

Summary

At present, many customers are using third-party monitoring software and NAS equipment to connect to IP cameras.

The more representative monitoring software is Blue iris.

There are also many models of network storage devices, and Synology NAS is used as a case for illustration.

As we know, many of these third-party software and NAS devices only support H.264 video encoding. Therefore, when connecting with a Topodome camera, you need to pay special attention to the default video encoding format of the camera.

Due to the upgrade of the version, many Topodome camera models are currently factory-set to H265 video format by default. If the user only uses a mobile phone to browse or save to an SD card, the H265 format will have a better compression ratio.

But if you want to connect the above-mentioned third-party software and equipment at the same time, you need to adjust the video encoding format to H264.

The following is the specific setup process for Blue Iris and Synology NAS.

If you are using other brands of software and NAS, DVR, please refer to this example to adjust, if this example can not help you solve the problem, please contact our technical email: Support@topodome.com.

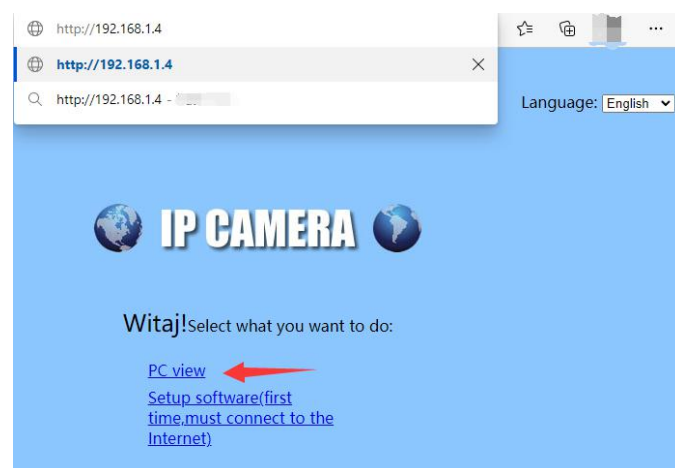
1.How to adjust the video coding of Topodome Camera

For reasons of simplification, currently Camhi Pro APP cannot select the video encoding format.

Therefore, if you want to modify the video encoding format, you must log in to the camera through a browser to obtain more modification permissions.

Currently Topodome camera supports IE/ Edge/ Firefox and Google Chrome browsers. First, please use Camhi Pro APP or IP search tool to obtain the current camera IP address such as 192.168.1.4.

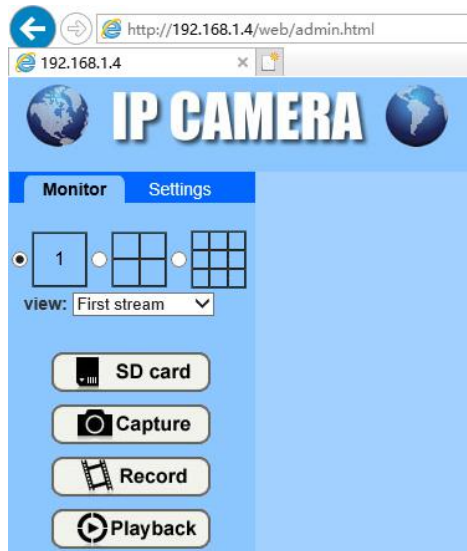
Enter the IP address in the address bar of the browser and click “PC view” to login the interface.



Note: for IE browser, you can click “Setup software” on home page and a plugin named

"ClientPlus_Setup.exe" will be installed on your PC.

This plugin will help you get more advanced function like SD Card control or PC recording & Playback.



But if you hate plug-ins, and you don't need to use your computer to read SD card files or use hard disks for video recording, you can use browsers such as Edge/ Firefox/ Google Chrome without installing the plug-ins.

Now, please find the option on your browser: Settings-->Media-->Video-->Video Coding.

In this option, if the default value is H265, please adjust the value to H264 high profile or main profile.

Then click the "Apply" button to make the settings take effect.



The web page will restart at this time, you can wait a few seconds, refresh the web page, and check whether the selection takes effect.

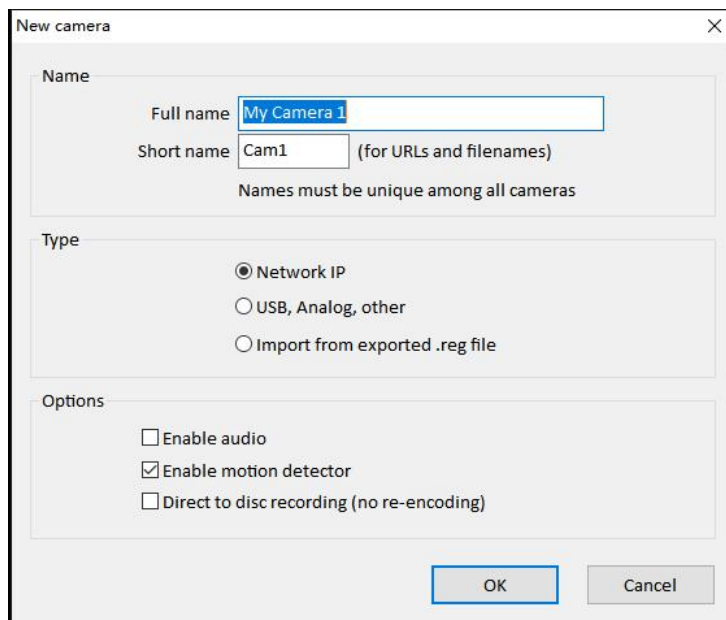
When the modification takes effect, you can start to connect the camera with Blue iris or Synology NAS.

2.How to setup Topodome with Blue IRIS

1. Add the camera name to Blue iris



After entering the main interface, please click the "Camera" icon, and then the newly added camera interface will pop up.



New camera

Name

Full name

Short name (for URLs and filenames)

Names must be unique among all cameras

Type

☒ Network IP

☐ USB, Analog, other

☐ Import from exported .reg file

Options

☐ Enable audio

☒ Enable motion detector

☐ Direct to disc recording (no re-encoding)

OK Cancel

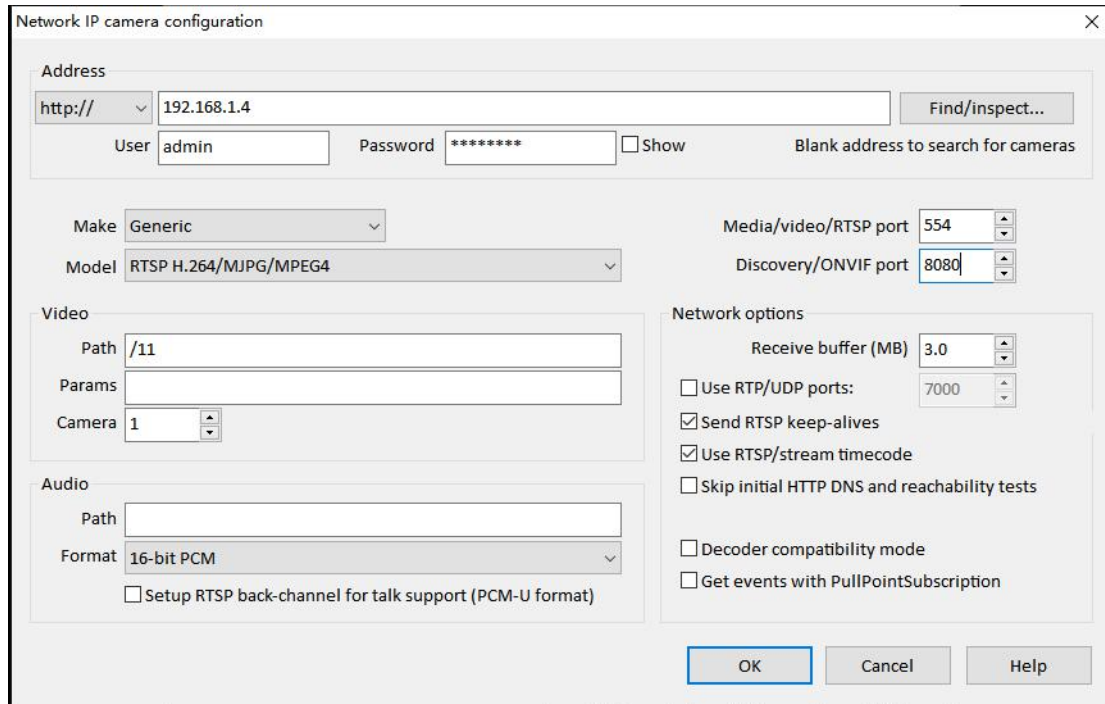
Please name the new camera and leave the "Network IP" option unchanged.

2. Add the camera Video Settings

In the setting interface, please enter the following parameters in sequence:

- 1) IP address
- 2) The correct user name and password of the camera
- 3) Make-> Generic
- 4) Model-> RTSP H.264/MJPEG/MPEG4
- 5) Media/Video/RTSP Port-> 554
- 6) Onvif Port-> 8080
- 7) Video->Path: /11 (You can also enter /12 or /13, which means the second stream and the third stream).

Note: If you already have three other devices connected to the camera and use the first stream, please select the second stream here, because each stream channel can only support up to 3 links.



Network IP camera configuration

Address:

User: Password: ☐ Show Blank address to search for cameras

Make: Media/video/RTSP port:

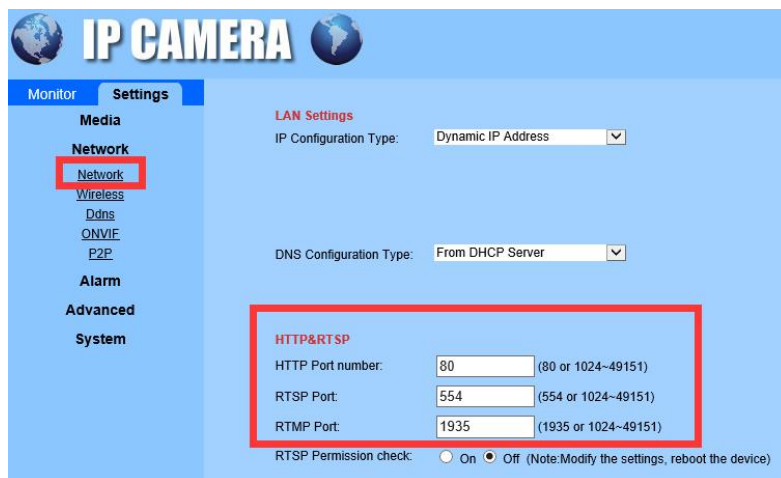
Model: Discovery/ONVIF port:

Video: Path: Params: Camera:

Audio: Path: Format: ☐ Setup RTSP back-channel for talk support (PCM-U format)

Network options: Receive buffer (MB): ☐ Use RTP/UDP ports: ☒ Send RTSP keep-alives ☒ Use RTSP/stream timecode ☐ Skip initial HTTP DNS and reachability tests ☐ Decoder compatibility mode ☐ Get events with PullPointSubscription

If you do not want to use the default RTSP and ONVIF ports, please go to the browser settings and modify the values.



IP CAMERA

Monitor Settings

Media

Network

Wireless

Ddns

ONVIF

P2P

Alarm

Advanced

System

LAN Settings

IP Configuration Type:

DNS Configuration Type:

HTTP&RTSP

HTTP Port number: (80 or 1024~49151)

RTSP Port: (554 or 1024~49151)

RTMP Port: (1935 or 1024~49151)

RTSP Permission check: ☐ On ☒ Off (Note: Modify the settings, reboot the device)



IP CAMERA

Monitor Settings

Media

Network

Wireless

Ddns

ONVIF

P2P

Alarm

Advanced

System

ONVIF

Onvif: ☒ On ☐ Off

Server Port:

Purview: ☐ Check type ☒ No check

Time zone Settings: ☐ Allow ☒ Prohibit

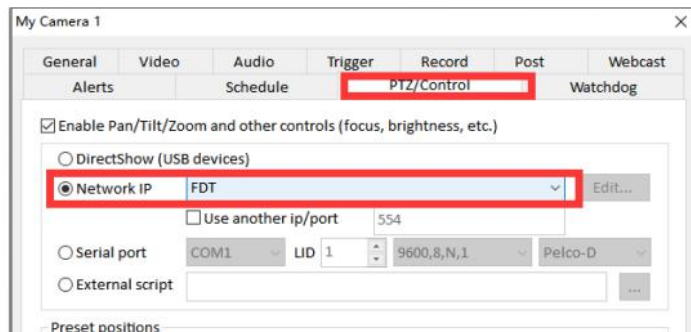
Image Settings: ☐ Allow ☒ Prohibit

NVC Type:

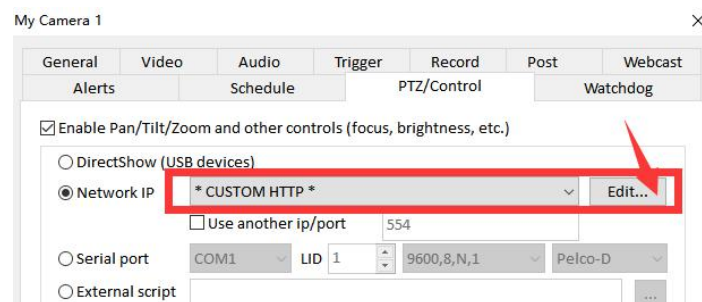
3. Add the camera PTZ Settings

Because Blue iris has not yet included the Topodome model in the software, the PTZ setup process is a bit complicated.

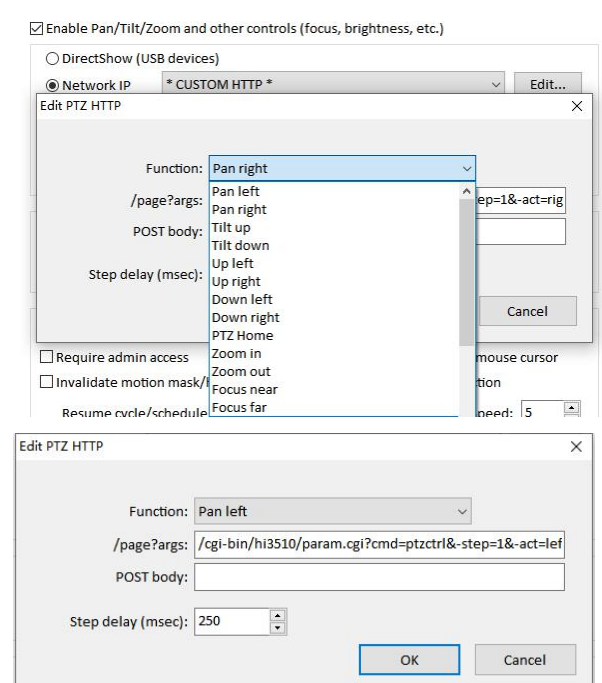
If you don't like to add pan/Tilt/Zoom commands one by one, you can temporarily select "FDT" in the PTZ control parameters. Their pan/ tilt commands are similar to Topodome, but no Zoom function.



If you like to control the PTZ options yourself, you can set the control settings according to the following command table.

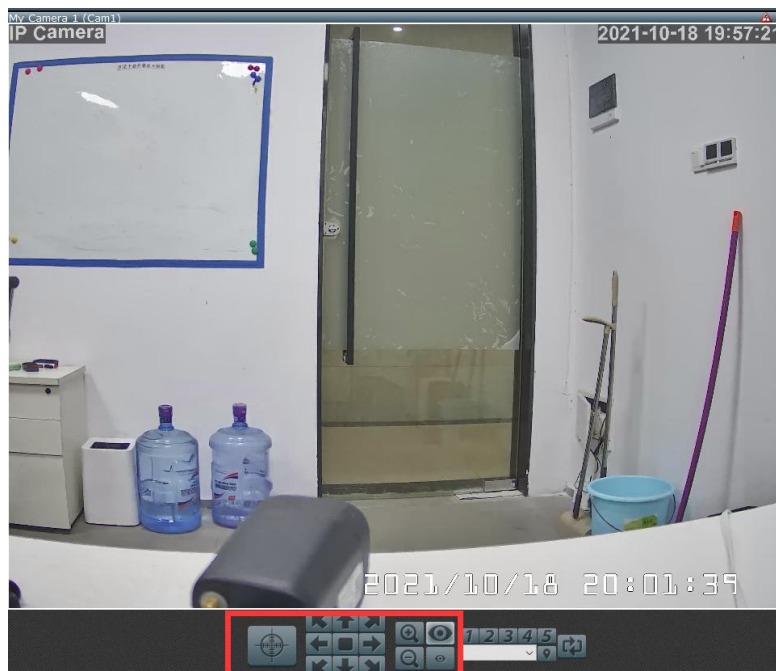


After click "Edit" beside the "Custom HTTP", you can input these commands:



Pan left: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=left&-speed=45
 Pan right: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=right&-speed=45
 Tilt up: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=up&-speed=45
 Tilt down: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=down&-speed=45
 PTZ Home: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=home&-speed=45
 Zoomin: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=zoomin&-speed=45
 Zoomout: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=zoomout&-speed=45
 Focus far: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=focusin&-speed=45
 Focus near: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=focusout&-speed=45
 Stop: /cgi-bin/hi3510/param.cgi?cmd=ptzctrl&-step=1&-act=stop&-speed=45

After setting the parameters, you can return to the video screen for testing.

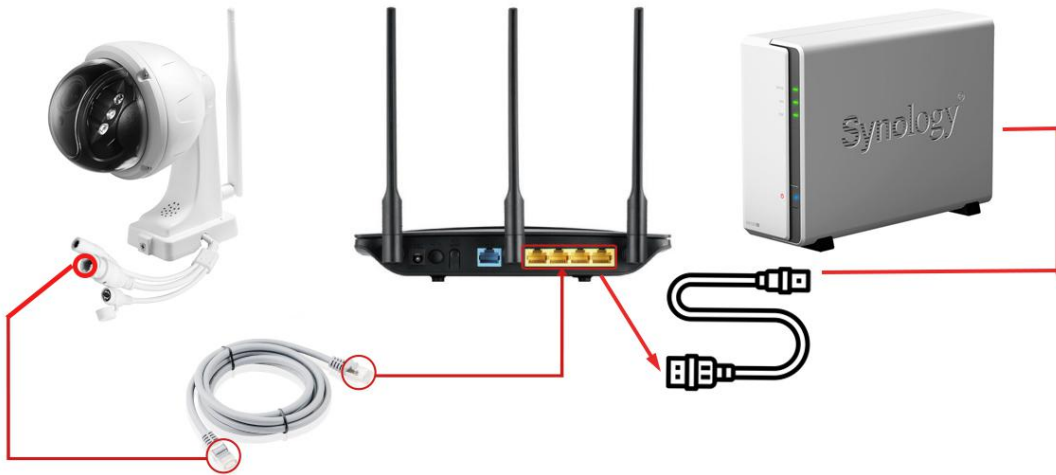


3.How to setup Synology NAS with Topodome

4. Hardware installation

Before proceeding with the installation, please make sure that the Synology NAS and Topodome camera are in the same network segment. Generally, they will be connected to the same router (or hub and other network devices).

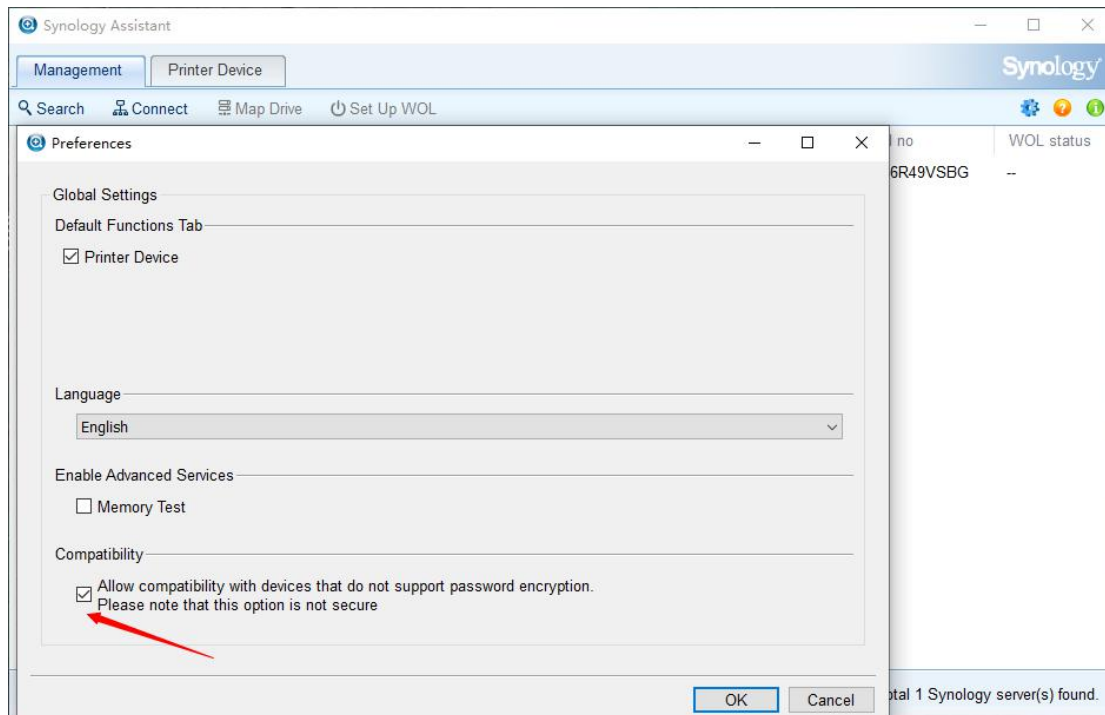
Remember to install the hard drive in the Synology device.



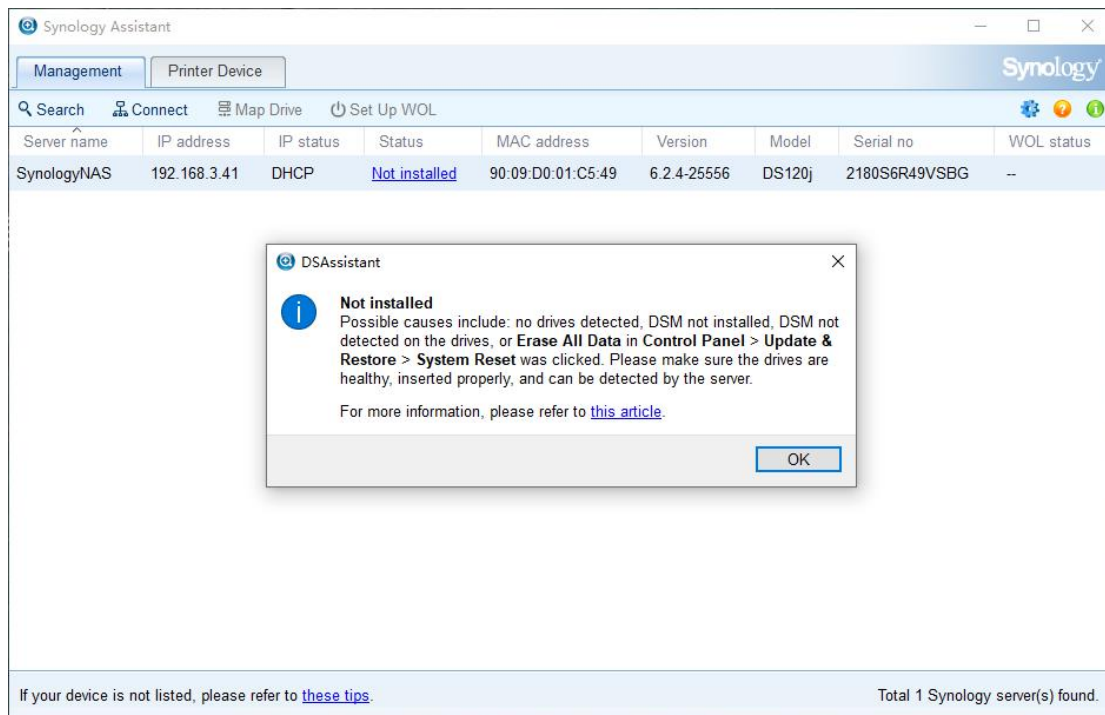
If you have installed Topodome's IP address search software, please test whether the camera has been assigned an IP address normally.

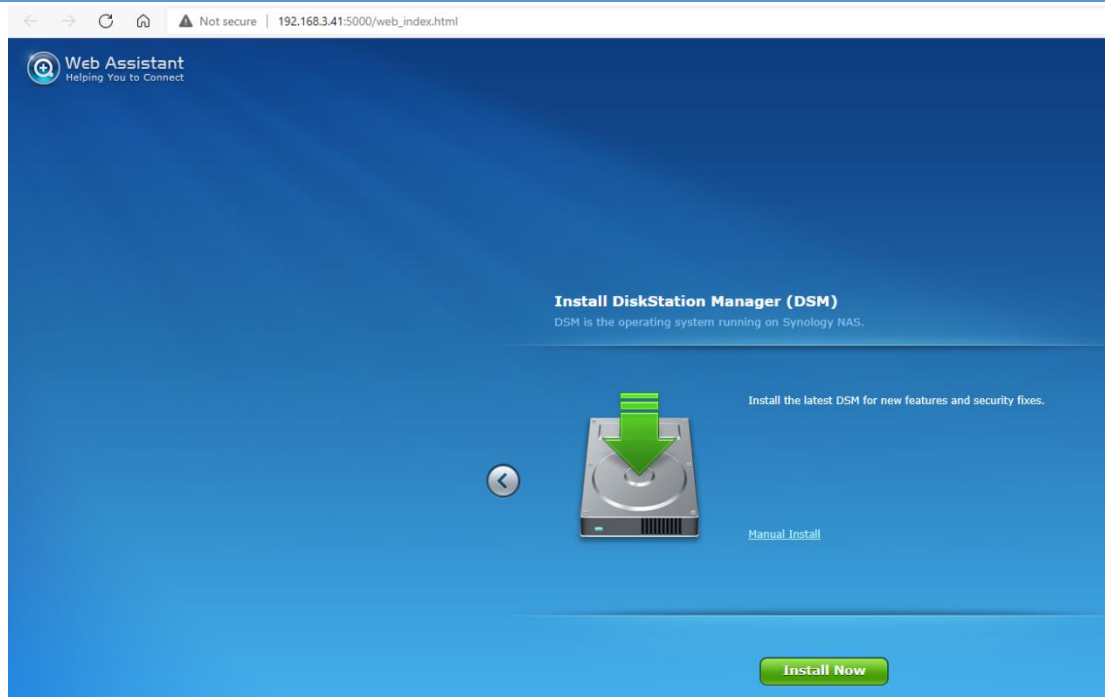
[illegible]

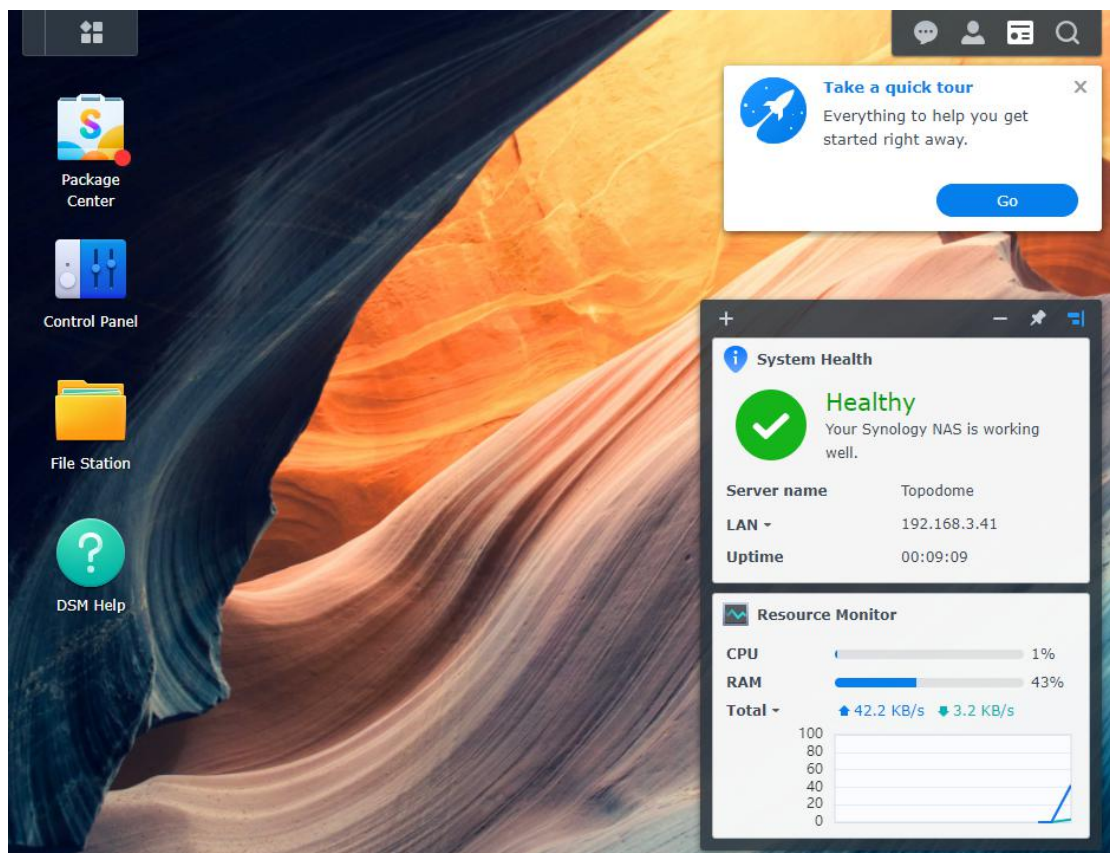
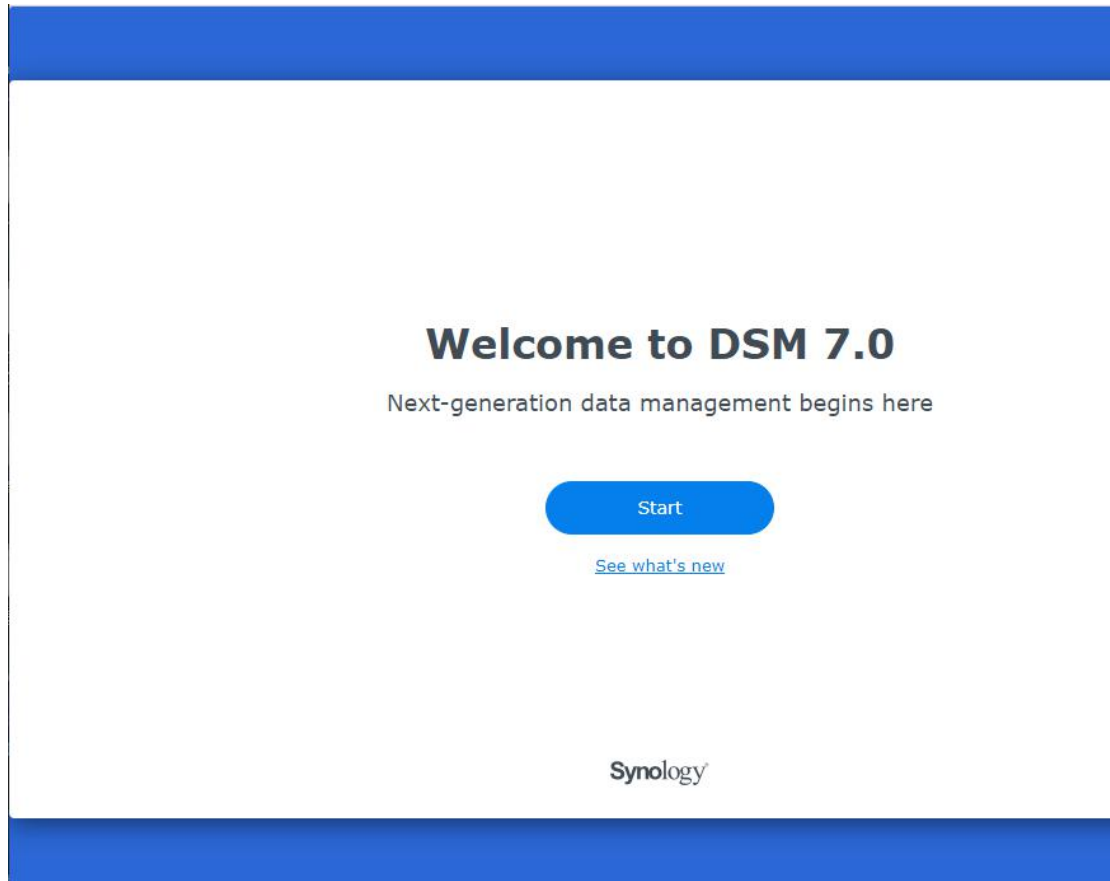
If you are installing Synology for the first time, please check the "Compatibility" option on Assistant.



At this time, the IP address of the NAS device will appear and display "Not installed". Follow the prompts to install the software.

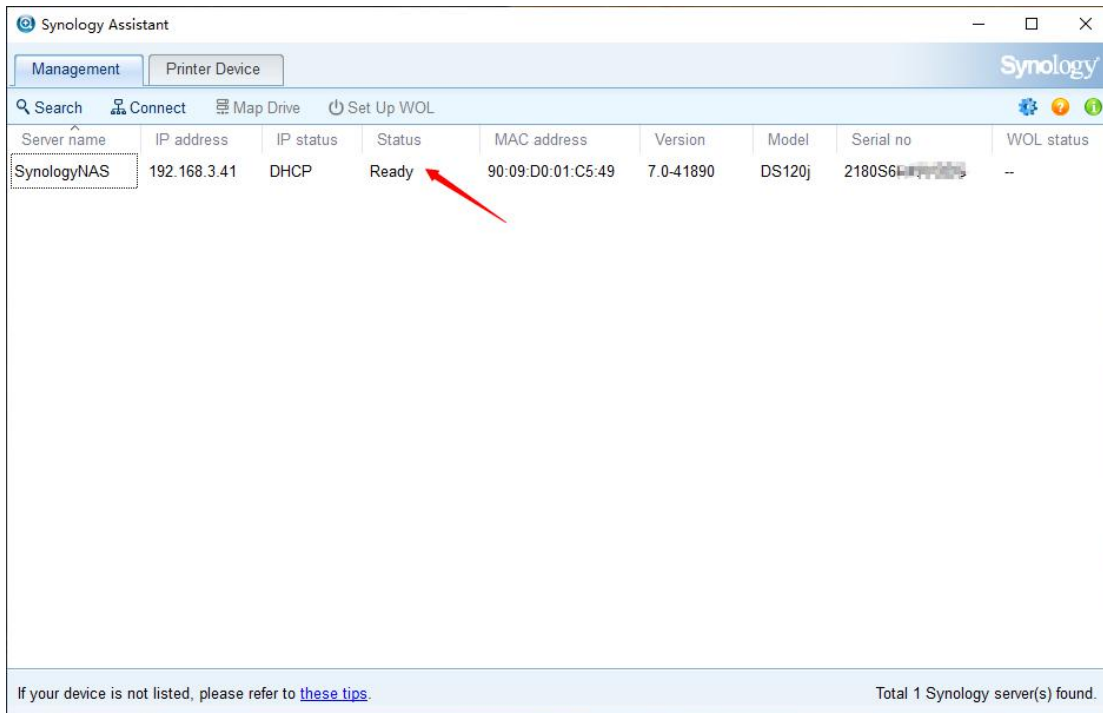






5. Setup camera with Surveillance Station

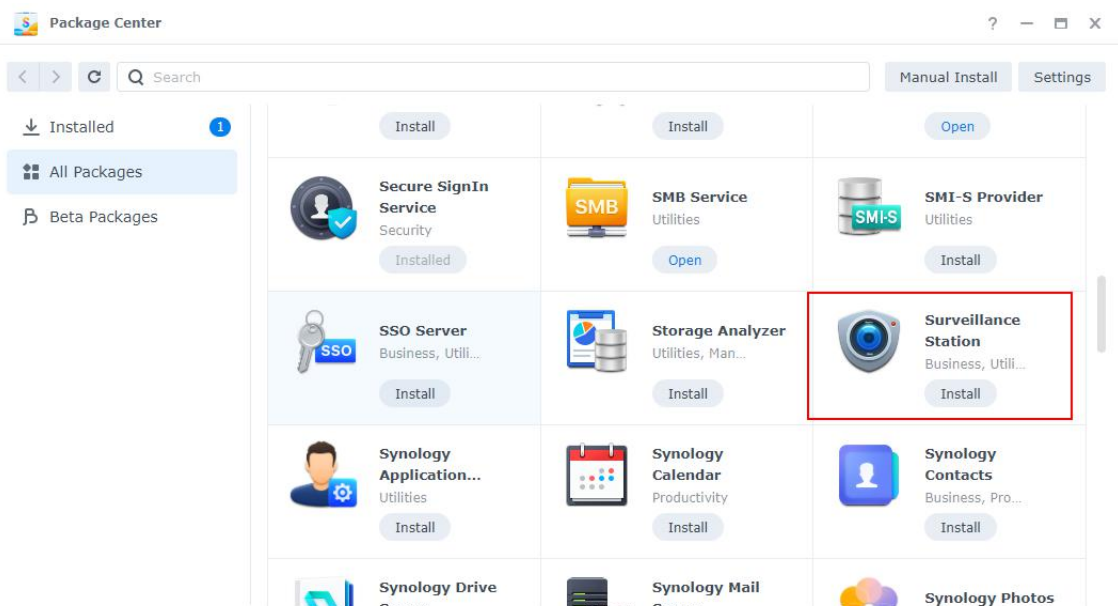
Now, the status of the NAS device should be displayed as "Ready".



Server name	IP address	IP status	Status	MAC address	Version	Model	Serial no	WOL status
SynologyNAS	192.168.3.41	DHCP	Ready	90-09-D0-01-C5-49	7.0-41890	DS120j	2180S6...	--

If your device is not listed, please refer to [these tips](#). Total 1 Synology server(s) found.

Enter "Package center", find "Surveillance Station" APP and install it.



Then you can select the independent IP access address of "Surveillance Station".

Surveillance Station - Install

Installation settings

Users can log in to Surveillance Station directly in a new browser window without logging in to DSM once the customized alias or port(s) is enabled.

☒ Enable customized alias (Login at: <https://192.168.3.41/cam>)

Alias:

☒ Enable customized HTTP port (Login at: <https://192.168.3.41/9900>)

Port:

☒ Enable customized HTTPS port (Login at: <https://192.168.3.41/9901>)

Port:

Next

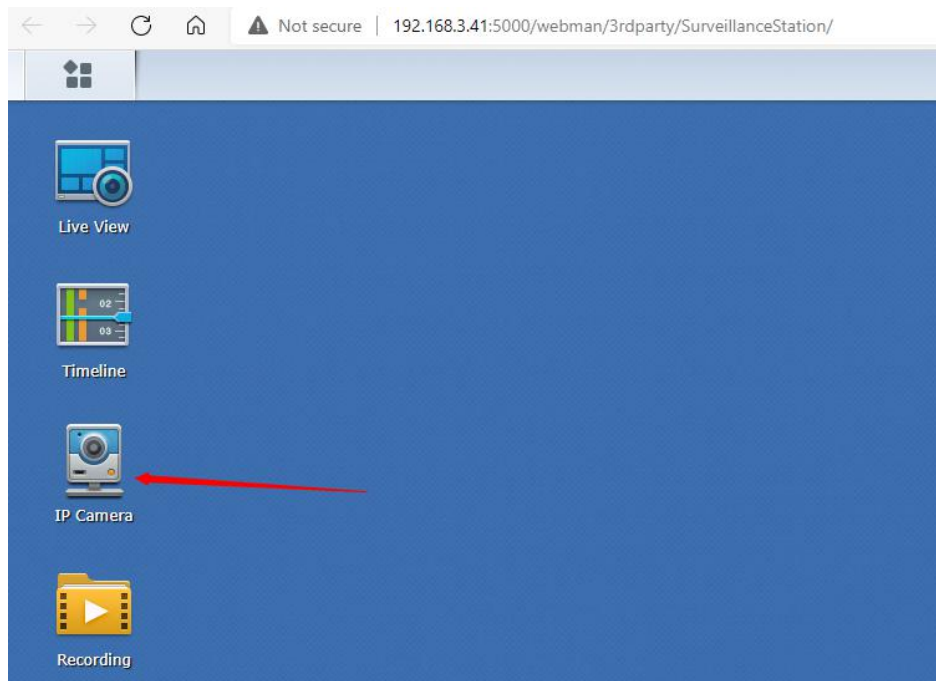
Tips about the browser.

Surveillance Station uses the default browser player to play videos. For better video streaming experience, we highly recommend using Google Chrome. For more information, please refer to [this FAQ](#).

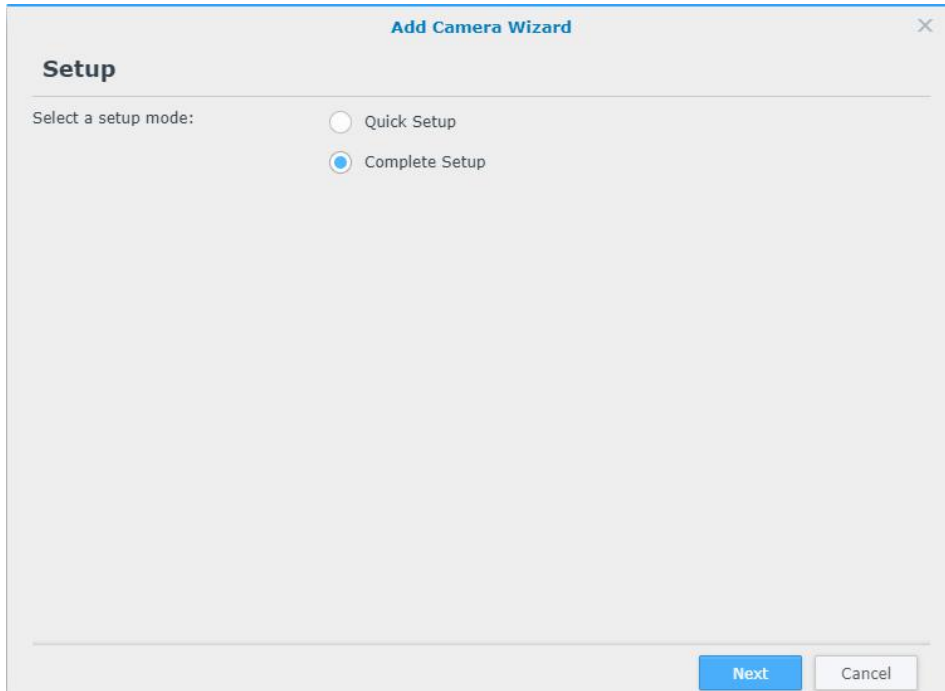
☒ Do not show this message again

OK

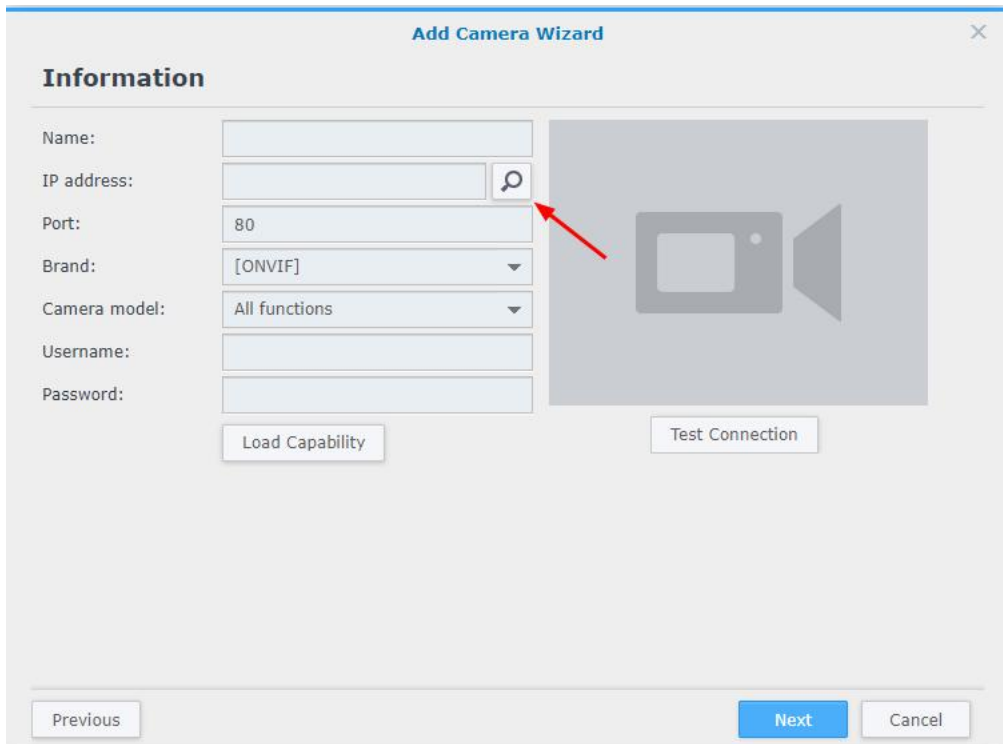
Enter the running interface of "Surveillance Station".



Click the "IP camera" icon to start the configuration process of the camera.
Please select "Complete setup".

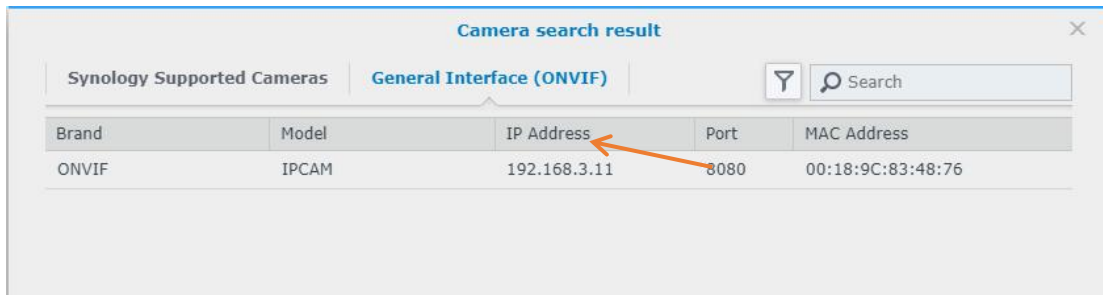


In the "Add Camera Wizard", click the magnifying glass icon to search for ONVIF cameras in the LAN.



Please click "General Interface(ONVIF)" in the search results.

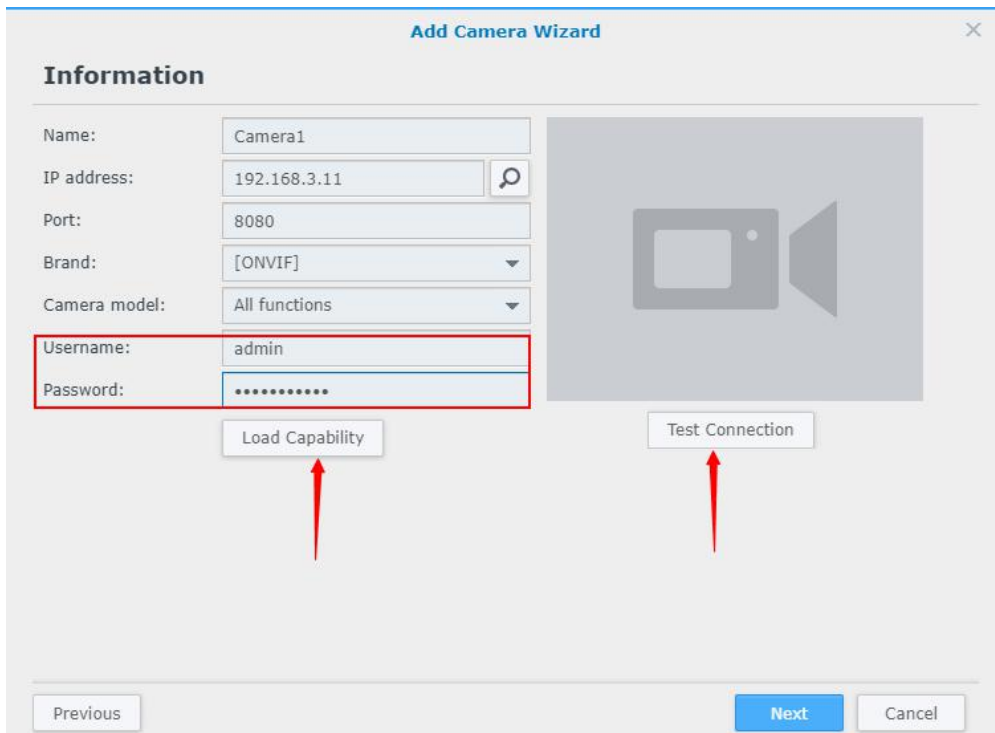
At this time, you can see the IP address information of the Topodome camera.



Camera search result				
Synology Supported Cameras		General Interface (ONVIF)		
Brand	Model	IP Address	Port	MAC Address
ONVIF	IPCAM	192.168.3.11	8080	00:18:9C:83:48:76

Double-click the IP address and it will return to the "Add Camera Wizard" interface. At this time, the specific IP address, ONVIF port, and Camera model information appeared.

Modify the new name for your camera (default is ONVIF), and then fill in the user name and password of the camera. Please note that if you have changed the camera user name or password, please make sure that the information entered at this time is the correct (default will be "admin" both for username and password).



Add Camera Wizard

Information

Name: Camera1

IP address: 192.168.3.11

Port: 8080

Brand: [ONVIF]

Camera model: All functions

Username: admin

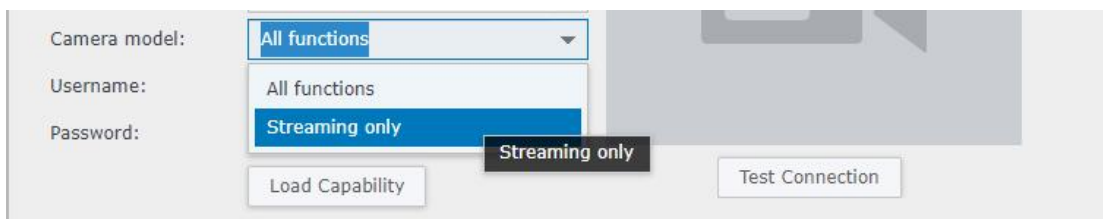
Password:

Load Capability

Test Connection

Previous Next Cancel

Please do not select "Streaming only" (in the Camera model), it will cause errors.



Camera model: All functions

Username: All functions

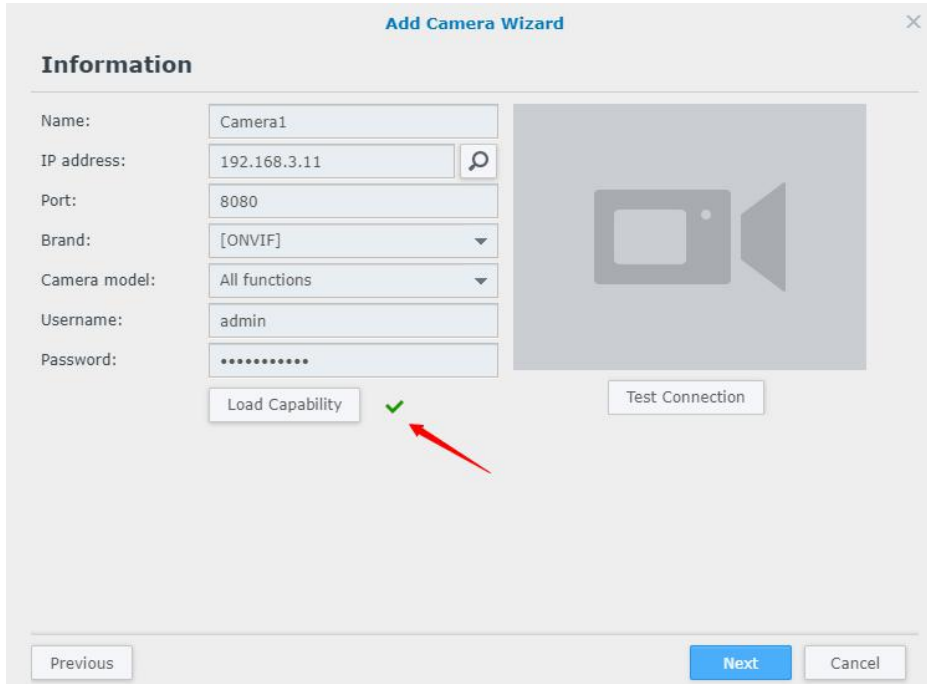
Password: Streaming only

Load Capability

Test Connection

At this point, click "Load Capability" to load the camera's parameters.

A green check mark will appear normally. If an error occurs, please check whether the user name and password of the camera are correct.



Add Camera Wizard

Information

Name: Camera1

IP address: 192.168.3.11

Port: 8080

Brand: [ONVIF]

Camera model: All functions

Username: admin

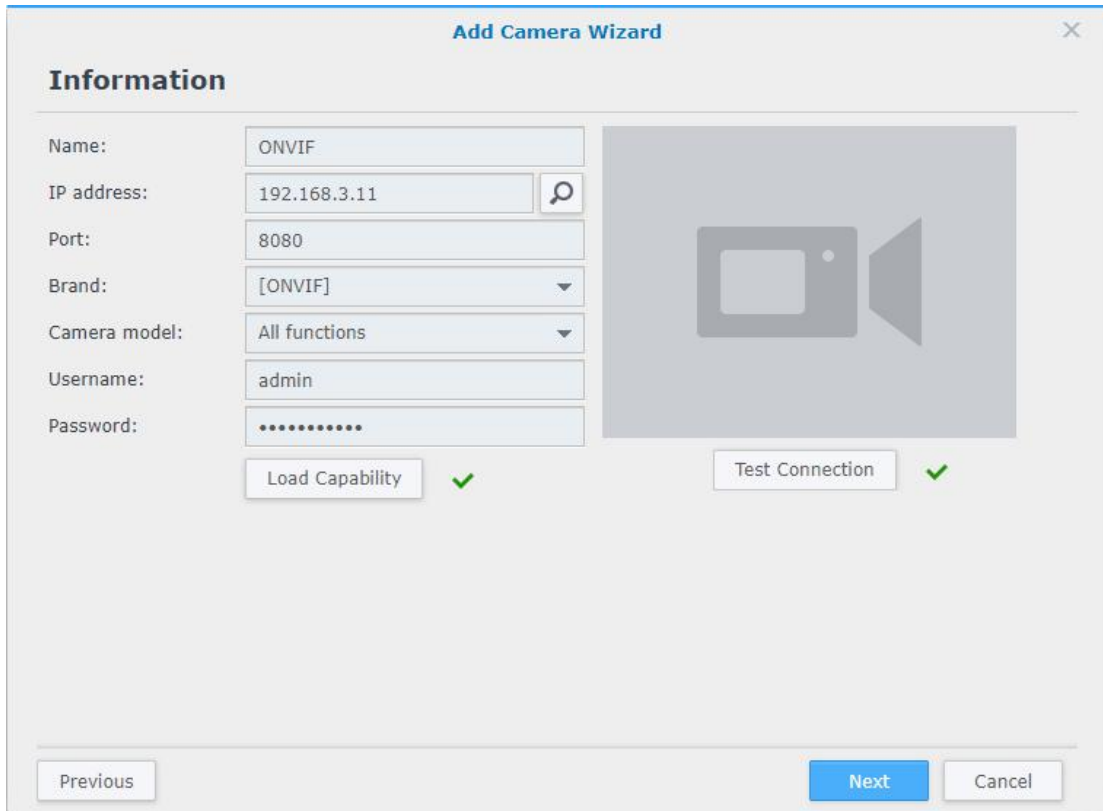
Password:

Load Capability ✓

Test Connection

Previous Next Cancel

Then click "Test connection" to test whether the camera can be connected normally, and a green check mark will appear normally.



Add Camera Wizard

Information

Name: ONVIF

IP address: 192.168.3.11

Port: 8080

Brand: [ONVIF]

Camera model: All functions

Username: admin

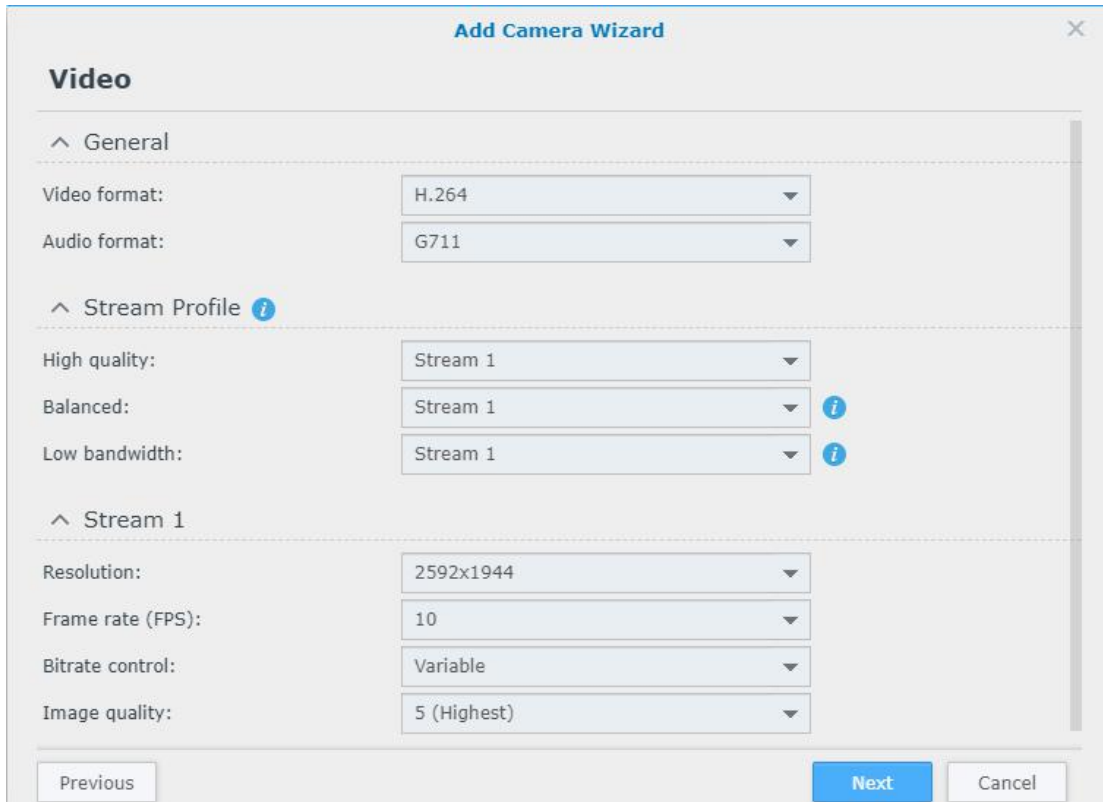
Password:

Load Capability ✓

Test Connection ✓

Previous Next Cancel

In the "Video" option, if the following parameters appear, it is normal, please do not modify it yet.



Add Camera Wizard

Video

^ General

Video format: H.264

Audio format: G711

^ Stream Profile *i*

High quality: Stream 1

Balanced: Stream 1 *i*

Low bandwidth: Stream 1 *i*

^ Stream 1

Resolution: 2592x1944

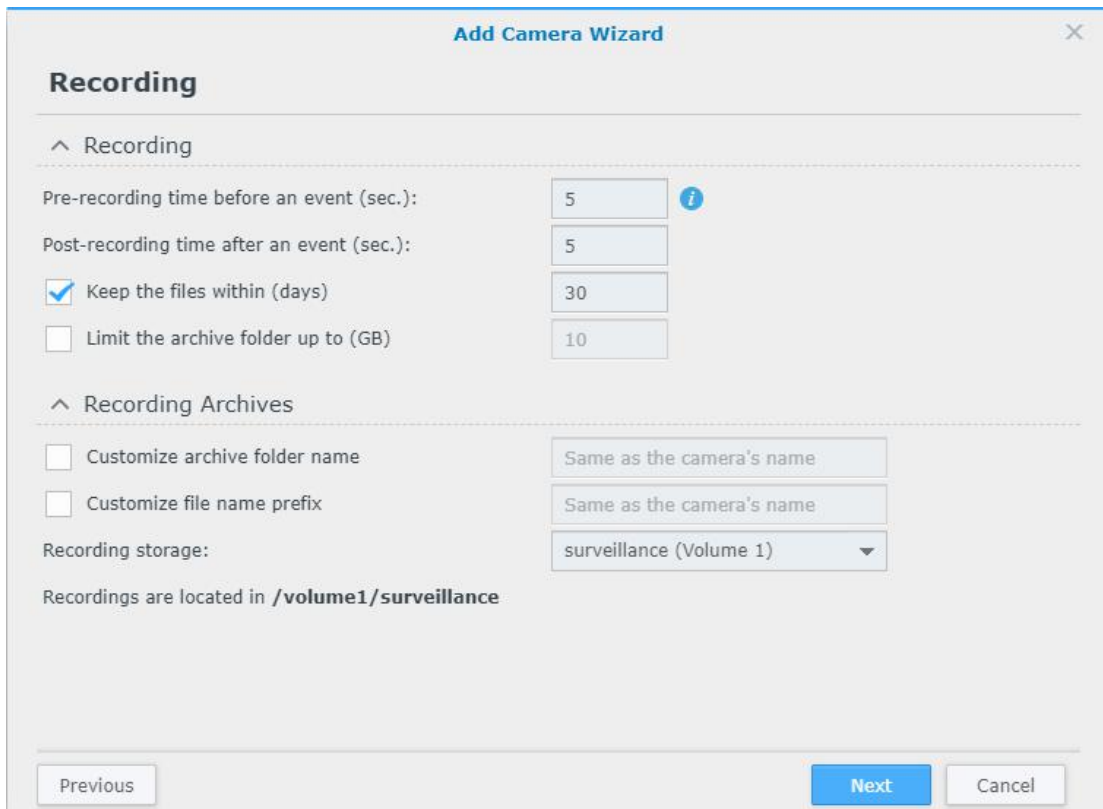
Frame rate (FPS): 10

Bitrate control: Variable

Image quality: 5 (Highest)

Previous Next Cancel

In the "Recording" option, you can set it according to your needs or keep the default.



Add Camera Wizard

Recording

^ Recording

Pre-recording time before an event (sec.): 5 *i*

Post-recording time after an event (sec.): 5

☒ Keep the files within (days) 30

☐ Limit the archive folder up to (GB) 10

^ Recording Archives

☐ Customize archive folder name Same as the camera's name

☐ Customize file name prefix Same as the camera's name

Recording storage: surveillance (Volume 1)

Recordings are located in **/volume1/surveillance**

Previous Next Cancel

In the "Schedule" project, you can set the trigger conditions for recording for different time periods according to your own preferences. The default is continuous recording.

Add Camera Wizard

X

Schedule

☐ Continuous

☒ Motion Detection

☐ Customize 1

☐ Customize 2

Delete

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sun																								
Mon																								
Tue																								
Wed																								
Thu																								
Fri																								
Sat																								

*Please note that you can use [Smart Time Lapse](#) to generate a space-saving video summary.

*Please note that the recording schedule will be affected by **Manual Recording** and [Home Mode](#).

Previous

Next

Cancel

In the "Complete" stage, various setting information of the camera will be displayed. At the same time, in the main interface, you will see the newly added camera appear with a video preview thumbnail.

Add v
Delete
Edit v
Enable v
Configuration v
FAQ

All Status	1
Normal	1
Disconnected	0
Disabled	0
Deleted	0
Others	0

ONVIF

192.168.3.11:8080

Add Camera Wizard

Complete

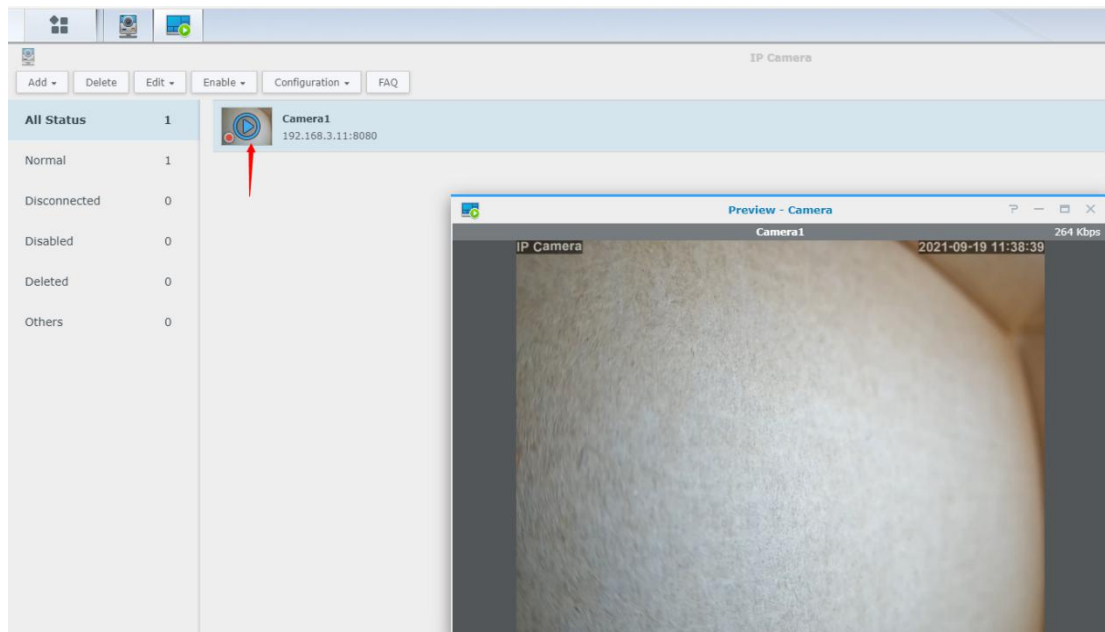
^ Basic Information

Name	ONVIF
IP address	192.168.3.11
Port	8080
Brand	ONVIF
Camera model	Generic_ONVIF

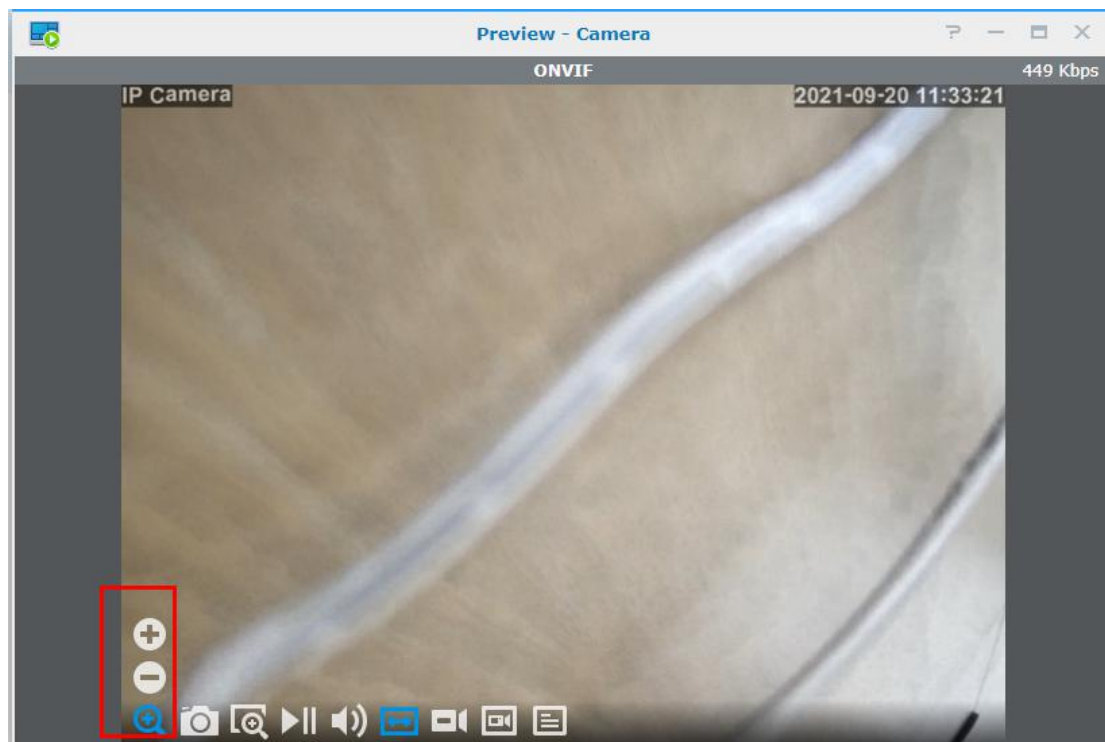
^ Video

Video format	H.264
Audio format	G711
High quality	2592x1944 @ 10 FPS
Balanced	2592x1944 @ 10 FPS
Low bandwidth	2592x1944 @ 10 FPS

Click the play button on the "thumbnail" and the video preview window will pop up.

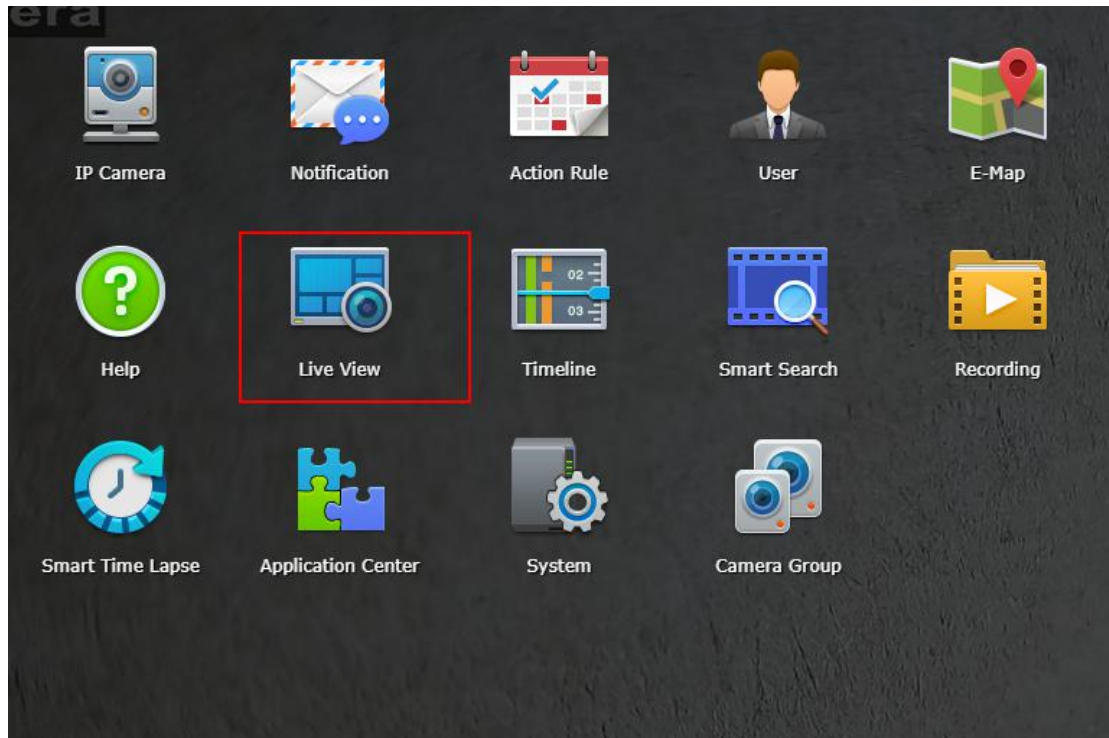


In the preview window, you can find the function buttons at the bottom and do a simple test.

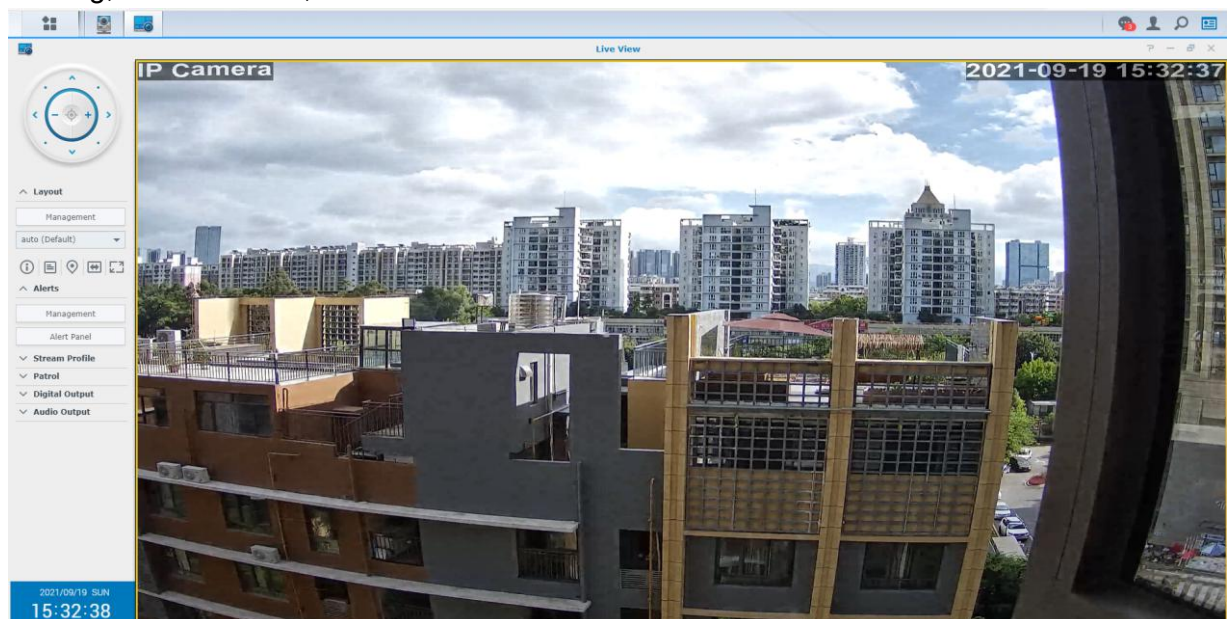


6. Use of "Live View" and adjustment of camera

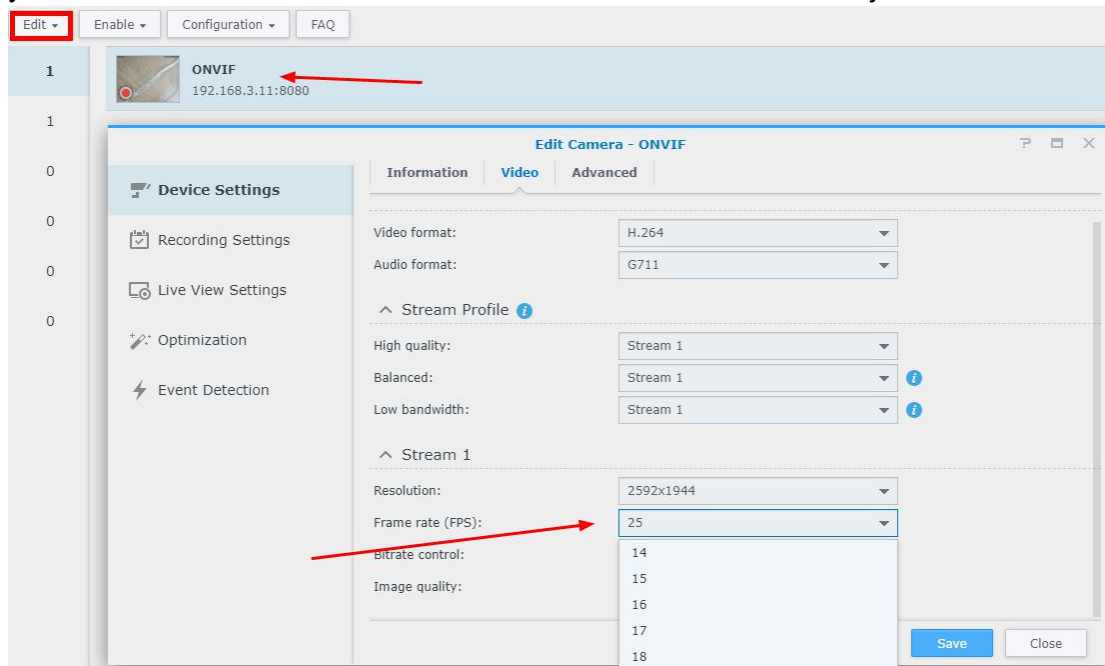
After returning to the main menu, you can find the "Live View" icon, which is the main control interface of the camera.



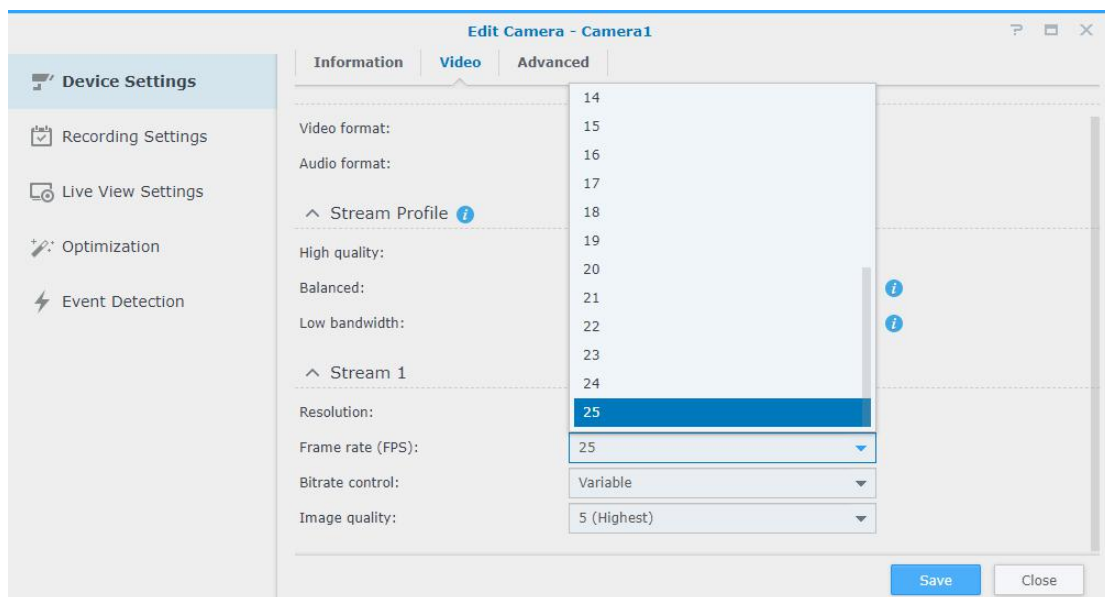
Through the "Live View" interface, you can perform various operations such as video viewing, Pan/Tilt/Zoom, etc.



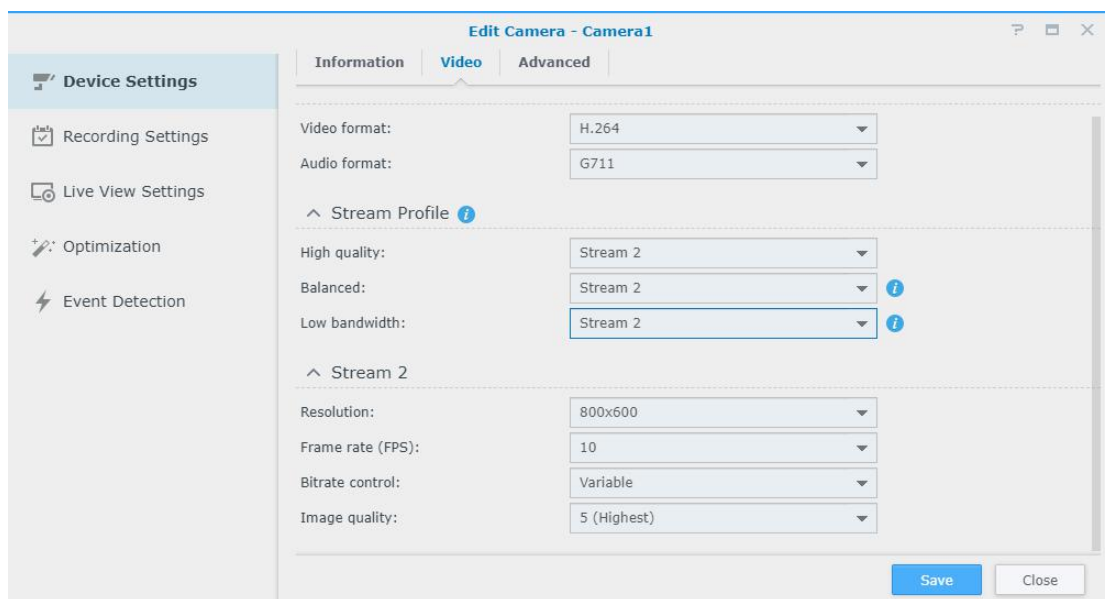
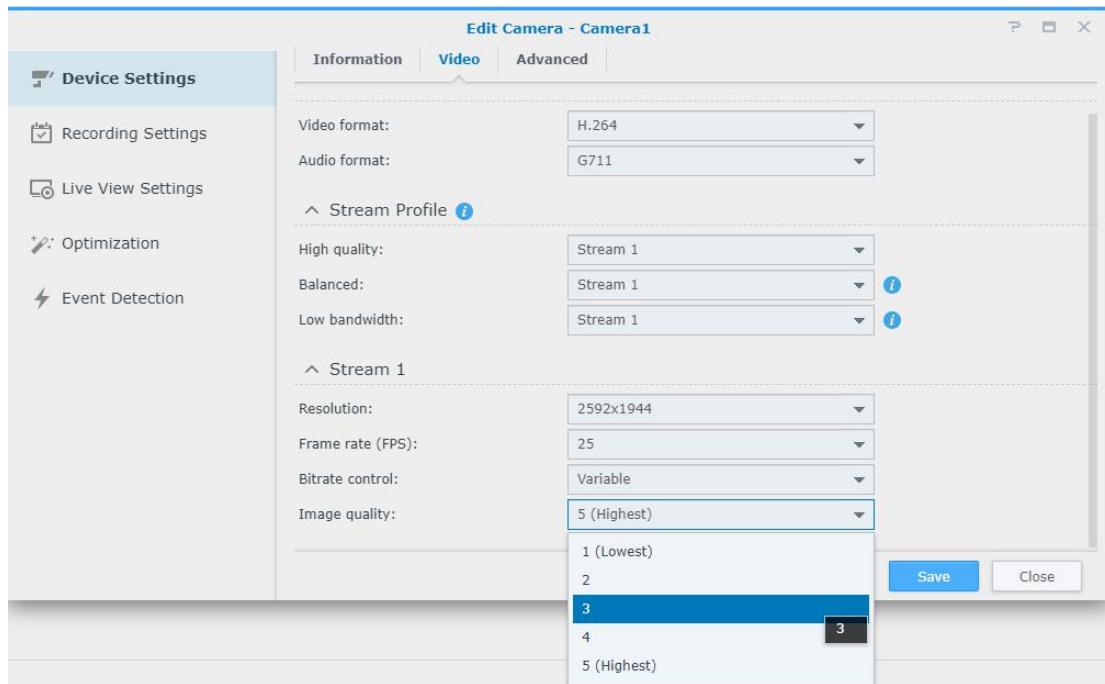
The video parameters of the camera, the default is the first stream, and 10 fps. If you want to increase the fps, or want to save storage space, and use the second stream, you can return to the "IP camera" interface and click "Edit" to re-adjust.



The frame rate can be adjusted up to 25 fps.



New choices can be made for image quality and code stream.



Others

Synology can support more features (such as audio), etc. Currently, Topodome is contacting Synology and will update these features in future versions.

This example can be used as a reference for general ONVIF NAS settings, but it does not guarantee that the settings of all NAS manufacturers are similar to this. If you encounter a problem with NAS settings, you can first communicate with the NAS manufacturer to understand how to connect the general ONVIF camera. If it still cannot be solved, please contact Topodome technical email:

Support@topodome.com.



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