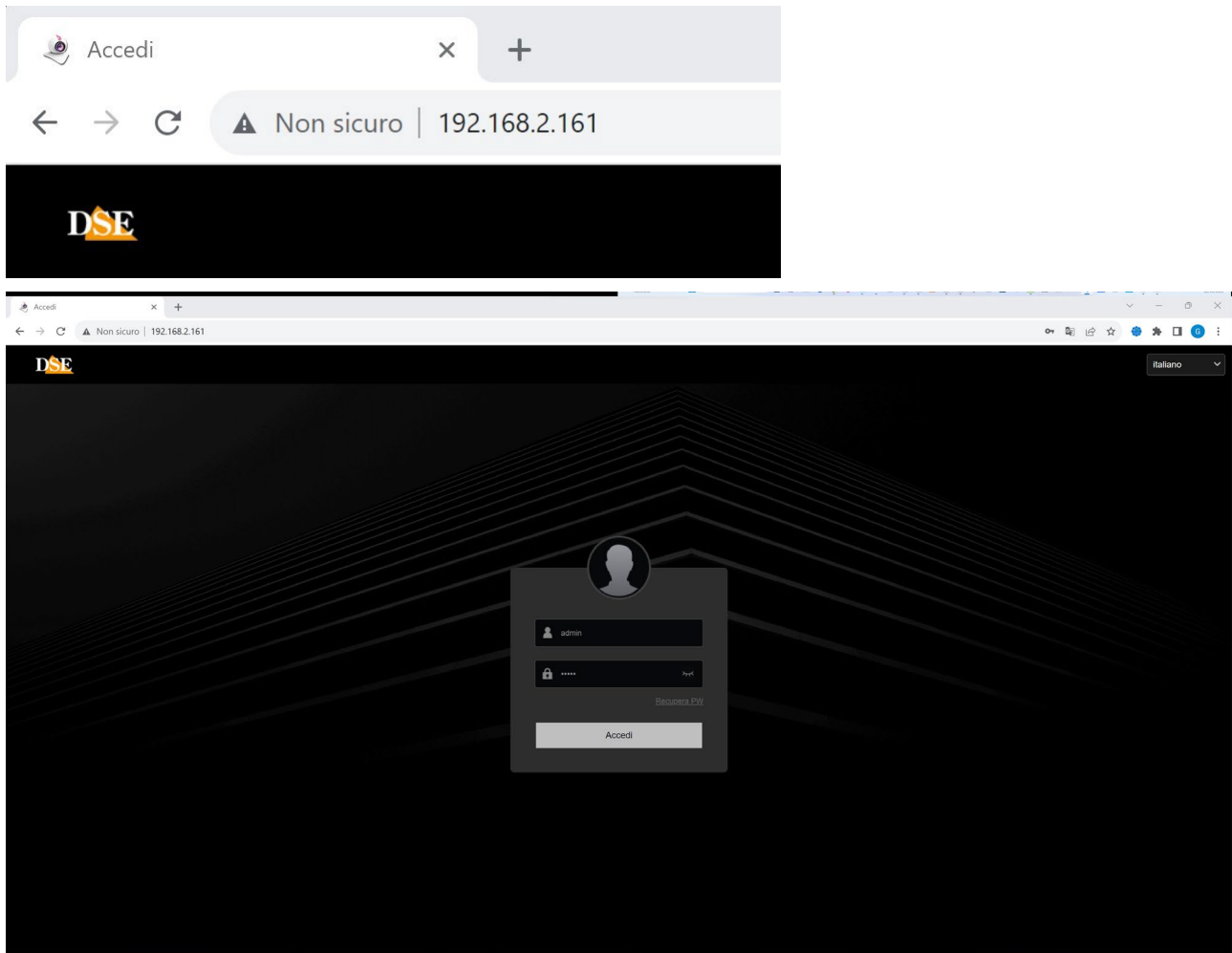
The screenshot displays the NVR 6.0 interface. At the top, there are navigation icons for Video, Playback, Search, Settings, and Reports. The main area shows a video search filter set to 'Tutti' and a date range from 21-09-2023 00:00:00 to 21-09-2023 23:59:59. Below this is a table of video files. Each row includes a checkbox, a file number (NO), the channel (Canali), the start and end time (Ora di inizio/fine), the file type (Tipo), the file size (Dimensione del file), and operation buttons (play and export).

<input type="checkbox"/>	NO	Canali	Ora di inizio/fine	Tipo	Dimensione del file	Operazioni
<input type="checkbox"/>	1	CH7	2023-09-21 11:04:22 ~ 2023-09-21 12:04:22	Video continuo	1.13GB	 
<input type="checkbox"/>	2	CH7	2023-09-21 12:04:22 ~ 2023-09-21 12:25:48	Video continuo	413.24MB	 
<input type="checkbox"/>	3	CH7	2023-09-21 13:09:57 ~ 2023-09-21 14:09:57	Video continuo	1.13GB	 
<input type="checkbox"/>	4	CH7	2023-09-21 14:09:57 ~ 2023-09-21 15:09:57	Video continuo	1.13GB	 
<input type="checkbox"/>	5	CH7	2023-09-21 15:09:57 ~ 2023-09-21 16:09:57	Video continuo	1.13GB	 
<input type="checkbox"/>	6	CH7	2023-09-21 16:09:57 ~ 2023-09-21 17:09:57	Video continuo	1.13GB	 
<input type="checkbox"/>	7	CH7	2023-09-21 17:09:57 ~ 2023-09-21 18:09:57	Video continuo	1.13GB	 
<input type="checkbox"/>	8	CH7	2023-09-21 18:09:57 ~ 2023-09-21 19:09:57	Video continuo	1.13GB	 
<input type="checkbox"/>	9	CH7	2023-09-21 19:09:57 ~ 2023-09-21 20:09:57	Video continuo	1.13GB	 
<input type="checkbox"/>	10	CH7	2023-09-21 20:09:57 ~ 2023-09-21 21:09:57	Video continuo	1.13GB	 

With the buttons to the right of the file you can play the video and save it on a USB stick or external HDD USB.

Access with browser

Today **Our RK DVRs/NVRs support all common browsers**, like Google Chrome, Firefox or Edge. Just type the internal network address of the NVR/DVR as in this example

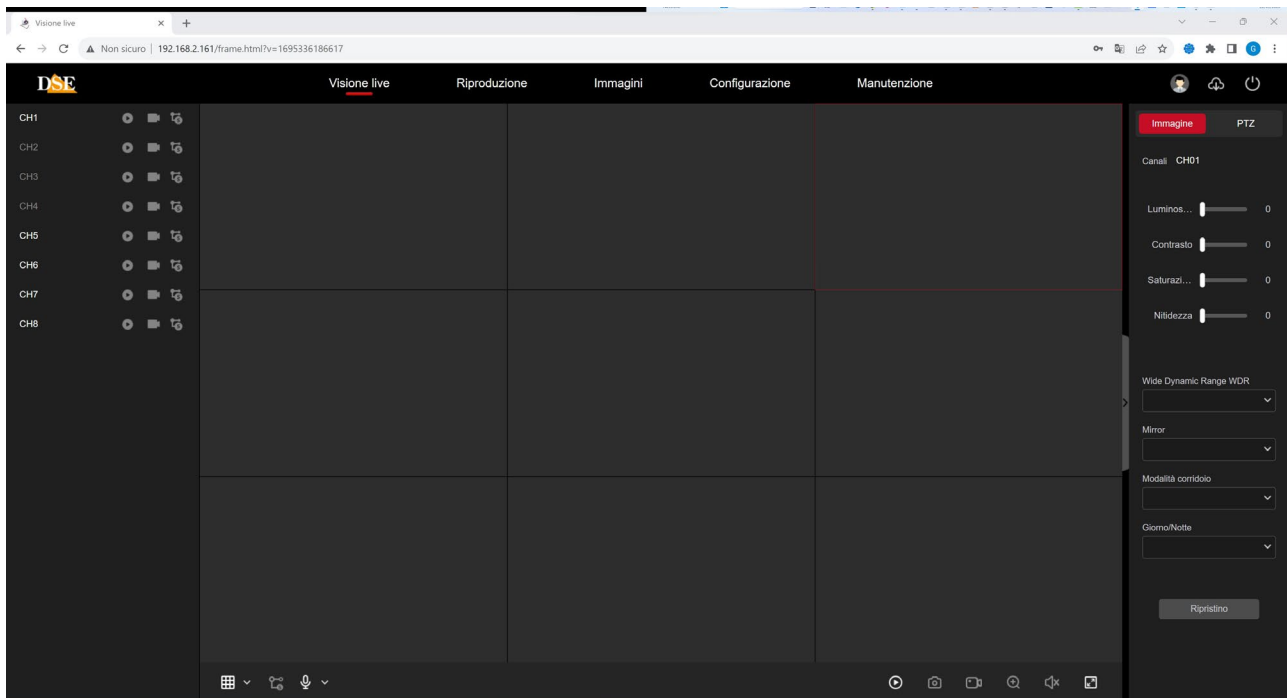


INSTALLATION MANUAL

RK SERIES – DVR and NVR GUI 6.0



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To control the functions, no additional components need to be installed. You can however Download and install a small additional software to fully control it too some advanced features. The button to download the optional plugin is at the top right



Browser access works on a local network. It can also work via the web, but not with the server P2P. You need to have a static IP and map router ports. For simple web access and immediately you can use the IoVedo.RK app or software.

Browser access is the only remote access mode that allows all configuration the operating options of the device, the same ones that can be controlled on the local monitor.

Connect with an RTSP client

The RK Series DVRs/NVRs support the RTSP protocol which is factory set to use the port 554. It is possible to connect to the DVR/NVR using any RTSP player such as VLC example.

The address to call must have the following syntax:

RTSP://USER:PASSWORD@IP:PORT/CHANNEL/STREAM

USER: Username

PASSWORD: Login password

IP: IP address of the DVR/NVR

BRINGS: RTSP port set in the DVR/NVR: 554 by default

CHANNEL: channel number starting from 0 (channel 1=0, channel 2=1 etc.)

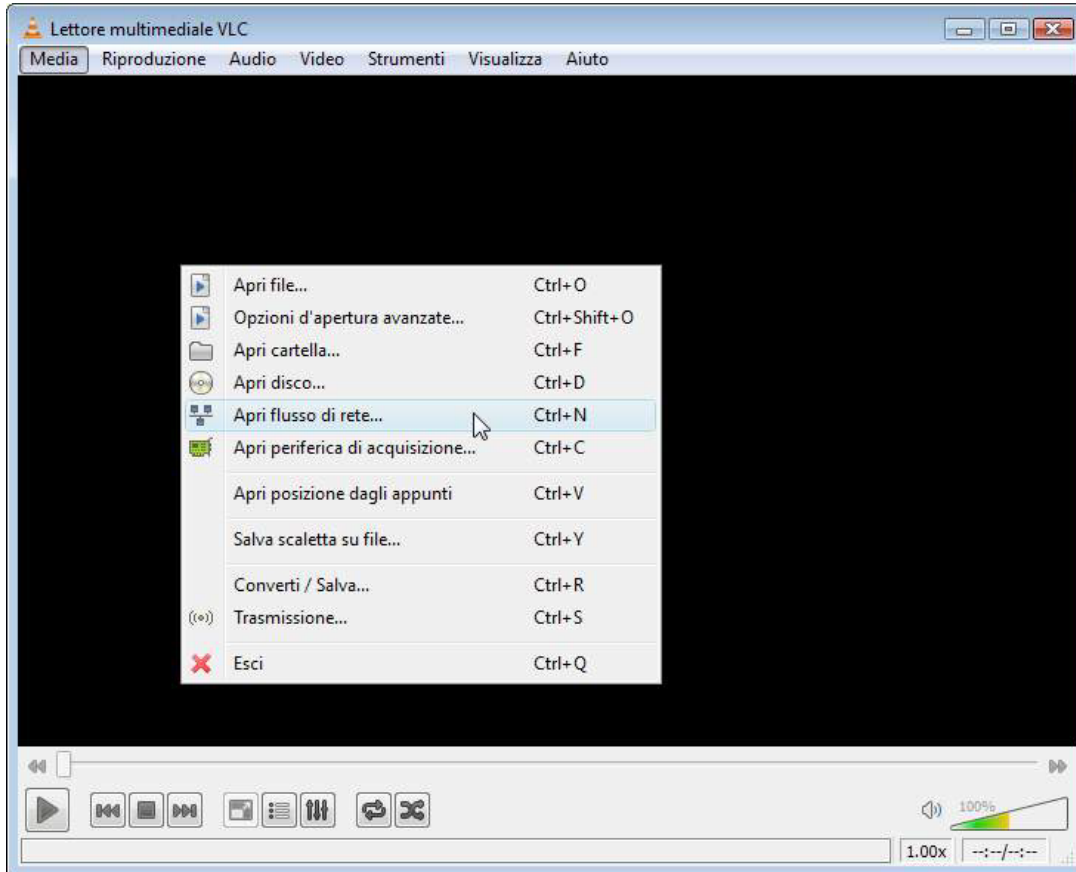
STREAM: 0=main stream. 1=substream

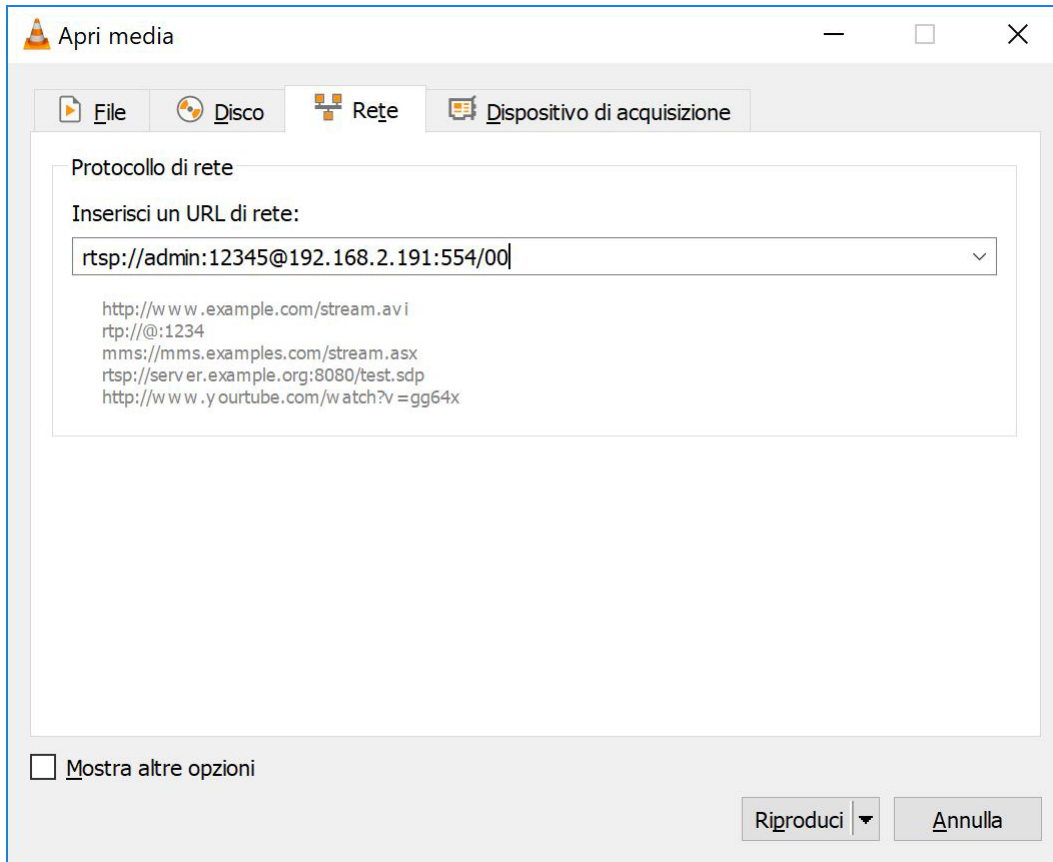
For example with this command:

```
rtsp://admin:12345@192.168.2.191:554/00
```

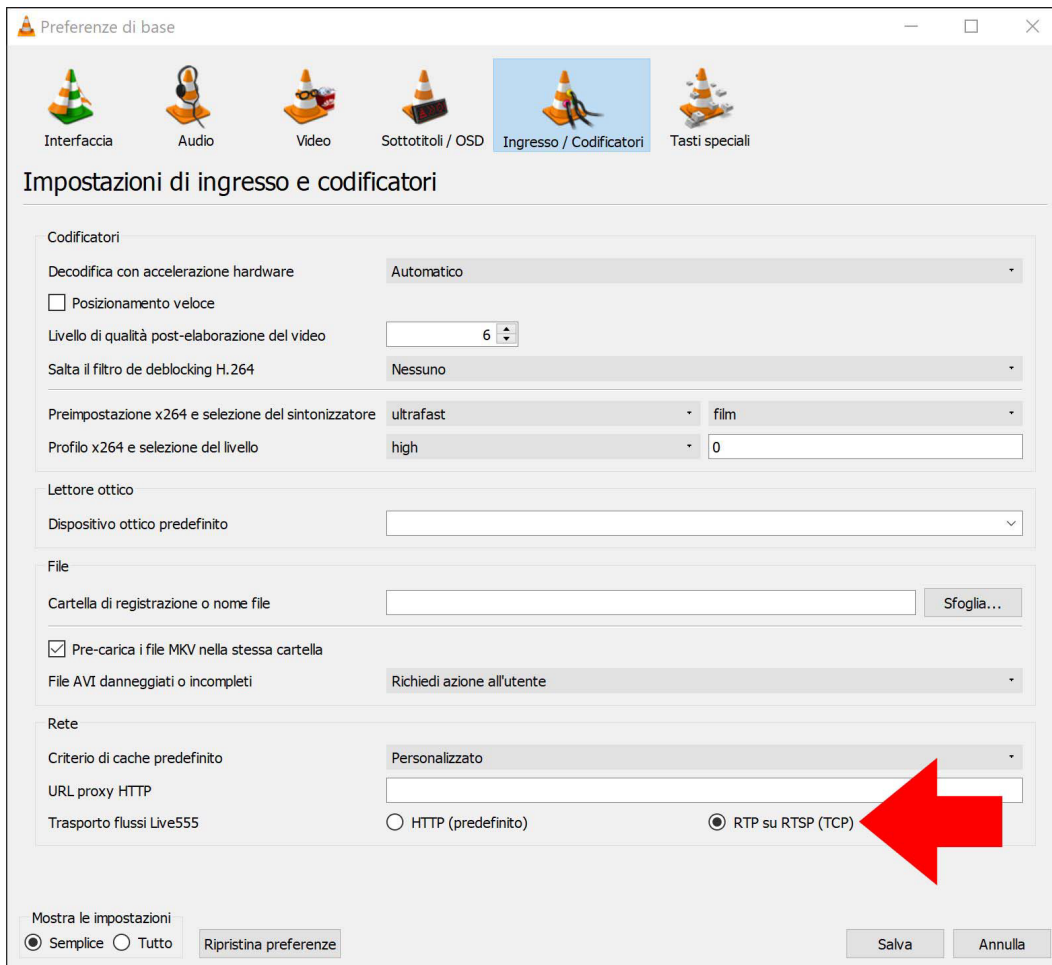
The main stream of channel 1 of the device opens

See below operate for example with the free VLC player:

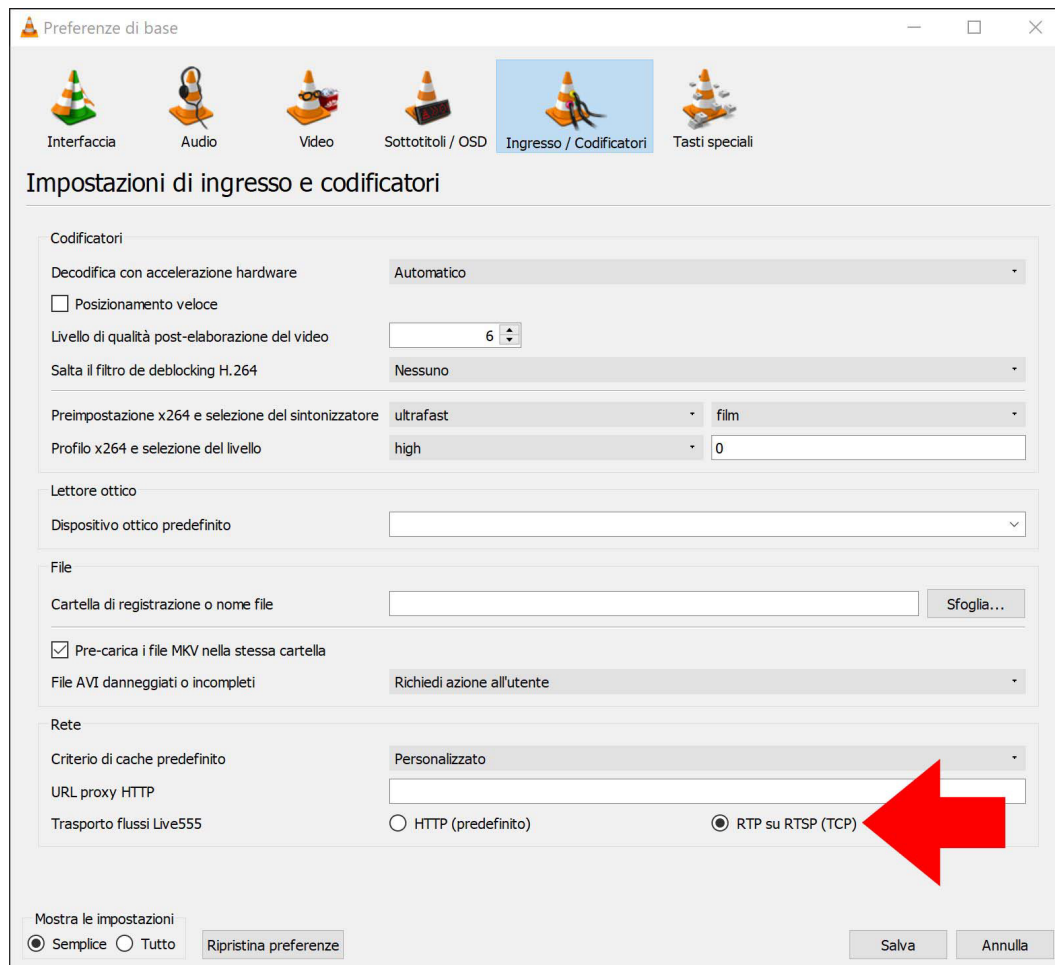




With VLC, the following option must be enabled for the stream to play



For the stream to be played, the following option must be enabled



INSTALLATION MANUAL

RK SERIES – DVR and NVR GUI 6.0



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Connect with your mobile phone, even via the internet

You can connect to the video recorder easily with your cell phone or tablet. You can do it online internal wifi or even via the Internet, thanks to our P2P cloud server. Consult the manual for remote access with our IoVedo.RK app and follow the tutorials on our YouTube channel.



Connect with the IoVedo.RK software for PC, even via the internet

You can connect to the video recorder easily with your Windows PC. You can do it over wifi network internally or even via the Internet. Download our software IoVedo.RK from our site and upload the your device to control it from your computer. Use the internal IP address if you want to connect to local network, or use the serial if you want to connect via internet with our P2P cloud. For details, refer to the IoVedo.RK software manual

