RK SERIES

DVR and NVR

Installation manual - Menu 5.0

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

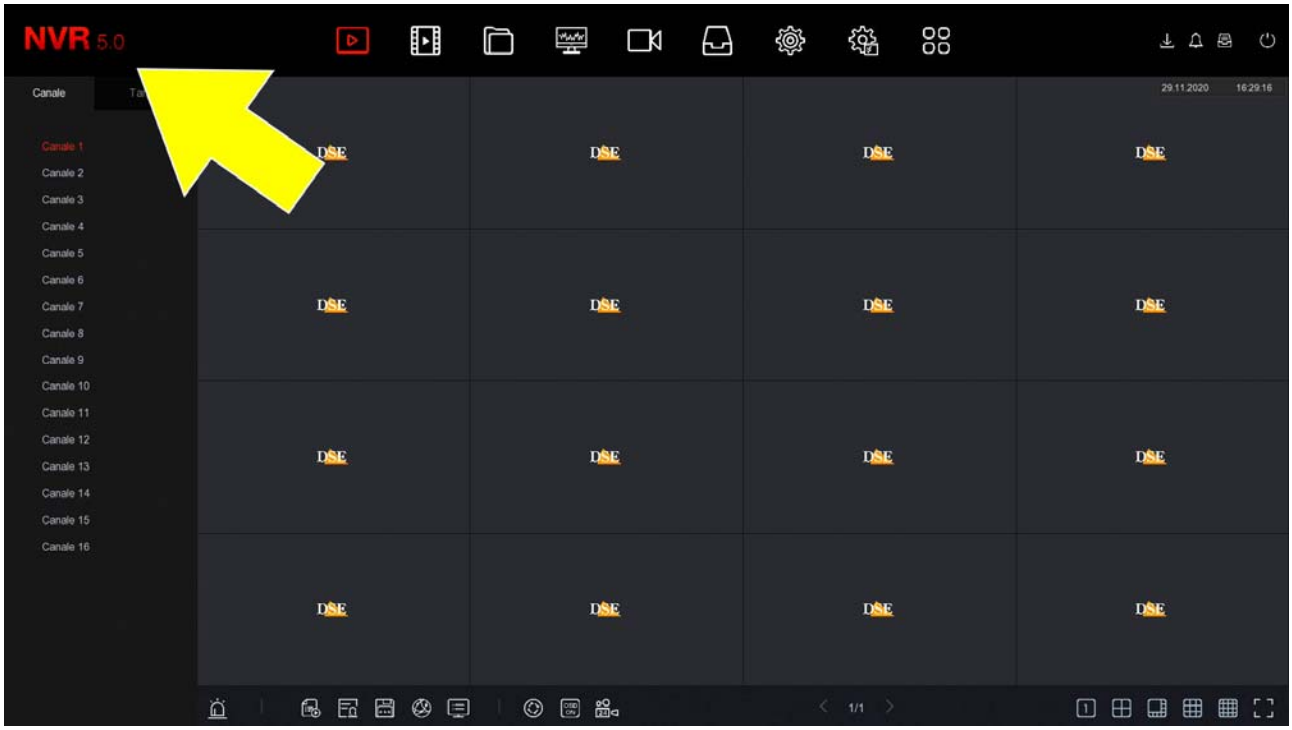
The RK series DVRs and NVRs are video recording systems for CCTV surveillance. The NVR models are for connecting IP cameras

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

This manual explains how to install the VCR, how to connect cameras and how to use essential functions. It also explains how to connect from a computer with common clients.

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

This manual refers to the NVR / DVR with graphical interface Version 5.0 that you see below



If your NVR / DVR has our classic interface, instead of 5.0, 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, only with different graphics.

Get the cameras ready

Before installing a DVR or NVR you must have the cameras to be connected. If you connect analog cameras you have 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 record, you need to install a Hard Disk inside the VCR. Any 3.5 ”computer SATA hard drive is fine, but for a longer life it would be better to purchase a dedicated model for video recording.

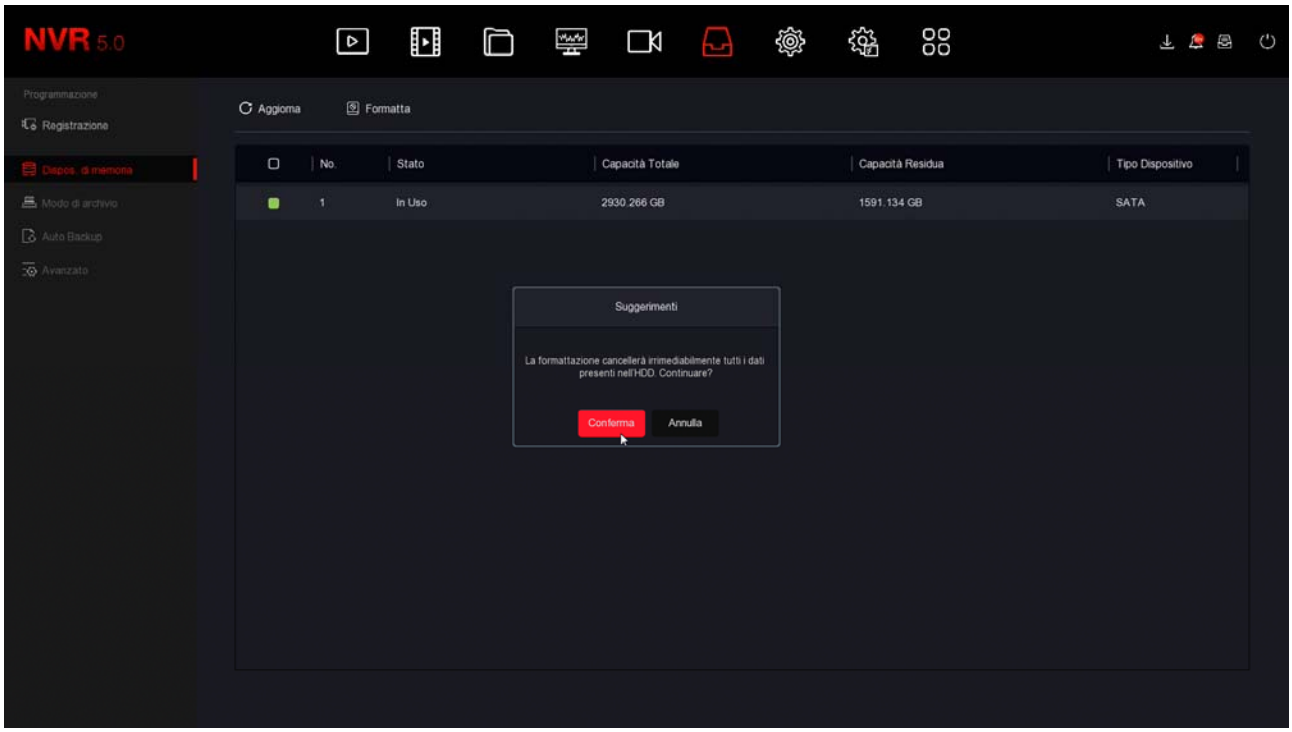
The maximum hard disk capacity that you can mount is 8 TB.
Depending on the model, you can house from 1 to 8 Hard Disks inside the VCR. You can easily understand the direction in which the disk should be mounted by looking at the holes on the bottom of the DVR / NVR.

Remove the cover by unscrewing the side screws e rear

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

Secure the hard drive with the 4 screws provided that you screw from underneath the VCR

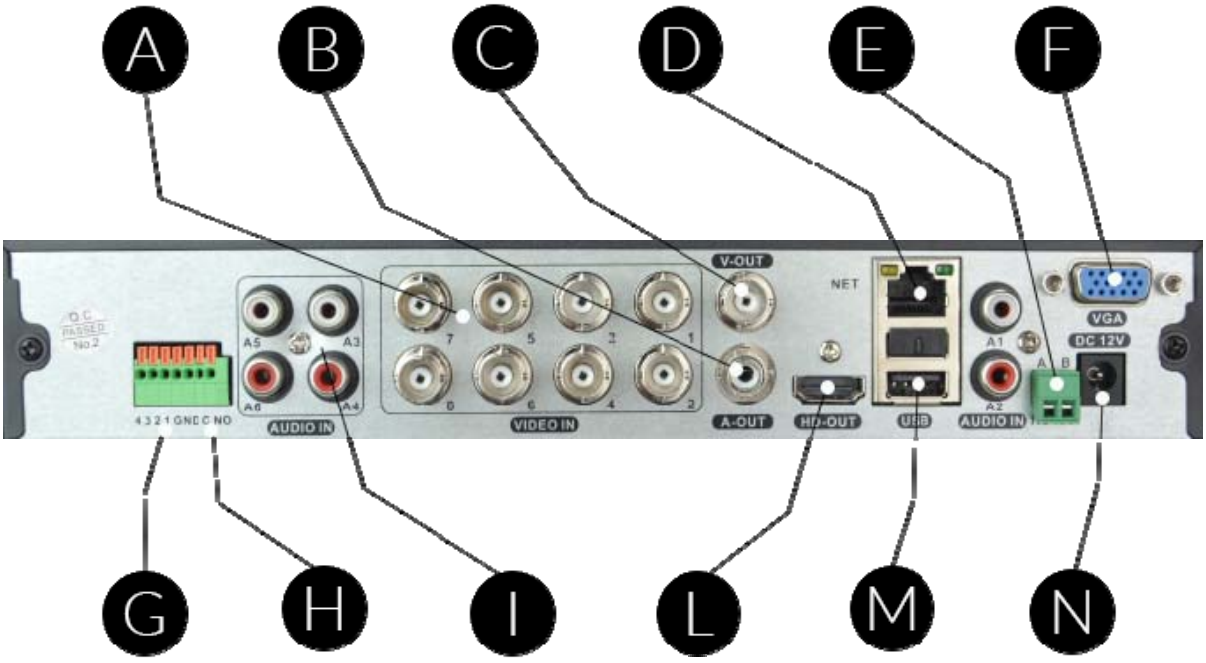
At the next boot, the NVR / DVR will reveal the newly installed Hard Disk and ask you to start formatting in order to use it.



ATTENTION - The power consumption of a hard disk varies greatly according to its capacity. Our VCRs are supplied with a power supply suitable for a normal 1 or 2TB hard disk, usually the most used size. If you install a higher hard disk or more than one hard disk it is better 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 analog cameras, with its BNC inputs, and IP cameras, via the network port.
These are the rear connections. The equipment varies according to the model you have purchased.



A | VIDEO IN-To these BNC video inputs you can connect any type of analog camera in AHD, CVI or TVI technology, up to the maximum resolution managed by your DVR model. You can also connect old analog CVBS cameras. The only cameras with BNC connection that you cannot connect are SDI digital cameras.
B | A OUT-You can connect a speaker to this RCA connector to broadcast the audio of the 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 output is not sufficient to be able to operate in the configuration menu.
D | NET-This is the RJ45 network port. To be able to view your cameras via the Internet, or for

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

And | AB RS485-This is the RS485 serial port to which you can connect the control pair to control analog or AHD motorized cameras. Although our latest motorized analog cameras support motion control along the video cable by selecting UTC command protocol, older motorized analog cameras require these two additional cables for control. The RS485 BUS is a twisted pair that connects in cascade all the analog motorized units of your system. Find more information on how to connect it in the camera manual, always respecting terminal A (+) and B (-) on the camera. You will then need to configure the transmission protocol, in the PTZ configuration of the DVR, according to the camera. It is necessary to select the protocol, usually PelcoD, the speed, usually 1200,

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 of port to this output. This output supports the maximum resolution of 1920x1080 FullHD.
G | ENTRANCES-You can connect alarm contacts to these terminals as explained below **H | EXIT**-You can connect the alarm output to these terminals as explained below **I | A1..A4**-You can connect audio signals from analog cameras or microphones to these RCA inputs. Remember that these audio inputs are only active for BNC channels because IP cameras require the microphone to be connected to the camera.

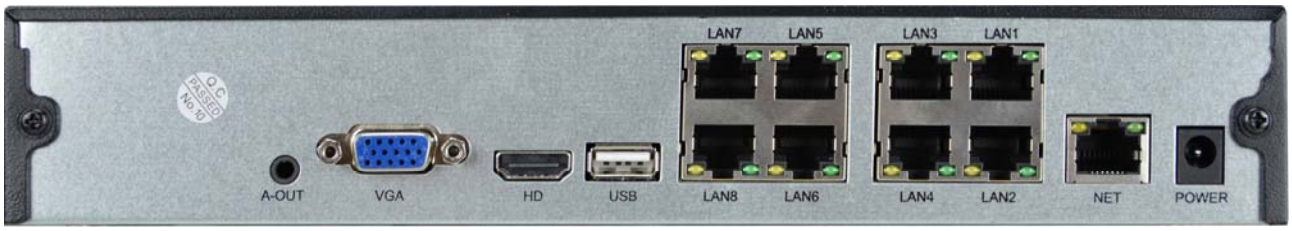
L | HD OUT-This is the HDMI output for the monitor. Almost all TVs and PC monitors have this connection port. If you connect a TV, you must remember to select the external HDMI input that you used for the NVR on your TV to see the images. This is usually done by pressing the SOURCE button on the remote control. These DVRs come from the factory with a low output resolution that you can increase up to 4K to match the maximum resolution of the monitor. This operation is better explained later in the manual
Remember that the HDMI cable cannot be longer than a few meters. To connect a remote HDMI monitor from the NVR you need to use an HDMI transmission device.
M | USB-To the USB ports you can connect the mouse included with the DVR and USD memories, such as USB sticks or hard drives to back up video files. All DVRs also have a front USB port.

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

maybe bought for the cameras, because this would lead to malfunctions. If you power the DVR with our centralized cassette power supply, you must consider that the individual outputs are limited to 1A and it is therefore necessary to connect at least 3 in parallel in order to provide 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 according to the model you have purchased.



A-OUT-To this minijack connector you can connect an external speaker to spread 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, you must remember to select the external HDMI input that you used for the NVR on your TV to see the images. This is usually done by pressing the SOURCE button on the remote control. These DVRs come from the factory with a low output resolution that you can increase up to 4K to match the maximum resolution of the monitor.

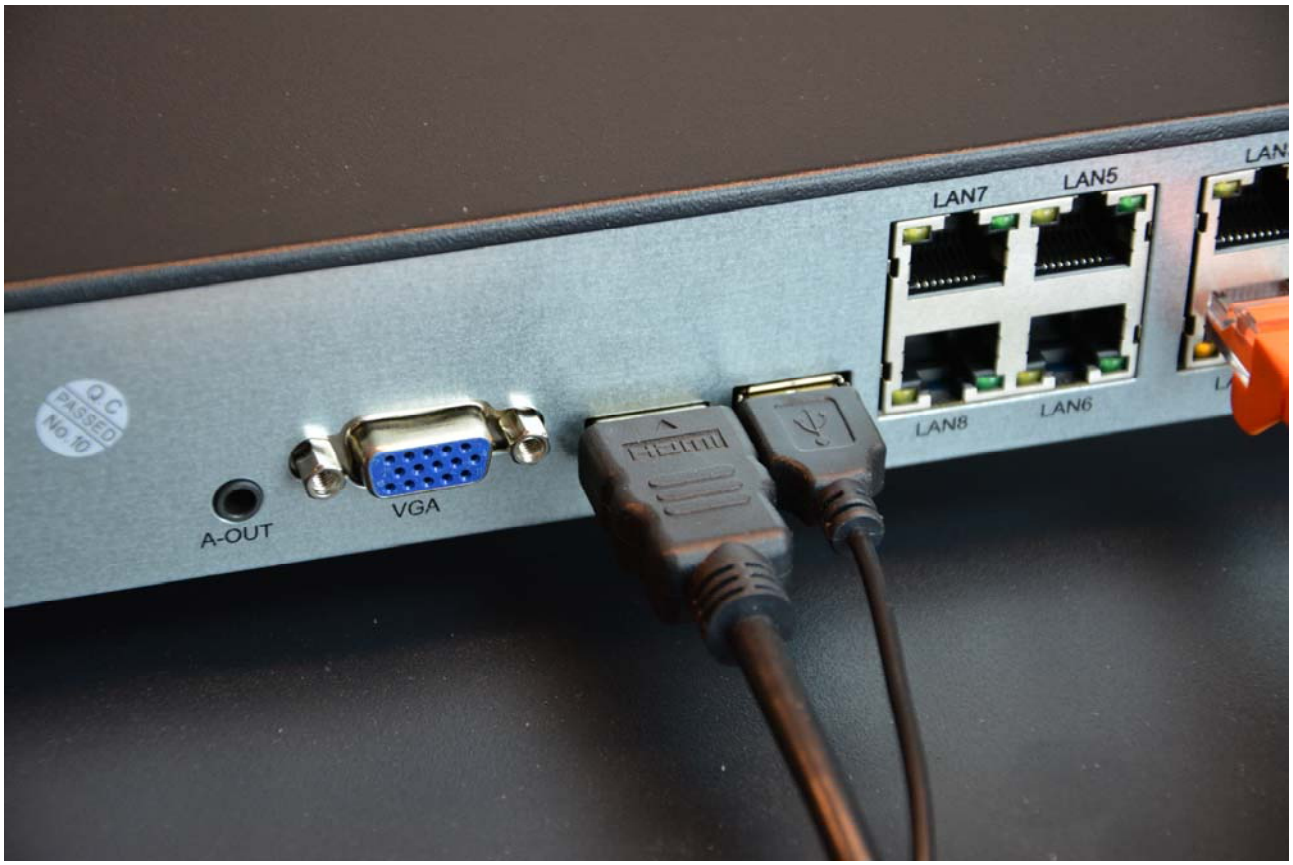
Remember that the HDMI cable cannot be longer than a few meters. To connect a remote monitor from the NVR you need to use an HDMI transmission device.
USB-To the USB ports you can connect the mouse included with the DVR and USB sticks for backing up video files. Many DVRs / NVRs also have a front USB port. You can also connect USB disks to record to external HDDs
NET or LAN or WAN-This is the RJ45 network port. To be able to view your cameras via the Internet, or to connect external IP cameras, you must 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 on one side into the network port of the NVR and on the other side into a free port on your router or switch. The NVR is factory set to auto configure itself to the network automatically (DHCP).
LAN1..8or**POE1..8**- Some NVR models have POE ports to connect cameras. You can connect here the IP cameras you want to be managed by the NVR. The NVR provides POE power to the cameras. If you connect our RK Series cameras to these ports, they are automatically configured (plug and play). If you connect other cameras you will first need to assign them 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.

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

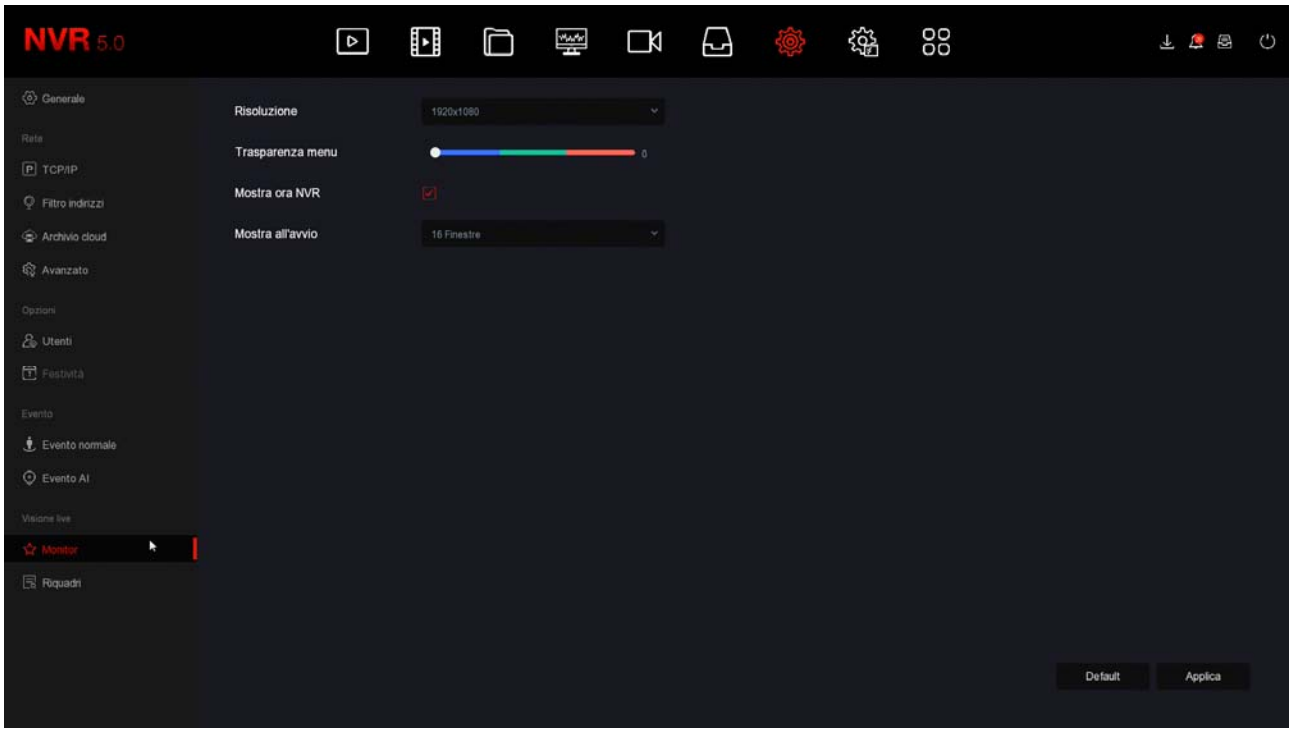
Plug in your monitor

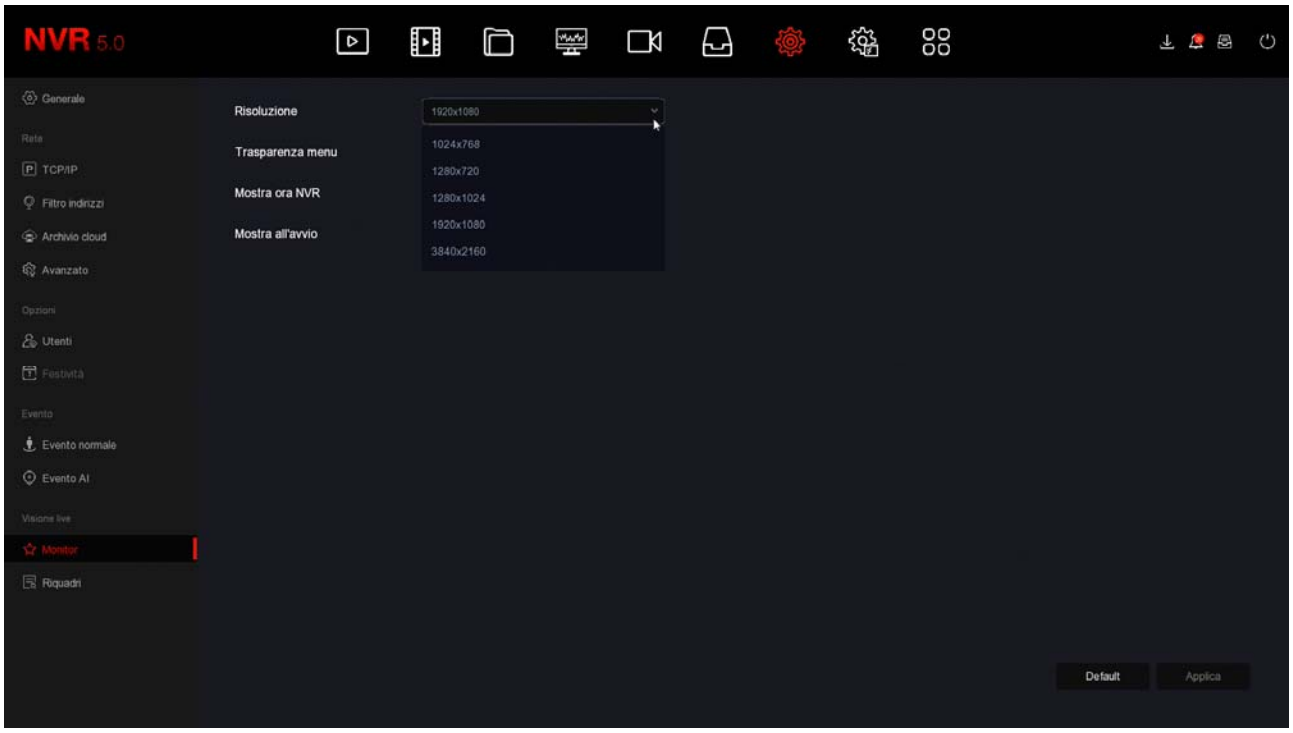
Although the DVR / NVR can work without a monitor, you must necessarily connect one, at least for the configuration operations.

You can use a computer monitor or a TV. The higher resolution main monitor port is the HDMI port found in all modern TVs and computer monitors.
There is 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) to be compatible with all monitors. Once you have connected the monitor and started the DVR / NVR, you should increase the resolution of the video output up to the maximum supported by your monitor (usually FullHD 1920x1080 or 4K 3840x2160).
If starting the DVR / NVR you only see the DSE logo and then nothing more, it is because the monitor does not support the video resolution of the device. You have to connect another monitor and then eventually change the video resolution in the configuration



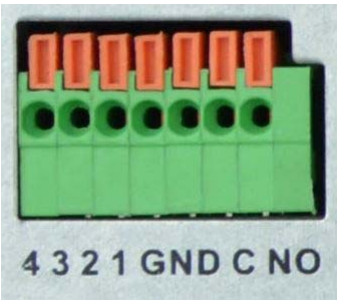


Remember that the HDMI cable cannot be longer than a few meters. To connect a remote monitor from the NVR you need to use an HDMI transmission device.

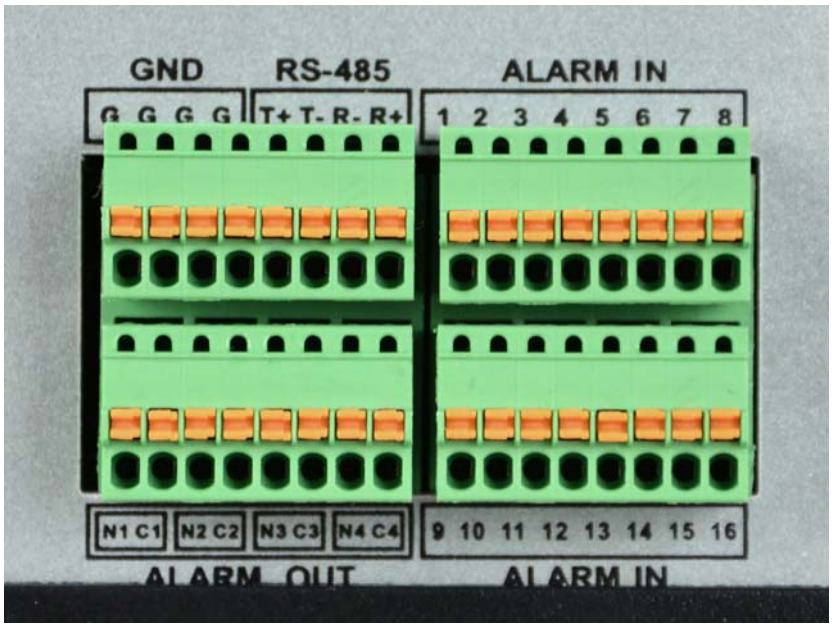
Connect alarm I / O

Some DVRs / NVRs are equipped with alarm inputs and outputs and have a special rear terminal block. The arrangement of the terminals varies from model to model, here we see 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 signals. The contact must be connected between the input terminal (1,2,3,4 etc) and a GND terminal in the terminal board. If the terminal block has multiple G or GND terminals you can choose any one.
In configuration you can set the NO or NC operation (normally open or normally closed) of the input in order 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 to be connected between the two output terminals. In models with only one 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 configuration of the DVR / NVR you can set the events that cause the closure of the output contact and also the duration of the closure.

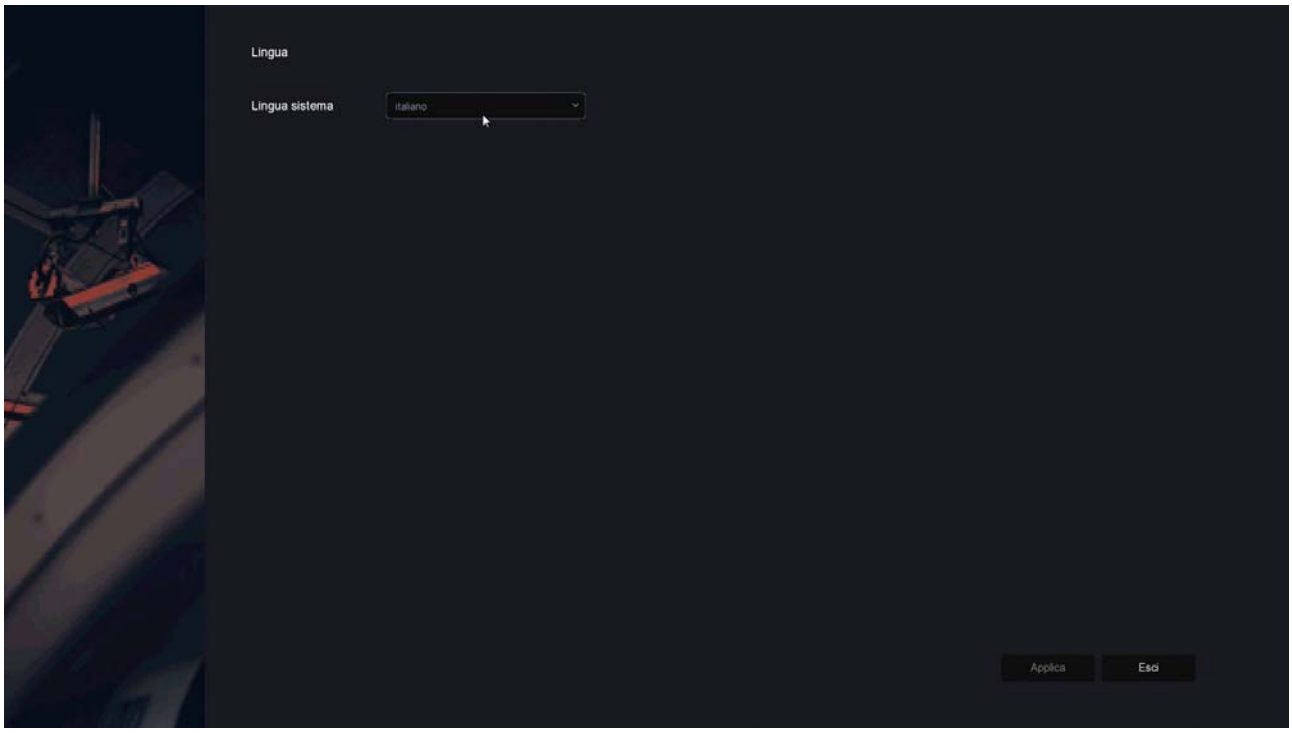
Make the first ignition

As soon as you plug in the power adapter, the DVR / NVR starts up and displays an image on the screen. Video surveillance DVRs and NVRs do not have a power switch because they are designed to stay on all the time.
If you don't see the picture you need to check the cable and monitor settings. The first time you turn on a wizard that helps you configure the main options of your system in a few 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 windows of the setup wizard are also accessible later in the setup menu.

1 - CHOOSE YOUR LANGUAGE

The guided configuration procedure starts when the device is turned on. After using it once, you can disable it in the DVR / NVR configuration to not use it in future startups. The first option to choose is the menu language. Over 20 languages are available. This manual refers to the Italian language.

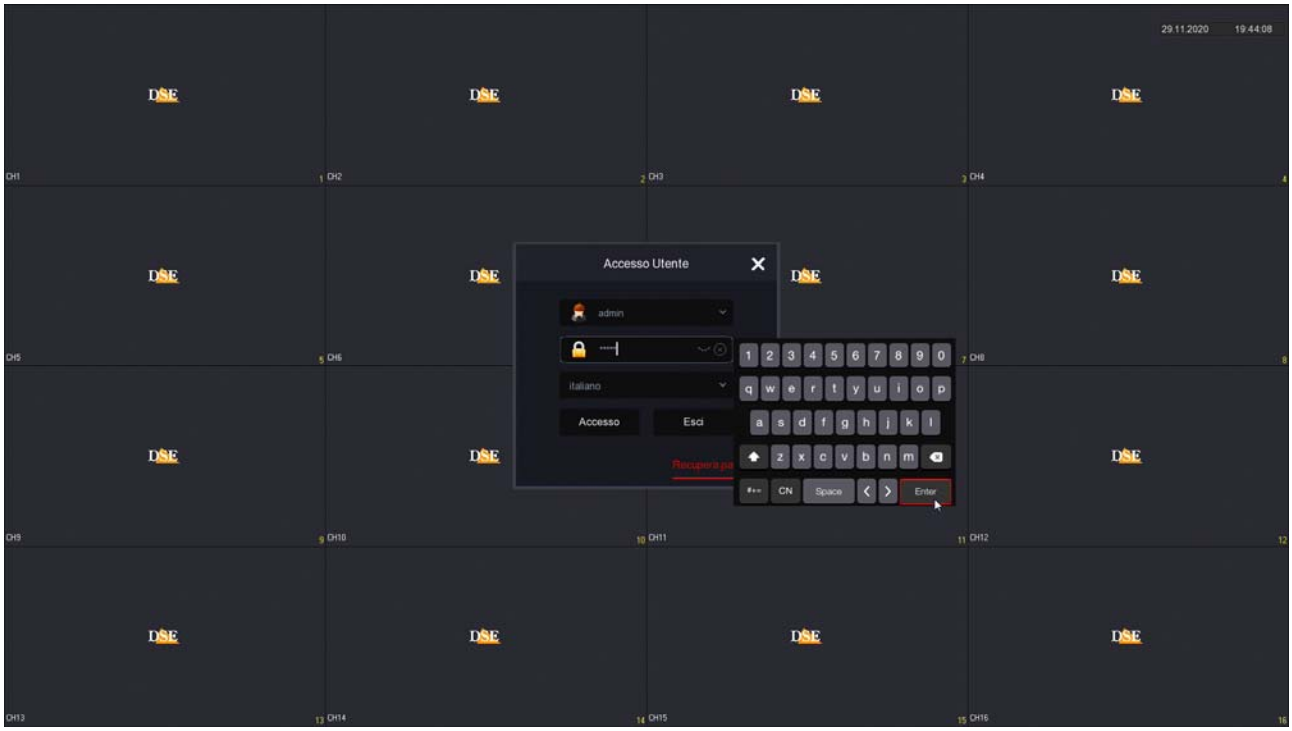


2 - LOG IN TO THE SYSTEM

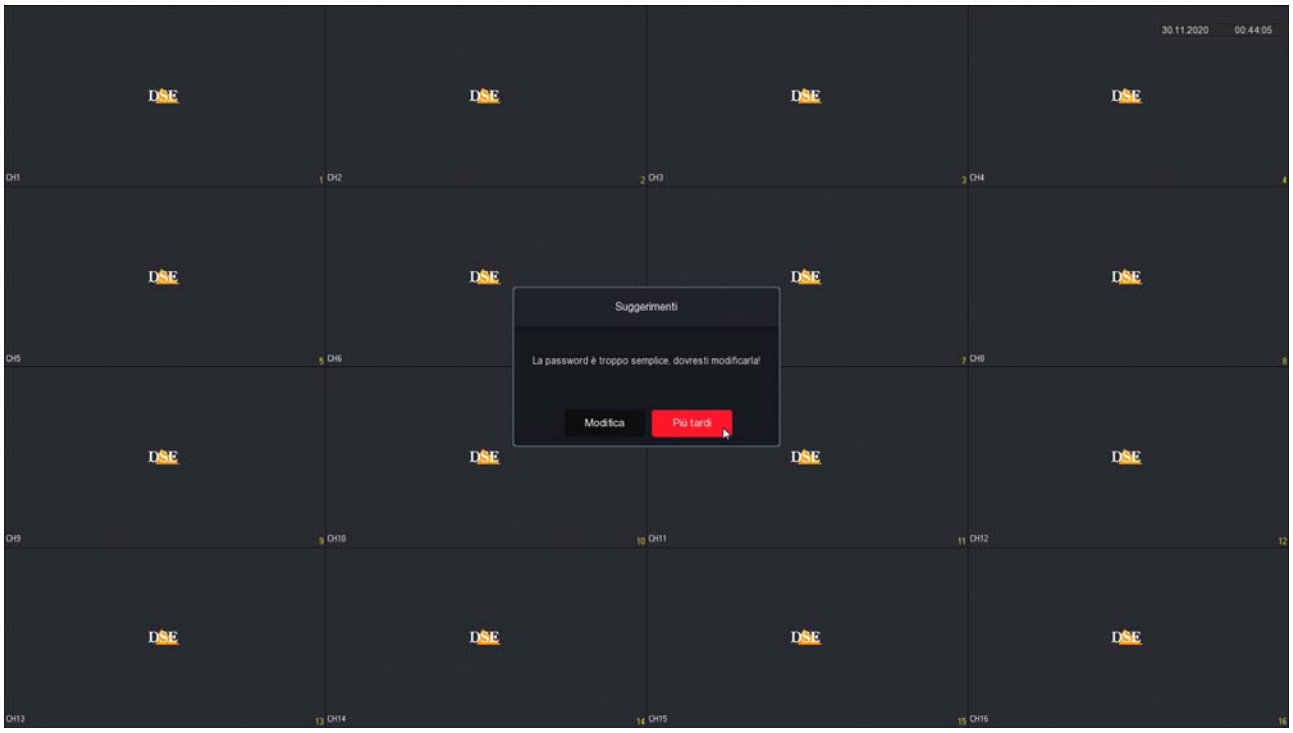
Enter the factory password to access the DVR / NVR:

USER: admin
PASSWORD: 12345

Then press LOGIN.

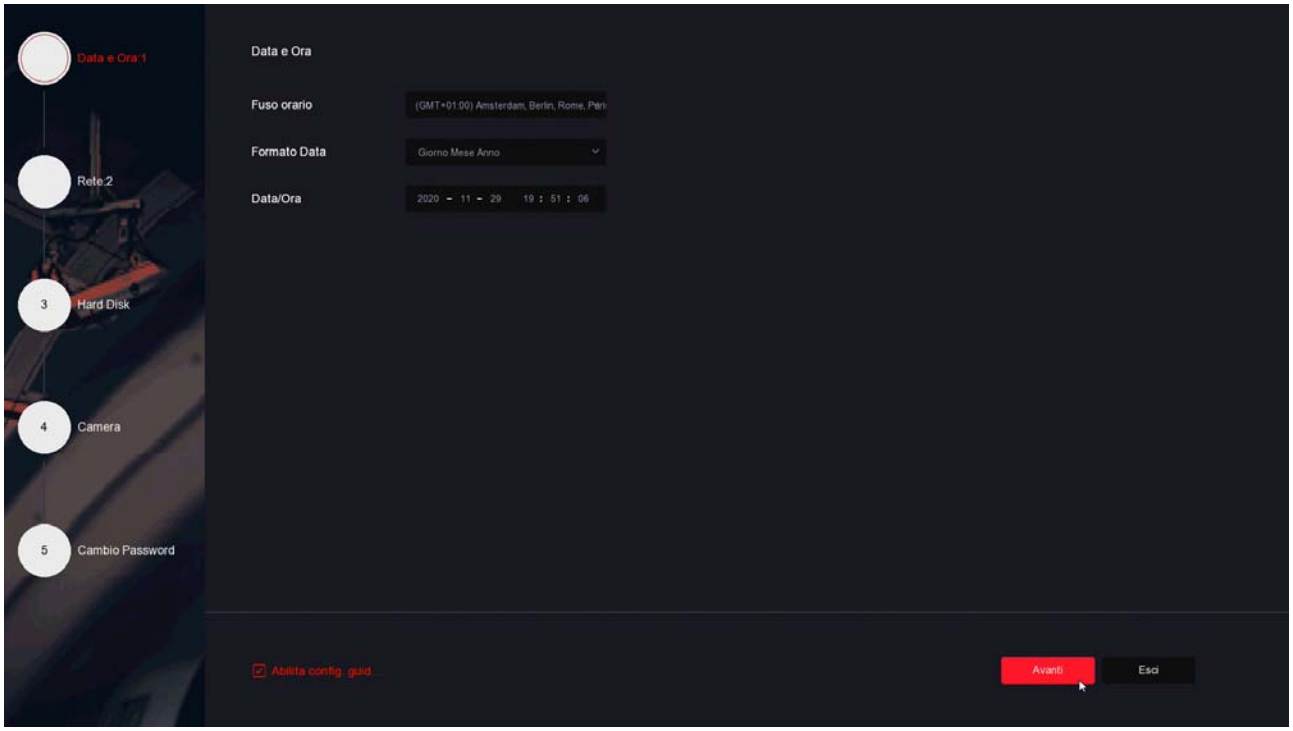


After pressing the ACCESS button, the system reminds you that it would be advisable to customize the password. It is an important operation, to protect your privacy, but it is better to choose to do it later, at the end of the guided configuration menu.



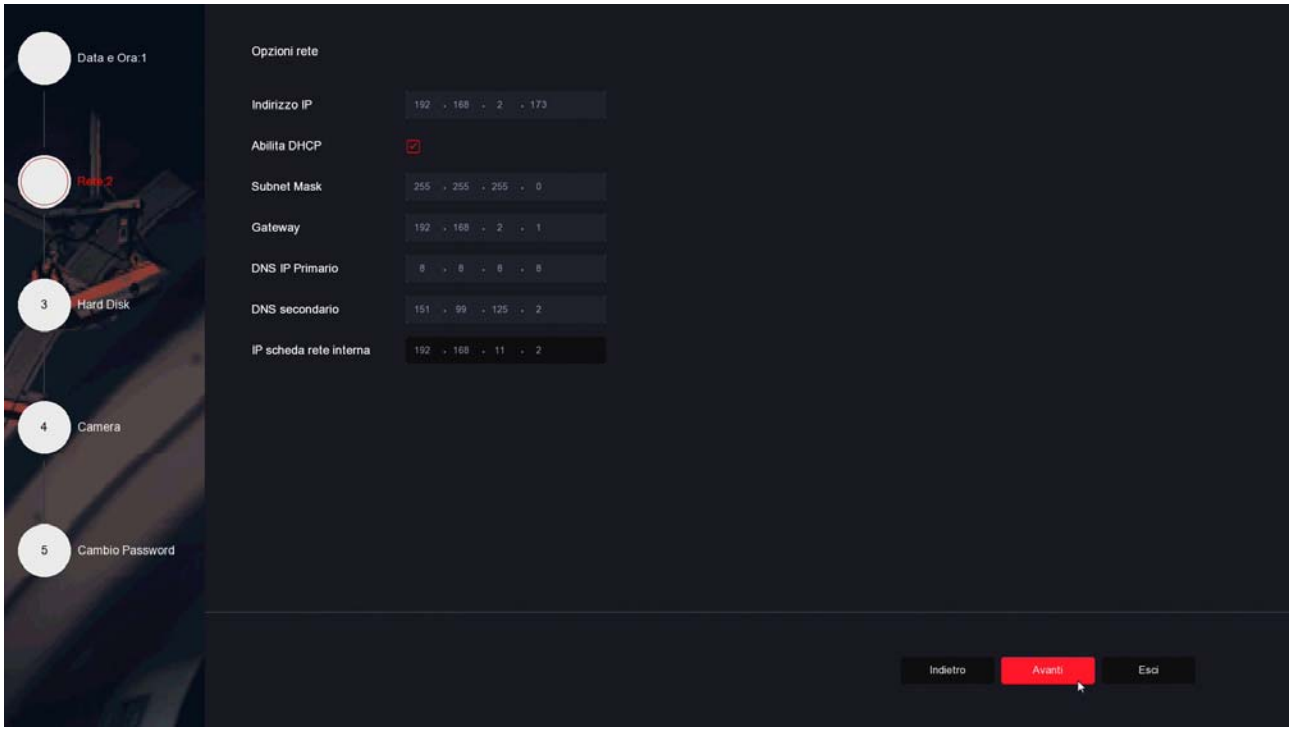
2 - SET DATE AND TIME

First you need to set the system date and time. GMT + 1 and the Day / Month / Year format. Choose the Italian time zone



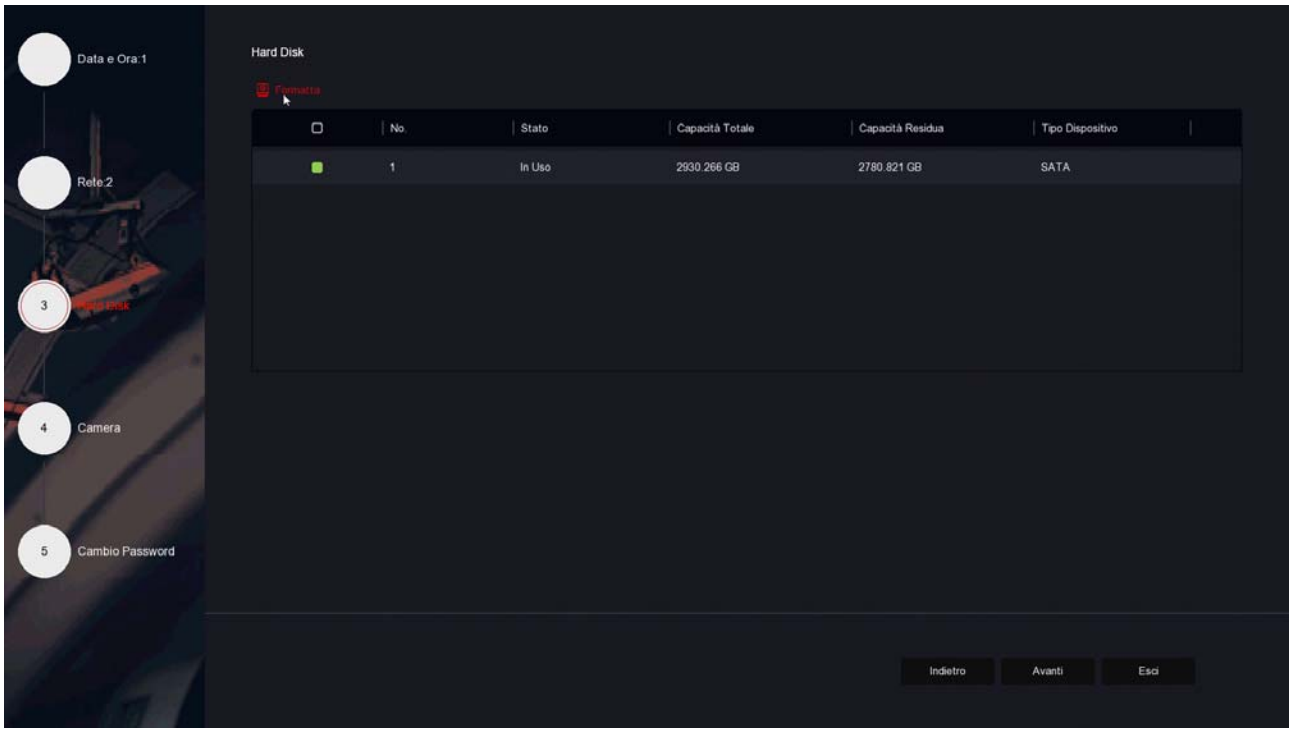
3 - SET UP YOUR NETWORK

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



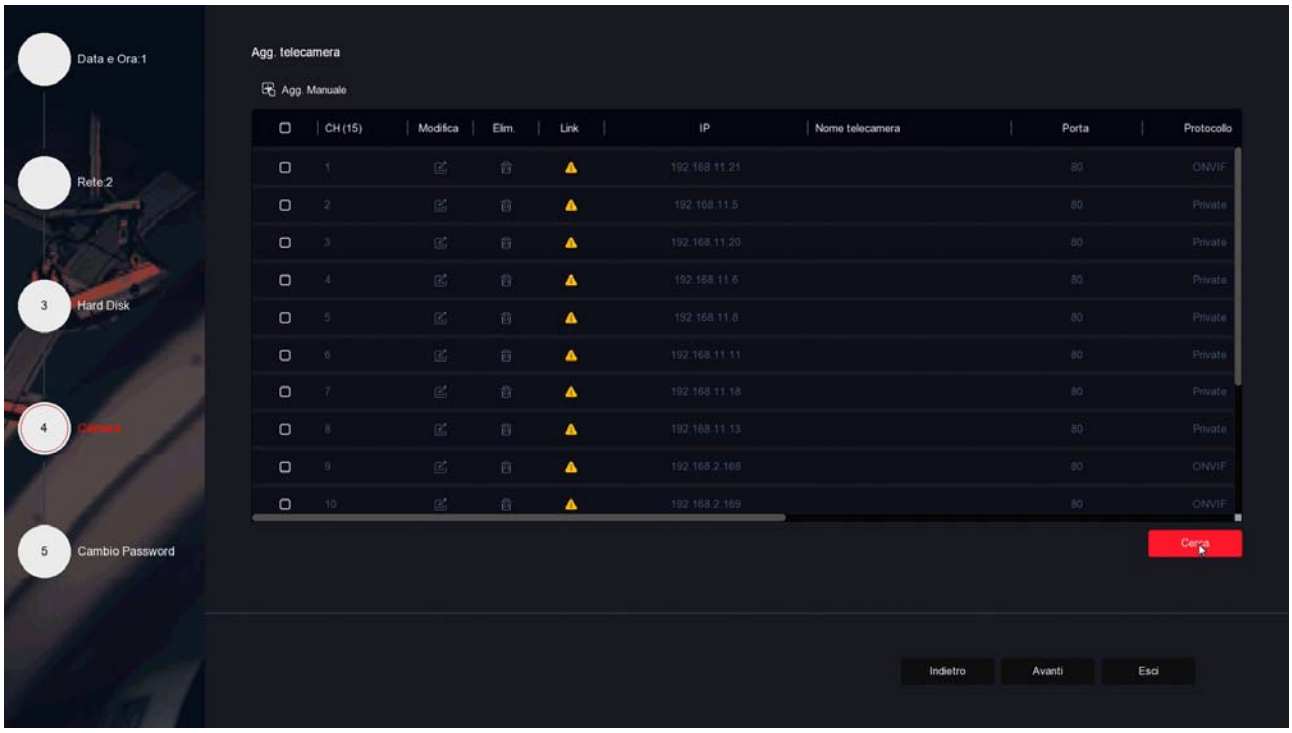
4 - FORMAT the HARD DISK

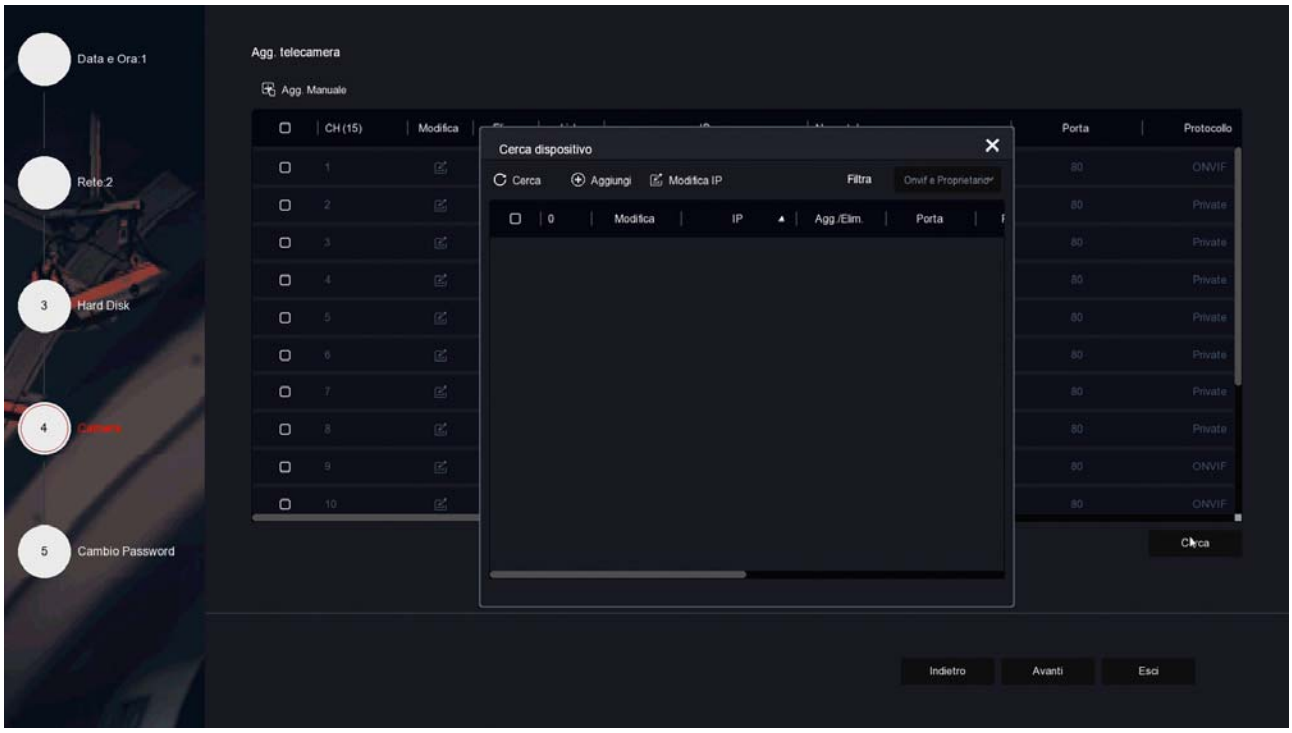
In this step you should find the hard disk you have inserted into the DVR / NVR. Select it and click FORMAT to make the DVR / NVR use it. If you do not find the hard disk in the list check that the two internal cables are connected and that the power supply of the DVR / NVR is the correct one, if necessary try to replace the hard disk because it may be faulty.



5 - ADD THE CAMERAS

Analog cameras connect to the BNC ports and are immediately available. If you want to connect IP cameras to your DVR / NVR you must first configure them appropriately in the external network or connect them to the LAN ports of the NVR (NVR with poe ports). In this section of the procedure, you can add the IP cameras you have networked to the recorder. You have to press the search button to find the cameras on the network. The details of this operation, with the various cases, are explained further on and also in the configuration manual.

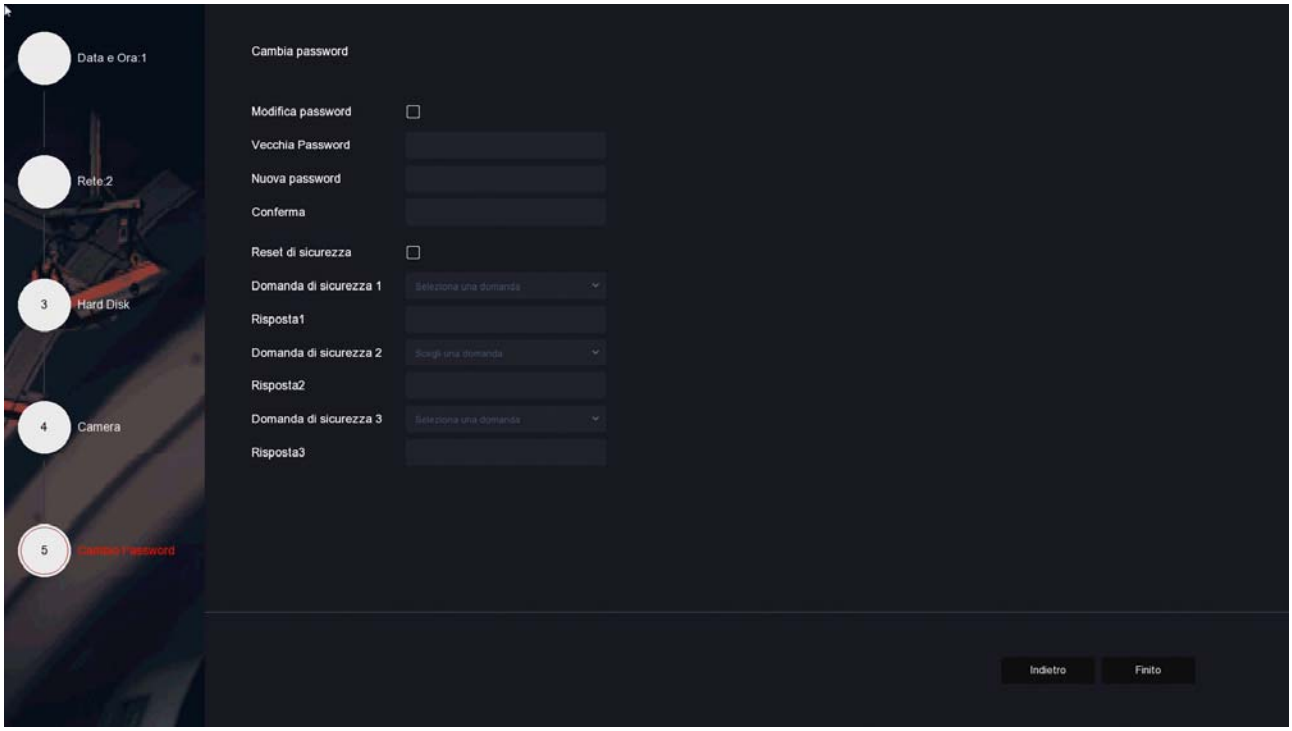




6 - SET THE PASSWORD

In this final step you can possibly change the access password to your NVR / DVR. If you want to do this, first you must be sure not to forget it, because it is a safety device and to recover a forgotten password, you will have to

contact us and face a rather laborious procedure.
The password must contain at least 8 characters with a letter and a number inside. You must also set the 3 answers to the security questions, before saving the new password, because they will allow you to easily recover the password via email, should you forget it.



FINISHED!

At the end of the wizard your CCTV system is already working.

Connect the NVR to your network

In order to connect to the surveillance system via PC or mobile phones 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 light up, this means that the hardware connection is correct.

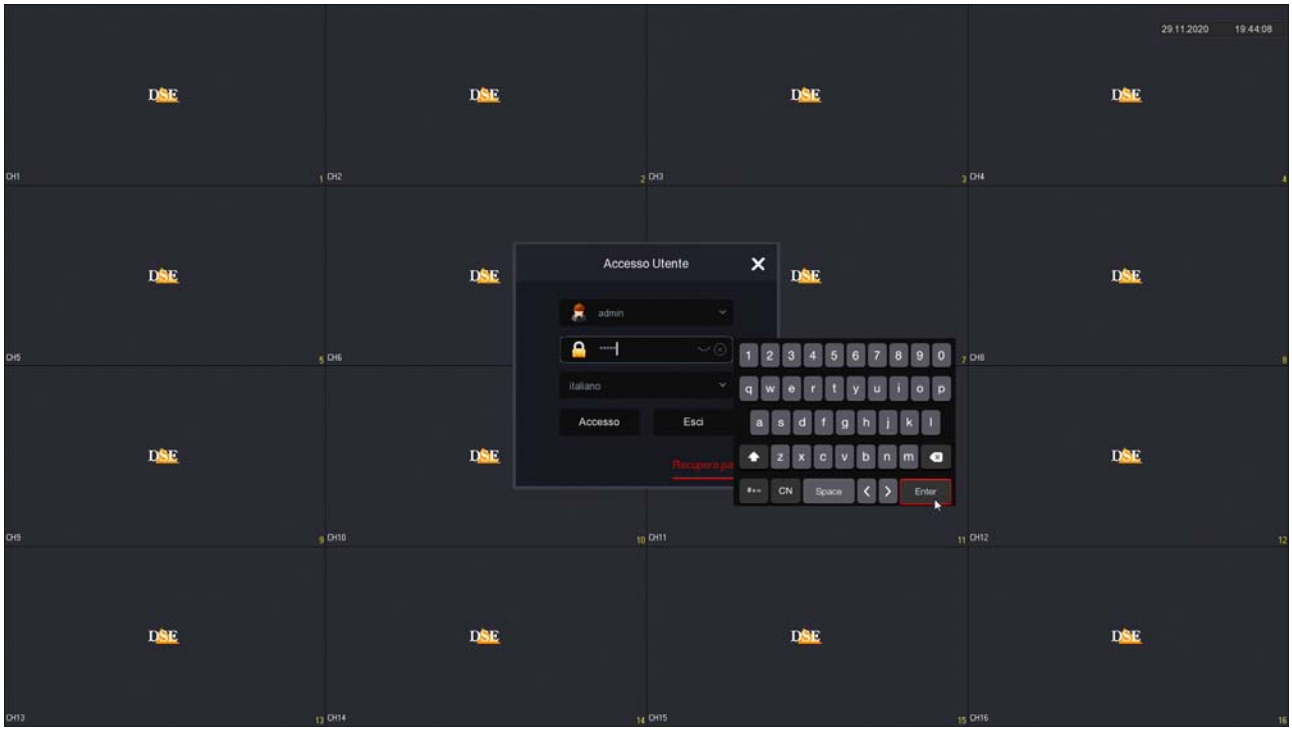
If your NVR has POE LAN ports for cameras, do not use them to connect the external network as it will not work. The external network, towards your Internet router, must be connected to the external network port, which is the only one in your DVR / NVR or otherwise separated from the others.

Check the network parameters of your DVR / NVR

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

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

1 - ACCESS THE NVR MENU Right click
and log in



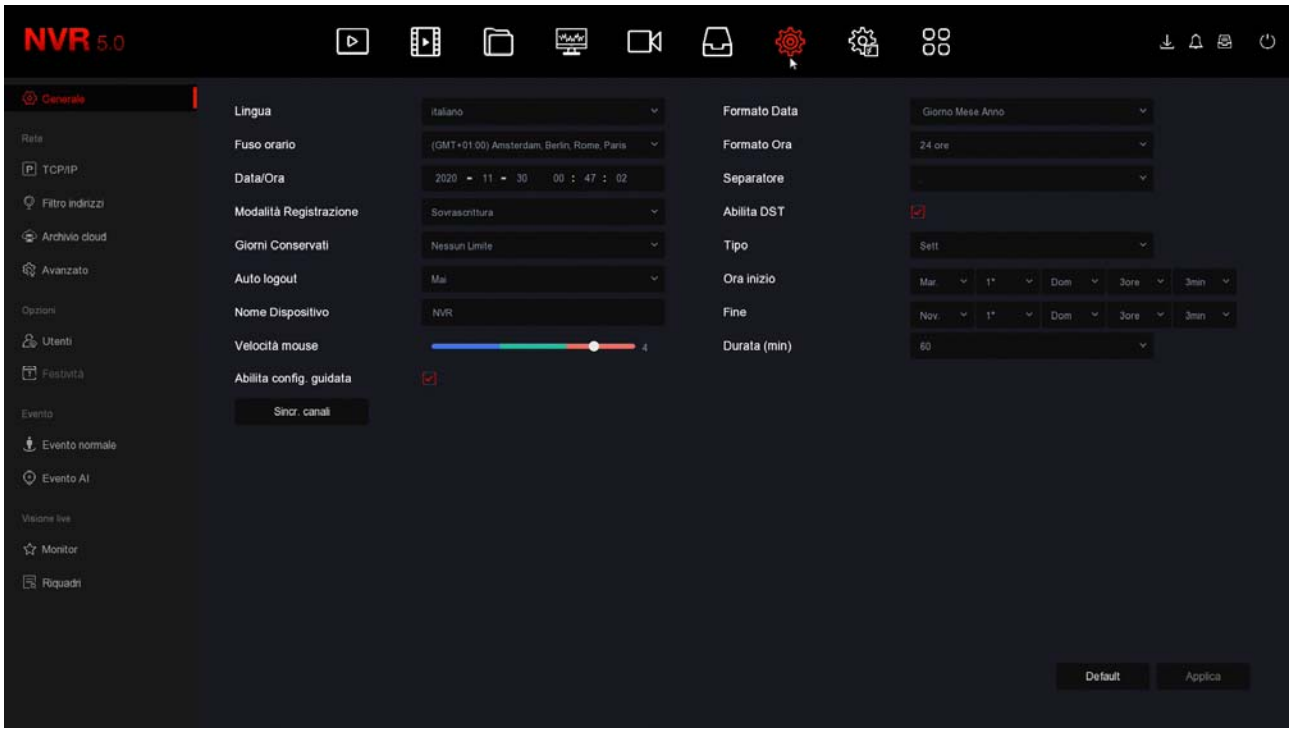
Enter the factory password:

USER: admin
PASSWORD: 12345

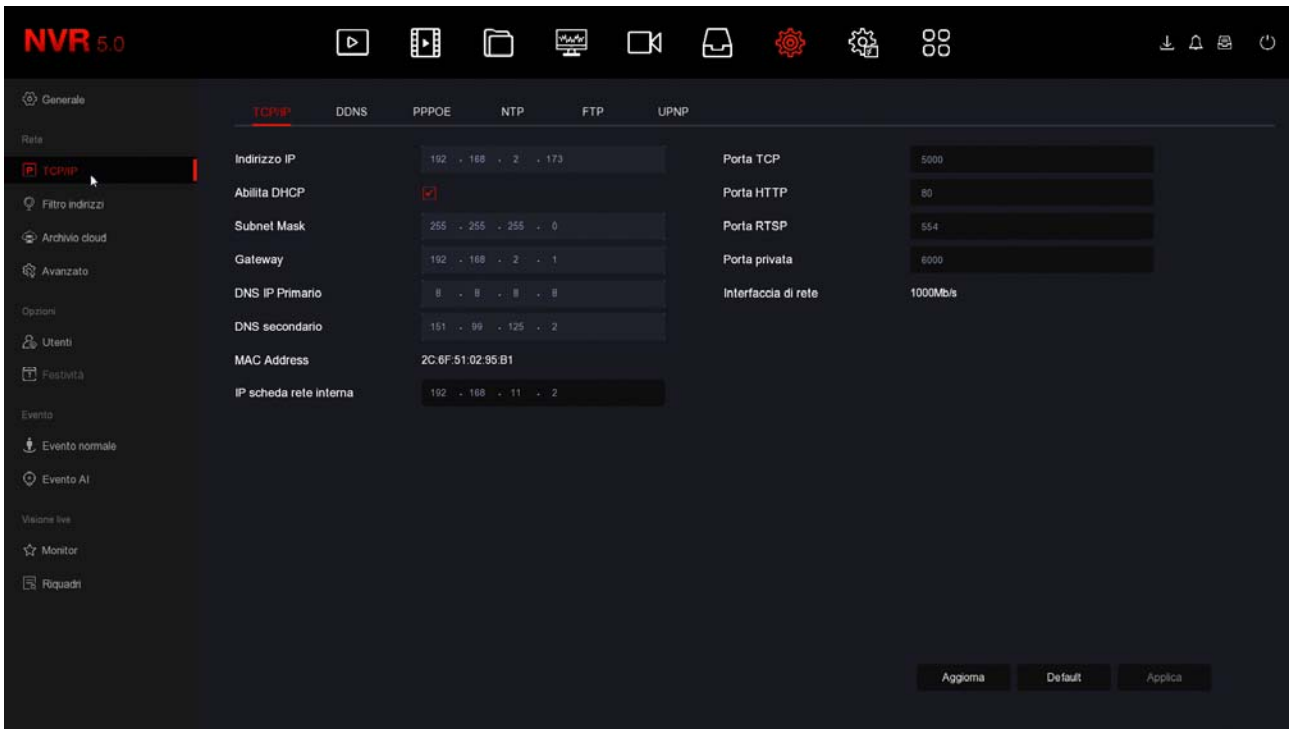
Or your new password that you have set.

2 - OPEN THE NETWORK WINDOW TO CHECK THE IP ADDRESS

Right click to open the configuration commands and then CHOOSE THE SETTINGS ICON at the top by clicking the gear icon.



Now, in the network settings, choose TCP / IP

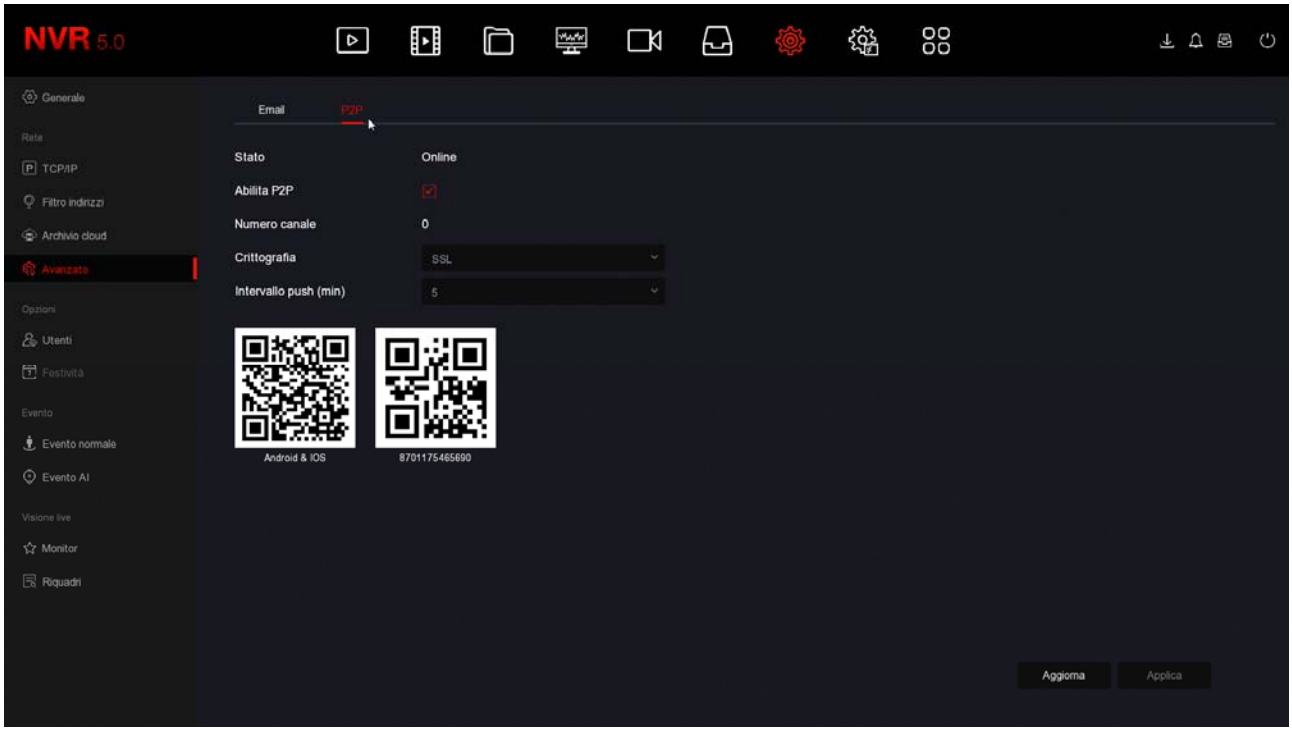


In this window check that the check on DHCP is active and take note of the IP address that your NVR has assumed within the network (first line at the top). It will be useful if you want to access the NVR from within your network, without going through the Internet.

If your network is not connected to a router, or to another device acting as a DHCP server,

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

3 - GO TO THE P2P WINDOW TO CHECK THE CONNECTION TO THE SERVER After checking the IP address of your NVR, go to the ADVANCED section and open the P2P folder



On this page you need to check that the P2P function is enabled and that the connection status to the server is ONLINE, as in this example. This means that the NVR is communicating well via the Internet with our P2P cloud server that will allow you to access via the Internet without configurations or static IPs. If the status is not ONLINE but OFFLINE double-check the previous steps because it means that your DVR / NVR cannot access the Internet.

Connect analog cameras

If you have purchased a DVR of 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 factory programmed to recognize the video format automatically so you don't need to configure anything and just connect the rear BNC connector.

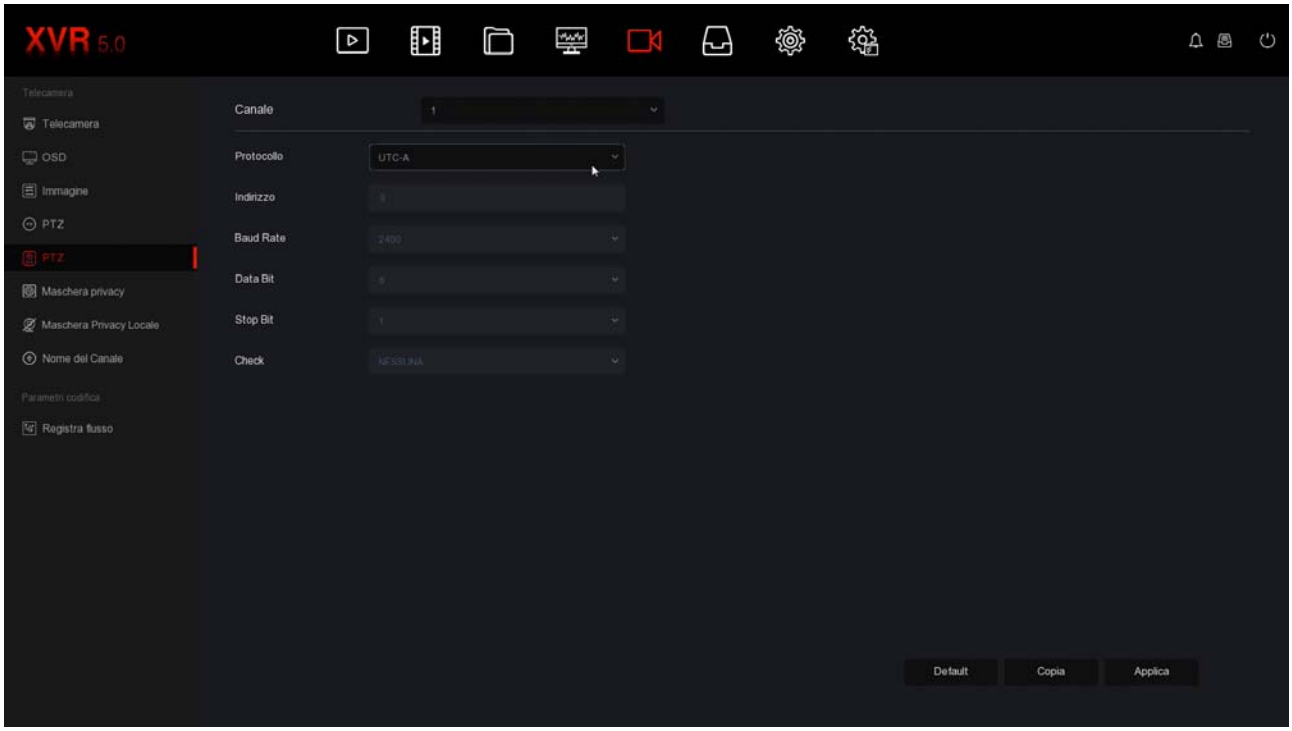
ATTENTION: HD-SDI digital cameras, although they use the same BNC connector as analog cameras, are not compatible.

When you connect a new camera, the DVR displays the format and resolution of the camera's video signal for a few seconds. Many analog cameras allow you to change the video format and its resolution by pressing the button on the camera.

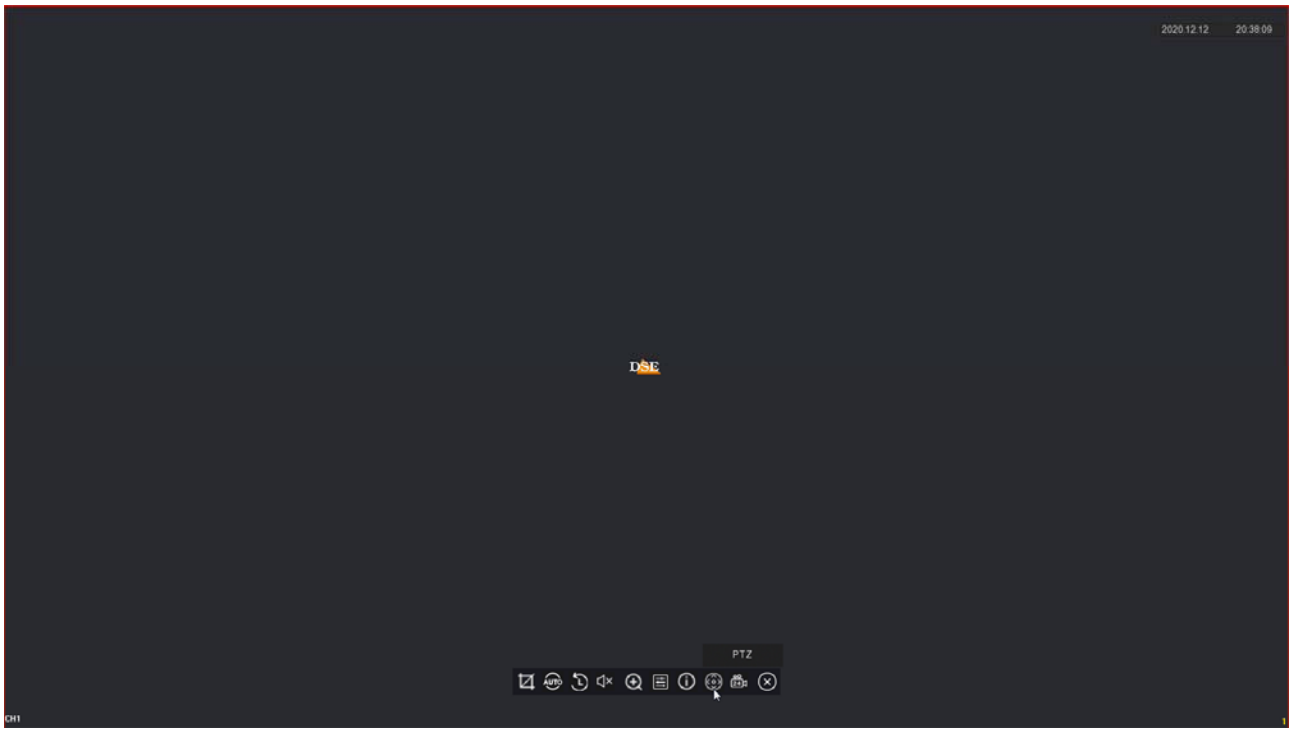
UTC MENU CONTROL OF ANALOG CAMERAS
The latest AHD, CVI and TVI cameras have an internal configuration menu that is usually operated with the button on the camera.
These DVRs allow you to control the internal OSD menu of the camera with the mouse of the DVR thanks to the UTC protocol that passes along the video cable. The camera must support the UTC protocol in order to use this function.
The UTC protocol is a standard that allows you to send commands to the camera along the video cable, without having to prepare additional cables in addition to the traditional video + power supply. It works on all types of analog video cabling, both on coaxial and twisted pair cables

with balun.

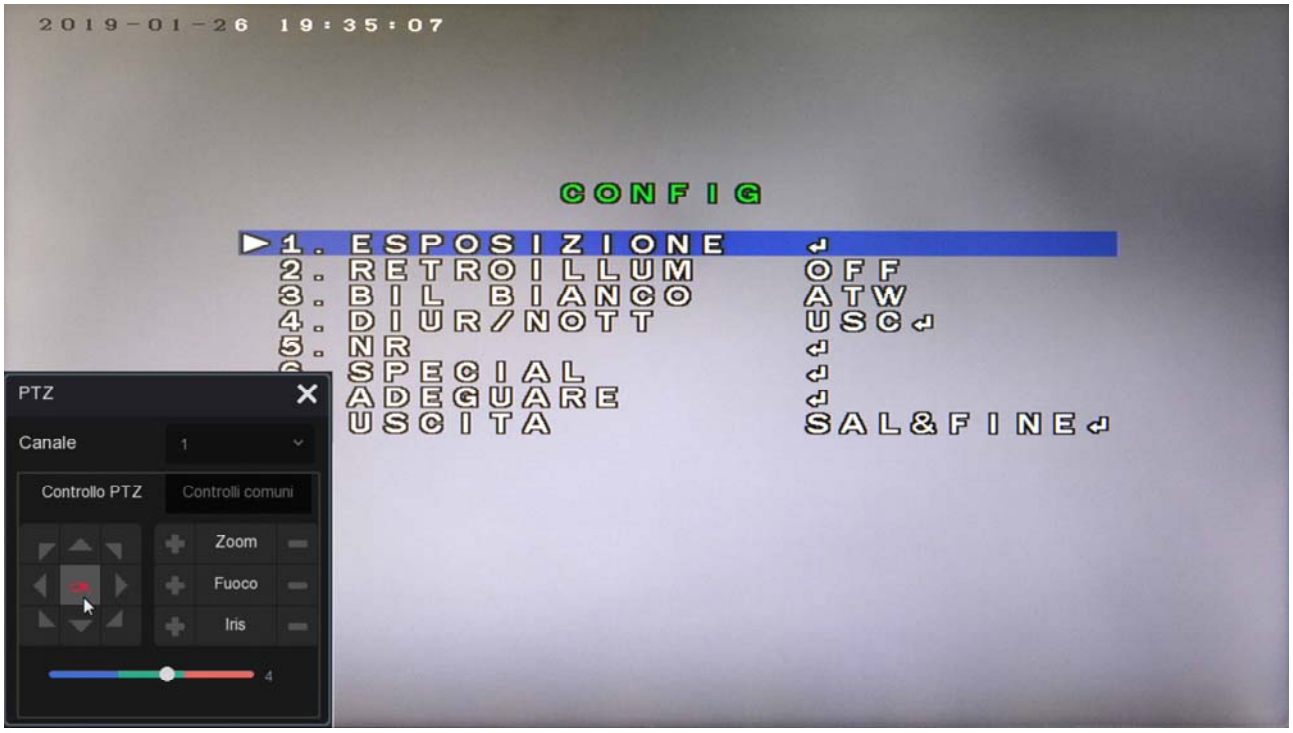
To use UTC control you need to enable UTC protocol in the PTZ settings of the channel. By default this protocol is already set on all channels, so you can limit yourself to a simple check.



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



To open the camera OSD menu, press the central ENTER button in the middle of the arrows.



ZOOM CONTROL VIA UTC IN ANALOG CAMERAS

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

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

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

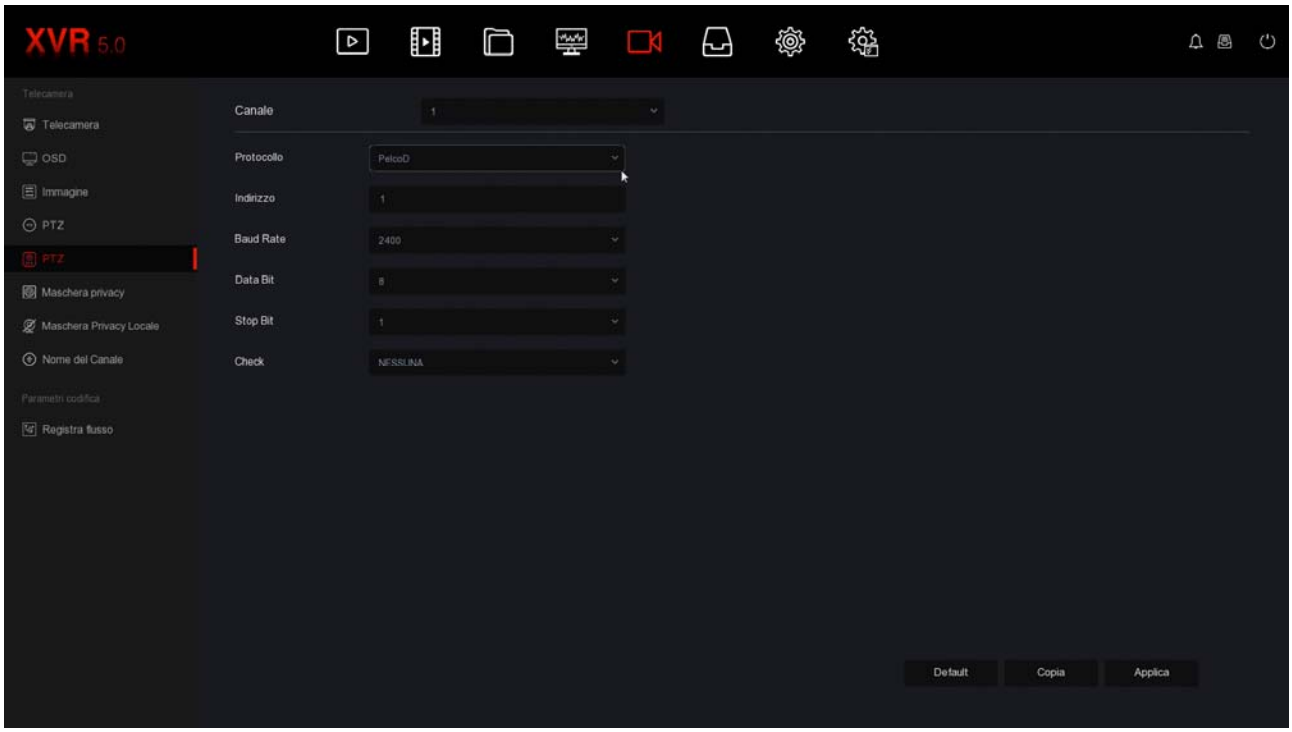
PTZ CONTROL VIA UTC IN ANALOG CAMERAS

The most recent motorized analog cameras in our range accept movement control via the UTC protocol that passes along the video cable. Pay attention that only some analog motorized cameras accept this type of command, others require an additional RS485 twisted pair.

These DVRs allow you to remotely control the movements of the camera via the UTC protocol, which passes along with the video signal and does not require additional cables.
The UTC protocol is already enabled on all factory channels, as seen previously, so you don't have to do anything in the settings but just open the PTZ panel and control the movements with the arrows and the lens with the +/- buttons

PTZ CONTROL OF ANALOG CAMERAS VIA RS485

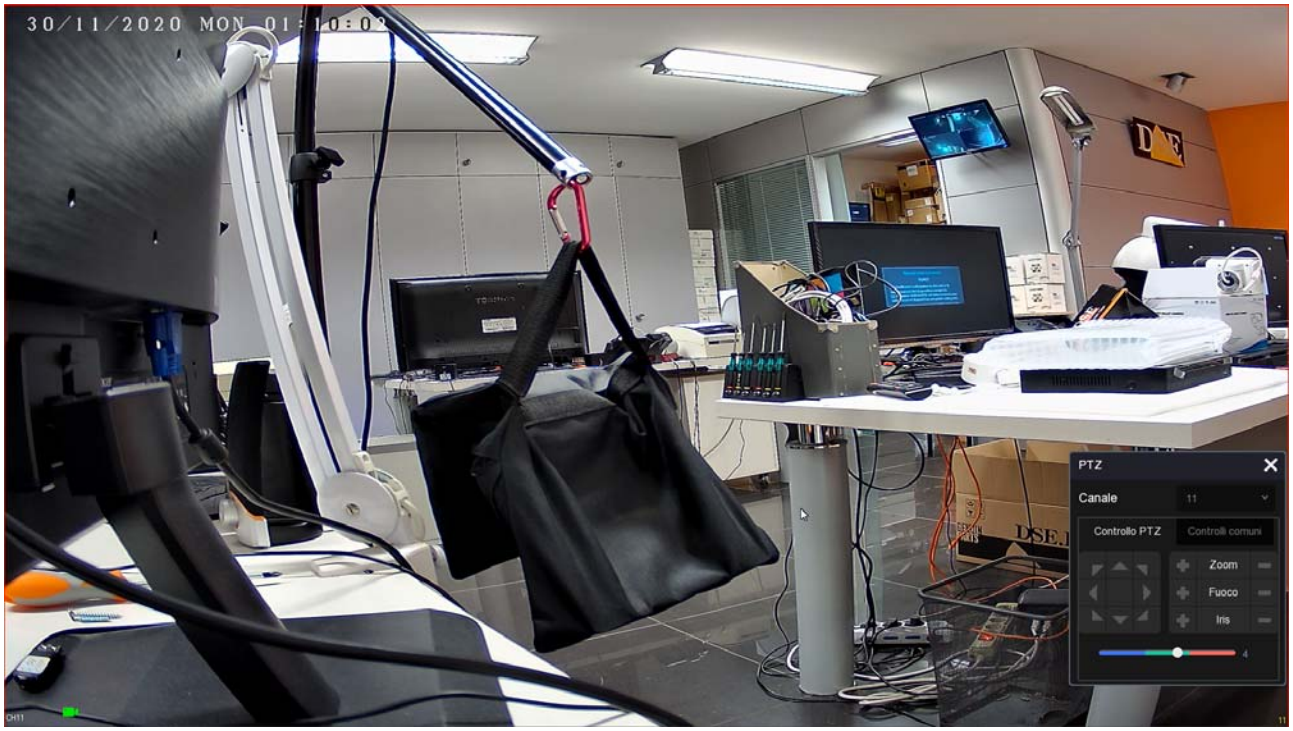
Analog motorized cameras that do not support commands via UTC can be controlled by commands sent through the rear RS485 port. These cameras require a twisted pair control cable in addition to the traditional Video + Power cabling.
First you need to set the communication parameters that allow the DVR to communicate with 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 rates 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 located along the RS485 bus must have an ID address from 1 to 255. Normally the cameras have the factory address 1 but you can change it by acting on the camera.

BAUD RATE / DATA BIT / STOP BIT / CHECK PARITY - These are the communication parameters that the DVR will use to communicate with your camera. The most important is the 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 to be entered. In general, the address and speed in the camera are set with microswitches and are often indicated as an overlay when the camera is started.

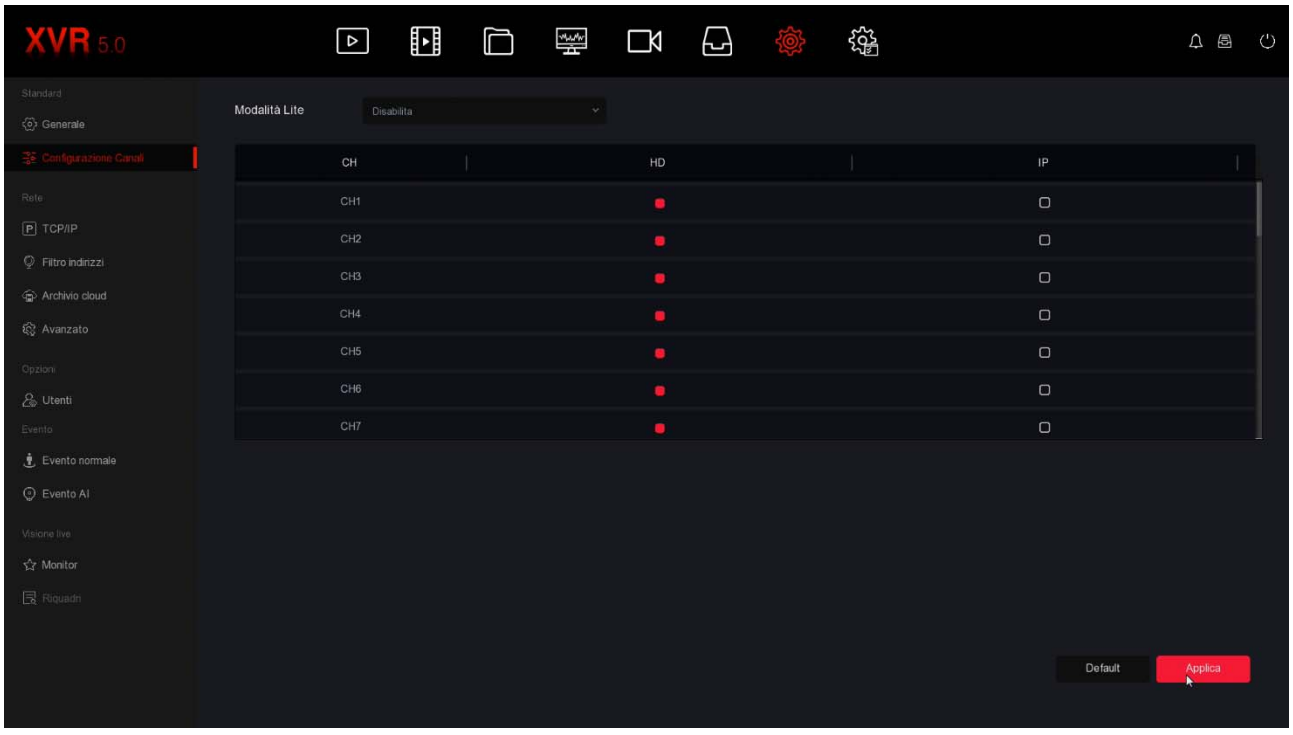
To control the movements of the motorized cameras you have to bring the camera to full screen and click PTZ.



You can rotate the camera with the arrows and control the lens with the Zoom, Focus, Iris buttons. The commands in this window are explained in detail in the configuration manual.

Enable IP channels on your DVR

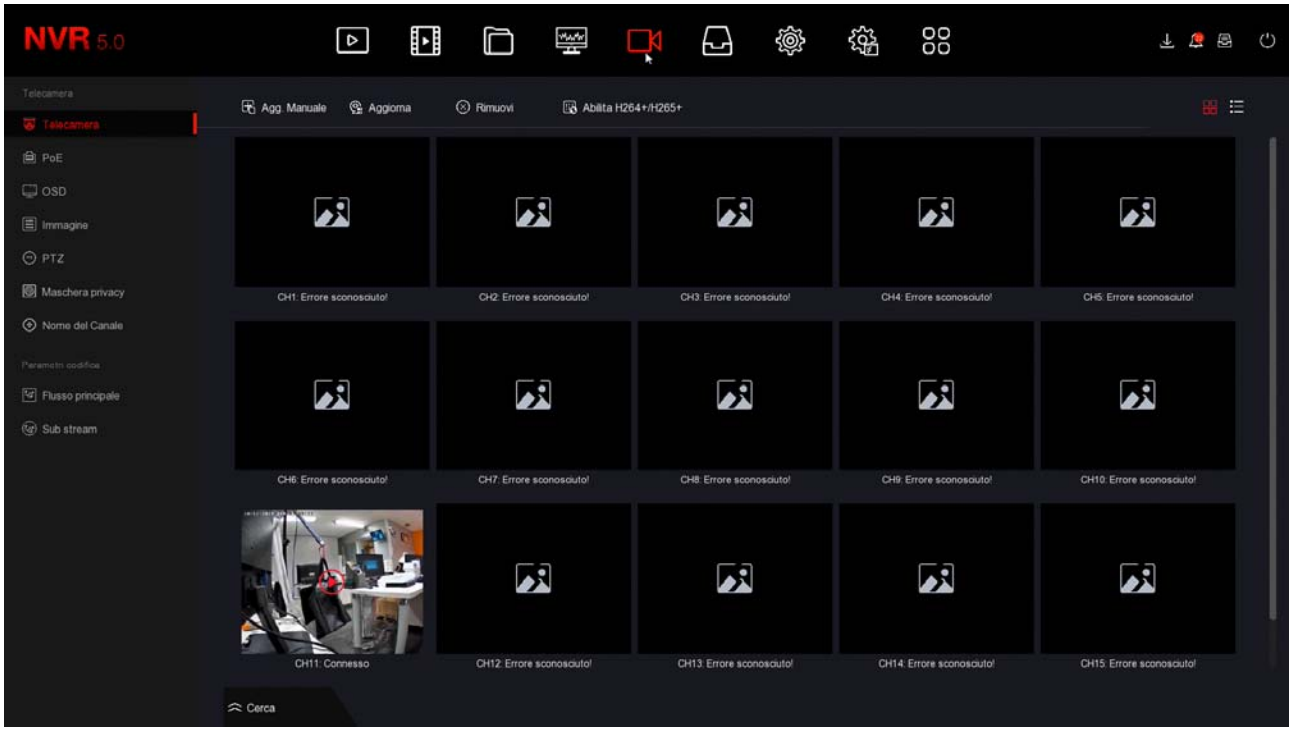
If you have purchased an NVR you can only manage IP cameras that you must have previously installed on the network, each with its own address.
DVRs with BNC ports can also manage IP cameras in addition to BNC channels. You can also disable BNC channels you don't use to increase the number of IP channels. To do this you have to click CONFIGURATION... CHANNEL CONFIGURATION



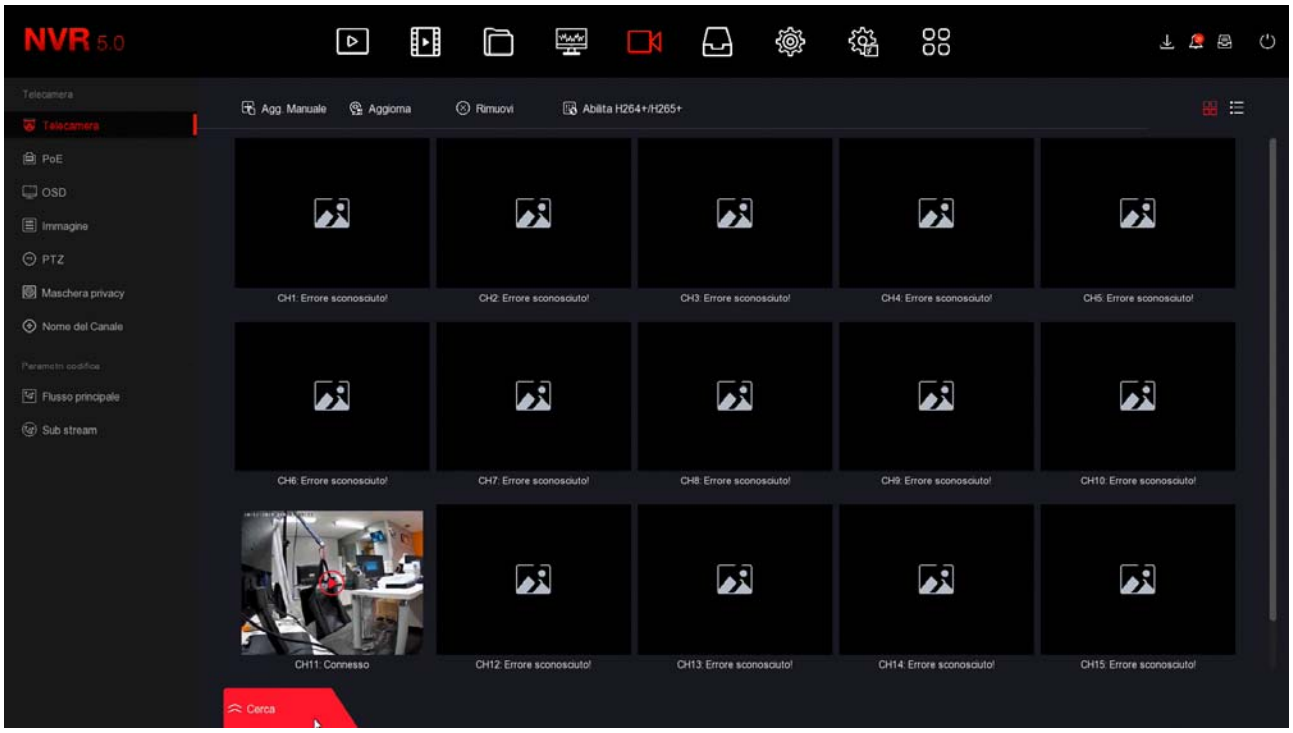
The DVRs are shipped with all analogue channels enabled by default so that all rear BNCs can be used. Almost all of our DVRs allow you to connect additional IP cameras, in addition to the analog ones. Also, if you don't use some BNC channels you can disable them in this table and they will automatically enable a certain number of IP channels. Obviously, if you disable an analog channel, its BNC can no longer be used. It seems like an obvious clarification, but it needs to be remembered because if you connect a BNC camera to that input in the future and you don't see it working, you may think that the DVR is broken and needlessly require repair.

Connect IP cameras on the network

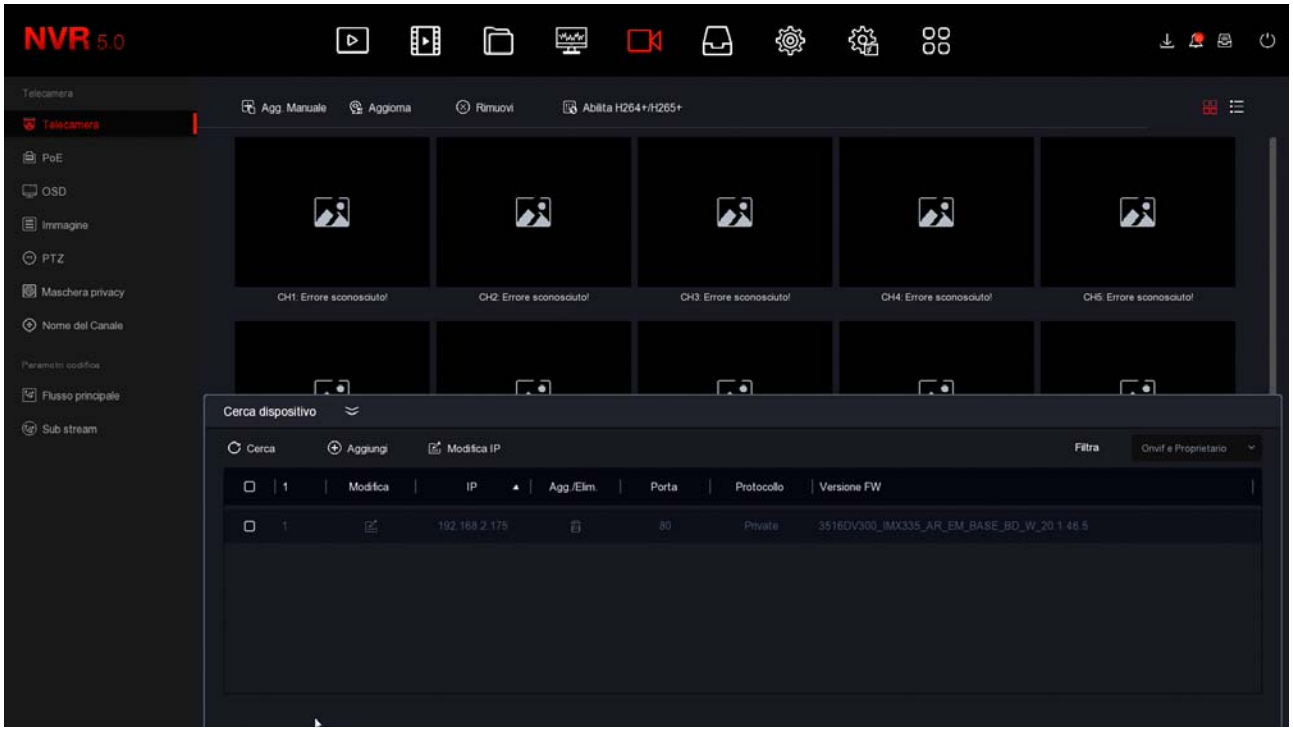
If you have purchased an NVR you can manage IP cameras. You can also manage IP cameras with a DVR, if you have disabled some analogue channels, as seen in the previous chapter.
Before adding an IP camera you must have it configured on the network, using the appropriate configuration software, as explained in the camera manual.
To add an IP camera to your DVR / NVR you need to right click and choose the CAMERAS icon in the top menu.



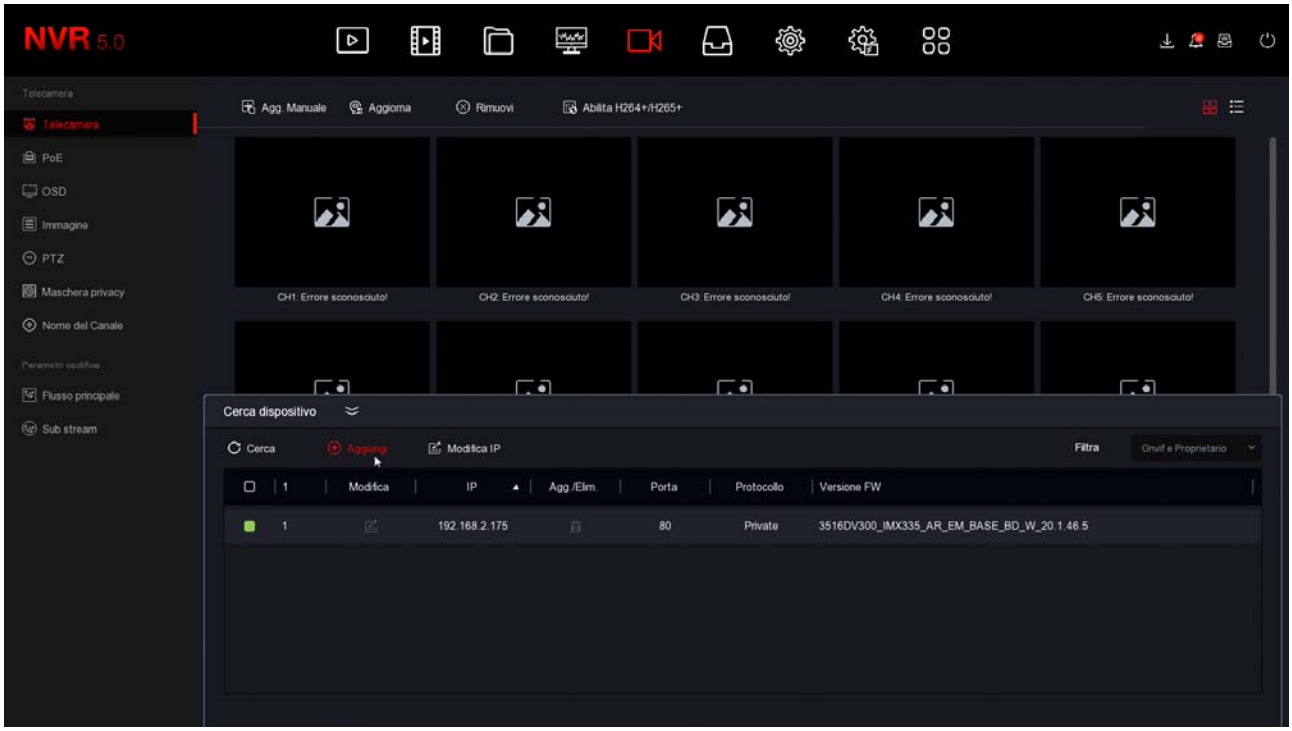
In the camera list window, click the SEARCH button at the bottom.



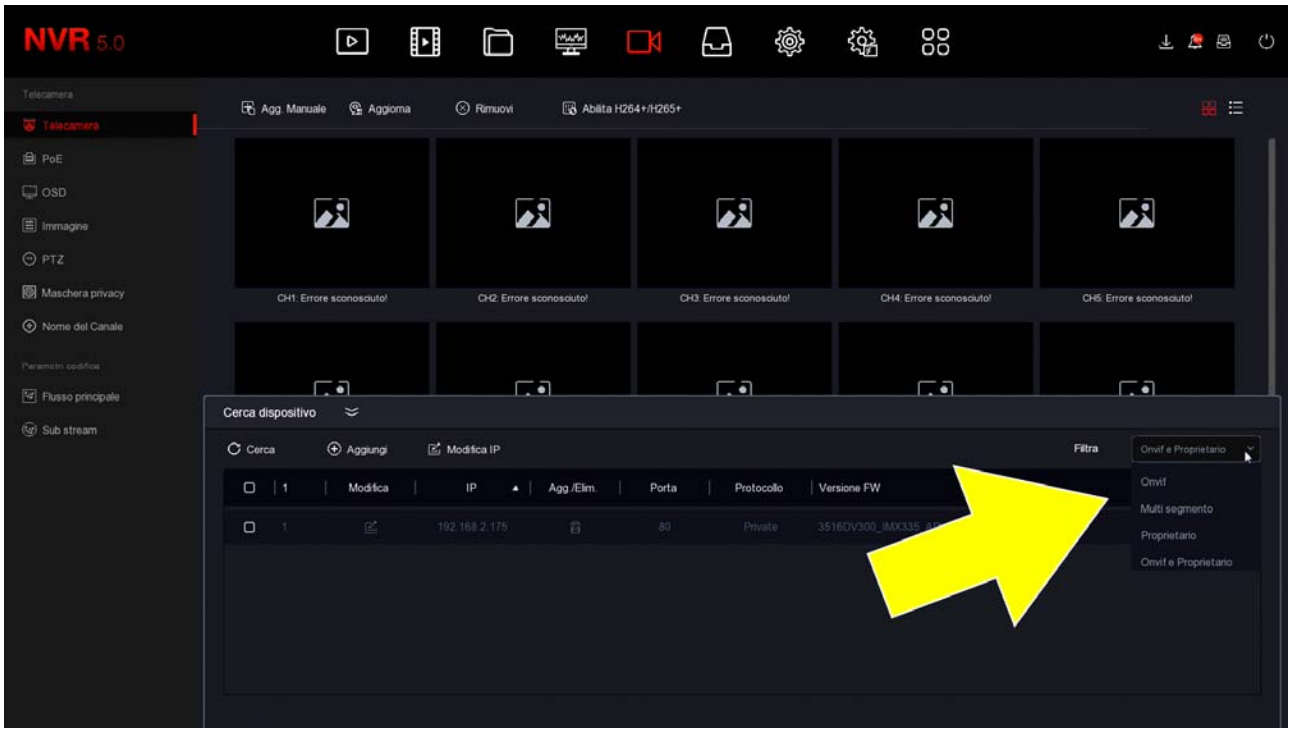
A search window will appear. Wait for the search to complete and at the end you will find in the list all the DSE cameras and also the ONVIF cameras of other brands that the DVR / NVR has detected on the LAN to which it is connected.



Select the camera you want and click ADD to insert it into the VCR.



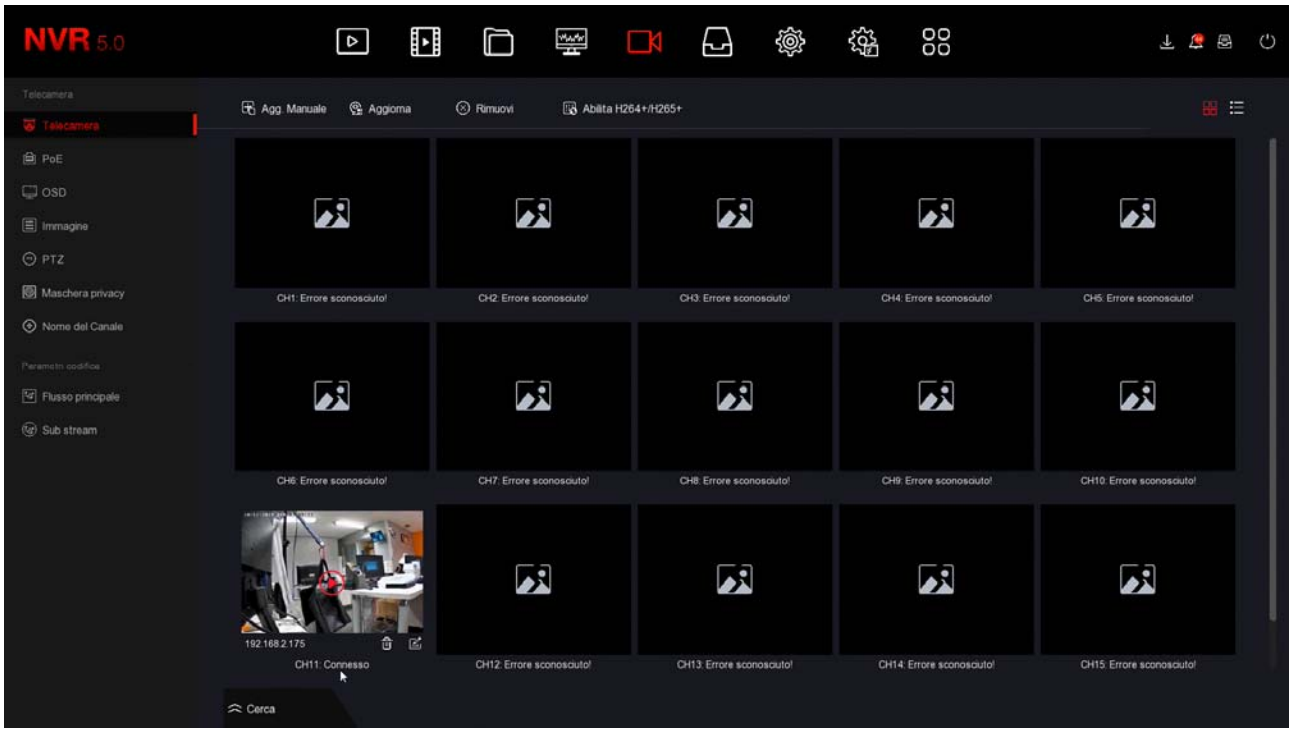
If your camera does not appear in the list check that it has been configured on the same network segment as the DVR / NVR (in the example above 192.168.2) and that it supports the Onvif protocol. Also check the network settings of the DVR / NVR as seen above.
At the top right you can choose the camera search mode



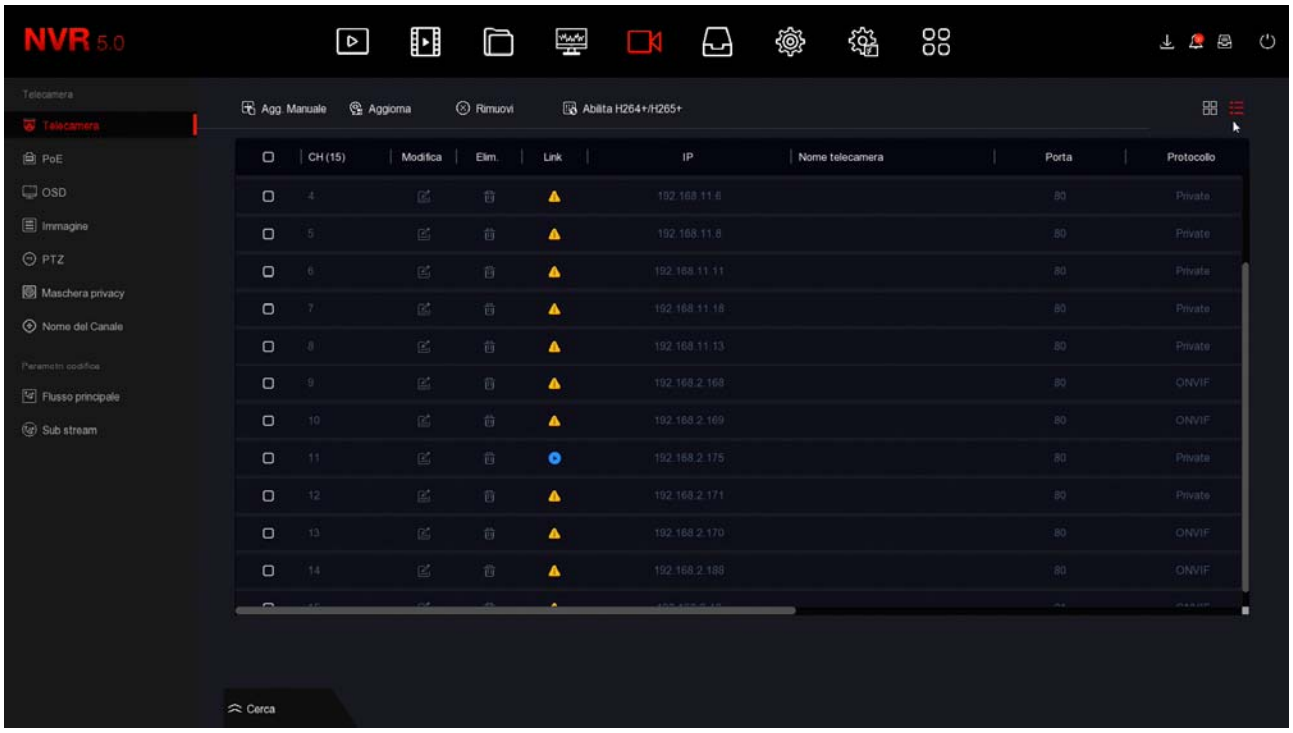
Onvif and owner-Search all cameras on the network
Multi segment-Search all cameras also on other network segments, different from that of the NVR

Owner-Search the net for our RK Series cameras only **Onvif**-Search the network for all cameras using the Onvif protocol only

Once the camera has been added, check that the word CONNECTED appears, as in the photo below, because this certifies that the connection has been made. The connection usually takes about ten seconds but can sometimes take longer depending on the type of network connection.

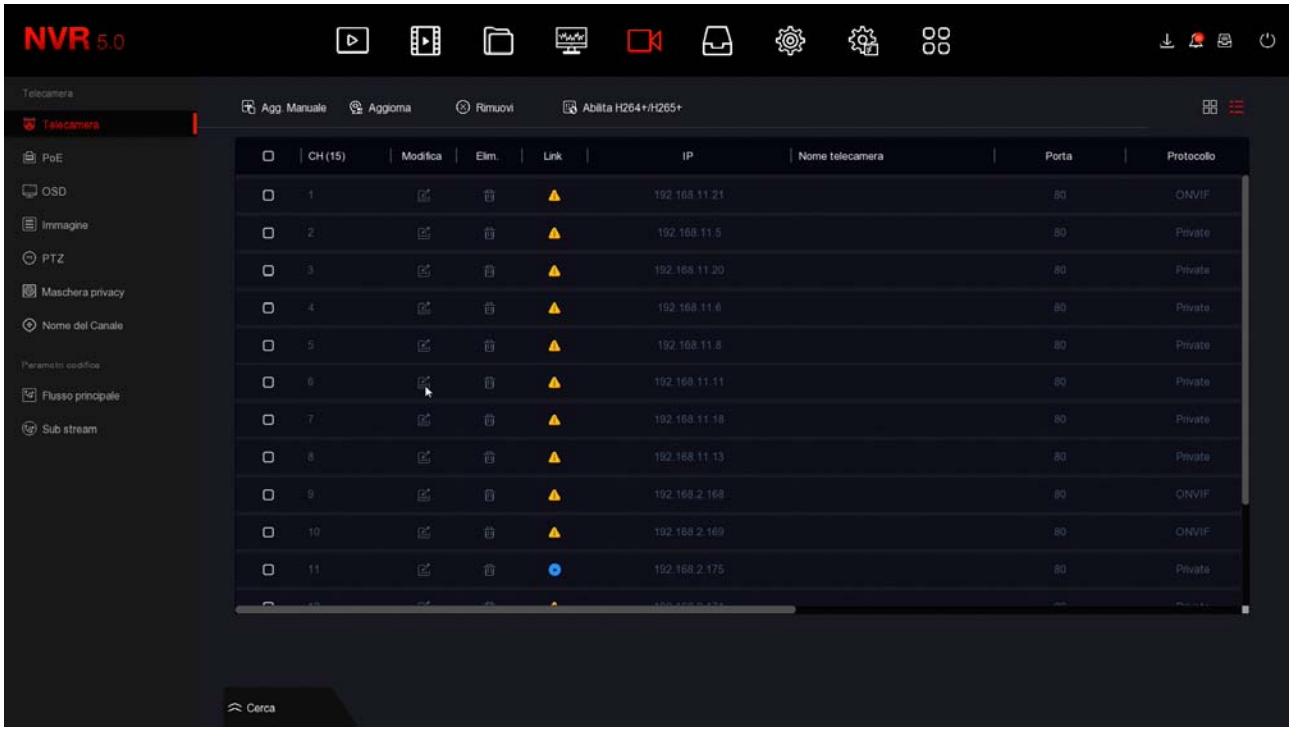


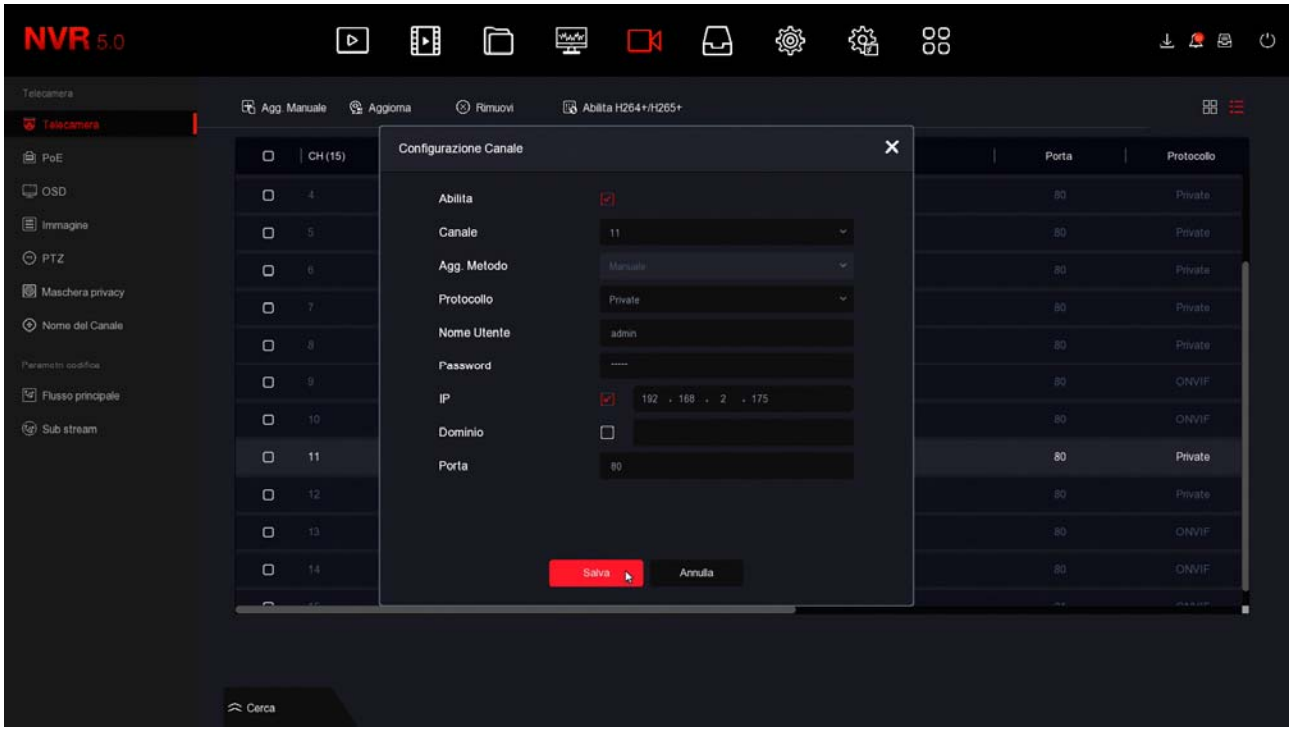
You can also switch to the view in LIST mode, with the button at the top right and check that the blue icon appears next to the camera.



If the LINK indicator remains in error there is something wrong with the configuration

automatic camera failed. You must then click on the EDIT button and change the connection parameters. Start by entering the correct access password of the camera, then check the onvif port your camera uses in the manual.





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

Connect IP cameras to the POE ports of the NVR

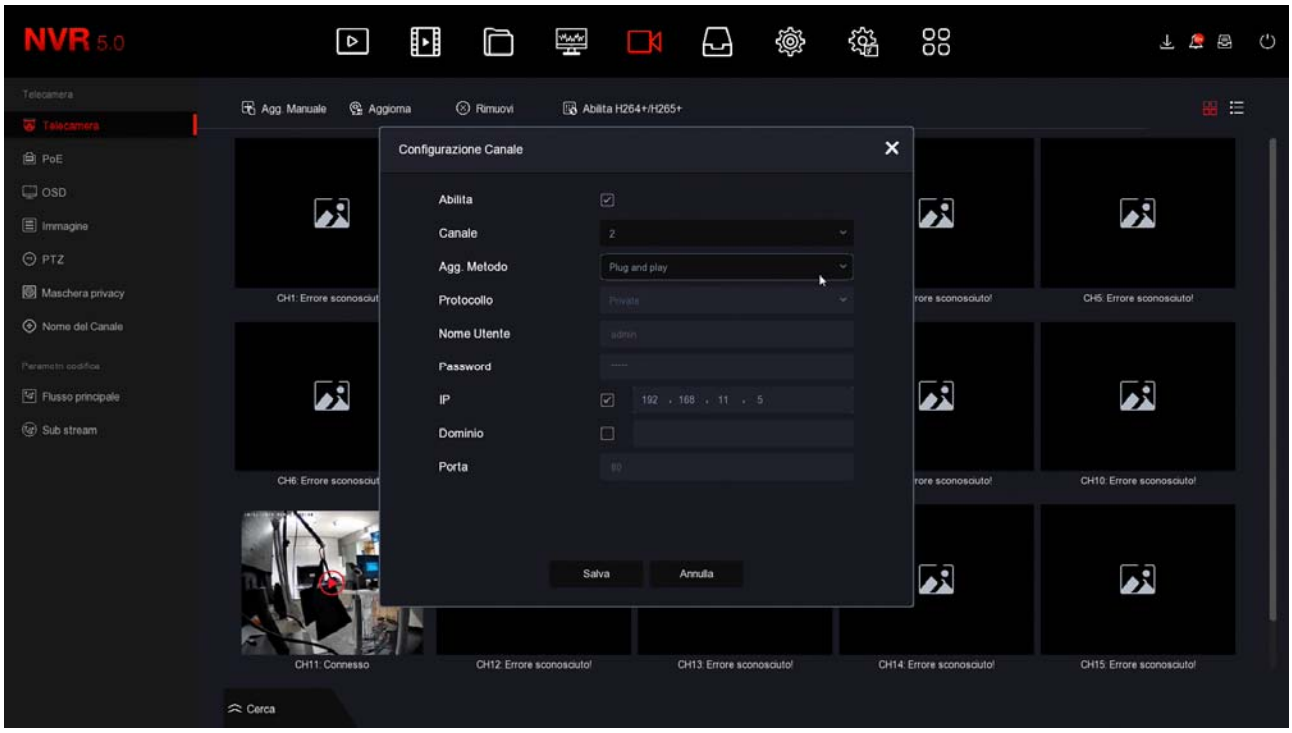
If you have purchased an NVR with integrated POE ports you can connect the IP cameras directly to the LAN ports on the back of the NVR. It is a very simple operation because the NVR configures the camera automatically.

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

CONNECT RK SERIES CAMERAS (PLUG & PLAY)

If you connect one of our RK series cameras to the NVR, recognition is totally plug & play. You can take the new IP camera out of the box and connect it directly to a LAN port of the NVR without doing any preliminary configuration. The NVR will 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 where you have inserted it.

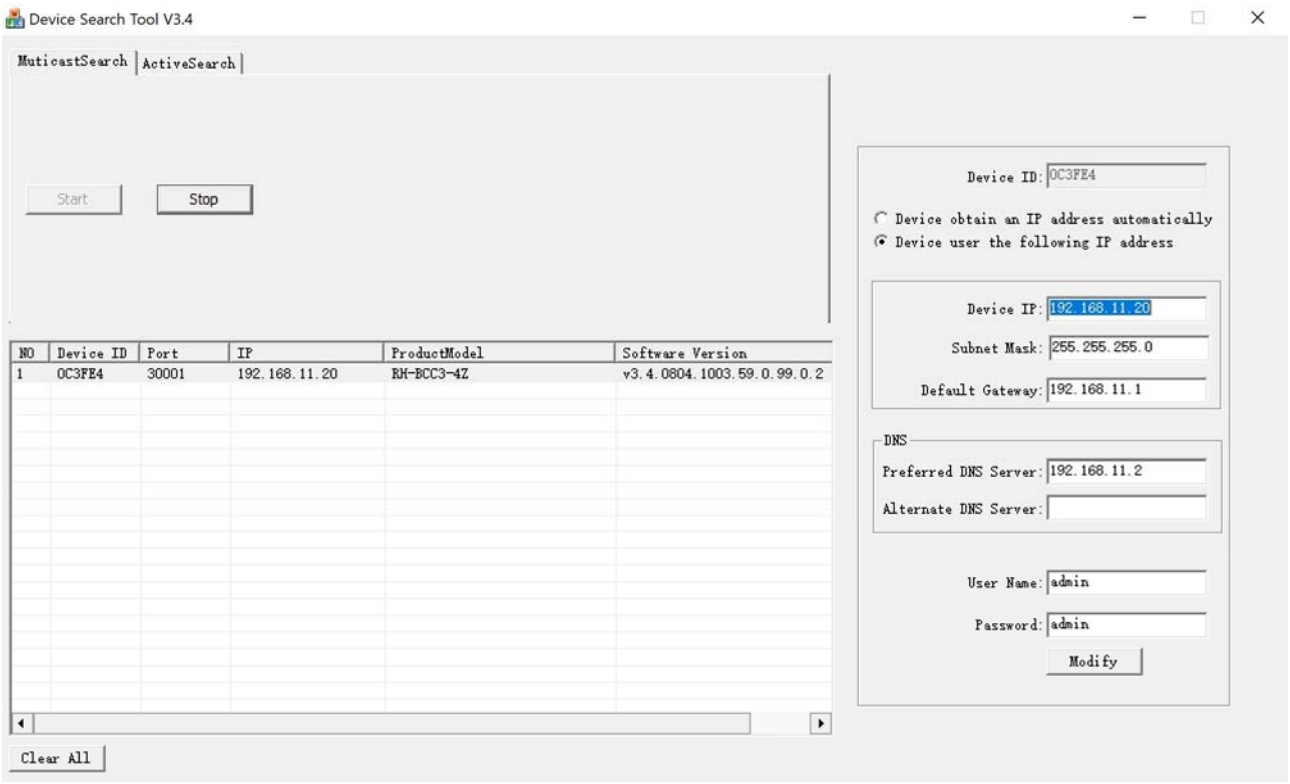
In video recorders with poe ports, inputs 1-4,1-8 or 1-16, depending on the model, are factory programmed in Plug & Play mode in order to self-configure the RK series cameras that will be connected.



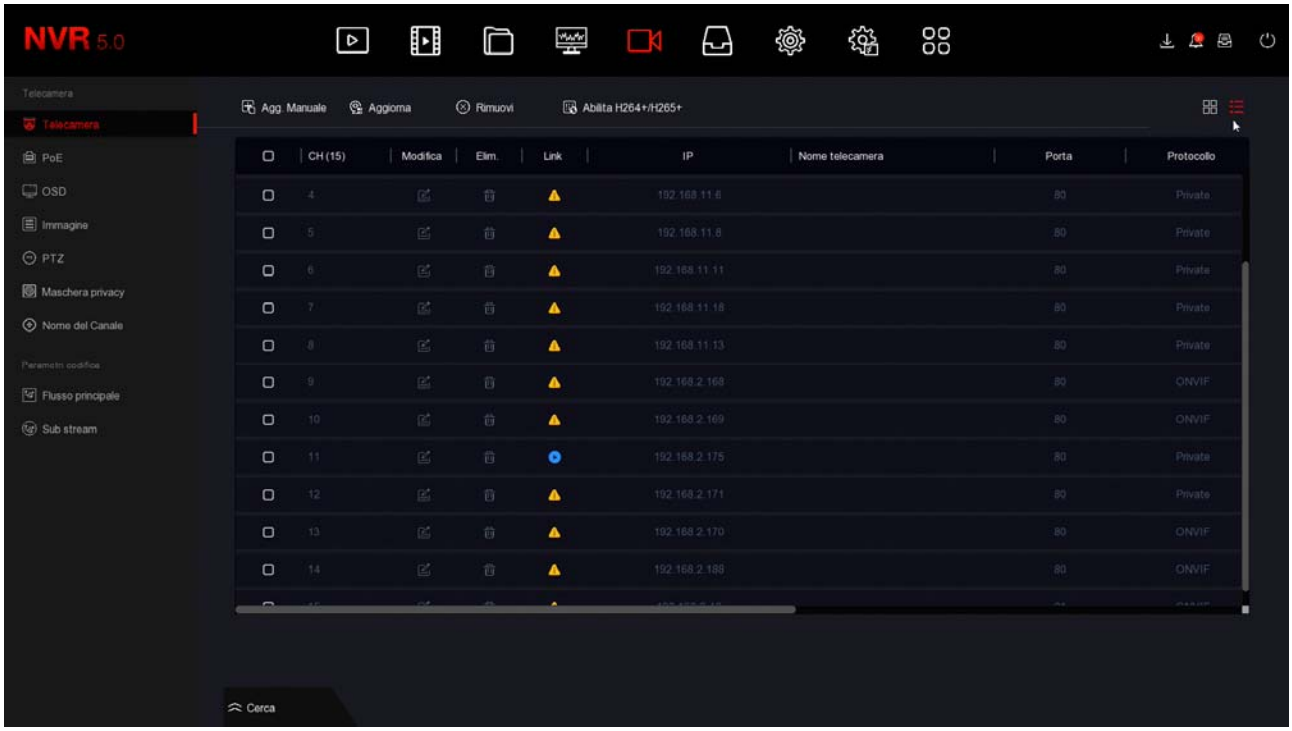
CONNECT ONVIF CAMERAS

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 plug and play auto-configuration mode only works with our RK Series cameras. Use the program to assign the IP address to the camera and set a fixed IP address of the type 192.168.11 .---, for example 192.168.11.20.

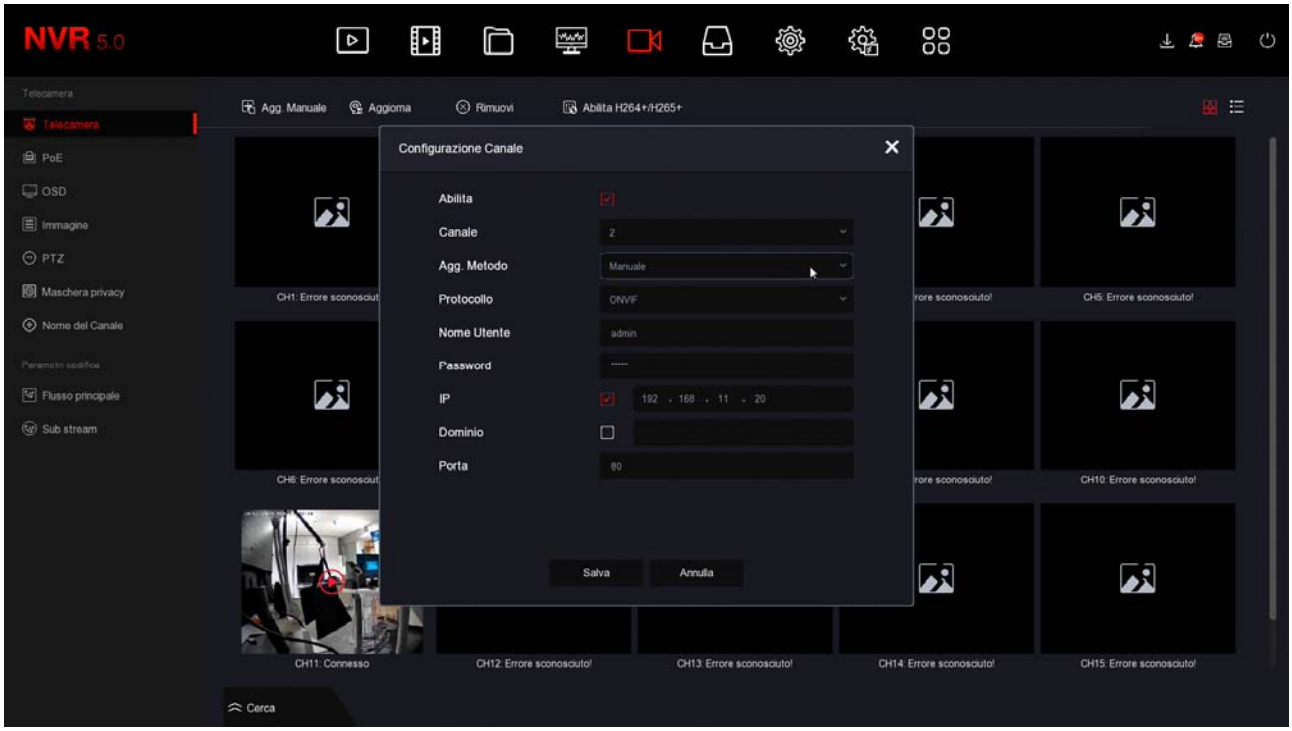
192.168.11 .--- is the address class that the factory NVR uses to manage its internal network. Enter the other network parameters as in the example below, where we use our RH Series camera.



If you want to check which IP addresses are factory programmed in combination with the POE channels you can see it in the list of cameras



Once the IP has been assigned to the camera, connect the camera to a POE port of the NVR, click EDIT in the channel to which you connected the camera and change the add mode from Plug & Play to MANUAL, with ONVIF protocol. Then complete the card with the camera login credentials and the IP address you assigned to the camera, as in the following example.



TIP - If you want you can also assign an external network address to the new camera, instead of an internal network address of the NVR. For example, if your external network, to which the NET port of the NVR is connected, uses the class 192.168.1.xxx you can assign the address 192.168.1.10. If you add the camera to a POE port of the NVR using this address it will work the same, even if you have not used an internal IP address of the NVR network (192.168.11 ---). It can be handy if you have already assigned your camera a fixed IP address for your external network, so you don't have to change it.

ONVIF CAMERAS IN DHCP

Although it is technically possible it is not advisable to connect to the POE ports of the NVR cameras in DHCP mode (automatic address assignment) because they will receive the IP address from the DHCP server of your external network and if this IP changes you will have to reconfigure the NVR.

Connect wifi IP cameras to wifi NVRs

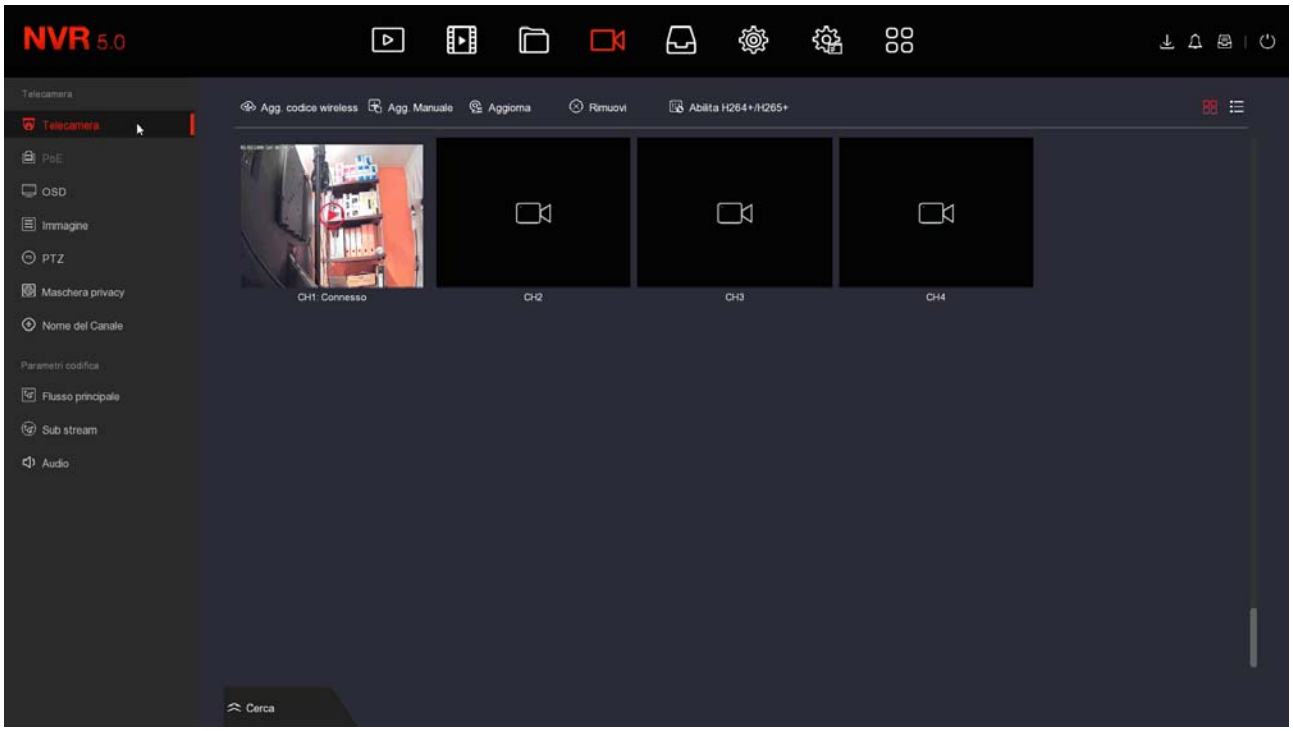
If you have purchased an NVR with integrated wifi you can connect wifi cameras directly to the wifi network of the NVR without using your external wifi network.
Connecting wifi cameras is very simple and Plug & Play if you buy one of our RK or RKK series wifi cameras.
If, on the other hand, you want to connect a wifi onvif camera of another type, you will have to proceed with the manual configuration.

ADD AN RKK SERIES CAMERA - WITHOUT NETWORK SOCKET

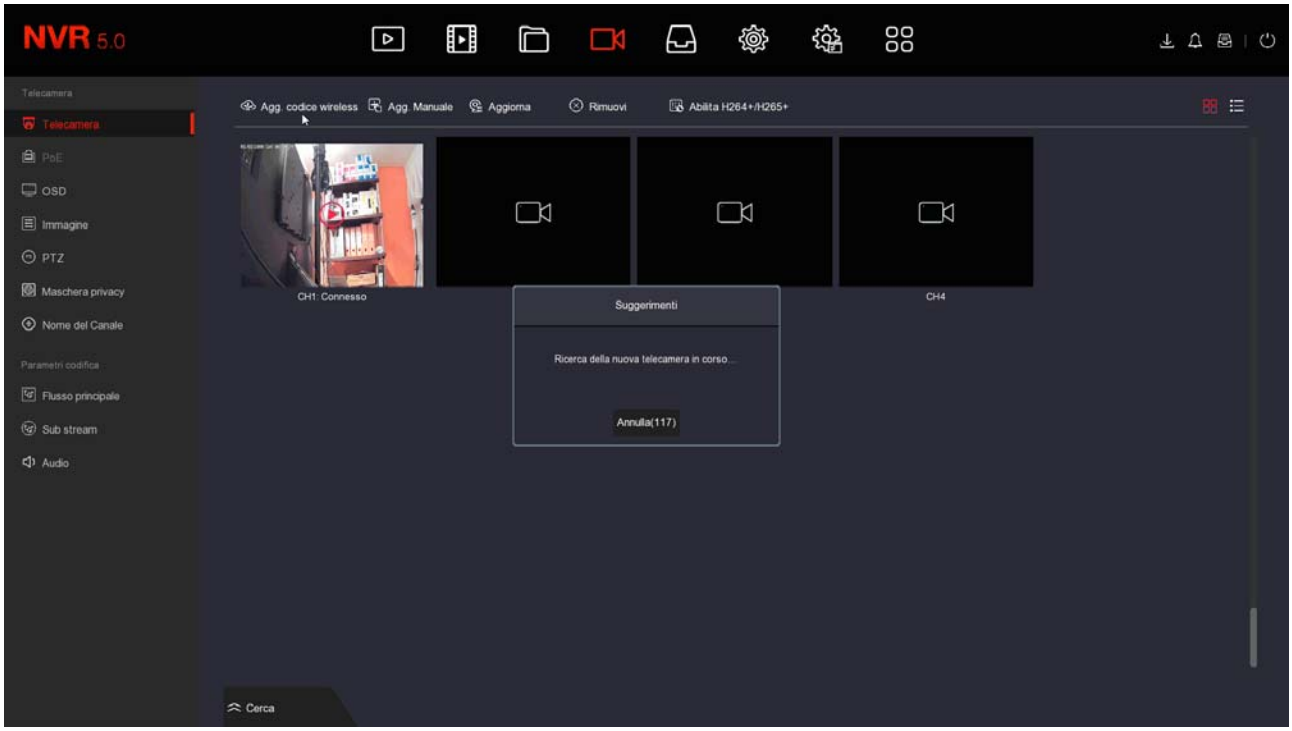
RKK cameras can only work with our WIFI NVRs and are not equipped with a network socket, but with a pairing button.

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 a third.



3 - Press the ADD button. WIRELESS CODE to start searching for the camera to be paired. A window opens with a 120 second timer.



4 - Before the 120 seconds expire, press the button located between the camera connections, next to the power connector. Press and hold for 10 seconds until the camera LEDs start flashing.

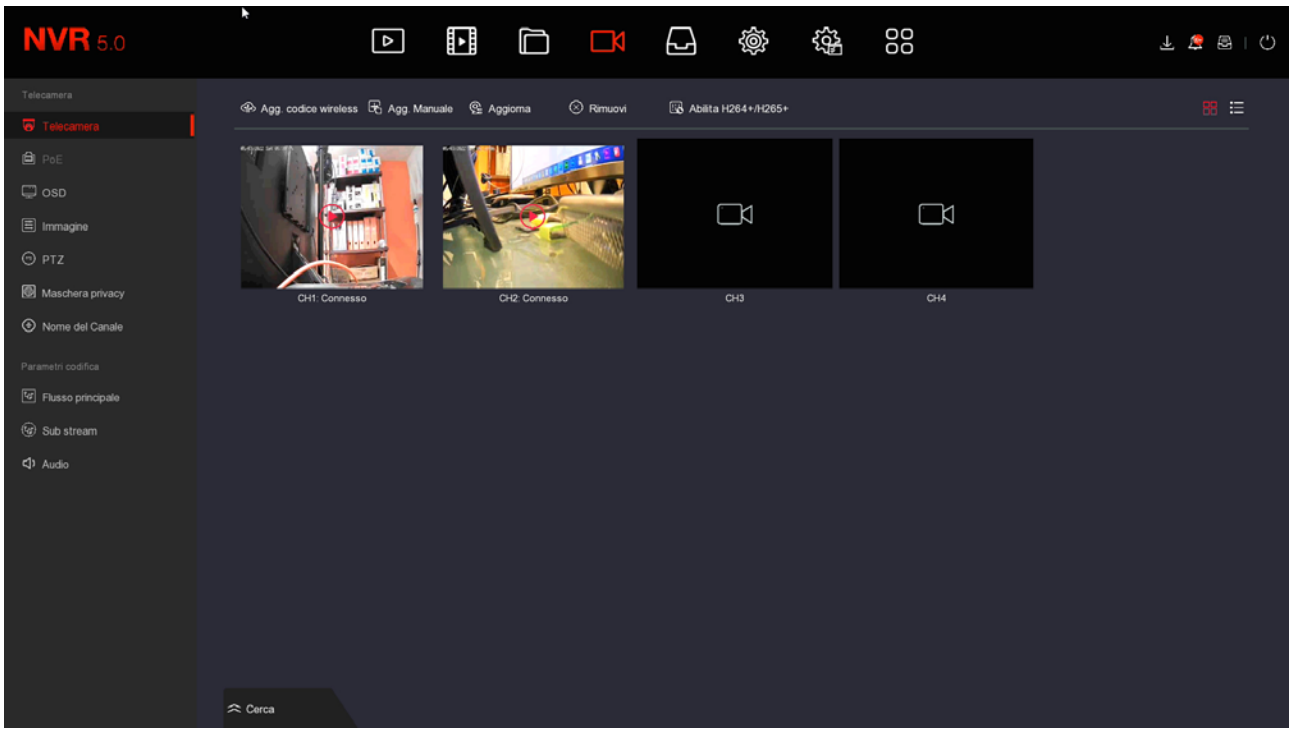
FINISHED - Wait for automatic pairing to complete. Now the camera is connected to the NVR and you can use it in wifi like the others.

CONNECT A RK SERIES WIFI CAMERA WITH A NETWORK PORT

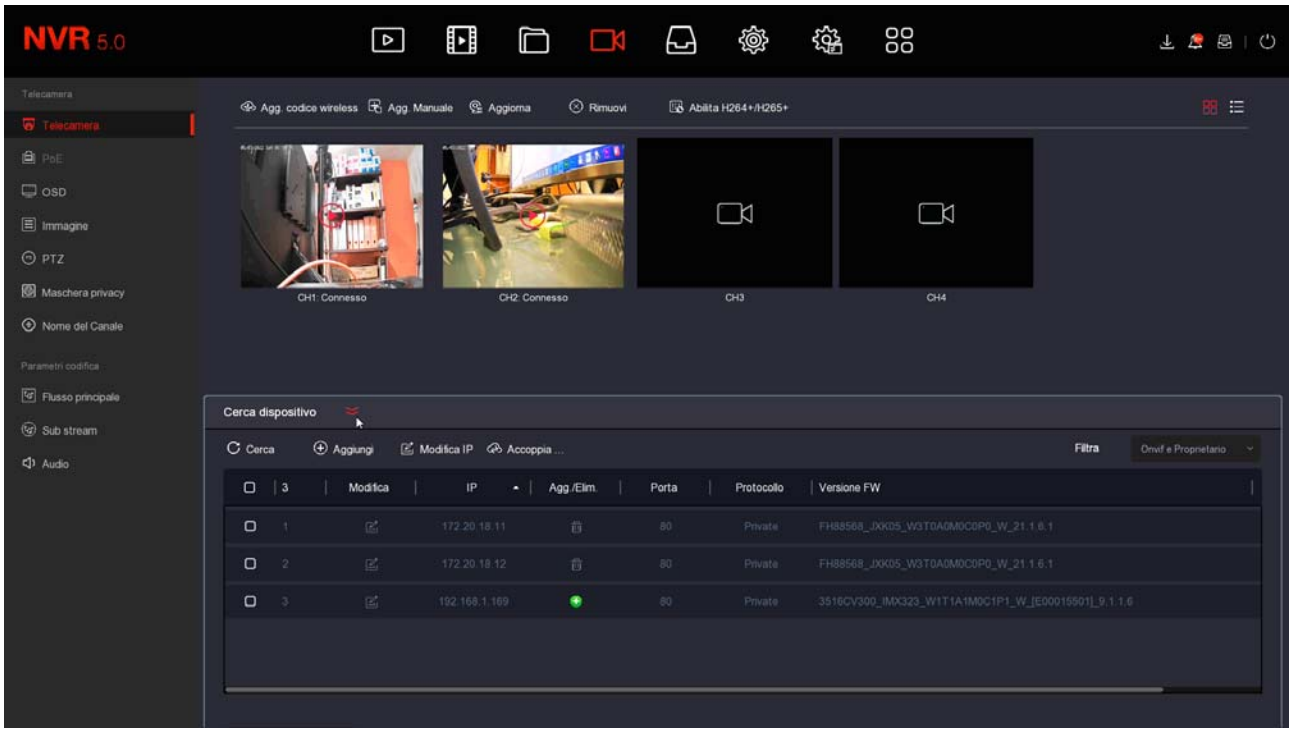
If you connect one of our standard RK series cameras, equipped with a network port, to the wifi NVR, the coupling to the wifi NVR is carried out by initially connecting the camera via cable to the NVR. The recognition is totally plug & play. You can take the new IP camera out of the box and connect it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

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

2 - Open the NVR MENU and access the CAMERAS section
In this example it is a system with 2 connected and functioning cameras to which we want to add a third one.

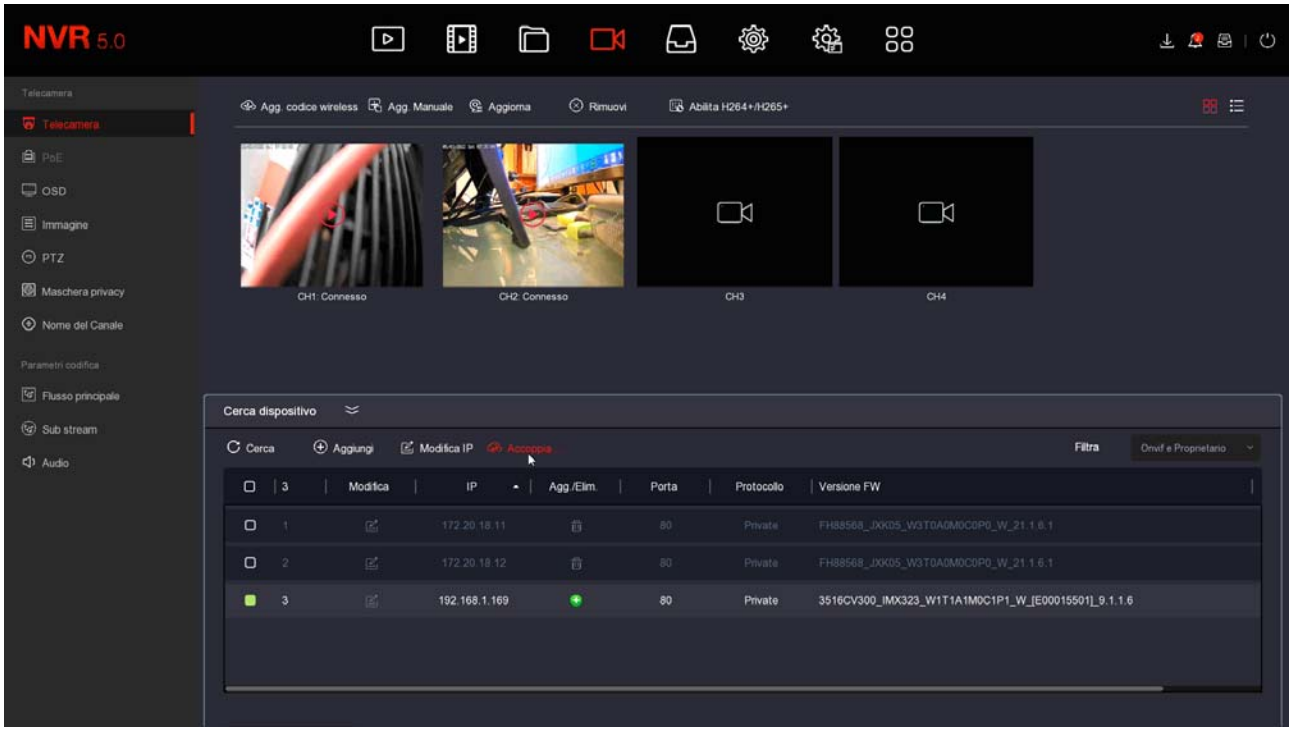


3 - Press the SEARCH button at the bottom of the window to start the camera search



In the FILTER box, 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, also the new one you connected with the cable. This new camera will probably have a completely different address than the ones already installed, but don't worry; the NVR will configure the camera automatically.

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



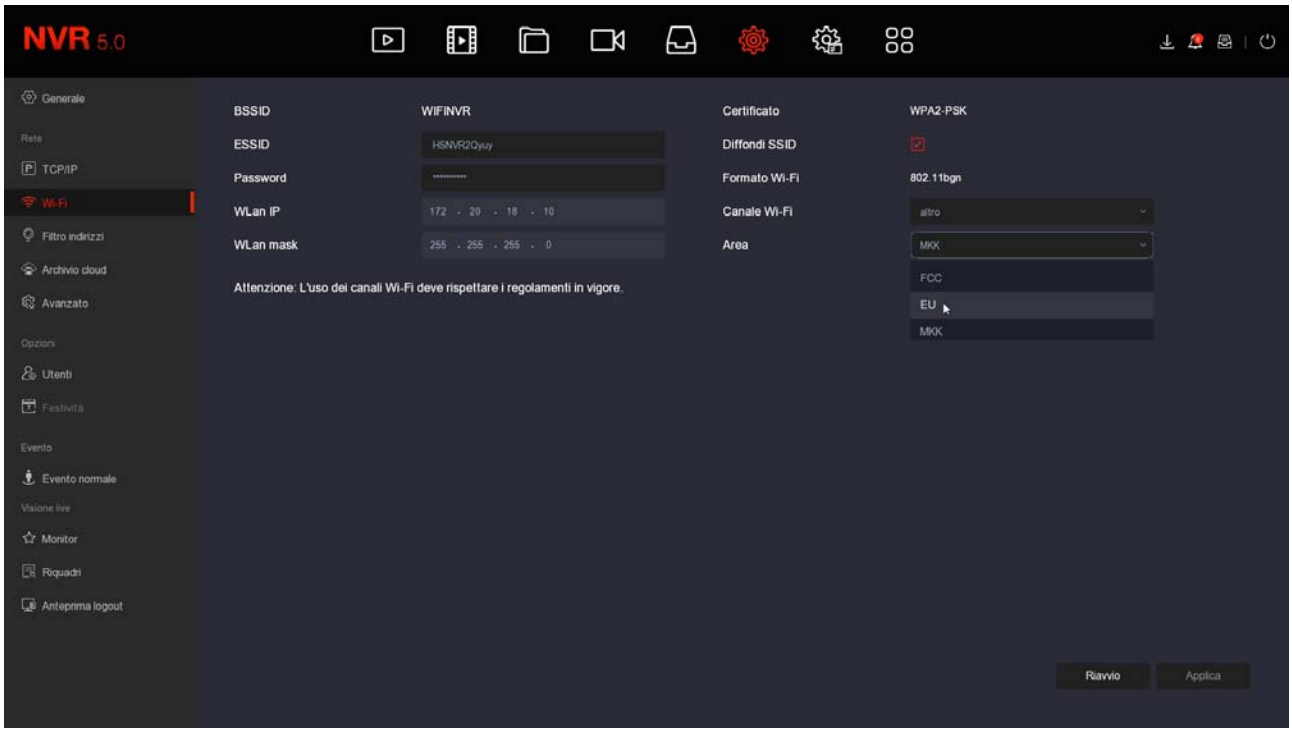
FINISHED - Now you can disconnect the network cable between the camera and the NVR and use the camera in wifi like the others.

CONNECT WIFI ONVIF 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 wifi PTZ cameras, or a wifi camera from another manufacturer, you can do so by following the camera instructions to connect the camera to a network. Wifi. 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 perform some preliminary configurations in the NVR to make the wifi network that it generates visible to the outside.

1 - Enter the NVR menu in the 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 wifi network of the NVR will also be visible to external devices. You can try to search for wifi networks with your smartphone to make sure of the presence of this new network.



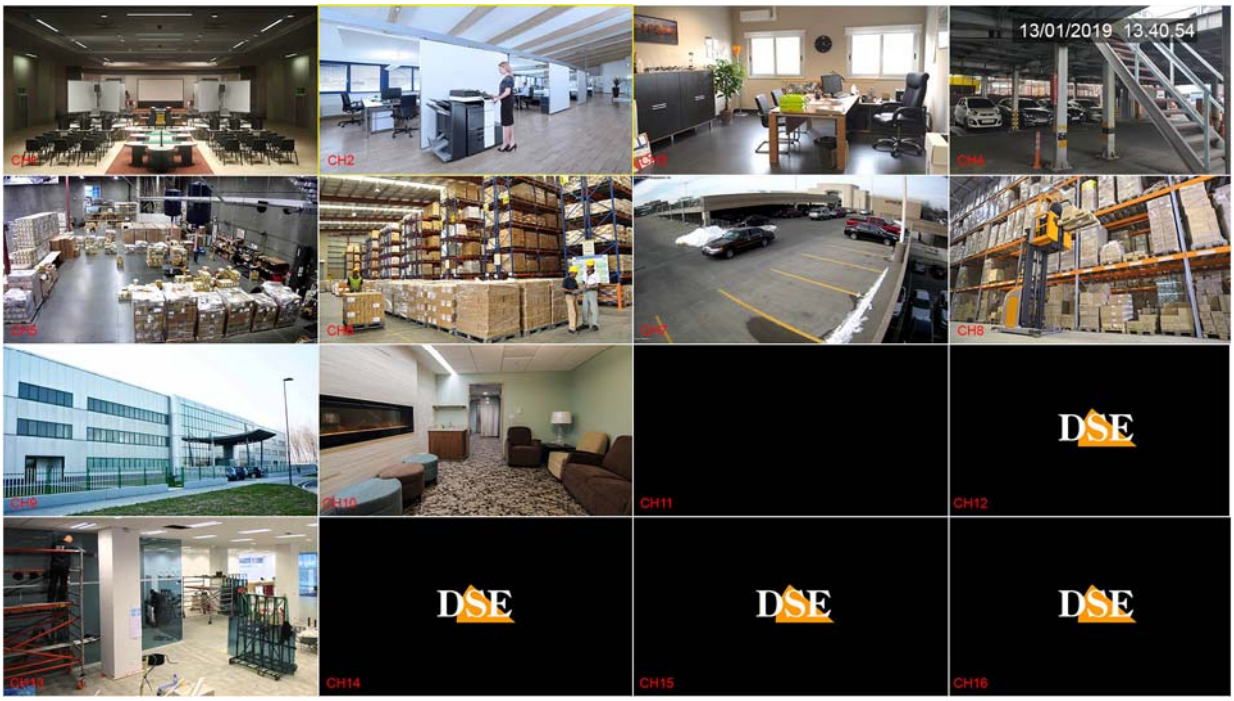
2 - Connect the camera to the NVR wifi network following the camera instructions. Generally you will have to enter the camera configuration from a computer and act in the wifi configuration.

The WiFi page of the NVR, which you see in the following photo, provides you with the connection data of the WiFi network of the NVR, which you must use to connect the camera. The ESSID is the name of the wifi network of the NVR and the access password is revealed by pressing SHOW. By default, the WiFi password of our NVRs is “lspassword” paying attention that the first letter is a lowercase L.
You can connect to the NVR any onvif wifi IP camera and also different wifi devices, such as WiFi signal repeaters to enhance the transmission range.

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

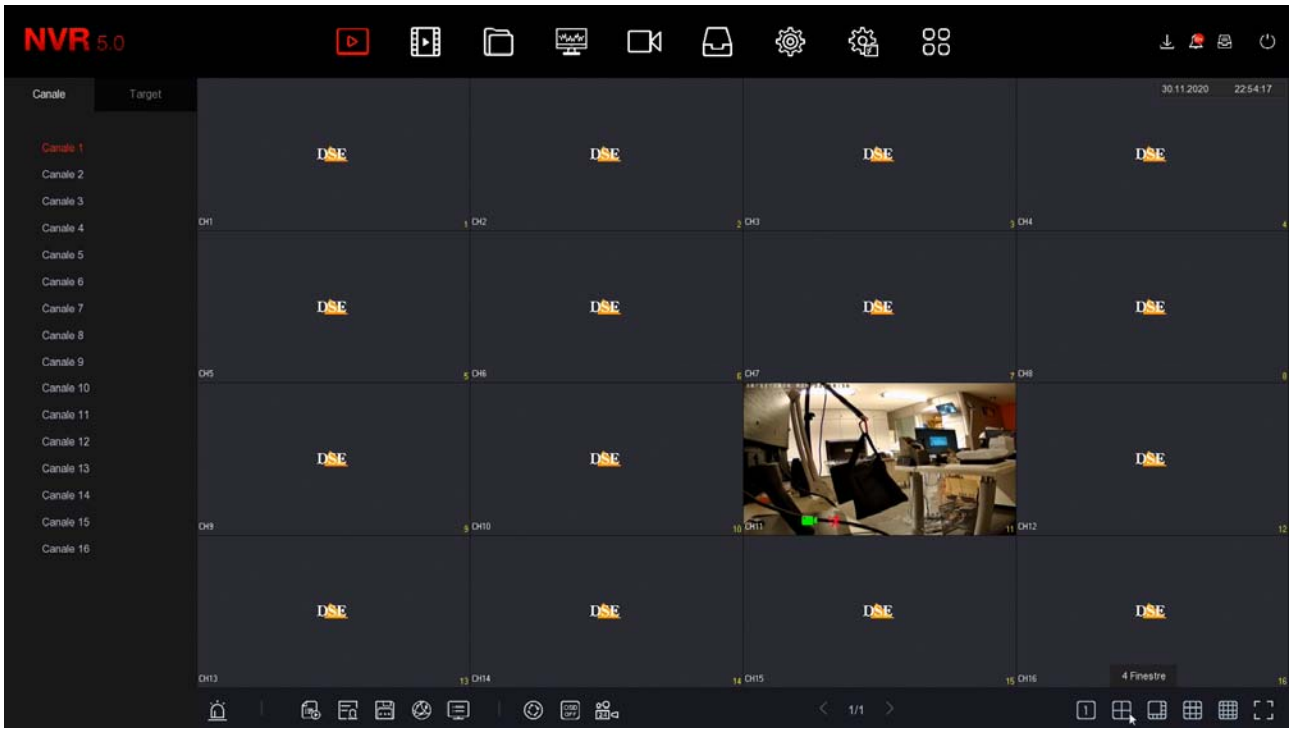
Viewing of live cameras

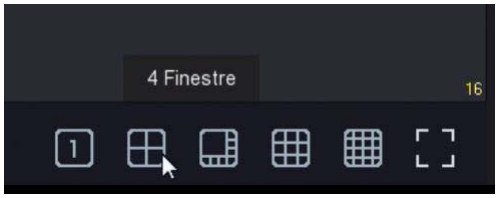
Now that you have installed your VCR you can see the cameras on the monitor. In this chapter we give you some tips to make the most of live viewing.



The factory view foresees the multivision of all the cameras on the screen. You can easily change this basic view.

EDIT SCREEN DIVISION - Right click to open the menu and in the menu that appears choose another screen division with the buttons at the bottom right. It can be useful especially if you don't use all the channels of the NVR / DVR.



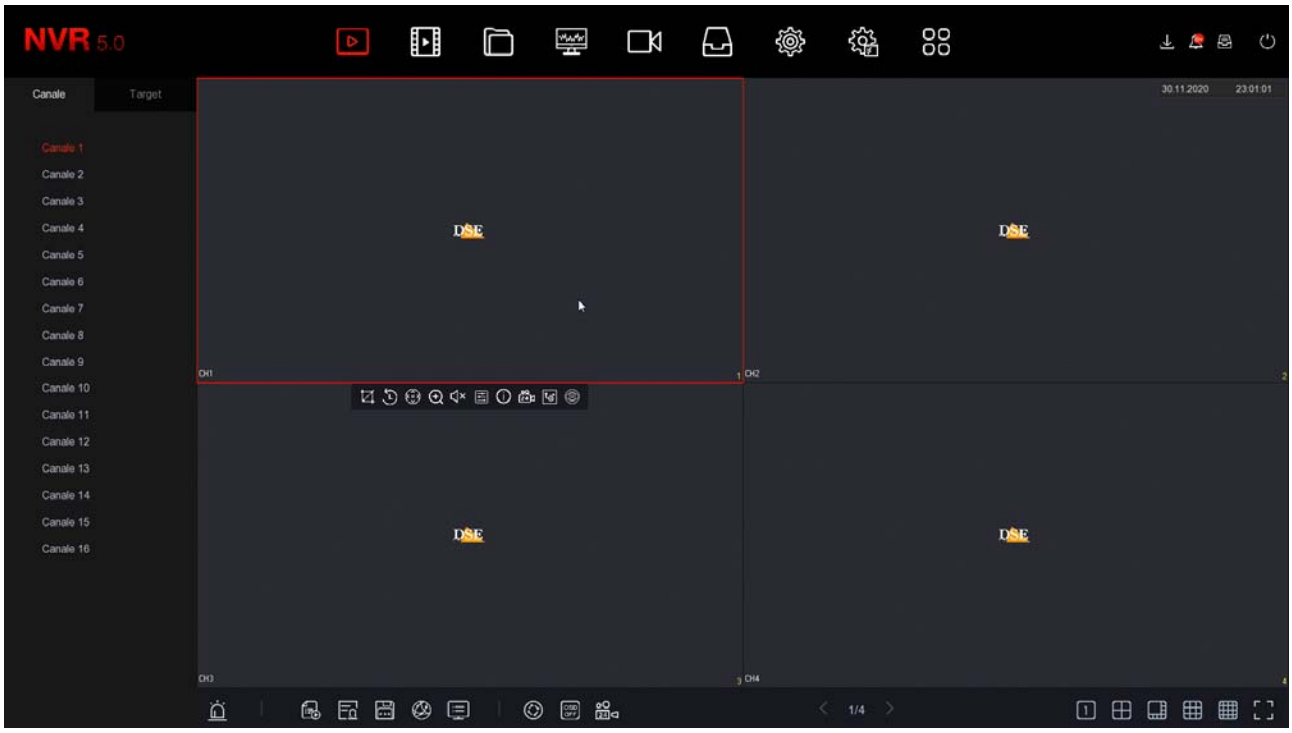


In the general settings of the NVR you will be able to choose a preferred subdivision to be recalled at startup.

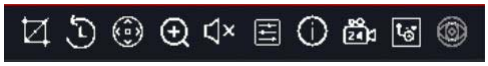
In live view you can also do the following.
FULL SCREEN - You can bring a camera to full screen by double clicking with the mouse.

DRAG CAMERAS - If you want, you can drag a camera with the mouse to change its position in the monitor.

CHANNEL CONTROL - Clicking on a camera opens a control panel for that camera.



1 2 3 4 5 6 7 8 9 10



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

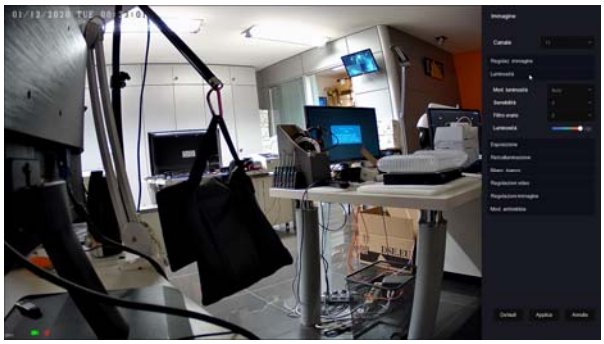
2 - INSTANT PLAYBACK - If you press this icon, you automatically play the last 5 minutes of recording. This is a very handy feature for instantly reviewing what just happened.

3 - PTZ - With this button you open the panel for the PTZ control of the motorized cameras or the UTC menu of the analog cameras. This function automatically brings the camera to full screen.

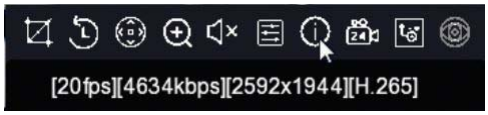
4 - DIGITAL ZOOM - If you activate this function, you open the digital zoom mode where you can zoom in on a particular image and you can control the zoom by dragging the zoom box with the mouse. Click the right mouse button to return to normal viewing.

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 - ADJUSTMENTS - With this button you can adjust the video parameters of the image: brightness, contrast, saturation, tones, as well as other parameters depending on the camera.



7 - INFO - If you leave the mouse on this icon for a moment, the data of the video stream will appear in real time.



8 - RECORD - Use this button to activate continuous recording on this channel. This command manually activates recording regardless of the automatic adjustments of the DVR / NVR.

9 - 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.

10 - Not used

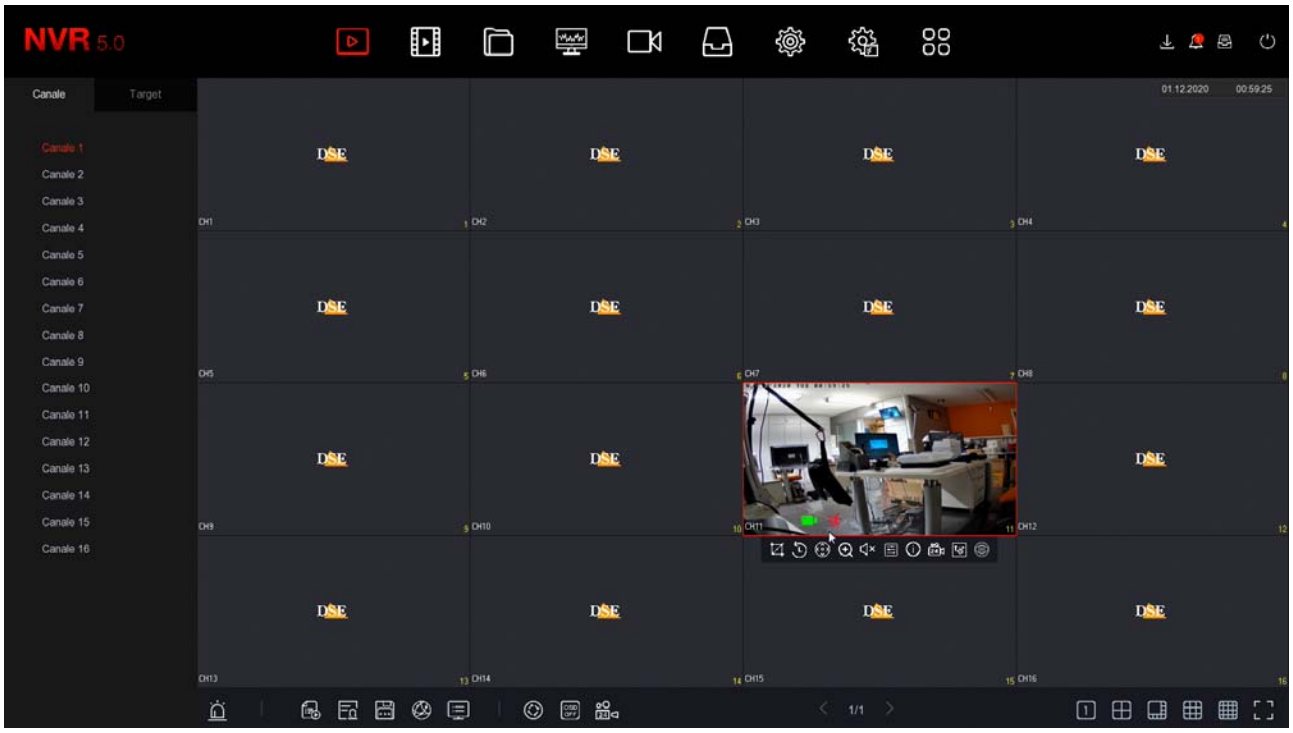
CHANNEL ICONS

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

 Channel in recording

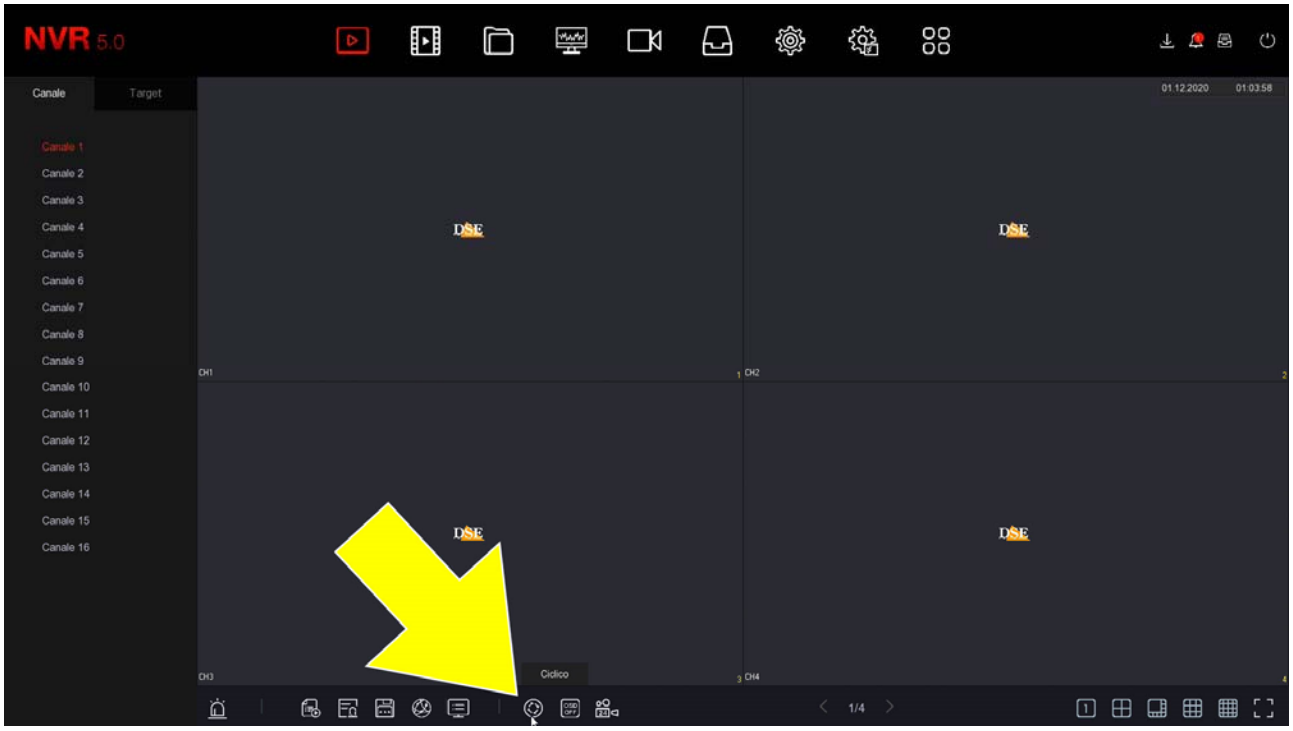
 Motion detection alarm channel

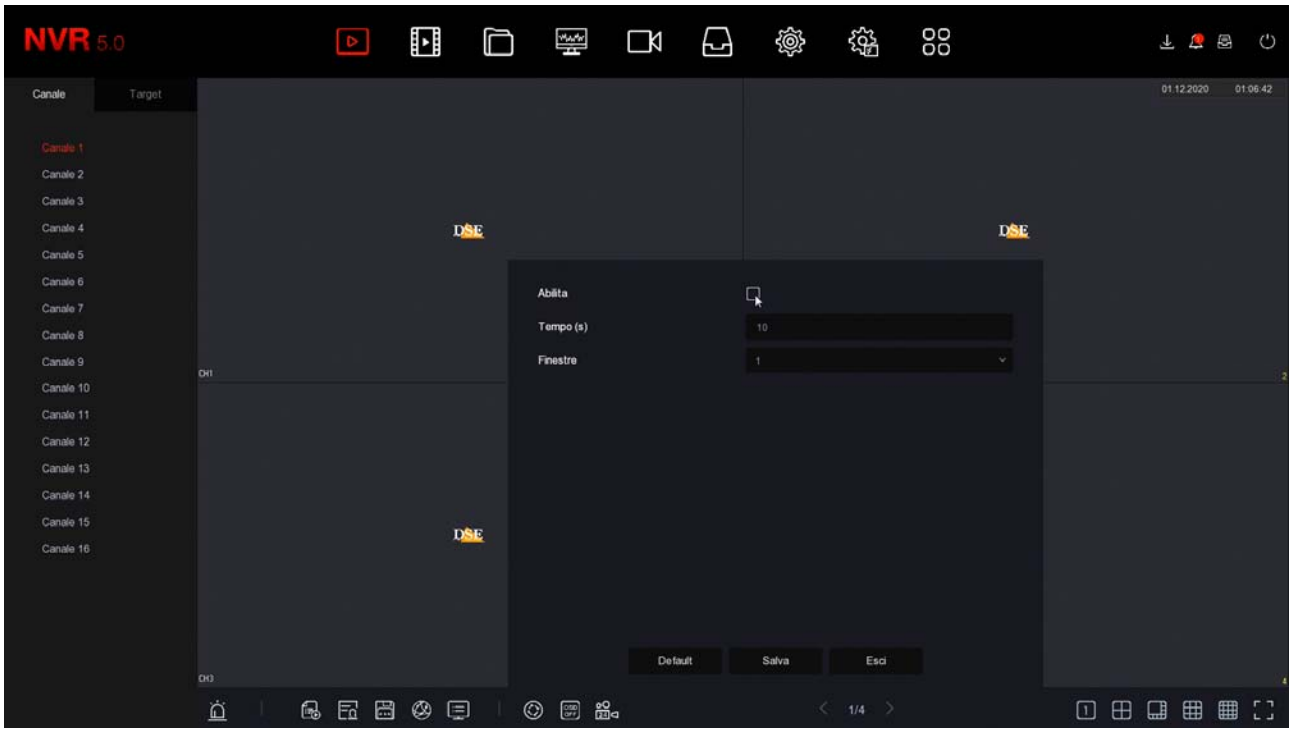
 Human detection alarm channel



CYCLIC

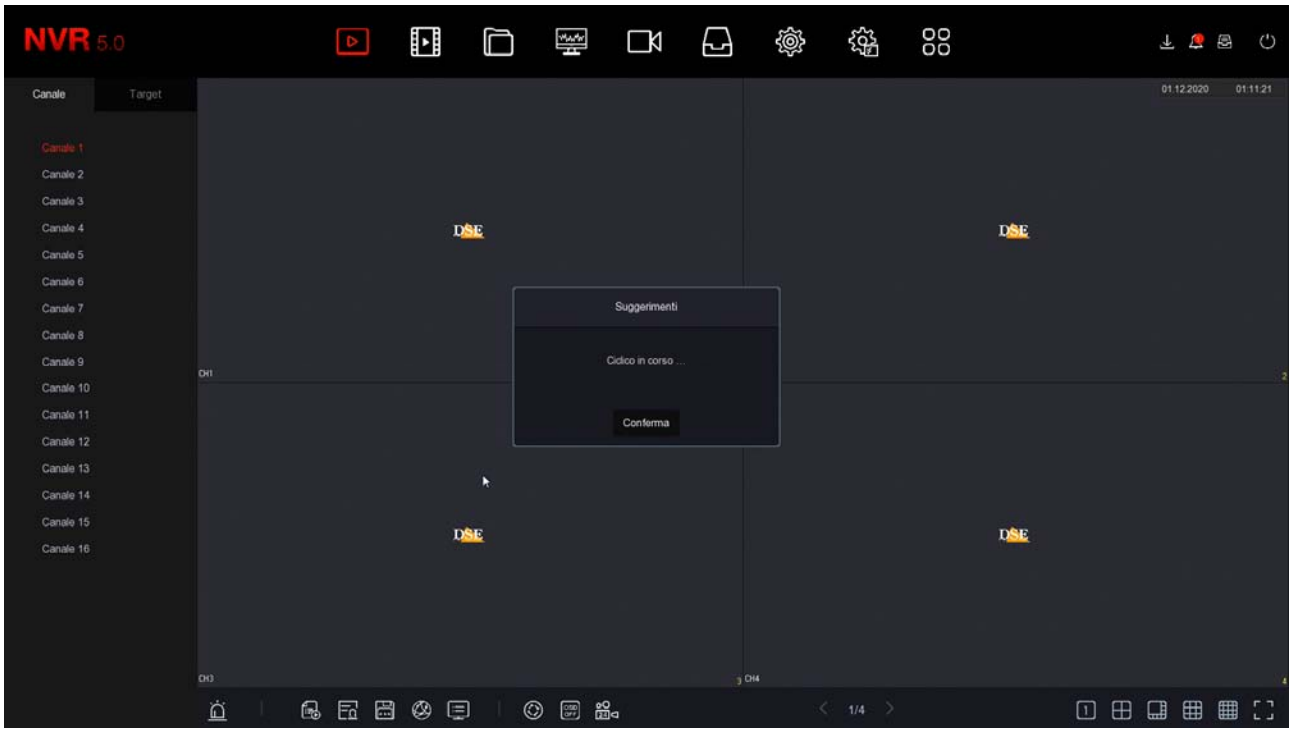
The cyclic camera scan allows you to see all the cameras in sequence instead of the classic multivision of all the channels. If you want to use this function press the CYCLIC button in the live menu





ENABLE - If you enable the cyclic, the display will follow the cyclic settings and many normal functions, such as viewing all cameras in multivision, will not be possible. You will have to disable the cyclic to return to normal monitor management
TIME - It is the dwell time of each window during the scan (seconds). WINDOWS - In the DVR / NVR with more than 4 channels, in addition to scanning a single camera at a time, you can cycle windows with 4 or more cameras.

ATTENTION: During the cyclic scan you cannot control the other live functions and to regain total control of the functions you must first disable the cyclic. The DVR / NVR warns you with this message,

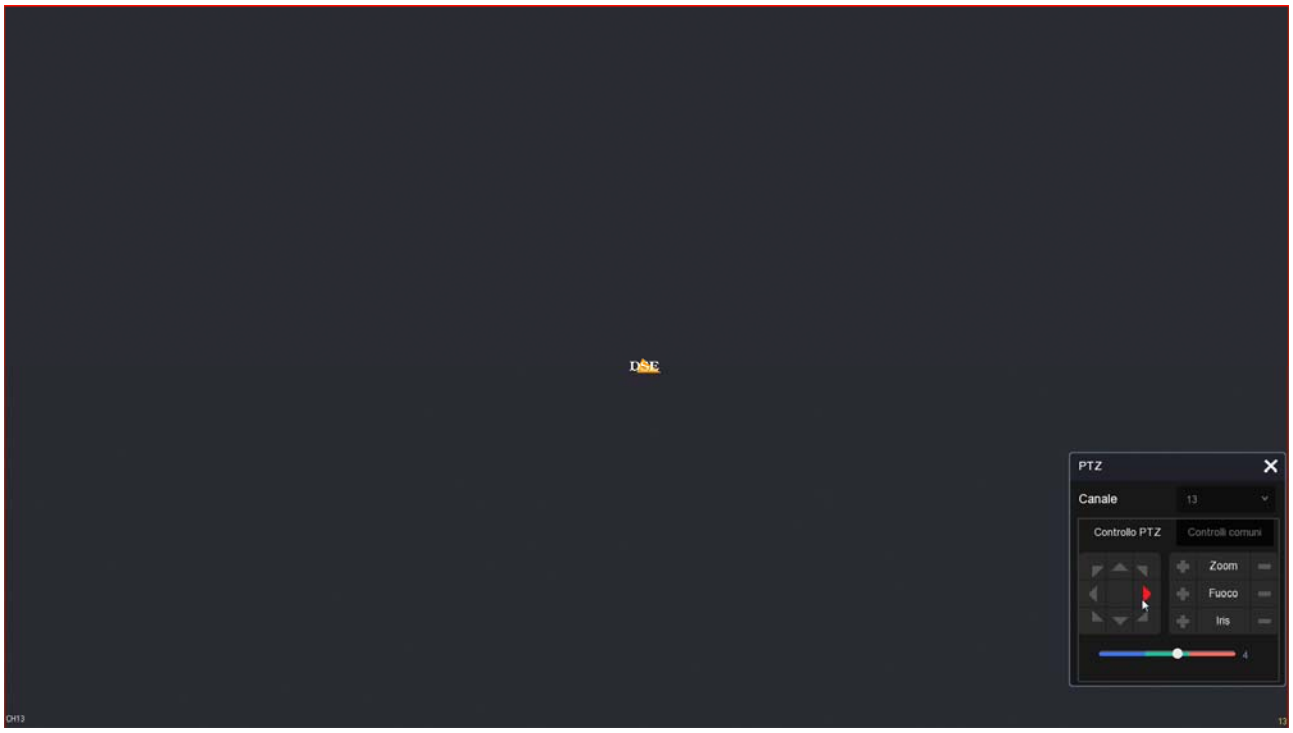


PTZ CONTROL

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

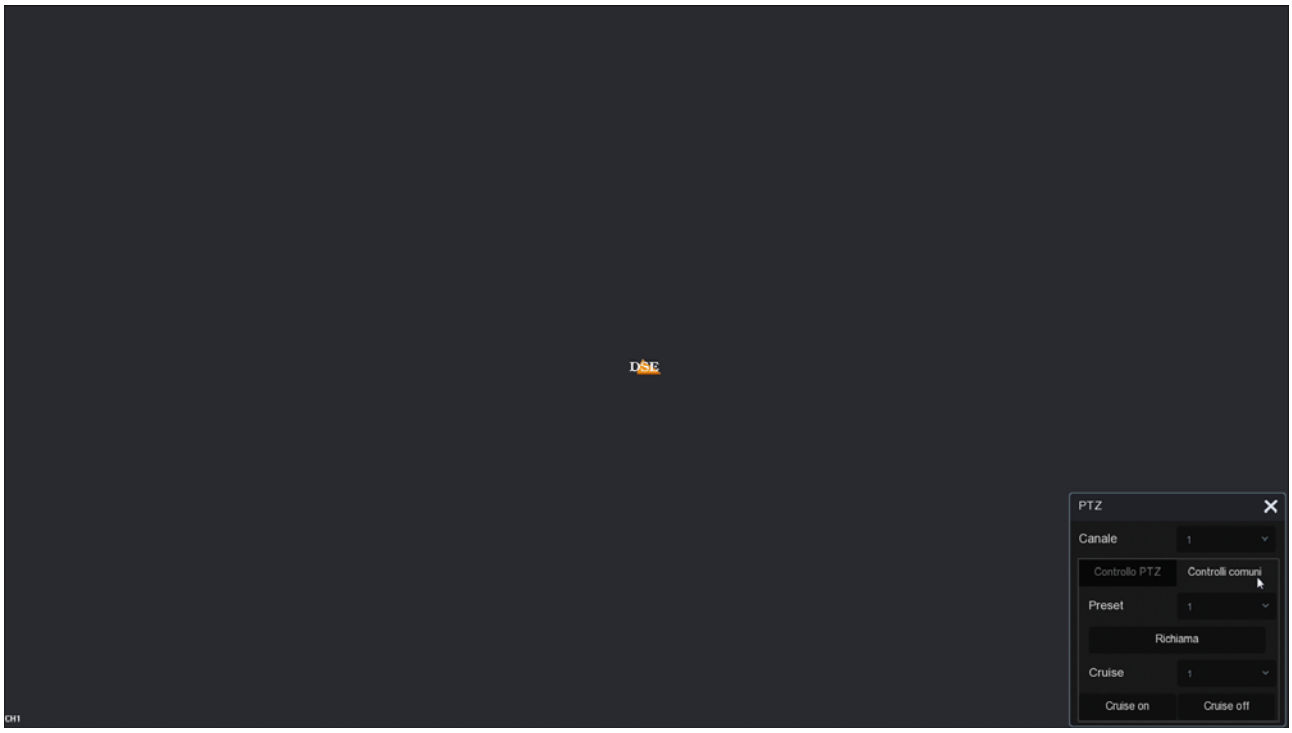
In order to use this panel with analog cameras it is necessary to set the PTZ settings correctly as explained above in this manual.

PTZ control is performed automatically on a single full screen camera



CHANNEL - Select the camera to view and control ARROWS - Direction
shifts
ENTER - The camera configuration menu opens with the central button. Some analog cameras do not support this recall and require a preset recall. SPEED - Adjusts the speed of movement, if the camera supports this adjustment. ZOOM - FOCUS - IRIS - Motorized lens controls. Some of these commands may not be effective depending on the camera settings.

COMMON CONTROLS - Allows you to set the tour or cruise of the camera (if available)



PRESET - You can recall a preset set in the camera
CRUISE ON / OFF - You can activate a tour or cruise set in the camera. Some cameras do not accept this recall and require you to control tours by recalling special presets.

NVRs can only control the most common automatic movements of PTZ cameras. Other functions and configurations must be performed in the camera configuration.

OTHER LIVE CONTROLS

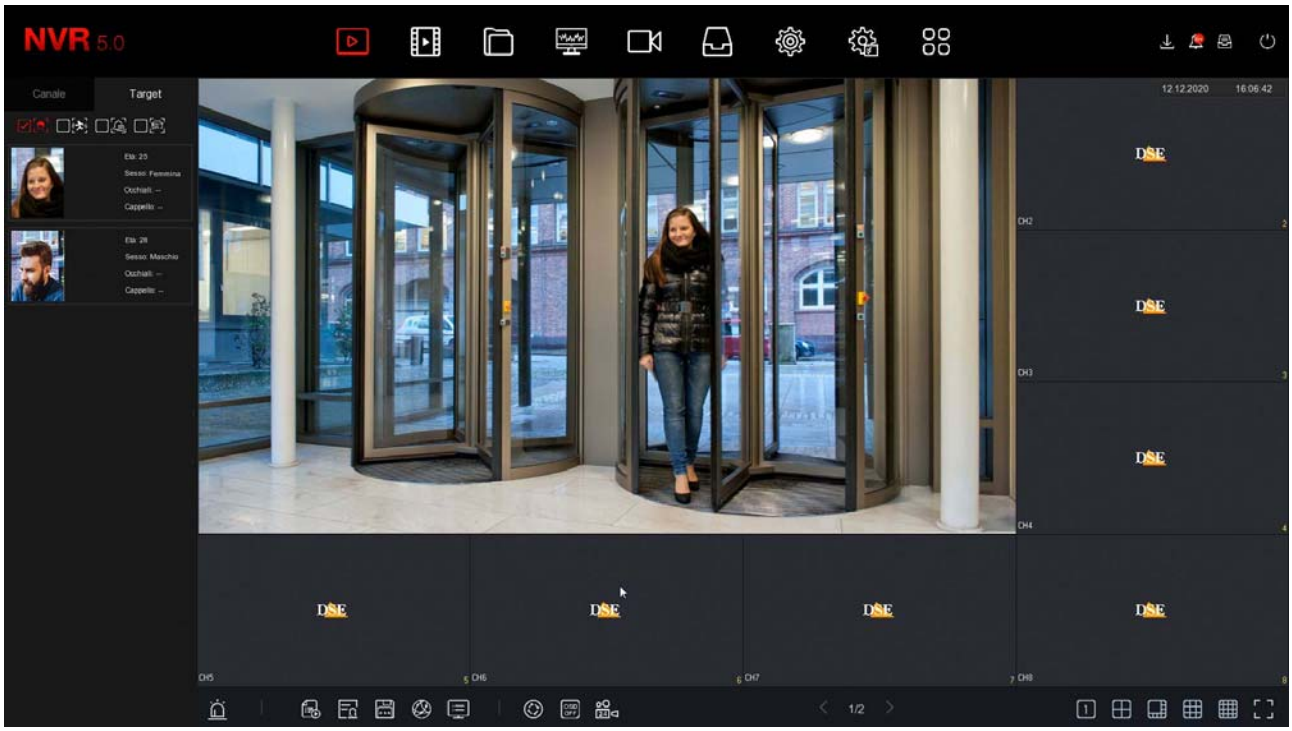
Below the live view windows are some buttons for quick system information and additional controls in live view.

1 - ALARM OUTPUTS - Shows the status of the alarm outputs
2 - RECORDING STATUS - Shows the status of the channels and the recording 3 - ALARM INPUTS - Shows the status of the alarm inputs
4 - DISK - Shows the status of the Hard Disk
5 - NETWORK - Show network status with DVR / NVR network settings 6 - INFO - Show system information
7 - CYCLIC - Configure cyclic scanning of on-screen cameras 8 - OSD - Enable / Disable channel overlays

9 - RECORDING - Activates instant continuous recording on all channels

CONTROL OF HUMAN DETECTION AND VIDEO ANALYSIS

If you have purchased our RK camera with human detection, our NVRs provide you with a specific live vision column called TARGET.



It is a live viewing mode that can be useful for surveillance personnel. At the top you can choose the type of event to view:

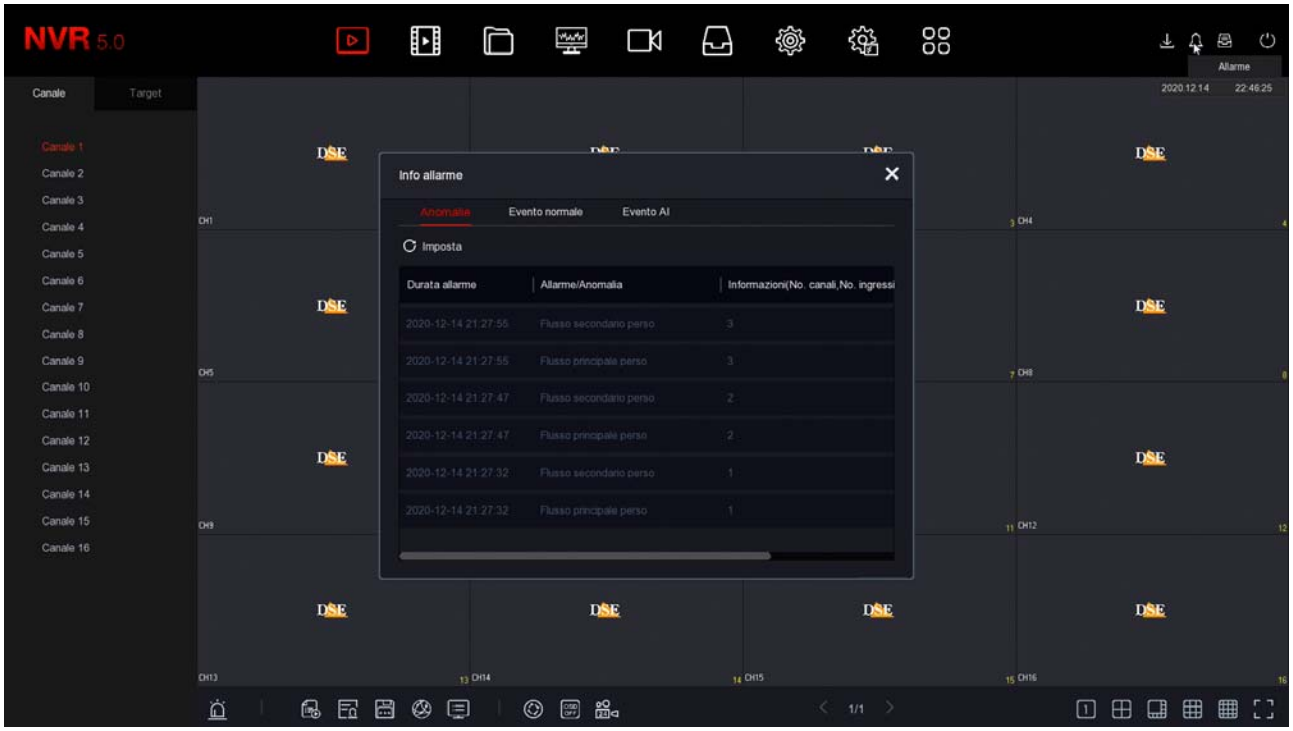
- Face recognition
- Human detection
- Video analysis event
- Auto detection (under development)

For each event that occurs you will see a card appear with a photo of the event

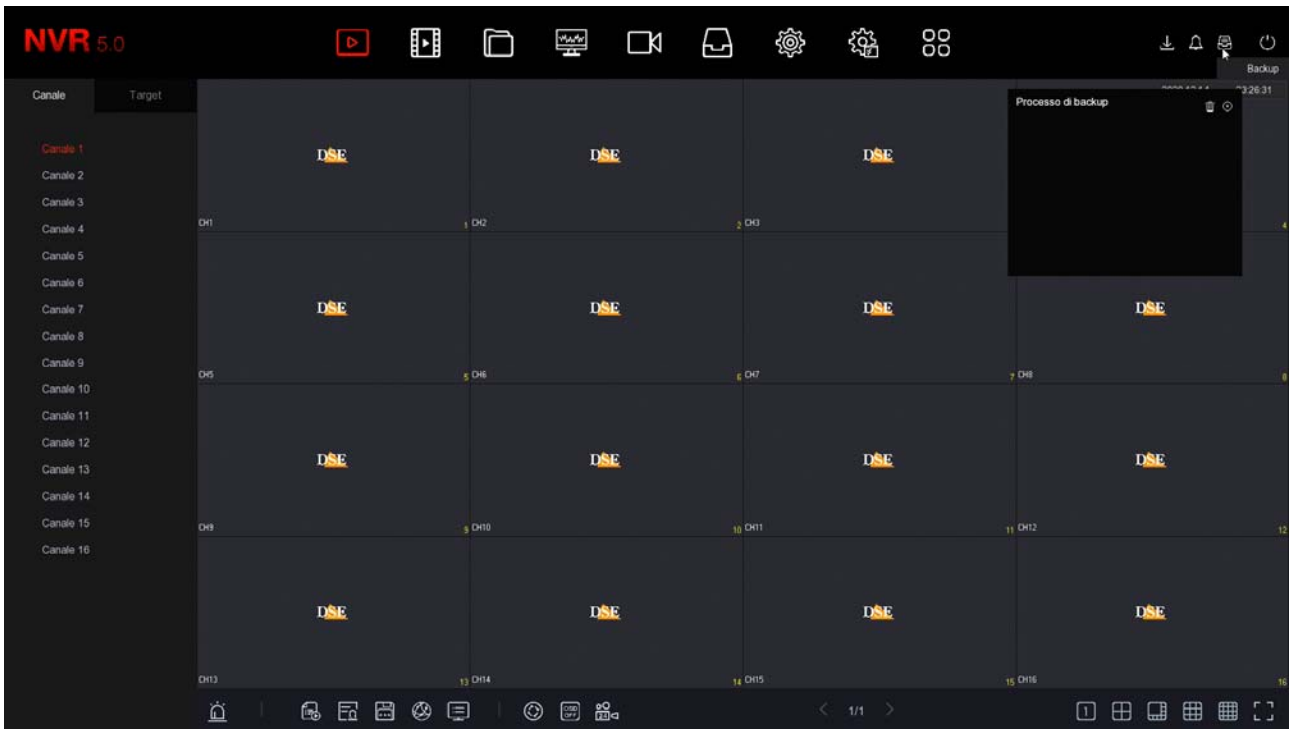
GENERAL BUTTONS

At the top right are some buttons for quick access to pop-up windows

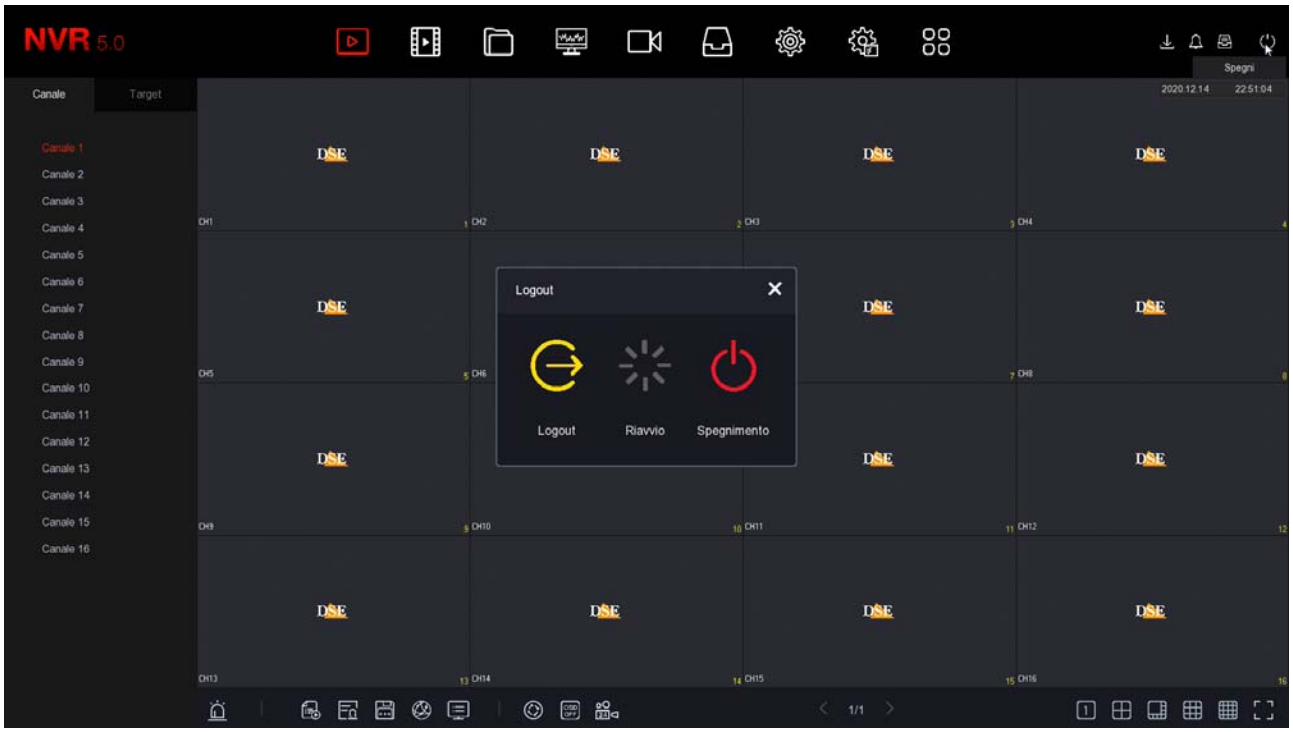
opens a popup panel with the log of the latest Alarms divided by Anomalies - Motion - AI



opens a pop-up panel showing the backup progress in progress



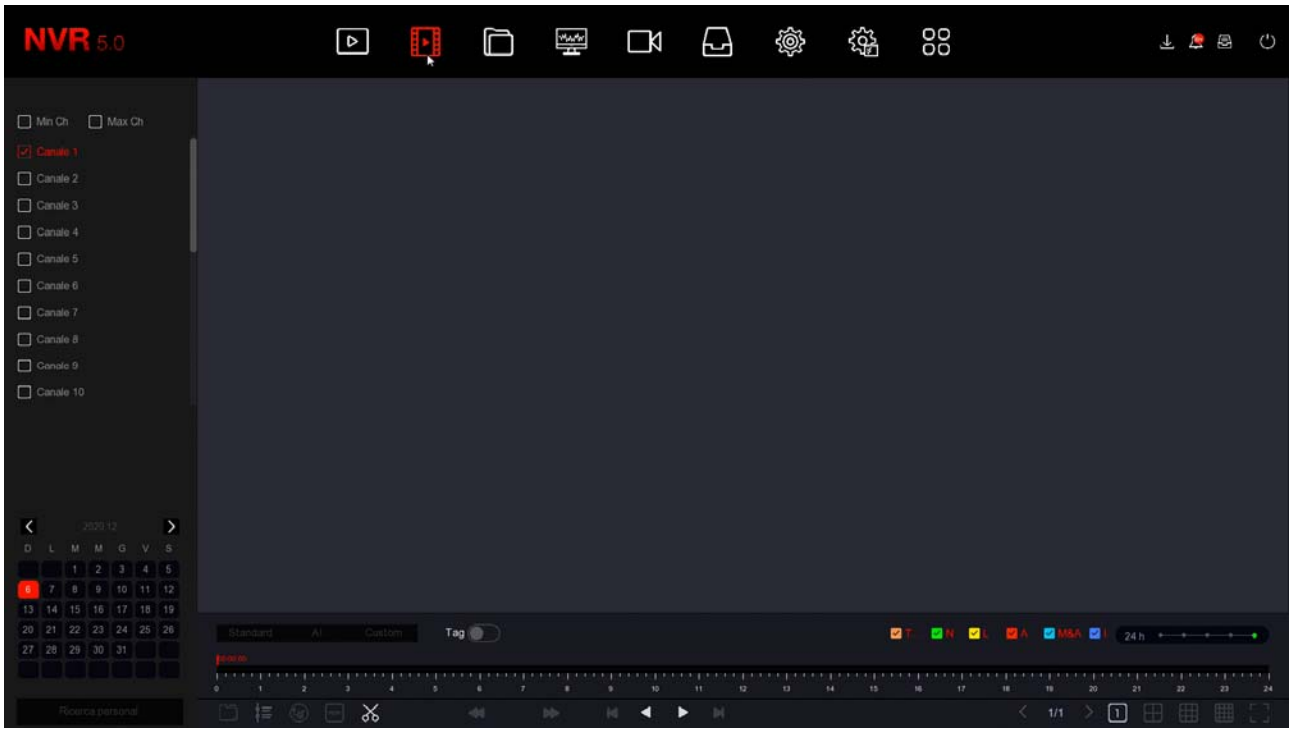
opens a popup panel where you can: Log Out, Reboot and Shut Down



Review the recordings

To review the recordings archived by your NVR / DVR do the following.

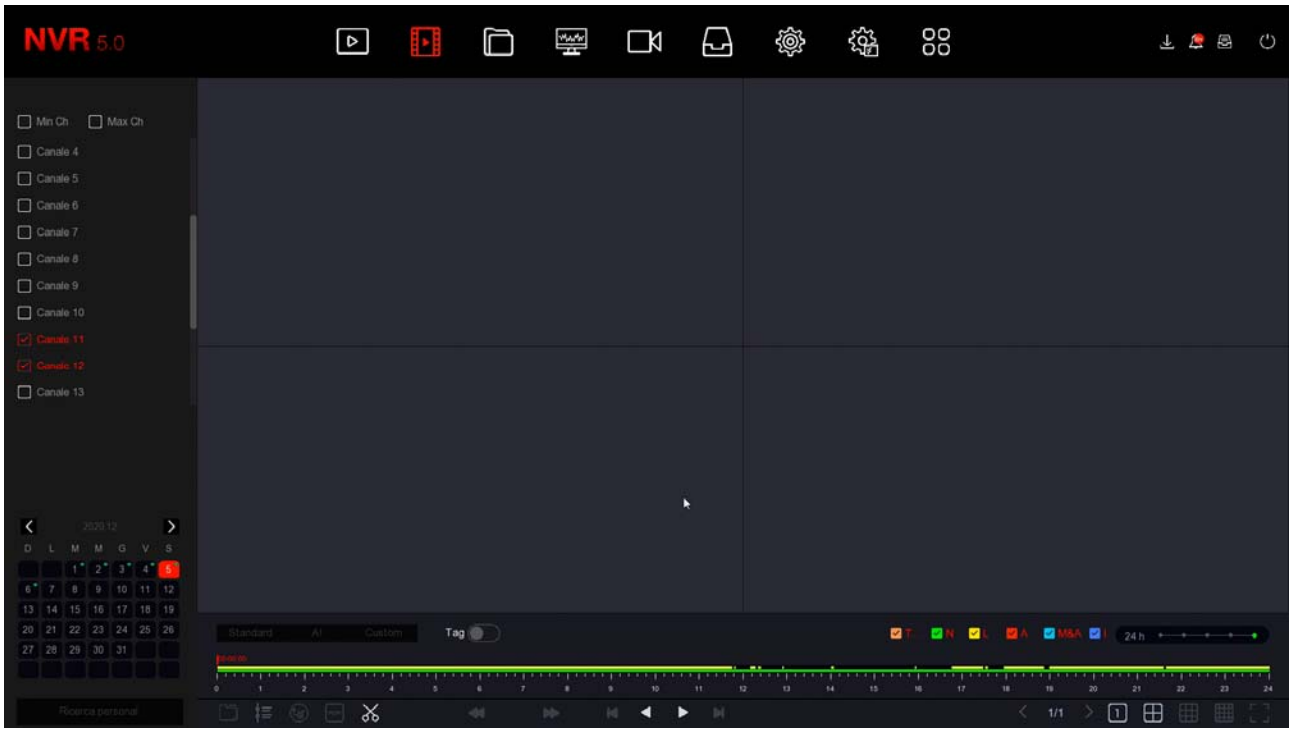
1 - OPEN THE PLAYBACK WINDOW Click the PLAYBACK icon at the top of the menu



2 - CHOOSE THE DAY AND THE CAMERA YOU WANT TO REVIEW

Choose the day you want to review in the calendar on the left. Days with recordings are marked with a colored dot. Click on one of these. Above the calendar, select the channels you want to play. The recordings will automatically appear in the bottom timeline representing the 24 hours of the day

Each NVR / DVR has a maximum number of cameras that can be played simultaneously. If you click MAX CH. the maximum number of channels allowed will be activated.



3 - REPRODUCE THE INSTANT YOU WANT TO REVIEW

In the time bar below you will find the 24 hours of the day. The recordings are shown in different colors according to the type of recording. The most common are the green bar for continuous recording and the yellow bar for motion detection recordings. If you want you can filter the recording types by selecting the colored icons:

T (All entries)

N - green (Continuous recording) L -

yellow (Motion recording)

A - red (Alarm input recording) M&A - blue (Motion recording and

alarm input) I - blue (Human detection recording).

Click wherever you want in the timeline to play the images at that exact moment. Consider that each NVR has a limit on the maximum number of cameras that can be played at the same time. If you select a higher number of cameras an INSUFFICIENT RESOURCES message will appear.

4 - CHECK PLAYBACK

With the zoom slider you can vary the scale of the timeline

With the play buttons at the bottom you can fast or slow playback and stop or pause the playback.

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

Frame by frame forward and backward

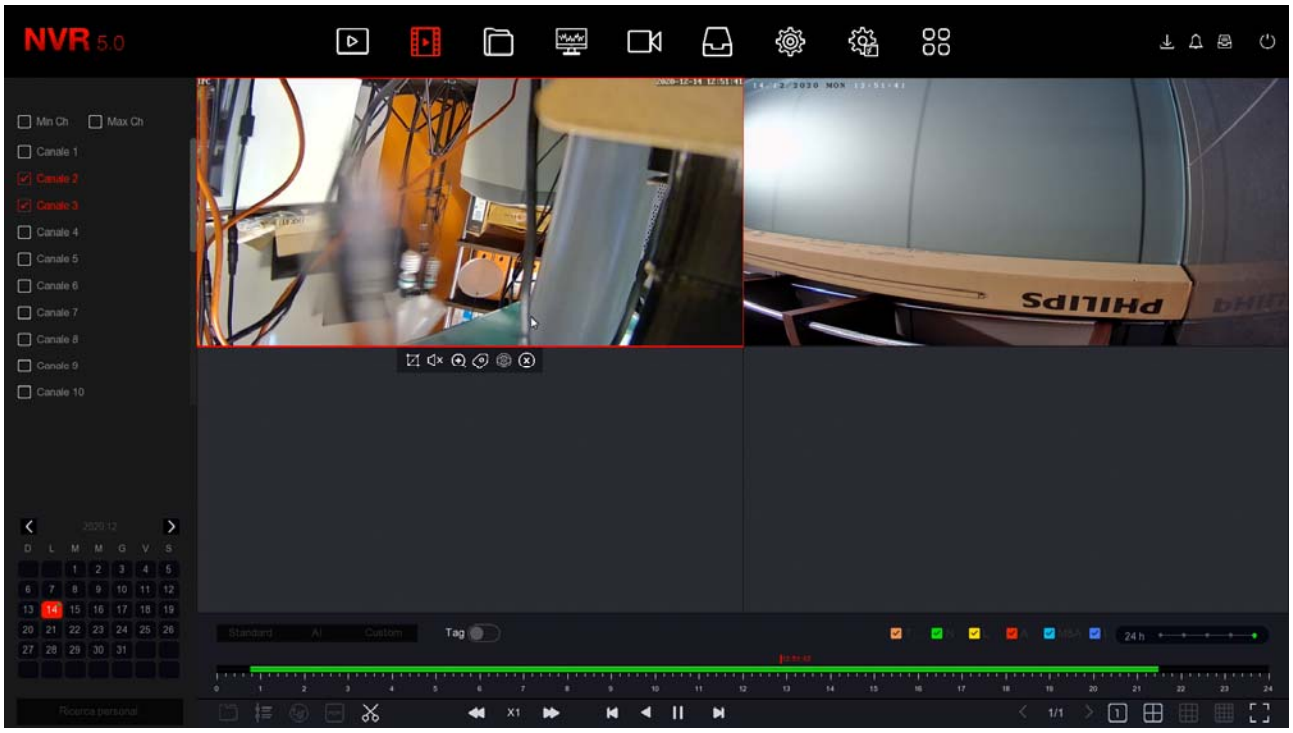
Play backwards

Play / Pause

With the scissors button you can cut out a video clip to export to a stick.

Press the button twice in succession to open and close the video clip while it is playing. Then you can save it with the SAVE CLIP button. The button with the scissors in brackets allows you to define a video clip by manually entering the start and end time.

Clicking a video tile during playback opens a channel menu




capture photos


turn on audio


activates digital zoom

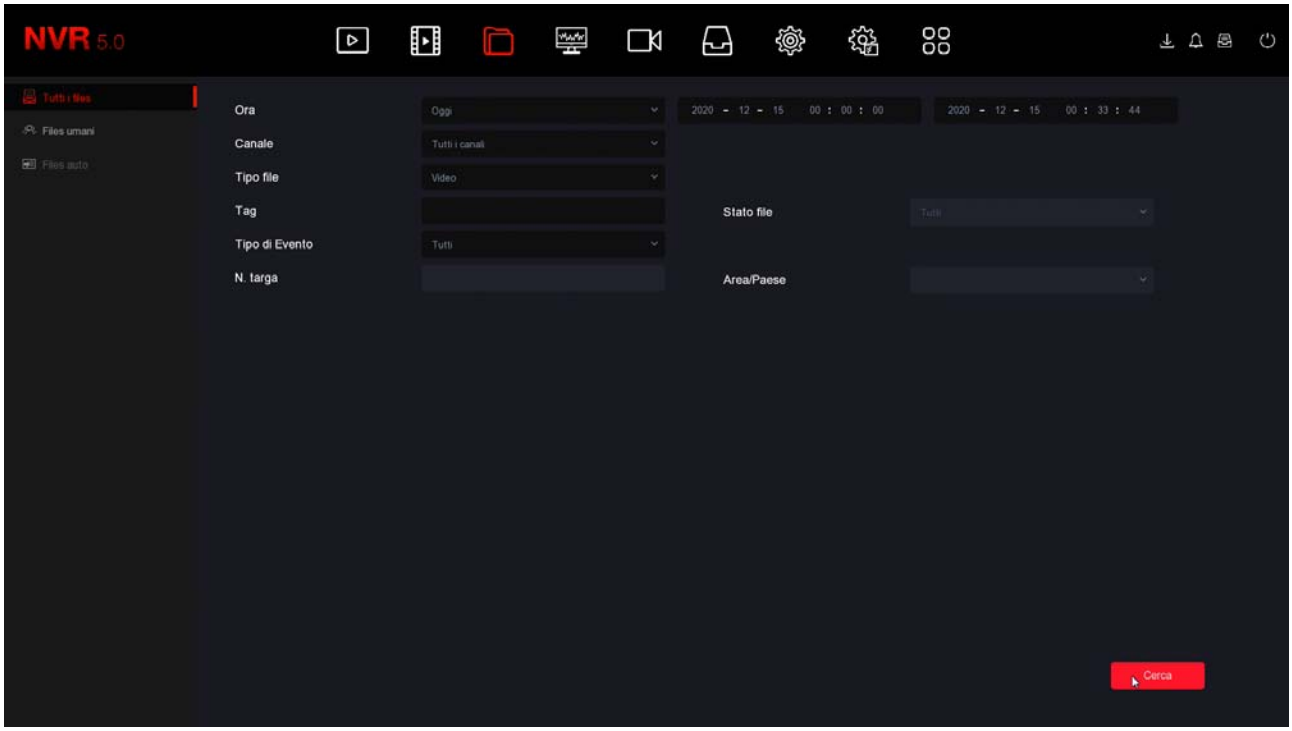

enter TAG

A TAG is a bookmark that you can insert in the timeline so that you can easily find that moment again. You can give each TAG a name, to distinguish it. You can enable the display of TAGs with the appropriate selector

Search and backup of files

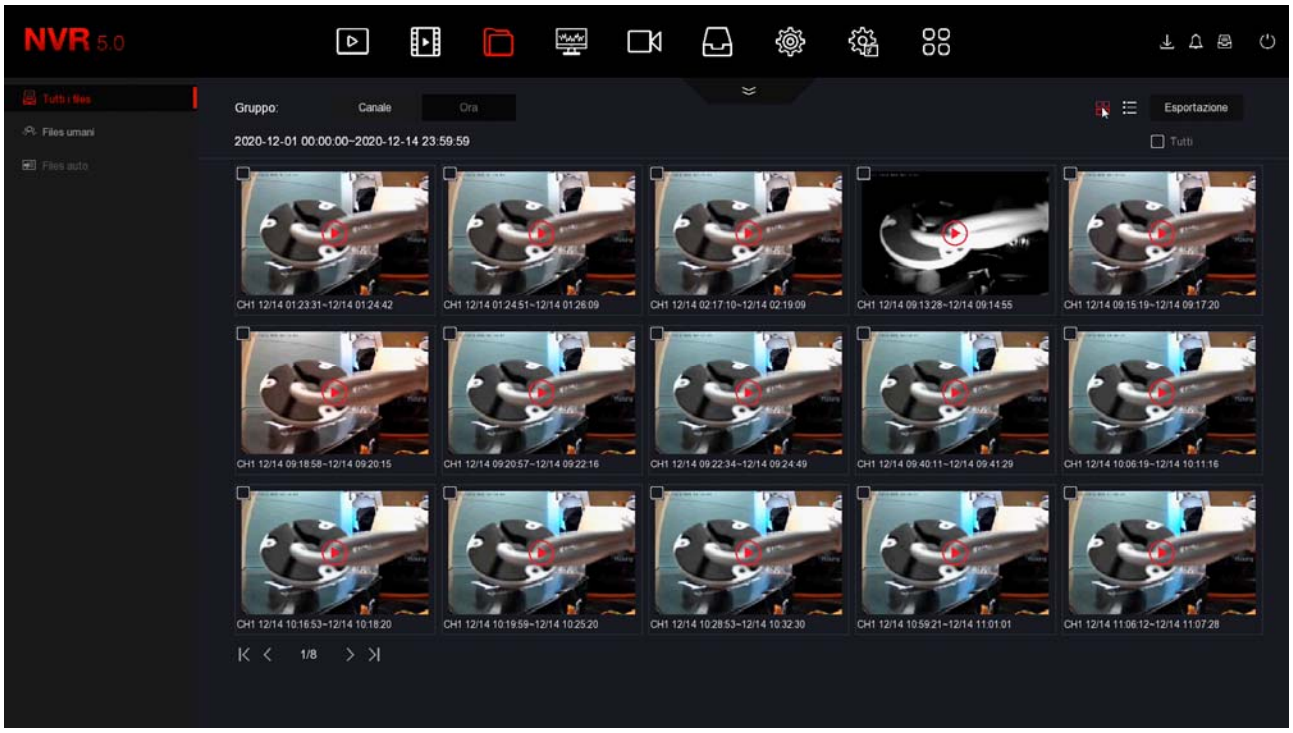
In this section you can search for video files recorded following alarm events, such as motion detection or human detection, and export them to external memories. Do the following.

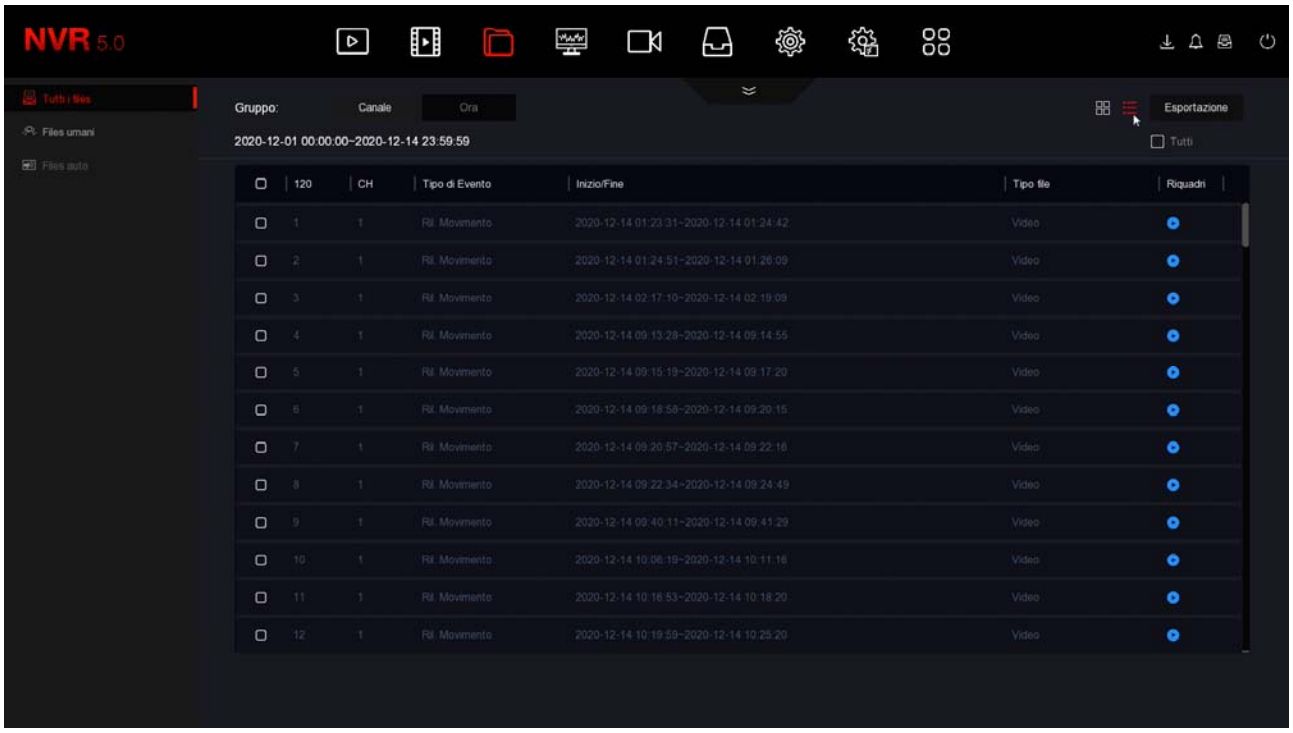
1 - OPEN THE FILES WINDOW Click the FILES icon at the top of the menu



2 - SEARCH THE FILES

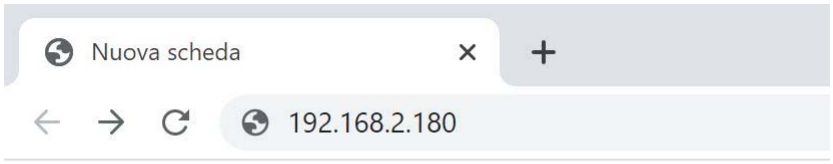
You can search by date / time, channel and type of event. You have two search pages, one for normal events such as motion detection and one specific for human detections. You can then easily review the files and export them to a USB stick with the EXPORT button

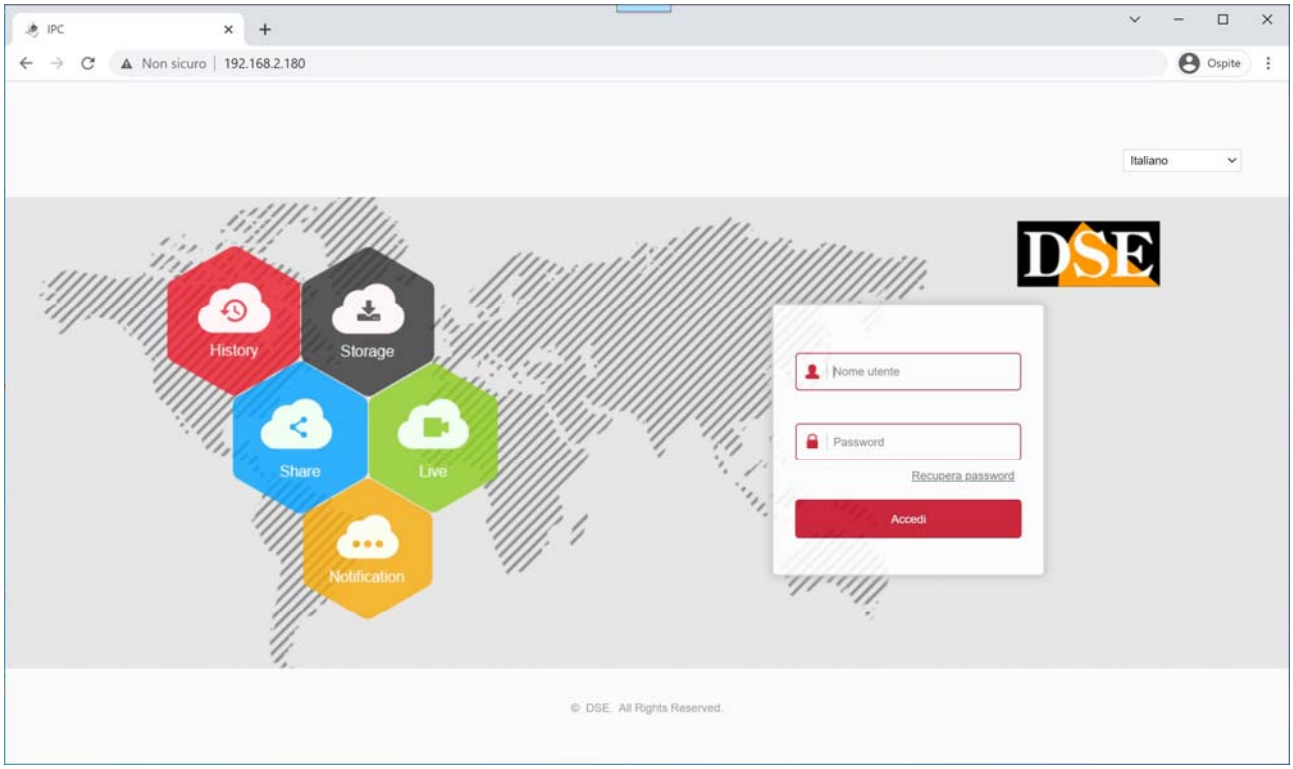

NVR 5.0
Gruppo:
Canale
Ora
Esportazione
2020-12-01 00:00:00~2020-12-14 23:59:59
Tutti
1/8


NVR 5.0
Gruppo:
Canale
Ora
Esportazione
2020-12-01 00:00:00~2020-12-14 23:59:59
Tutti
120
CH
Tipo di Evento
Inizio/Fine
Tipo file
Riquadri

Access with browser

Today**our RK DVRs / NVRs support all common browsers**, such as Google Chrome, Firefox or Edge. Only some models, such as wifi NVRs, only require INTERNET EXPLORER. To access with browsers other than Internet Explorer you do not need to install any additional components and just type the internal network address of the NVR / DVR as in this example





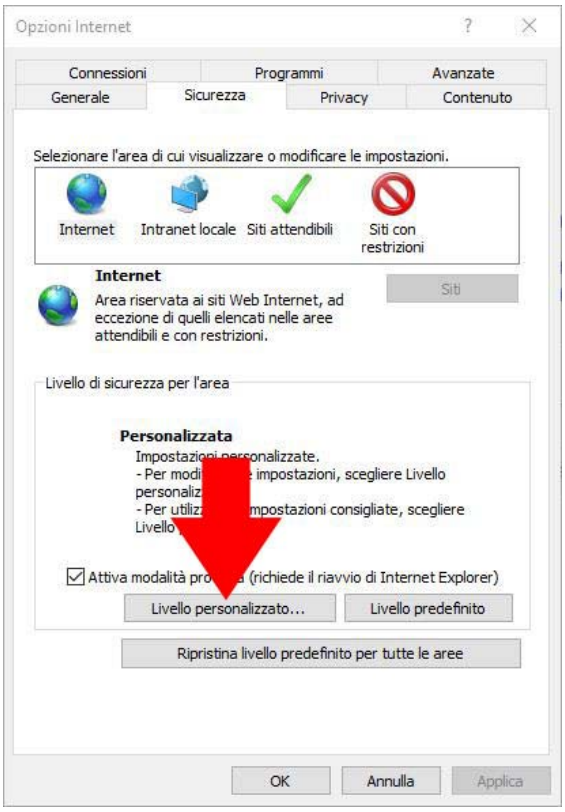
Connect with Internet Explorer

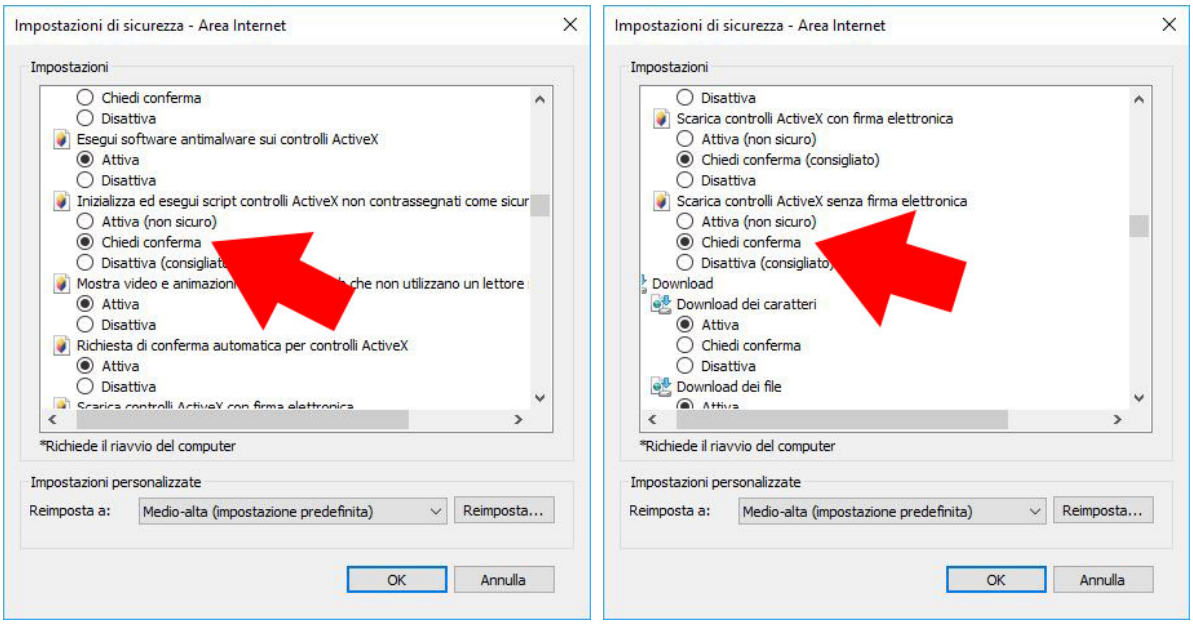
Some RK NVR models, such as WiFi models, do not support all browsers but only require Internet Explorer.

Although by now little used in normal web browsing, Internet Explorer always remains the reference browser in video surveillance, able to communicate with all devices thanks to the management of ActiveX plugins.
Internet Explorer is also present in Windows 10, just search for Internet Explorer in the search bar. In Windows 11 you can use Edge in IE mode.

1 - ENABLE THE EXECUTION OF ACTIVEX

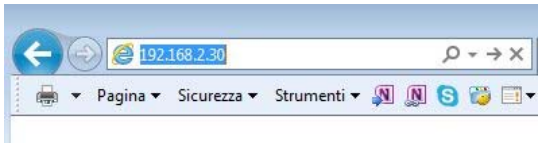
Internet Explorer contains security settings that can prevent the installation of the ActiveX component. Before connecting, you must enable the execution of ActiveXs not marked as safe. Open Internet Explorer and choose INTERNET TOOLS / OPTIONS





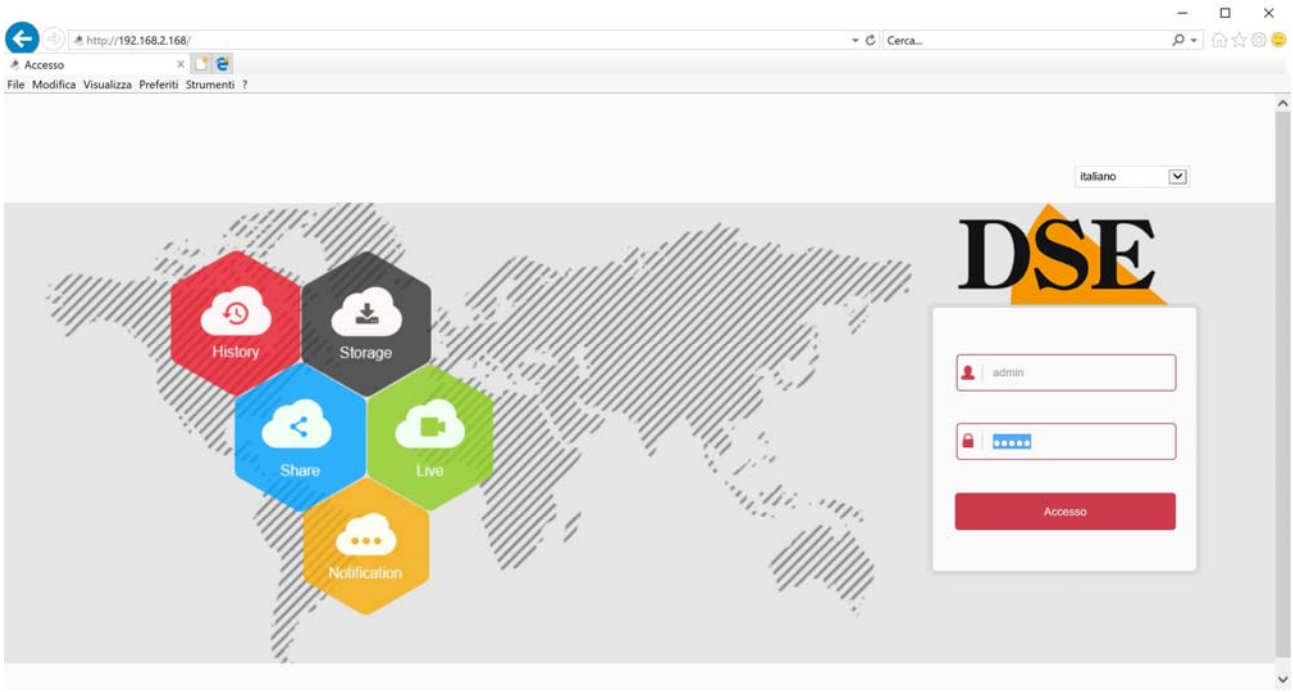
2 - ENTER THE NETWORK ADDRESS OF YOUR NVR

In the previous chapter we saw how to know the IP address your DVR / NVR is using in the local network by opening the settings menu in the NETWORK section. Enter the IP address of the DVR in the Internet Explorer bar



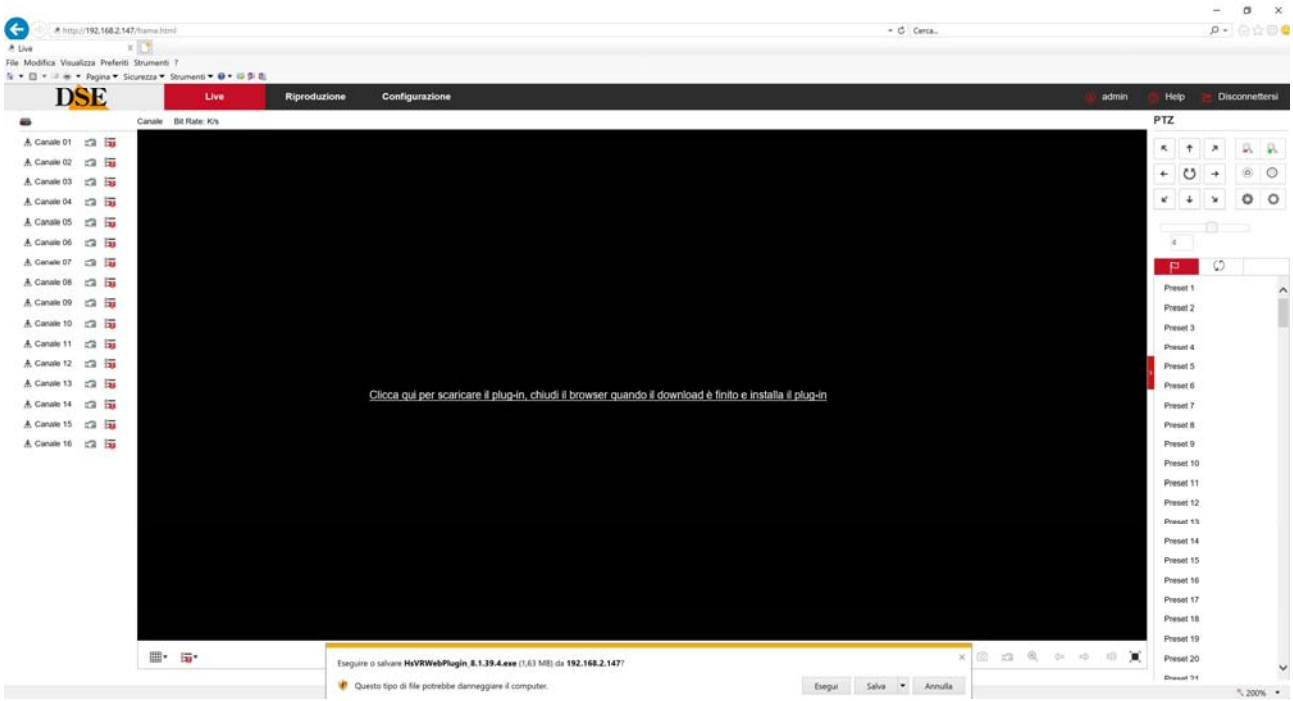
3 - ENTER THE PASSWORD

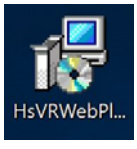
Enter the password to access your NVR (factory admin: 12345)



4 - INSTALL THE PLUGIN COMPONENTS

The first time you log in you will find the suggestion that asks you to download and install the necessary components (plugin activeX). The best thing is to download the file to your computer with the SAVE button and then install it like any other program.

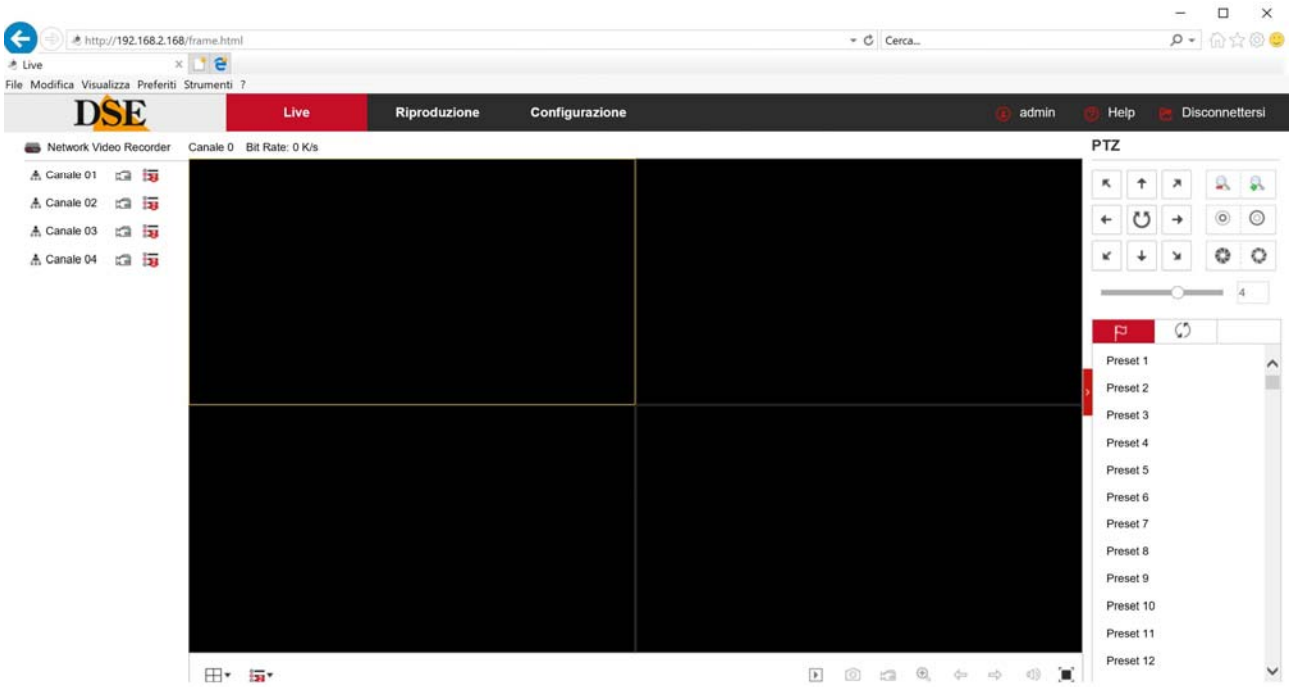




Remember to close the browser before installing the activeX component and reopen it at the end of the installation.

5 - FINISHED

You are now connected and can see live camera images by clicking on the camera icon. You can also review the recordings by clicking PLAY and change the system configuration that we will see in the advanced settings manual.



Connect with an RTSP client

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

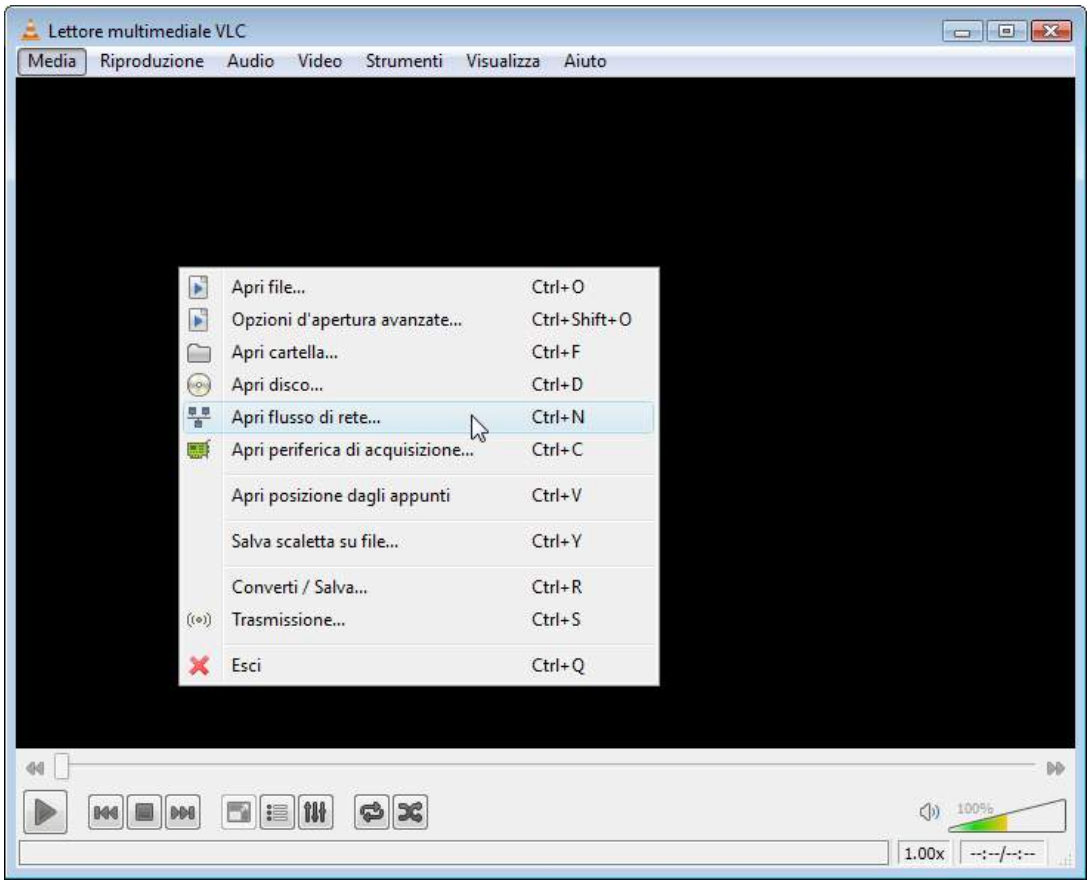
The address to be called must have the following syntax: RTSP: //
USER: PASSWORD @ IP : PORT / CHANNEL / STREAM

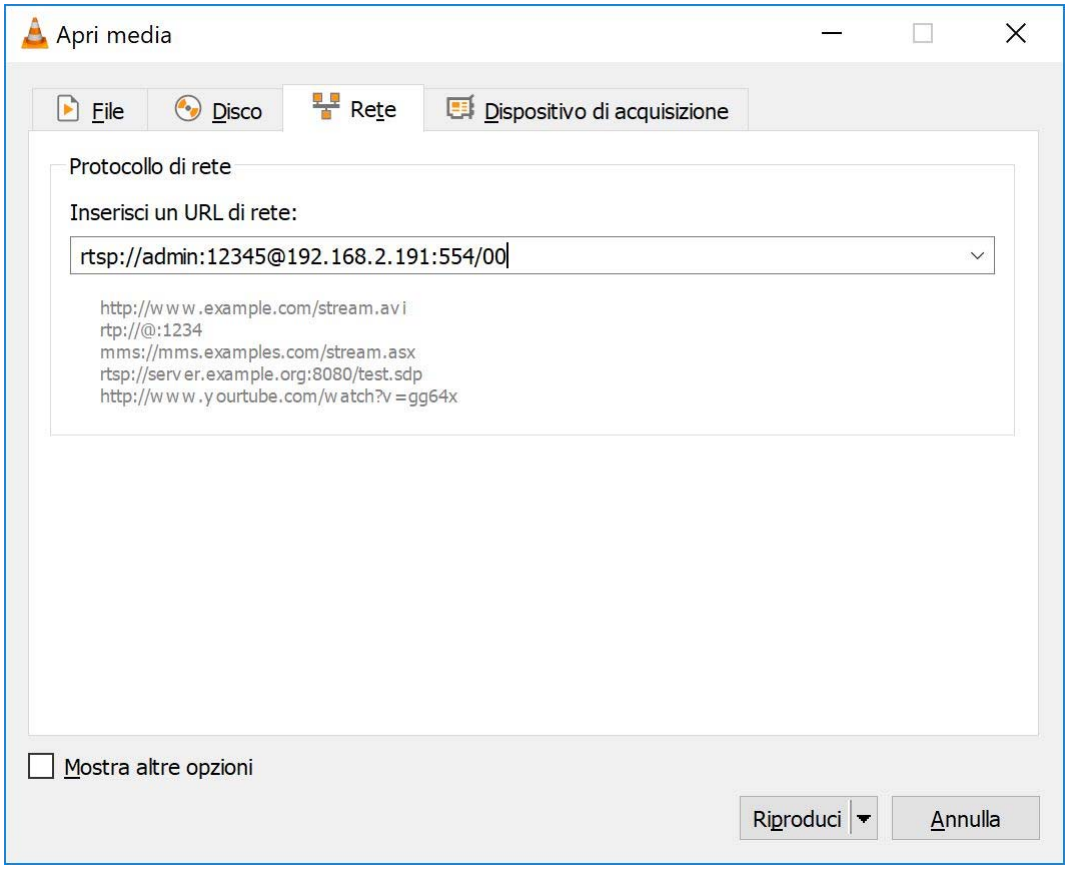
USER: Username **PASSWORD**: Access
password **IP**: IP address of the DVR /
NVR
DOOR: RTSP port set in the DVR / NVR: factory 554 **CHANNEL**: channel number from
0 (channel 1 = 0, channel 2 = 1 etc.) **STREAM**: 0 = main stream. 1 = substream

For example with this command: rtsp: // admin:
12345@192.168.2.191 : 554/00

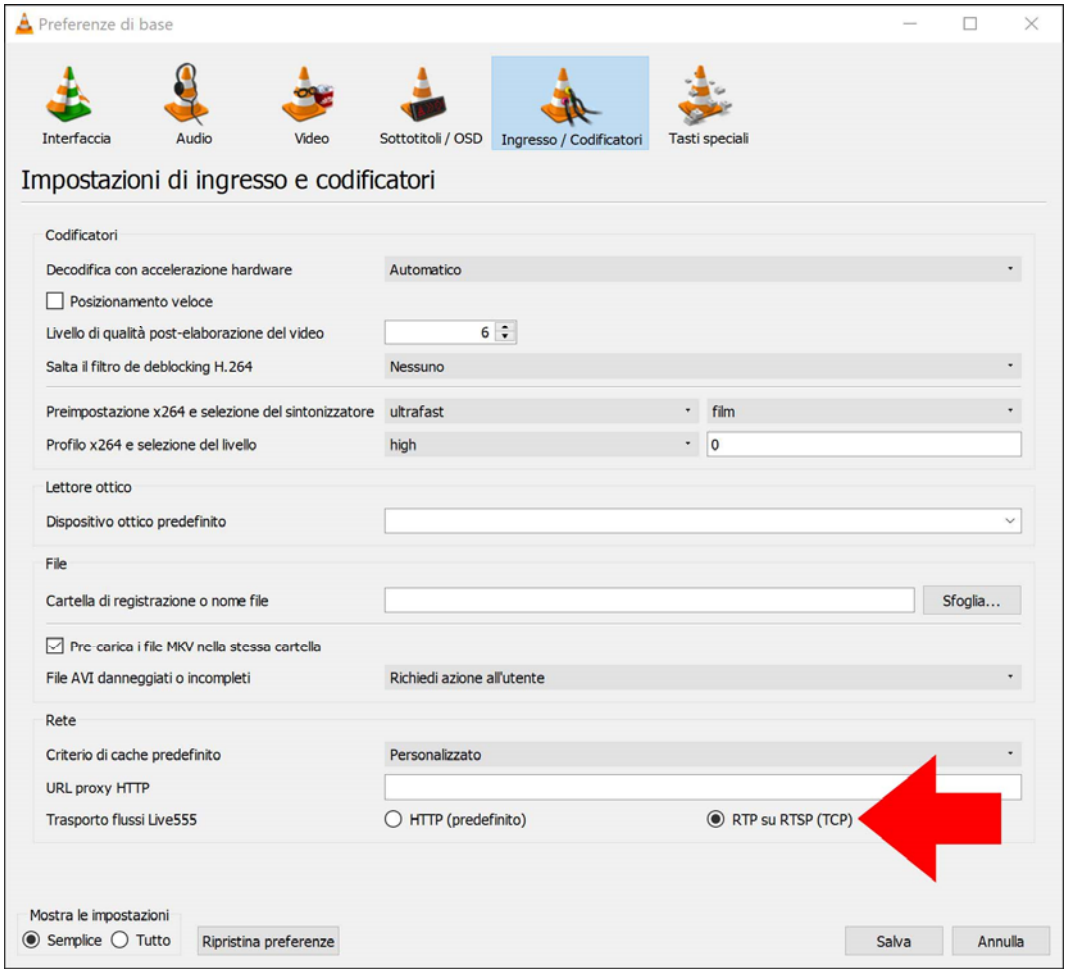
The main stream of channel 1 of the device opens

See belowhowoperate for example with the free VLC player:

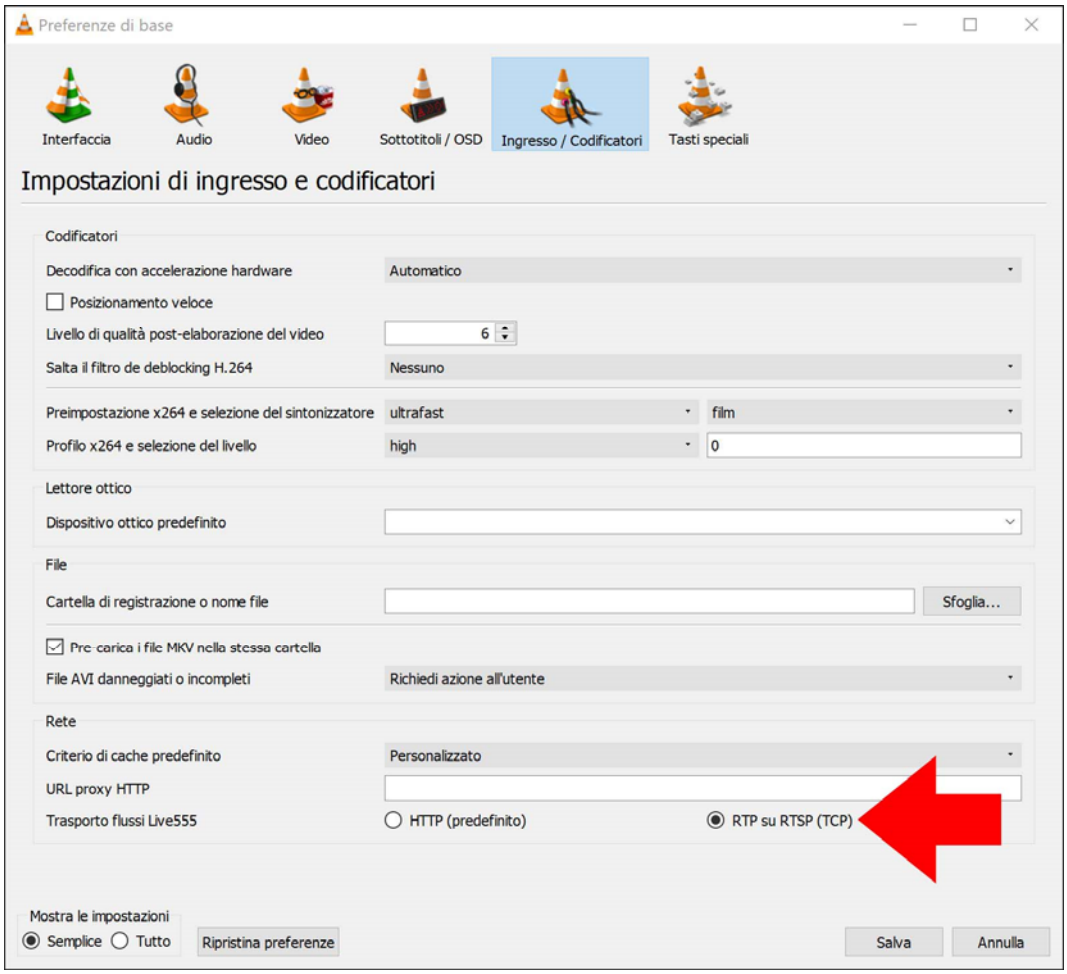




With VLC, the following option must be enabled for the stream to play


Preferenze di base
Interfaccia
Audio
Video
Sottotitoli / OSD
Ingresso / Codificatori
Tasti speciali
Impostazioni di ingresso e codificatori
Codificatori
Decodifica con accelerazione hardware
Automatico
Posizionamento veloce
Livello di qualità post-elaborazione del video
6
Salta il filtro de deblocking H.264
Nessuno
Preimpostazione x264 e selezione del sintonizzatore
ultrafast
film
Profilo x264 e selezione del livello
high
0
Lettore ottico
Dispositivo ottico predefinito
File
Cartella di registrazione o nome file
Sfoglia...
Pre-carica i file MKV nella stessa cartella
File AVI danneggiati o incompleti
Richiedi azione all'utente
Rete
Criterio di cache predefinito
Personalizzato
URL proxy HTTP
Trasporto flussi Live555
HTTP (predefinito)
RTP su RTSP (TCP)
Mostra le impostazioni
Semplice
Tutto
Ripristina preferenze
Salva
Annulla

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



Connect with your mobile phone, even via the internet

You can connect to the VCR easily with your mobile or tablet. You can do it on an internal wifi network 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 VCR easily with your Windows PC. You can do this on the internal wifi network or even via the Internet. Download our IoVedo.RK software from our site and charge your device to control it from a computer. Use the internal IP address if you want to connect to the local network, or use the serial if you want to connect via the internet with our P2P cloud.
For details, refer to the IoVedo.RK software manual