CBC (Europe) S.r.l.
NOTA APPLICATIVA

AIBOX out of alarm box Integration Guide v1.1

(Waveshare Modbus POE ETH Relay)

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1. Introduction

1.1 Prerequisites

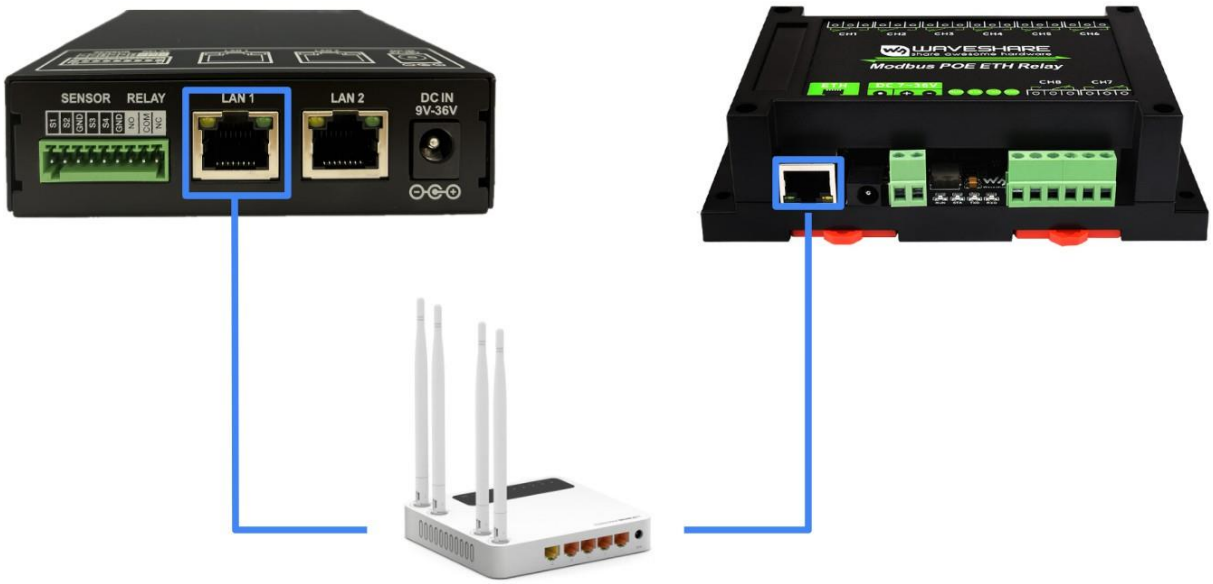
• AIBOX FW version 103719 or higher.
• TCP Modbus Relay Box
  Recommended Alarm Box models
  - Waveshare Modbus POE ETH Relay
  - Waveshare Modbus POE ETH Relay (B)
  - Waveshare Modbus POE ETH Relay 30CH

1.2 Learn about integration architecture

There are two ways to integrate AIBOX out of alarm box with waveshare:

1) Case 1
You will connect the Modbus POE ETH Relay (hereinafter referred to as "Relay") to LAN2 for use. You must assign an IP address to LAN2 on the AIBOX, and power must be supplied to the Relay device. If you assign the LAN2 IP address of the AIBOX to 192.168.1.xxx, you do not need to configure the IP on the Relay, as the default IP of the Relay is 192.168.1.200.

2) Case 2
You will connect the Relay to LAN1 for use. It must be used after setting up the router. If the router is not POE-enabled, you will need to supply additional power to the Relay and change its IP address. Since the Relay is an external device, this use case is not recommended due to security concerns.



2. Configuration

To integrate the AIBOX with the Waveshare Modbus POE ETH Relay, each device requires configuration. Below are the instructions for each configuration method. This manual is based on the Case1 use case. To use Case 2, additional settings for the Waveshare Modbus POE ETH Relay Device are required. Please refer to section 3.1 for the configuration.

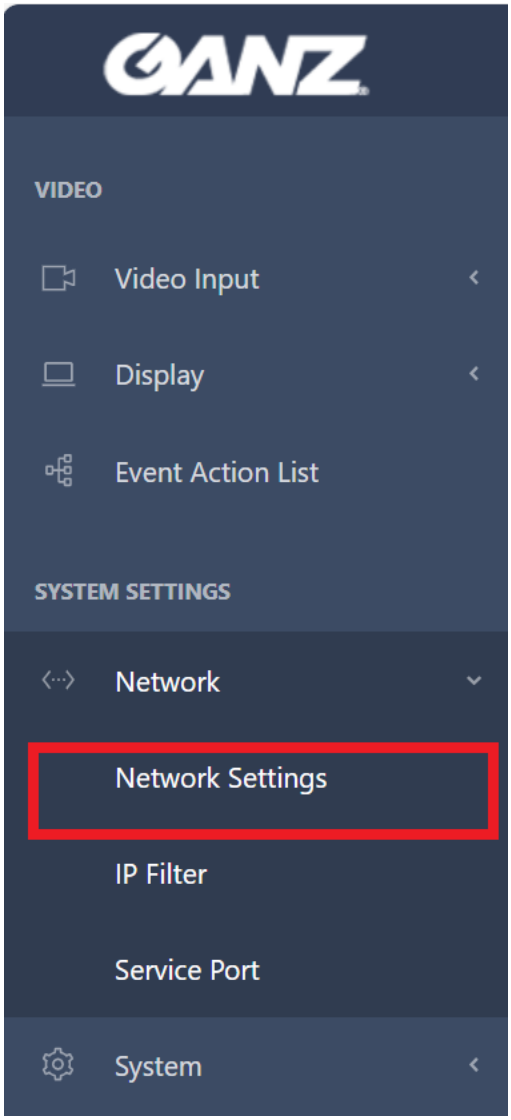
2.1 AIBOX

Below are the instructions for configuring the device to use Modbus equipment.

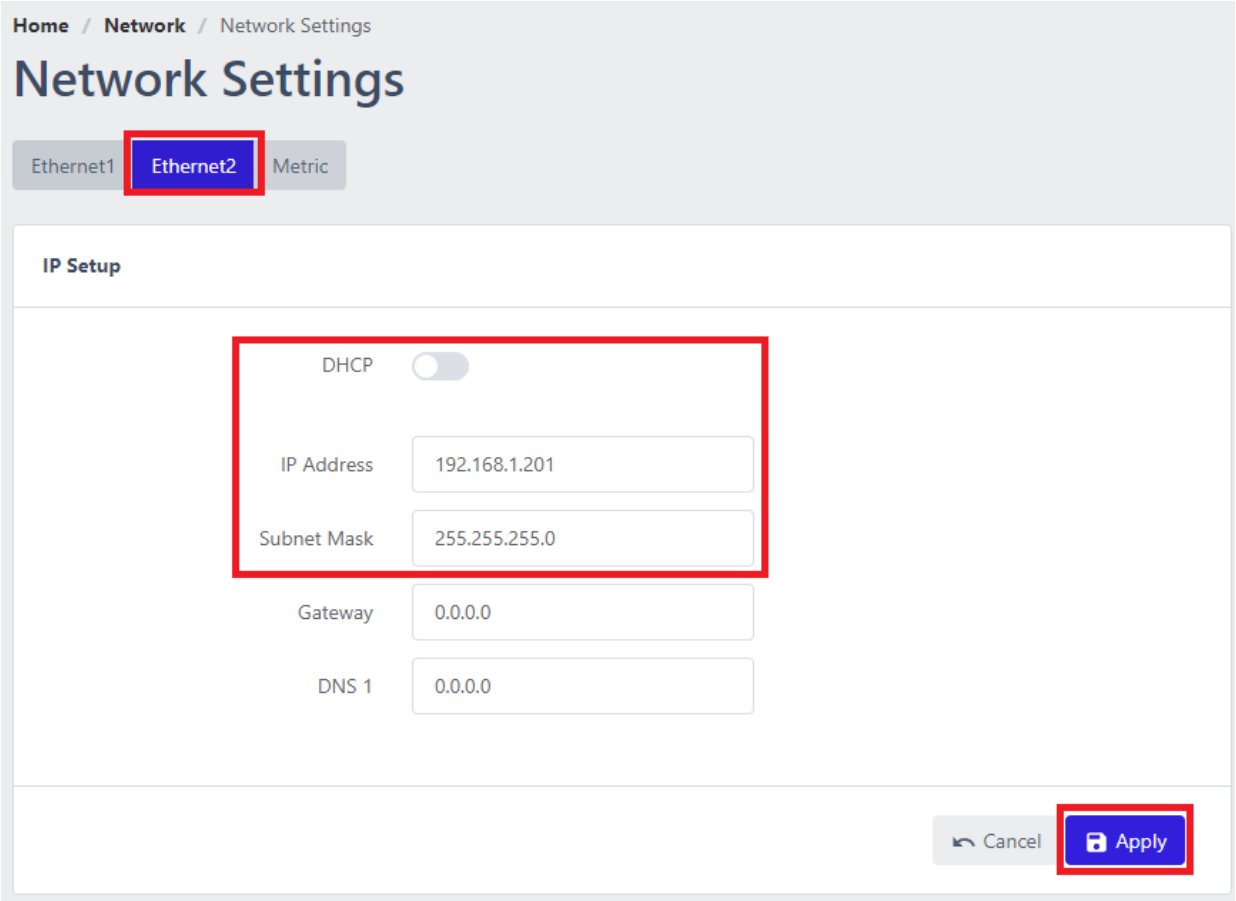
2.1.1 Network Setting

We recommend using Case 1, so you need to configure Ethernet2. Below are the instructions for setting up Ethernet2.

Access the AIBOX webpage and click on Network Setting under SYSTEM SETTING in the left menu bar.



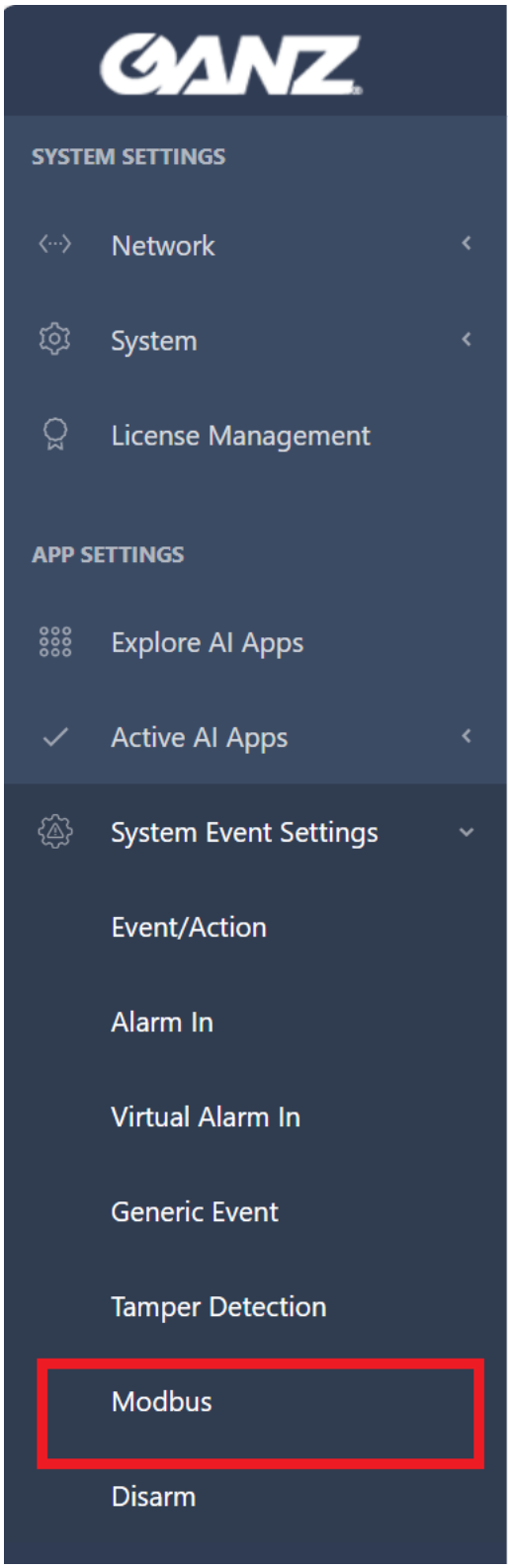
Click on Ethernet2, then turn off DHCP and configure the IP address and Subnet Mask.



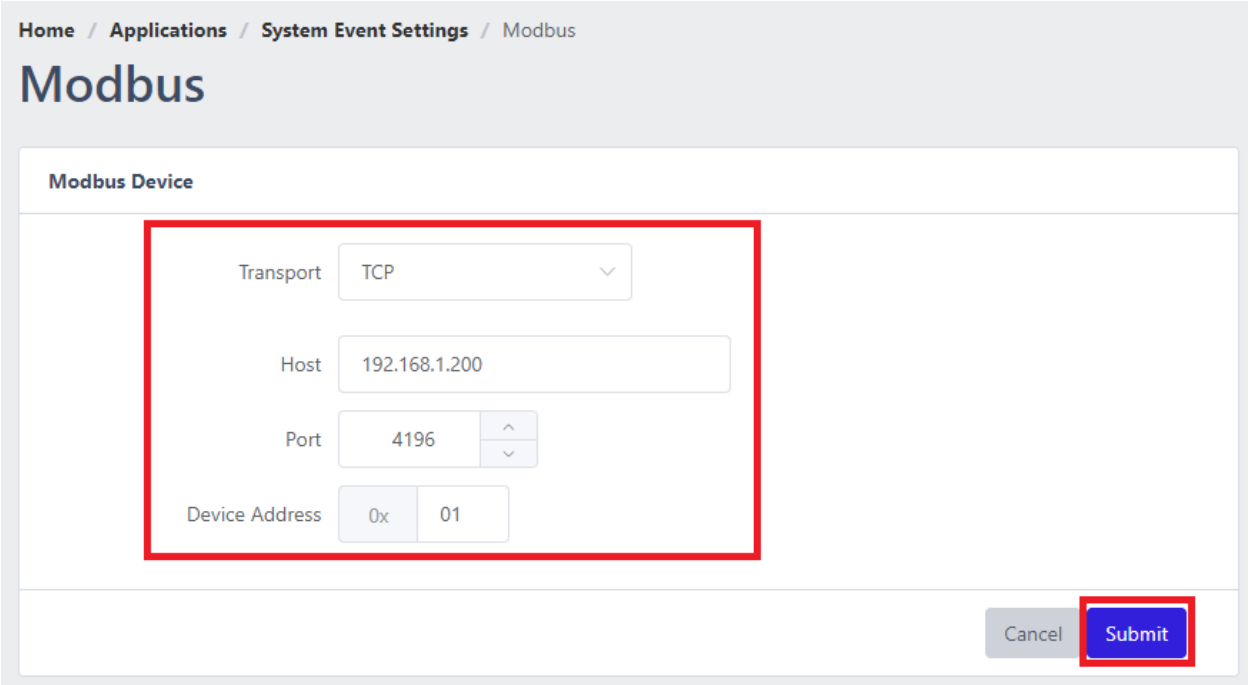
Note. If there is no Gateway, you should not configure it separately.

2.1.2 Modbus Relay Setting

Access the webpage and select APP SETTING > System Event settings > Modbus from the left menu bar.

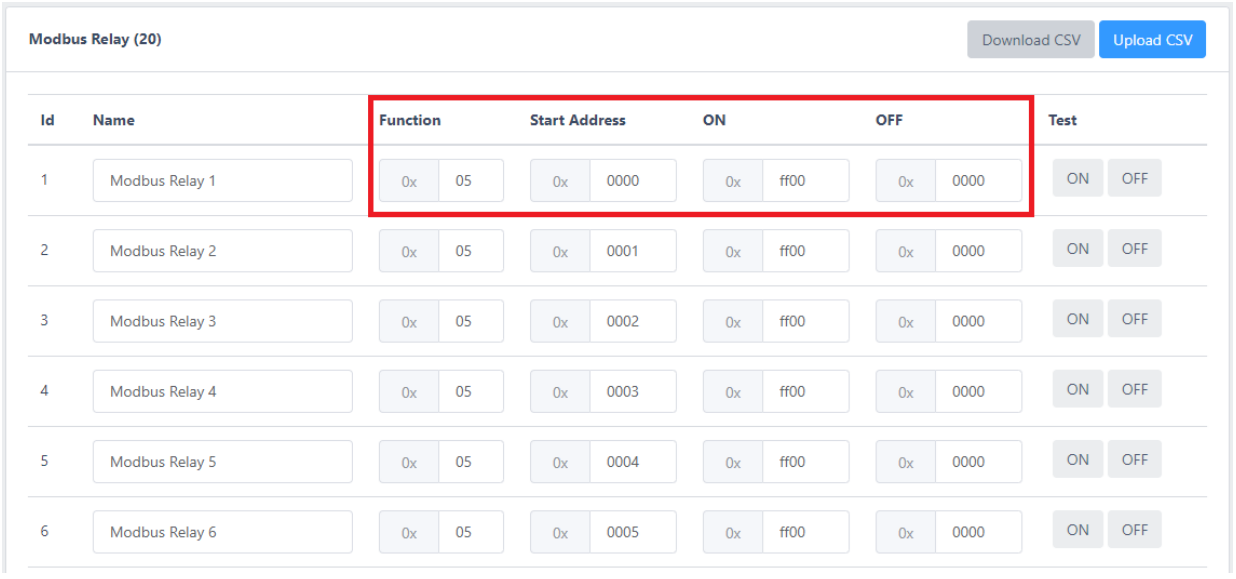


Select TCP for Transport and configure the Host and Port settings. For the Waveshare Modbus POE ETH Relay, the Device Address is fixed at 0x01.



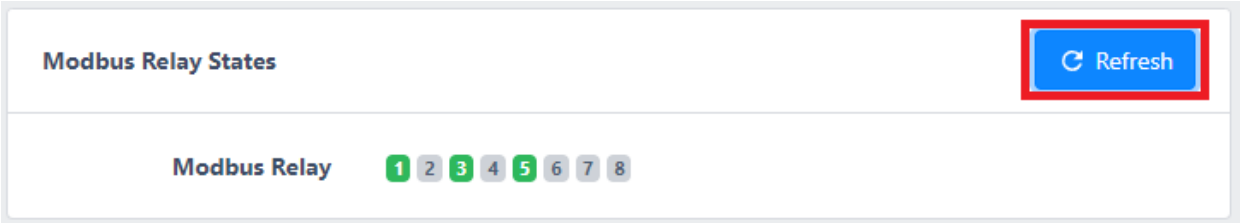
Note. The device's default IP is 192.168.1.200, and the port is 4196.

Enter the following configuration values: For the Waveshare Modbus POE ETH Relay, the Function is fixed at 0x05, the Start Address is 0x0000, ON is 0xff00, and OFF is 0x0000.

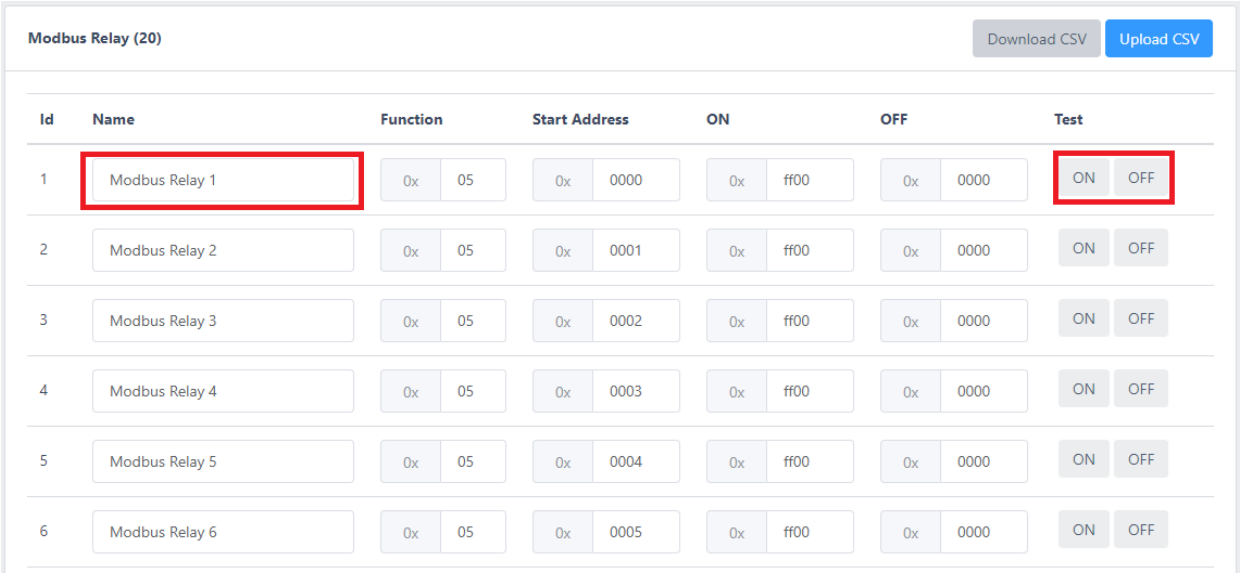


Id	Name	Function	Start Address	ON	OFF	Test
1	Modbus Relay 1	0x 05	0x 0000	0x ff00	0x 0000	ON OFF
2	Modbus Relay 2	0x 05	0x 0001	0x ff00	0x 0000	ON OFF
3	Modbus Relay 3	0x 05	0x 0002	0x ff00	0x 0000	ON OFF
4	Modbus Relay 4	0x 05	0x 0003	0x ff00	0x 0000	ON OFF
5	Modbus Relay 5	0x 05	0x 0004	0x ff00	0x 0000	ON OFF
6	Modbus Relay 6	0x 05	0x 0005	0x ff00	0x 0000	ON OFF

Tip. Click the Refresh button to check the current Relay status of the connected device.



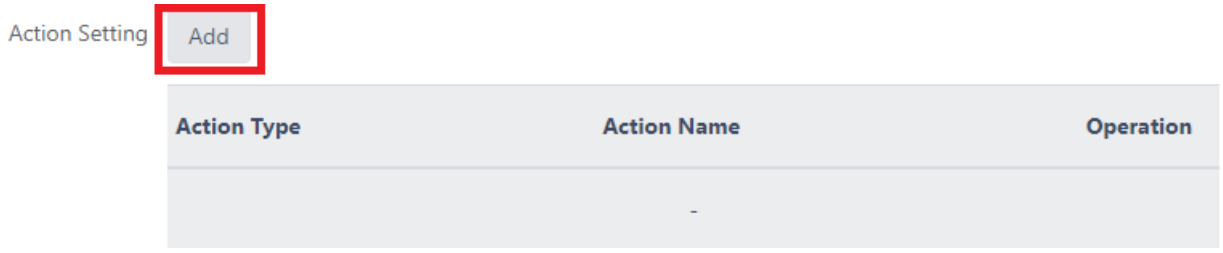
Tip. You can set the name of the Relay you wish to use and click the ON/OFF button to test it.



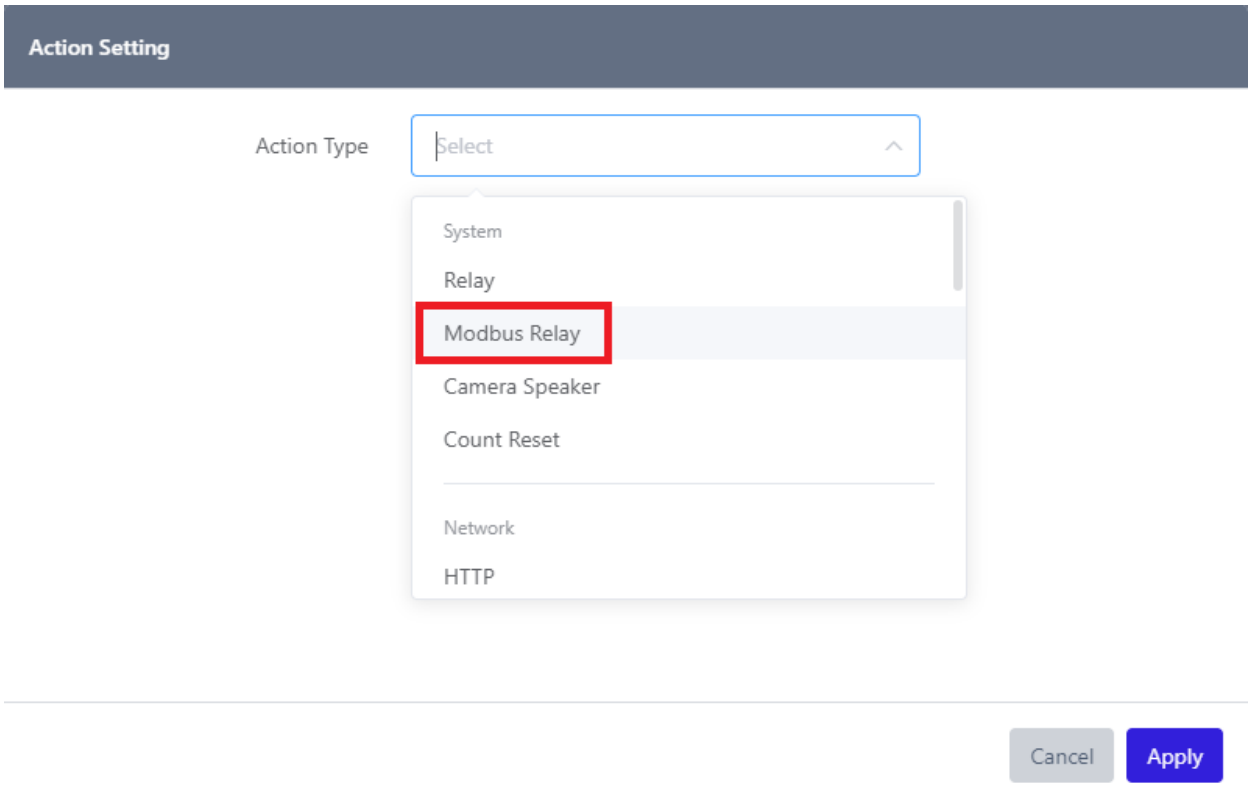
2.1.3 Modbus Relay action

Below are the instructions for adding the Relay device registered in the AIBOX to the action settings.

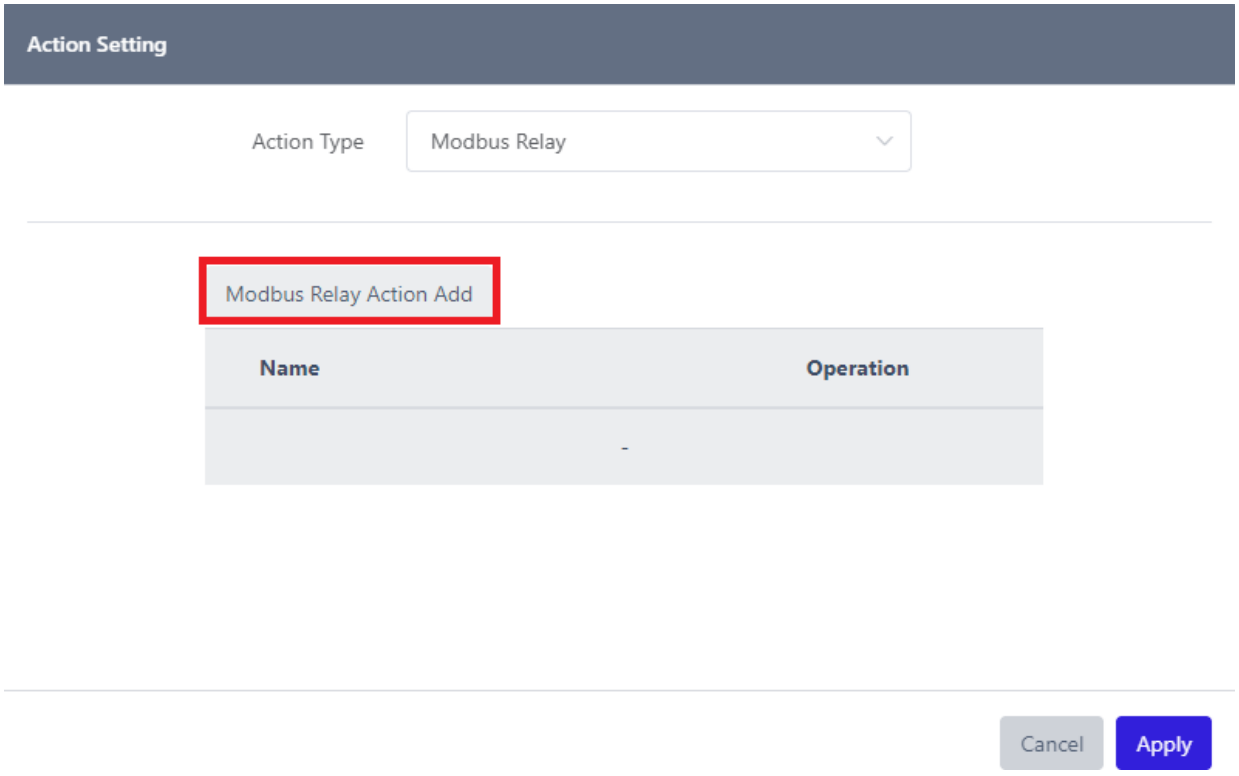
After setting up the AI App or system events, click on Action setting and then select Add.



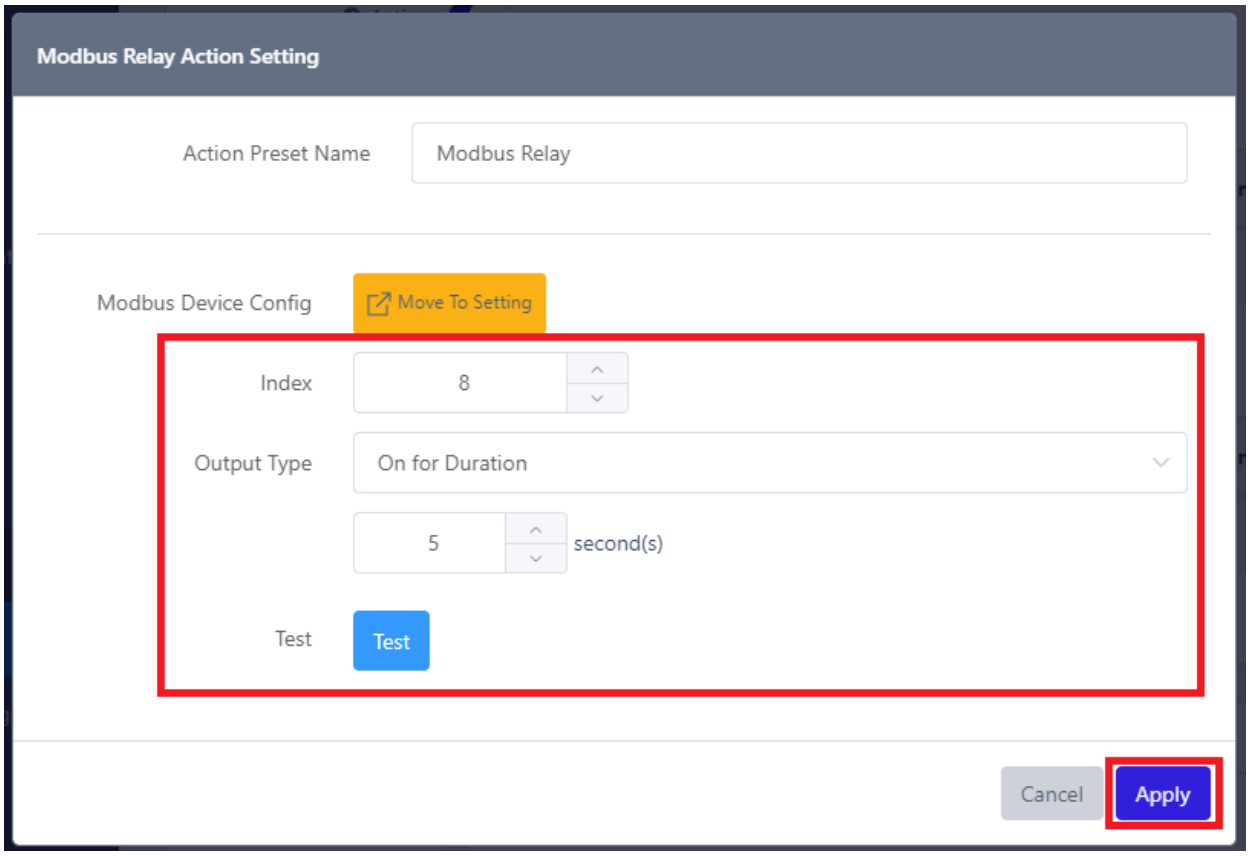
Select Modbus Relay from the Action Type.



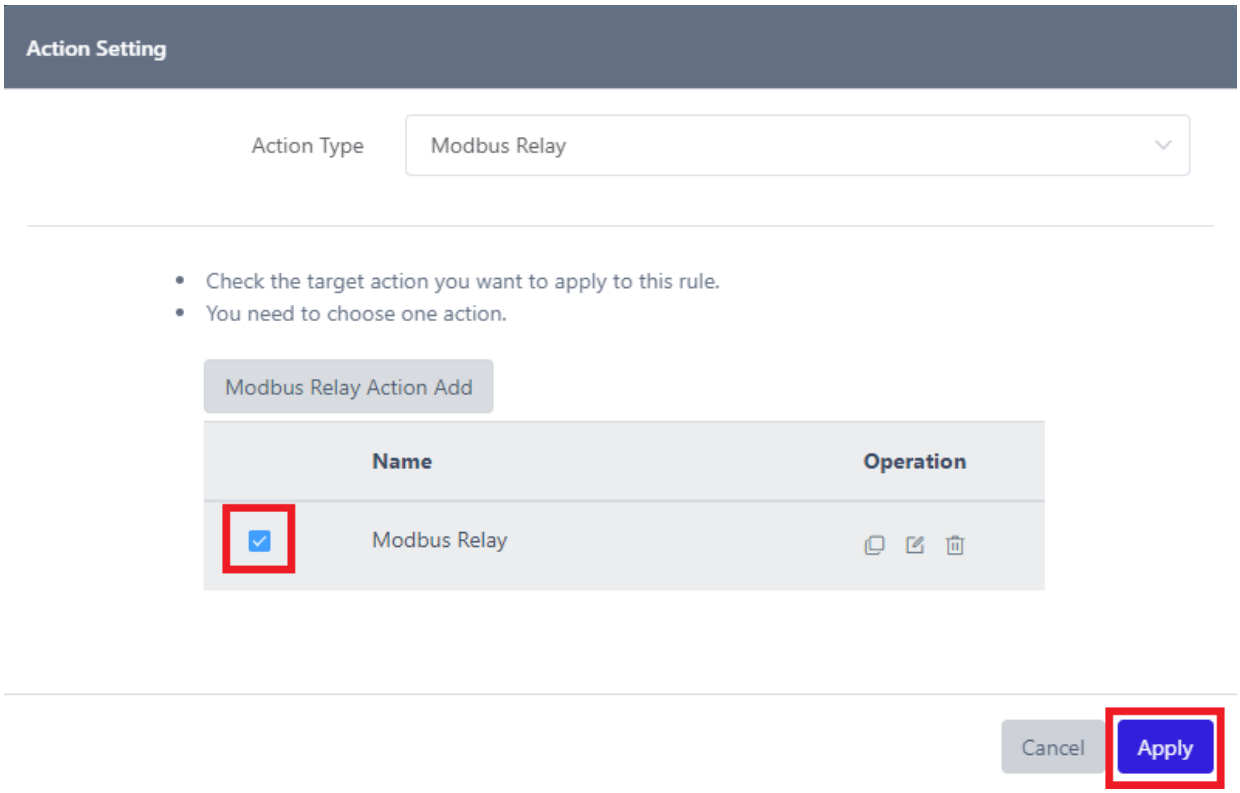
Clicked ‘Modbus Relay Action Add’ Button.



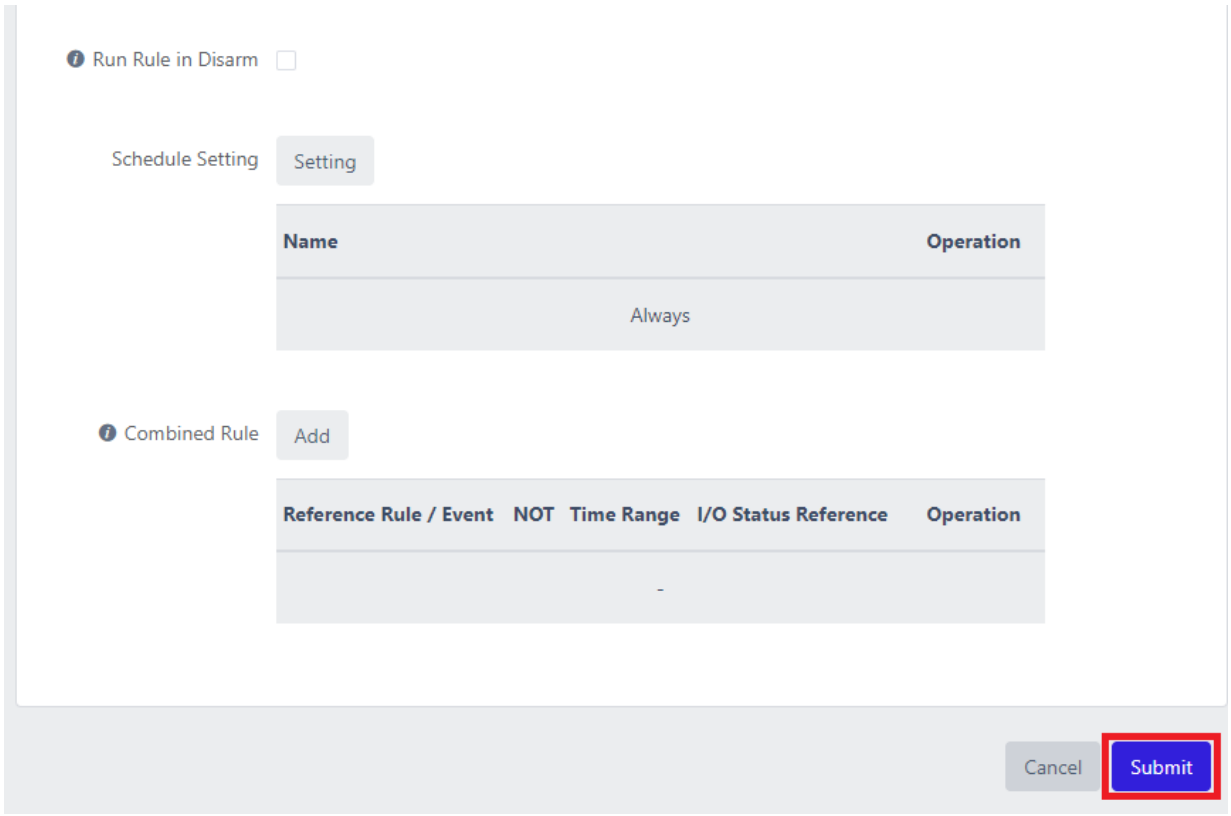
The Index refers to which Relay of the Relay device set in section 2.2.1 you want to control. Select the desired Output Type, then click the Test button to verify its proper operation. Finally, click the Apply button to save the settings.



Check the checkbox, then click the Apply button.



After completing the settings, click the Submit button to apply the changes.



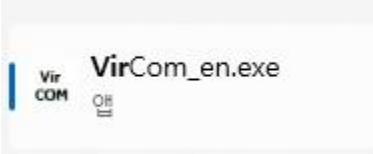
3. FAQ

3.1 Waveshared Modbus PEO ETH Relay Device Setting

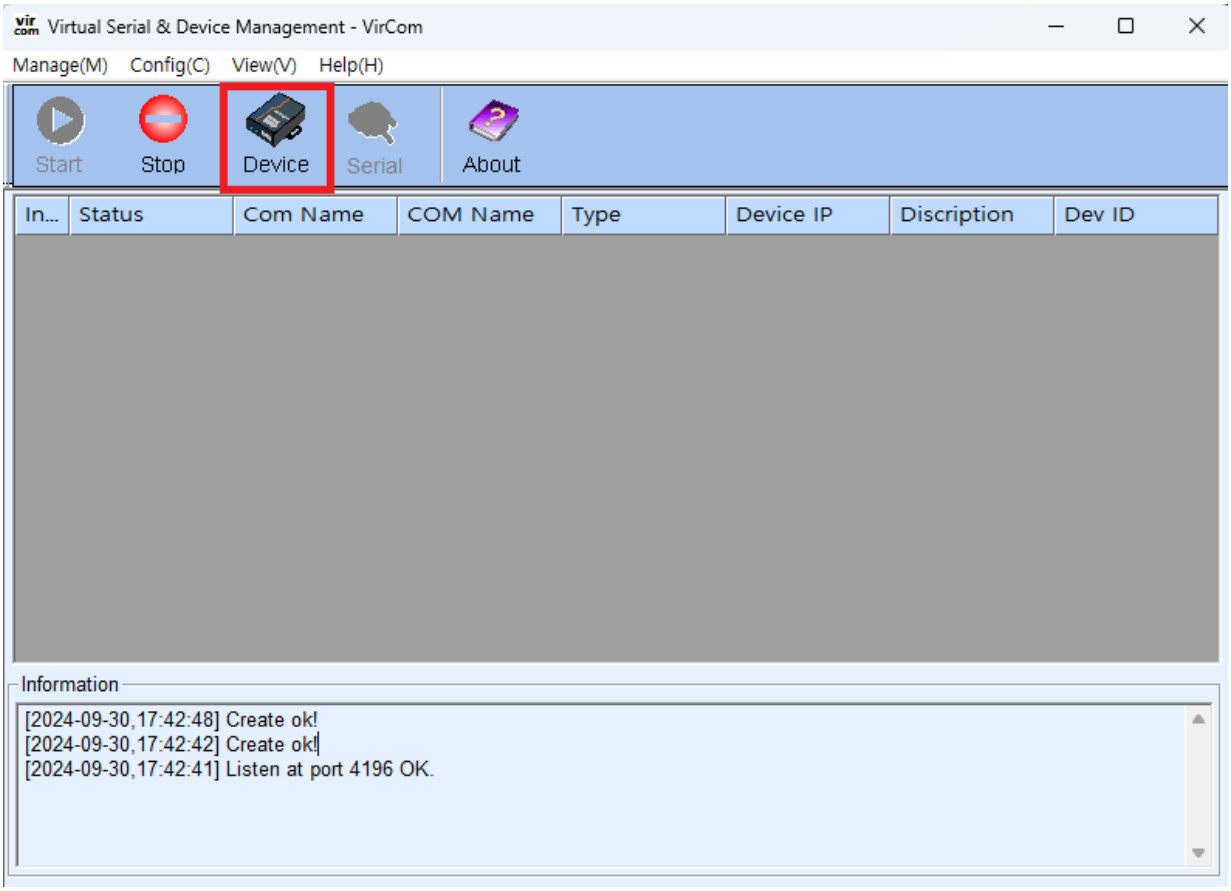
To search for devices, please download the installation file below.

3.1.1 Search Device

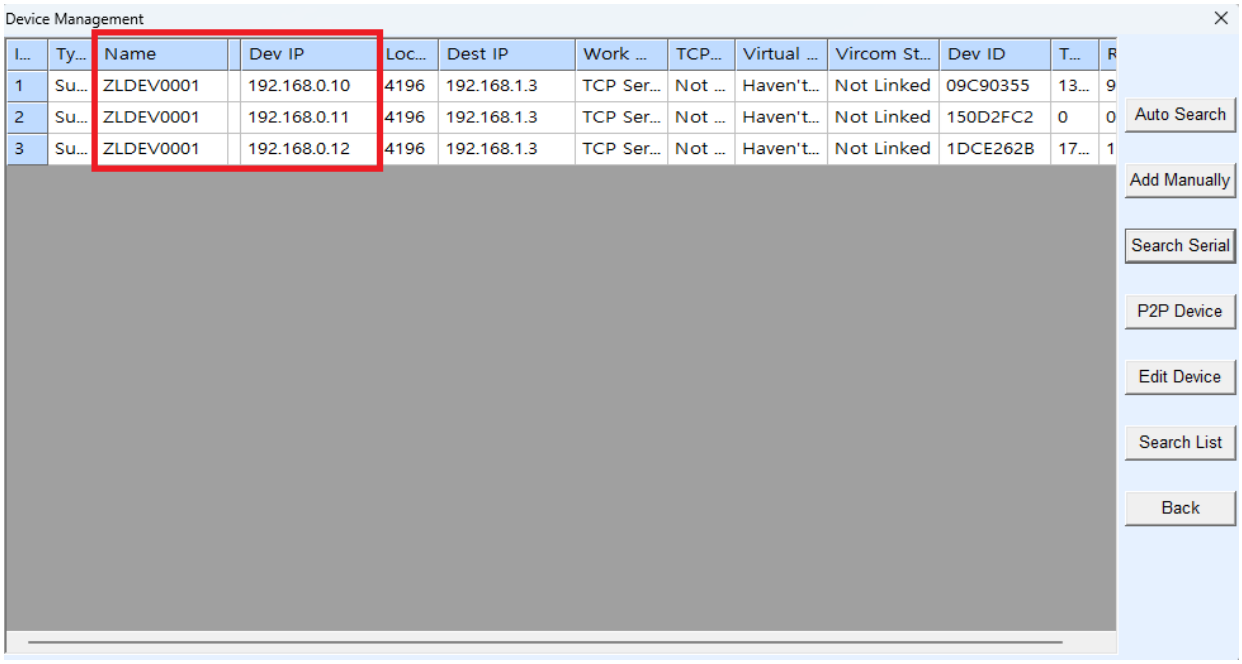
Run the file.



Clicked the ‘Device’ Button

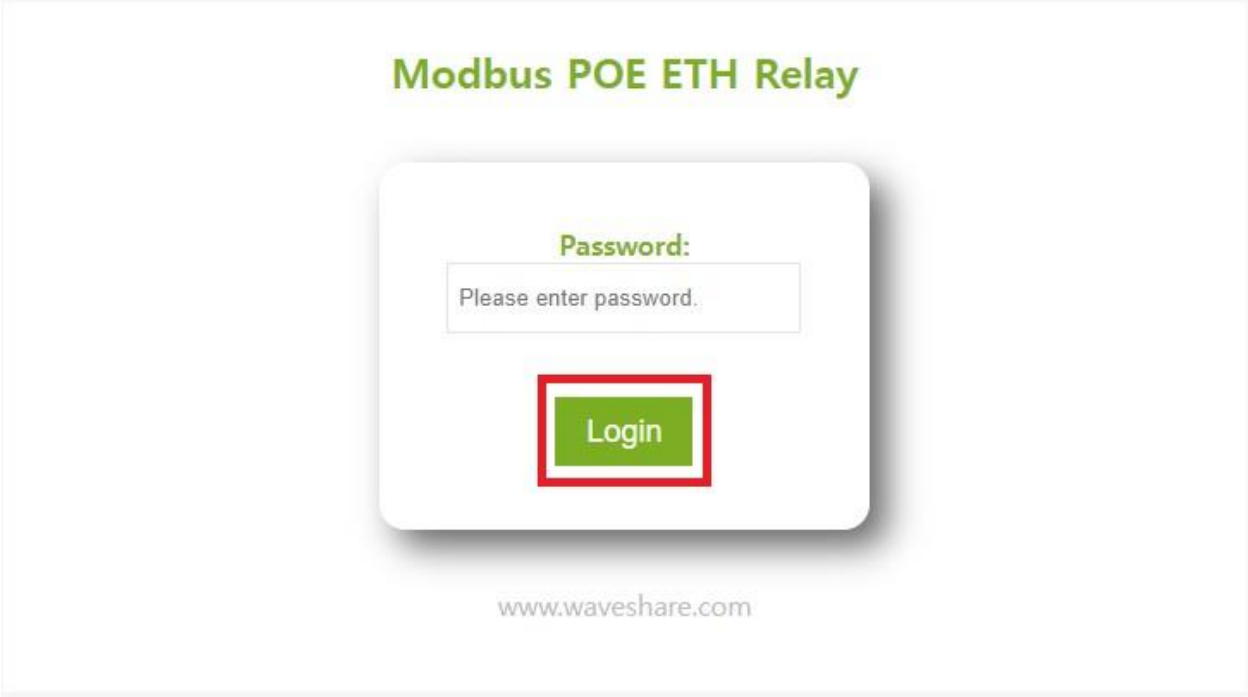


Devices on the same network will be detected. If a device is not found, please check the network connection and the power status of the device.



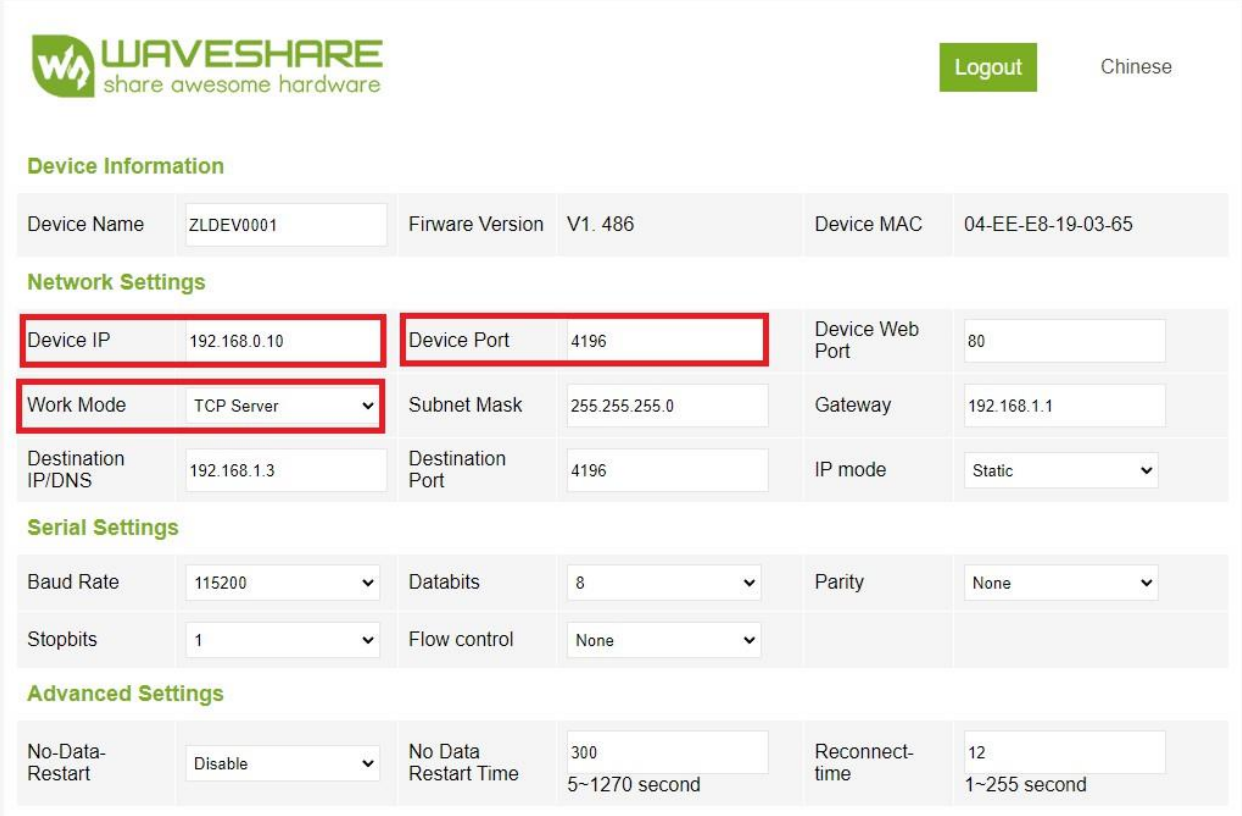
3.1.2 Configuration

Connect to the device you identified in section 2.1.1.



Note. The device has no default password. You can enter any value or leave it blank to log in.

Set the device's IP and port, and configure the work mode as TCP Server.



Note. The device's default IP is 192.168.1.200, and the port is 4196.
Tip. When configuring multiple devices, please connect to each one individually. Since the initial IP is fixed, changing the settings for one device may inadvertently affect others.