

# **NVR Cross-brand Networking Guide**

Please read this guide before you start with the quick setup upon the first use.

# Check whether the camera supports the ONVIF protocol and the ONVIF function is enabled

Tenda NVR supports the ONVIF protocol and is compatible with multi-brand third-party cameras using the ONVIF protocol. To add and use the camera normally, please confirm the following information.

- **The camera supports ONVIF protocol.**

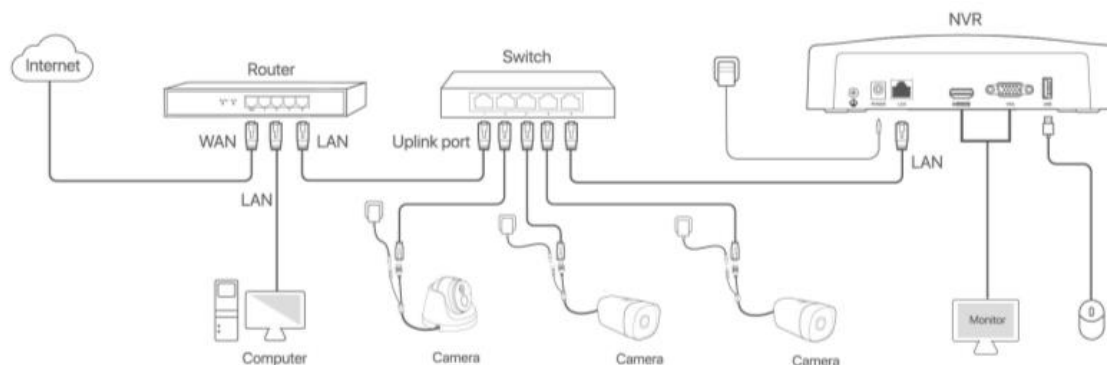
Please confirm whether the camera supports the ONVIF protocol. For any doubt, please view the user guide of the camera or contact your manufacturer.

- **Confirm whether the ONVIF protocol is enabled on the camera, and an ONVIF account is added.**

The ONVIF protocol may be disabled by default for individual brands of cameras, you can enable it through the camera configuration page, and then add related users.

# Networking

The network topology of an ordinary NVR is as follows:



The ONVIF protocol can be searched and connected of cameras in the same network segment. You are recommended to configure the camera as a static IP and ensure that the IP address of the camera and NVR are in the same network segment.

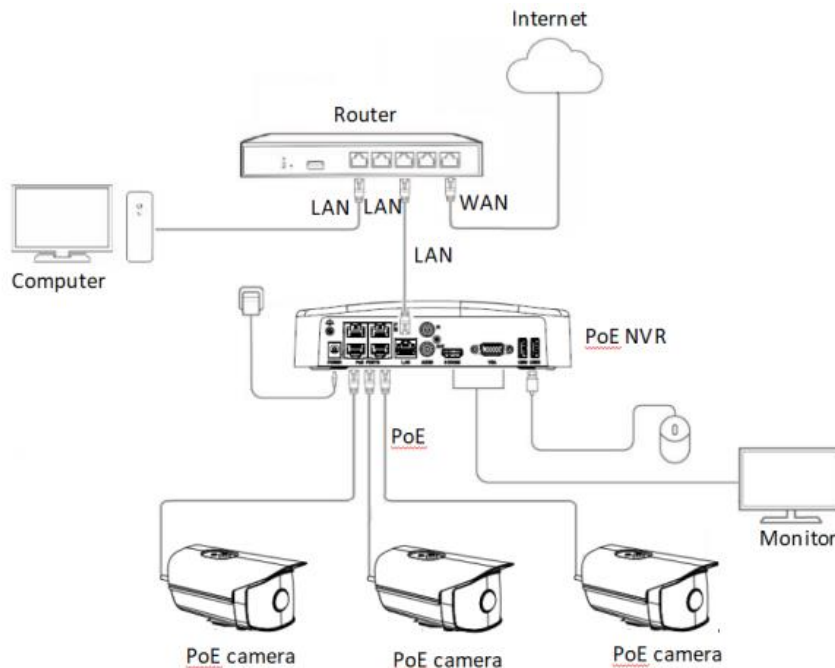
You can view and configure the IP address of the NVR in **Configuration > Network**. See [View the IP address of the NVR](#) in [Appendix](#).

---

## Tips

- Common settings for camera IP address:
    - Method 1: Log in to the web UI of the camera to configure the IP address of the camera.
    - Method 2: Use the camera management tool to configure the IP address of the camera. (You can contact the manufacturer to provide relevant tools and operation methods)
  - If the DHCP service is used for address assignment, you are recommended to enable MAC address binding on the router.
-

## The network topology of a PoE NVR is as follows:



The camera can be connected to both the LAN port and PoE port of the Tenda PoE NVR. But the PoE port and LAN port use different IP addresses that are isolated from each other and in different network segments.

### **Scenario 1: The camera connects to the NVR through PoE port.**

You are recommended to set the camera to DHCP. The DHCP server in the NVR automatically assigns IP addresses to the camera.

If the camera is connected to the PoE port of the NVR through a static IP address, you are recommended to set the IP address of the camera to an IP address between 192.168.254.X and 192.168.254.XX.

### **Scenario 2: The camera connects to the NVR through LAN port.**

You are recommended to set the camera to static IP address and ensure that the IP address of the camera and the NVR are in the same network segment.


You can view and configure the IP address of the NVR in **Configuration > Network**. See [View the IP address of the NVR](#) in [Appendix](#).

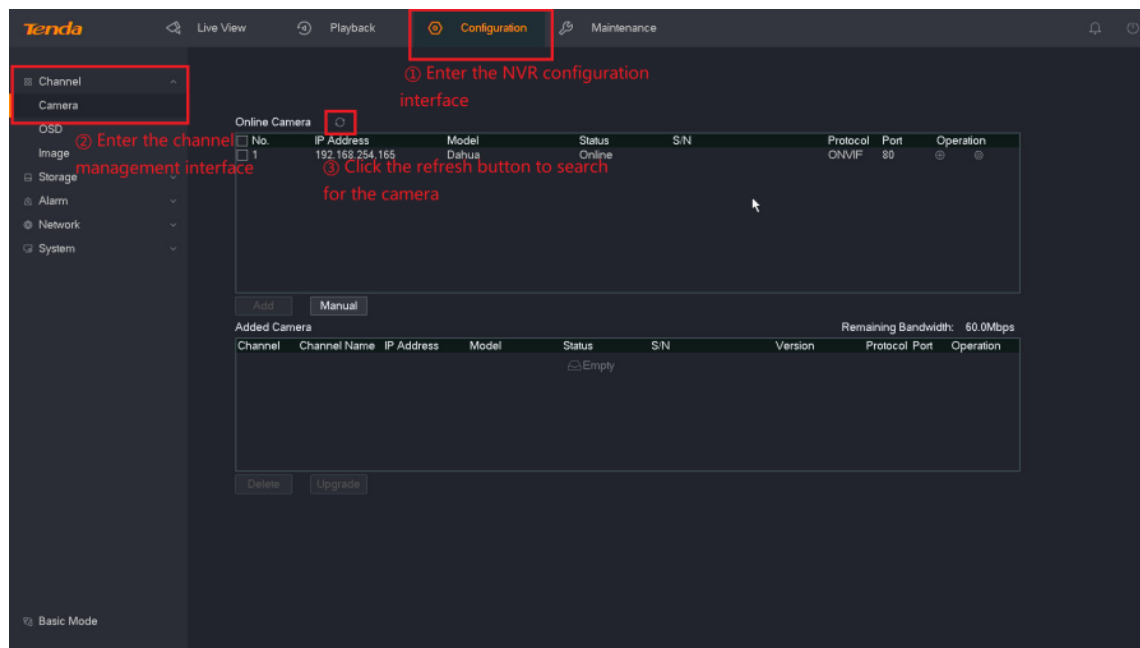


Camera IP address configure method:


- Method 1: Log in to the web UI of the camera to configure the IP address of the camera.
  - Method 2: Use the camera management tool to configure the IP address of the camera. (You can contact the manufacturer to provide relevant tools and operation methods)
-

# Use NVR to search and add the camera for cross-brand connectivity

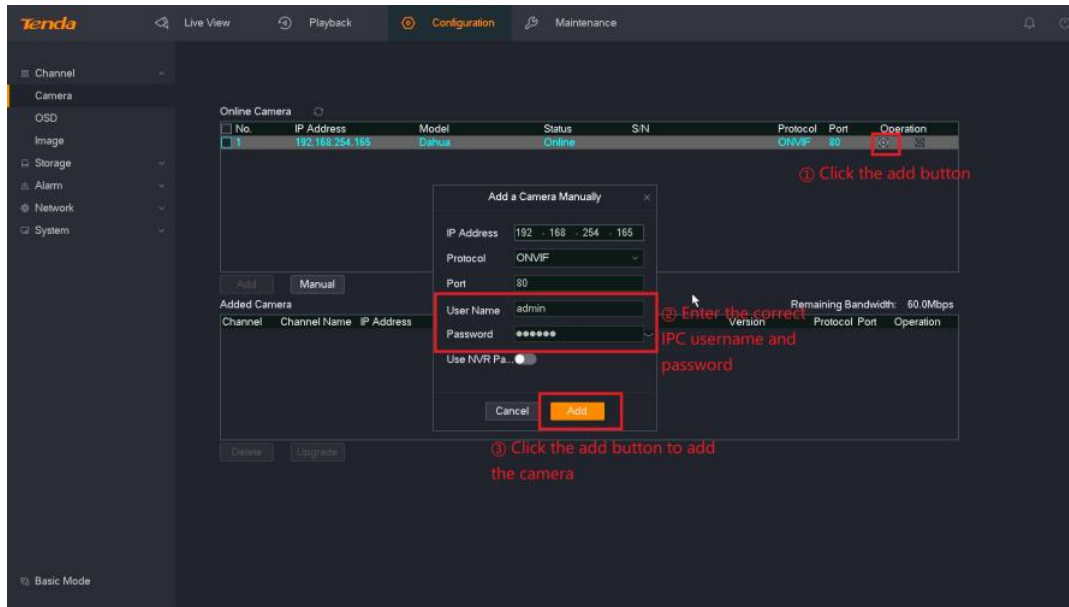
1. Log in to the GUI of the NVR.
2. Navigate to **Configuration > Channel > Camera**.
3. Click  to search for the camera you want to add.



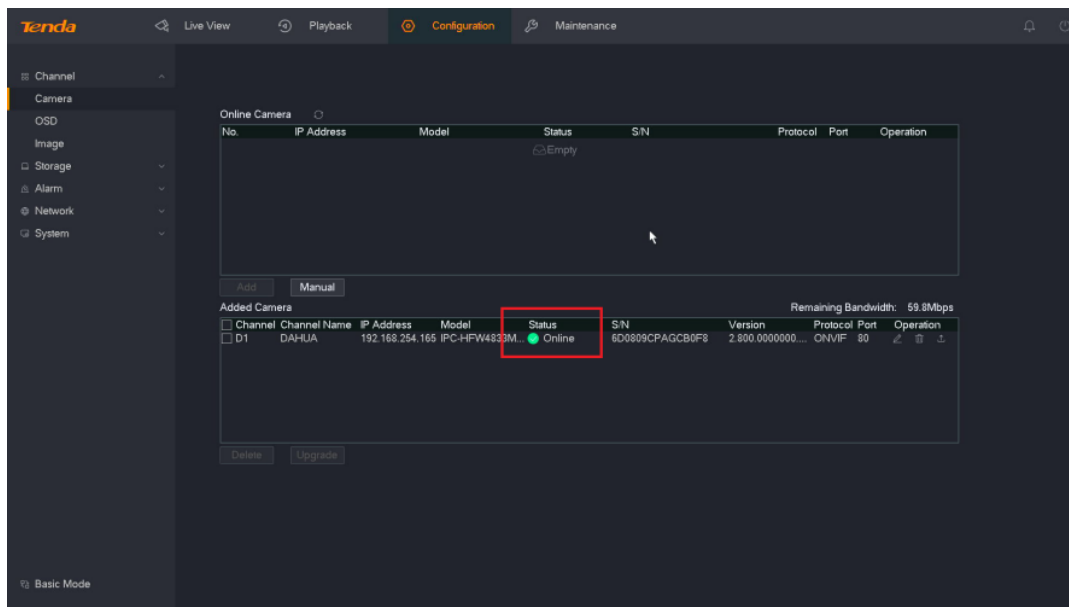
#### 4. Add the camera.

(1) Click  behind the camera you want to add.

(2) Enter the correct username and password of the camera in the pop-up window, and click **Add**.



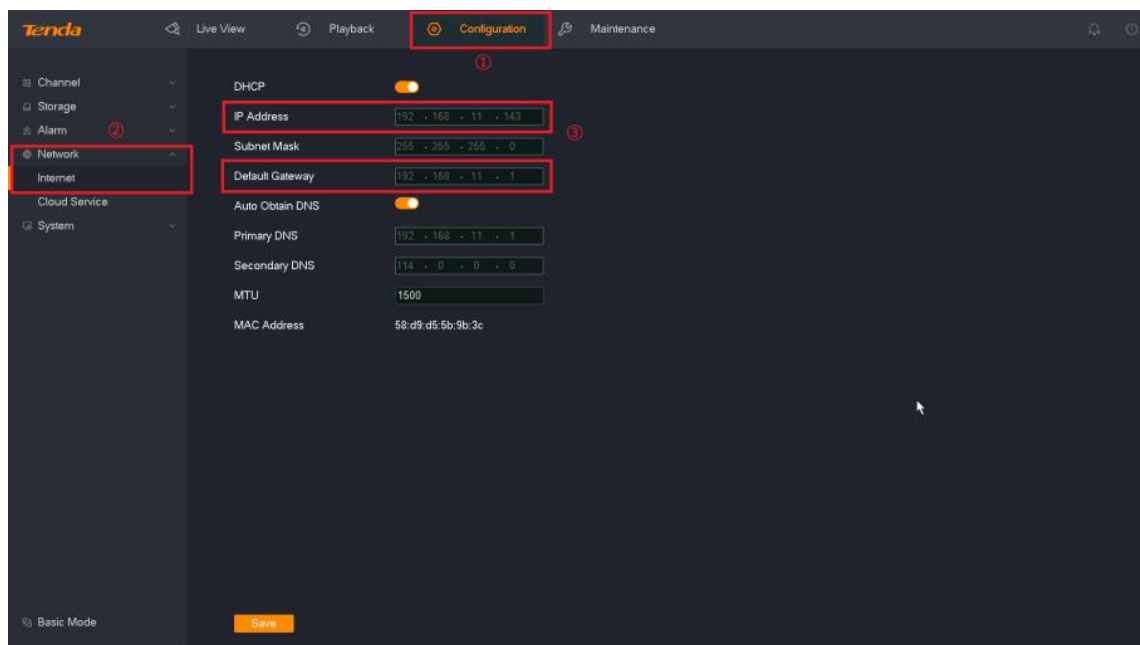
The camera is added successfully.



# Appendix

## View the IP address of the NVR

1. Log in to the GUI of the NVR.
2. Navigate to **Configuration** > **Network** to view the IP address of the NVR. (Example: 192.168.11.143)



# FAQ

\*If the problem persists, please contact technical support for help.

**Q1: The camera is connected to the NVR, but the NVR cannot search for the camera. What should I do?**

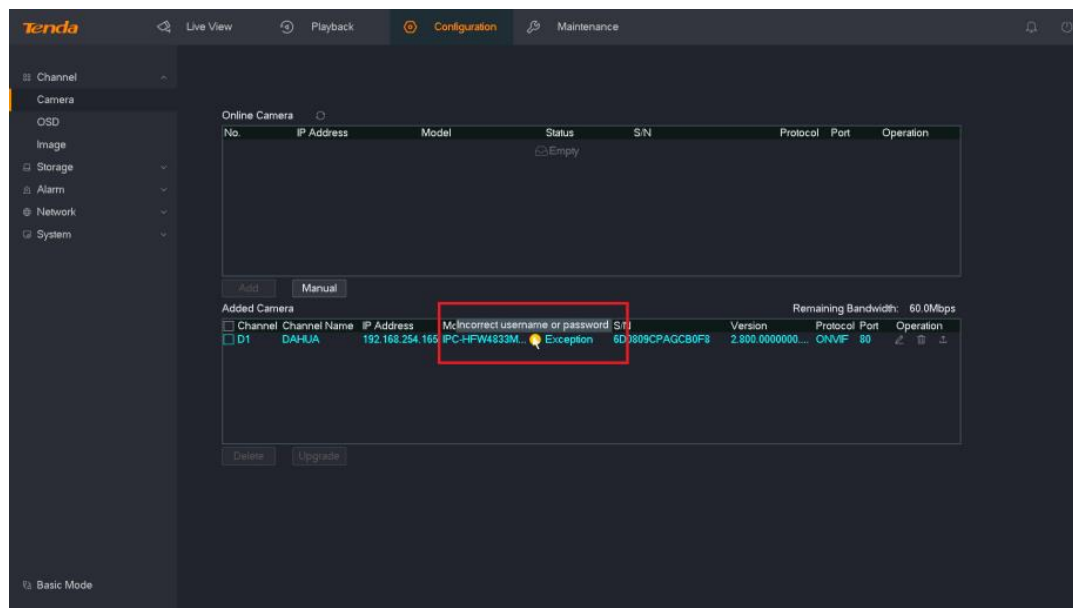
A1: Try the following solutions.

- Use the IPC management tool of the corresponding brand to search for the device. If the device cannot be found, the network connection or power supply of the device may be abnormal. Ensure that the connection between the NVR and the camera is normal, and the Ethernet cable is not loose.
- Check whether the camera supports the ONVIF protocol (view the user guide of the camera or contact your manufacturer).
- Enable the ONVIF function on the camera configuration page and add relate users.
- Refer to [Networking](#) to set the IP address of the camera and NVR are in the same network segment.
- Check the IP address of the NVR and the camera. If there are 4 digits of the same IP address, it is an IP address conflict. Change the last digit (the fourth digit) of the conflicting IP addresses to be different.

**Q2: After the camera is added successfully, the status is abnormal and the image cannot be displayed normally. What should I do?**

A2: Try the following solutions.

- Navigate to **Configuration > Channel > Camera** of the GUI of the NVR
- Find the abnormal device, and hover the mouse to check the exception reason.





**Q3: After the camera is added to NVR, but the image is black screen. What should I do?**

A3: Try the following solutions.

- Some cameras H.265 encoding is not standard, resulting in abnormal NVR decoding.

**Method 1:** Log in to the GUI of the NVR, navigate to **Configuration > Audio & Video**, select the corresponding channel, and set the encoding type of the camera to H.264.

**Method 2:** Log in to the web UI of the camera, and set the encoding type of the camera to H.264.

- Use the third-party tool ONVIF Device Manager (ODM) to search for the camera. Log in to the management page of the camera and check whether the image is displayed properly. If the image cannot be displayed, contact the manufacturer to provide the latest camera firmware version that supports the ONVIF protocol.

Download link: <https://sourceforge.net/projects/onvifdm/>

