



**ZHC0941/0951**

# **Configuration Instructions**

**Version: 1.0**

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## 1. Configure Networking

Preparation: rs485 to usb tool, computer, configuration software

Point-to-point transmission: one-to-one, one-to-many.

For example: one-to-one network; point-to-point transmission between device ZHC0941 and device ZHC0951, the specific operation steps are as follows:

### 1.1 Open the ZHC0941/51 configuration software

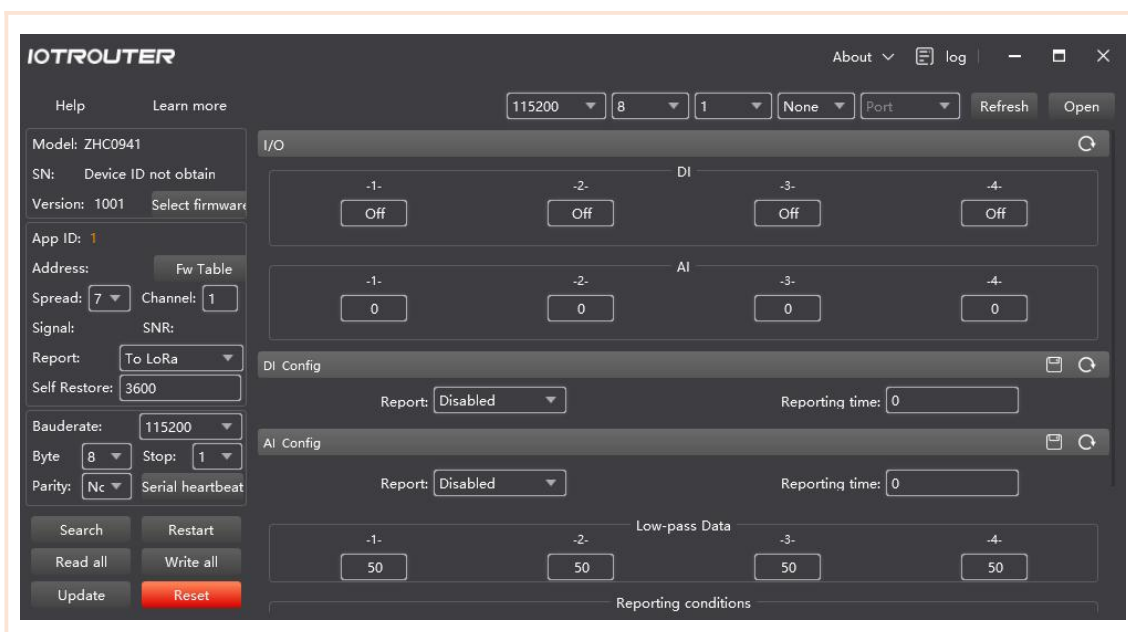


Figure 1 ZHC0941/51 configuration software

### 1.2 Debug parameters

Connect the ZHC0941 device to the PC, and use the USB to 485 tool to connect to the configuration software.

#### 1.2.1 Get the basic parameters of the device ZHC0941/51

Firstly, we use the RS485 serial port tool to connect the ZHC0941/51 device and the configuration software to obtain the corresponding configuration

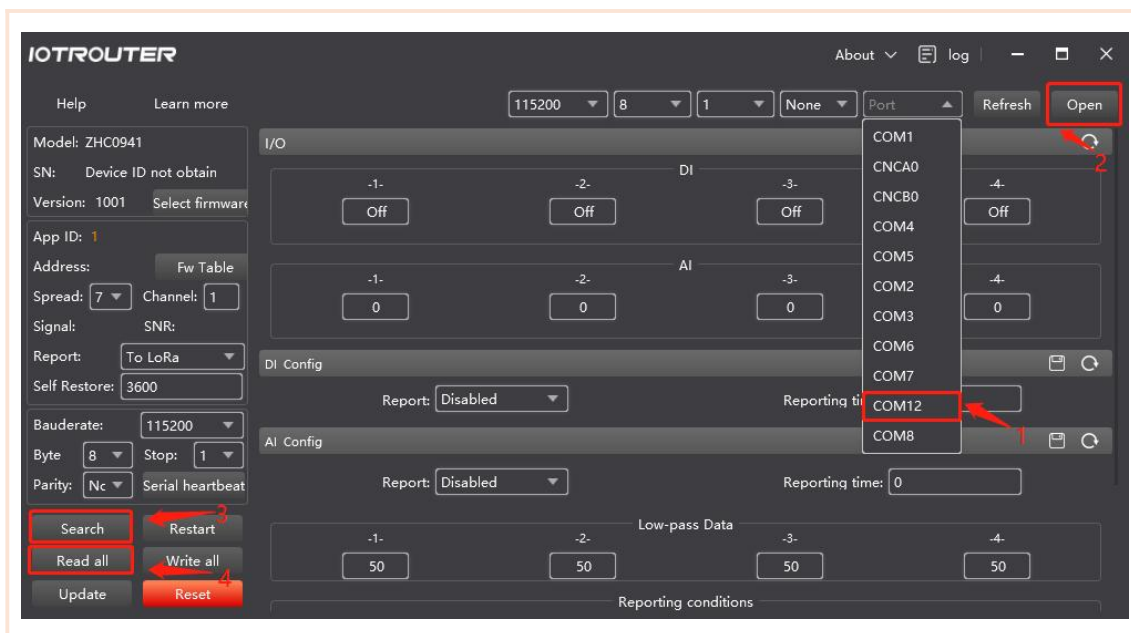


Figure 2 Get device default configuration 1

As shown above:

1.

- ① Select the corresponding 485 serial port (port) and open it
- ② search equipment
- ③ After the search is successful, read the default configuration of the device with one click (read a configuration separately, and then read the corresponding configuration bar with the right mouse button)

2. The default address of the device is 55 (the address can be set by yourself during debugging).  
The device that configures the network needs to change the device address to a different 1-FF.

## 1.2.2 Set device ZHC0941 networking parameters

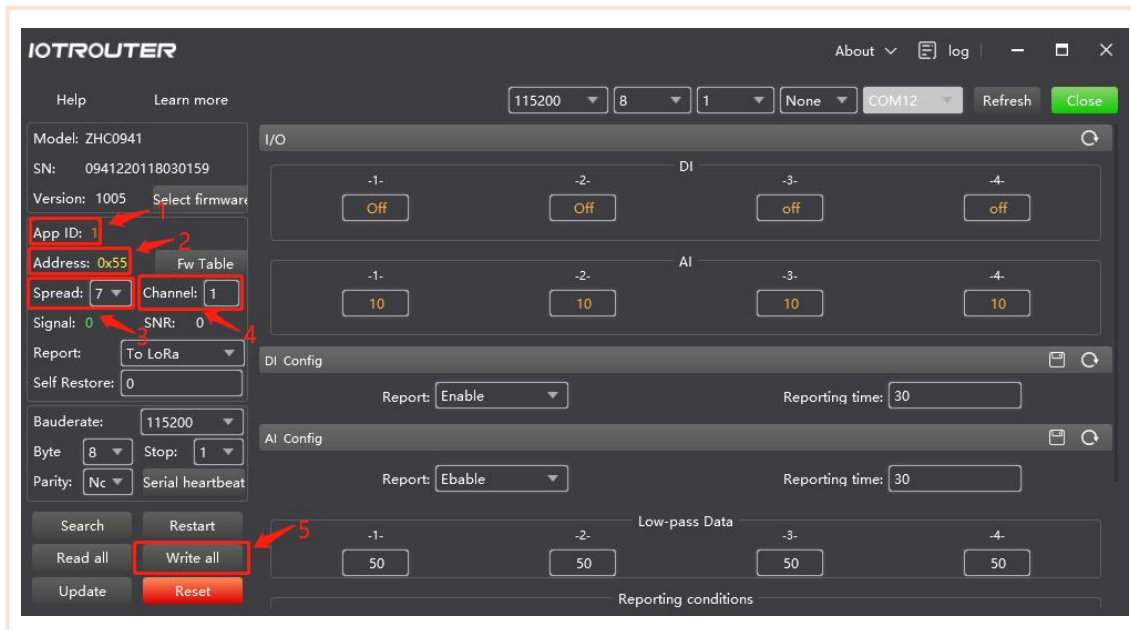


Figure 3 Configuration ZHC0941 Operation Point 1

As shown above:

1. Application ID: The device settings of the network are consistent (range 0-100)
2. Address: The default address of the device is 55 (the address can be set by yourself during debugging). The device that configures the network needs to be changed to a different address. Here we set the 0941 address to 55 (range 1-FF)
3. Spread spectrum: the networking equipment settings are the same  
(Spread 7-12, 7 means fastest data transmission and the shortest transmission distance, 12 means the slowest transmission data and the largest transmission distance)
4. Channel: The setting of the networking equipment is consistent (range 0-31)
5. After confirming that the above parameters are filled in, click one-key write. After writing, one-key read the device configuration to check whether the writing is successful. After confirming that the writing is successful, restart the device to take effect.

### 1.2.3 Set device ZHC0951 networking parameters



Figure 4 Configuration 0951 Operation Point 1

As shown above:

1. Application ID: The device settings of the network are consistent (range 0-100)
2. Address: The default address of the device is 55 (the address can be set by yourself during debugging). The device that configures the network needs to be changed to a different address. Here we set the 0951 address to 56 (range 1-FF)
3. Spread spectrum: the networking equipment settings are the same  
(Spread 7-12; 7 means fastest data transmission and the shortest transmission distance, 12 means the slowest transmission data and the largest transmission distance)
4. Channel: The setting of the networking equipment is consistent (range 0-31)
5. After confirming that the above parameters are filled in, click one-key write. After writing, one-key read the device configuration to check whether the writing is successful. After confirming that the writing is successful, restart the device to take effect.

**Note: The addresses of each device in the network must be different.**

### 1.2.4 Test whether the networking is successful



Figure 5 Network Test

As shown above:

1. Use the 485 tool to connect to one of the devices (we connected to ZHC0951 here as example), and open the log bar of ZHC0951;
  2. Send a data command to read the device AI of ZHC0941 (address 55), if there is a reply, the networking is successful.
- (If there are two 485 tools, you can connect the two devices to the computer at the same time and open the log bar to send data to each other. The fact that the two devices can receive each other's data also proves that the networking is successful)

## 2.Set AO to follow AI

### 2.1 Configure the device

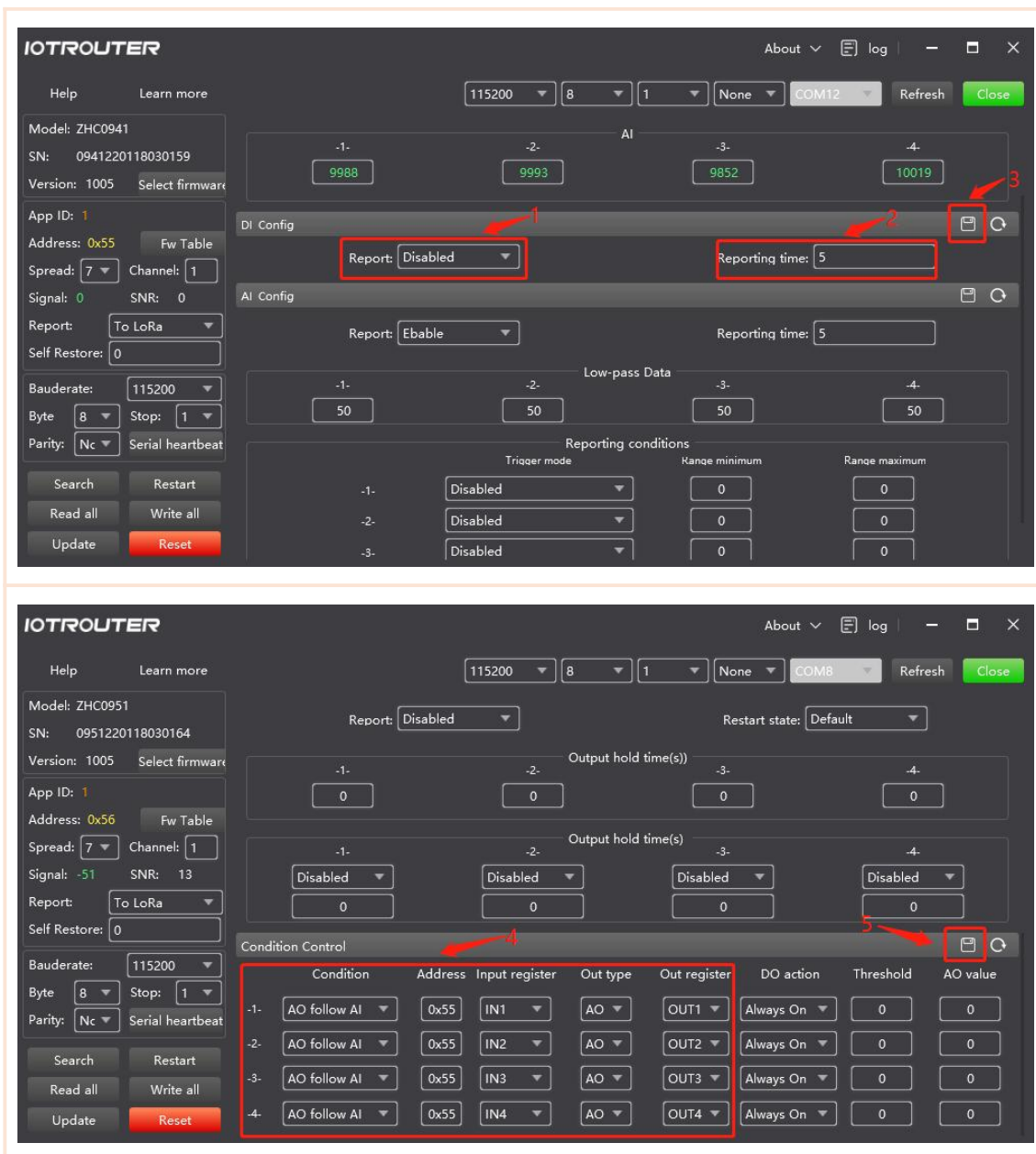


Figure 6 Setting device AO1 to follow AI

As shown above:

1. Enable active reporting in the AI basic parameters of ZHC0941. The reporting interval is the reporting cycle time S (seconds), which can be set by yourself, and click Save.
2. Set the 0951 device condition judgment, select AO to follow, and fill in the address 55 of



the 0941 device to be followed, (input register selects IN11, output type selects AO, and output register selects OUT1, which means AO1 follows AI1) Click Save to complete.

*Note: If you set up local follow, just change the address to 0, it can be achieved.*

### 2.2 Data presentation

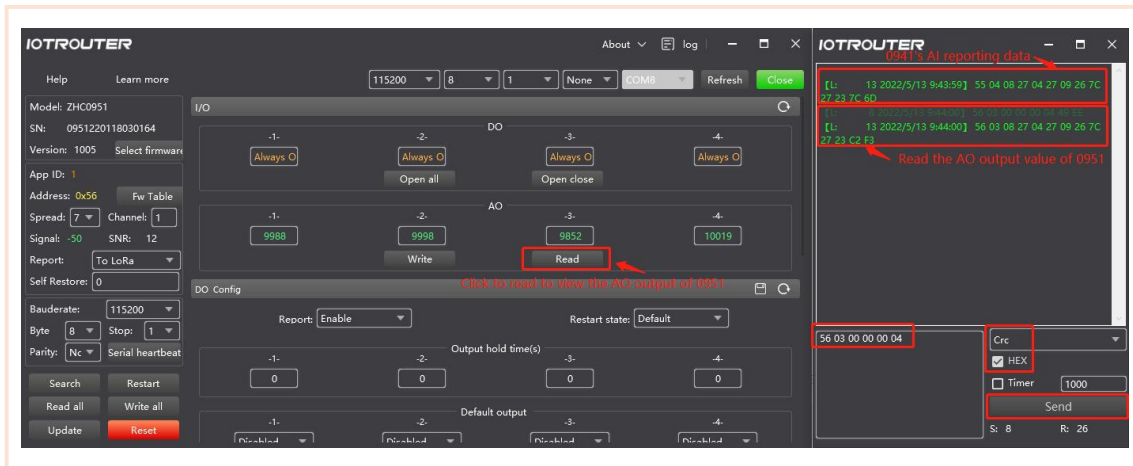


Figure 7 AO data presentation of device ZHC0951

As shown above:

1. If the value corresponding to the AO of ZHC0951 and the AI input value of the device ZHC0941 is the same, the configuration will follow successfully, and the data refresh speed is determined by the active reporting time;
2. You can also test whether the AO output follows the AI in other ways. For example, you can use a multimeter to print the AO output current value.

### 3. Set DO to follow DI

#### 3.1 Configure the device



Figure 8 Setting the device DO to follow DI

As shown above:

1. Enable active reporting in the DI basic parameters of ZHC0941, and the reporting interval is the reporting cycle time S (seconds), which can be set by yourself, and click Save.
2. Set the condition judgment of ZHC0951 device, select forward or reverse follow, and fill in the address 55 of the 0941 device to be followed, (input register selects IN11,

output type selects DO, and output register selects OUT1, which means DO1 follows DI1) to complete Click Save.

*Note: If you set up local follow, just change the address to 0, it can be achieved.*

### 3.2 Data Presentation

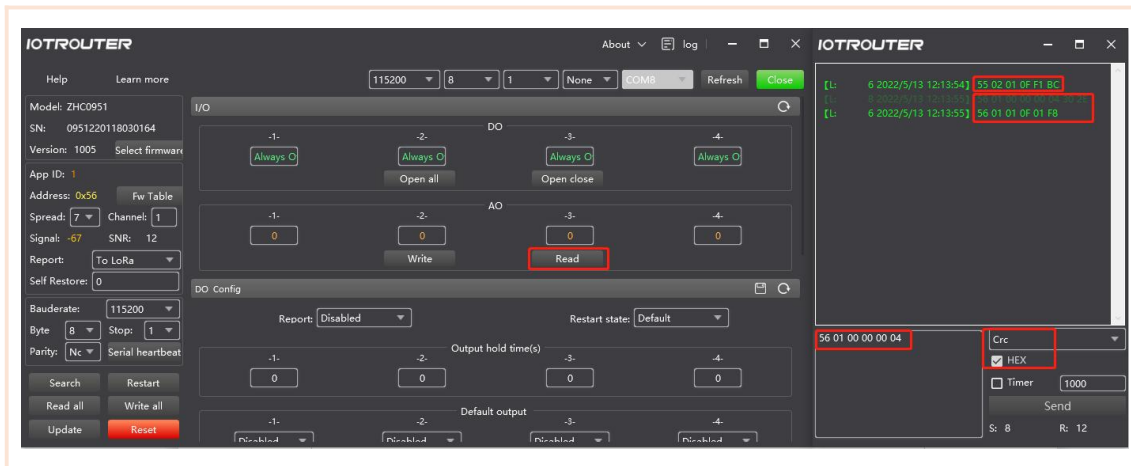


Figure 9 Device ZHC0951 Data Presentation

As shown above:

1. If the values corresponding to the DO of ZHC0951 and the DI input of device ZHC0941 are the same, the configuration will follow successfully, and the data refresh speed is determined by the active reporting time;
2. You can also test whether the DO output follows the DI in other ways, for example, you can use a multimeter to print the DO on/off state.

## 4. Drop output settings

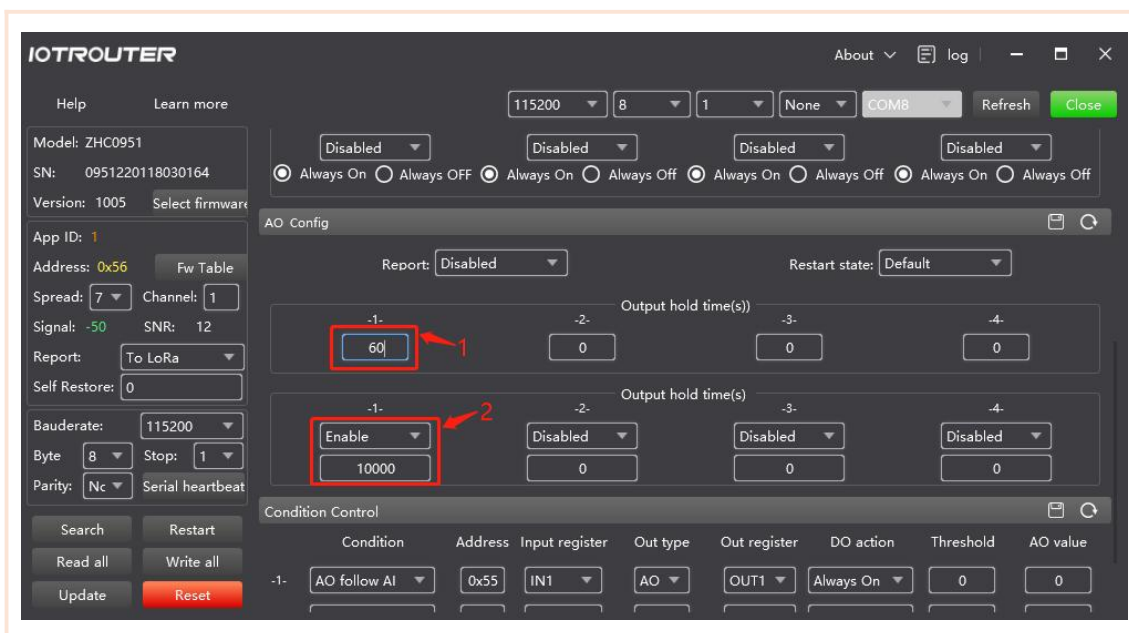


Figure 10 Dropped output settings

As shown above:

1. This picture is the AO parameter configuration page of the ZHC0951 device. The output hold time and the default output need to be used at the same time.
2. The above setting means that when the ZHC0951 device does not receive the AI status report of the 0941 device within 60 seconds, the AO1 will output the default output value of 10000uA.

**Note:**

*The same is true for the output setting of DO following DI disconnection. It can be set according to the requirements. It can be disabled if it is not needed. The output hold time is 0, which is disabled.*