NOVUS NVIP-5H-671[1-TA-3 Dual IP Camera User Manual

NOVUS NVIP-5H-671[1-TA-3 Dual IP Camera User Manual

Contents

FOREWORD INFORMATION

General Characteristics
General

- Dual camera – thermal/visual
- FPA – thermal image sensor that allows observation of objects in total darkness
- Thermo dual vision – a feature that allows to overlay a thermal image on a video image
- Advanced image analysis features based on Deep Learning available in both thermal and video modules
- Ability to use two different image analysis functions at the same time
- Temperature measurement at any point or area
- Temperature alarm – alarming if the temperature threshold is exceeded at any point or area
- Fire detection – alarming about the appearance of fire in the field of view of the camera
- 10 Temperature measurement zones (polygon, line, point)
- **Active deterrence:** LED warning lamp, white flashing or continuous light
- Audio speaker built into the camera with the ability to use custom voice messages

Thermal module:

- FPA – uncooled microbolometer
- Number of effective pixels: 256 x 192
- Fixed-focal lens: f=3.2 mm/F1.1
- Object detection range: 133m – human, 409m – vehicle
- Object recognition range: 33m – human, 102m – vehicle
- Detection temperature: -20°C ~ 150 °C
- Temperature Measurement Accuracy ± 2°C – for the range from -40°C to 100°C
- Video content analysis: line cross, intrusion detection

Video module:

- 5 MPX CMOS sensor 1/2.7” OmniVision
- Fixed-focal lens: f=4 mm/F1.6
- Stream resolution up to: 2592 x 1944
- Compression: H.264, H.265, MJPEG / G.711
- Video content analysis: tamper, line cross, zone entrance, zone exit, cross counting, scene change, video blurred, video color cast, intrusion detection

Others:

- MicroSD card support up to 256 GB
- Onvif protocol support
- Ability to define compression, resolution, speed and quality for each stream
- Power supply 12 VDC/PoE

FOREWORD INFORMATION

Technical specification

IMAGE – THERMAL MODULE

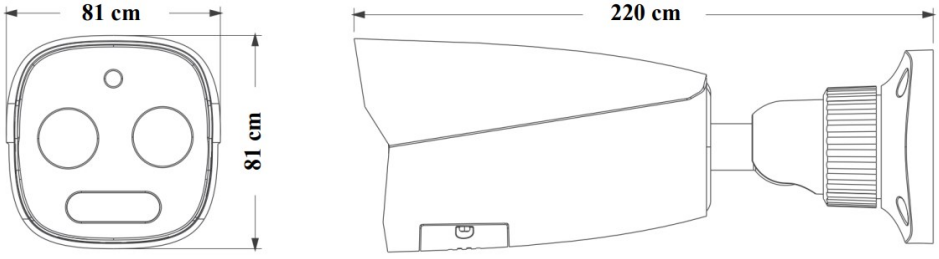
Image Sensor	Uncooled FPA Microbolometer
Number of Effective Pixels	256 (H) x 192 (V)
Pixel Size	12 µm
Spectral Range	8 – 14 µm
Thermal Sensitivity	50 mK
Thermovision Modes	White Hot, Black Hot, Rainbow, Iron Oxide Red, Lava Color
Detection Temperature	-20°C ~ 150°C
LENS – THERMAL MODULE	
Lens Type	f=3.2 mm/F1.1
Object Detection Range	133m – human , 409m – vehicle
Object Recognition Range	33m – human , 102m – vehicle
IMAGE	
Image Sensor	5 MPX CMOS sensor 1/2.7” OmniVision
Number of Effective Pixels	2688 (H) x 1944 (V)
Min. Illumination	0.02 lx/F1.6 – color mode
Electronic Shutter	auto/manual: 1/3 s ~ 1/100000 s
Digital Slow Shutter (DSS)	up to 1/3 s
Digital Noise Reduction (DNR)	2D, 3D
Defog Function (F-DNR)	yes
Highlight Compensation (HLC)	yes
Back Light Compensation (BLC)	yes
Reduction of image flicker (Antifli cker)	yes
LENS	
Lens Type	fixed focal, f=4 mm/F1.6
DAY/NIGHT	
Switching Type	mechanical IR cut filter
Switching Mode	auto, manual, time, external
Switching Level Adjustment	yes
Switching Delay	2 ~ 120 s
Switching Schedule	yes
Visible Light Sensor	yes
NETWORK	

Stream Resolution	2592 x 1944, 2592 x 1520, 2560 x 1440 (QHD), 2304 x 1296, 1920 x 1080 (Full HD),1280 x 720 (HD), 704 x 576, 480 x 240, 352 x 288 (CIF)for thermal module: 704×576, 352 x 288 (CIF), 1280×720, 480×240
Frame Rate	30 fps for each resolution
Multistreaming Mode	3 streams
Video/Audio Compression	H.264, H.265, MJPEG/G.711
Number of Simultaneous Connections	max. 10
Bandwidth	50 Mb/s in total
Network Protocols Support	HTTP, IPv4, IPv4/v6, UDP, HTTPS, FTP, DHCP, DDNS, NTP, RTSP, RTP, UPnP, SNMP, QoS,IEEE 802.1X, PPPoE, SMTP, RTCP, ICMP, HTML5
ONVIF Protocol Support	Profile S/G/T
Camera Configuration	from Internet Explorer, Firefox, Chrome, Opera, Edge browserlanguages: P olish, English, and others
Compatible Software	NMS, N Control 6000
Mobile applications	SuperLive Plus (iPhone, Android)

OTHER FUNCTIONS	
Temperature Measurement	yes
Temperature Alarm	yes – for thermal module
Temperature Measurement Zone s	10 – for thermal module polygon, line, point
Temperature Measurement Accur acy	+-2°C – for the range from -40°C to 100°C
Privacy Zones	4 video mask type: single color
Motion Detection	yes
Region of interest (ROI)	8
Video Content Analysis (VCA)	tamper, line cross, zone entrance, zone exit, cross counting, scene change, video blurred,video color cast, intrusion detection
Image Processing	sharpening, vertical flip, horizontal flip, lens distortion correction
Prealarm/Postalarm	up to 6 s/up to 120 s
System Reaction to Alarm Events	e-mail, e-mail with attachment, saving file on FTP server, saving file on SD card, alarmoutput activation, playback of the audio message
Determent	LED warning light, white, flashing/continuous mode, ,acoustic signaling device, built-in speaker (pre-defined or self-recorded voice messages)
Restoring default settings	via web browser, using reset button, via NMS IPTool software
IR LED	

Smart IR	yes (software support)
INTERFACES	
Audio Input/Output	1 x Jack (3.5 mm)/ – built-in speaker
Alarm Input/Output	1 (NO/NC)/1 relay type (max. 12VDC/300mA)
Network Interface	1 x Ethernet – RJ-45 interface, 10/100 Mbit/s
Memory Card Slot	microSD – capacity up to 256GB
INSTALLATION PARAMETERS	
Dimensions (mm)	with bracket: 81 (W) x 81 (H) x 220 (L)
Weight	0.73 kg
Degree of Protection	IP 66 (details in the user's manual)
Enclosure	aluminium, white, fully cable managed wall mount bracket in-set included ,I K10 impact rating
Power Supply	12 VDC, PoE (IEEE 802.3af, Class 3)
Surge protection	TVS 4000 V
Power Consumption	9 W
Operating Temperature	-30°C ~ 60°C
Humidity	max. 95%, relative (non-condensing)

Camera dimensions (mm)



Package contents

After opening the package make sure that the following elements are inside:

- IP camera
- Accessories bag
- Short version of user's manual

If any of this elements has been damaged during transport, pack all the elements back into the original box and contact your supplier for further assistance.

CAUTION!
It is forbidden to use – as the camera power source – PoE equipment (adapters, etc.) not compatible with IEEE 802.3af standard (items called "passive PoE power supply"). Damages caused by the usage of improper power

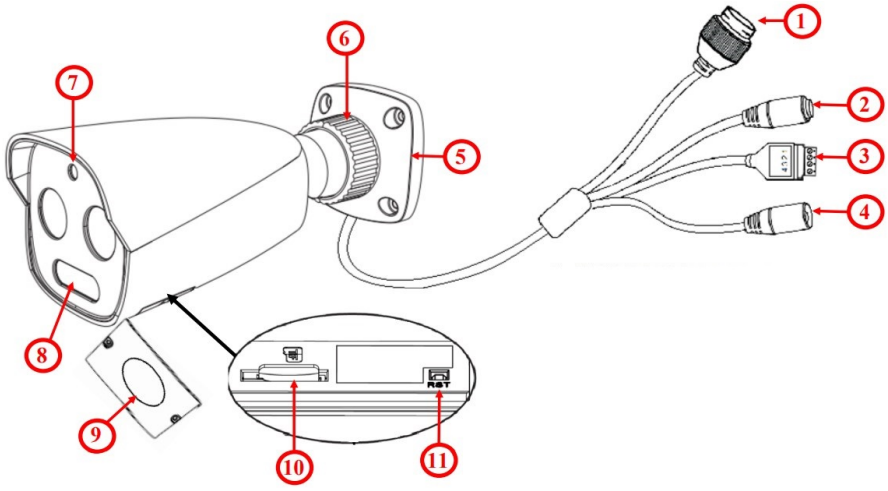
supply source are not covered by the warranty

START-UP AND INITIAL IP CAMERA CONFIGURATION

CAUTION!
If the device was brought from a location with lower temperature, please wait until it reaches the temperature of location it is currently in. Turning the device on immediately after bringing it from a location with lower ambient temperature is forbidden, as the condensing water vapour may cause short-circuits and damage the device as a result.

Before starting the device familiarize yourself with the description and the role of particular inputs, outputs and adjusting elements that the device is equipped with.

Description of connectors and control tools



1. 100 Mb/s Ethernet port (PoE RJ-45 connector)
2. Audio input „MIC” (Jack 3.5mm)
3. Alarm input/output
4. Power supply connector 12VDC
5. Base of camera
6. Counter nut
7. Light sensor
8. White light and IR illuminator
9. Speaker
10. MicroSD card slot
11. RESET button

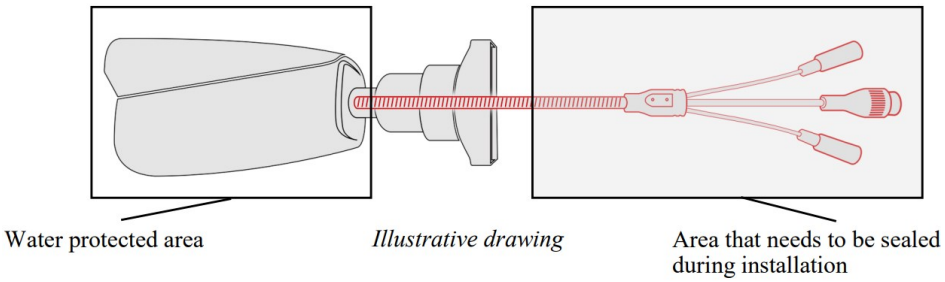
Power supply connection

The camera can be powered from a commercially available DC power supply, provided that it meets the technical requirements of the camera. The source must provide stabilized 12VDC voltage, must allow the consumption of at least 9W of power, and have a barrel DC 2.1/5.5 plug with the correct polarity of the contacts:

It is also possible to power the camera via the RJ45 network socket, using PoE technology (IEEE 802.3af, Class 3).

Caution!
Do not use power supplies and POE adapters that do not comply with the IEEE 802.3at standard, the so called “passive POE” power supplies. Damage resulting from the use of an unsuitable adapter is not covered by the warranty!

Protection against water ingress
The declared degree of protection applies only to camera housing and the location where the connection cable enters the inside of the housing.



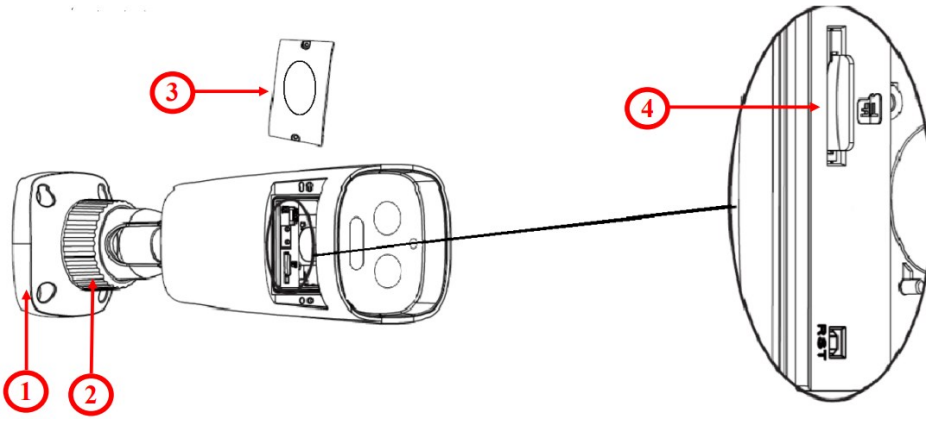
This means that the connection cable, including sockets, connectors, switches, buttons, and other elements on this cable, as well as other camera equipment/construction elements (such as hoods, brackets, supports, etc.), are not waterproof. It is the responsibility of the person installing the camera to protect the elements that require it (and in any case the connection cable) against moisture.

The manufacturer is not responsible for any damages or camera malfunctions resulting from failure to comply with the above obligation, which also means that they are not covered by the warranty repairs.

The RJ-45 socket cover included in the camera accessories (depending on the version/model) is not a\ water protection element. Its purpose is to protect against the ingress of dust and atmospheric moisture into the socket and prevent accidental disconnections by mechanically stabilizing the network plug in the RJ-45 socket.

Camera mounting
To mount a camera please follow the instructions below:

- Unscrew the counter nut (2).
- Put the bracket to the wall in a desired mounting place (with cable hole). Take the drill pattern and mark future drilling holes for screws and wires.
- Drill holes for screws, wires and base.
- Mount the camera base (1) using the supplied plugs and screws.
- If necessary, unscrew the service panel (3) located on the bottom of the camera, paying special attention to the cable leading to the speaker located in the service panel, then insert the memory card (4) and screw the service panel back.
- Connect the camera wires.
- Adjust camera position.
- Tighten to the stop counter nut (2).



Caution!
Pay particular attention to the surface to which is attached the camera to have the appropriate capacity.

Caution!
It is recommended to install the camera using one of the dedicated adapters. The use of an adapter allows for an aesthetic camera installation, facilitates later servicing and provides a water-protected space for hiding cables.

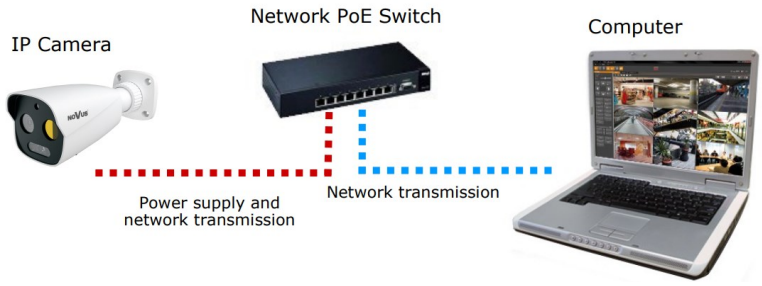
ⓘ Adapters are additional equipment, to be purchased separately. The characteristics and functions of the adapter (such as mounting method, space for cables, etc.) depend on its model. The list of dedicated adapters and their specifications can be found on the camera's catalog card under the "Related Products" tab

Starting the IP camera
To run NOVUS IP camera you have to connect ethernet cable between camera and network PoE switch with PoE support (IEEE 802.3af).

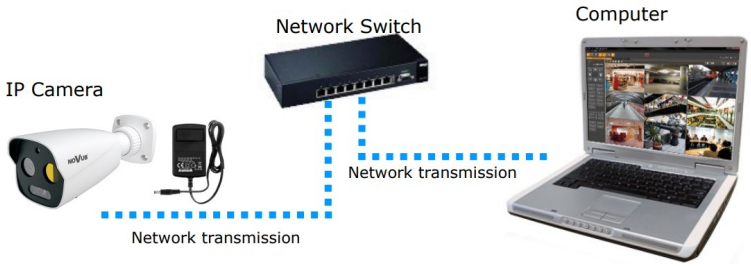
You can also power it from 12VDC power supply compatible with camera power supply specification.

The recommended way to start an IP camera and perform its configuration is a direct connection to the network switch which is not connected to other devices. To obtain further information about network configuration parameters (IP address, gateway, network mask, etc.) please contact your network administrator.

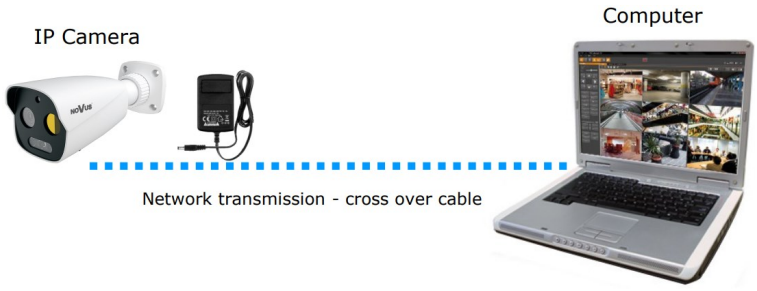
- Connection using network switch with PoE support



- Connection using external power supply and network switch



- Connection using external power supply directly to the computer



Information:
Power supply adapter is not included. Please use power adapter with parameters specified in user ‘s manual.

Initial configuration via the web browser
The default network settings for NVIP-5H-6711/TA/3 camera are :

1. IP address – 192.168.1.200
2. Network mask – 255.255.255.0
3. Gateway – 192.168.1.1
4. User name – root
5. Password – pass

Knowing the camera’s IP address you need to appropriately set PC IP address, so the two devices can operate in one network subnet (e.g. for IP 192.168.1.1, appropriate address for the camera ranges from 192.168.1.2 to 192.168.1.254, for example 192.168.1.60). It is not allowed to set the same addresses for camera and PC computer.

You can either set a network configuration (IP address, gateway, net mask, etc.) of NOVUS IP camera yourself or select DHCP mode (DHCP server is required in this method in target network) by using web browser or by NMS software. When you use DHCP server check IP address lease and its linking with camera MAC address to avoid changing or losing IP address during device operation or network/ DHCP server breakdown. You have to remember to use a new camera IP address after changing network parameters.

After network setting configuration has been done, the camera can be connected to a target network.

Security recommendations for network architecture and configuration

CAUTION!
Below are shown security recommendations for network architecture and configuration of CCTV systems that are connected to the Internet to reduce the risk of unauthorized interference with the system by a third party

1. Absolutely change the default passwords and user names (if the device gives this possibility) of all applied network devices (recorders, cameras, routers, network switches, etc.) to the severely complexity password. Use lowercase and uppercase letters, numbers, and special characters if there is such possibility.
2. Depending on the available functionality in the order to restrict access to the used network devices at the administrator account level, it is recommended to configure the users accounts accordingly.
3. Do not use DMZ function (Demilitarized zone) in your router. Using that function you open the access to recorder system from the Internet on all ports, which gives possibility for an unauthorized\ interference with the system. Instead of DMZ use port forwarding redirect only the ports which are necessary for the performance\ of

the connection (detailed information about ports of communication in different models of recorders, cameras, etc. can be found in the operating instructions).

4. Use routers with firewall function and make sure it is enabled and properly configured.
5. It is recommended to change the default network communication port numbers of used devices if there is such possibility.
6. If used network devices has a UPnP feature and it is not used, turn it off.
7. If used network devices has a P2P feature and it is not used, turn it off.
8. If used network devices support HTTPS protocol for connection, it is recommended to use it.
9. If used network devices support IP filtering for authorized connections function, it is recommended\ to use it.
10. If used recorder has two network interfaces it is recommended to use both of them to physically separate network for cameras and network for Internet connection. The only device in the system, accessible from Internet will be recorder – there will be no physically access directly to any camera.

NETWORK CONNECTION USING WEB BROSWE

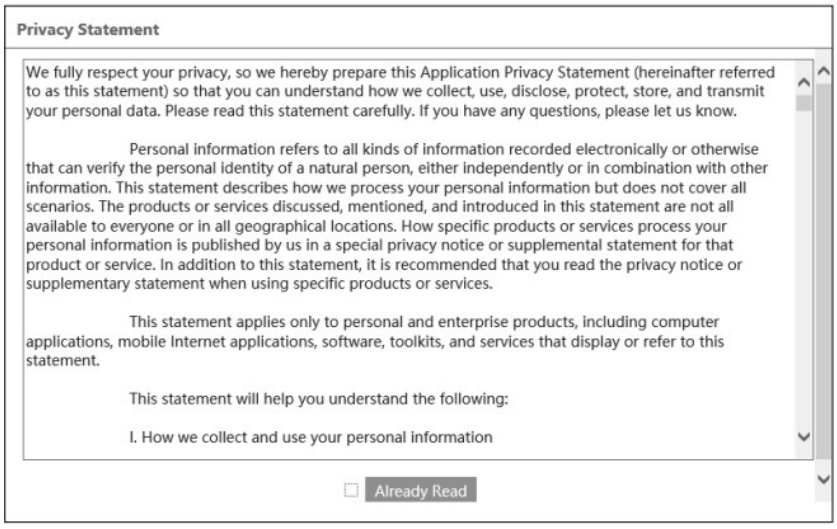
Recommended PC specification for web browser connections
Requirements below apply to connection with an IP camera, assuming smooth image display in 2592 x 1944 resolution and 30 fps speed

1. CPU Intel i7 3 GHz
2. RAM Memory min. 6 GB
3. VGA card Nvidia GeForce 1GB
4. Operating System Windows 10
5. Network card 100/1000 Mb/s

Connection with IP camera via web browser

- Connecting to the camera for the first time

Enter the IP address of the camera (default 192.168.1.200) in the address bar of the web browser. If the address is correct and the target device is currently available, the first connection window will be displayed. In this window, user should read the privacy statement and after reading it, select the checkbox next to the Already Read button, and press this button.



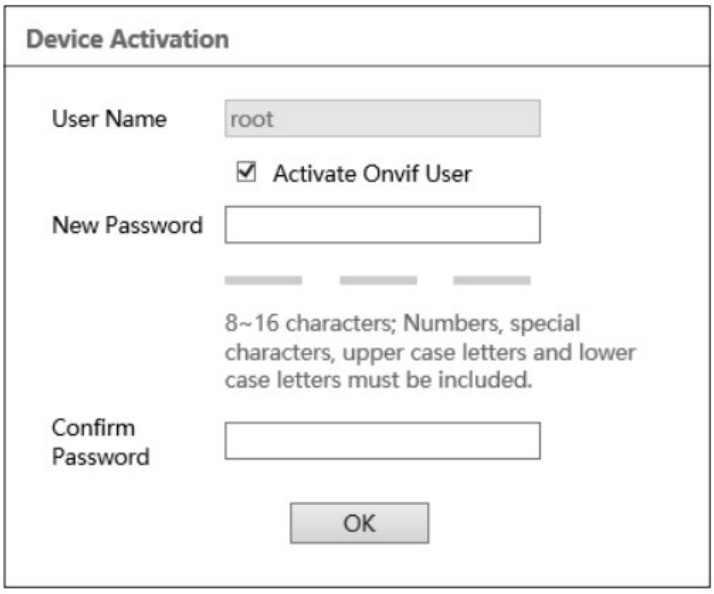
The acceptance of the privacy statement cannot be omitted. This window only appears the first time you log in, but it can be displayed again at any time.

Access to the privacy statement can be found in the menu Config > System > Basic information > Privacy statement.

- Device Activation

After accept privacy statement, device activate window appears. In this window user has to set a password for the web account.

Check the “Activate Onvif user” checkbox to change the password for the Onvif account to the same password as for the web account.



If the user assigns a new password during the device activation but does not check the

- Activate Onvif User” checkbox, the Onvif account will remain with the default login data (login: root and password: pass).

The password can be up to 16 characters long. While password is entered strength of it displaing on an ongoing basis by the security level indicator. To ensure the good security of the password, use upper and lower case letters, numbers and special characters. After entering the correct password twice and confirming it with the OK button, the administrator password will be saved, the window will close and the login screen will be displayed

- User accounts

The Web account is the administrator account created during the activation of the device. It means that the user logging in, by using the root login and a predefined password and have access to the full functionality and all available settings in the camera. The account is also used to log in to the camera via the 6000 series network recorders and NMS (Novus Management System) software using the LongPolling event method.

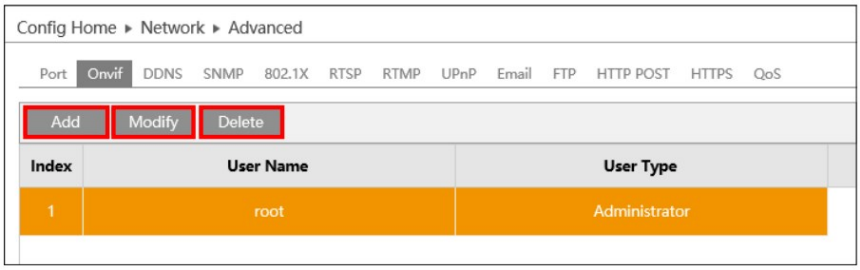
The Onvif account is an account used to log in to the camera via the NMS software (Novus Management System) or using the Onvif or the RTSP protocol. This account is created automatically during activation of the device, and the default login data are login: “root” and password: “pass”.

ⓘFor security reasons, immediately change the default password for the Onvif account after activating the device. It is recommended to set the same password in both accounts: the Onvif account and the web account.

- Onvif account edition

In order to change the Onvif account password, after logging in, go to the Settings tab in the upper right corner and then Network > Onvif.

In the Onvif tab, click the Modify button, then in the Edit User window, enter the new password and confirm with OK button. If the connection to the camera via the NMS software is using the LongPolling event handling method, the same password for the Onvif account as for the Web account must be set in this step



In order to delete the Onvif account, select the user by clicking on the appropriate row in the table, then click Delete button. Please note that deleting Onvif account means that the camera cannot be added to NMS software. Add button is used to create new Onvif account.

- Logging in to the camera for the first time

In this window, in order to login to camera, enter the user name root and the newly set administrator password. In the Stream type field user can select the stream that is displayed in the live view window after login. The Language field allows to change the interface language. The Forget Password option allows to log in to the camera if you forget the administrator password and for this is required to know the answers to the security questions (set in the next step).

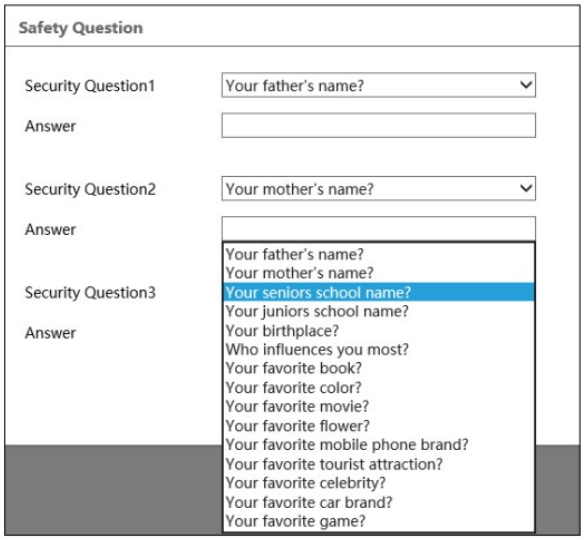
After entering appropriate data, click the Login button to login to the web panel of the camera.

- Safety questions

The next step in logging in for the first time is entering answers to the security questions.

In the window that appears, select questions from among those available on the list and enter your own answers.

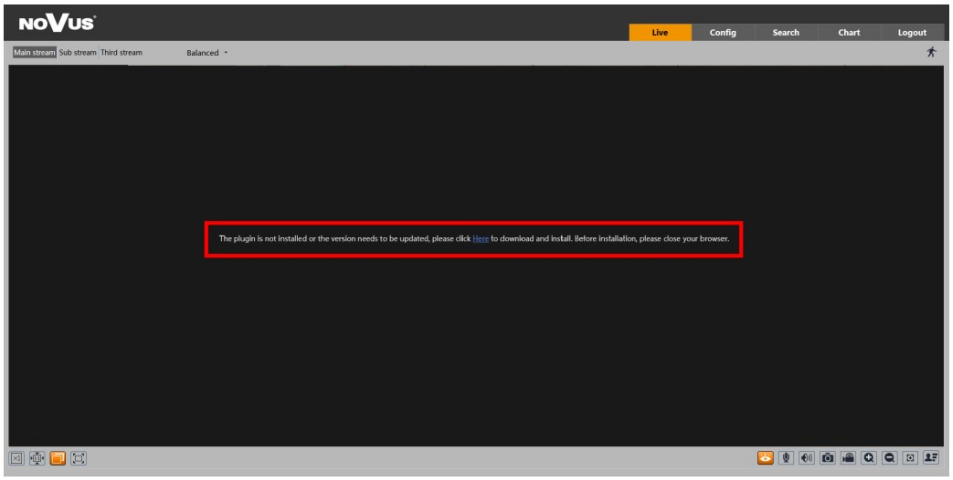
Knowing the right answers is essential to recovering the administrator password.



This step cannot be omitted. The security question window is displayed only during the first login, and the only possibility to change the given answers is to restore the factory settings and go through all stages of the first connection with the camera.

- Plug-in installation

If the browser has no connected to any of the 6000 series cameras so far, or if an older version of the plug-in is installed, a message will be displayed in the remote viewing window that the appropriate plug-in version must be installed.



To start plug-in installation, click Here button. Then the browser displays a window asking how to proceed with the NetAIIPCamera.exe file. Press the Run button to start the plug-in installer.

In the installer window, select the installation language (English by default) and then click Install button to install plug-in. After installation click the Finish button to close the installer and refresh the browser window (you can also close and restart the browser).

If after installation and browser window refresh, the same text appears on the screen, go to the browser Tools (the gearwheel icon in the top right corner), then click Menage add-ones. In the window that appears click right mouse button on the NetAIIPCamera Control, then click the Enable option and refresh the browser window.

After completion all of the above steps, preview of the camera in the live view window should appears

WWW INTERFACE – WORKING WITH IP CAMERA

Displaying live video

1. Camera menu:
    - Live – opens the camera live video,
    - Config – opens the camera configuration menu,
    - Search – opens the camera playback,
    - Chart – opens the intelligent image analysis statistics window.
2. The buttons for changing the displayed stream and fluency:
    - Allow to change the displayed stream to Main stream, Sub stream.
    - Allow you to choose between Real-time, Balanced and Fluent fluency.
3. Alarm icons – icons showing the current status of some camera alarms. To see what an icon is responsible for, move over it the mouse cursor.
4. Video camera preview window.
5. Thermal camera preview window.
6. Image settings buttons – these buttons change the picture display mode in the live video preview:
    -  Original size
    -  Proper size
    -  Adapt
    -  Full screen
    -  Thermal and video image in division
    -  Video image
    -  Thermal image

Function buttons

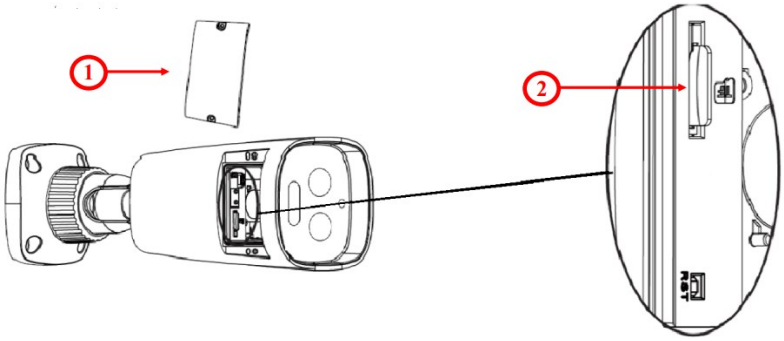
-  Start/stop live view

-  Snapshot
-  Zoom In (digital)
-  Enable/disable face recognition panel
-  Activate alarm output
-  Enable/disable audio
-  Start Recording
-  Zoom out (digital)
-  Two-way communication

ELECTRIC CONNECTORS AND ACCESORIES

MicroSD card installation
Camera supports microSD cards up to a maximum size of 256GB. In order to install the card properly, please follow the instructions below:

- Turn off the camera power.
- Unscrew the service panel (1) located on the bottom of the camera, paying special attention to the cable leading to the speaker located in the panel.
- Mount microSD card in the socket (2).
- Screw the camera service panel (1).
- Turn on the camera.
- Check the microSD card by checking its capacity in the “System” -> “SD Card” tab.



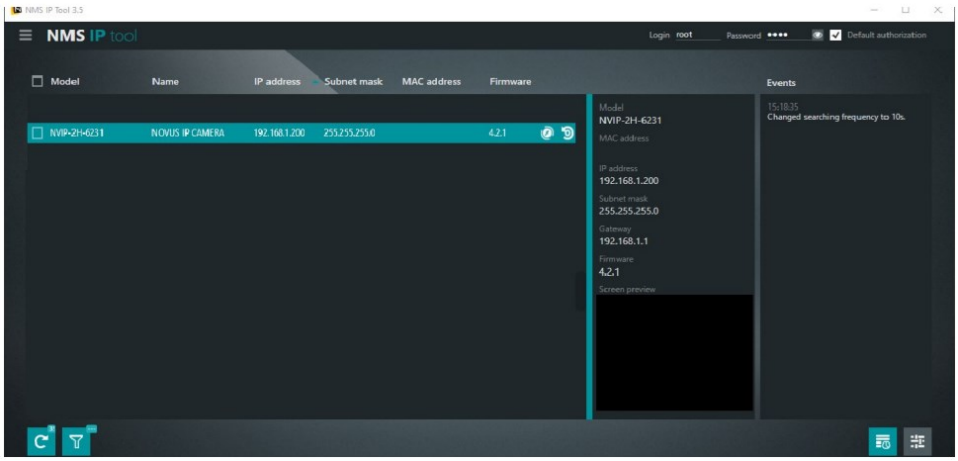
FACTORY SETTINGS RESTORING

Restoring factory settings of the IP camera restores all default settings. This process takes about two\ minutes. NOVUS NVIP-5H-6711/TA/3 cameras allow to restore defaults via:

- software (via web browser)
- software (via NMS IPTool)
- hardware (using reset button (RST))

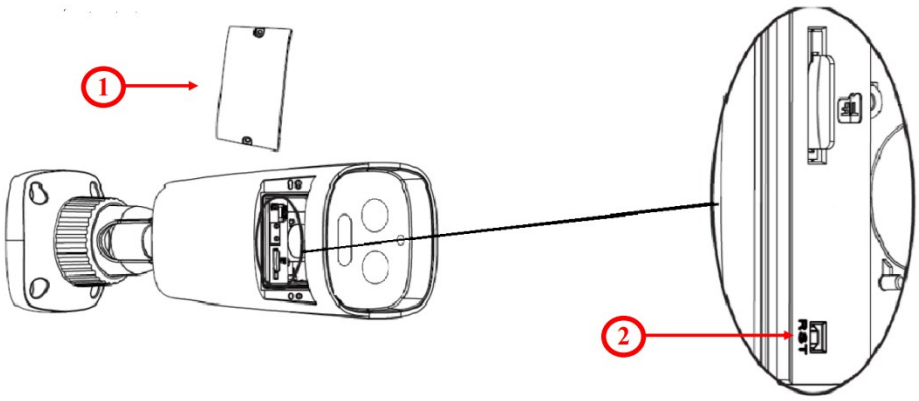
Software factory settings restoring via web browser
Restoring factory settings via web browser allows you to optionally keep some settings, such as network settings. To restore default settings go to: “Maintenance -> Backup and Restore” tab.

Software factory settings restoring via NMS IPTool
NMS IPTool (version 3.5 or later) allows to restore factory settings. To restore settings via NMS IPTool, find the camera in the list of available devices and then, on the right side of the row click , . Then within 30 seconds disconnect power of the camera. After reconnecting the camera, all settings are factory default.



Hardware factory settings restoring
In order to restore factory settings using reset button (RST), please follow the instructions below:

- Unscrew the camera service panel (1).
- Press the reset button (2) and hold on for 10 seconds.
- Release button.
- Screw the camera service panel (1).
- Log on after 2 minutes using default IP address (http://192.168.1.200) and default user name (root) and password (pass).



AAT SYSTEMY BEZPIECZEŃSTWA Sp. z o.o.
431 Pulawska St., 02-801 Warsaw, Poland
tel.: +4822 546 0 546, kontakt@aat.pl
www.novuscctv.com

Documents / Resources

	NOVUS NVIP-5H-671[1-TA-3 Dual IP Camera [pdf] User Manual NVIP-5H-671 1-TA-3 Dual IP Camera, NVIP-5H-671 1-TA-3, Dual IP Camera, IP Camera

References

- NOVUS Professional solution for your security systems | Video surveillance (CCTV), Access control
- NOVUS Profesjonalne rozwiązanie dla systemów zabezpieczeń | Telewizja przemysłowa CCTV, Kontrola dostępu