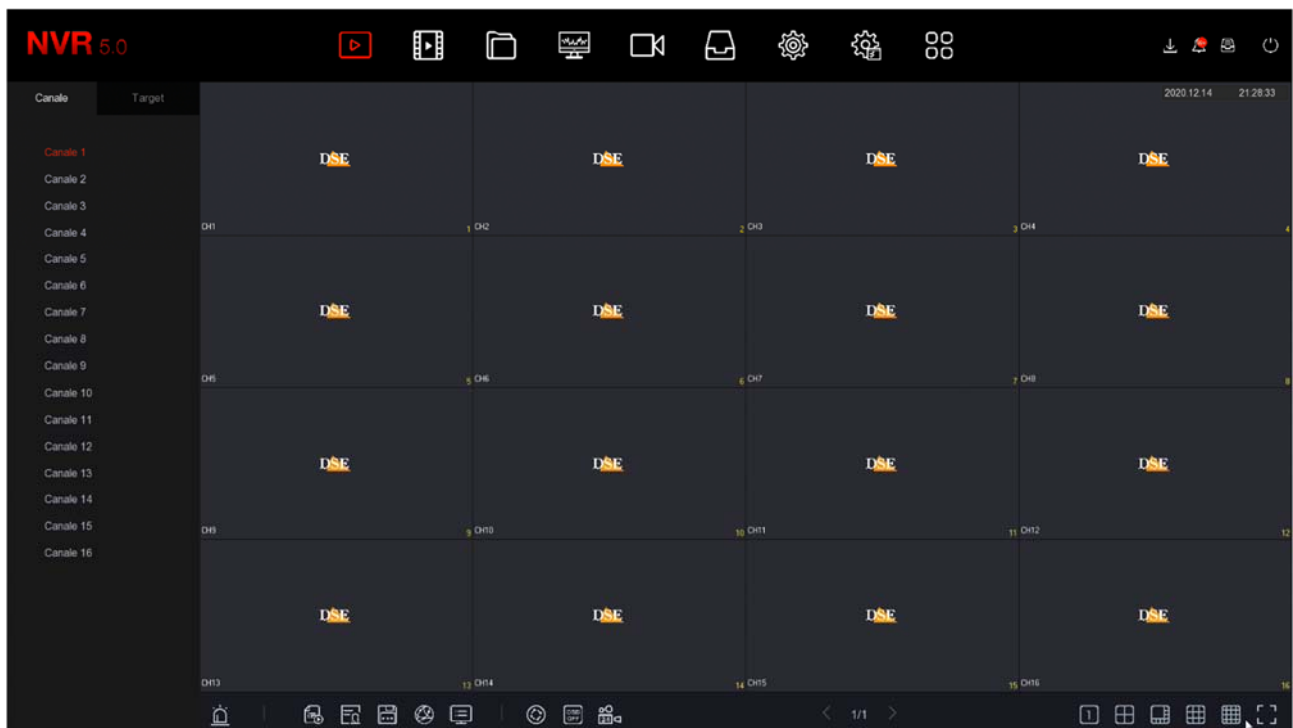




RK and RKK SERIES

DVR and NVR



Configuration manual - Menu 5.0

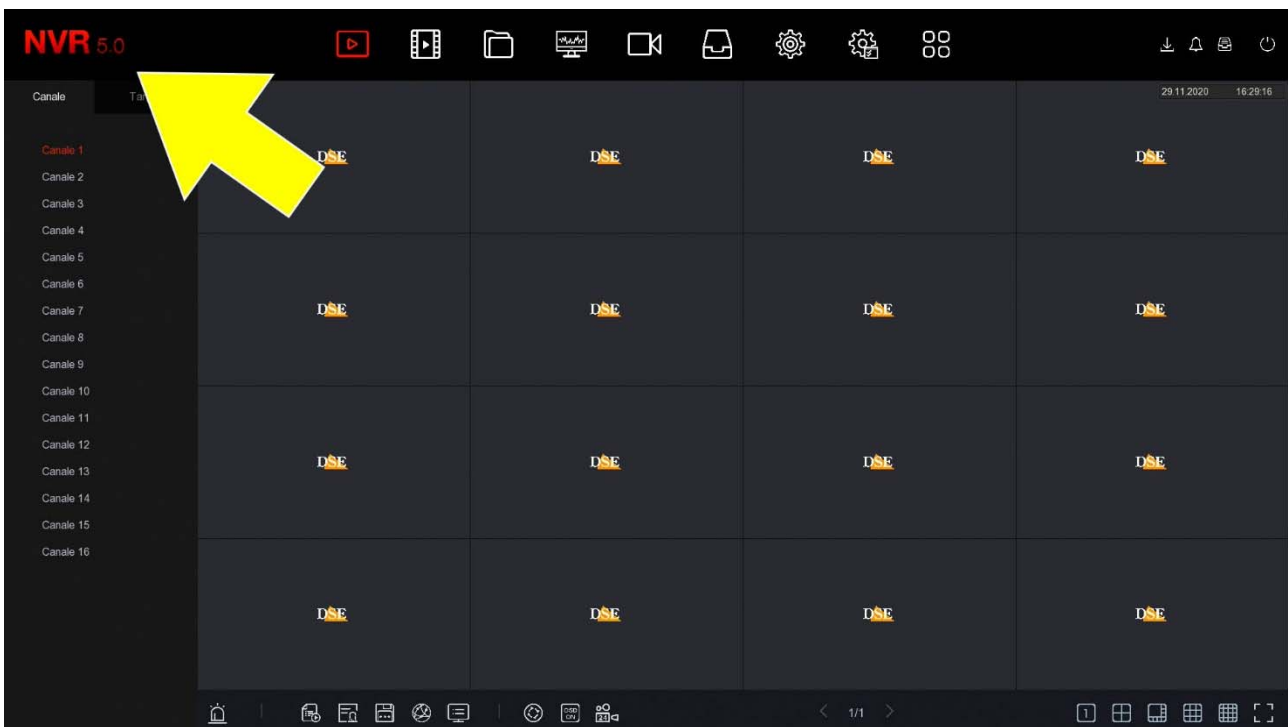
How to configure all system operation options



Contents of the manual

This manual explains in detail all the configuration options to make the best use of our RK Series DVRs / NVRs. For the use of the normal live view and playback functions, for the hardware installation and for the connection of the cameras, refer to the installation manual.

This manual refers to the Version 5.0 NVRs with graphical interface 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.

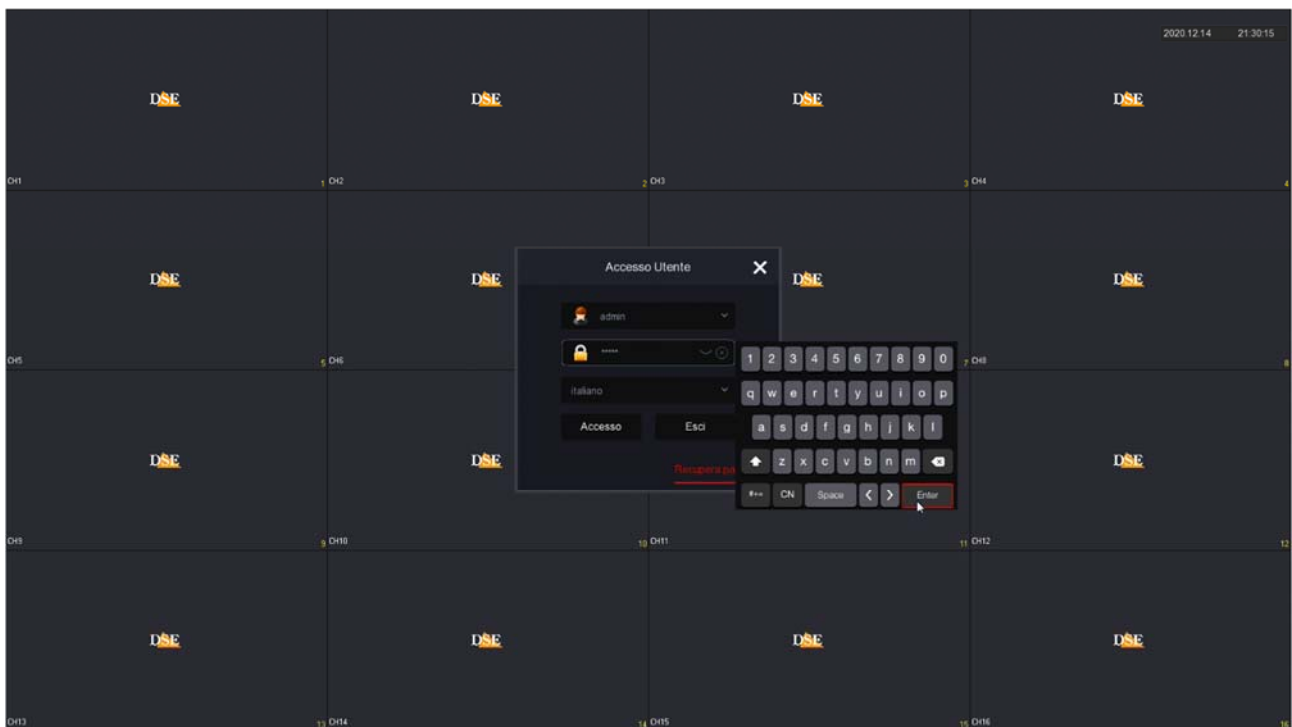


Access to the control menu

The installation manual explains how to install and use the basic features, live and playback, of our RK Series NVRs and DVRs.

If you have not yet mounted your system and you still do not see the cameras on the monitor, you should take the installation manual back and follow the instructions. If, on the other hand, you have installed the system and are able to move the mouse on the screen, you can continue reading this manual and learn all the advanced features of your CCTV system.

In this manual we start from the login window where you can enter the username and password for access.



The factory access data to the RK Series NVRs and DVRs are: **USER**

NAME: admin

PASSWORD: 12345

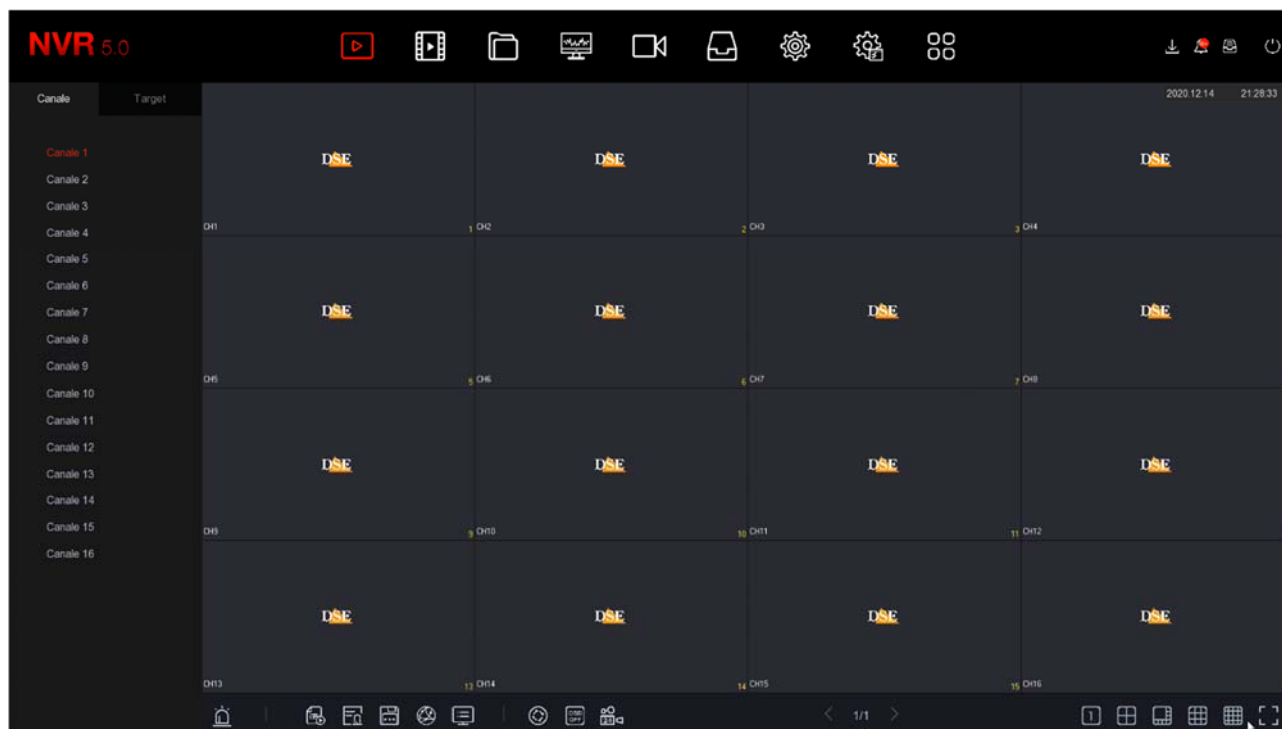
To access the configuration menu you have to right click on the screen

CONFIGURATION MANUAL

RK SERIES - NVR and DVR



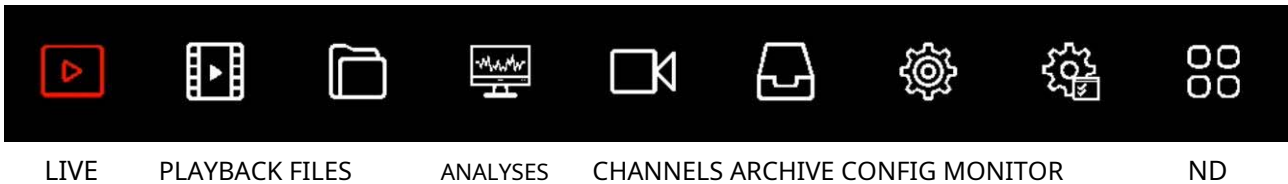
Page: 4





Navigation bar

At the top of the monitor there is a navigation bar to browse the different control environments of the device.



LIVE, PLAYBACK and FILES environments, for viewing and playback, are explained in the installation manual.



In this manual we will deal with all the other control and configuration pages



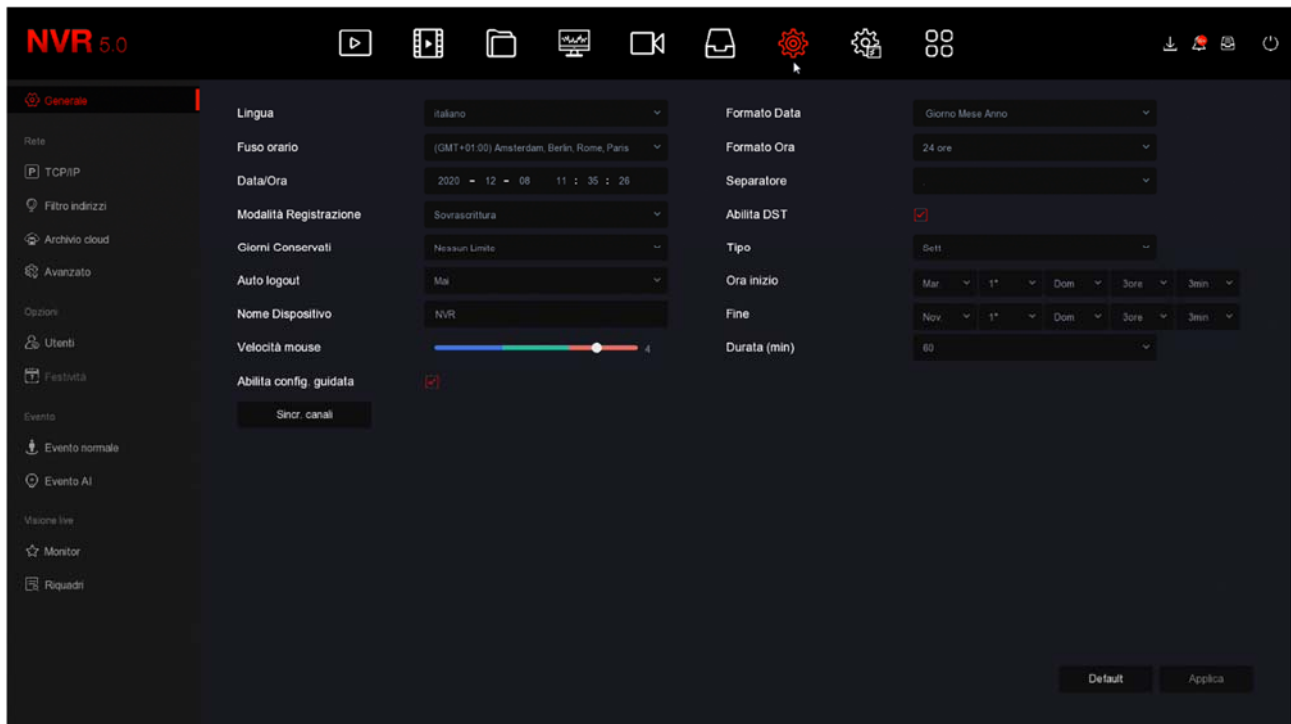
CONFIGURATION section

Click the SYSTEM button to open the page that contains the configurable options of your NVR / DVR



GENERAL

On this page some general system options are set



LANGUAGE - The factory language is Italian, but you can choose another among the dozens available

TIME ZONE - Choose the time zone of your area which in Italy is GMT + 1

DATE / TIME - Shows the system date and time that you can manually change

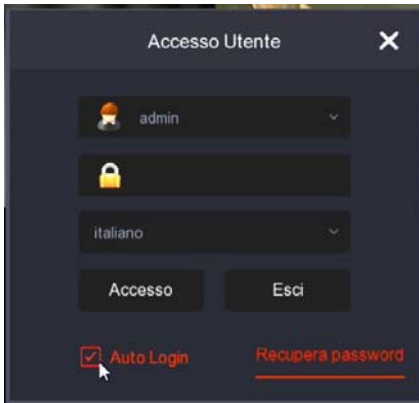
RECORDING MODE - The only possible option is OVERWRITE, ie the automatic deletion of the oldest videos once the disk space is exhausted.

DAYS PRESERVED - You can limit the maximum capacity of your video archive by specifying a specific number of days (1,2,3,4,5,6,7,15,30). This may be necessary to comply with local privacy regulations.

DEVICE NAME - You can name your DVR / NVR for easy identification.

MOUSE SPEED - Adjust the mouse speed of the DVR / NVR

AUTO LOGIN - Allows you to use the automatic login which is an option available in the login window and which allows you to avoid typing the password every time to access the NVR. To enable this option, **AUTO LOGOUT** must be disabled



AUTO LOGOUT - Defines after how many minutes of operator inactivity the system will require a new login to access the NVR.

FULL SCREEN DURATION - Various detections, such as motion detection, allow you to bring the alarmed camera to full screen automatically. Here you can configure how long the image remains on full screen

ENABLE GUIDED CONFIGURATION AT STARTUP - After completing the installation of the NVR / DVR, you should disable the wizard when starting the video recorder, by unchecking this option.

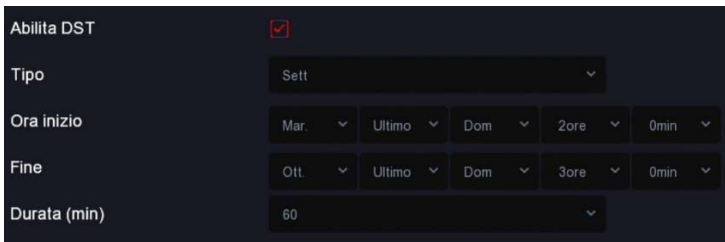
In the following options you set the system date and time. It is important that the date and time of the NVR are correct in order to easily search the recorded videos. The system can manage the time manually or with automatic synchronization via the Internet with an NTP server, if you enable the function in the TCP / IP - NTP section.

DATE FORMAT - Choose the format you prefer, Day / Month / Year in Italy TIME

FORMAT - Choose the format you prefer, 12 or 24 hours

SEPARATOR - Choose the separator between the hour numbers

In the following options the automatic switching to daylight saving time is enabled. It is very important to set this parameter correctly for proper remote playback. **ENABLE DST (SUMMER TIME)** - You can make the NVR automatically adapt to daylight saving time. This setting may vary from country to country. In Italy, you must set the WEEKLY type and duration 60 minutes, starting at 2 am on the last Sunday in March and ending at 3 am on the last Sunday in October.



Abilita DST

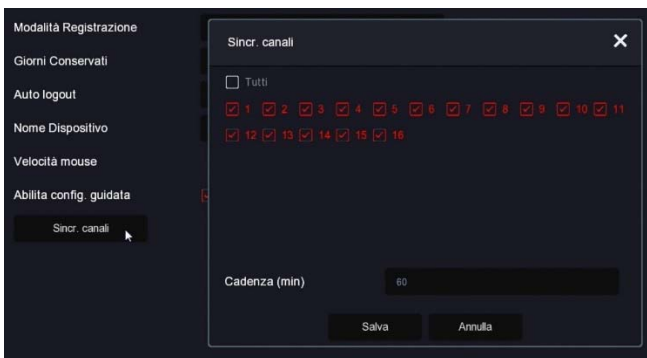
Tipo

Ora inizio

Fine

Durata (min)

SYNCR. CHANNELS - You can make the NVR automatically synchronize the time of the IP cameras connected to it. This option is factory enabled on all channels, but you can disable some channels here if you wish. Note that in the camera settings you need to allow the NVR to change the time. Some cameras, depending on the chip used, may allow proper synchronization by the NVR. In this case it is advisable to disable channel synchronization in the NVR and manage the time directly in the camera configuration.



Modalità Registrazione

Giorni Conservati

Auto logout

Nome Dispositivo

Velocità mouse

Abilita config. guidata

Sincr. canali

Sincr. canali

Tutti

1 2 3 4 5 6 7 8 9 10 11

12 13 14 15 16

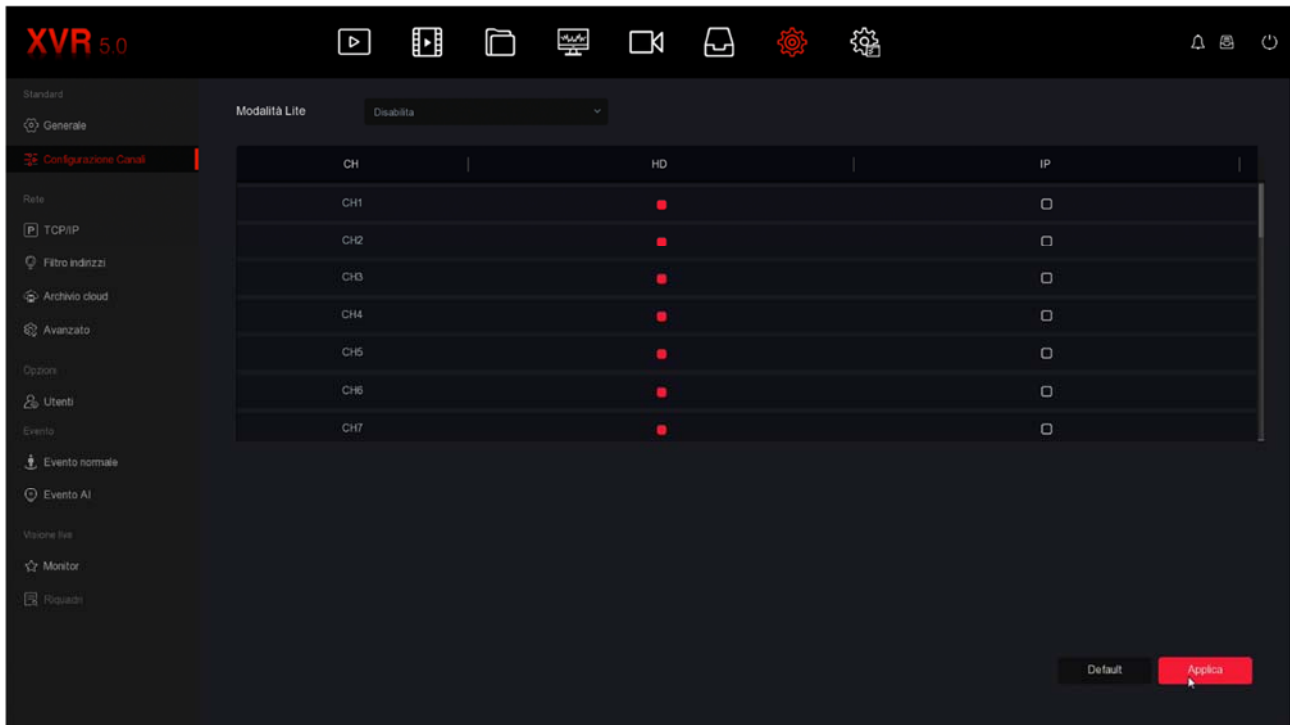
Cadenza (min)

Salva Annulla

DEFAULT - Restore factory settings for this section

CHANNEL CONFIGURATION

This section is only present in DVRs with BNC inputs that can manage both analog and IP cameras.



DVRs in this range are shipped from the factory with all analog channels enabled so that all rear BNC inputs can be used.

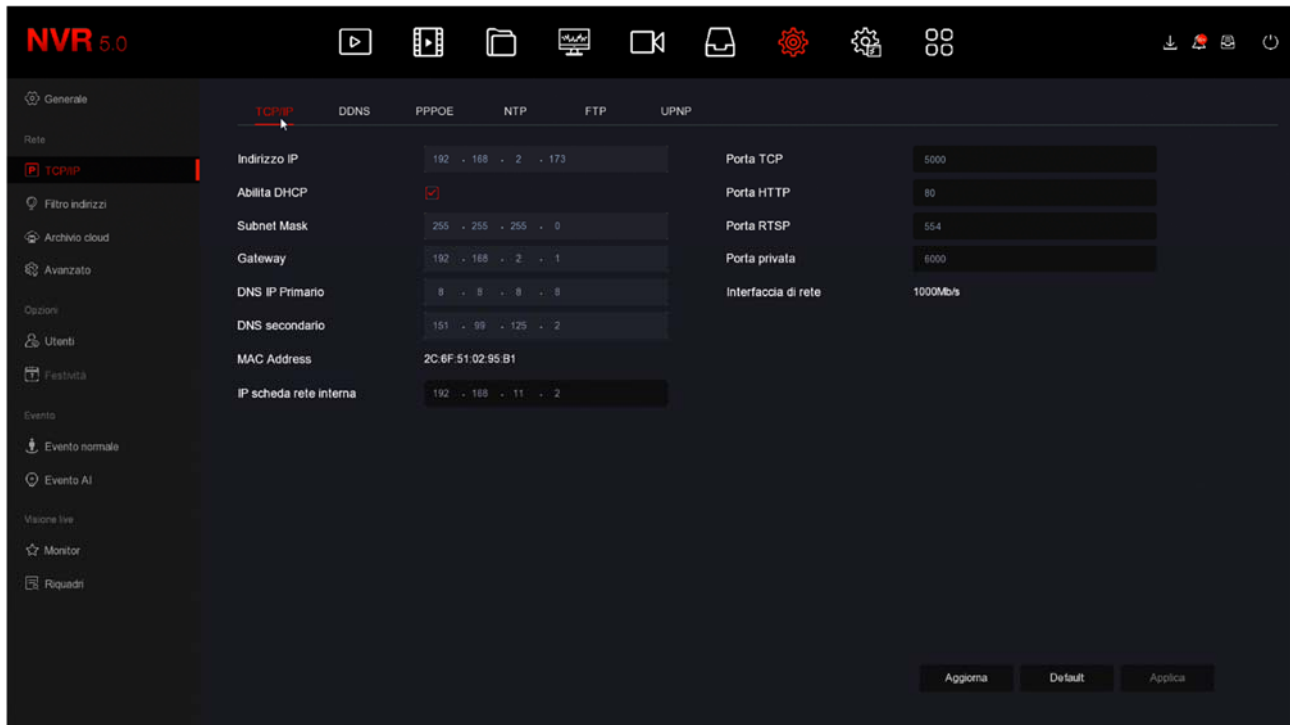
In this window you can decide to disable one or more analog inputs to enable IP inputs. If you uncheck an analog input you will automatically see a certain number of IP channels activated.

If you disable an analog (HD) channel, its BNC will be disabled. Normally you can disable the BNC inputs in pairs.

LITE MODE - You can enable lite mode if you want to slightly increase the frame rate of your footage, both live and recording, by reducing the resolution a little. Normally this option is not convenient, but it can be interesting if you are shooting fast moving targets to increase the smoothness of the video.

TCP / IP

In this section you can enter the network data of the NVR.



NETWORK ADDRESSES - IP address, Subnet mask, Gateway and DNS are the addresses that allow your DVR / NVR to communicate with the network. The easiest thing to do is to keep the factory setting with DHCP enabled so that the unit will automatically configure itself on the network. In order to use this function, the DVR / NVR must be connected to a network with a router or other equipment acting as a DHCP server.

If for some reason you have to enter the parameters manually, document yourself before doing so because entering incorrect parameters can make the system unreachable from the outside. Remember that all devices on your network must have IP addresses with the first 3 numbers the same and the same subnet mask (usually 255.255.255.0). The gateway is usually the address of the router, the number 1 of the network (for example 192.168.1.1). DNS is important for the DVR / NVR to surf the Internet and connect to external hosts, such as our P2P server or your SMTP provider to send emails. If you don't know your provider's DNS, use Google's 8.8.8.8.

MAC ADDRESS - Identifies your equipment and is not editable

IP INTERNAL NETWORK CARD - If you have purchased an NVR with built-in POE ports, here you will find the starting address that will be assigned to the cameras connected to the NVR ports. By default, our POE NVRs use the 192.168.11 class... for the internal network and it is advisable not to modify it.

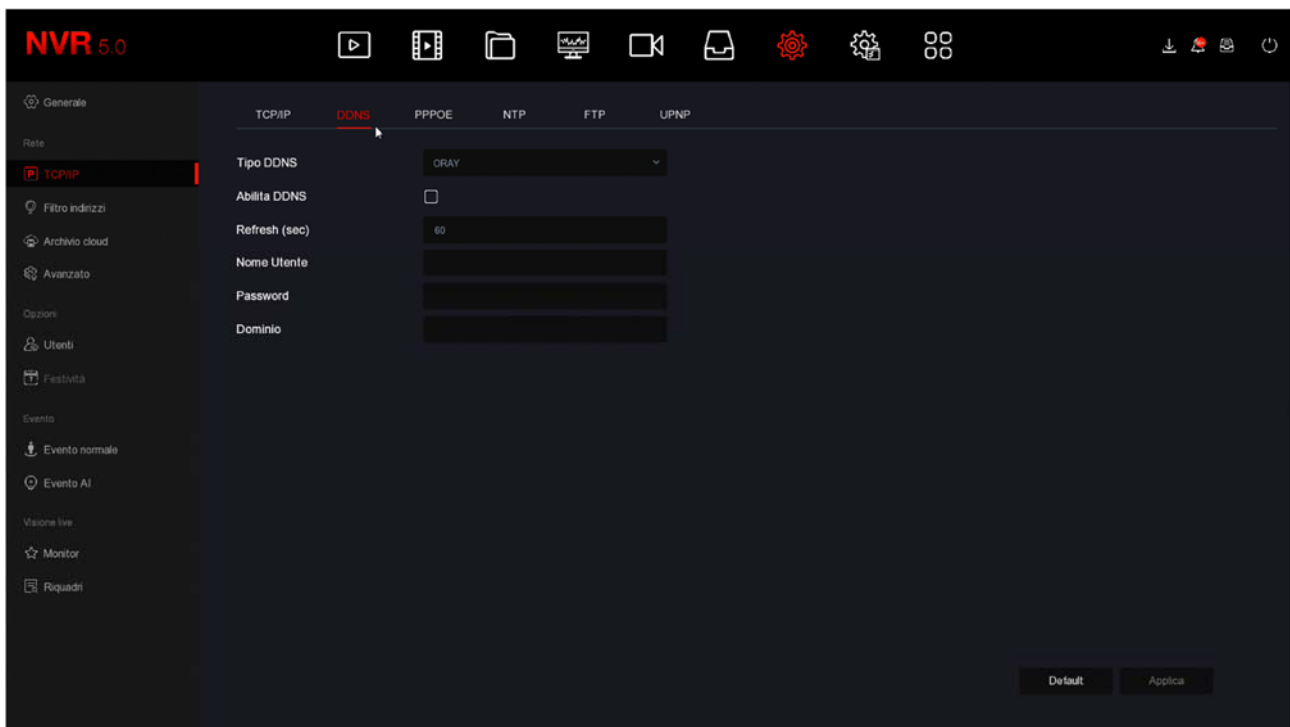
In this window there are also the communication ports used by the camera that you should never modify without being really required by a specific need.

PORTS - Here are indicated the ports used by the NVR / DVR for network communication when using the TCP, HTTP (ONVIF), RTSP protocols. Our private protocol, used by the IoVedo.RK app and software, uses port 6000 by default. It is advisable to never modify these communication ports.

NETWORK INTERFACE - Shows the speed of the device's external network interface (100 or 1000Mb / s).

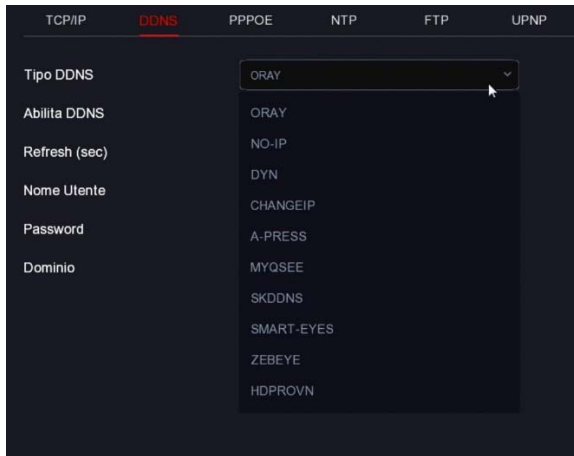
TCP / IP | DDNS

In this section you can enter the connection data to a DDNS server.



DDNS servers are services offered via the Internet that allow you to reach a variable IP as if it were static.

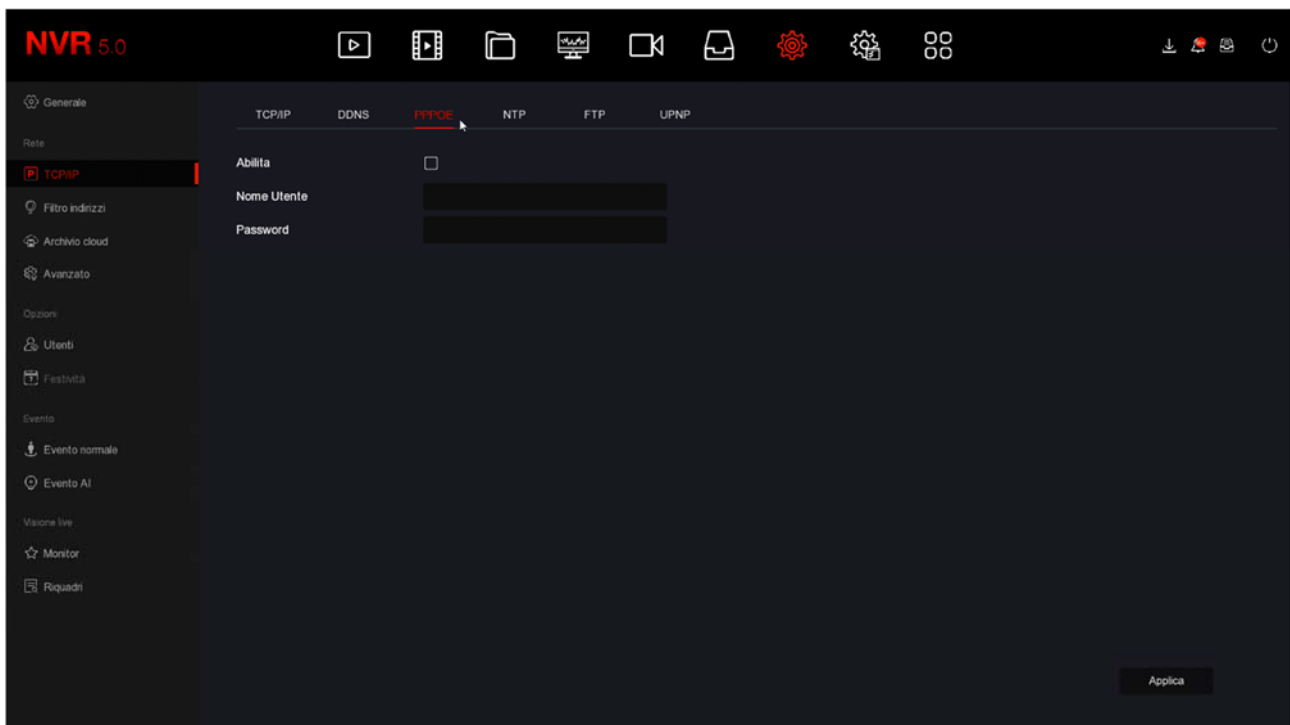
With our DVRs / NVRs you don't need these services because the P2P cloud server we offer for free does this function perfectly. However, the VCRs support various DDNS services and you can set the connection details in this folder if you intend to use them. Remember that if you use a DDNS service, instead of our P2P cloud you will need to map the ports in the router appropriately in order to communicate with the DVR / NVR.



Typically, the data required to connect to a DDNS server are the domain name and credentials and are assigned by the DDNS provider when subscribing to the service. You can also set a refresh interval that indicates how often the DVR / NVR will communicate its connection data to the server.

TCP / IP | PPPOE

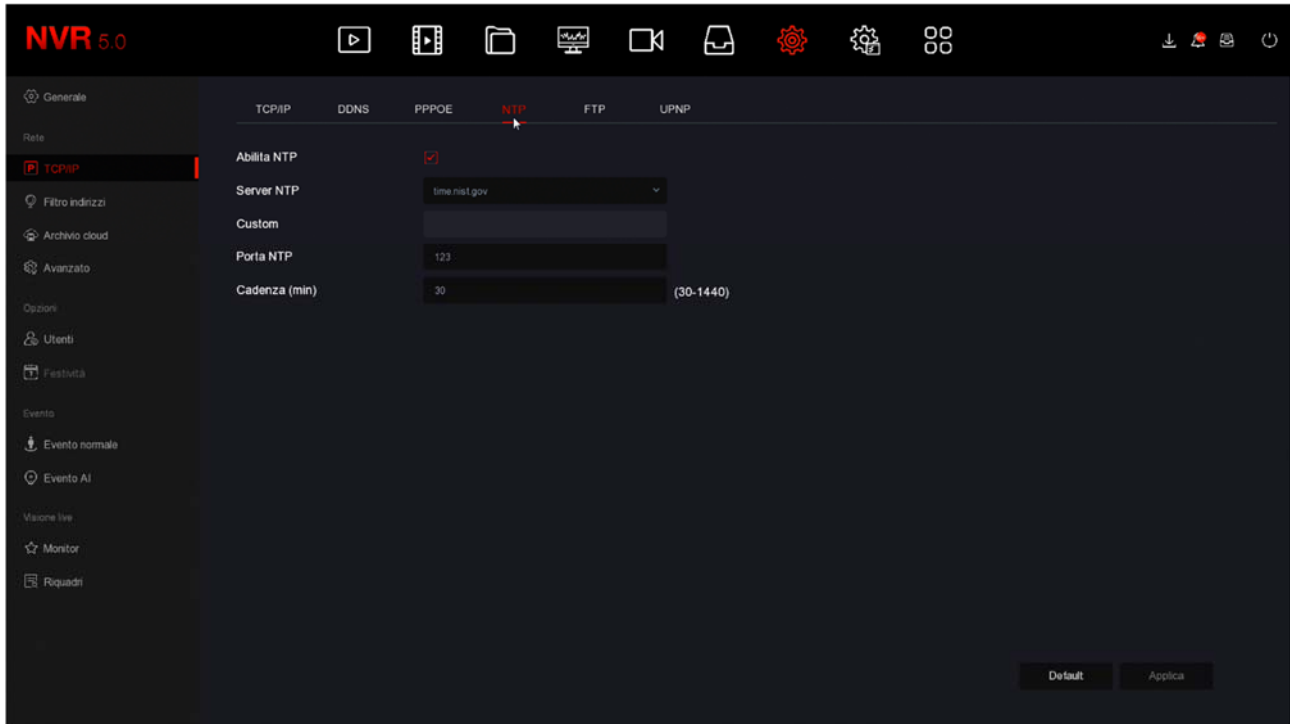
The NVR / DVR can be connected directly to an ADSL modem to connect to the Internet by making a call (dial-up) and typing in the credentials.



Normally you will not need this page because today we prefer to use routers for Internet access and this protocol is not necessary

TCP / IP | NTP

The NTP protocol is used to automatically synchronize the time of the NVR via the Internet

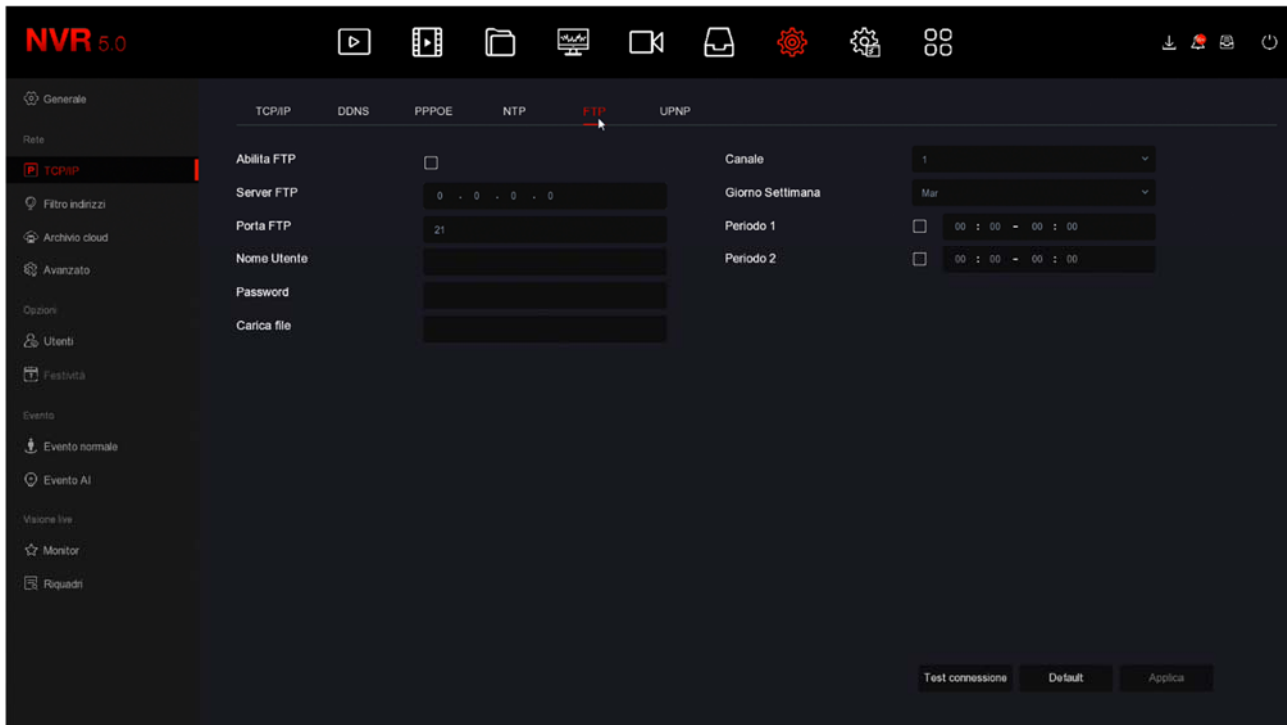


If you enable NTP protocol management, the NVR will synchronize the time over the Internet with an NTP server. SERVER - The most popular free servers for time synchronization are listed. You can also enter a custom one.

NTP PORT - NTP servers normally use port 123 CADENCE - Sets the frequency of synchronization with the server.

TCP / IP | FTP

The DVR / NVR can send photos in case of intrusion or alarm on an FTP server on the network. It is a useful function if you have a web space where you can secure salient images.



SERVER / FTP PORT - These are the main data of your FTP space
USER NAME / PASSWORD - Credentials to access your FTP space
UPLOAD FILE - Type the name of the folder where the files are stored in the FTP server
CHANNEL / DAY / TIME SLOT - You can enable the " sending of files only in certain time slots depending on the day of the week. You can set different rules for each channel.

CONNECTION TEST - Before saving, press this button to check that the FTP server is reachable with the parameters you entered.

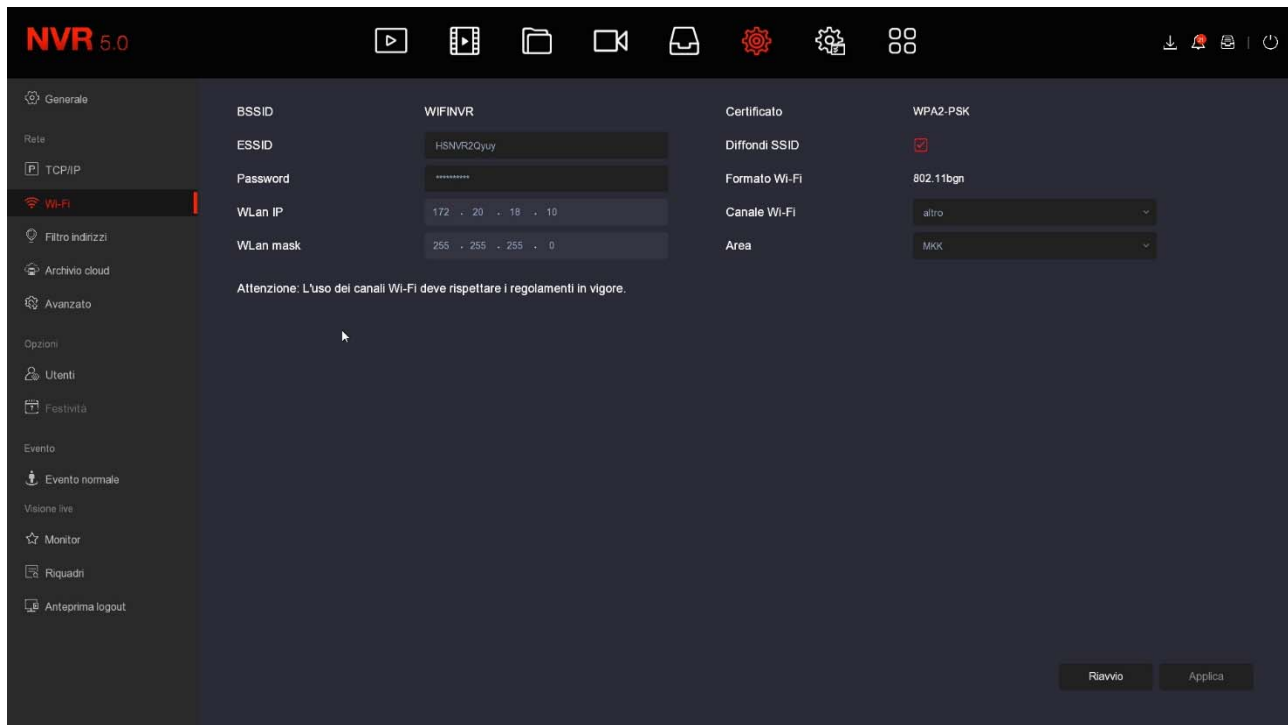
TCP / IP | UPNP

If you have a static IP address on the Internet, you can also decide not to use our cloud server to connect via the web and connect directly via the Internet to your router's IP address. In this case you need to map the router ports so that the ports used by the DVR / NVR (factory default 80,5000,554,6000) are transferred from the Internet side to your DVR / NVR on the internal network.

It would be good to do the mapping manually in the router configuration. However if your router accepts upnp mapping you can also enable it in the NVR so that it is done automatically.

WIFI

This section is only present in NVRs with built-in wifi and controls the wifi network generated by the NVR.



BSSID / ESSID - It is the name that distinguishes the wifi network generated by the NVR

PASSWORD - It is the access password to connect to the WiFi network of the NVR. Factory "lspassword"

WLAN IP / MASK - Indicates the class of addresses and the subnet mask used by the wifi network of the NVR

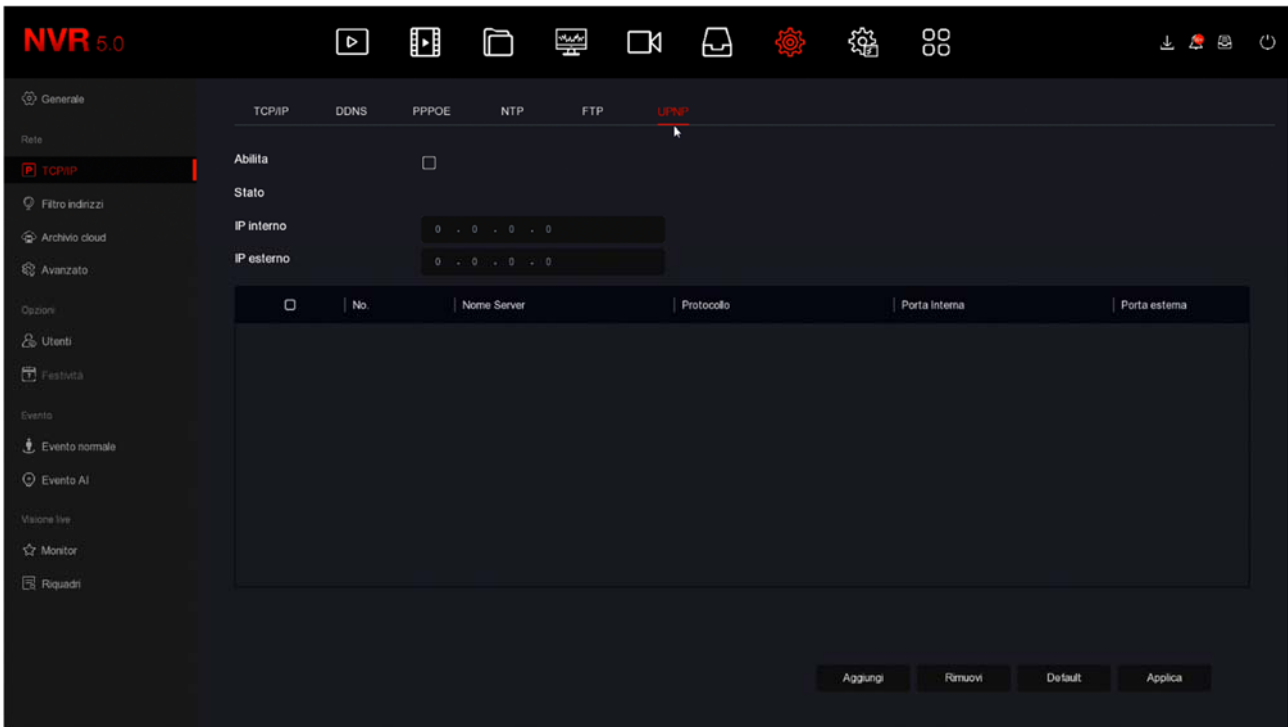
CERTIFIED - It is the security code used by the wifi network of the NVR

SPREAD SSID - If you disable this option, the wifi network of the NVR will not be visible in the search for wifi networks.

WIFI FORMAT - Indicates the WiFi technology of the WiFi network of the NVR

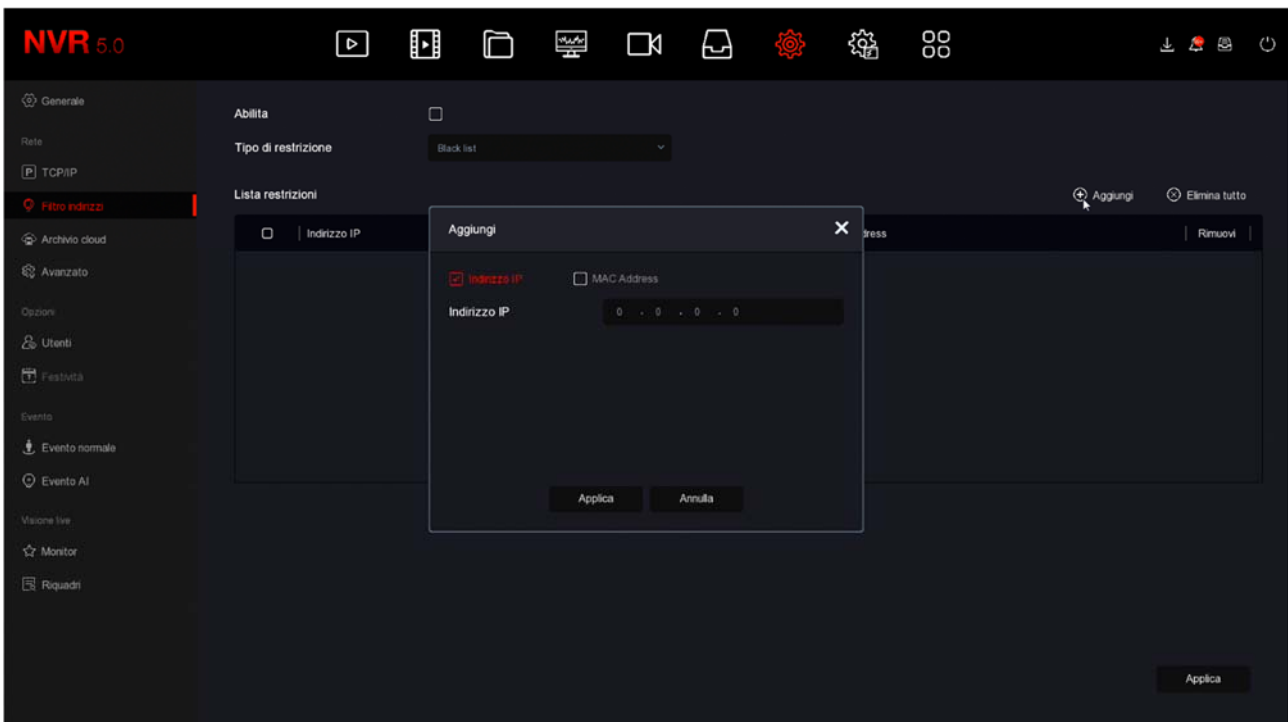
WIFI CHANNEL - Here you set the WiFi channel to be used for communication with the cameras. From the factory it is advisable to keep the automatic factory option. However, it is possible to force communication on a specific channel from 1 to 13. Setting a specific WiFi channel can help to avoid frequencies disturbed by the presence of other devices. If you are having problems with occasional disconnection of WiFi cameras, you can try to set different channels in this box.

AREA - Defines the WiFi standard to be used. If you want the wifi network of the NVR to be visible and usable by other European devices than set EU.



ADDRESS FILTER

On this page you can allow or prevent remote connection to your DVR / NVR based on the IP address or Mac Address of the connecting client. It is useful for restricting the remote access possibilities to authorized IPs only.

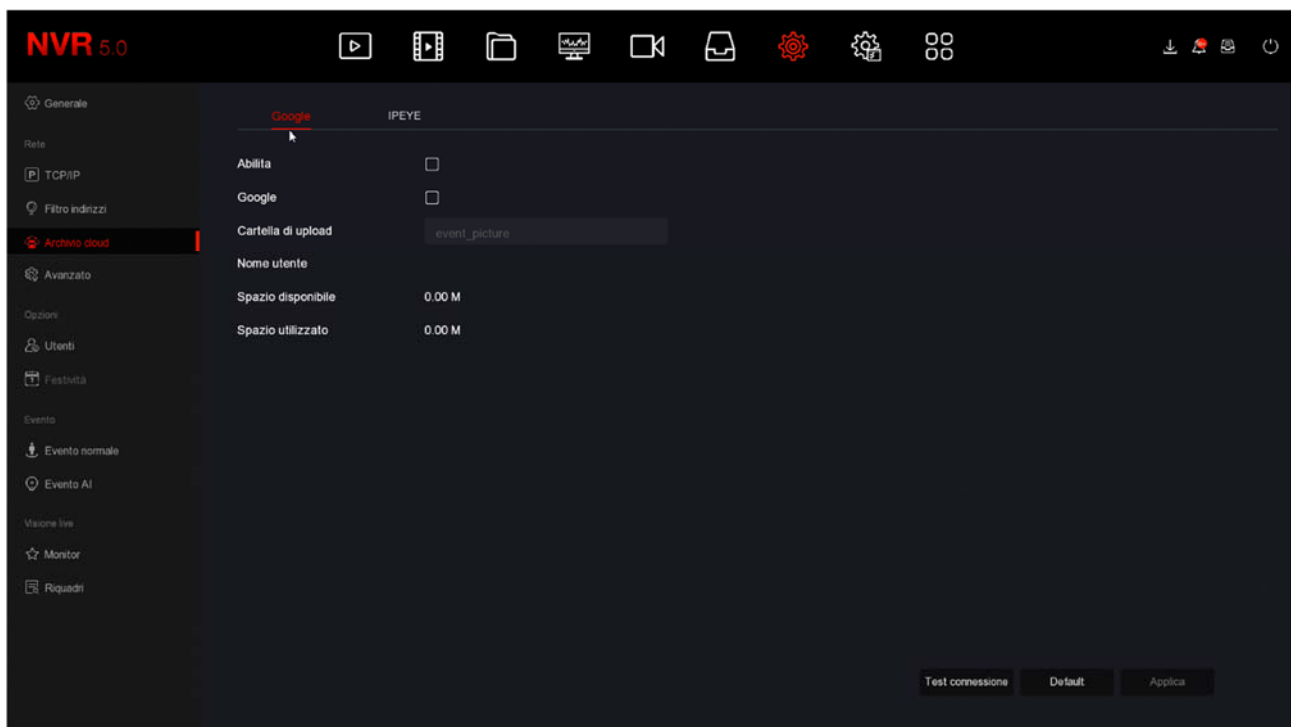


If you use the BLACKLIST mode you can then add all the IP addresses or MAC addresses to which you do not wish to grant access to the system. If you use the WHITELIST mode you can enter in the list the IP addresses or MAC addresses to which access is allowed, while all the others will be excluded.

CLOUD ARCHIVE

The RK Series NVRs / DVRs allow you to save images recorded in the event of an alarm on a CLOUD storage server via the Internet. Google cloud service is supported. In this case it is not a question of services similar to our P2P Cloud to facilitate the connection, but of web archive spaces that you can buy from Google to store data online.

Note that it is not possible to save continuous recordings to the cloud, but only images following an alarm (motion, alarm input etc.)



Before completing this table you must obviously subscribe to Google Cloud and have the login credentials. Also you have to create a folder in your cloud space to save your files.

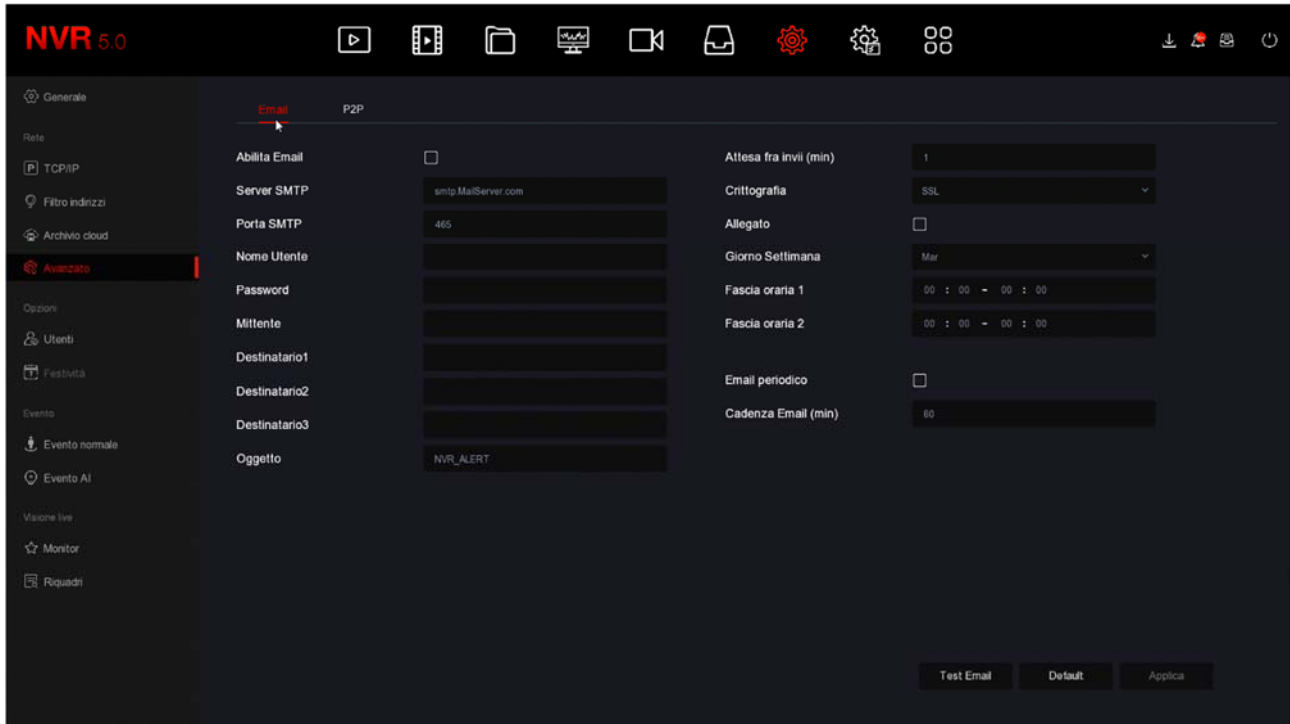
On this page you need to enter your Google Cloud login details. After entering the required data, use the TEST CONNECTION button to check that they are correct.

Once connected, the space available and occupied on the server will be indicated.

The IPEYE service is not supported

ADVANCED | E-MAIL

In this section you can enter the data necessary to make your NVR / DVR send emails in the event of an alarm. You must consult your e-mail provider to find out what data to enter in order to communicate correctly with the SMTP outgoing mail server.



SMTP SERVER / SMTP PORT - These are the main data to be able to communicate with your SMTP server for sending e-mails and must be provided by your e-mail account provider.

USERNAME / PASSWORD - These are the login credentials, to be used if your provider requires authentication on the SMTP server

SENDER - Enter the name and email address you want to appear as the sender of the alarm email sent by the DVR / NVR

RECIPIENTS - You can enter here the recipients to send the email to in the event of an alarm. You can enter up to 3 recipients.

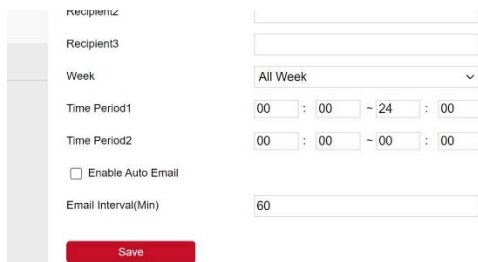
SUBJECT - Type in the subject you want to appear in the alarm email

WAITING BETWEEN SENDS - It is good to insert an interval between consecutive sendings in order to avoid an excessive number of emails

ENCRYPTION - Several providers use encryption in the SMTP protocol. It is essential to enter here the encryption used by your provider (SSL or TLS). Note that email providers often have different access modes, with different settings based on the encryption used. ATTACHMENT - If you want to attach the photo to the alarm email, enable this option.

TIME BANDS - If you want, you can enable the sending of emails only at certain times of the day. **Remember to enable at least one time slot from 00 to 24 for every day**

if you want to send emails without limitations.



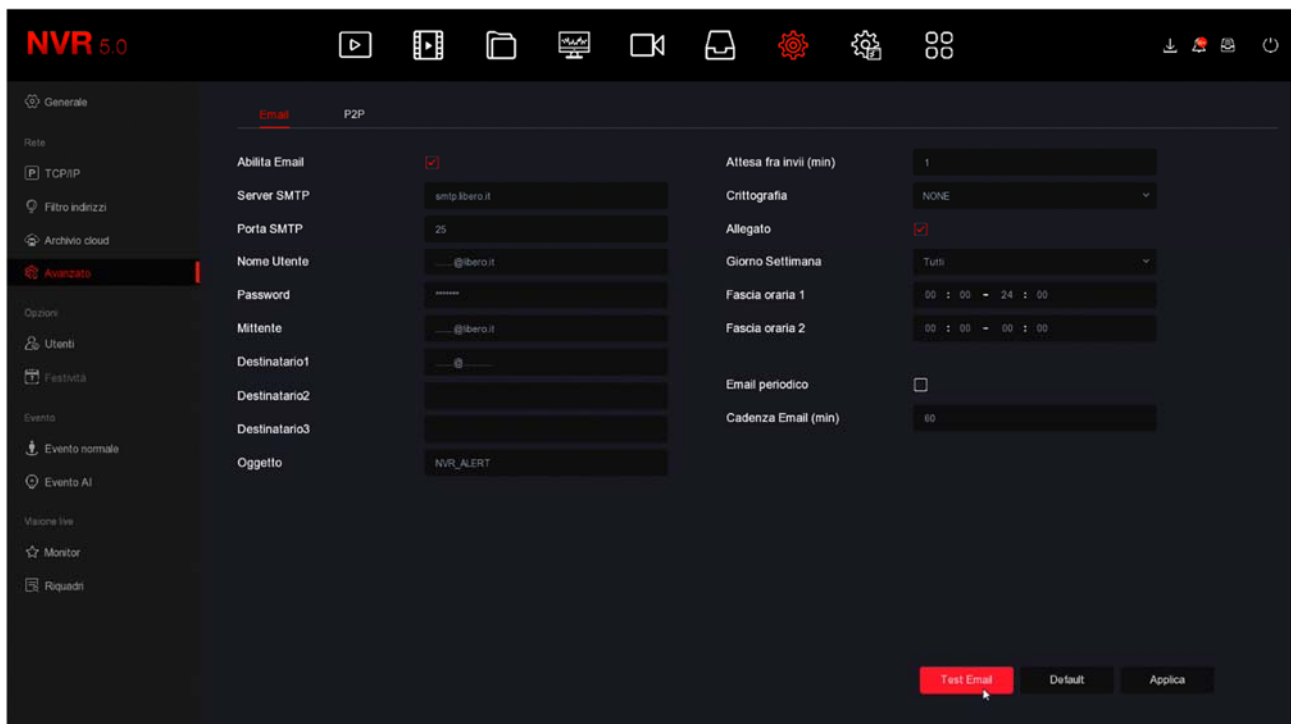
Recipient1:
Recipient2:
Recipient3:
Week: All Week
Time Period1: 00 : 00 ~ 24 : 00
Time Period2: 00 : 00 ~ 00 : 00
 Enable Auto Email
Email Interval(Min): 60

PERIODIC EMAIL - If you enable this function the DVR / NVR will send an automatic email at the rate you can define below. It is a very useful function that is used to send continuous regular emails that certify the presence of the device on the network.

TEST EMAIL - Before saving make a test send with this TEST button.

If the test fails, do not contact our support thinking the appliance is not working. Remember that sending emails depends only to a small extent on the NVR and to a large extent instead on your smtp provider. It is important to use the correct parameters for your provider and sometimes you also need to set features in your mailbox settings to allow sending emails from devices considered unsafe.

Here is an example of an effective configuration that you can achieve by creating a free account on **LIBERO.IT** and using their SMTP server with no encryption on port 25.



CONFIGURATION MANUAL

RK SERIES - NVR and DVR



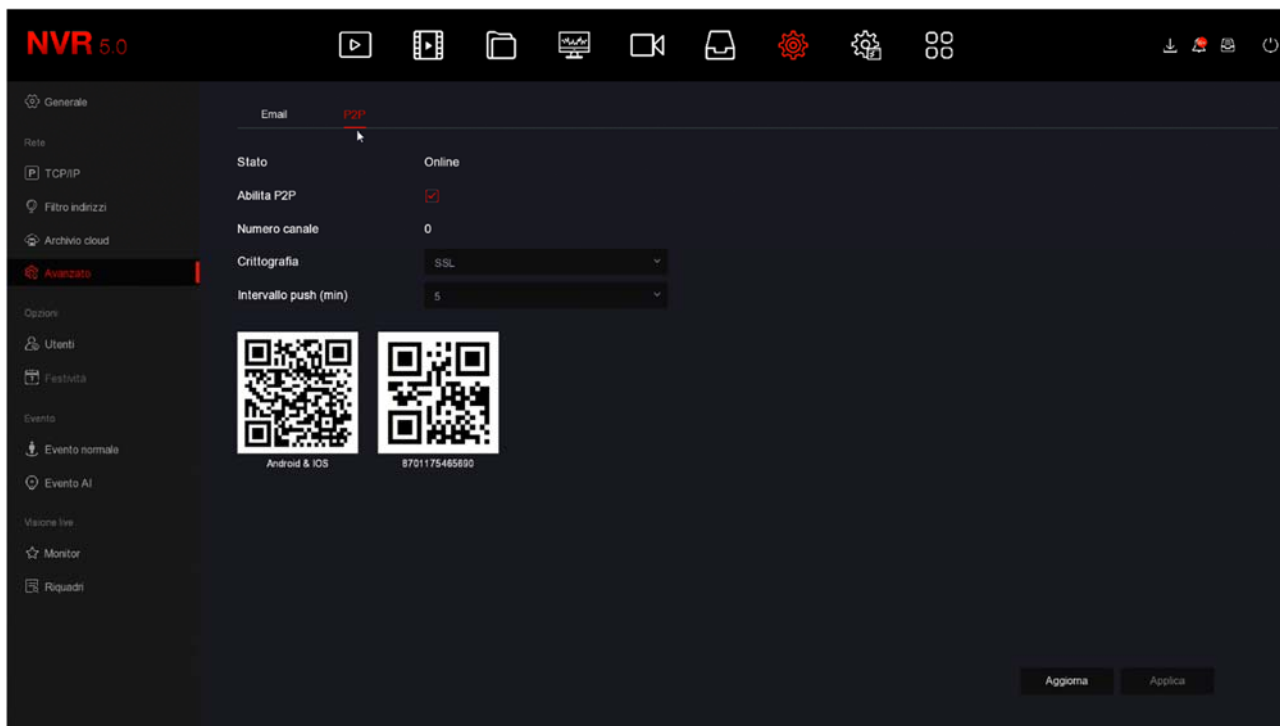
Page: 20

We remind you that it is no longer possible to use **GMAIL** to send emails from automatic devices such as NVRs and DVRs as Google has prevented the use of accounts without double authentication that NVRs / DVRs cannot manage.

If you can't succeed with your usual smtp provider, don't go crazy looking for the correct settings for that provider. You can try other free accounts on the net, such as libero.it or email.it. You don't necessarily have to use their POP3 mailbox to receive emails, but you can limit yourself to just using SMTP for sending.

ADVANCED | P2P

This is a very important window because it contains the data for the connection to our P2P cloud server that allows you quick access via the web with PCs and mobile phones. In the remote access manual you will find the explanation of the operation and the explanations on how to use our IoVedo.RK app



STATE -Online it means the system is connected to our P2P server correctly.Offline instead it indicates that you cannot connect remotely with the cloud because the NVR does not see the Internet. Always check the status of your cloud connection before trying to connect over the internet.

If the server is offline, the most likely thing is that the network settings of the DVR / NVR are incorrect. Then enable the DHCP function in the network settings and reboot the device, so that the DVR / NVR automatically receives the correct settings from your router. Then double check in this section if the P2P server is connected.

ENABLE P2P - If for privacy reasons you prefer your DVR / NVR not to connect to the cloud server you can disable this function.

CHANNEL NUMBER - This box shows the number of clients (mobile or PC) connected via cloud to your DVR / NVR at that precise moment.

ENCRYPTION - It is advisable to keep the factory SSL encryption

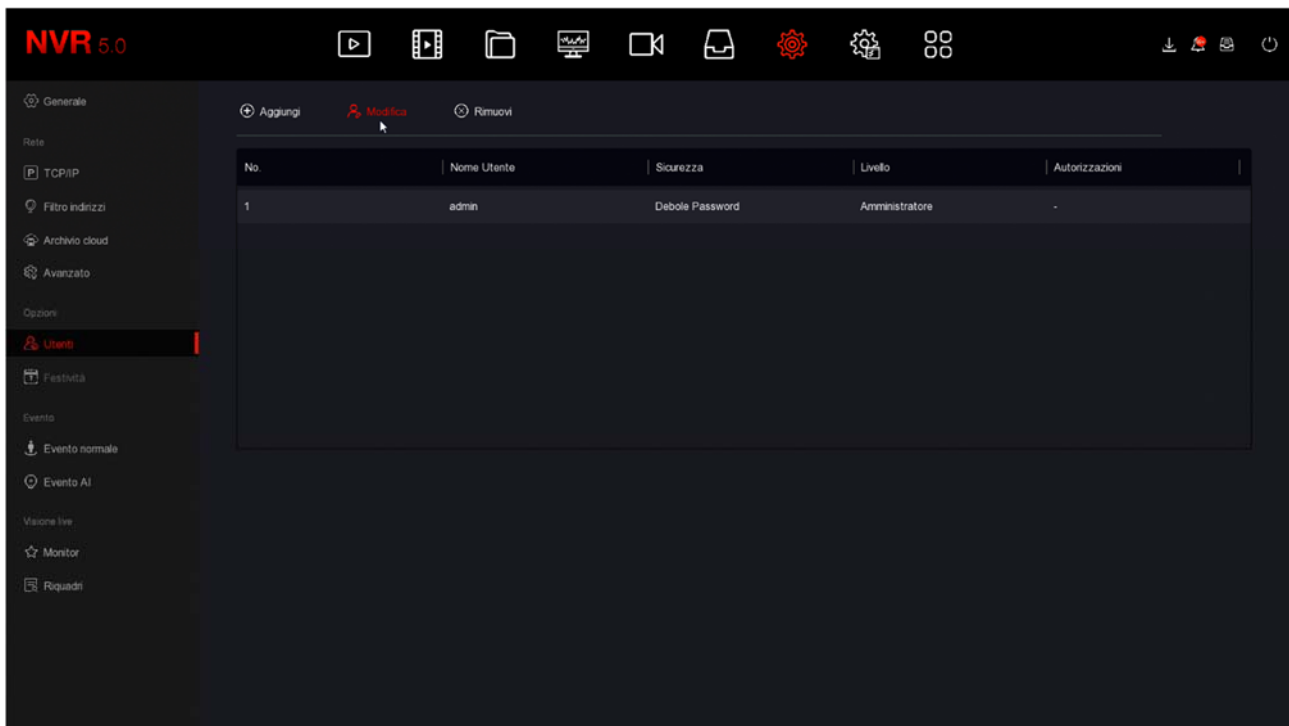
PUSH INTERVAL - It is the waiting interval between sending a push notification to the IoVedo.RK app and the next. It is advisable to keep a delay of 5 or 10 minutes to avoid receiving too many notifications and not to run out of the maximum number of 100 notifications / day per channel provided.

QR CODE - The first QR code on the left can be framed with the mobile phone to download the IoVedo.RK APP for iOS or Android. The second QR code is used instead in the app configuration to quickly load the serial number of the DVR / NVR. This serial number consists of 13 numbers and identifies your DVR / NVR in our cloud server. It is also written under the QR Code, should you need to enter it manually. The QR code is also shown on the self-adhesive label under the VCR and on the packaging.

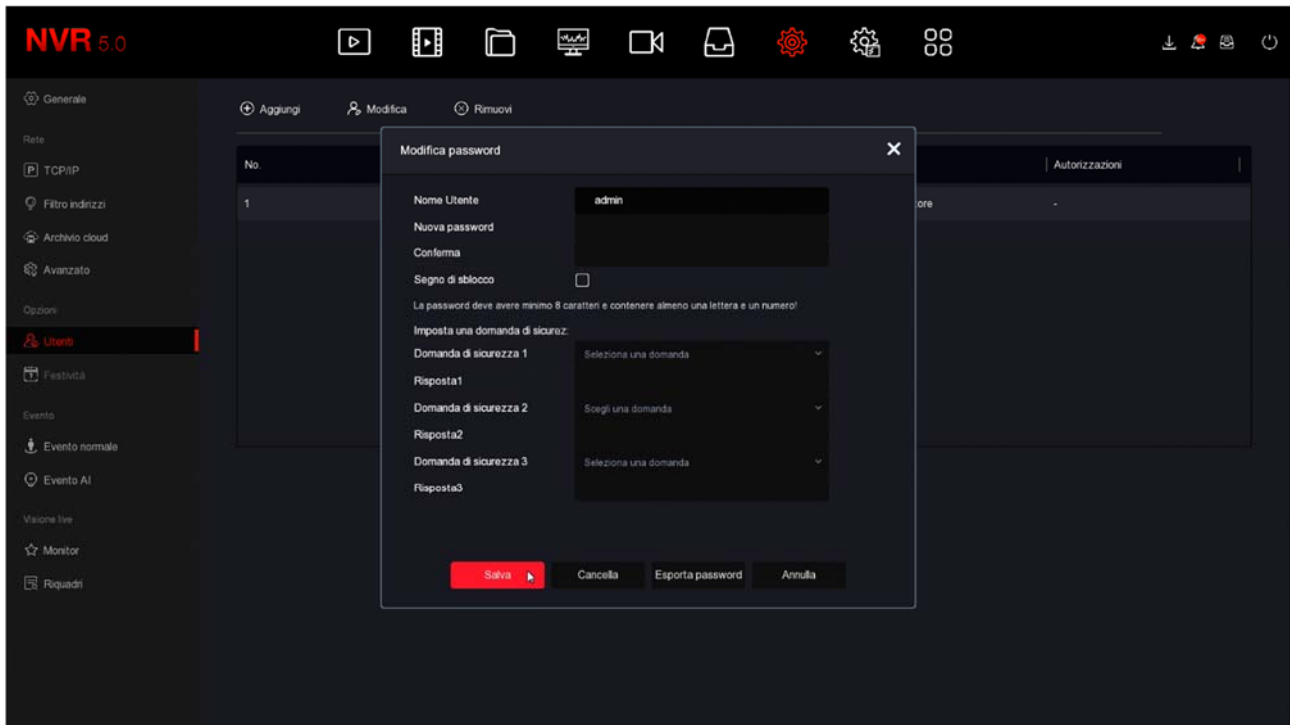
USERS

To access the NVR / DVR, either from the local monitor or remotely with mobile phones or PCs, a user name and password must be entered.

The main user that you find in the list and that you cannot delete is the administrator user: admin / 12345 (by default)



In this section you can change the administrator password by selecting the user and pressing CHANGE. It is an important operation to protect your privacy.



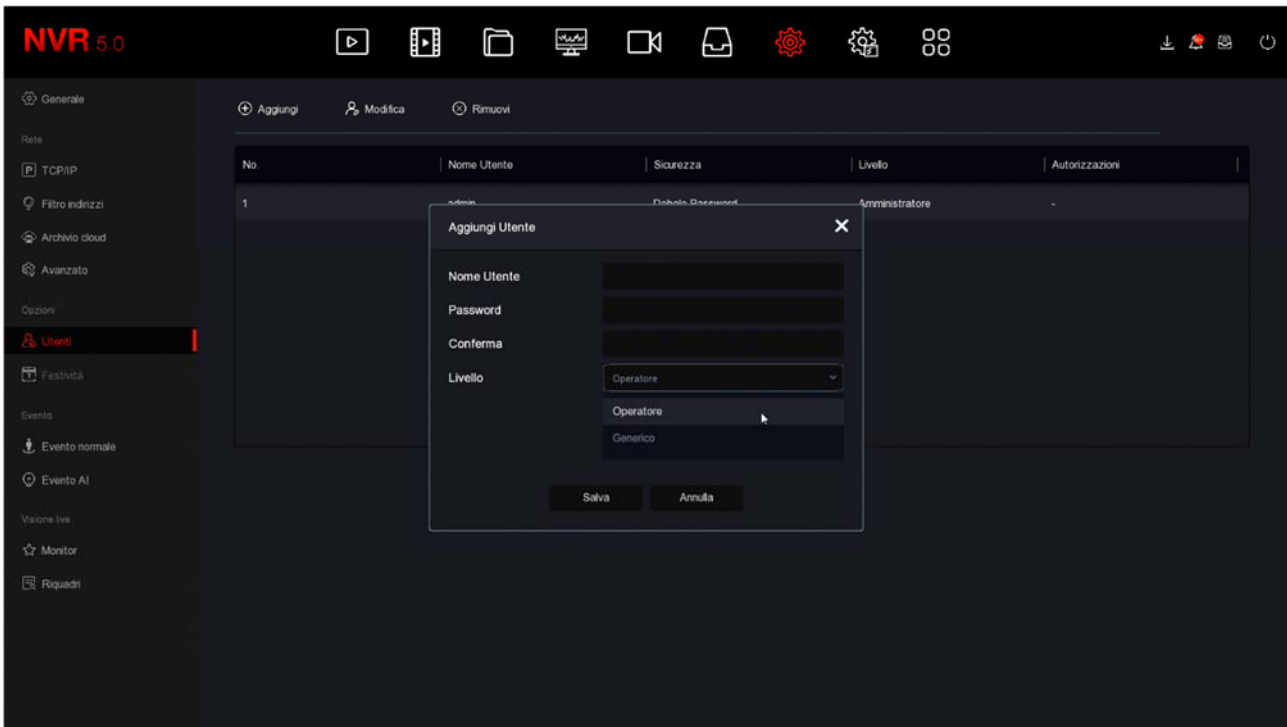
You can enter a new password of at least 8 characters with at least one letter and one number and also set an unlock sign, as is done in mobile phones.

You can also set some security questions / answers that you can use to recover your password if you forget it.

Finally you can Export the password to an encrypted file on a stick.

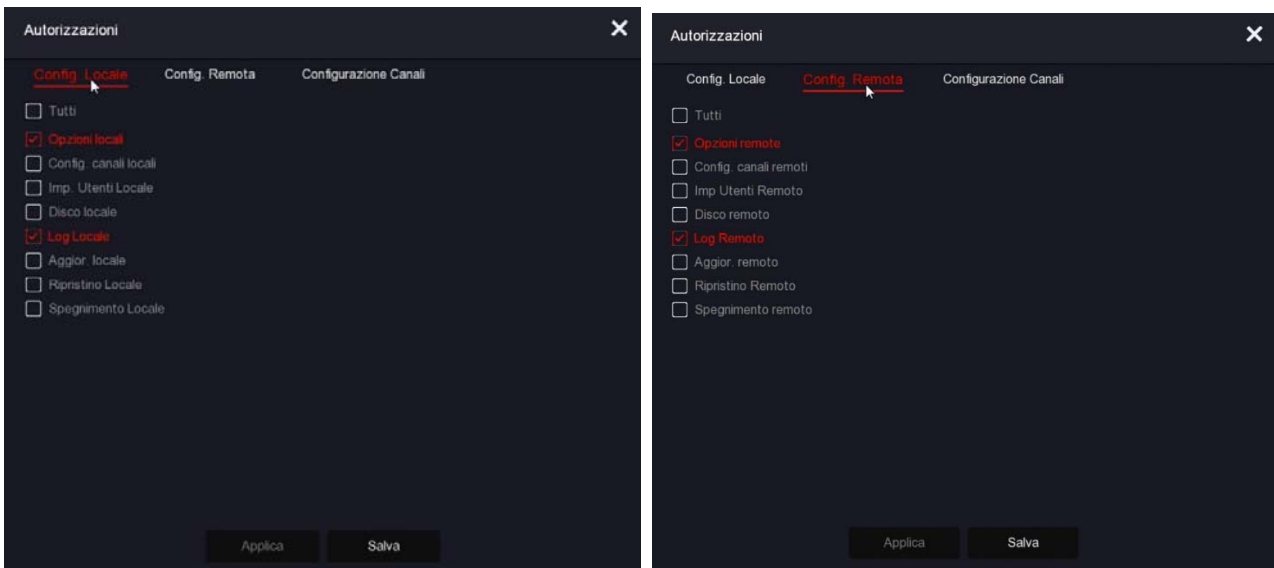
All of these precautions are to give you a way out if you forget your password.

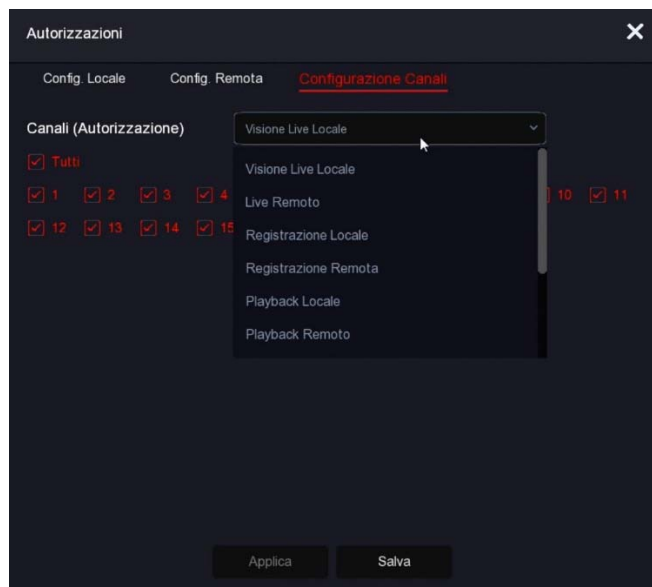
On this page you can also add additional users with the ADD button.



For each user, except the administrator, you can enable different levels of authorization to functions and channels.

The RK Series DVRs / NVRs allow a very refined authorization management





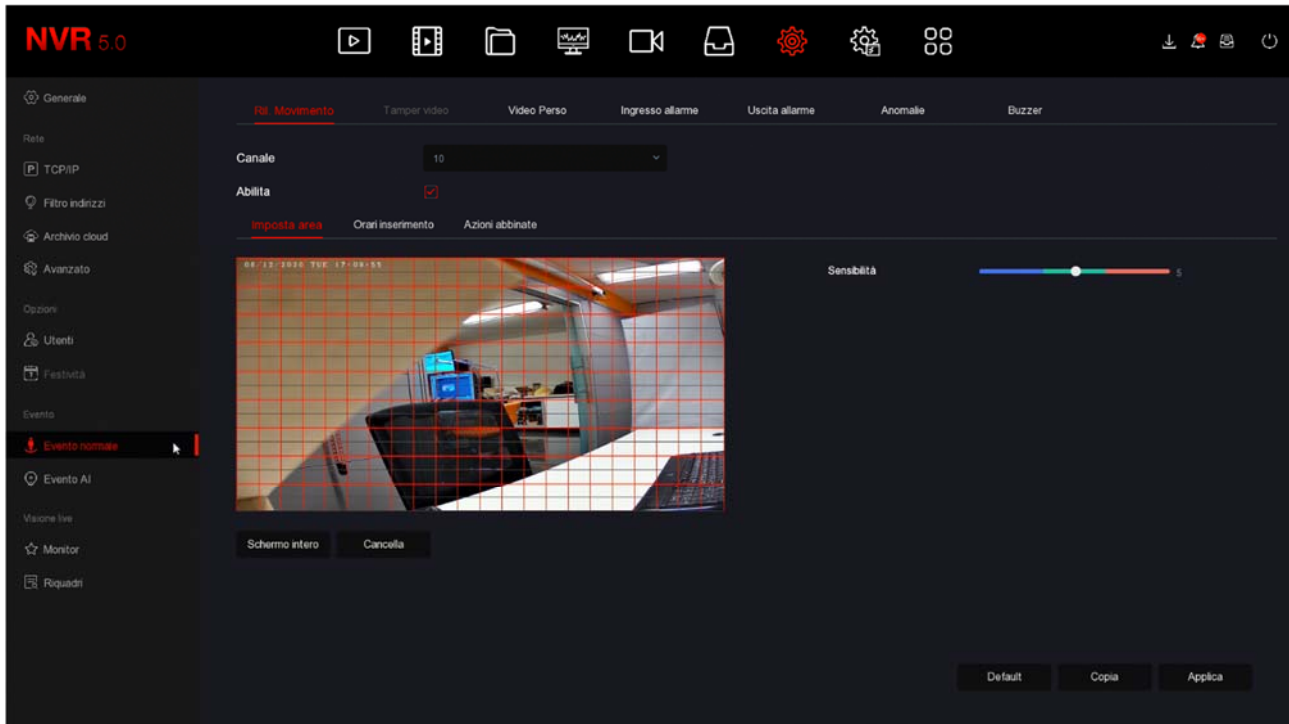
There are two pre-configured permissions levels that you can choose when creating the user: Operator User (access to all operations excluding configuration) and Generic User (access to viewing and playback only), but after creating the new user you can customize the access level as desired, for example by allowing access only to certain cameras.

FESTIVITY'

Function under development

NORMAL EVENT | MOTION DETECTION

In this section you can activate the motion detection function, also called: motion detection.



Motion detection is a very useful feature that allows the DVR / NVR to record only when an intrusion occurs, thus saving a lot of disk space. It also allows you to send push and email notifications. If you use motion detection, in addition to obtaining a much higher storage capacity, you will also have greater ease in consulting the video history because you will see at a glance the moments in which significant events have occurred and you will not have to scroll through long periods of empty environments, as happens with continuous recording.

The use of motion detection is generally advisable, but it also has disadvantages. You cannot use motion if subjects remain still for a long time (in motion detection the recording would stop) or in framing situations where motion detection cannot be adjusted effectively. Also you have to consider that if you record in motion you could lose some recordings where the subject is very far from the camera or in a corner of the frame.

Also remember that to have a detection as effective as possible you will have to carry out several tests to find the right compromise between high sensitivity and false detections.

UNDERSTANDING MOTION ADJUSTMENTS IN IP CAMERAS

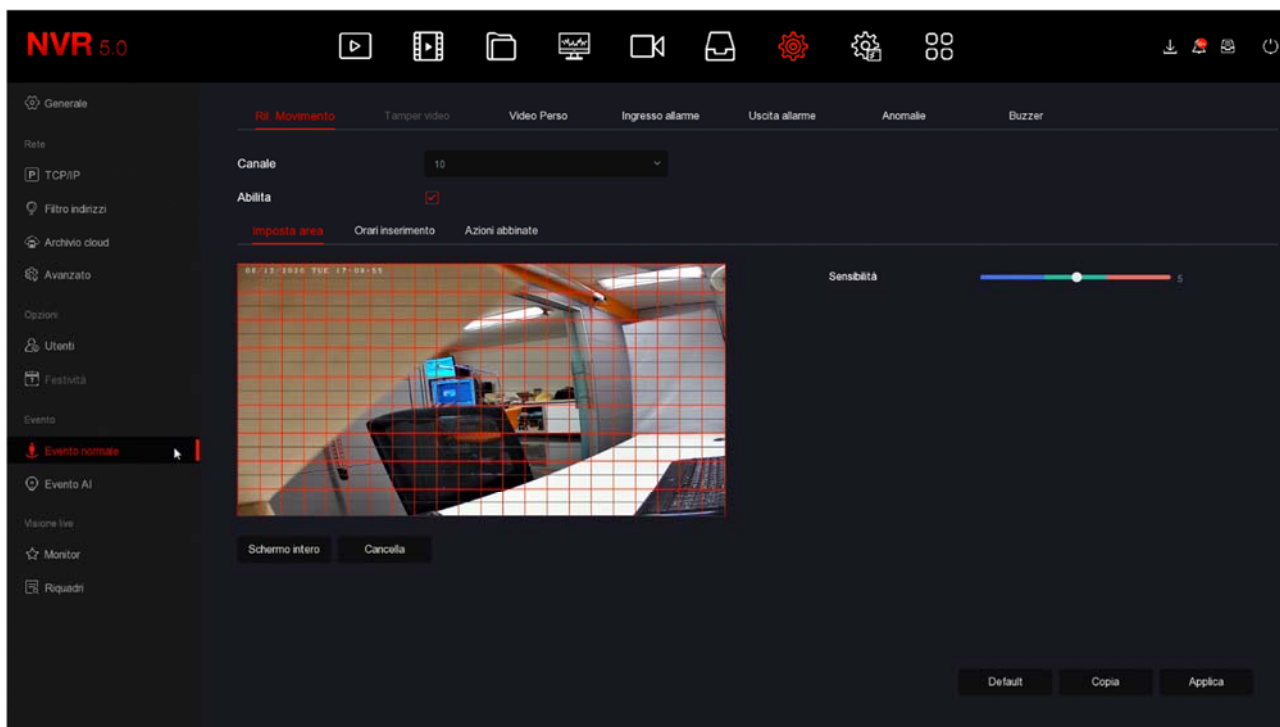
In analog cameras, all motion detection functions are performed by the DVR. In the

IP cameras, on the other hand, are not. In IP cameras the detection function is performed by the camera, while the NVR only carries out the alarm actions resulting from the detection. As a result, when you configure motion detection from the NVR, the detection settings, such as enable, area and sensitivity, are sent to the camera to be put into practice.

Depending on the camera chip, the NVR may fail to control these parameters (Area, Sensitivity and Enable) remotely and in this case **you will need to set these functions in the camera menu by connecting with the browser** directly to the camera.

Now let's see how motion detection is configured, option by option.

Remember that in this section you can only adjust the detection options, while **how and when to register you have to set it in the ARCHIVE section.**



CHANNEL - You can activate motion detection differently for each camera. Be careful not to underestimate this box, as each channel has a different schedule, so you have to configure all channels individually one by one.

SET AREA - You can define in which area of the visual field the motion detection is carried out. Areas not covered by the red grid will be ignored for detection purposes. To select the detection area, color the image frames with the mouse. If you want the detection to take place on the whole image, select full screen or color all the squares by dragging the mouse. Depending on the type of DVR / NVR, the active area can also be shown in gray instead of the red grid. If after some tests you have the impression that this adjustment is not effective it is because your camera requires you to configure the



detection directly in the camera menu and not through 'NVR.

SENSITIVITY - You can choose a sensitivity value to exclude, as far as possible, false detections due to small movements. Remember that no matter how much you can set the sensitivity, you can never totally exclude the probability of false interventions due to multiple factors such as changes in ambient brightness, insects, heavy rain, etc. If after a few tests you have the impression that this adjustment has not effectiveness is because your camera requires you to run it directly in the camera menu and not through the 'NVR.

ENABLE - Check this option if you want to use motion detection on the selected channel. If after some tests you have the impression that this adjustment is not effective it is because your camera requires you to run it directly in the camera menu and not through the 'NVR.

ARMING TIMES - For each day of the week you can define two enabling times if you want motion detection to be active only in certain periods. This setting is made for each day of the week. If you want motion to be always active, select ALL days and set a time slot from 0 to 24.

COMBINED ACTIONS

ACOUSTIC ALARM - You can activate the internal buzzer of the DVR / NVR at each motion detection. It is a convenient function for having a local sound alert. We recommend that you enable this function when adjusting the motion function, so you can hear if the alarm goes off when you move in front of the camera.

EMAIL NOTIFICATION - You can send an email in case of detection. For the email to start successfully you need to check that the motion clicks properly (check if the red man appears on the overlay) and that the SMTP network settings are correct (use the test button in the email section)

RECORD - You can choose to start recording after motion is detected. Or you can use motion just to launch alerts and record continuously. **ALARM OUT** - You can choose to activate the output of the NVR following motion detection. **FULL SCREEN** - You can automatically bring the alarmed camera to full screen. The time spent on full screen is defined in the general options.

COPY - With this button you can copy the motion settings of this channel to other channels.

DETECTION TEST

To verify that your motion settings are effective you need to perform walk tests by moving within the field of view, as an intruder might do. It is ideal to have a collaborator to do these tests more comfortably.

When the motion is taken you must see the red man icon that appears superimposed on the image. If you've scheduled motion recording, you should also see the green camera icon light up.



Channel in recording



Motion detection alarm channel

If during the test you see that the little red man does not appear during an intrusion you must check the motion detection options described above. If, on the other hand, the red man appears, but not the green camera, it is because recording in the event of a motion alarm is not scheduled, so check the table in the ARCHIVE section.

NORMAL EVENT | LOST VIDEO

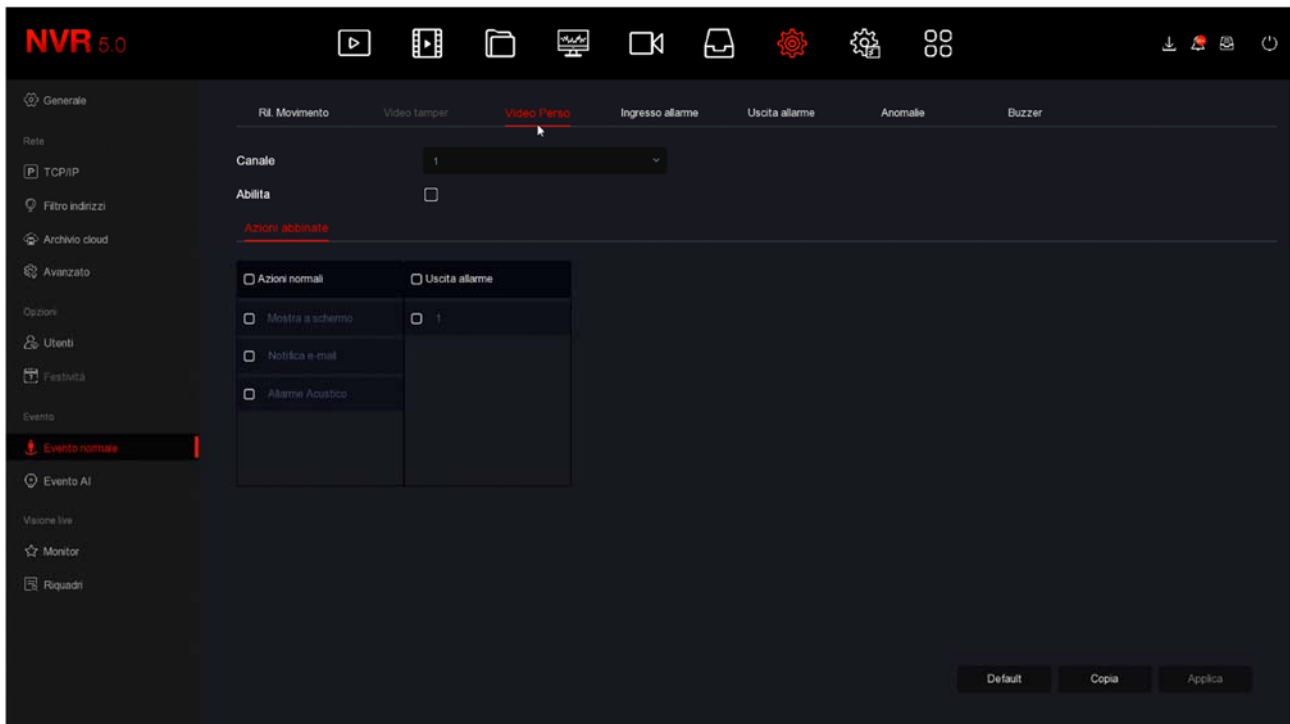
In this section you can activate alarm actions in case of loss of a video signal. For each camera you can activate:

Screen message

Send email

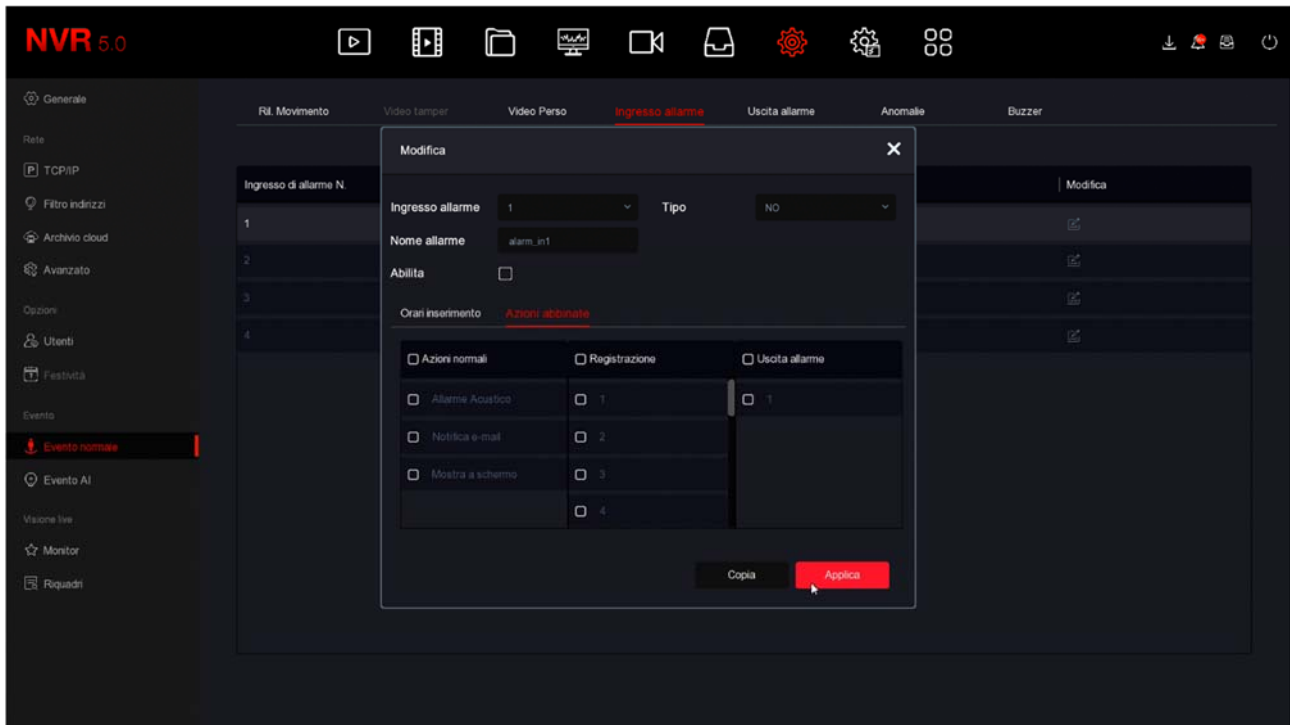
Activation of the internal buzzer

Alarm output (if present)



NORMAL EVENT | ALARM INPUT

If your DVR / NVR has alarm inputs here you can configure them



ALARM INPUT - Each terminal block input has its own programming

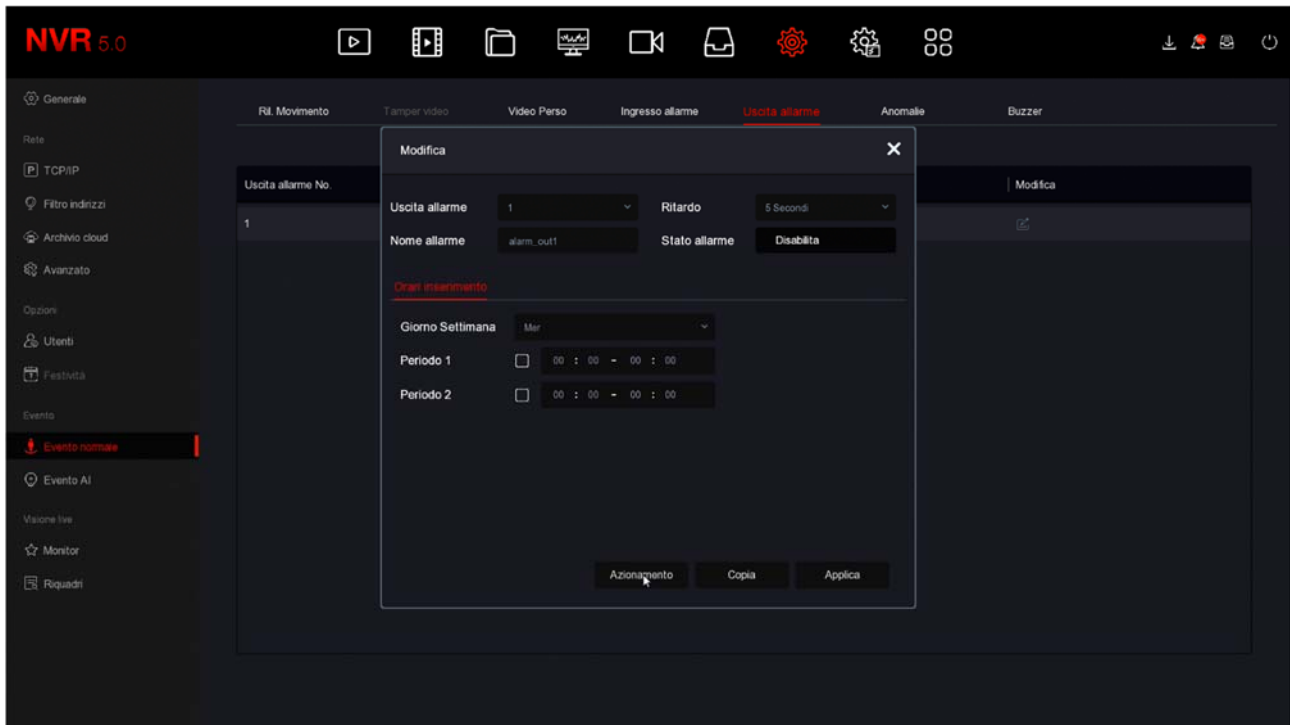
TYPE - You can choose NO (Normally open, alarm on closing) or NC (Normally closed, alarm on opening) operation

ALARM NAME - Identifies the function of the input

ARMING TIMES - You can enable the inputs only in weekly time bands (2 per day) **COMBINED ACTIONS** - With the activation of the input you can activate: acoustic alarm in the device, notification via email and notification on the screen. Also you can record one or more channels and activate the alarm output.

NORMAL EVENT | ALARM OUTPUT

If your DVR / NVR has alarm outputs here you can configure them



ALARM OUTPUT - Each output on the terminal board has its own DELAY programming - You can define how long the output remains active in the event of an alarm

ALARM NAME - Identifies the function of the output

ALARM STATUS - Indicates the status of the alarm output at that time

ARMING TIMES - You can enable the entrances only in certain weekly time slots (2 per day)

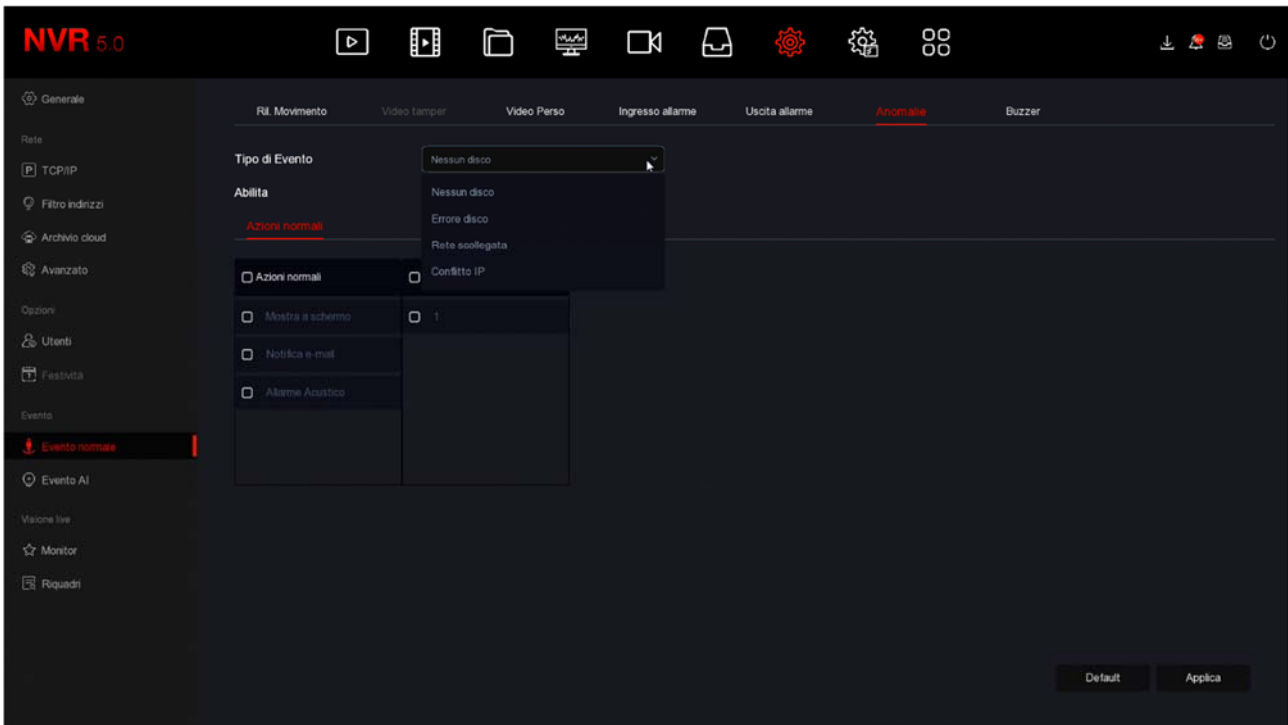
OPERATION - With this button you can operate the output manually.

NORMAL EVENT | ANOMALIES

In this section you can enable a notification in case of anomalous events such as: Disk not present

Disk write errors Network disconnected

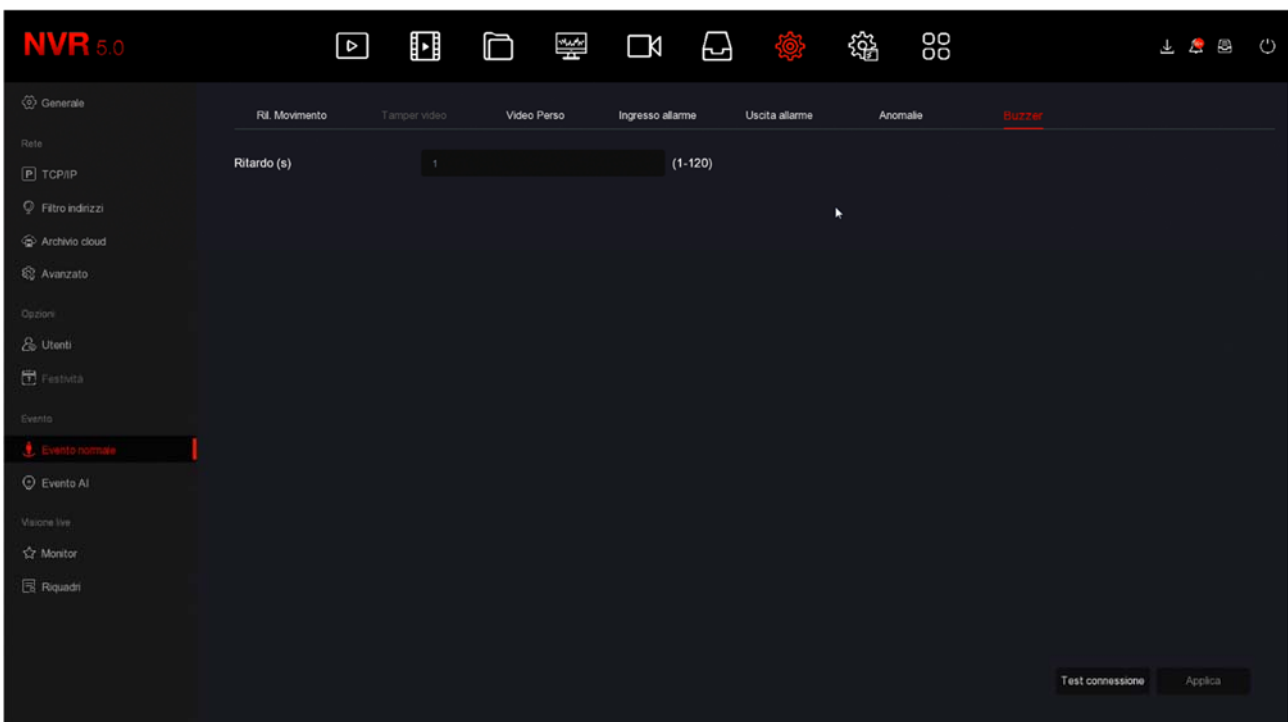
IP conflict on the network.



You can enable a message on the monitor, the sending of an email, the sound of the internal buzzer and the activation of outputs.

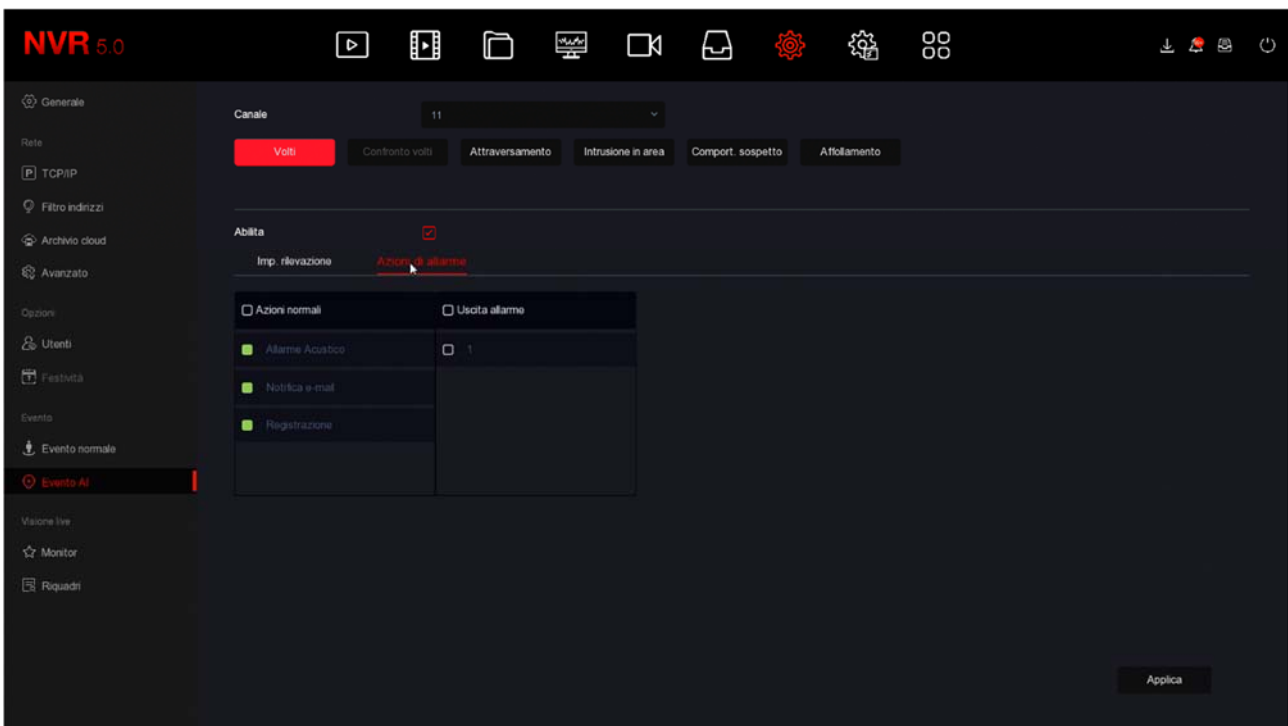
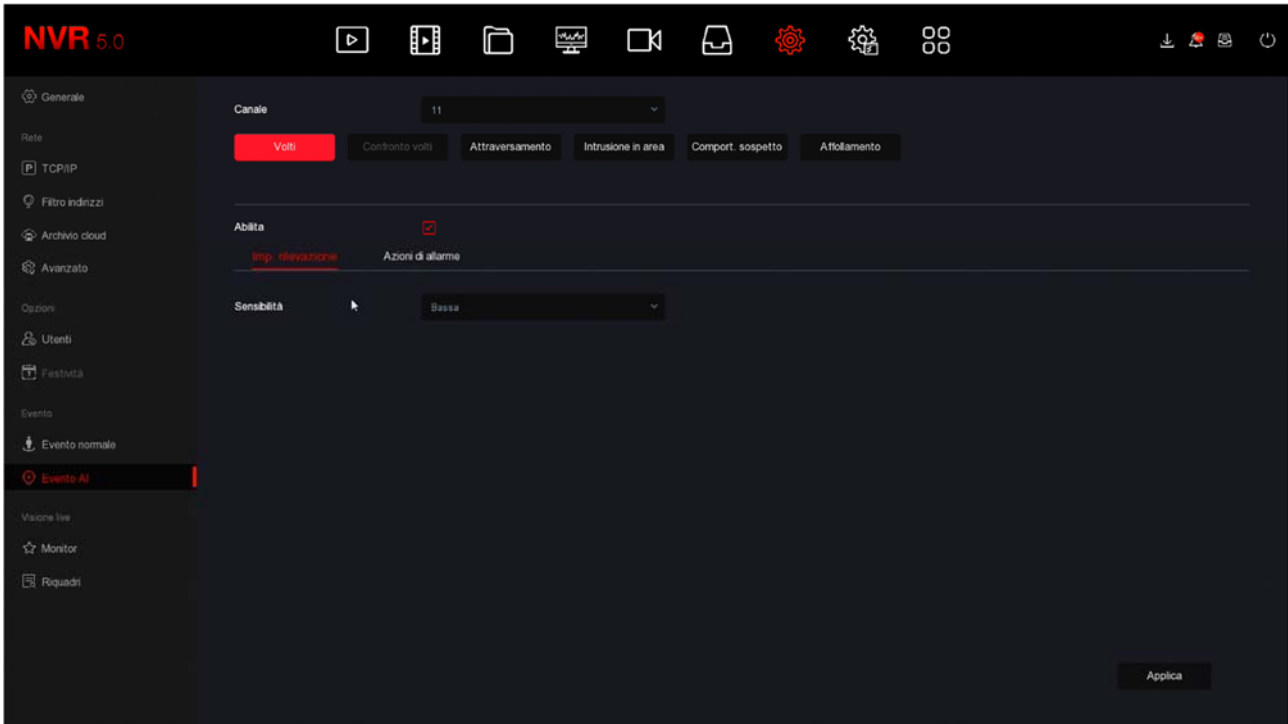
NORMAL EVENT | BUZZER

In this section you set the activation duration of the DVR / NVR internal buzzer



FW EVENT | FACES

If you have connected one of our RK cameras with face recognition to your NVR, here you can set the detection. These parameters are not available on channels with other types of cameras.



SENSITIVITY - Adjusts the sensitivity of the detection



ALARM ACTIONS - You can define the alarm actions to be performed in case of detection: activation of the buzzer, sending of email, Recording, Activation of output.

In face recognition there are other adjustments, such as loading the photo database, which can only be carried out from a PC, with the IoVedo.RK software.

FW EVENT | CROSSING / INTRUSION / SUSPECT COMPOSITION / CROWDING If you have connected one of our RK cameras with intelligent detections to your NVR, here you can set the various detections of line crossing, intrusion, stay in the area and crowding in the area.

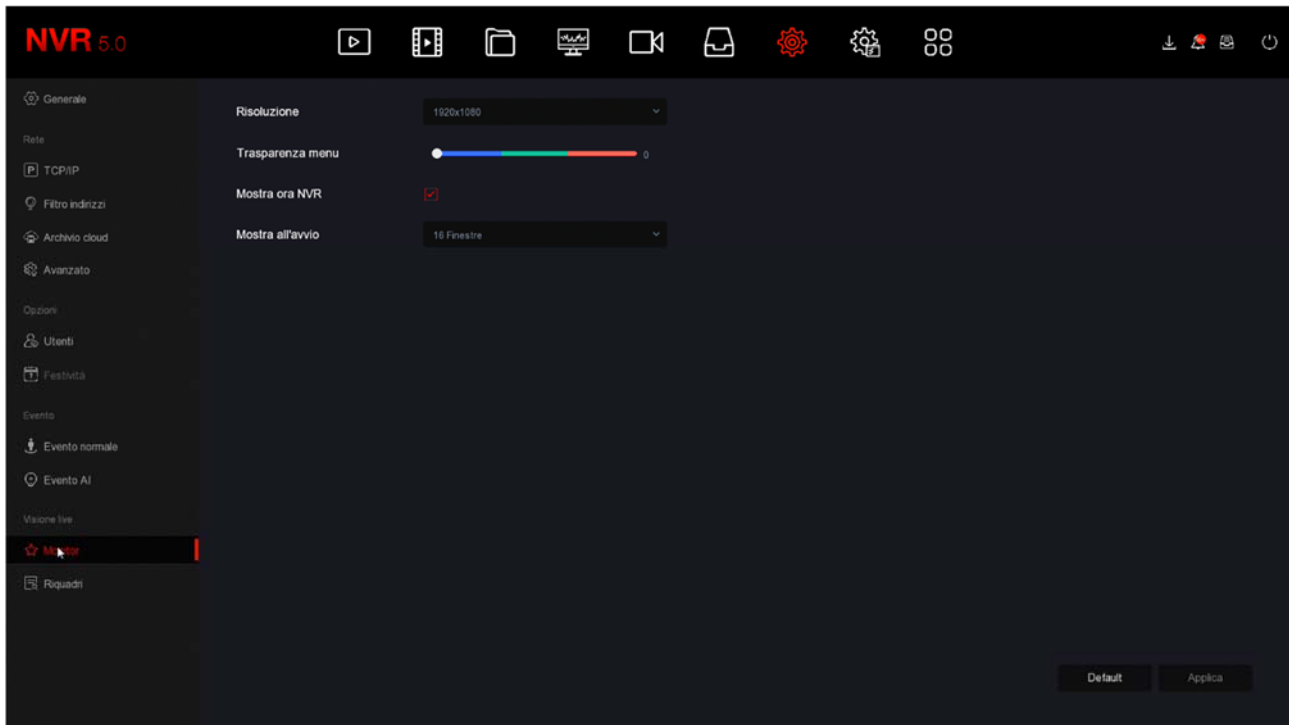
The cheapest cameras with human detection only have access to the intrusion function in the area, while the most advanced models have access to all video analysis.

These parameters are not available on normal camera channels without human detection.

Note that the adjustments of these functions reside in the camera. The NVR allows you to configure them from the NVR and send them to the camera. Refer to the RK Series camera setup manual for adjustments to these functions.

MONITOR

RK Series NVRs / DVRs allow you to connect HDMI and VGA monitors. In this section you can set some options related to the monitor.



RESOLUTION - At the factory, you will find this value set at the low value, such as 1280x1024. This is to make sure that the system is compatible with any monitor, even a small one. If your monitor supports higher resolutions, you may want to set a higher resolution. Typically all modern monitors support the maximum resolution 1920x1080 (FullHD 1080P). If you are connecting a large TV, these DVRs / NVRs also support 4K resolution.

If when starting the DVR / NVR you see only our initial logo on the screen and then nothing more, this means that the resolution produced by our NVR / DVR is not supported by your monitor. Many monitors in this case should show you a signal out of range message, or similar indications in English. You must then connect another monitor, in order to then enter the DVR / NVR menu and change this resolution so that it is supported by your monitor or TV. The most common resolution today is 1920x1080 (1080P) and is supported by all monitors, both PC and TV.

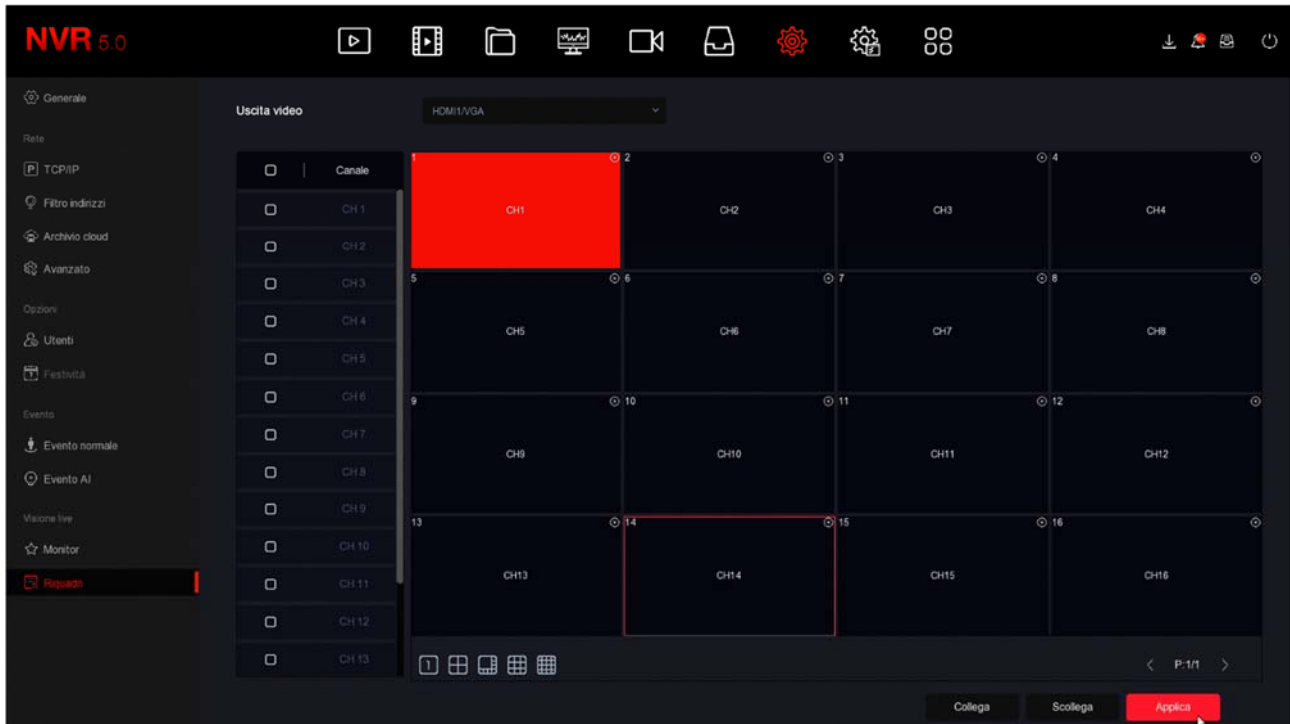
MENU TRANSPARENCY - You can make the menu windows slightly transparent to see the cameras in the background.

SHOW NOW DVR / NVR - Overlay the time of the DVR / NVR

SHOW AT STARTUP - You can decide how many panes to show at startup of the DVR / NVR. This is an important option to set based on how many cameras your system has, to avoid having to manually reset the preferred screen division in the event of a network failure.

BOXES

In this section you can customize the live viewing window to adapt it to the number of your cameras and your taste

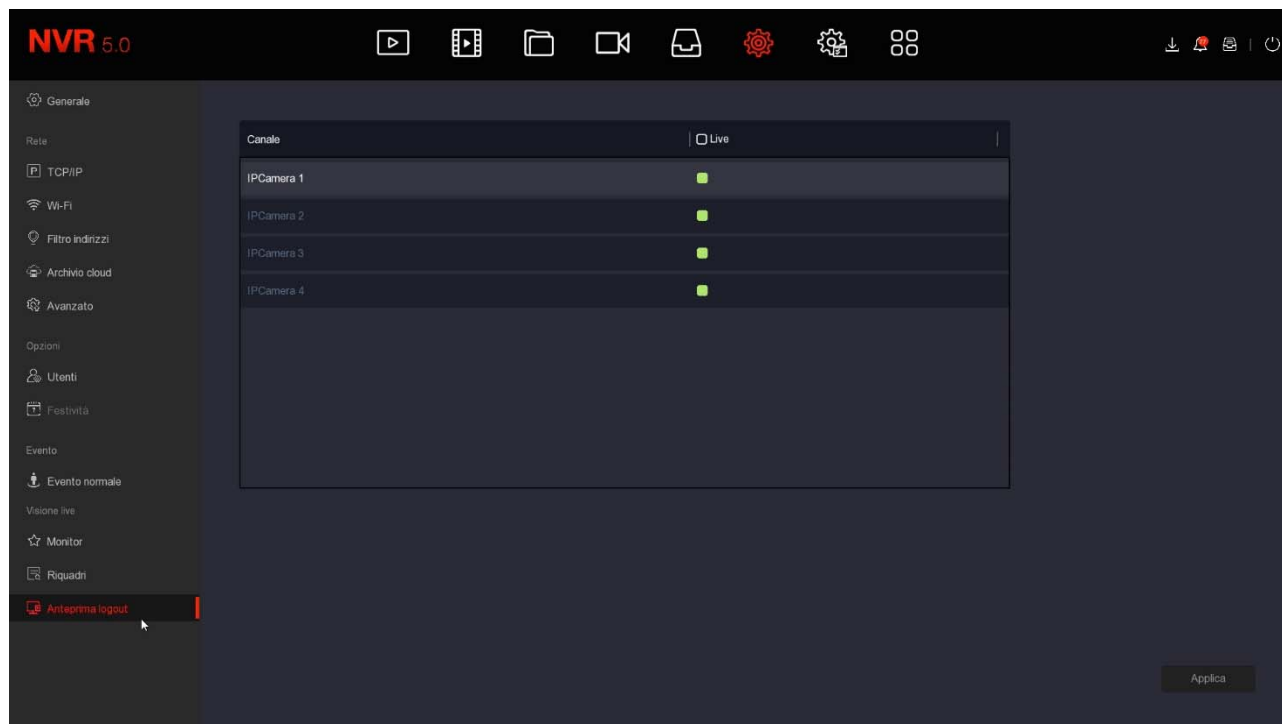


First choose the screen split you prefer. You can choose a single screen with all the cameras or several screens with 1,4,8,9,16 cameras, depending on the number of channels that your NVR / DVR can manage. Then select a box and double click on the channel number you want to match.

CONNECT - By clicking this button the composition is used in the live view. DISCONNECT - By clicking this button the composition is ignored and the standard display is restored.

PREVIEW LOGOUT

In this section you can select which cameras are shown in live view even without logging in. By default, all cameras are displayed even without entering the access password. If you want some cameras to be shown only after authentication you can disable them on this page.



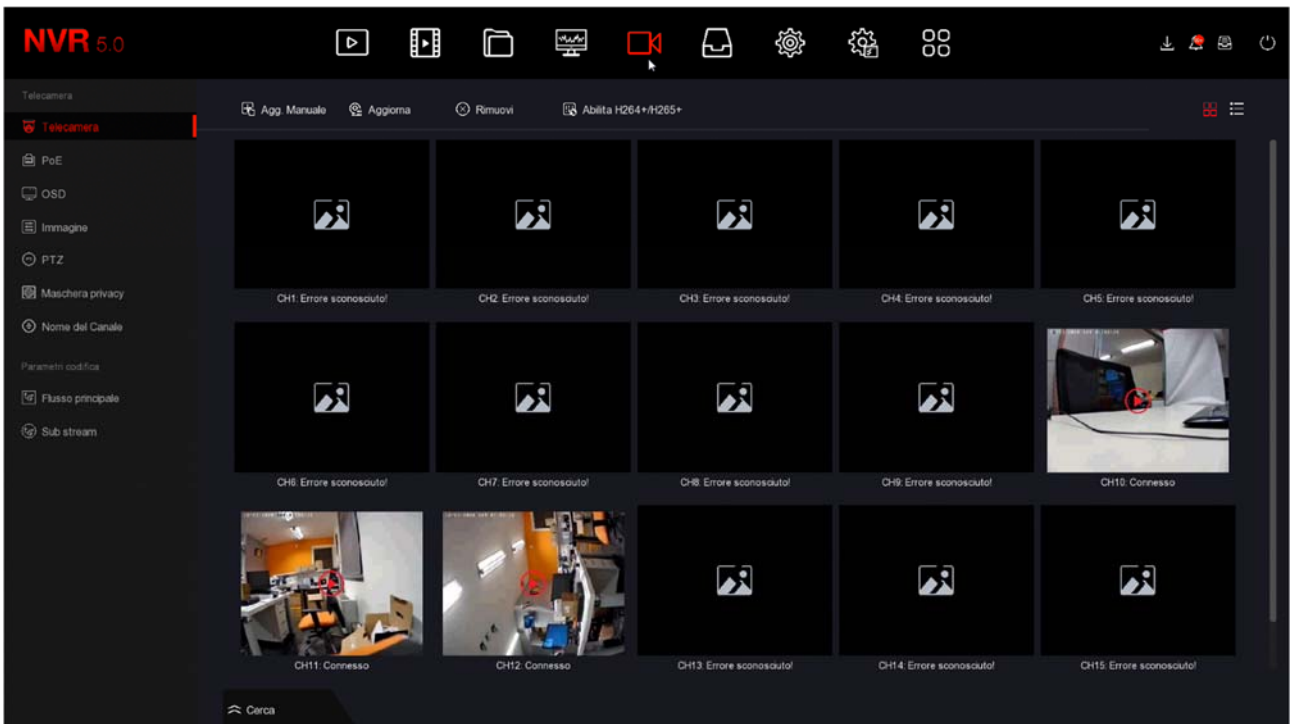
CAMERAS section

Click the CHANNELS button to open the video channel configuration page



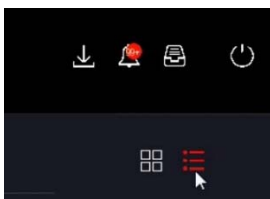
CAMERA

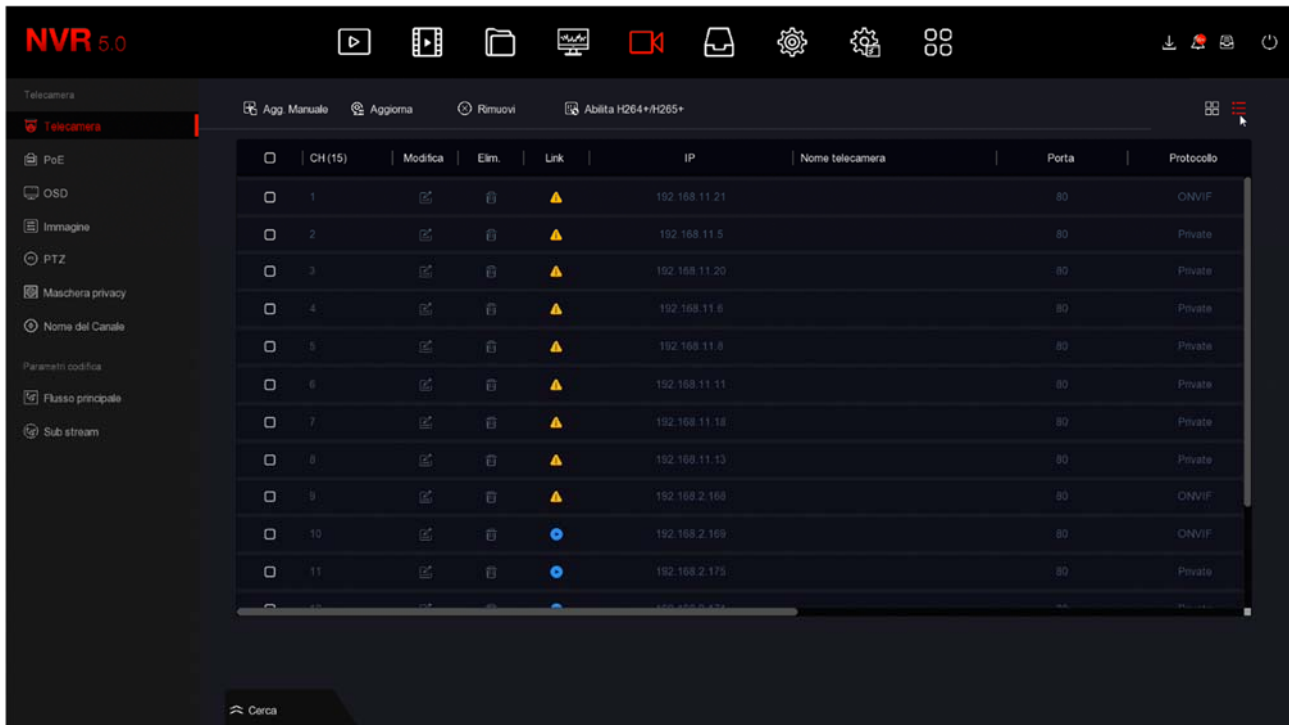
In this section you can upload IP cameras and configure channels



In this section you can add IP cameras to your NVR / DVR.

With the button at the top right you can switch between large icons with preview to list mode.





ATTENTION: The procedure for **add cameras** IP to your video recorder is explained in the installation manual and use the SEARCH button at the bottom left to activate the search for cameras on the network. The complete procedure is explained in the installation manual

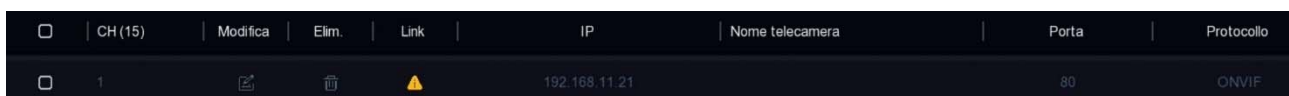


ADD MANUAL - Allows you to enter the data of a new camera manually when it is not possible to use the network search function, for example for connections to other networks. **UPDATE** - Refresh the table

REMOVE - Deletes the selected cameras freeing the corresponding channels

ENABLE H264 + / H265 + - Enables the most recent compression type automatically on all channels.

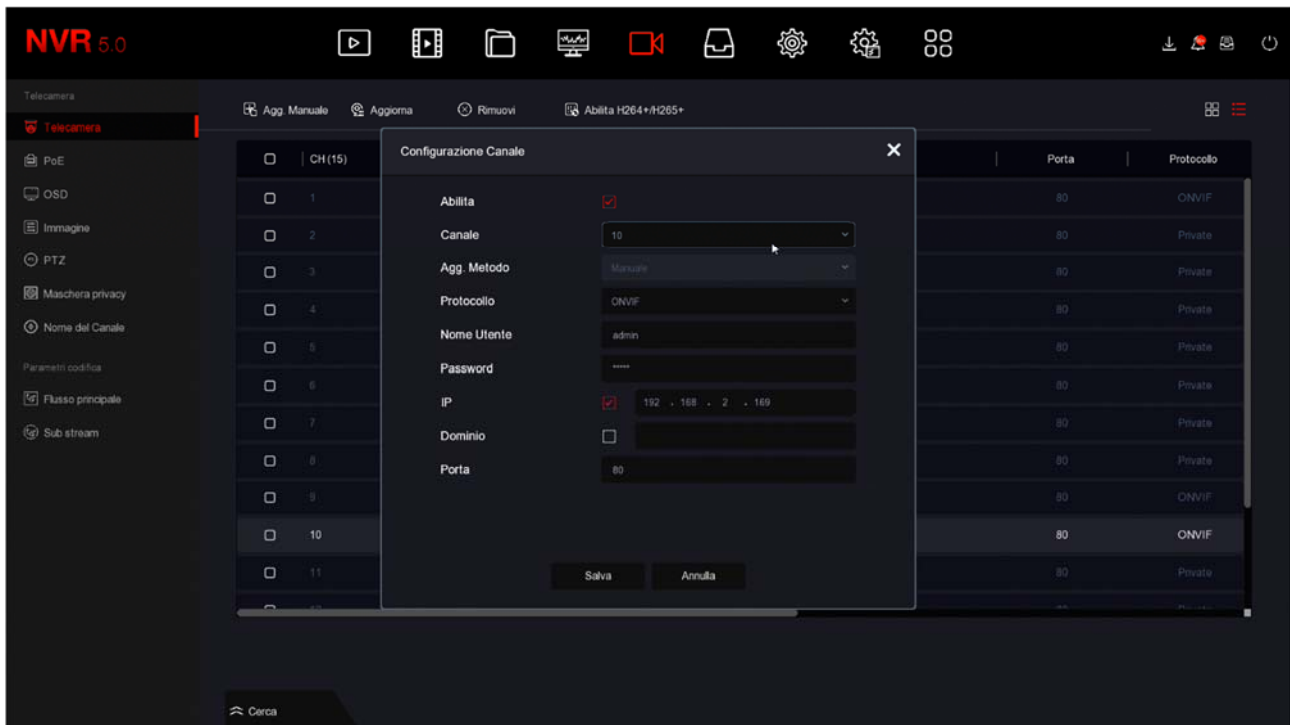
The channel table includes various indications and commands



DELETE - Delete the camera and free the channel

LINK - Shows a yellow triangle if the connection is not in progress or a blue dot if the camera is connected. If you click the blue dot you can view the camera in a preview box.

EDIT - You can manually edit the camera connection data



CHANNEL - The channel of the NVR you are configuring

ADD METHOD - Indicates the video input management method. Plug & play is the factory setting of the channels paired with the poe ports of the NVRs. Provides auto configuration when you are connecting an RK Series camera to the NVR via an internal POE port. If you want to use the channel for something else, for example for an external network camera or a non-RK camera, you must set this item to MANUAL.

PROTOCOL - Choose PRIVATE if you are connecting to an RK series camera, or choose ONVIF if you are connecting another type of camera that uses this standard protocol. You can also choose RTSP to receive a video stream from video devices that do not support the ONVIF protocol

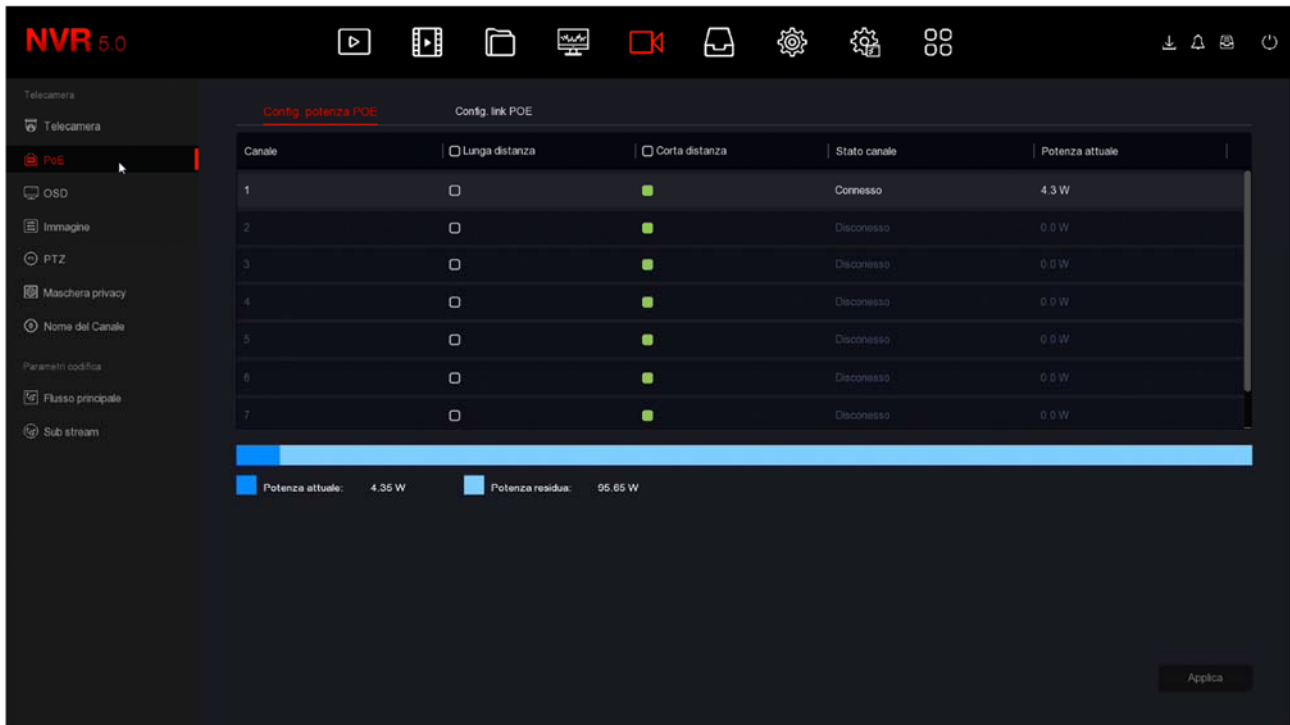
USER NAME / PASSWORD - These are the camera access credentials.

IP / DOMAIN - You can enter the IP of a camera or the name of a domain if, for example, you want to connect to a DDNS service

PORT - It is the communication port that the camera uses according to the protocol you have chosen. Our cameras use port 80 for the private and onvif protocol and 554 for the RTSP protocol. Check the manual for other cameras.

POE - POE POWER

This section is only available in NVRs with integrated POE ports.



It shows the status of the doors with the power absorbed by each camera and the total output and residual power of the NVR

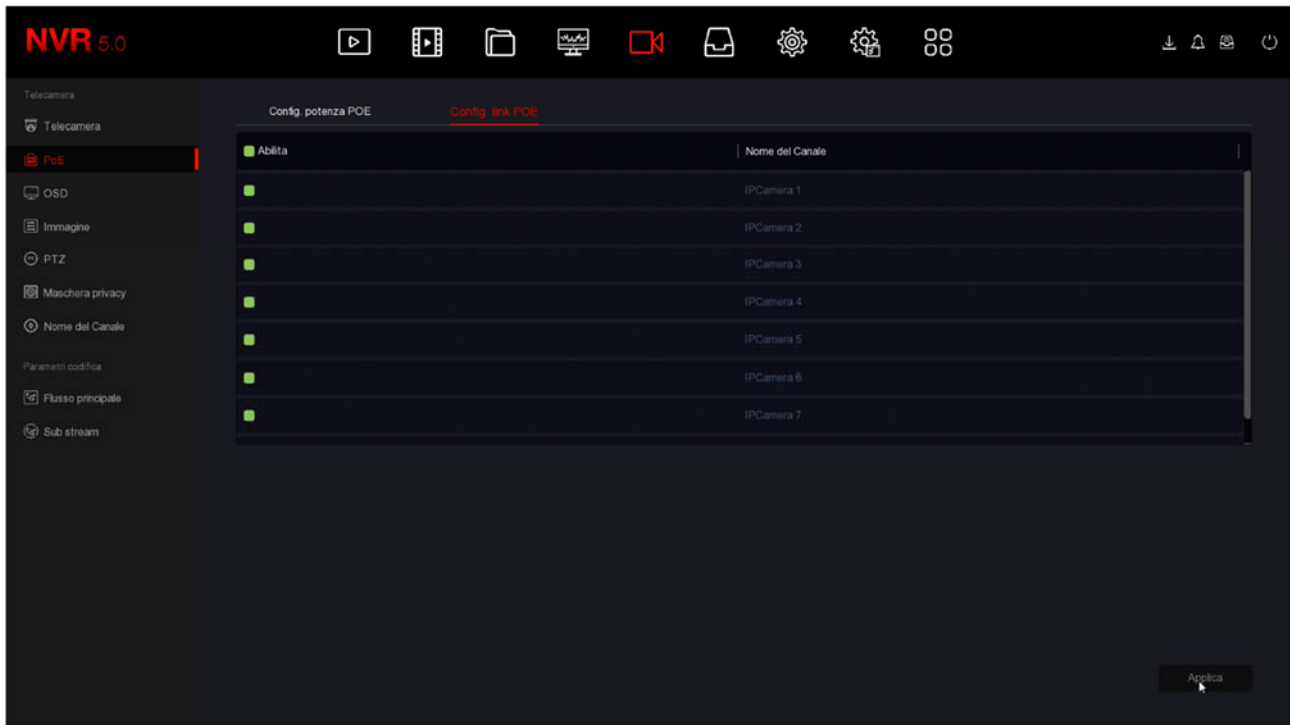
LONG DISTANCE - Enables the Extended POE power supply on the input which allows wiring up to 250 m. with maximum bandwidth 10MB

SHORT DISTANCE - Ability on the input the standard POE power supply that allows wiring up to 100 m. with maximum bandwidth 100MB

POE - LINK POE

This section allows you to permanently connect the physical inputs of the POE ports on the back of the NVR to channels 1-4, 1-8 or 1-16 of the NVR. NVRs with POE ports have this active link at the factory so that port 1 is reserved for channel 1, port 2 for channel 2, and so on.

In this factory configuration if, for example, the NVR has 4 POE ports, the channels 1 to 4 will be reserved for the ports of the NVR while any external cameras will be inserted from channel 5 onwards.

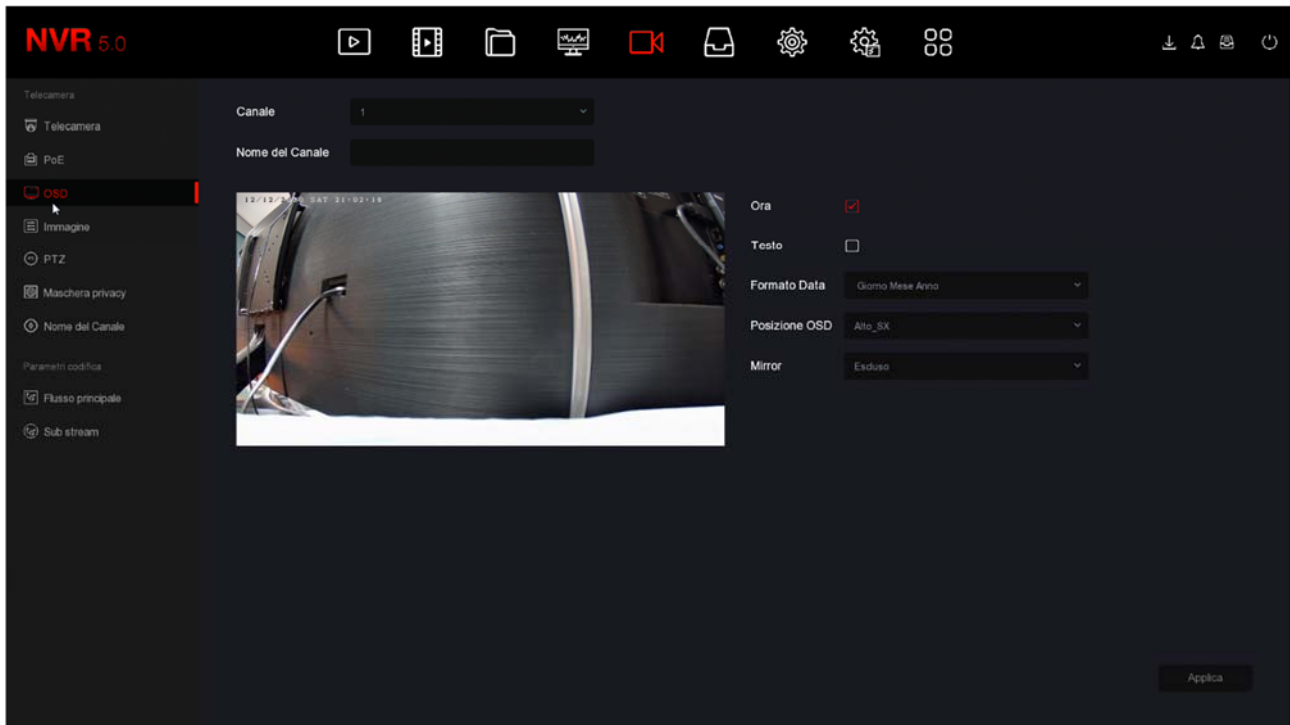


If you connect the cameras only to the ports of the NVR you can keep this factory setting. If, on the other hand, you connect some cameras to the NVR's POE ports and others externally to the network, then you should disconnect the poe ports you don't use in order to have these channels available for the external cameras.

OSD

In this section you can define the screen overlays for each camera.

This is a function you can use only with analog cameras or with our RK Series IP cameras connected with PRIVATE protocol (not Onvif) . With other IP cameras you need to set overlays directly in the camera's internal menu.



You can superimpose the date and time (TIME), choosing the date format, and also the name of the channel (TEXT), which is entered in the box at the top.

The position of the overlay can be chosen in different positions on the screen (OSD POSITION).

There is also the possibility to flip the image horizontally and / or vertically (MIRROR)

IMAGE

In this section you can adjust the image parameters to compensate for imperfect environmental situations. First choose the channel on which to operate in the box above, then act on the sliders by checking the effects of your changes directly in the preview.

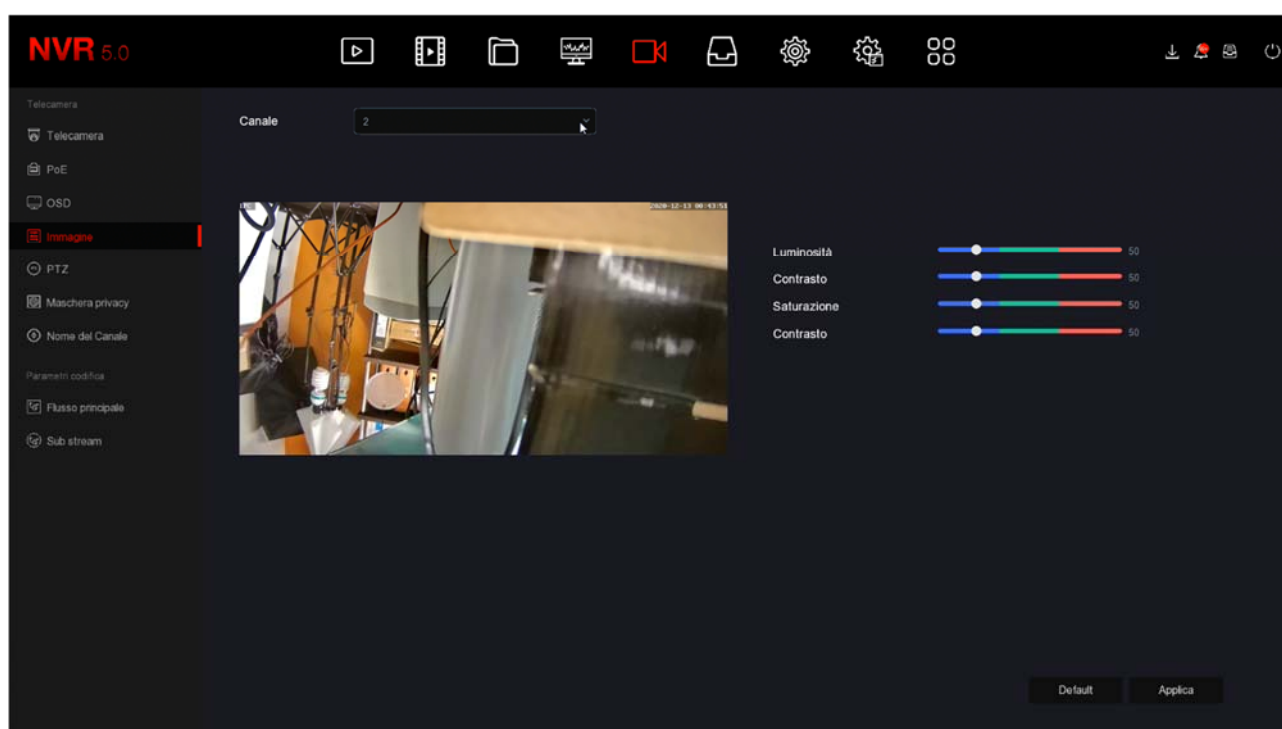
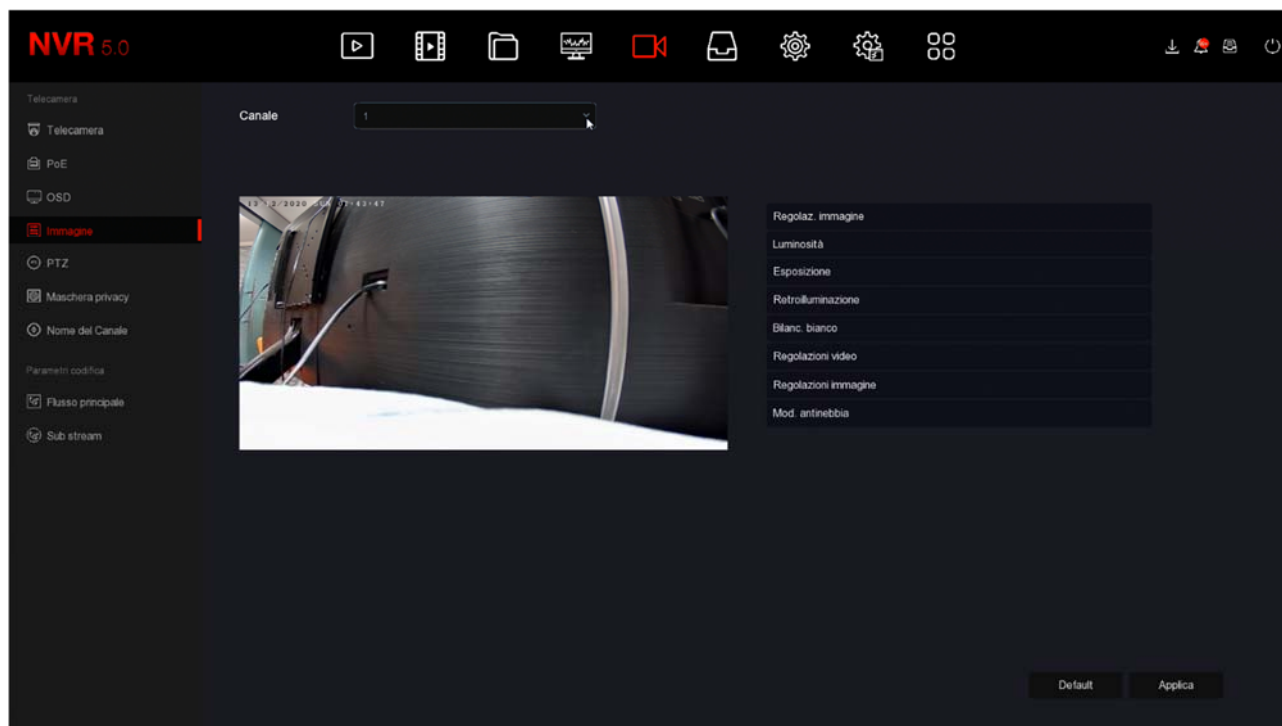
If you connect one of our RK series cameras via the private protocol you can adjust all the camera image options, while with different IP cameras or analog cameras you can only adjust the basic parameters

CONFIGURATION MANUAL

RK SERIES - NVR and DVR



Page: 45

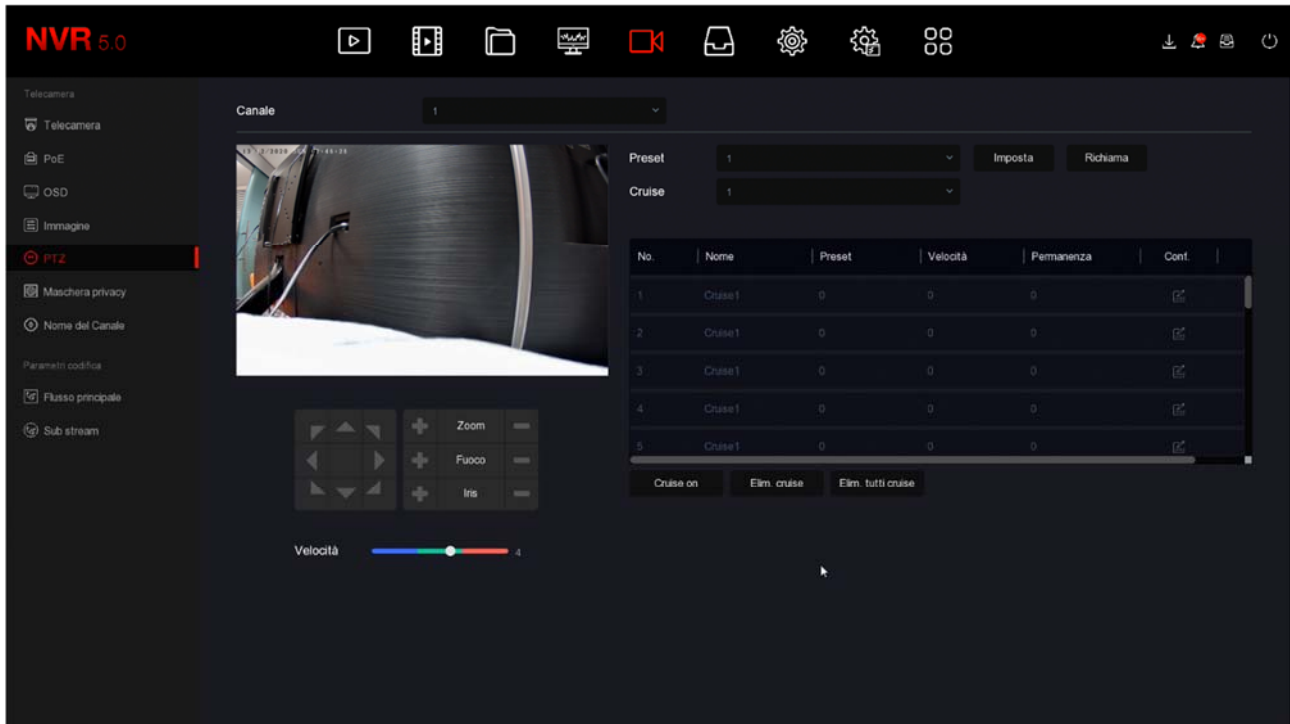


PTZ

In this window you can set various functions of the motorized cameras.

You can set the presets (prepositions) and tours (or cruises) of the camera and then recall them at will during live viewing.

With the buttons you can control the camera and check the position in the preview



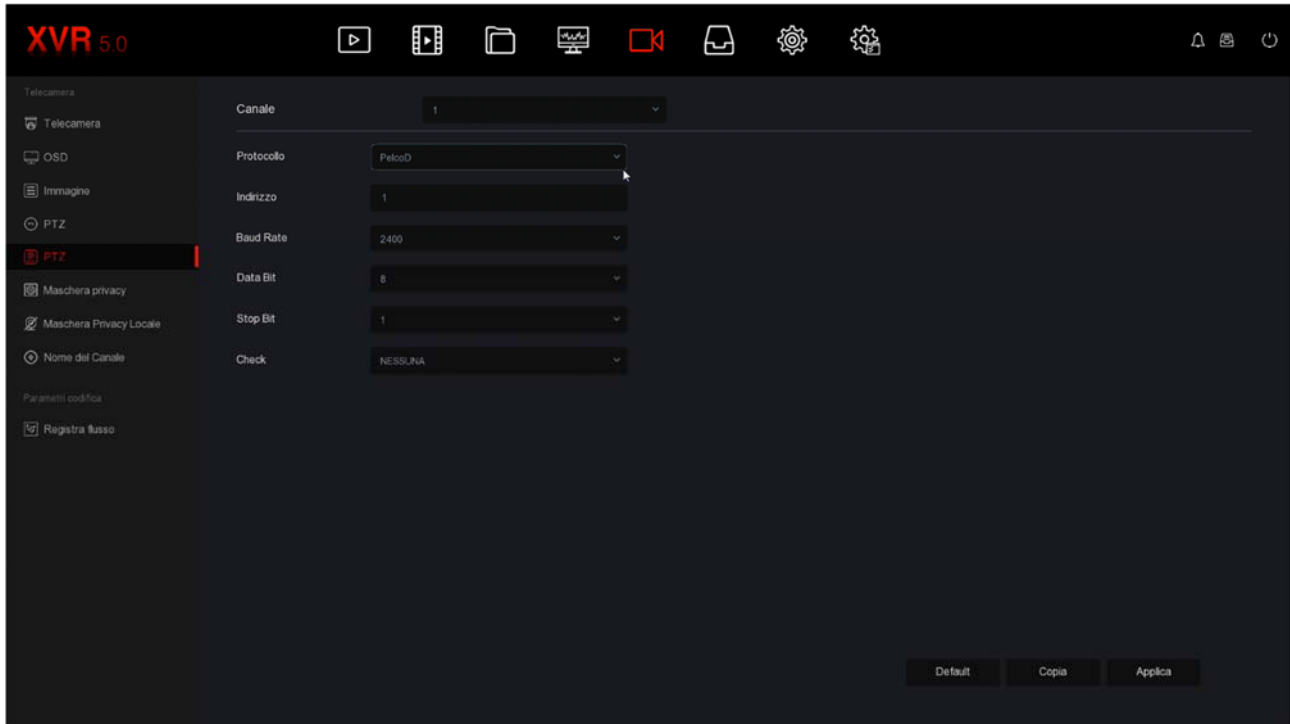
To set a preset choose the preset number, position the camera and then press SET. To recall the preset press RECALL.

To set a cruise (tour between various presets) choose the Cruise number (if the camera manages more than one) and then with the CONF button. set the different presets that make up the tour and the time spent on each one.

ATTENTION - Not all motorized cameras allow you to configure presets and cruises from the DVR / NVR. In many cases it is necessary to make these settings in the camera menu by referring to its manual

PTZ - SETTINGS

In this section you can set the communication protocol to be used for controlling the analogue motorized cameras. It is a section that you can only find in our DVRs with BNC inputs because it is relevant only for analog PTZ cameras and does not concern IP cameras.



You can choose PelcoD, PelcoP, UTC protocol

PelcoD - It is used for all DSE motorized cameras that are controlled via the RS485 serial port on the back of the DVR. Address, Baudrate, Data Bit, Stop bit and Parity Check must be the same as those set in the camera. The most common baud rates are 2400 and 4800 baud. Each camera has its own address which usually starts from the number 1 which is factory set in the cameras.

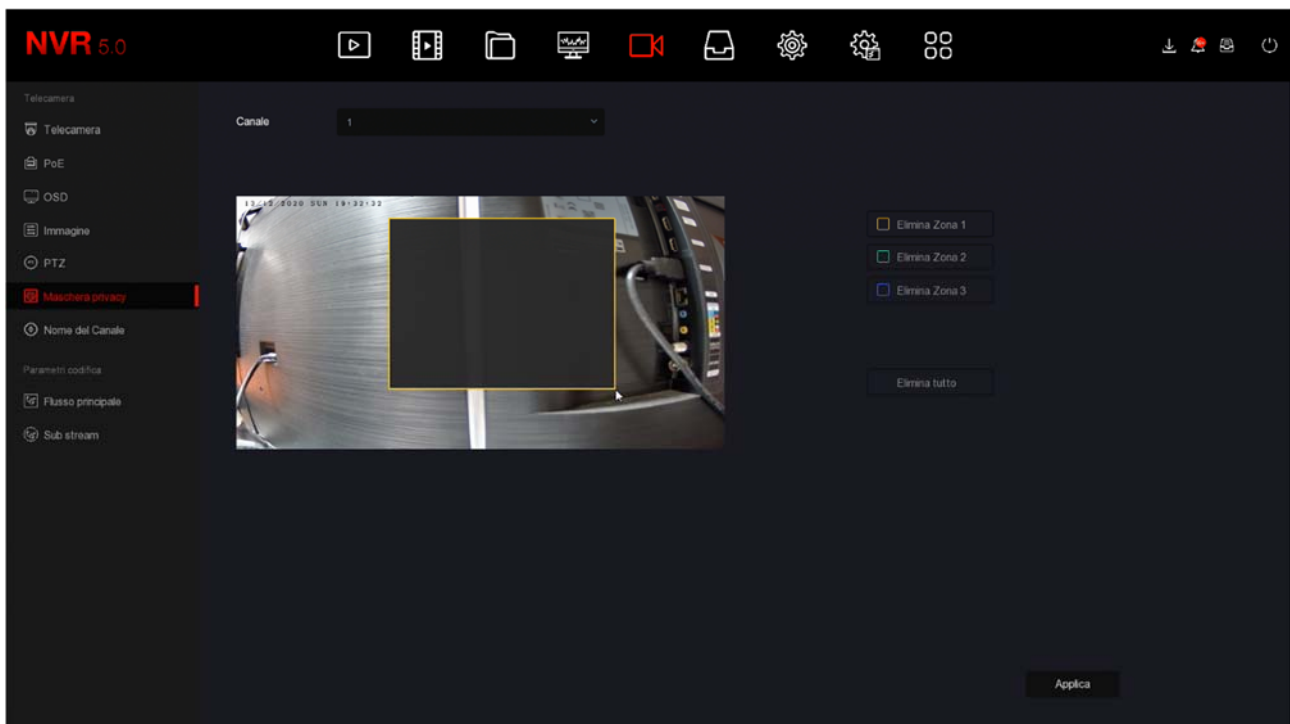
PelcoP - Another variant of the PelcoD, to be used with cameras from other manufacturers

UTC - The UTC protocol is used to control the latest analog cameras which, thanks to this protocol, are able to receive commands along the video cable, without the need for an additional control pair. It is the factory-enabled protocol on all analogue channels, with which you can control the OSD menu of the cameras, the motorized zoom and also the movements of the motorized cameras that support this protocol. With the UTC protocol you don't have to set any communication parameters.

PRIVACY MASKS

In this window you can trace with the mouse up to 3 masking areas in the image to obscure areas to protect privacy. Typically this function is used to darken areas outside the property.

This is a function you can use only with analog cameras or with our RK Series IP cameras connected with PRIVATE protocol (not Onvif) . With other IP cameras you have to set the privacy masks directly in the camera settings.

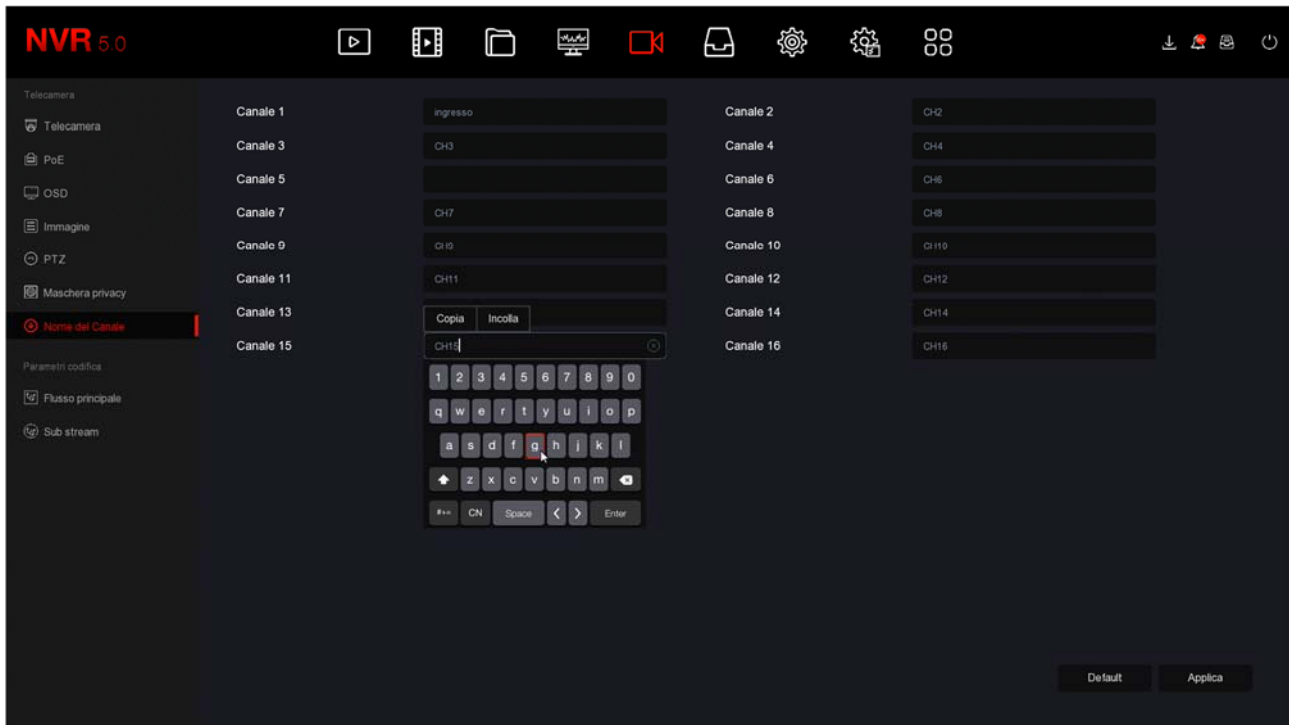


Choose the channel to operate on in the box above and then draw the mask directly on the preview. You can define up to 3 rectangular privacy masks. If you are not satisfied, use the delete buttons.

In the analog DVRs only you can insert two different types of masks: the standard masks and the local masks. Local masks are masks that appear only in live view while the recording is not masked.

CHANNEL

In this window you can assign a custom name to each camera for easy event identification.

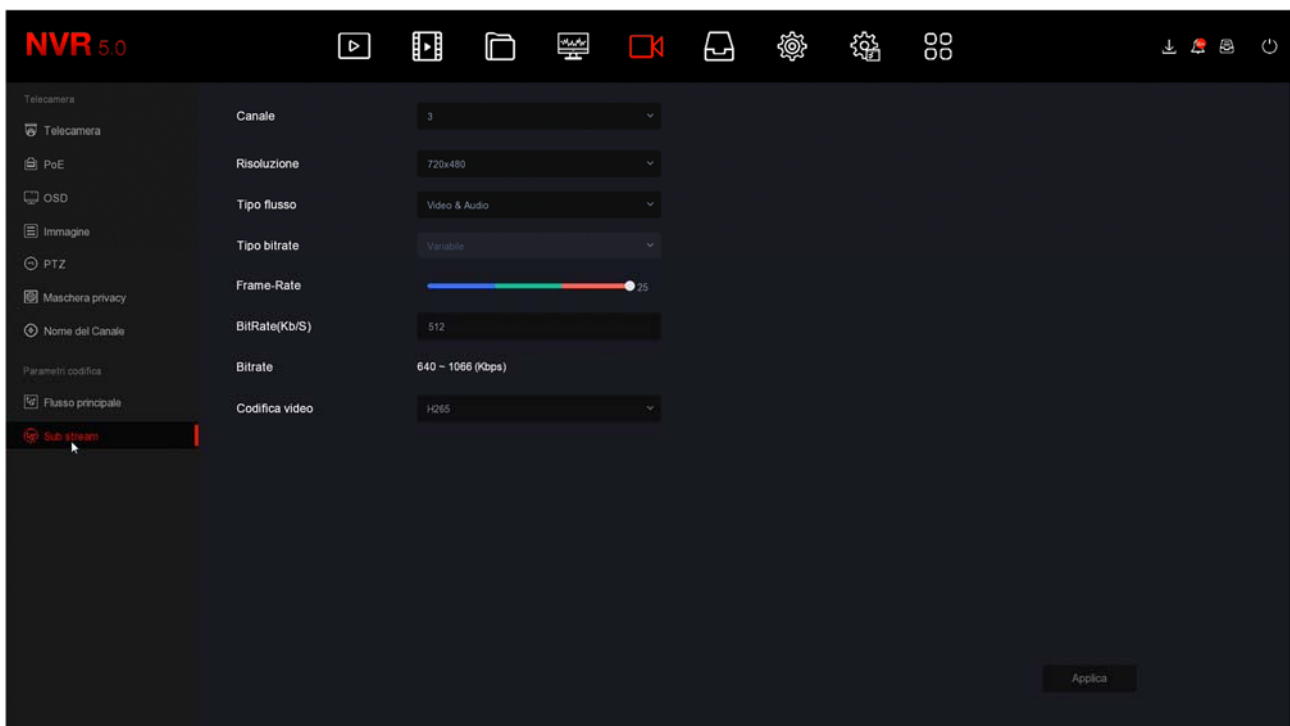
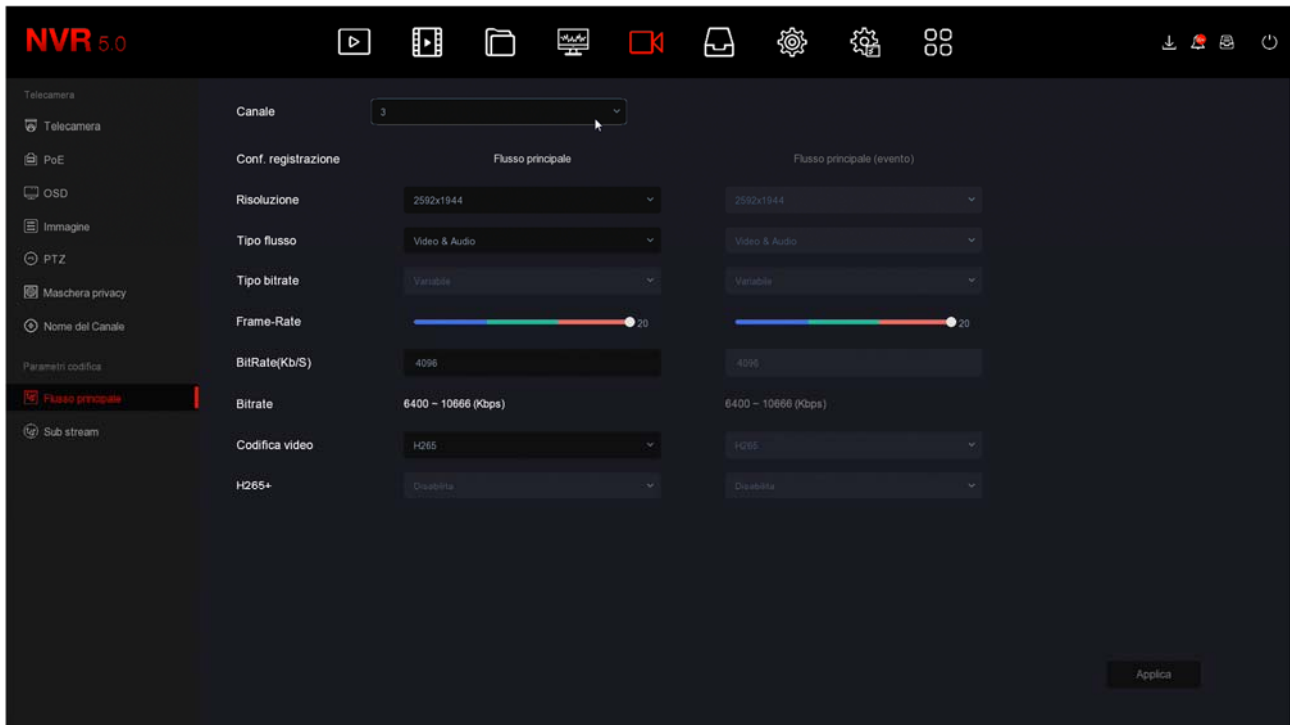


MAIN STREAM / SUB STREAM

In these windows you set the main and secondary video streams of the cameras. Each camera can generate two video streams: the main stream (mainstream) and the secondary stream (substream). The main video stream is the one at the highest resolution that is used in full screen viewing and recording. The secondary stream, or sub stream, is the lightest one that is used in the vision of many cameras on the screen and via the Internet.

IN IP CAMERAS Video streaming adjustment is done in the camera settings, not via the NVR. This is because the NVR does not process the incoming video from the camera, but merely receives it. However, our NVRs allow you to adjust the streaming of our RK series IP cameras by configuring the options that are then sent to the camera. You find two separate configuration pages for the two video streams.

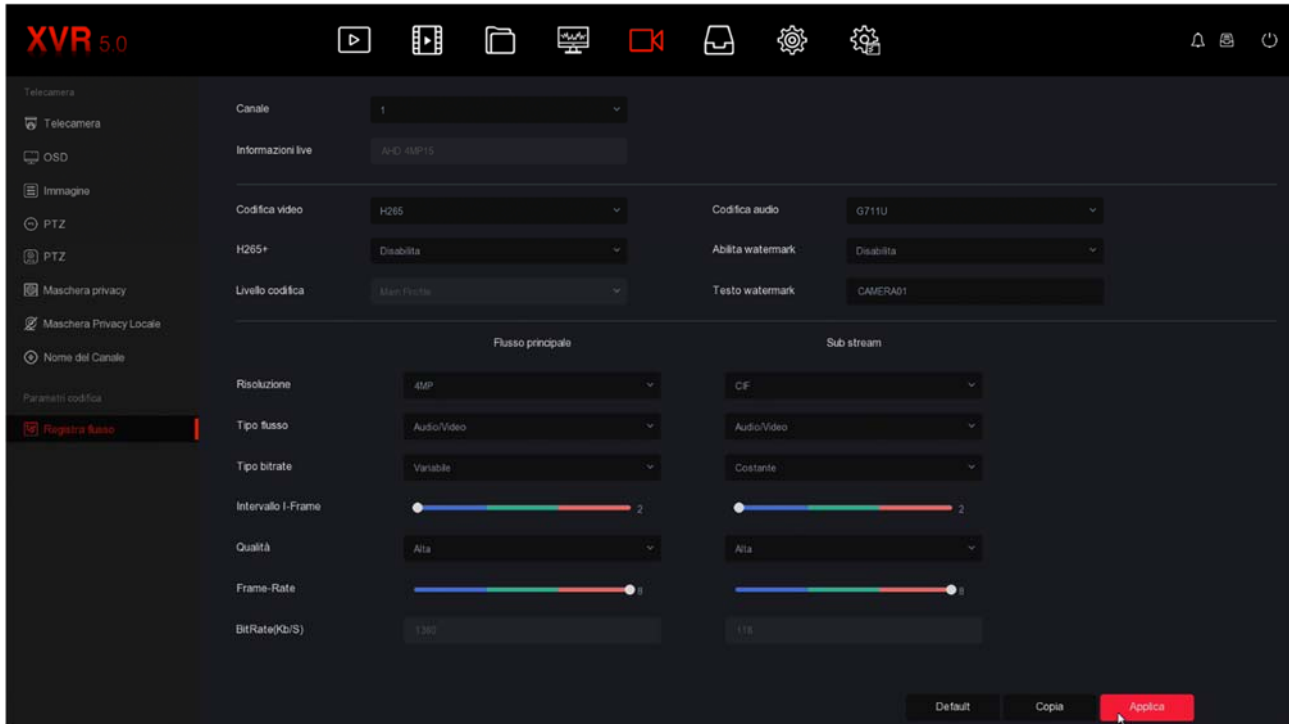
If you have not connected RK series IP cameras, these pages are not configurable.



In this manual, we do not explain the IP camera video streaming adjustment items. Look for this information in the camera manual.

IN ANALOG AND AHD CAMERAS the adjustment of the video streaming is done in the DVR as it is the DVR that digitizes the analog signal. On this page you can

set the DVR video encoding parameters for each channel.



For analog cameras you can adjust the following encoding parameters

LIVE INFORMATION - Indicates the video resolution of the connected camera. Some AHD cameras allow you to change the resolution in the camera OSD menu

CODING - H265 or H264. Choose H265, the most up-to-date format, for maximum compression efficiency.

H265 + - You can enable a further enhancement in compression. H265 + takes up even less disk space than H265

AUDIO ENCODING - If your camera has audio you can choose the encoding. Choose G711U for the highest efficiency.

WATERMARK - You can superimpose a custom text in the recordings **RESOLUTION** - Defines the video resolution of the recording which can be the maximum resolution of the camera or a lower resolution

STREAM TYPE - Choose Video only or Audio + Video

BITRATE TYPE - You can choose whether to allocate a constant or variable bandwidth to the camera to keep the video quality constant in all shooting situations.

I-FRAME INTERVAL - The longer the interval, the less space will be occupied on the disk at the expense of a small loss of image quality.

QUALITY - Set the video quality of the camera. Higher quality means less compression and therefore more disk space.

FRAME RATE - You can reduce the number of frames per second of the capture to reduce it



space occupied on disk at the expense of less fluidity of moving images. BITRATE - Indicates the Kb / s that the camera will occupy with the settings set

SUB STREAM - You can adjust the main stream and the secondary stream differently which must be kept very light (eg 150Kb / s) to maintain fluidity in viewing via the Internet and in the live multivision of multiple cameras.

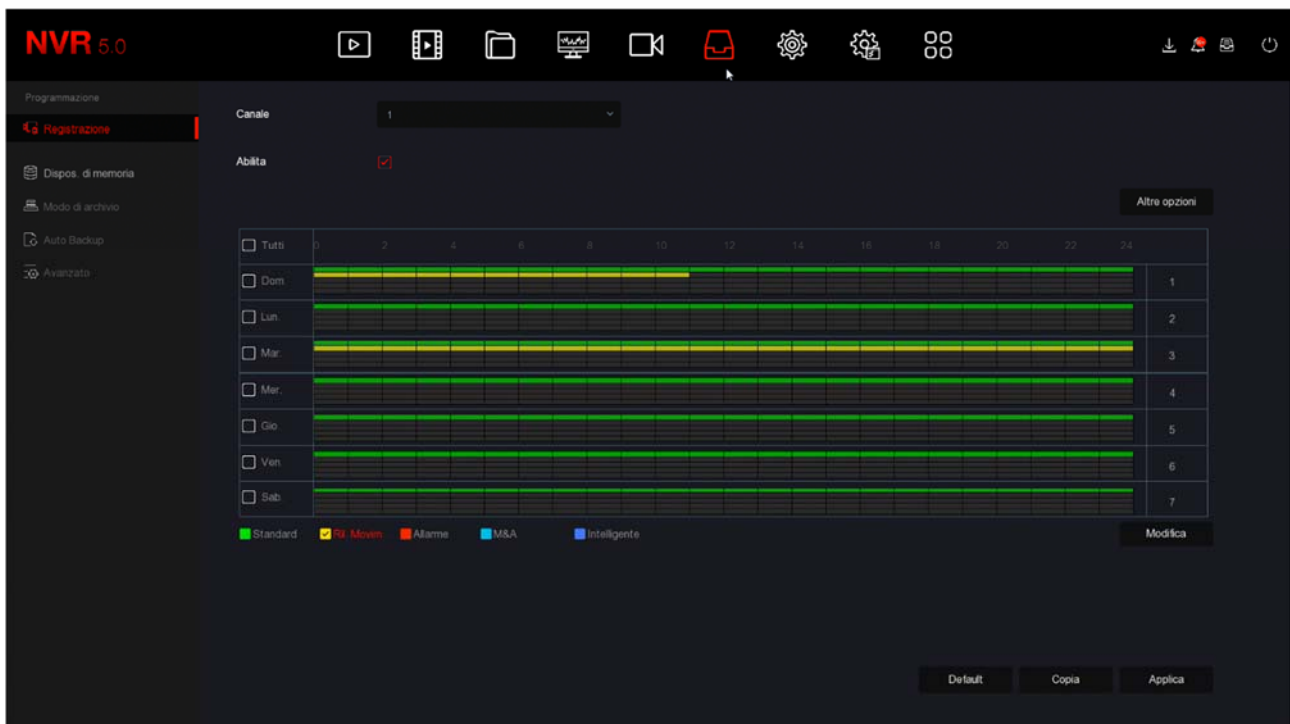
ARCHIVE section

Click the ARCHIVE button to open the page that allows you to check the Hard Disk and the registration rules.



REGISTRATION

On this page you define how to record the cameras according to the time and day of the week



The first thing you need to do is choose the channel to configure at the top. Each camera has its own programming so you have to configure them one by one. If you want to configure all channels in the same way you can select ALL in the channel column.

Select the channel to be configured at the top and then color the green or yellow bands in the weekly calendar with the mouse. The green bands indicate continuous recording, the yellow bands indicate recording only in case of motion detection.

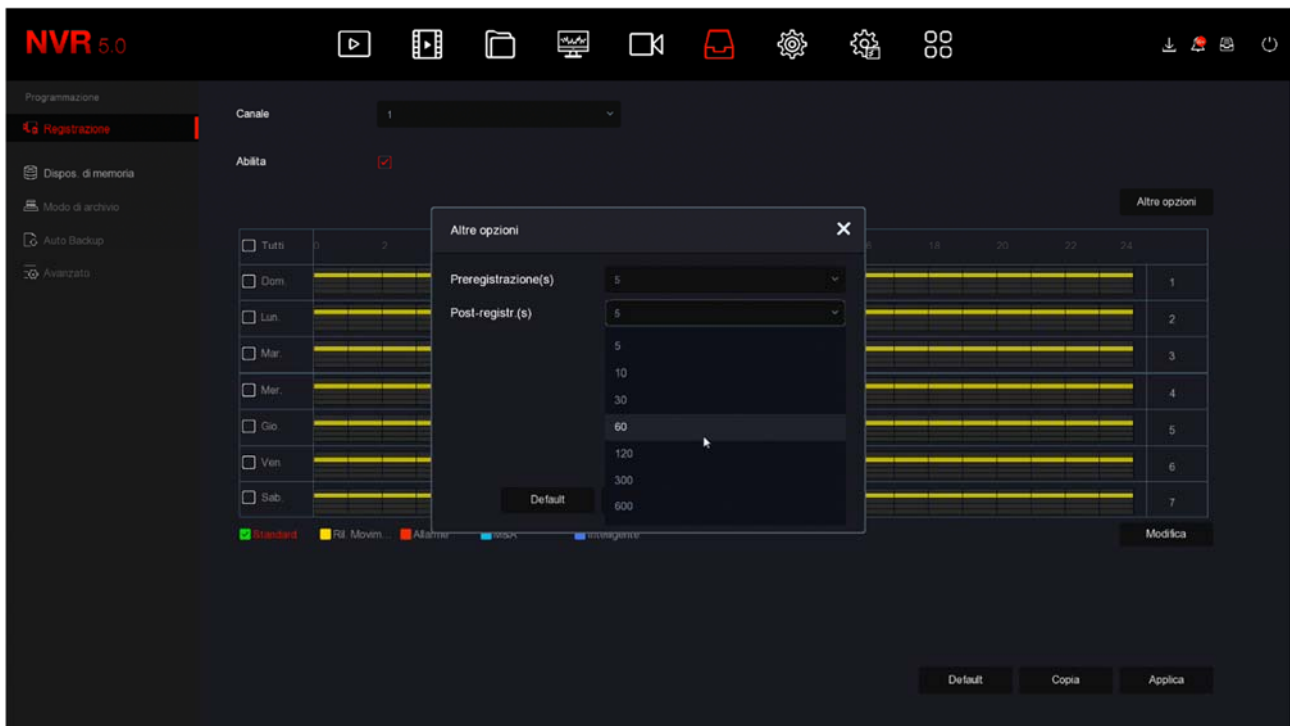
To color the table choose the green or yellow color at the bottom, then drag the mouse directly on the calendar.

If your DVR / NVR has alarm inputs for external contacts, in addition to yellow and green colors

you can also color the table RED (recording from alarm input) or BLUE (recording for both motion and input alarms). If you use our RK Series IP cameras with human detection, you can also color the table BLUE (recording for human detection).

You can set different types of recording at the same time so it is advisable to always keep the continuous green recording active to make sure you never lose any image.

The MORE OPTIONS button allows you to set the pre-recording period, which allows you to record a certain period before detection, and the post-recording period, i.e. the duration of the recording following the event.



VERIFICATION OF REGISTRATION

To make sure you have set up the registration table correctly, check the live image of the cameras. If recording is in progress you should see the green camera icon overlay.



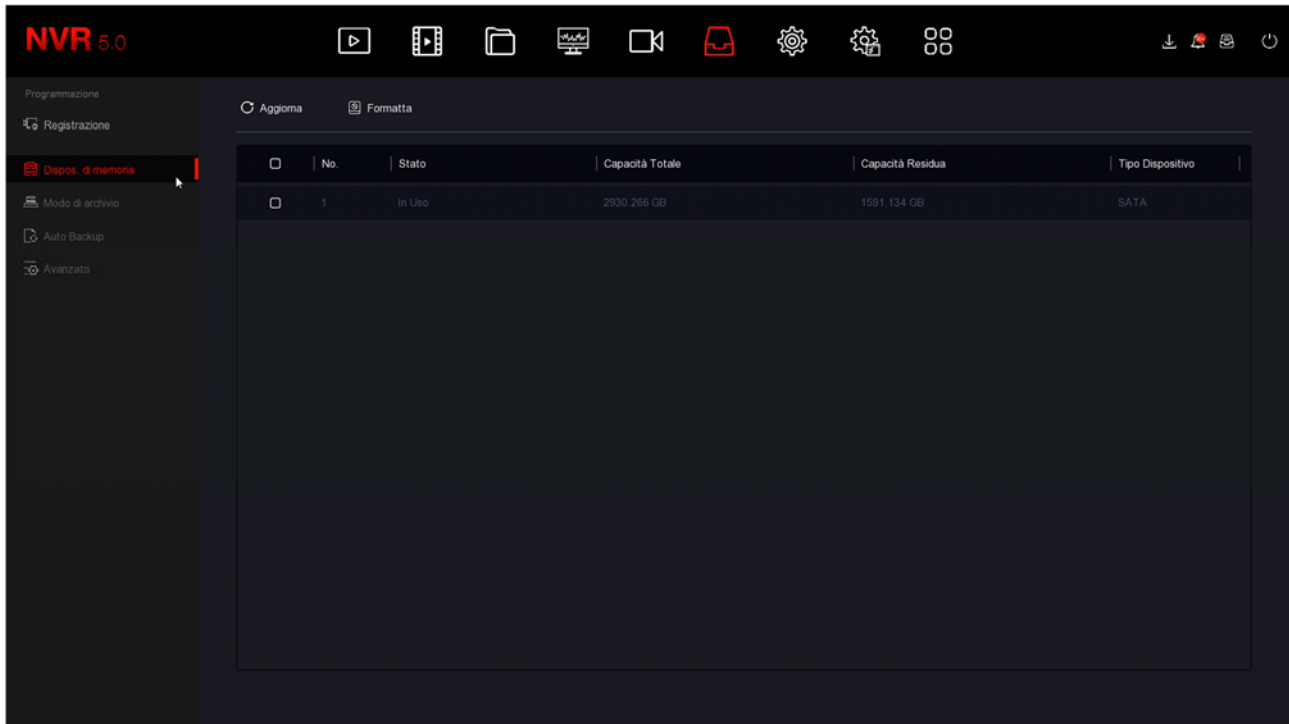
Channel in recording

If the channel does not record even though you have set the table well, check the HARD section

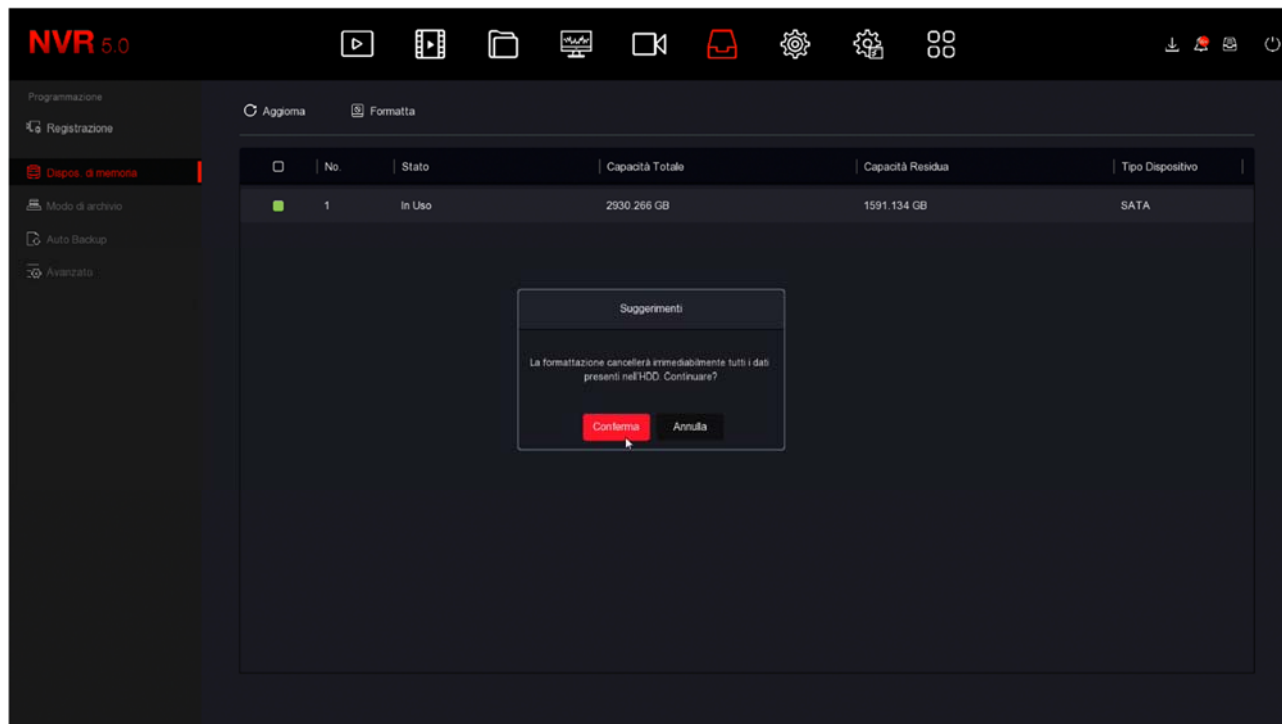
DISK because there may be problems with the hard drive on which the recordings are stored.

MEMORY DEVICE

In this tab you can control the memory units (internal or USB)



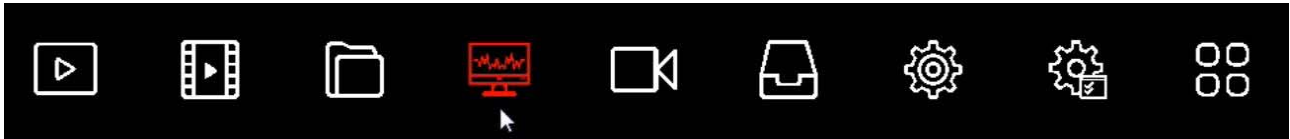
On this page you can check the status of the internal hard disk of the DVR / NVR and know the total and residual capacity. With the FORMAT button you can proceed to format the disk with the deletion of all data. When the DVR / NVR detects a new disk it automatically prompts for formatting at startup so generally you don't need to enter this window to make it usable. However this window can be used to check the status of the disk and to do a forced formatting if you want to delete all the recordings.



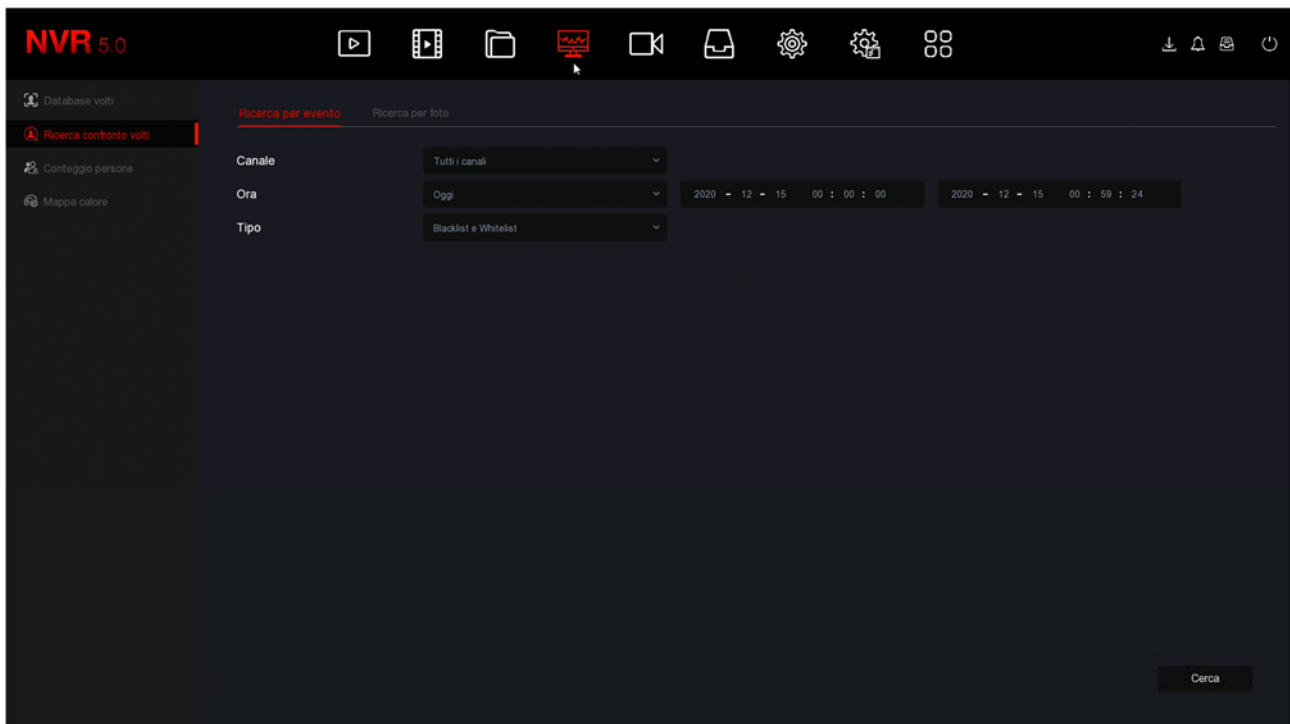
If your Hard Disk works well, in this window you must see it indicated as IN USE with correct indication of the maximum and residual capacity

INTELLIGENT ANALYSIS section

Click the INTELLIGENT ANALYSIS button to open the configuration page for AI functions such as human detection and face recognition



This section is under development



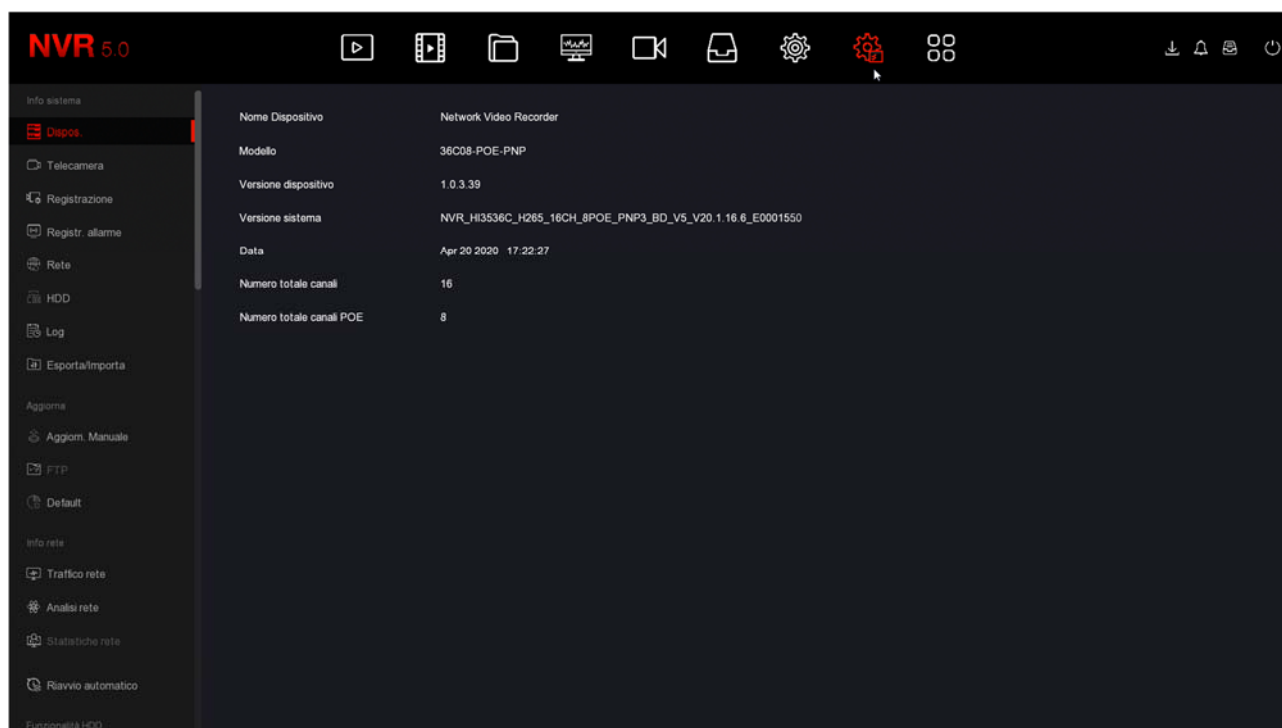
MAINTENANCE section

Click the MAINTENANCE button to access various operations useful for checking the status of your NVR / DVR



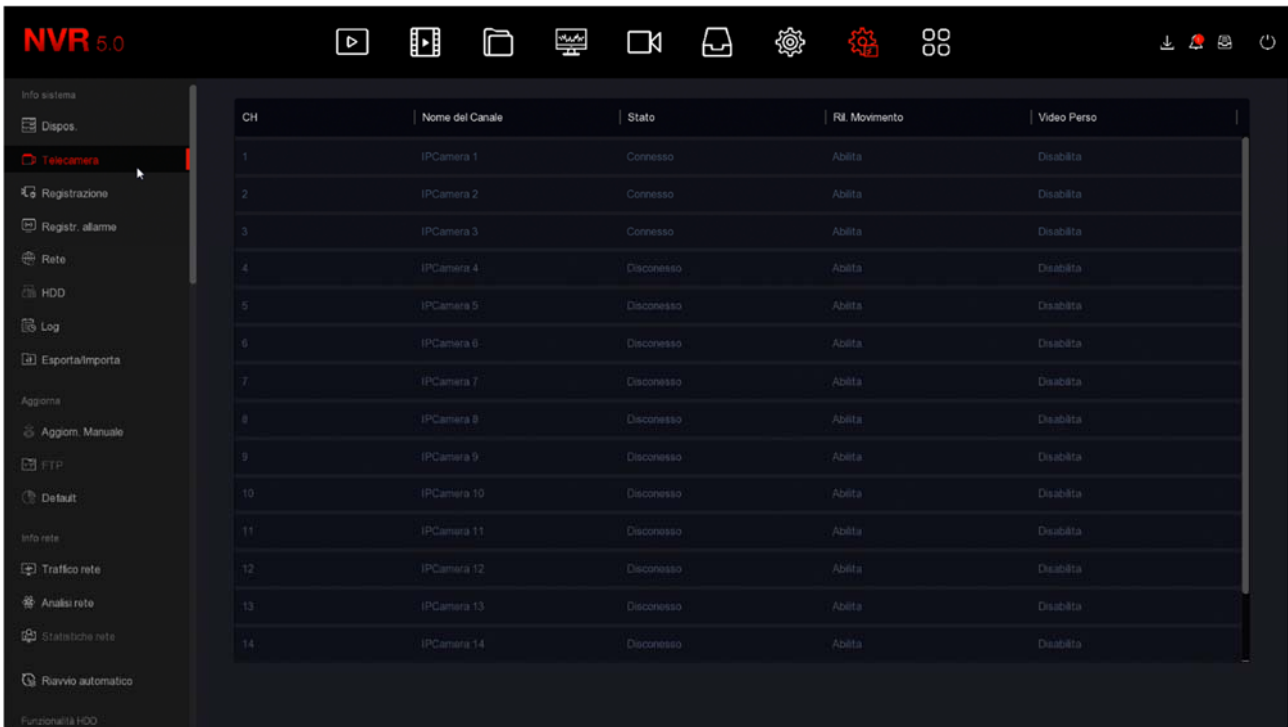
DEVICE

On this page you will find information about your DVR / NVR with the firmware version



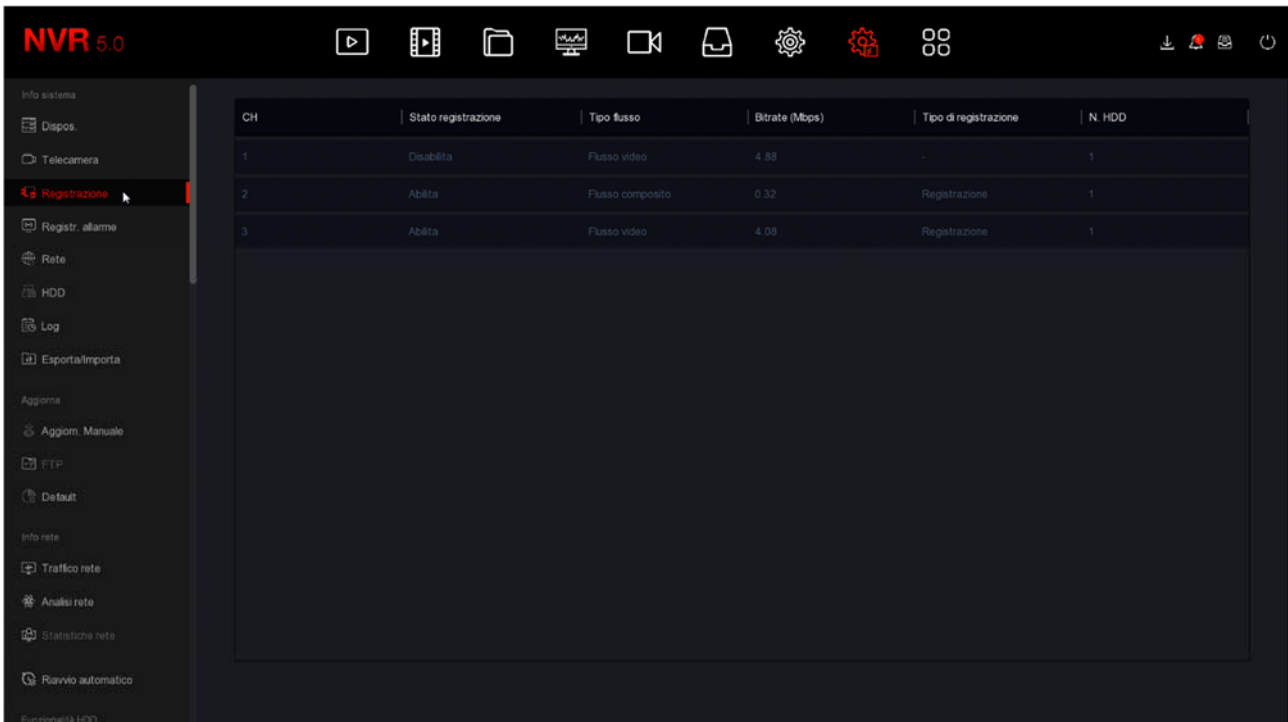
CAMERA

On this page you will find the summary of the status of the channels



REGISTRATION

On this page you will find the summary of the registration status of the channels



ALARM RECORDING

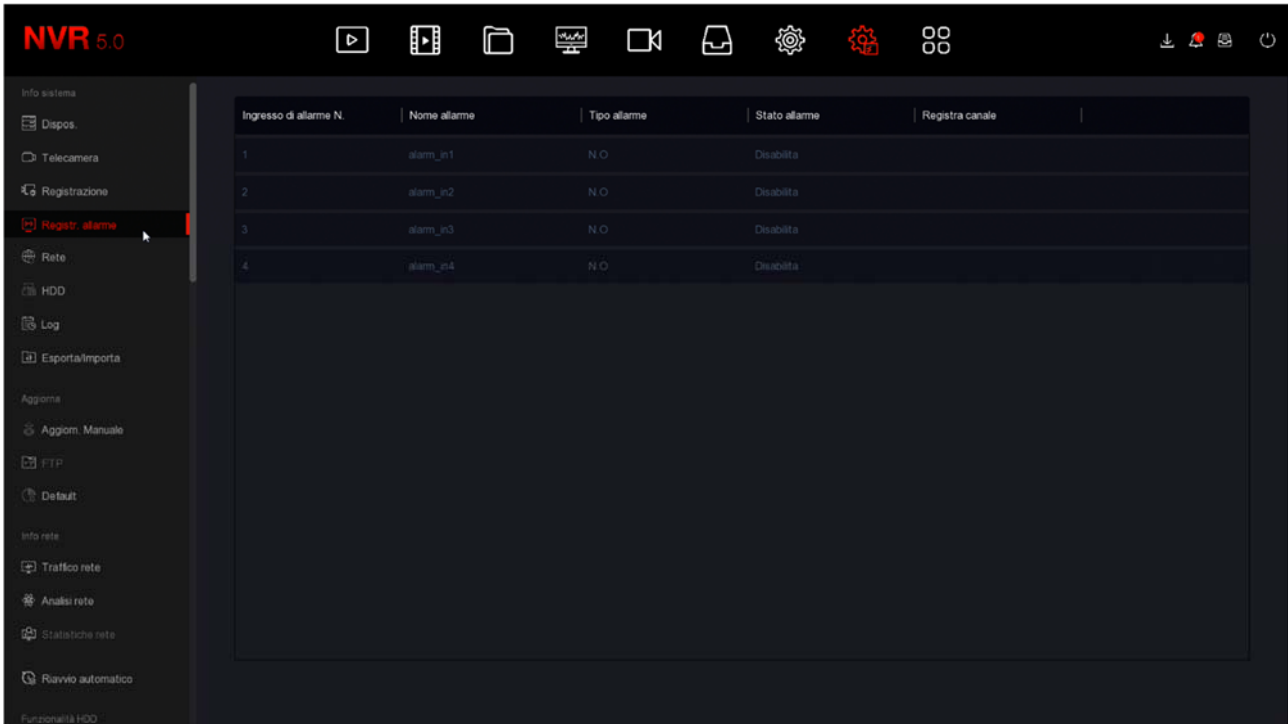
CONFIGURATION MANUAL

RK SERIES - NVR and DVR



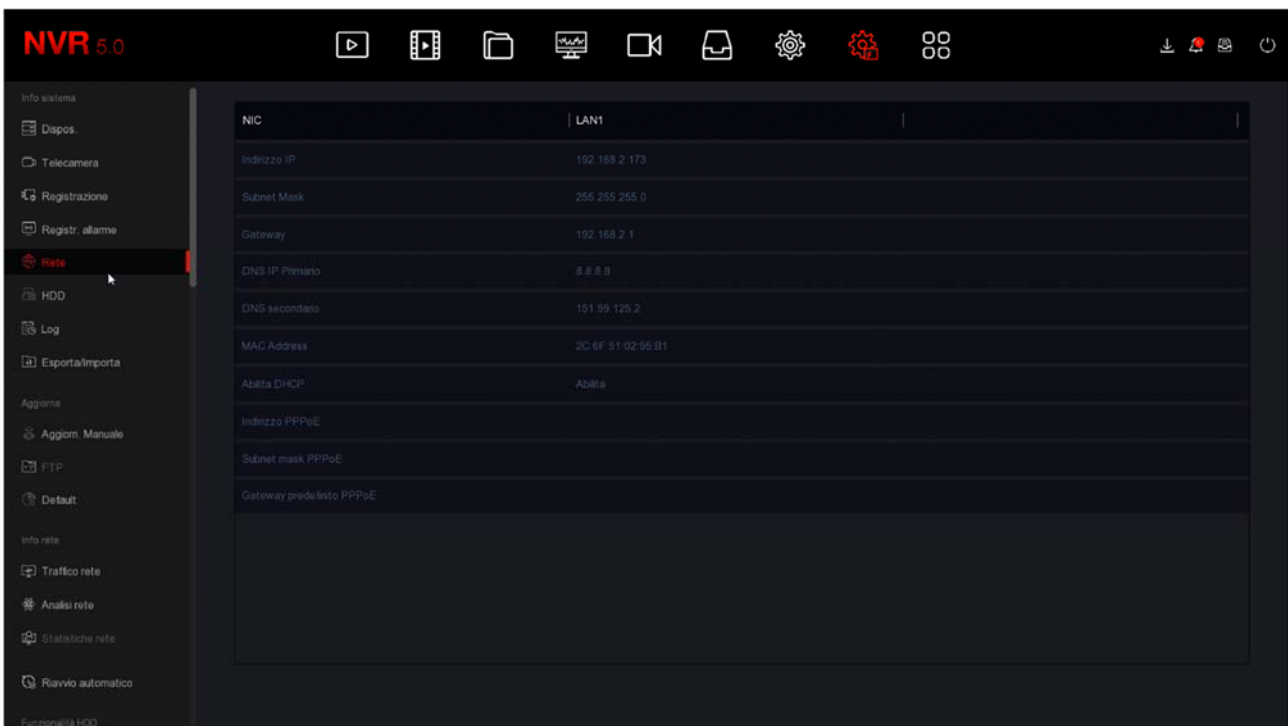
Page: 60

On this page you will find the summary of the recording status of the alarm inputs



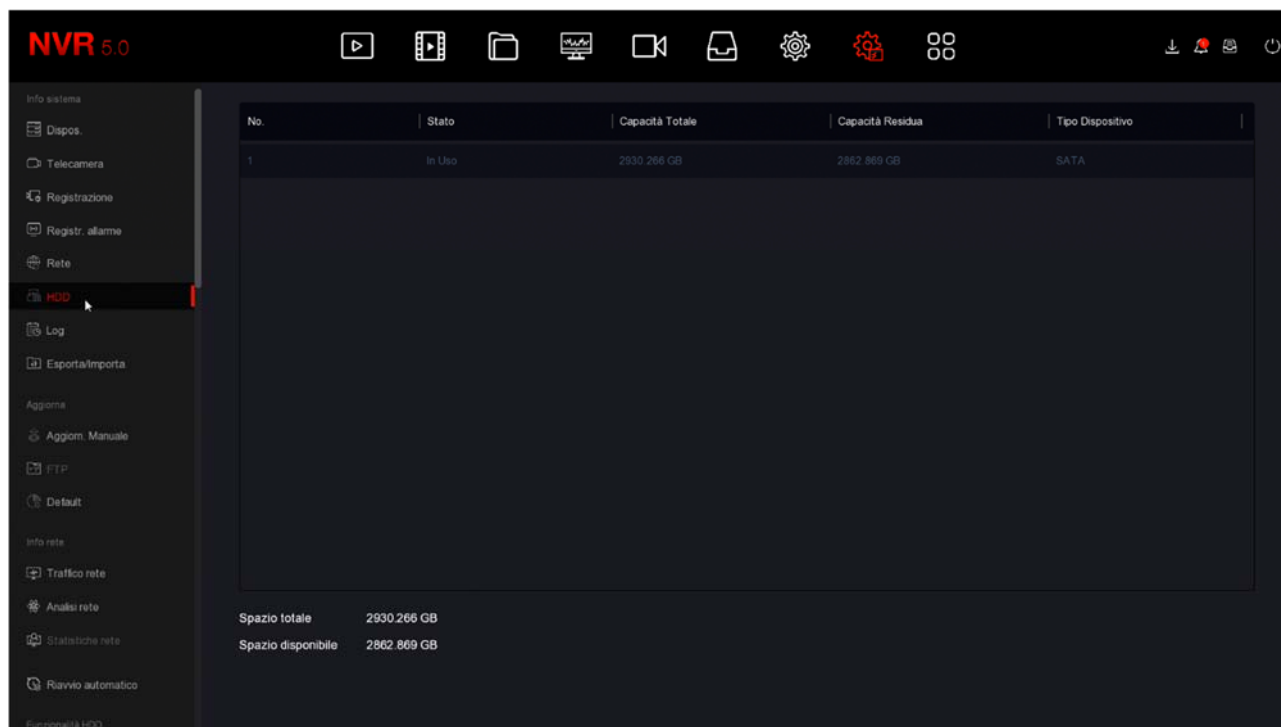
NET

On this page you will find the summary of the network interface status



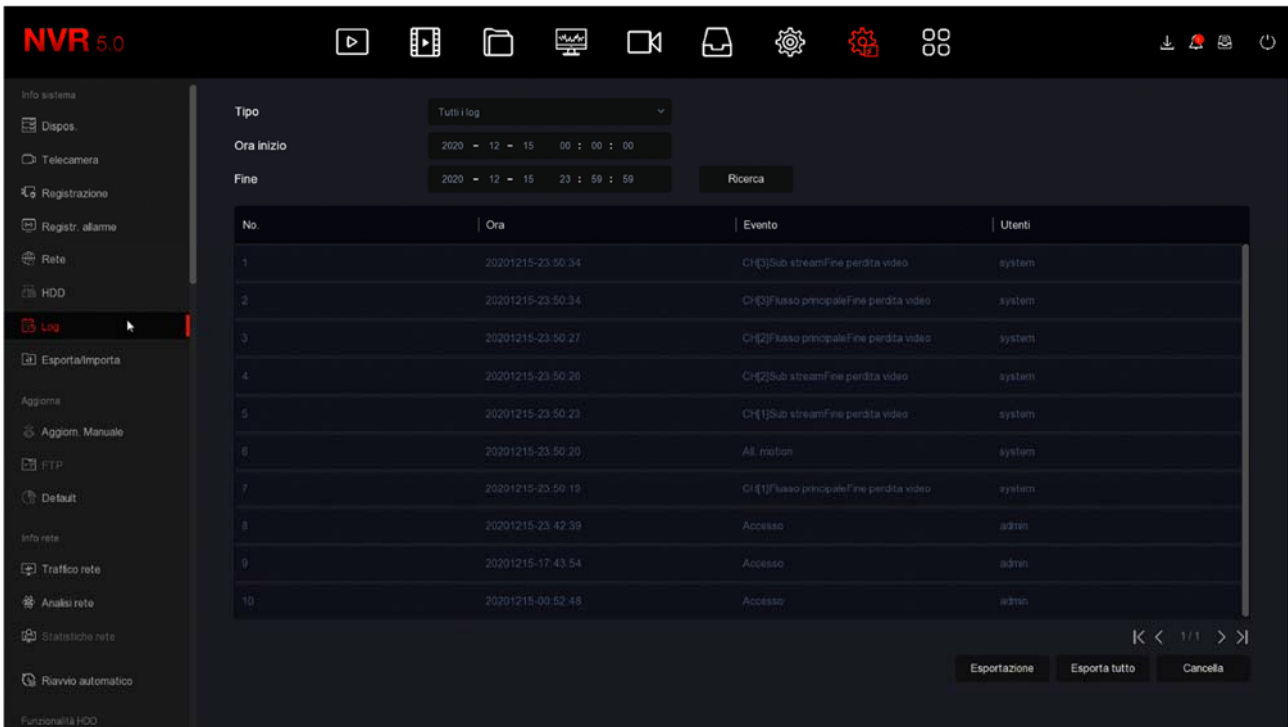
HDD

This page displays the status of the memory units



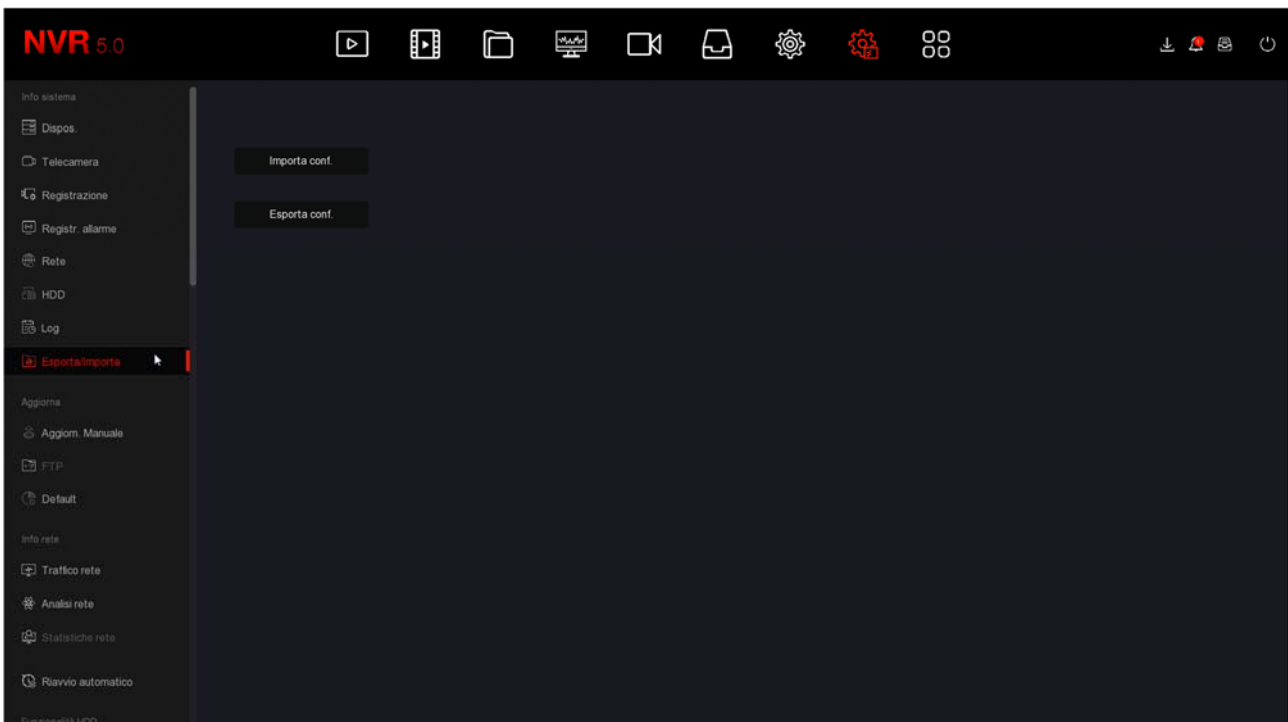
LOG

On this page you can consult the device's event log by searching by date, time and type of event



EXPORT / IMPORT

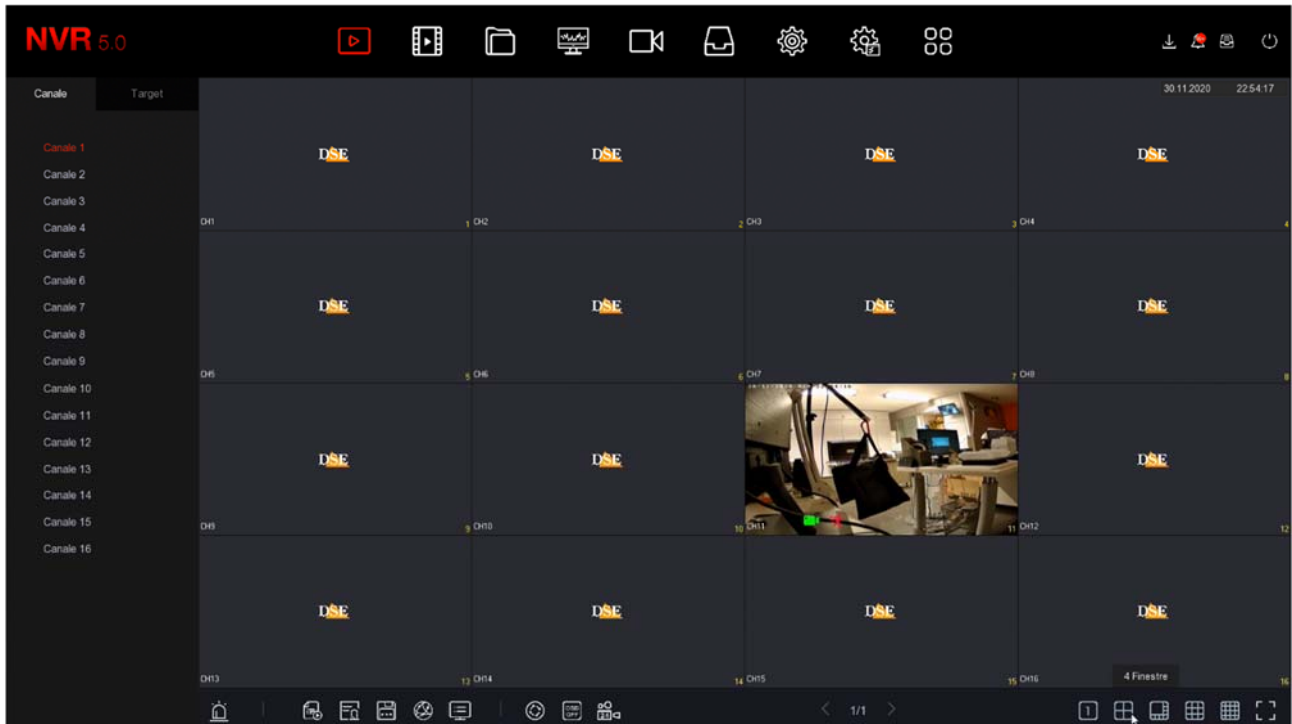
On this page you can export all the configuration of the DVR / NVR to a file or import a previously exported configuration. It is a useful function to save the configuration made in case of failure.





MANUAL UPDATE

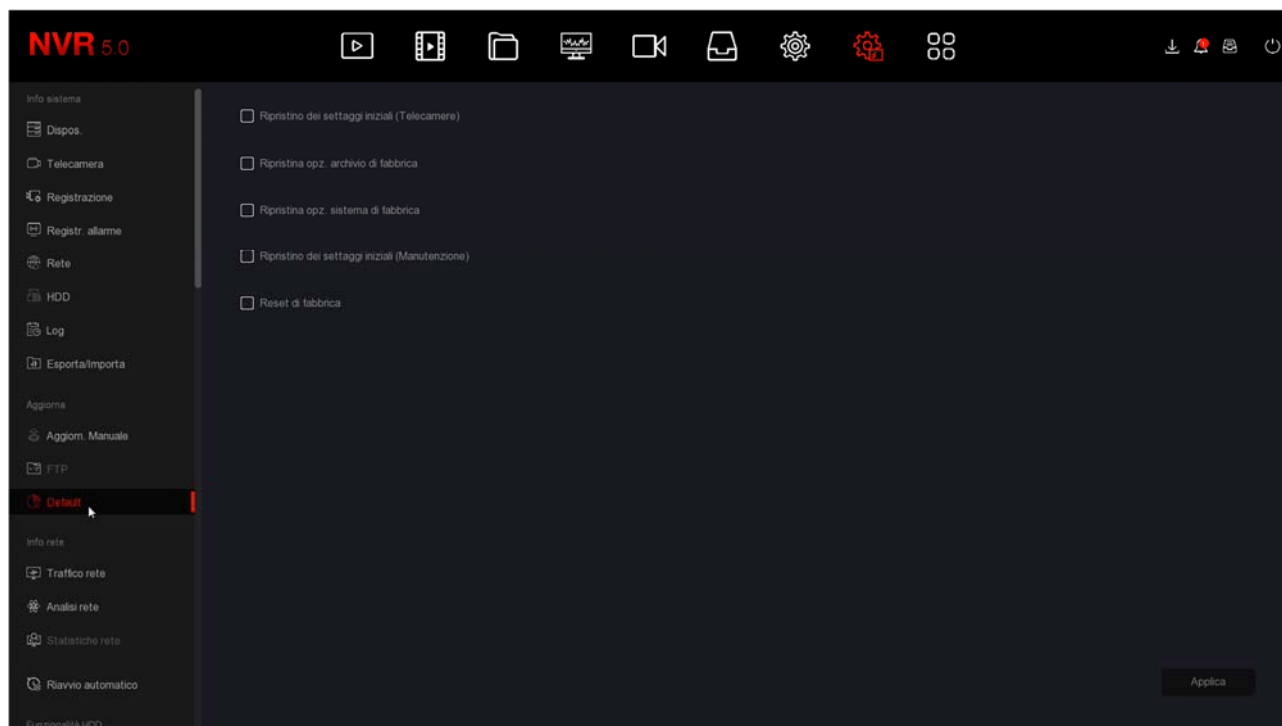
On this page you can upload an updated firmware to the DVR / NVR. This operation must be carried out only under the specific instructions of our technicians in order not to invalidate the guarantee.



DEFAULT

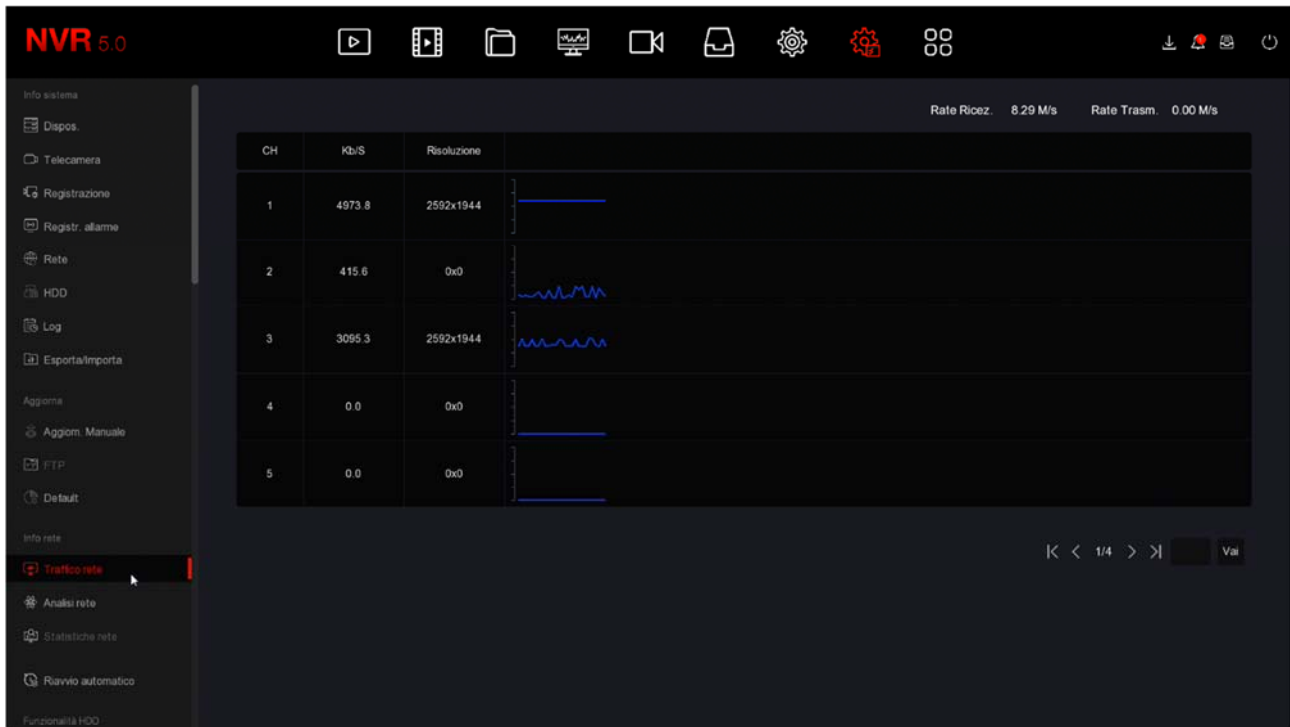
This page allows you to restore the factory configuration. This is useful if you have changed the configuration and got unwanted results. You have several reset options available so that you can only reset the parameters you are not satisfied with and preserve the others.

If you use the **FACTORY RESET** (last option) bring the DVR / NVR back to the condition in which it was delivered to you.



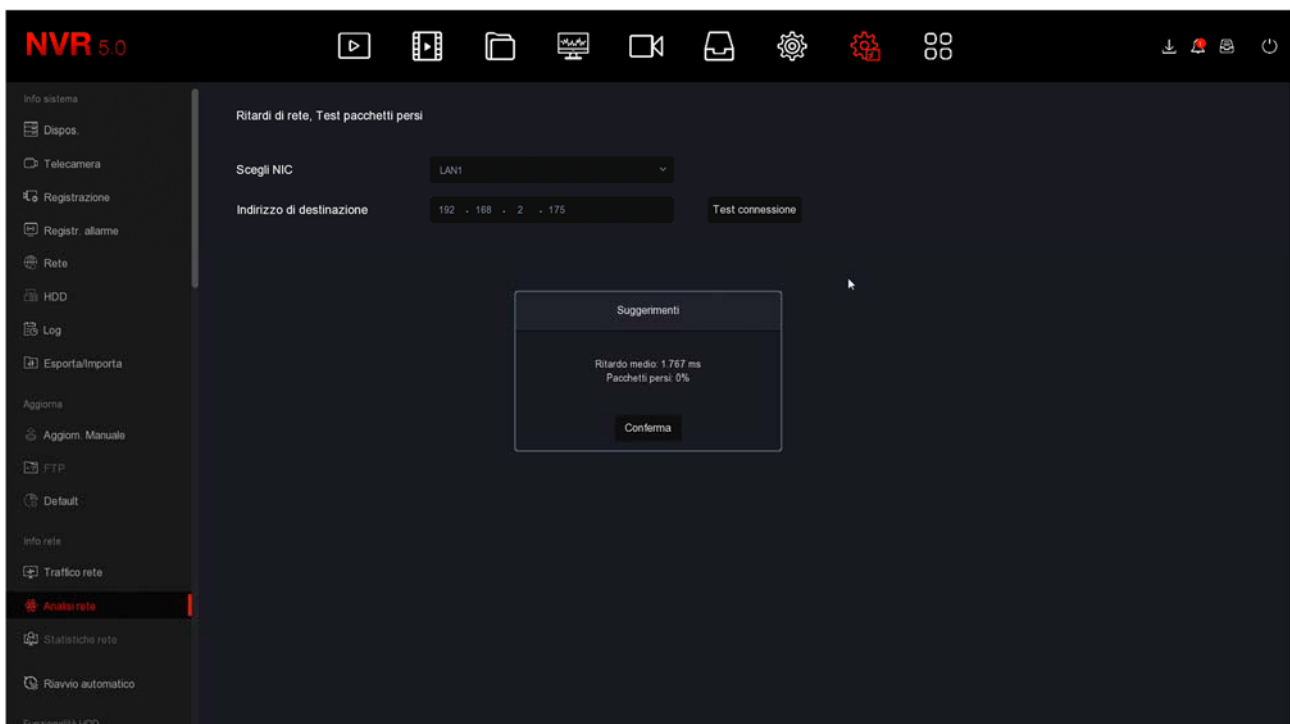
NETWORK TRAFFIC

This window shows the band used in Kb / s and the resolution of the video stream of each channel. If you leave this window open for several minutes, you will be able to see on the screen the graph of the band used by the various channels. It is a useful function to check that the parameter remains stable over time.



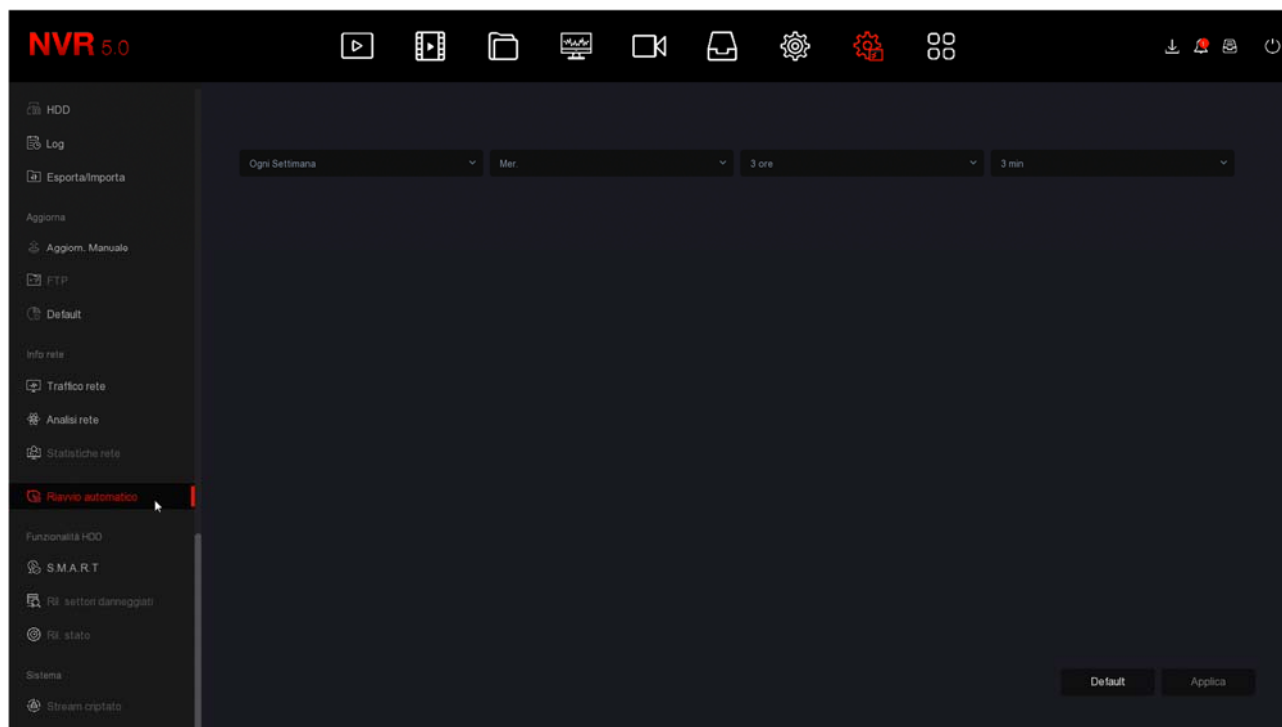
NETWORK ANALYSIS

This window allows you to test communication with a network IP address by obtaining the response time and errors. It is a useful function to verify the good physical connection of the IP cameras.



AUTOMATIC RESTART

Here you can set the automatic restart of the DVR / NVR which is factory set once a week



SMART

This page allows you to carry out a verification test on the health of the memory units



The screenshot displays the NVR 5.0 web interface. The top navigation bar includes icons for playback, file management, camera, settings, and user management. The left sidebar lists various system functions, with 'SMART' highlighted under 'Funzionalità HDD'. The main content area shows configuration for 'N. HDD' (1) and test conditions (Mai testato, Auto valutazione: Passato, Valutazione generale: Passato). Below this is the 'Info S.M.A.R.T.' section, which contains a table of SMART attributes.

ID	Nome	Stato	Flags	Thresh	Valore	Minimo	Raw value
1	Raw_Read_Error_Rate	OK	15	6	111	99	217496837
3	Spin_Up_Time	OK	3	0	94	94	0
4	Start_Stop_Count	OK	50	20	109	100	183
5	Reallocated_Sector_Ct	OK	51	10	100	100	0
7	Seek_Error_Rate	OK	15	30	80	60	22053541142
8	Power_On_Hours	OK	50	0	75	75	22163
10	Spin_Retry_Count	OK	19	97	100	100	0
12	Power_Cycle_Count	OK	50	20	100	100	137
184	End-to-End_Error	OK	50	99	100	100	0