

ZLAN8308/8308N

4G CAT1 DTU

RS232/485 to 4G

Modbus RTU to 4G Modbus TCP

RS232/485 to MQTT

DLT-645/RTU to cloud platform JSON

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1.Overview

ZLAN8308It is a new high-cost-effective product launched by Shanghai ZhuolanCAT1 4G DTU, and supports2G GPRSmode. It can be realizedRS232/485change4G,CAT1 4Guplink transmission speed5Mbps, Down10Mbps, significantly higher than the traditional2G GPRS DTU.yes2GAlternative solutions after network withdrawal.

ZLAN8308Nis8308Basic upgradeP2PFunctional products, very suitable for all kinds of serial ports PLCAs well as communication and data monitoring of serial port devices.

in additionZLAN8308Price and2GEquivalent to traditional products, it not only has registration report, heartbeat package, but also has newerMQTT,Modbus RTUchangeJSONConnect to cloud servers and other functions. 2GThe product also achieves the characteristics of high-speed transmission, low latency, and support for new technologies.



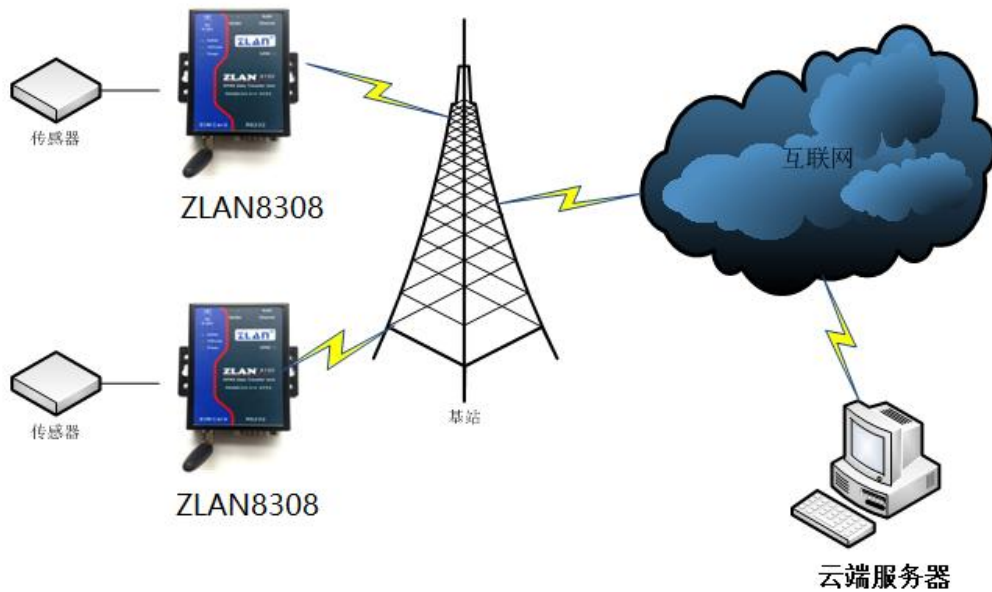
picture1 ZLAN8308Appearance

ZLAN8308Inheritance of Zhuo Lan2GproductZLAN8100Stability and general4G DTU ZLAN8305The powerful features of the device can be configured through the serial port, firmware upgrade, configuration MQTT/JSONAnd other advanced settings. At the same time, it supports remote centralized management of a large number of distributed devices through the server, which can be remotely configured, remotely viewed, and remotely upgraded. With the public cloud or ZLO Cloud, it can be realizedWebDevice management andWebTerminal data viewing and remote control.

ZLAN8308There is a specially designed watchdog circuit to ensure4GThe module operates stably for many years. Product Support -40Degree~85industrial temperature range.

ZLAN8308 Suitable for the following application areas:

- 1.Data collection in the fields of industrial Internet and industrial automation.
- 2.Power data collection and monitoring.
- 3.Access control and security.
- 4.Collection and monitoring of hydrological, meteorological and environmental data.
- 5.Intelligent transportation, vehicle-mounted data collection.



picture2Application environment diagram

ZLAN8308 This model integrates ZLAN's P2P technology, which can solve the inconvenience of ordinary DTU requiring "port mapping" and "dynamic domain name". Figure 3 P2P 3G/4G DTU mode is shown in Figure 3. Compared with Figure 2, (1) a ZLAN P2P server is added here, and (2) the user's computer replaces the monitoring server. Users do not have to use the server for monitoring, but can use their own laptops to monitor anytime and anywhere. At the beginning of communication, the P2P software on the user's computer - ZLVircom first communicates with the ZLAN P2P server; at the same time, 8303 can also communicate with the ZLAN P2P server. After the two parties have negotiated, direct communication between 8303 and ZLVircom can be established (without forwarding through the P2P server). The software on the user's computer can communicate through the virtual serial port or TCP simulation port provided by ZLVircom. When using it, the user only needs to enter the serial number of the 8303 to be monitored in the ZLVircom software to establish a P2P connection. The P2P method frees users from the trouble of "port mapping" and "dynamic domain name", and does not require them to rent a server with a public IP, thus truly achieving

The combination of P2P technology and 3G/4G wireless technology realizes an innovative monitoring method, which has the following characteristics:

1. Easy to use. Users only need to add the serial number of 8303 to use the operation without port mapping.

Shooting and other professional operations.

2. No additional investment is required, and users do not need to rent a public network server.
3. Support virtual serial port, no need to modify the user-side PLC software, just like local serial port communication.
4. Since data can be directly transmitted through P2P communication without the need for server transfer, data communication time is shortened.

It improves the real-time performance of communication and reduces the burden on the central server.

5. Supports encryption and user name verification to ensure communication security. (Fees are required)

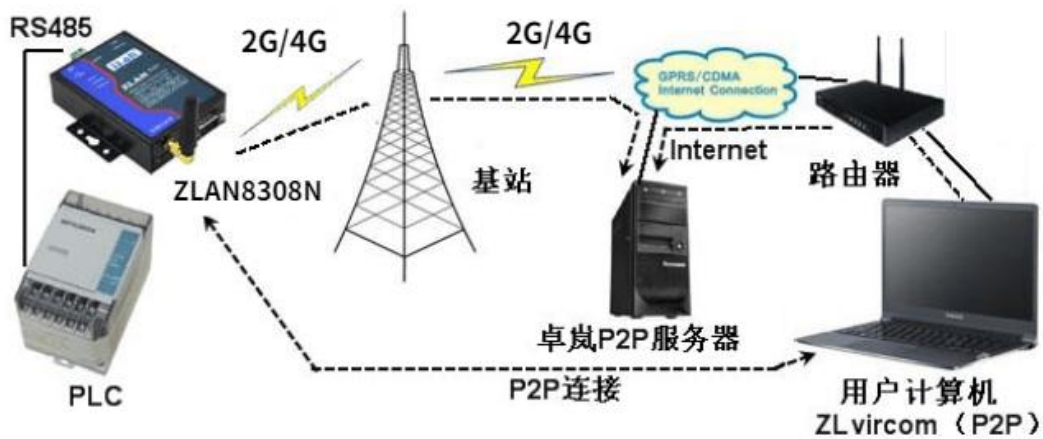


Figure 3 P2P 2G/4GDTU mode

2.Features

Special feature

- 1.Support customization Modbus/DTL-645changeJSONFunction.
- 2.CanMQTT+JSON,HTTP+JSONmode, connecting to various public clouds.
- 3.supportMQTTGateway function. Can supportMQTT SSLEncrypted transmission.
- 4.Support edge computing functions: including data over-limit alarm, data translation and scaling calculation, data change upload, device offline alarm, etc.
- 5.Support device cloud management: realize online monitoring of devices, remote configuration modification of devices, remote upgrade of devices, etc. through ZLAN device cloud or user-built cloud.
- 6.Support offline data storage.

General functions

- 1.support3Type of mode,TD-LTE/ FDD-LTE/ GSM, including China Unicom 4G, 2G, China Mobile 4G, 2G and China Telecom 4G networks.
- 2.supportTCPClient,UDPmodel.
- 3.Serial port support300~921600Baud rate, support5~8Data bit, support no check, odd check, even check, support1~2stop bits.
- 4.Support serial port (RS232/485)change4G.
- 5.Support serial port transparent transmission,8308supportModbus RTUchangeModbus TCP,MQTTprotocol.
- 6.Support serial portATCommand configuration, supportZLViromThe software checks some parameters.
- 7.Support serial port configurationMQTTparameter.
- 8.supportDTL-645/Modbus RTUAutomatic collection and conversion to cloud platformJSONFormat.
9. 8308The firmware of the device can be updated through the serial port.ZLVircomThe software updates the device firmware on the server side.
- 10.Supports server-side remote device management, device configuration, and device upgrades.

3.Technical Parameters

Main parameters of the product		
parameter name	parameter	Remark
Support Mode	4G CAT1support3Modes: B1/B3/B5/B8@FDD LTE B34/B38/B39/B40/B41@TDD-LTE B3/B8@GSM It includes China Unicom 4G, 2G, China Mobile 4G, 2G and China Telecom 4G networks.	
Transmission rate	LTE:Max 10Mbps(Downward)/Max 5 Mbps(Up) GPRS:85.6Kbps(Downward)/Max85.6Kbps(Up)	
SIMCard	Voltage:3V,1.8V; Size: Large card (small card can be purchased with card holder)	
Antenna interface	50Ω/SMAGlue stick antenna or suction cup antenna optional	
Serial port type	RS232/RS485	

Serial port parameters	Baud rate:300~921600bps; Data bits:5~8Bit; Stop Bit:1~2bit; parity bit: none, even, odd.	
Power interface	Q2.1Socket, can be customized as power terminal input.	
Input voltage	DC9V~24V	
Working current	dial/4GDuring communication50mA@12V,idle25mA@12V	
Operating temperature	-40Degree~85Spend	
Storage temperature	-40Degree~120Spend	
Humidity range	0~95%Non-condensing	
Product Size	Length × width × height =9.4cm×6.5cm×2.5cm	

4. Hardware Description

ZLAN8308The front view of3shown.



picture3 ZLAN8308Front view

8308It adopts radiation-resistant metal casing and has two mounting ears on both sides, which can be fixed with screws; it can also be equipped with guide rail accessories.

Panel Light:

Indicator Lights	green	blue
ActiveIndicator Lights	Serial port sends data	Serial port receiving data
LinkIndicator Lights	8308Started but no network connection	Solid blue meansTCPConnection established
4GIndicator Lights	Power indicator	Flashing blue means4GAfter dialing, the system is powered on15Second Start dialing, usually10You can dial in seconds. Solid blue means4GConnectivity Status



picture4Interface Diagram1

ZLAN8308The front interface is as shown in the figure4As shown:

1. Power input: Interface typeQ2.1Socket, input voltageDC+9V~ +24VDC, power required3Wby
The default adapter is12V. Can be customized as power terminal input.
2. RS485interface:
RS485Signal input, be careful not to connect to power supply.
3. RJ45Interface: Reserved for later expansion of Ethernet interface, currently invalid.

ZLAN8308The rear interface is as shown in the figure5As shown:



picture5Interface Diagram2

- 4.antenna:8308The antenna interface adopts50Ω/SMA(female), external antennas must use a suitable4G
Antenna of the working band. ZLAN can provide glue stick or suction cup antenna, the suction cup can be sucked onto the metal shell of the chassis (the default suction cup antenna lead1.5meters in length).
5. SIMCard Installation: InstallationSIMMake sure the device is not powered on when inserting the card. Use a pen or screwdriver toSIM
The card slot is pushed out.SIMPush the metal side down into the card slot.
6. DB9:RS232signal input.

5.Configuration

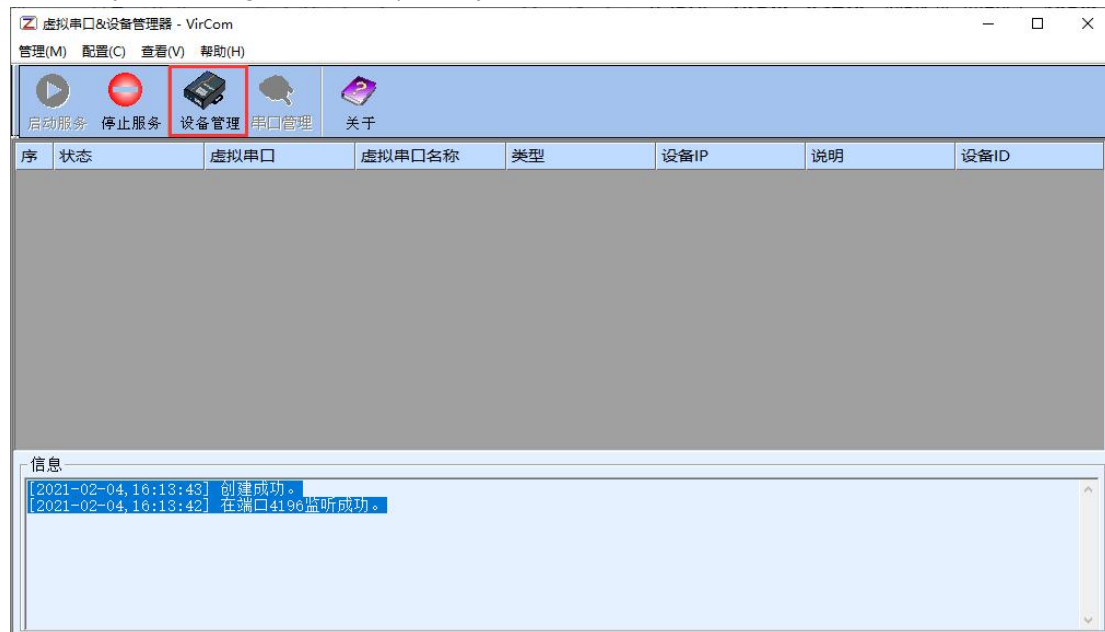
The device can be configured via the serial port. After connecting to a remote server, it can also be remotely configured by installing the configuration software on the remote server.

5.1.Serial PortATInstruction Configuration

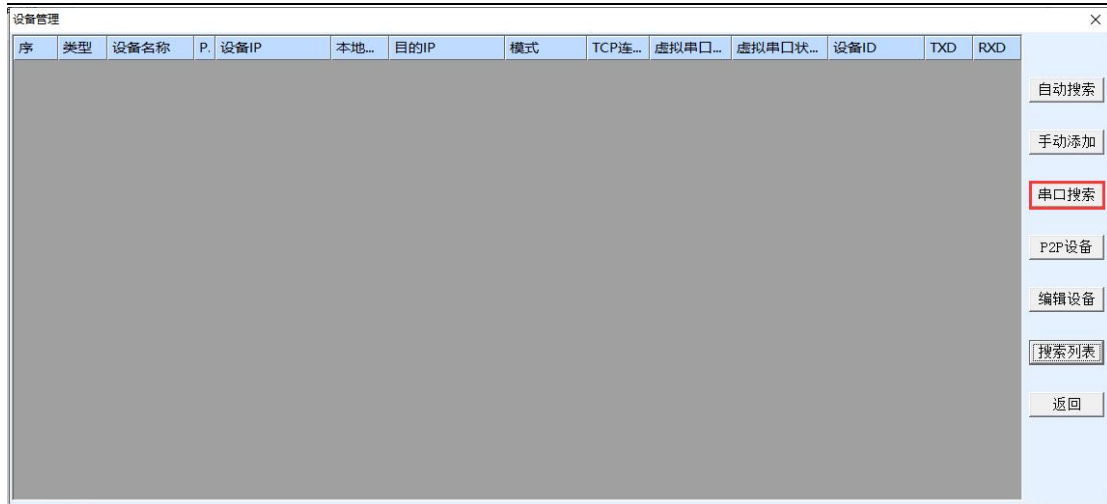
downloadZLVircomConfiguration Tool(<http://www.zlmcu.com/download/ZLVirCom.zip>), this software can be configured through the serial port8308.

WillUSBchangeRS232Connect to8308The serial port, give8308Power on, turn onZLVircom(hereinafter referred to as configuration tool), enter the main interface of the configuration tool6.

Click Device Management and select Serial Port Search, as shown in the figure7, the serial port parameter selection interface pops up, as shown in the figure8, select the serial port number, here isCOM15, the baud rate is115200,here115200This is the factory default setting. If the user has previously set8308Set to other baud rates (such as9600), can also be searched.



picture6Configuration tool main interface

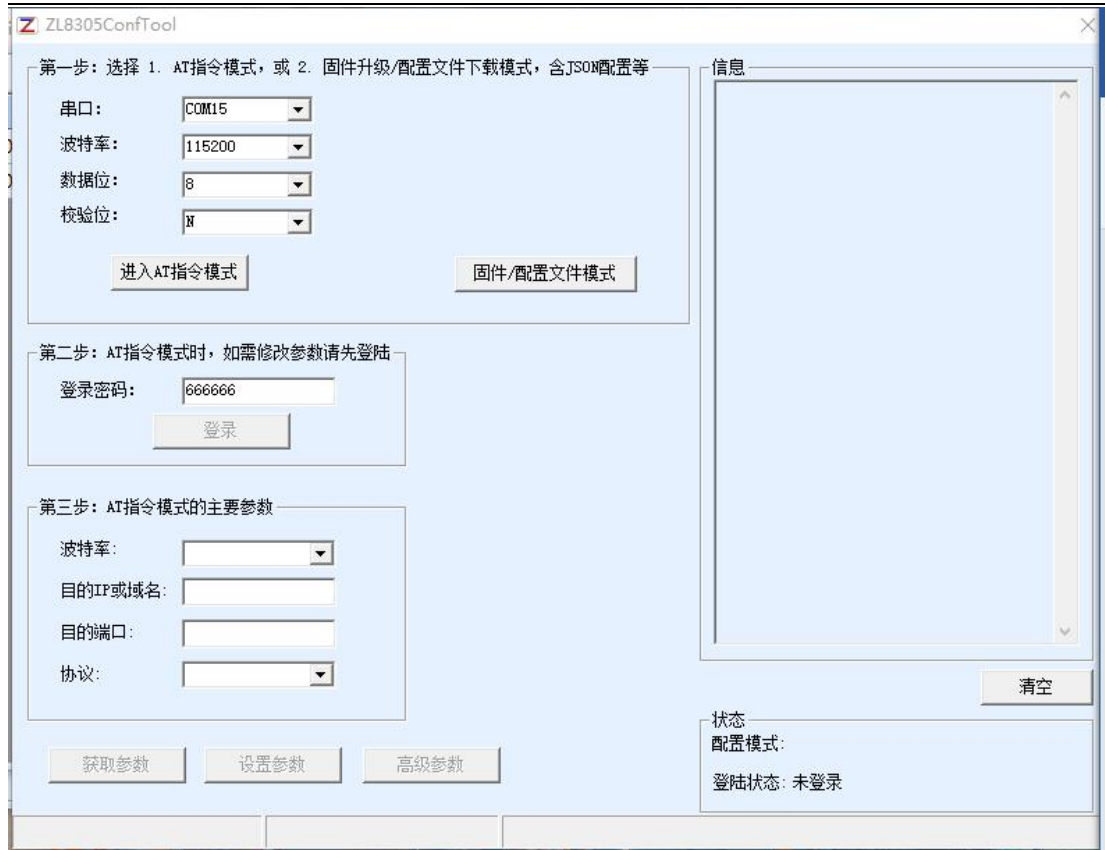


picture7Serial port search interface



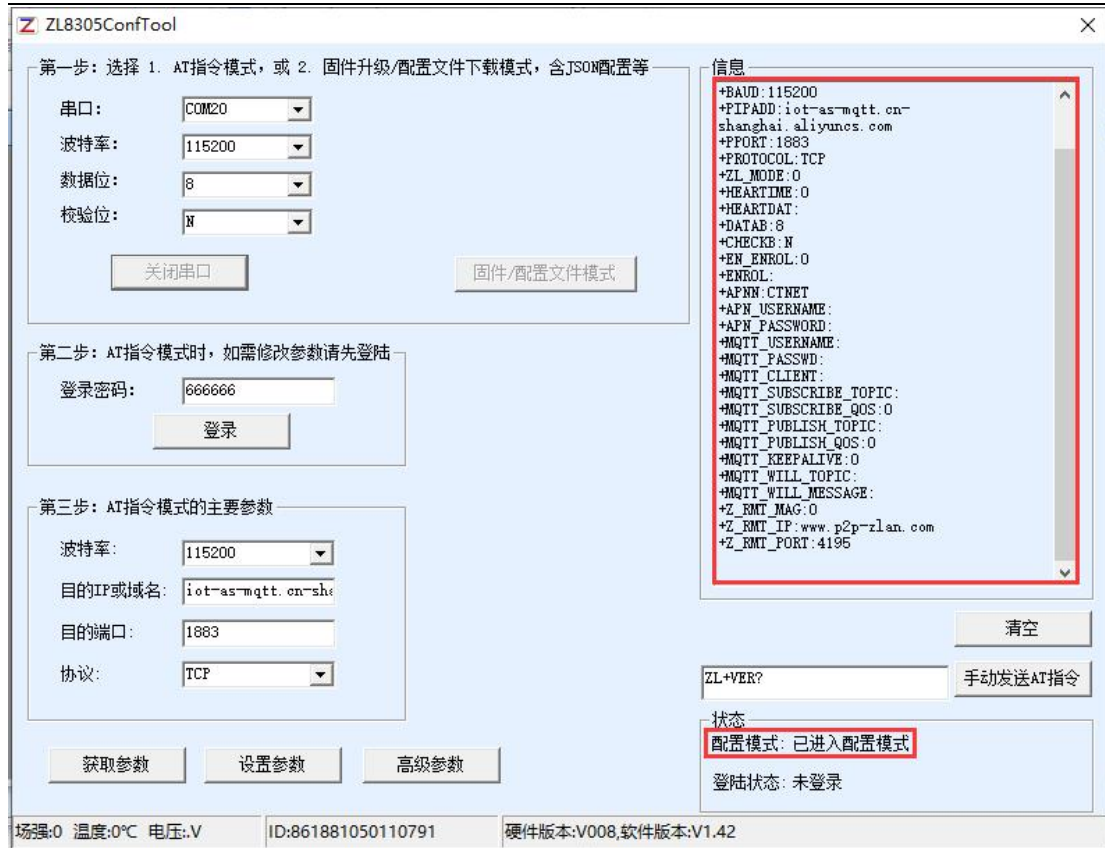
picture8Serial port parameter settings

Wait after power on15After the dial light starts flashing, click "Search" and the configuration tool will try to communicate with the device. If successful, it will enterConfToolInterface. As shown below9 As shown:



picture9 ConfToolinterface

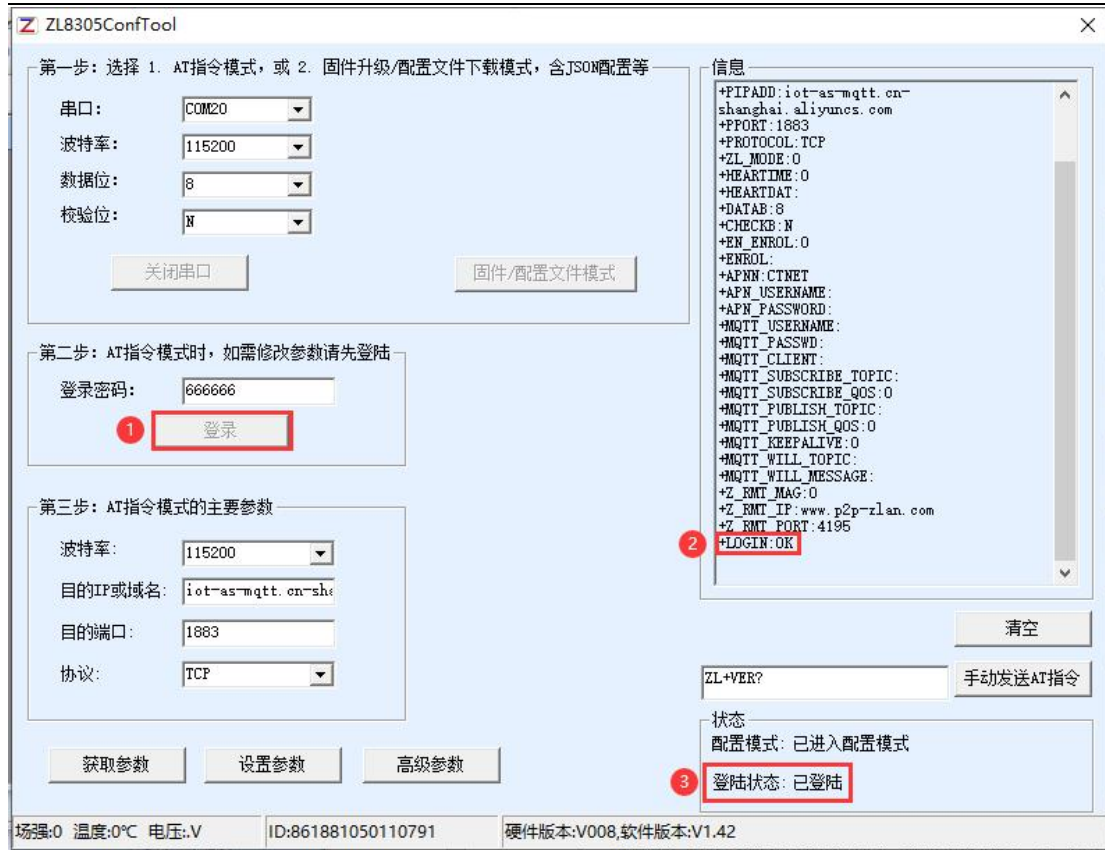
click to enterATIn command mode, the configuration tool will try to communicate with the device. If the communication is successful, the right side will displayATThe command returns information, and the configuration mode is displayed as having entered the configuration mode, as shown below10:



picture10Enter the configuration mode interface

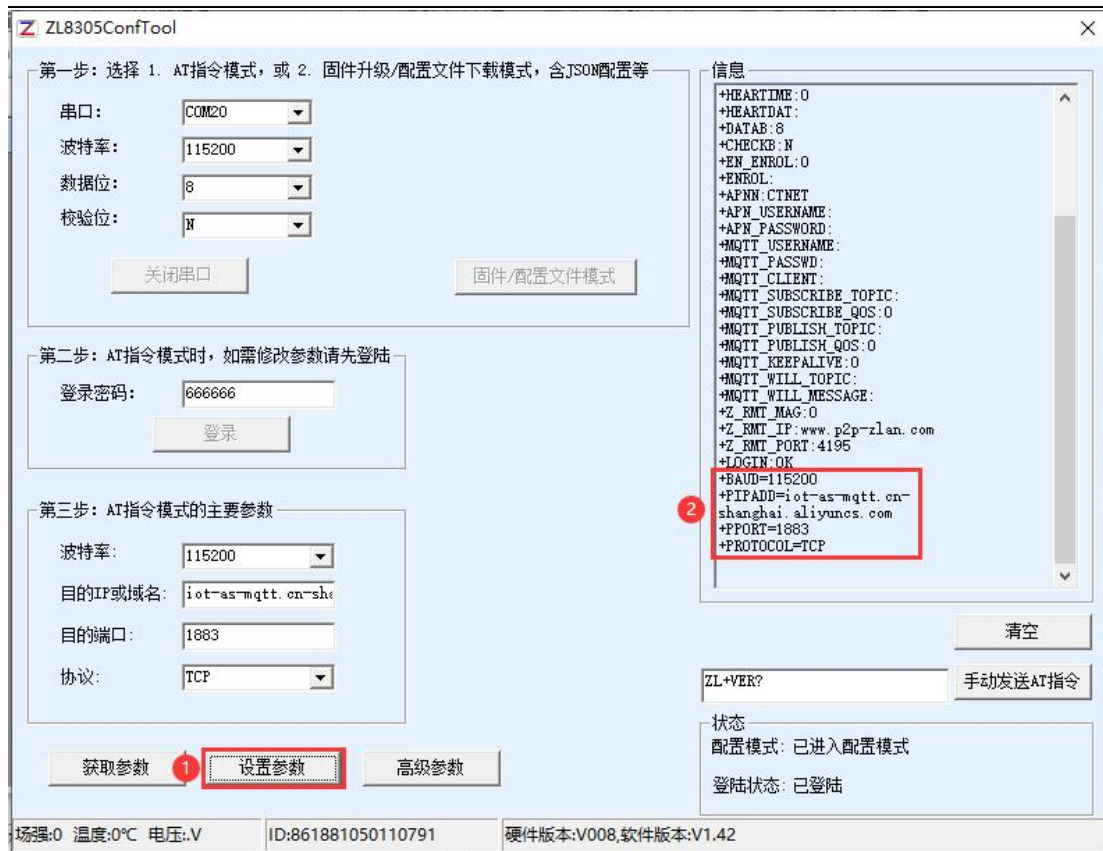
The default login password is666666Before clicking "Login", the parameters are read-only and cannot be set or modified. Click the "Login button":

You can see that after logging in, the login status changes to "Logged in" and a "+LOGIN OK" Information, as shown in Figure11shown.



picture11Login interface

ATThe main parameters of the command mode include baud rate, purposeIP, destination port and protocol. Protocol supportTCPorUDPAfter modifying the corresponding parameters, click "Set Parameters" to set the new parameters to the device, and the device will return the successfully set parameters, as shown in the figure12shown.



picture12Setting parameters

The "Get Parameters" button can get the parameters of the current device. Getting parameters is done by sending AT instructions to obtain parameters, listed on the right are AT. The return data of the instruction. AT. For instructions, please refer to other chapters of this article. Since the "Get Parameters" button will be automatically executed once the "Open" button is successfully executed, you generally do not need to click the "Get Parameters" button.

Click "Advanced Parameters", the advanced parameter box is as shown in the figure 13As shown, the commonly used parameters are:

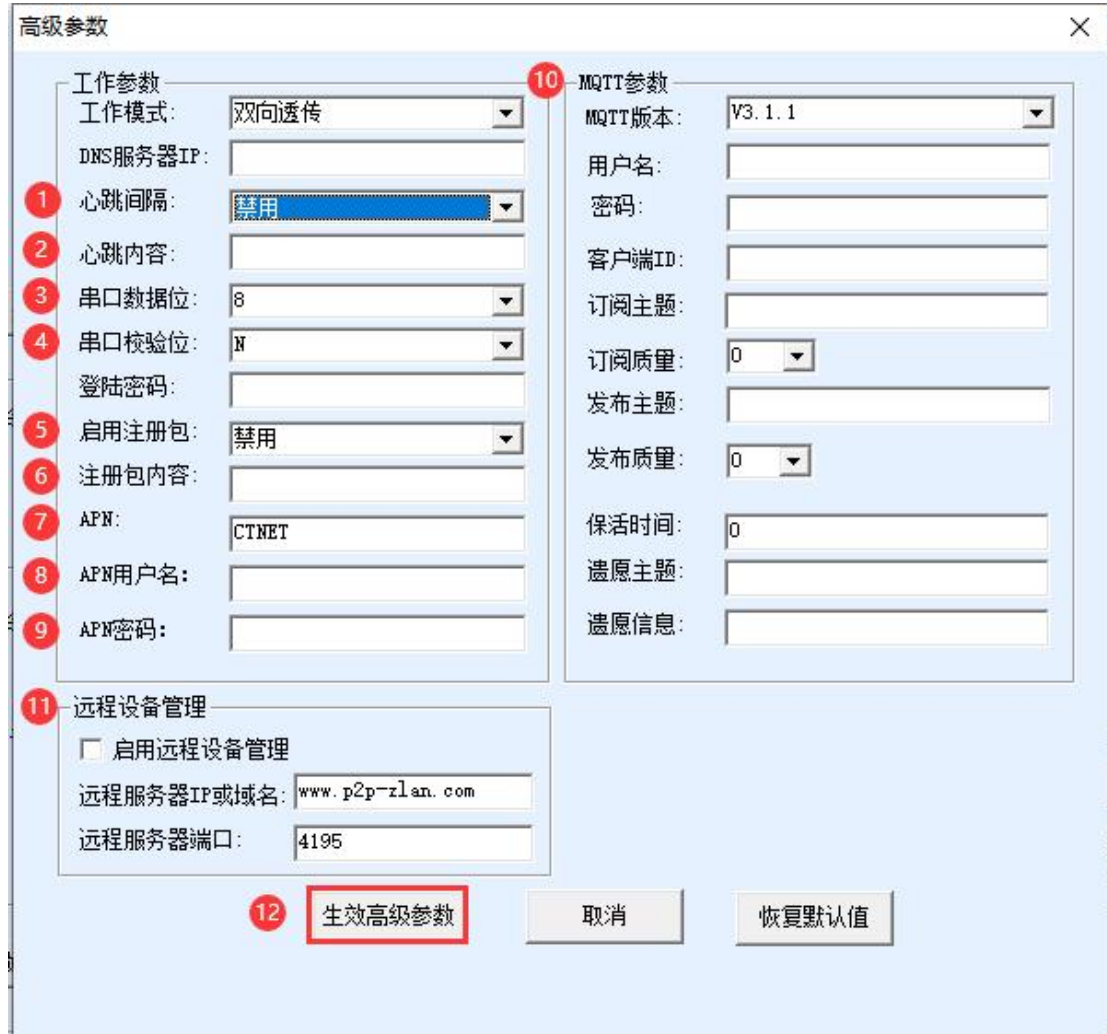
1. Heartbeat interval: The interval can be set to 15s Heartbeat packet.
2. Heartbeat content: Set the heartbeat packet content.
3. Serial port data bits
4. Serial port check digit
5. Enable registration package: Whether to enable the registration package.
6. Registration package content: the registration package content sent after connecting to the server.
7. APN: APN The access point name.
8. APN username
9. APN password

10. MQTTParameters: used to set accessMQTTServer parameters

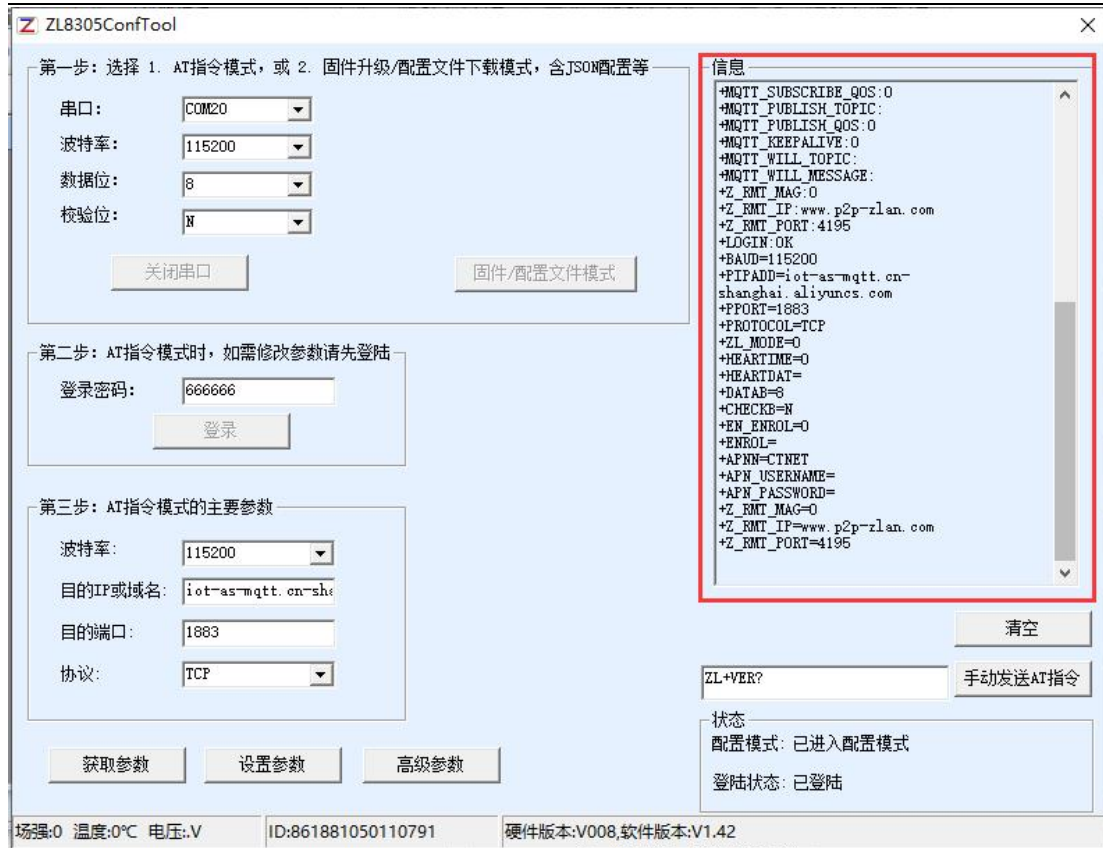
11.Device remote management: used for devices with remote management functions to access remote servers. After selecting the parameters, click the

"Effective Advanced Parameters" button and observe the information bar on the right to see whether the setting information returned by the device is

consistent with the information filled in, as shown in the figure14shown.



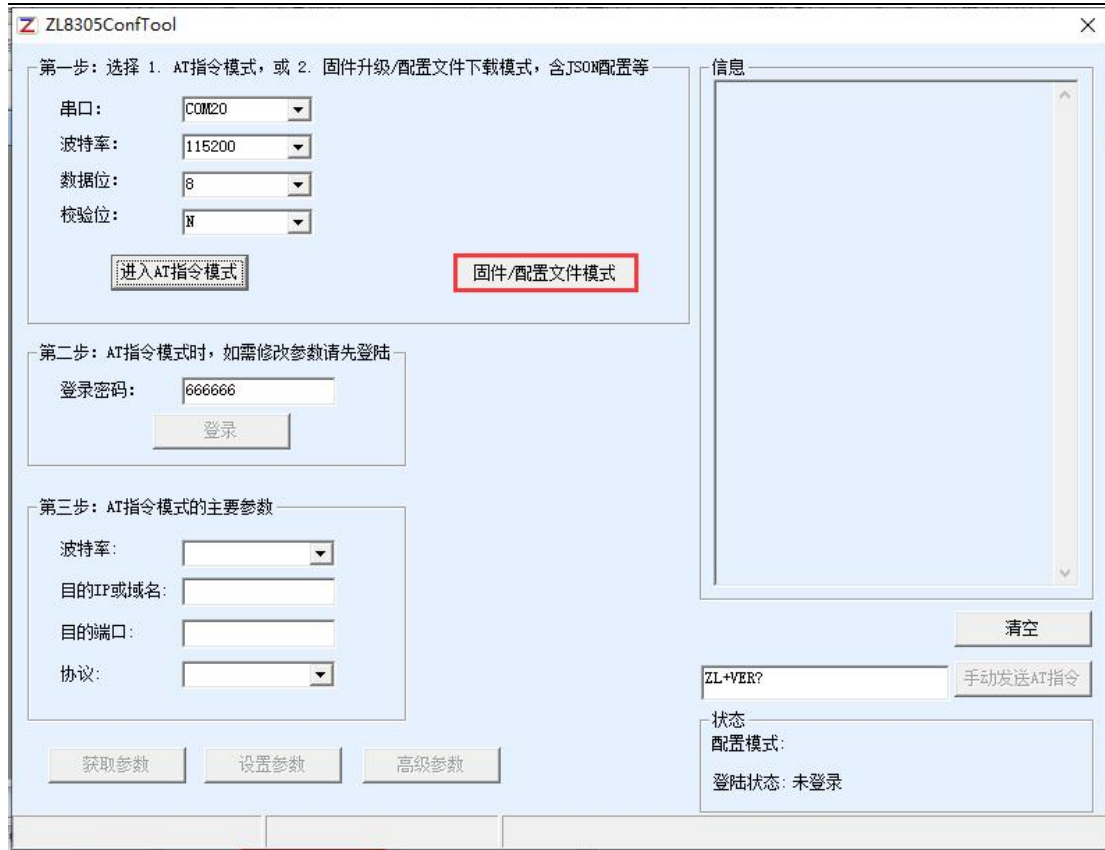
picture13Advanced Parameters



picture14Set advanced parameters to return information

5.2.Firmware/Configuration File Mode

EnterConfToolAfter the interface is displayed, click the Firmware/Configuration File Mode button, as shown in the figure15, jump to the firmware/configuration file interface16, first create a local configuration web root directory to store the configuration file, clickMQTT Configuring input connectionsMQTTAfter setting the server information, click Save.MQTTConfiguration, as shown in the figure 17, clickJSONConfiguration)JSON Send the configuration to the upper and lower levels and save it)JSONConfiguration, as shown in the figure18, click the download button, the configuration software will download all the files in the directory to8308In the device, after the download is successful, the transfer completion interface pops up and the device automatically restarts, as shown in the figure19.



picture15Configuration interface



picture16Firmware/Configuration File Interface

MQTT连接参数设置 ✕

服务器域名或IP:	<input type="text" value="ProductKey.iot-as-mqtt.cn-shanghai."/>
服务器MQTT端口:	<input type="text" value="1883"/>
用户名:	<input type="text" value="112121@a1WSVHIXkDh"/>
密码:	<input type="password" value="*****"/>
客户端ID:	<input type="text" value="132 securemode=3,signmethod=hmacsh."/>
订阅主题:	<input type="text" value="/a1WSVHIXkDh/112121/user/zlan_test"/>
发布主题:	<input type="text" value="/a1WSVHIXkDh/112121/user/zlan_1"/>

MQTT高级参数保存MQTT设置删除MQTT设置返回

picture17 MQTTConfiguration interface

JSON转Modbus RTU设置

1. 上传服务器时间: 毫秒 (范围100~31718940, 最大8.8小时)

2. 选择接入的云平台:

3. JSON的上层协议:

GET或者POST的域名加地址 (不含前面的http://):

POST变量名 (纯json无需填):

4. 上传数据增加帧头 (如01 02): 帧头格式:

5. 上传 次后串口同时输出指令 (如01 02): 输出条件 (默认空)

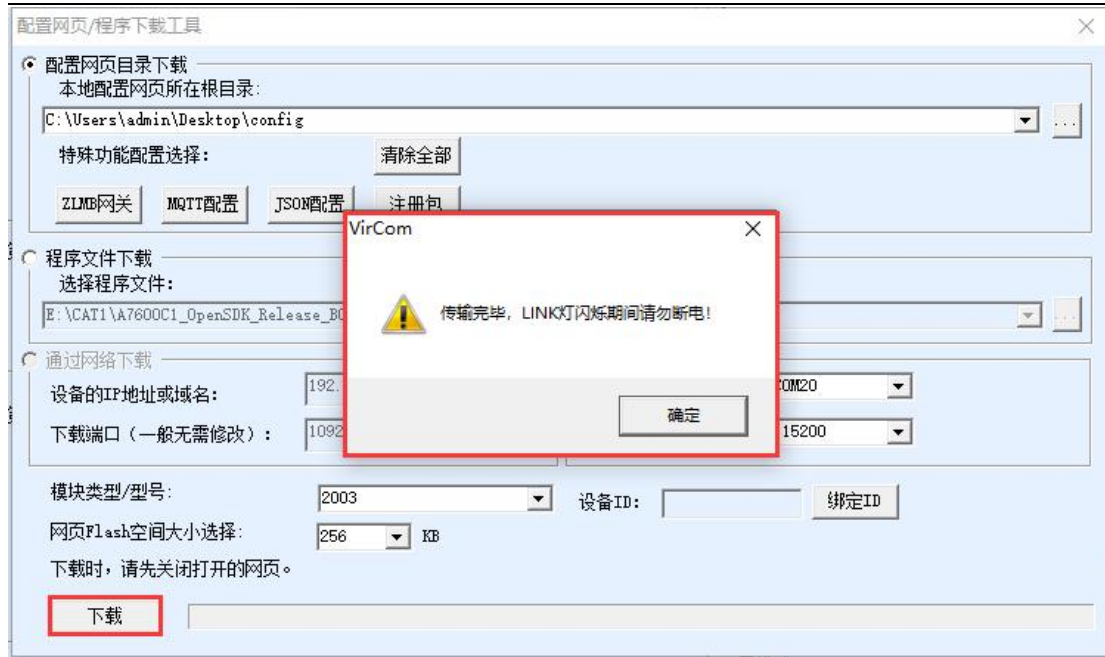
6. 添加或删除Modbus寄存器:

7. 点击保存JSON设置并展示结果:

8. 导出/导入EXCELL格式文件配置:

```
{
  "1":0,
  "2":0,
  "5":0,
  "10":0,
  "15":0,
  "16":0,
  "17":0,
  "18":0,
  "19":0,
  "20":0,
  "21":0,
  "22":0,
  "23":0,
  "24":0,
```

picture18 JSONConfiguration interface



picture19Download interface

6.Product Features

6.1.Communication test

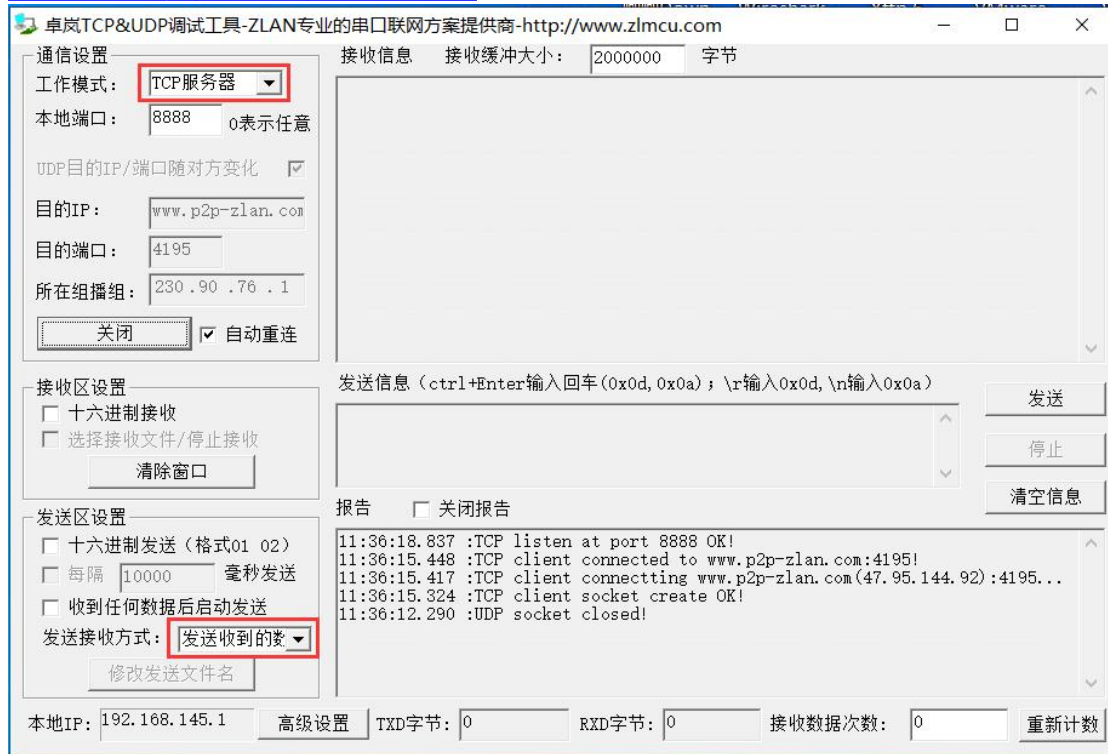
6.1.1Server transparent transmission test

Assume that there is the following network structure as shown below:8305Configure to connect to the *** port of server
..***.***. Please configure according to the method in the "Serial Port Configuration" section. After the configuration is completed,
restart the power.20~40seconds to connect to the server.



picture20Network structure diagram

We run on the serverSocketDlgTestthisTCPtool(http://www.zlmcu.com/document/tcp_debug_tools.html).

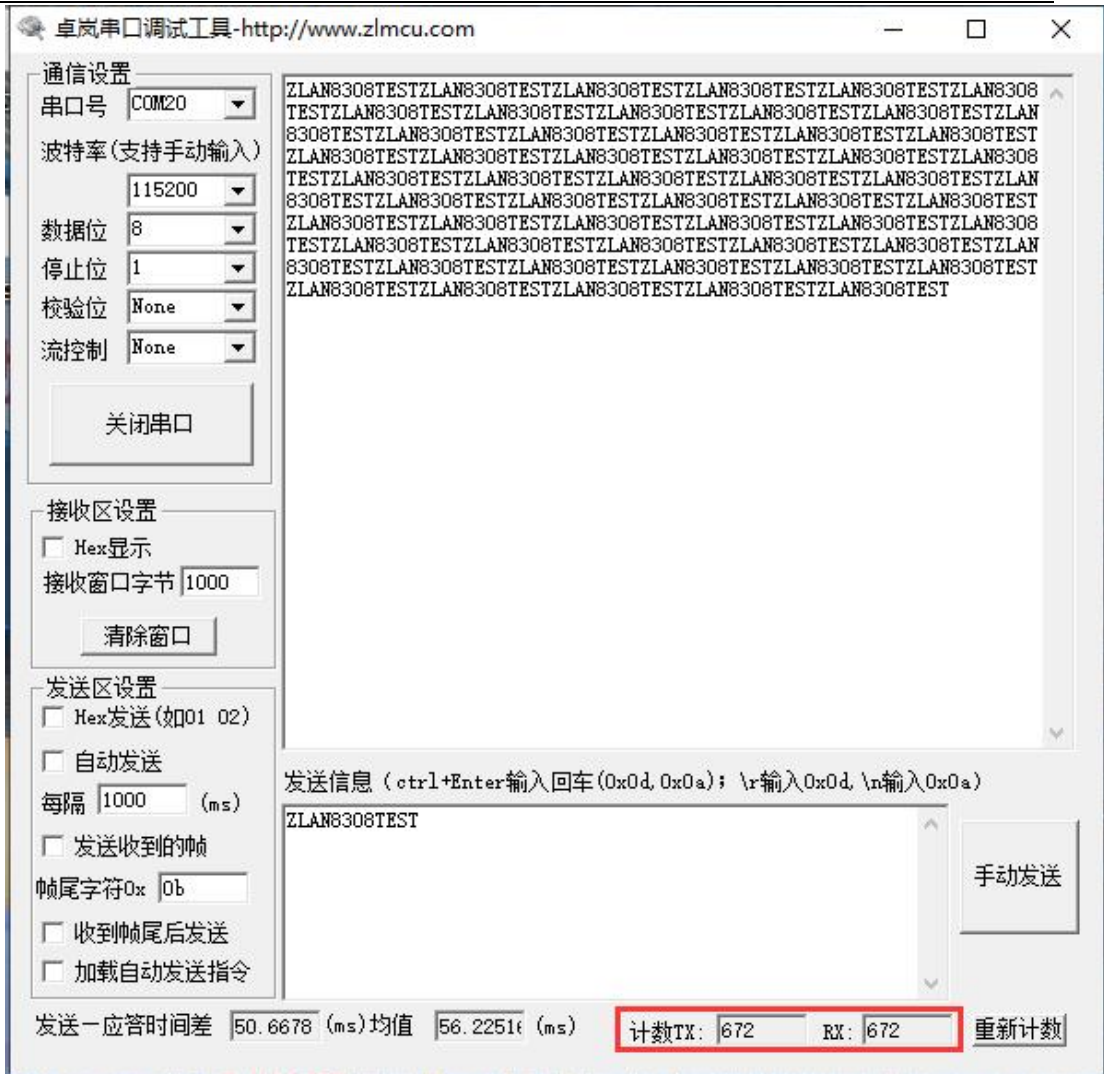


picturetwenty oneServer-side tools

Select the local port as shown in the figure4196(Note that if you runZLVircomtools, you need to change a port), and then click the "Open" button.8308After the device is connected to the server, it will display "The NO... is accepted!"Information.

Now will8308Serial port connection of the deviceUSBchange232Serial line, and open the serial debugging tool (http://www.zlmcu.com/document/com_debug_tools.html), and open the correctCOM mouth.

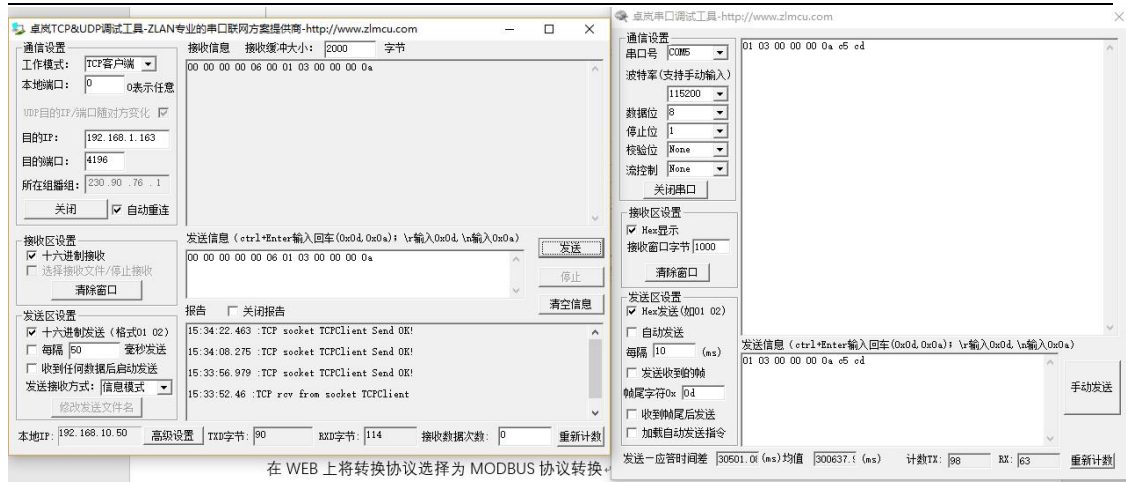
Now the serial port sends data, and the server will reply with the corresponding data. Similarly, the device receives the server's reply message and outputs it through the serial port. The serial port tool receives the same data.4GThe network two-way communication is as shown belowtwenty twoAs shown:



picturetwenty twoDevice serial port debugging tool

6.1.2 ModbusProtocol conversion test

The configuration parameters are basically the same as those for the non-protocol transparent transmission test. You only need to change the conversion protocol to MODBUS. The serial port can be realized MODBUS RTU Protocol conversion to network MODBUS TCP Protocol, the network MODBUS TCP Protocol conversion to serial port MODBUS RTU protocol.



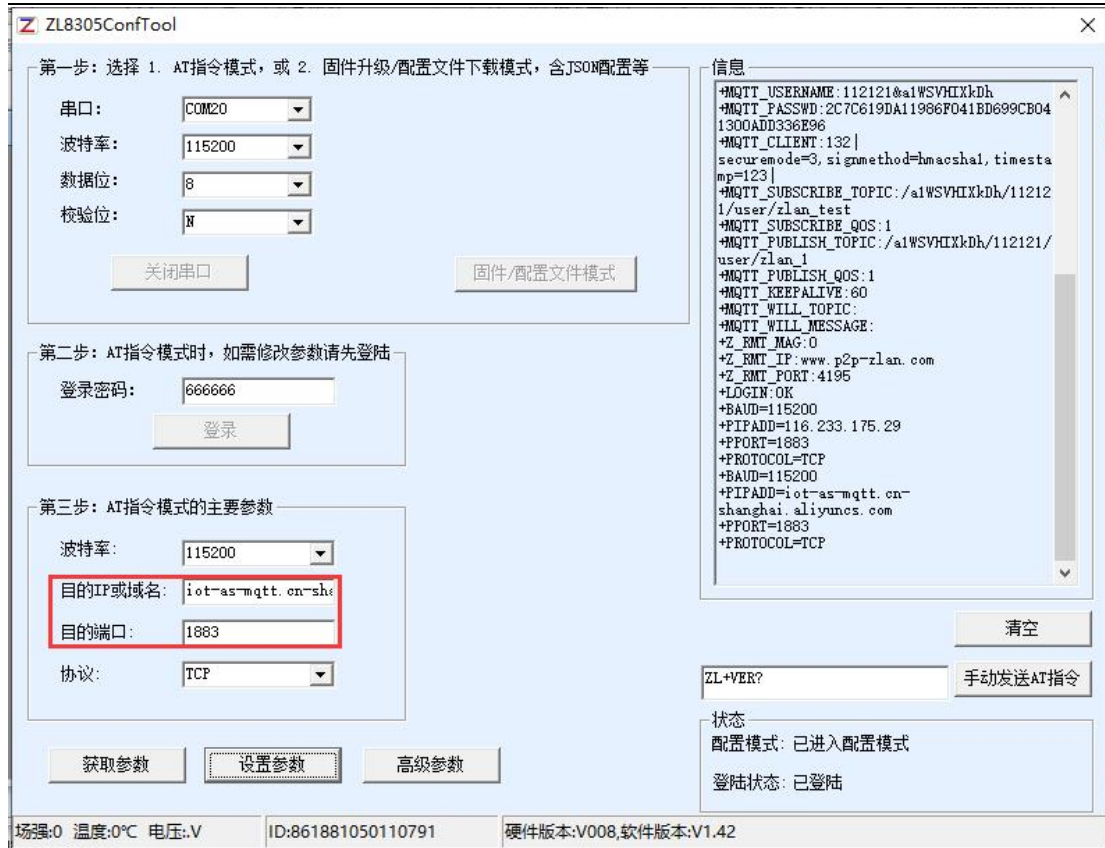
picture23 ModbusProtocol conversion test

6.1.3 MQTTProtocol testing

This test is to connect to Alibaba Cloud. Create a newzlan_testA subscription topic calledzlan_1The publishing topic is as shown in the figuretwenty fourAs shown. Follow the configuration instructions in step 5. MQTTServerIPFill in the port configuration and save the parameters. Fill in the parameters as shown in the figure25As shown. Then the advanced parameters page will beMQTTofID, username, password, including subscription and publishing topics, keep alive time, fill in the parameters as shown in the figure26As shown. Note that the working mode isMQTTmodel.

自定义 Topic	操作权限	描述
/a1WSVHIXkDh/\${deviceName}/user/zlan_test	订阅	-
/a1WSVHIXkDh/\${deviceName}/user/zlan_1	发布	-

picturetwenty fourAlibaba Cloud Add Theme



picture25Ali CloudIPand Port

高级参数

工作参数	MQTT参数
工作模式: MQTT	MQTT版本: V3.1.1
DNS服务器IP:	用户名: 112121@a1WSVHXkDh
心跳间隔: 禁用	密码: 86F041BD699CB041300ADD336E96
心跳内容:	客户端ID: thod=hmacsha1,timestamp=123
串口数据位: 8	订阅主题: 7HXkDh/112121/user/zlan_test
串口校验位: N	订阅质量: 1
登陆密码:	发布主题: WSVHXkDh/112121/user/zlan_1
启用注册包: 禁用	发布质量: 1
注册包内容:	保活时间: 60
APN: CTNET	遗嘱主题:
APN用户名:	遗嘱信息:
APN密码:	

远程设备管理

启用远程设备管理

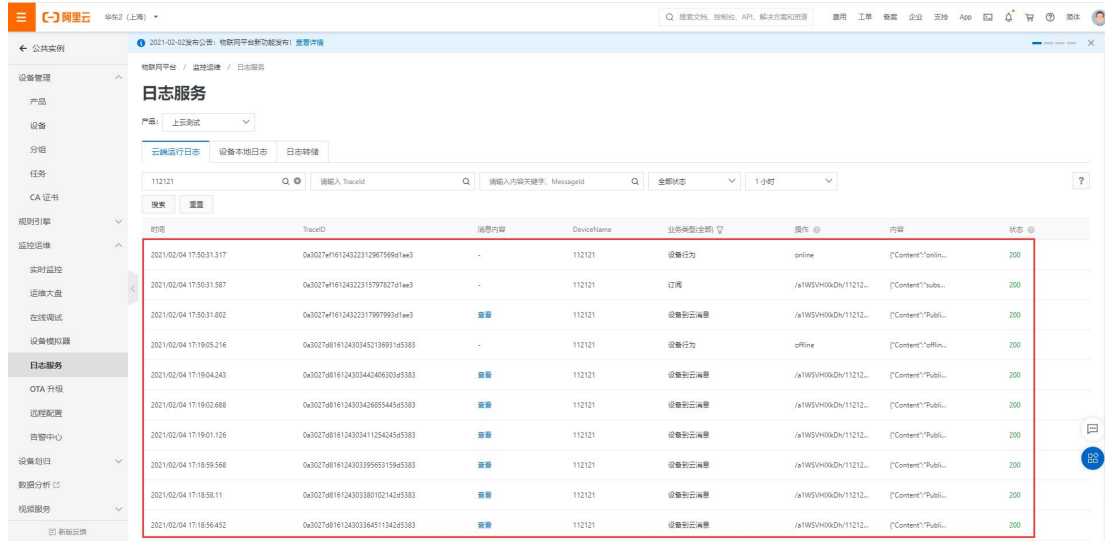
远程服务器IP或域名: www.p2p-zlan.com

远程服务器端口: 4195

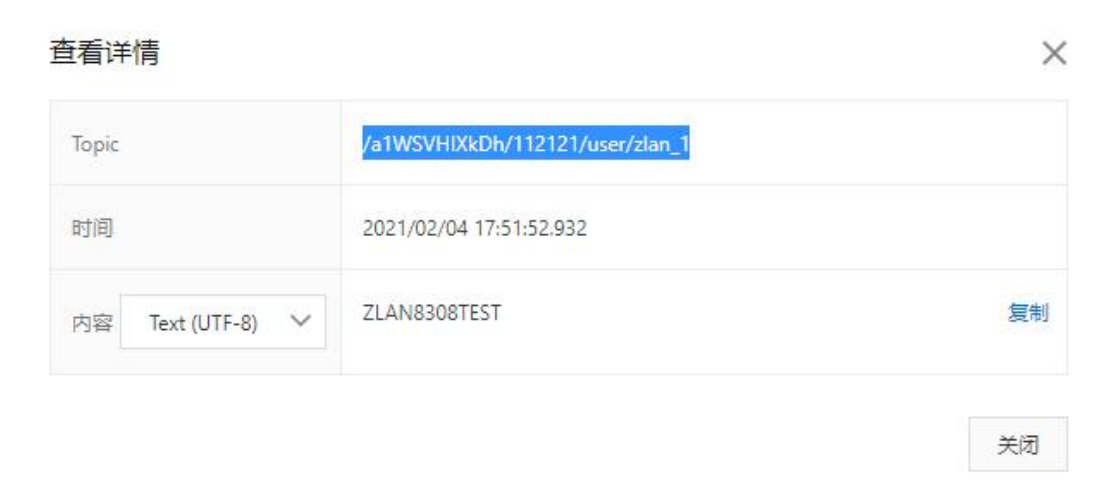
生效高级参数 取消 恢复默认值

picture26Ali CloudMQTTConfiguration

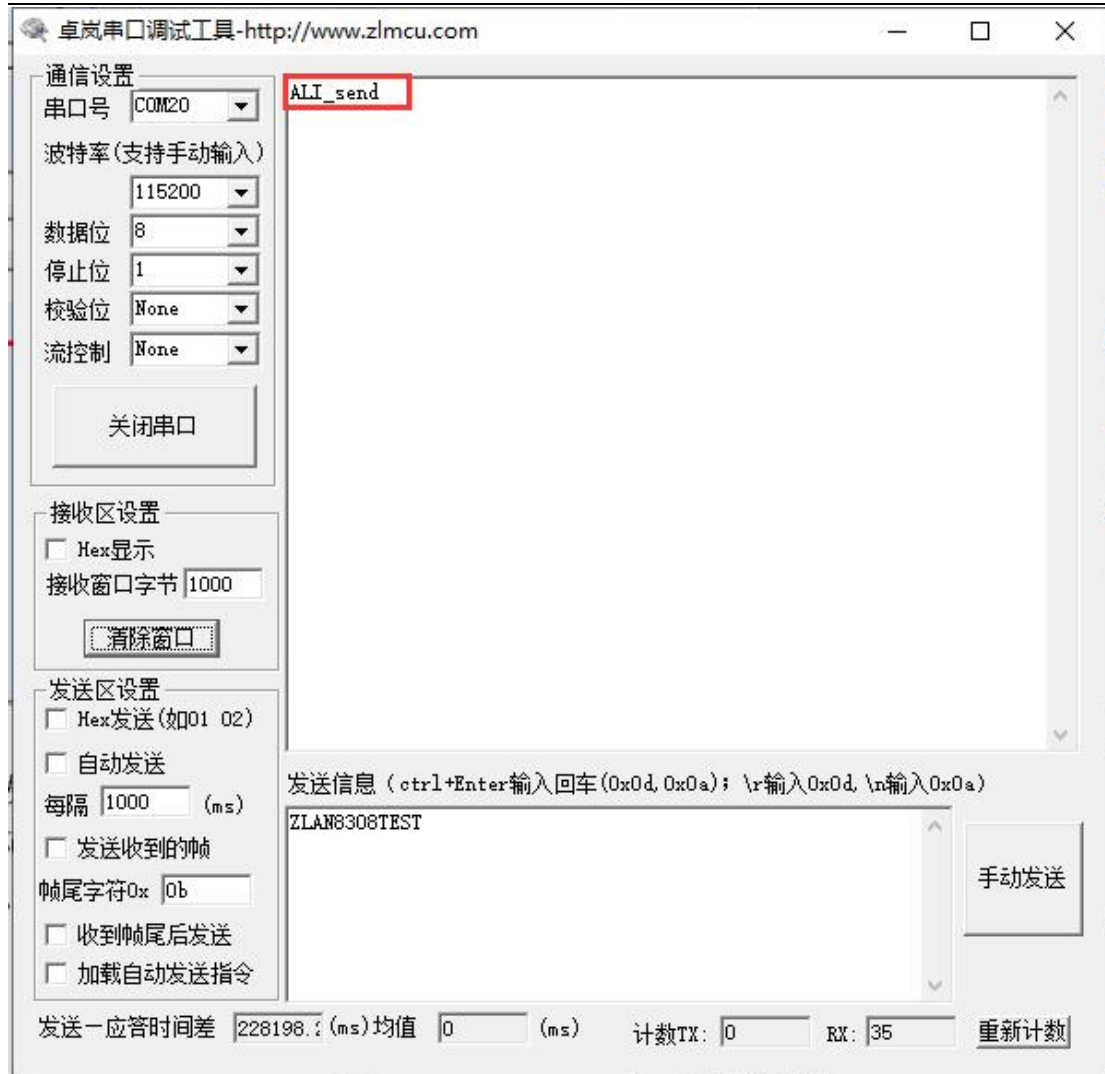
After the settings are completed, open the Alibaba Cloud device management interface and enter the log service page to view the information sent by the device, as shown in the figure27As shown. Data is sent through the serial port of the device.zlan_1Send message to the topic ("ZLAN8308TEST")To Alibaba CloudMQTTServer, Alibaba Cloud receives the data as shown in the figure28As shown, Alibaba Cloud Serverzlan_testTopic sends message ("ALI_send")To the device serial port, as shown in the figure29This is done.MQTTSend and receive test.



picture27Alibaba Cloud Log Service



picture28Alibaba Cloud receives serial port data



picture29The serial port receives Alibaba Cloud data

6.2. MODBUS RTUchangeJSONtest

6.2.1 ConfigurationJSONSend

Through the above section:ModbusProtocol conversion test, simple configurationJSONSend the template, the configuration process is as follows30,picture31,picture32,picture33As shown, collectionMODBUSThe data of some nodes are converted intoJSONFormat posted.

JSON转Modbus RTU设置

1. 上发服务器时间: 毫秒 (范围100~31718940, 最大8.8小时)

2. 选择接入的云平台:

3. JSON的上层协议:

GET或者POST的域名加地址 (不含前面的http://):

POST变量名 (纯json无需填):

4. 上发数据增加帧头(如01 02): 帧头格式:

5. 上发 次后串口同时输出指令 (如01 02): 输出条件 (默认空)

6. 添加或删除Modbus寄存器:

7. 点击保存JSON设置并展示结果:

8. 导出/导入EXCELL格式文件配置:

```
{
  "1":0,
  "2":0,
  "5":0,
  "10":0,
  "15":0,
  "16":0,
  "17":0,
  "18":0,
  "19":0,
  "20":0,
  "21":0,
  "22":0,
  "23":0,
  "24":0,
```

picture30ConfigurationJSONSend

添加JSON节点

下面是第 1. 个JSON关键词的设置。已经添加

该JSON数据节点类型： 对象数据（默认值，用[]来包含本节点数据和后续节点，需要设置关键词）
 数组数据（用[]来包含，无关键词名称）

其它来源参数
固定字符串： 不加引号

对应JSON关键词 1 数据来源选择：Modbus RTU

Modbus RTU设置
- 从站地址：
- Modbus功能码：
- 寄存器地址：

645协议
- 645版本： FE个数：
- 设备ID号： (6字节)
- 数据标识： (例如填9410表示上月总电能)

1. 数据长度： 字节。4字节顺序： (大端4字节：数据ABCD，低地址放高2字节AB，高地址放低2字节CD)
2. 保留小数点位数： 位，即：数据为整形时得到的整数小数点左移的位数。
3. 启用平移和缩放： 读取的寄存器数据减去整数： 再除以浮点数：
4. 数据格式： 布尔值所在位位置：
5. 数据后增加单位：
6. 数据用引号包含：
7. 串口轮询间隔： (ms)必须大于10ms。
8. 采集数据有变化，则立即触发上报：
9. RS485设备离线数据清零：，如果设备在线，则不管寄存器内容，强制设置为1：

JSON嵌套相关操作

设计或查看下一个

退出设计

picture31Configure the acquisition keywords, register addresses and acquisition intervals

添加JSON节点

下面是第 39. 个JSON关键词的设置。已经添加

该JSON数据节点类型： 对象数据（默认值，用[]来包含本节点数据和后续节点，需要设置关键词）
 数组数据（用[]来包含，无关键词名称）

其它来源参数
固定字符串： 不加引号

对应JSON关键词：49 数据来源选择：Modbus RTU

Modbus RTU设置
- 从站地址：
- Modbus功能码：
- 寄存器地址：

645协议
- 645版本： FE个数：
- 设备ID号： (6字节)
- 数据标识： (例如填9410表示上月总电能)

1. 数据长度： 字节。4字节顺序： (大端4字节：数据ABCD，低地址放高2字节AB，高地址放低2字节CD)
2. 保留小数点位数： 位，即：数据为整形时得到的整数小数点左移的位数。
3. 启用平移和缩放： 读取的寄存器数据减去整数： 再除以浮点数：
4. 数据格式： 布尔值所在位位置：
5. 数据后增加单位：
6. 数据用引号包含：
7. 串口轮询间隔： (ms)必须大于10ms。
8. 采集数据有变化，则立即触发上报：
9. RS485设备离线数据清零：，如果设备在线，则不管寄存器内容，强制设置为1：

JSON嵌套相关操作

设计或查看下一个

退出设计

picture32After the configuration is complete, save and exit

JSON转Modbus RTU设置

1. 上发服务器时间: 毫秒 (范围100~31718940, 最大8.8小时)
2. 选择接入的云平台:
3. JSON的上层协议:

GET或者POST的域名加地址 (不含前面的http://):

POST变量名 (纯json无需填):

4. 上发数据增加帧头 (如01 02): 帧头格式:
5. 上发 次后串口同时输出指令 (如01 02): 输出条件 (默认空)

6. 添加或删除Modbus寄存器:

7. 点击保存JSON设置并展示结果:

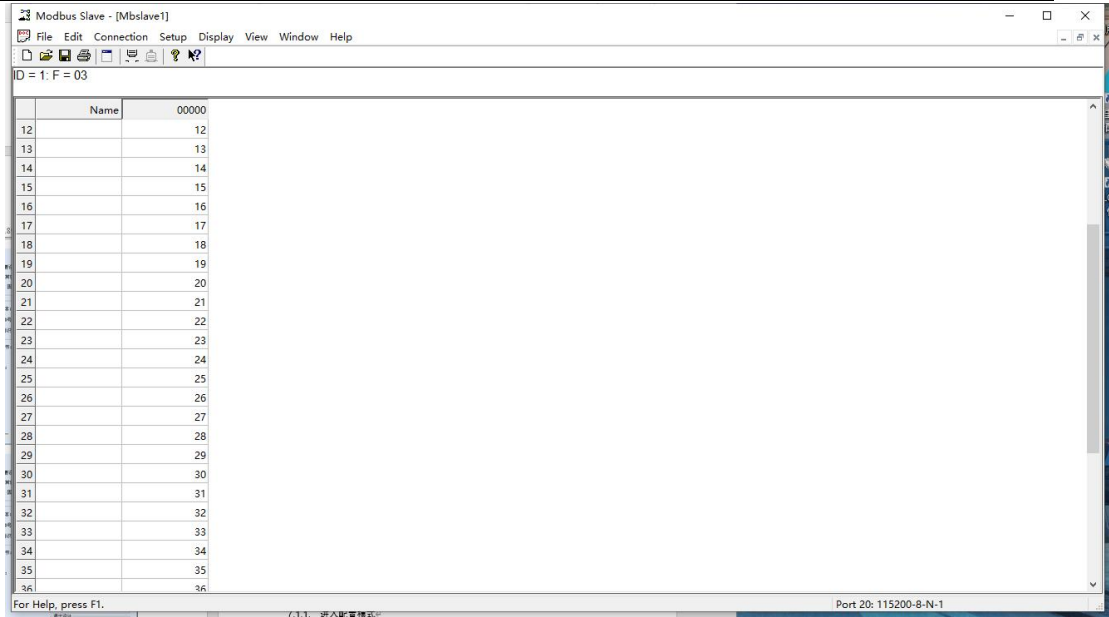
8. 导出/导入EXCELL格式文件配置:

```
{
  "1":0,
  "2":0,
  "5":0,
  "10":0,
  "15":0,
  "16":0,
  "17":0,
  "18":0,
  "19":0,
  "20":0,
  "21":0,
  "22":0,
  "23":0,
  "24":0,
```

picture33saveJSONSettings, view previewJSONFormat

6.2.2 Configuration MODBUS RTU Analog Devices

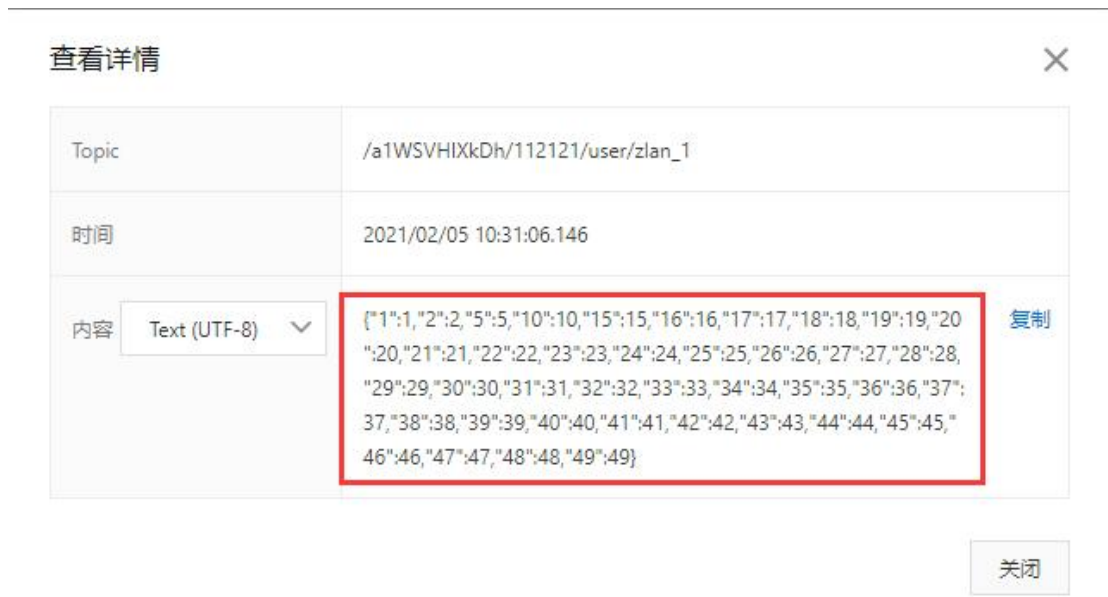
pass Modbus Slave Software simulation MODEBUS From the device, through the serial line ZLAN8308 Connect the device to the computer and open Modbus Slave Connection, Modbus Slave Configuration as shown 34 shown.



picture34 Modbus SlaveFill in simulation data

6.2.3View the postedJSON

View the uploadedJSONData, you can observe the collected data and Modbus SlaveThe configured data is consistent, which completes the simpleMODBUSchangeJSONtest.



picture35The serial port receives Alibaba Cloud data

6.3 P2PInstructions

please Ginseng Test 《 P2P Produce Taste makeuse refer to South 》 arts files
(http://www.zlmcu.com/download/p2p_manual.pdf).

7. ATInstruction

7.1.Login and Configuration

7.1.1.Enter configuration mode

instruction:REQUEST CFG MODE Function: Enter the configuration mode. During the device startup phase, send this command and the device can enter the configuration mode after the startup is complete.

return:CFG MODE\r.

7.1.2.Login

instruction:ZL+LOGIN=666666\r\n Function: Login, modifying device parameters requires login status to be successful. Return: +LOGIN:OK\r\n(Success) or +LOGIN:NG\r\n(fail)

7.1.3.Get device status

instruction:ZL+STAT?\r\n

Function: Query the signal strength, temperature, and voltage of the device

Returns: +STAT: Intensity, temperature, voltage\r\n

7.2.Serial port parameters

7.2.1.Get serial port parameters

instruction:ZL+BAUD?\r\n

Function: Get baud rate

Returns: +BAUD:n\r\n,nIndicates the specific baud rate

7.2.2.Get the check digit

instruction:ZL+CHECKB?\r\n

Function: Get the check digit

Returns: +CHECKB:N/O/E\r\n

N:No verification

O:Even parity

E:Odd parity

7.2.3.Get data bits

instruction:ZL+DATAB?r\n

Function: Get data bit

Returns: +DATAB:5/6/7/8\r\n

7.2.4.Set serial port parameters

instruction:ZL+BAUD=n\r\n

Function: Set the baud rate,nIndicates the value to be set

Returns: +BAUD:n\r\n

7.2.5.Setting the check digit

instruction:ZL+CHECKB= N/O/E \r\n

Function: Set the check digit

Returns: +CHECKB:N/O/E\r\n

N:No verification

O:Even parity

E:Odd parity

7.2.6.Setting Data Bits

instruction:ZL+DATAB=5/6/7/8\r\n

Function: Set data bit

Returns: +DATAB:5/6/7/8\r\n

7.3.Network parameters

7.3.1.Purpose of acquisitionIPor domain name

instruction:ZL+PIPADD?\r\n

Function: Get the purposeIPor domain name

Returns: +PIPADD=ip\r\n

7.3.2.Get the destination port

instruction:ZL+PPORT?\r\n

Function: Get the destination port

Returns: +PPORT=n\r\n

7.3.3.Get the device working mode

instruction:ZL+PROTOCOL?\r\n

Function: Get the device working mode

Returns: +PROTOCOL=TCP/UDP\r\n

7.3.4.ObtainDNSserverIP

instruction:ZL+PDNS?\r\n

Function: GetDNSserverIPAddress

returned: +PDNS=ip\r\n

7.3.5.Setting PurposeIPor domain name

instruction:ZL+PIPADD=ip\r\n

Function: Setting purposeIPor domain name

Returns: +PIPADD=ip\r\n

7.3.6.Set the destination port

instruction:ZL+PPORT=n\r\n

Function: Set the destination port

Returns: +PPORT:n\r\n

7.3.7.Set the working mode

instruction:ZL+PROTOCOL=TCP/UDP\r\n

Function: Set the working mode

Returns: +PROTOCOL=TCP/UDP\r\n

7.3.8.set upDNSServerIP

instruction:ZL+PDNS=ip\r\n

Function: SettingDNSServerIPAddress

returned: +PDNS=ip\r\n

7.4.Registration packet and heartbeat packet

7.4.1.Check the registration package contents

instruction:ZL+ENROL?\r\n

Query the registration package content (default registration package16Hexadecimal system

Returns: +ENROL:1234567890\r\n

7.4.2.Whether to enable the registration package

instruction:ZL+EN_ENROL?\r\n

Check whether the registration package is enabled (1Enable0

Disability) Return: +EN_ENROL:1\r\n

7.4.3.Set the registration package content

instruction:ZL+ENROL=123456\r\n Set the registration package content (default registration package16

The actual registration package is0X12 0X34 0X56 Returns: +ENROL:123456\r\n

7.4.4.Enable/disable registration package

instruction:ZL+EN_ENROL=1\r\n

Enable/disable registration package,1To enable,0Return

for disability: +EN_ENROL:1\r\n

7.5.Remote management capabilities

7.5.1 Query remote management function

instruction:ZL+Z_RMT_MAG?\r\n

Check whether the remote management function is enabled.1To enable,0

Return for disability: +ZL+Z_RMT_MAG:1\r\n

7.5.2 Enable remote management function

instruction:ZL+Z_RMT_MAG=1\r\n

Enable/disable remote management function,1To enable,0

Return for disability: +ZL+Z_RMT_MAG:1\r\n

7.5.3 Query the remote management server IP

instruction:ZL+Z_RMT_IP ?\r\n

Querying the Remote Management ServerIP

***** Returns: +ZL+Z_RMT_IP =*****\r\n

7.5.4 Query the remote management server port

instruction:ZL+ Z_RMT_PORT ?\r\n Query

the remote management server port****

Returns: +ZL+ Z_RMT_PORT =****\r\n

7.5.5 Setting the Remote Management Server IP

instruction:ZL+Z_RMT_IP =*****\r\n Setting up a

remote management serverIP

Returns: +ZL+Z_RMT_IP:*****\r\n

7.5.6 Setting the Remote Management Server Port

instruction:ZL+ Z_RMT_PORT =****\r\n Set the

remote management server port

Returns: +ZL+ Z_RMT_PORT:**** \r\n

MQTTparameter

7.6.1 Setting the MQTT Username instruction:ZL+

MQTT_USERNAME =****\r\n set upMQTTusername

Returns: +ZL+ MQTT_USERNAME:**** \r\n

7.6.2 Setting the MQTT password instruction:ZL+

MQTT_PASSWD =****\r\n set upMQTTpassword

Returns: +ZL+ MQTT_PASSWD:**** \r\n

7.6.3 Setting the MQTT client ID

instruction:ZL+ MQTT_CLIENT =****\r\n

set upMQTTClientID

Returns: +ZL+ MQTT_CLIENT:**** \r\n

7.6.4 Setting MQTT publishing topic

instruction:ZL+ MQTT_PUBLISH_TOPIC =****\r\n set

upMQTTPublish a topic

Returns: +ZL+ MQTT_PUBLISH_TOPIC:**** \r\n

7.6.5 Setting up MQTT subscription topics

instruction:ZL+ MQTT_SUBSCRIBE_TOPIC =****\r\n set up

MQTTSubscribe to a topic

Returns: +ZL+ MQTT_SUBSCRIBE_TOPIC:**** \r\n

7.6.6 Setting MQTT subscription quality instruction:ZL+

MQTT_SUBSCRIBE_QOS =1\0\r\n set upMQTTSubscription

Quality1\0

Returns: +ZL+ MQTT_SUBSCRIBE_QOS: 1\0\r\n

7.6.7 Setting MQTT Publishing Quality instruction:ZL+

MQTT_PUBLISH_QOS =1\0\r\n set upMQTTRelease

Quality1\0

Returns: +ZL+ MQTT_PUBLISH_QOS: 1\0\r\n

7.6.8 Setting the MQTT keepalive time instruction:

ZL+MQTT_KEEPLIVE =****\r\n set upMQTTKeep

alive time

Returns: +ZL+ MQTT_ KEEPLIVE:**** \r\n

7.6.9 Setting up the MQTT Will topic instruction:ZL+

MQTT_WILL_TOPIC =****\r\n

set upMQTTLast Wish Theme

Returns: +ZL+ MQTT_WILL_TOPIC:**** \r\n

7.6.10 Setting MQTT will information

instruction:ZL+ MQTT_WILL_MESSAGE =****\r\n set upMQTT

Last Wish Information

Returns: +ZL+ MQTT_WILL_MESSAGE:**** \r\n

8.Accessories

1、 Model selection:

model	Function	illustrate
ZLAN8308	4GConvert to Serial Port	

2、 Antenna selection:

You can choose glue stick antenna or suction cup antenna. The suction cup antenna is the default.1.5M,customizable2M,3M antenna.

3, power input:

Default is plug typeQ2.1The socket can be customized as a terminal block type power input.

4, You can choose rail mounting accessories.

9.After-sales service and technical support

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