HF2111A

Operation Guide

V 1.0

	HF2111A

1. HF2411 ..... 错误!未定义书签。

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1. HF2111A

The HF2111A support GRPS netowork.

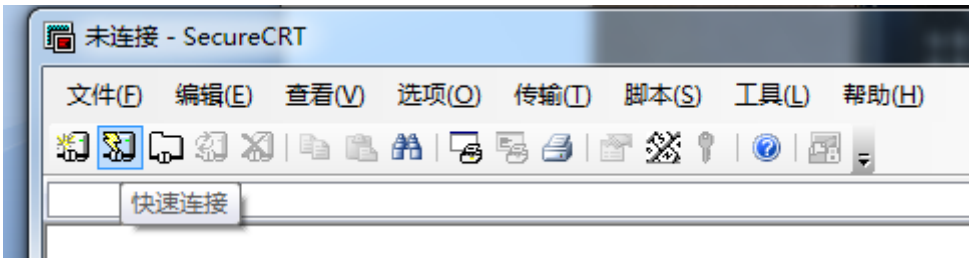
The HF2111A support TCPIP protocol, with its RS232/RS485 interface, it make traditional UART device easy connecting to IOT.

2. SERIAL SETTING

2.1. Serial Tool SecureCRT

Download adddress: http: //www.hi-flying.com/index.php?route=download/category&path=1_4

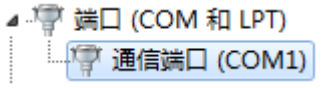
Decompress file and find executable program, then open. Click quick start button to create connection.



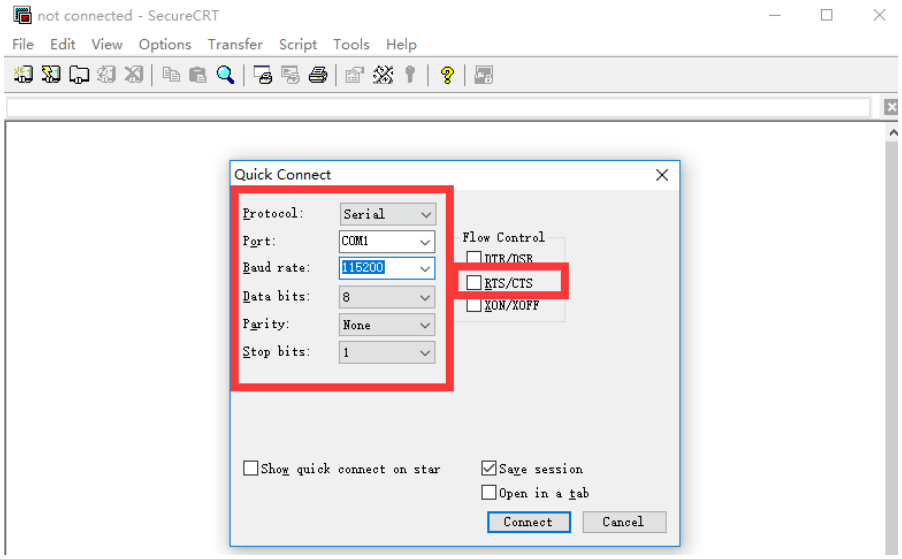
2.2. Configure Serial Parameter

Protocol: Serial

Port: Actual connection port(search by “My PC”->”Device Manager”->”Port(COM and LPT)”. As figure:



)



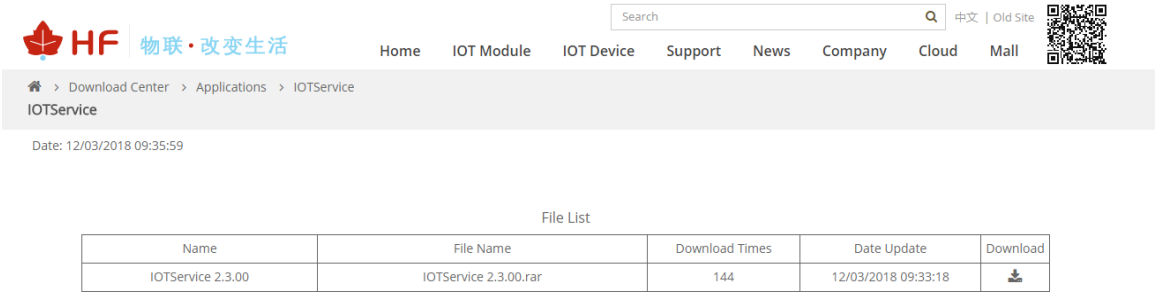
Notes: The default serial data is as above and user can modify device working parameter by IOTService.

3. TEST EXAMPLE

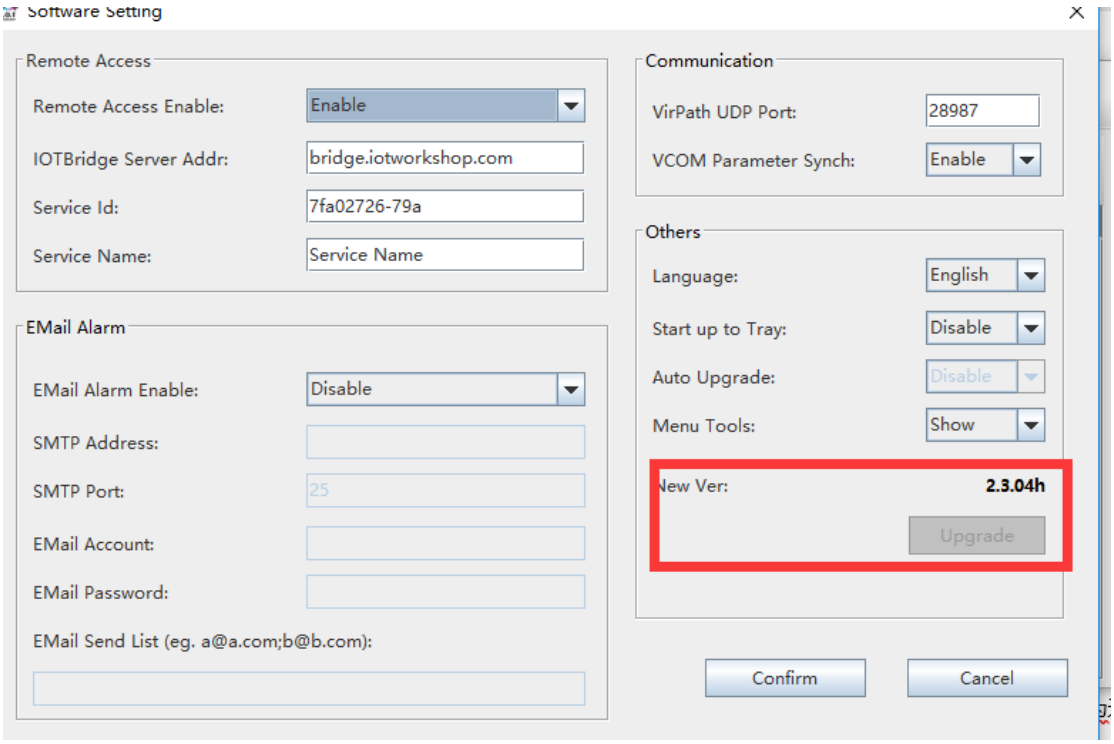
3.1. IOTService Tools

IOTService is used for config the module parameters by UART or remotely. Make module easy to use and check status. The download address is as following.

http: //www.hi-flying.com/download-center-1/applications-1/download-item-iotservice

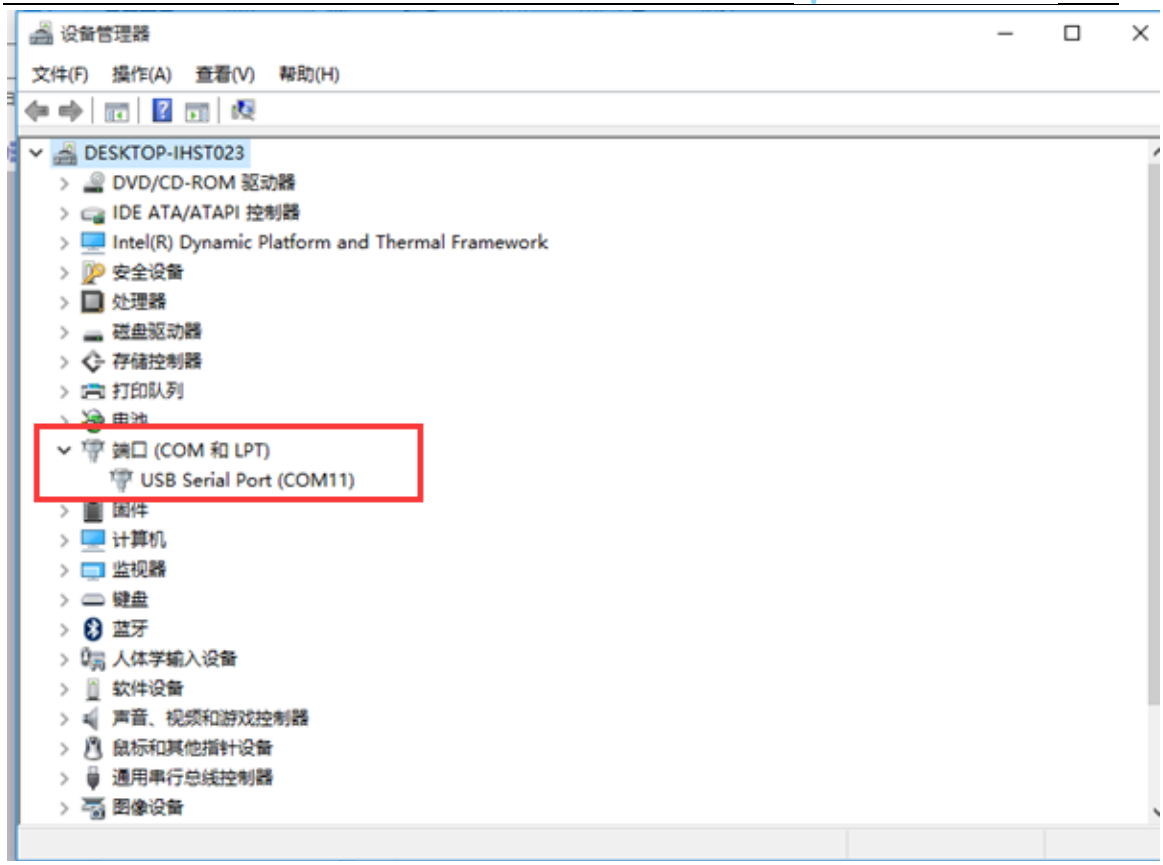


After download, click the following to update to latest version.

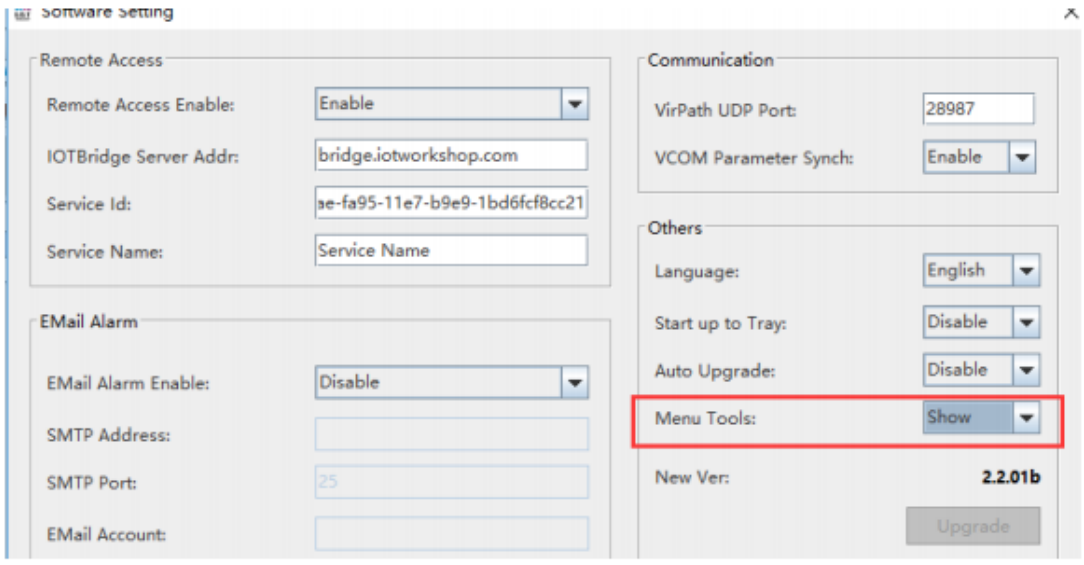


3.2. IOTService Introduction

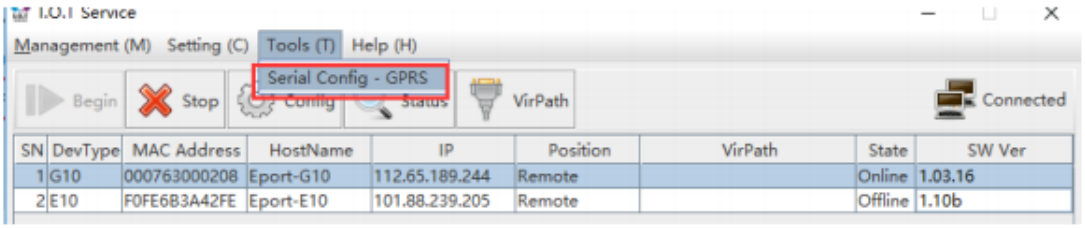
Step1: PC connect to device UART. Note that RS232/RS485/TTL UART is different.

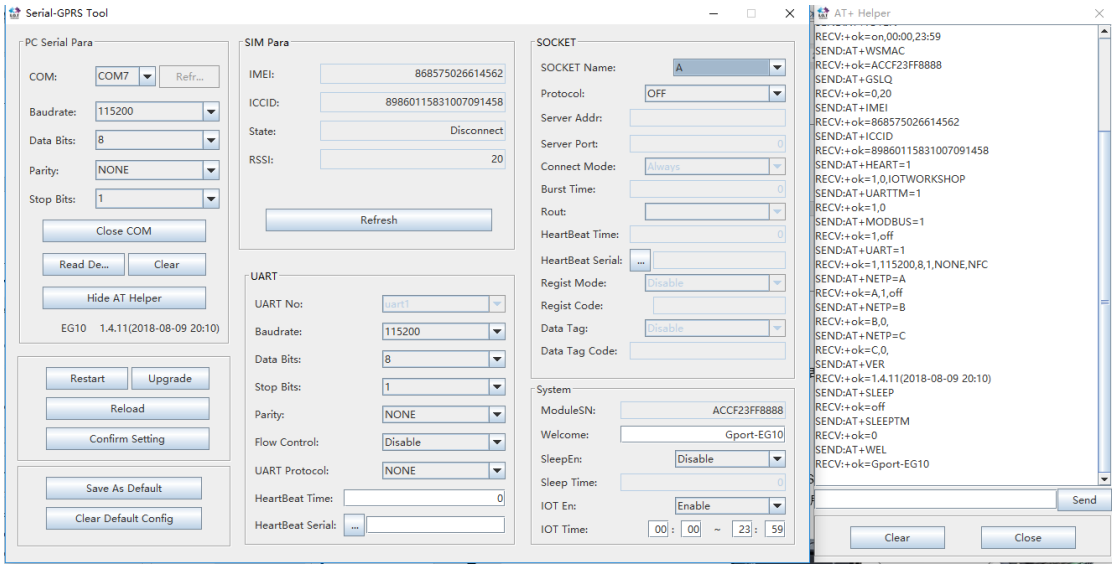


Step 2: Open IOTService, change the following menu as the picture



Step 2: Open IOTService UART tools





Main Menu:

Read Detail: Read product information

Clear: Reset the tools read information, this does not affect the product side.

Show AT Helper: Show AT command procedure

Restart: Reset product

Upgrade: Upgrade product

Reload: Reload product, restore parameters to default.

Confirm Setting: Set parameter

Save As Default: Set current setting parameters as default.

Clear Default Config: Clear saved default parameters

Socket Function:

SOCKET Name: Socket name

Protocol: Protocol, TCP/UDP/HTTP

Server Addr: Server address

Server Port: Server port

Connect Mode: short or long connection.

Burst Time: short conection time.

Rout: UART channel

HeartBeat Time: HeartBeat time

HeartBeat Serial: HeartBeat content, support wildcard character.

Regist Mode: Register Mode

Regist Code: Register Content, support wildcard character.

System Information:

Module SN: Product MAC

Welcome: Bootup information.

~~Sleep En: Reserved~~

~~Sleep Time: Reserved.~~

IOT En: Enable/Disable IOTBridge.

IOT Time: IOTBridge Enable time. Save data flow

UART Information:

Flow Control: hardware flow control.

UART Protoco: UART protocol

HeartBeat Time: UART HeartBeat time

HeartBeat Serial: UART HeartBeat content.

SIM Information:

IMEI: Module IMEI

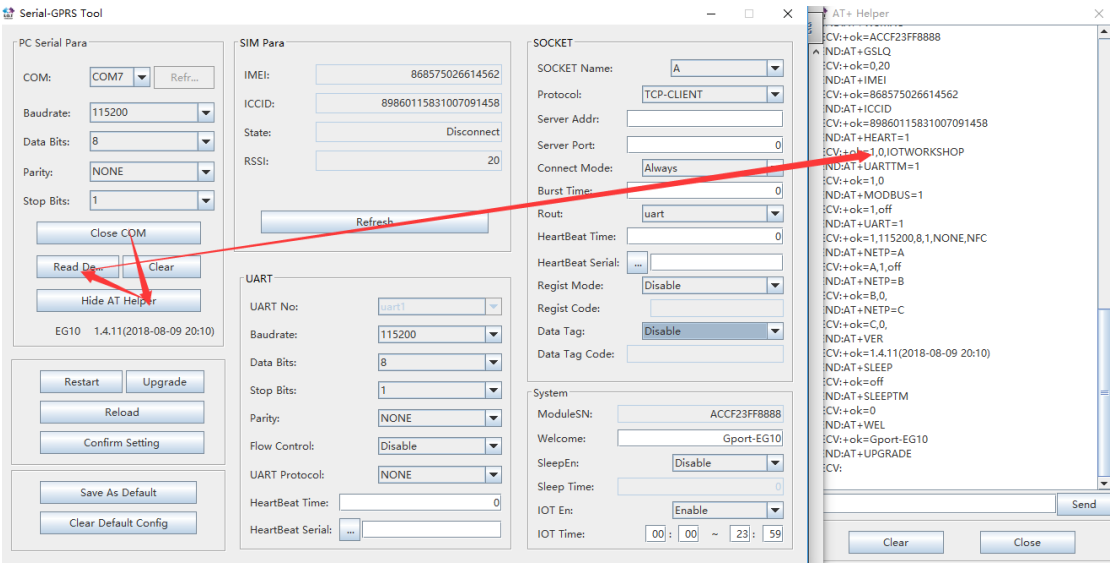
ICCID: Module ICCID

State: GPRS Status

RSSI: GPRS Strength

3.3. Test Case One: IOTService UART Config

Step 1: Open UART and do as following to read product parameters.

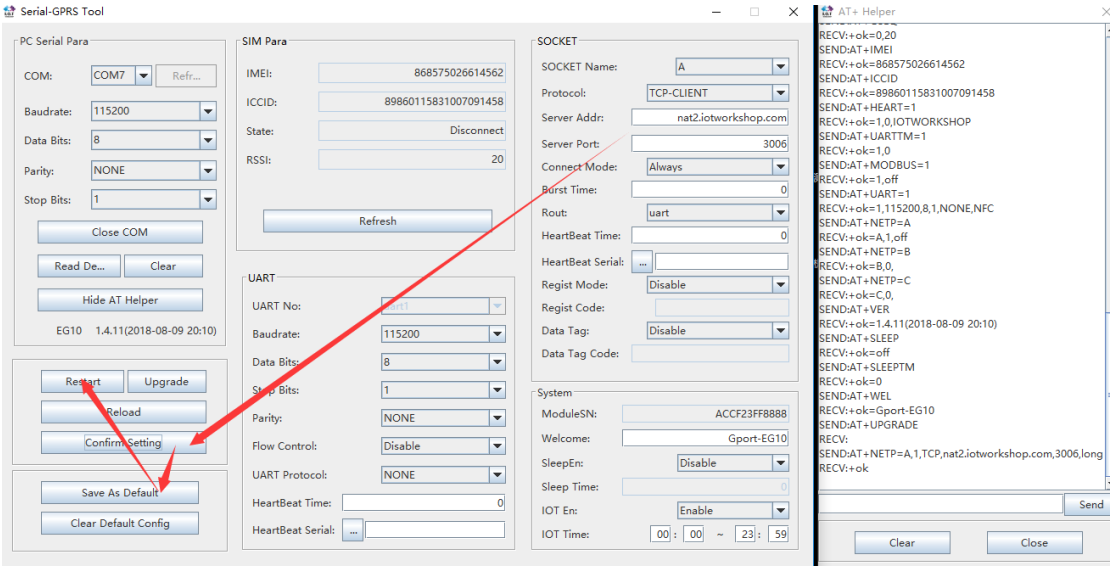


Step 2: The tools show the module parameters. Click 【Confirm Setting】to change parameter. 【Save As Default】 is used to save current setting to default. Once do reload operation, it will restore to this saved default value. The following set Socket A to our test server. (nat2.iotworkshop.com) and reboot

Test Server: nat2.iotworkshop.com

TCP Port: 3006

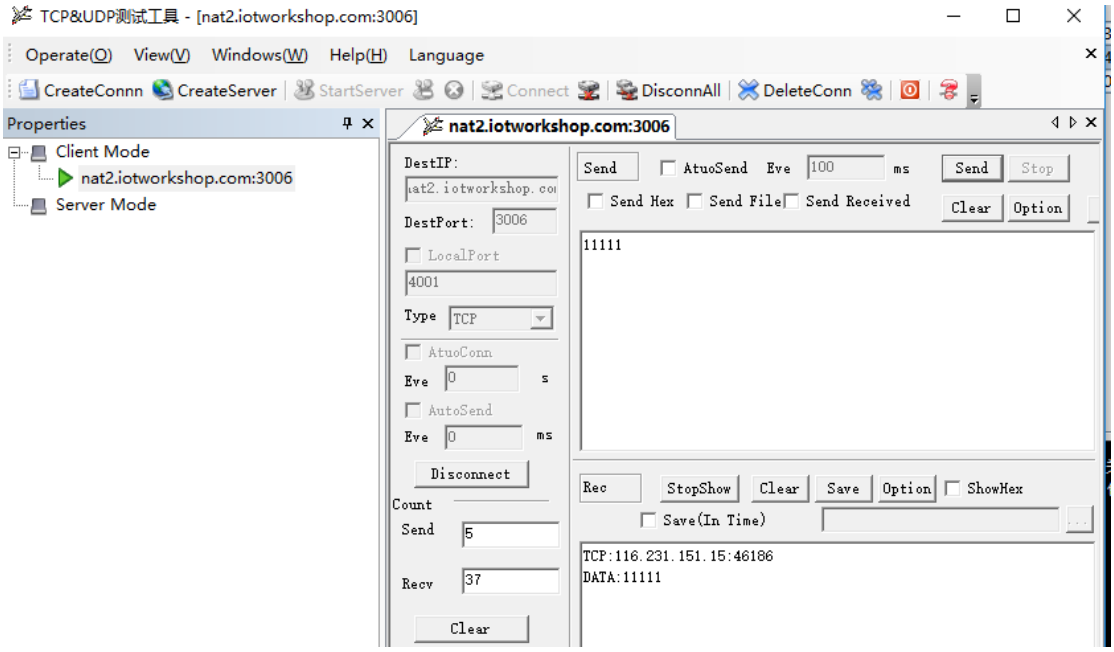
UDP Port: 3008



Note: Default UART is 115200,8,N,1.

Step 3: Wait for network connection OK, then send UART data, the server will response as the following picture. Response with protocol type, port number, and data. The product is in throughput mode by power on, if want to send AT command, need to send “+++” and then “a” to enter command mode, AT+ENTM to change back throughput mod.e.

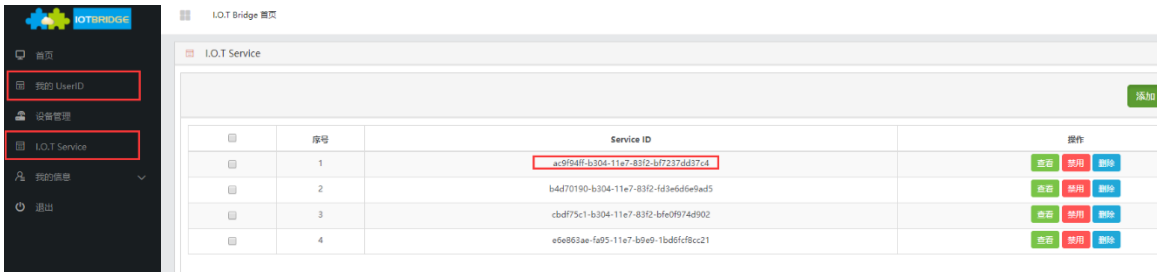
The following use tools to test server data response format.



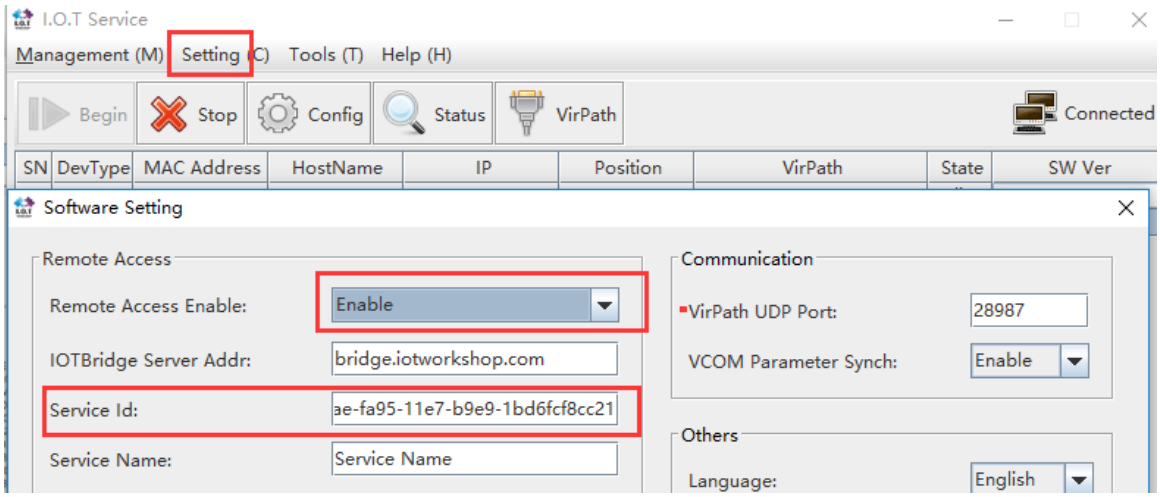
3.4. Test Case Two: IOTService Network Config

Step 1: Login IOTBridge(http: //bridge.iotworkshop.com/) to register account.

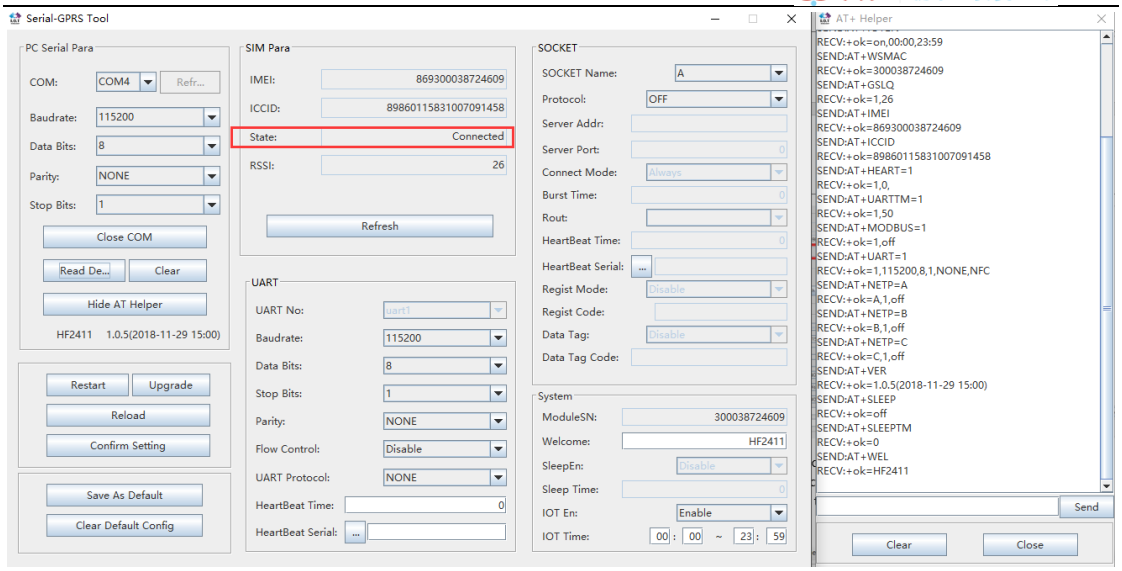
Step 2: Get UserId(device side)and ServiceId(IOTService side)



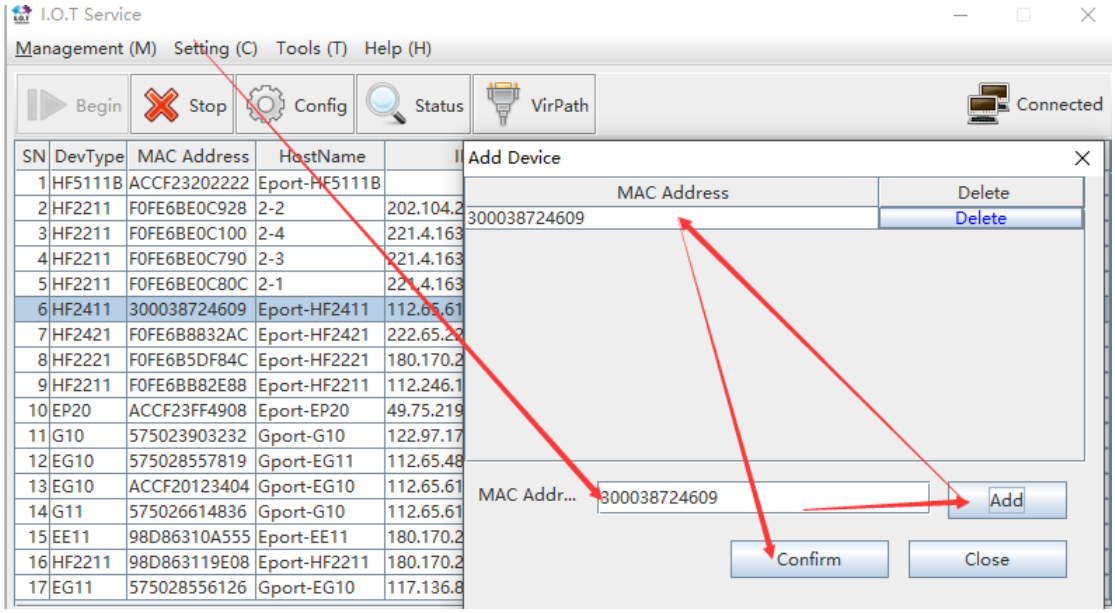
Step 3: Input ServiceId in IOTService.



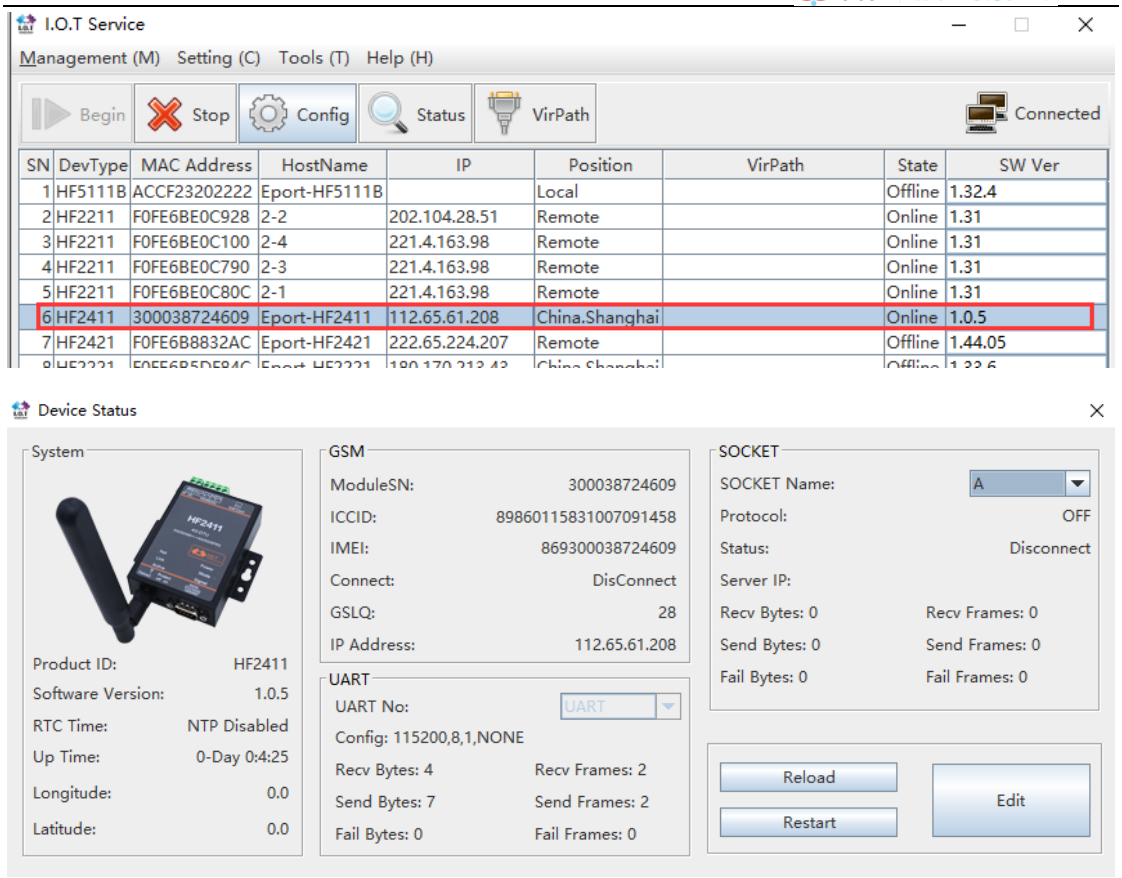
Step 4: Insert SIM card and power on device, wait for device connects to network. The UART tools also shows the network status.



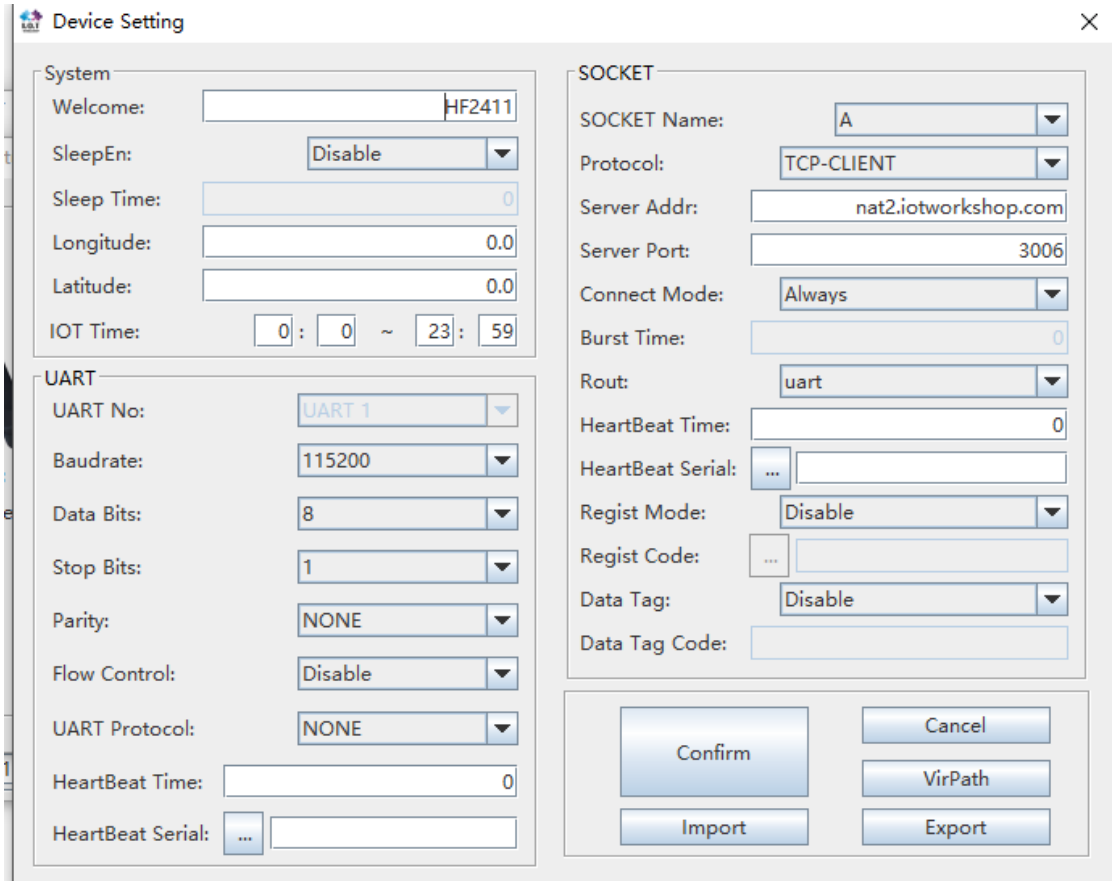
Step 5: Add MAC in the tools to bound account. (AT+WSMAC to get MAC address, usually it is the latter 12 character of the IMEI)，recommend to use AT+IOTUID command to write UserId into the device. Prevent bounded by the other vicious customer.



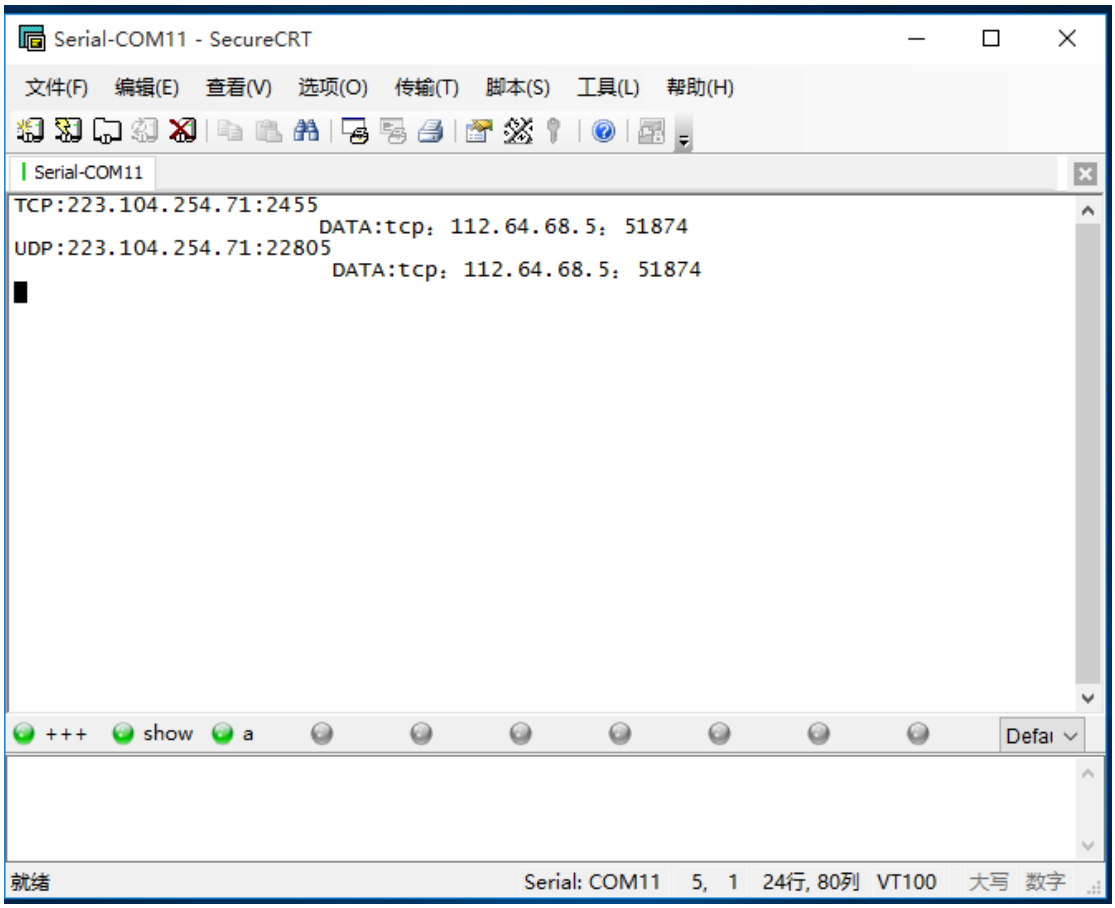
Step 6: Double click device entering the config page.



Step 7: Can modify the parameters.

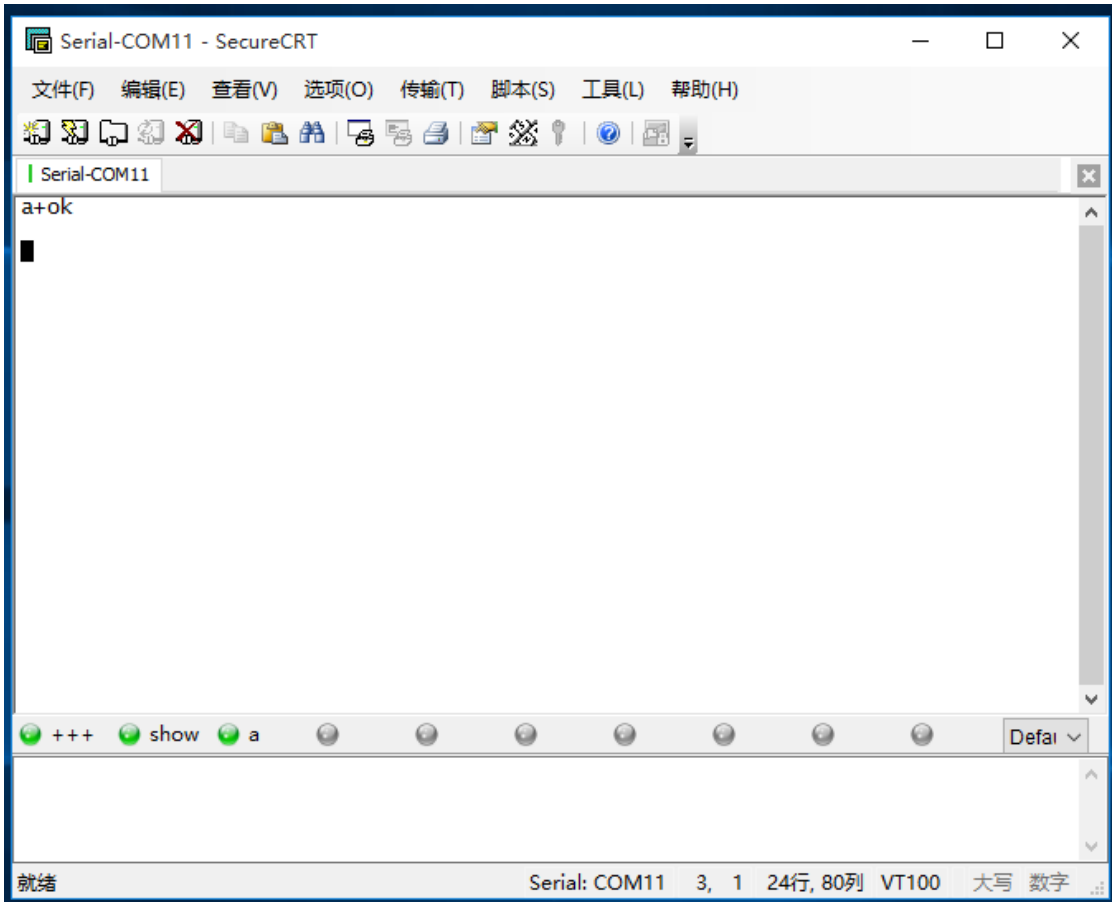


Step 8: Use our test server to check device function.

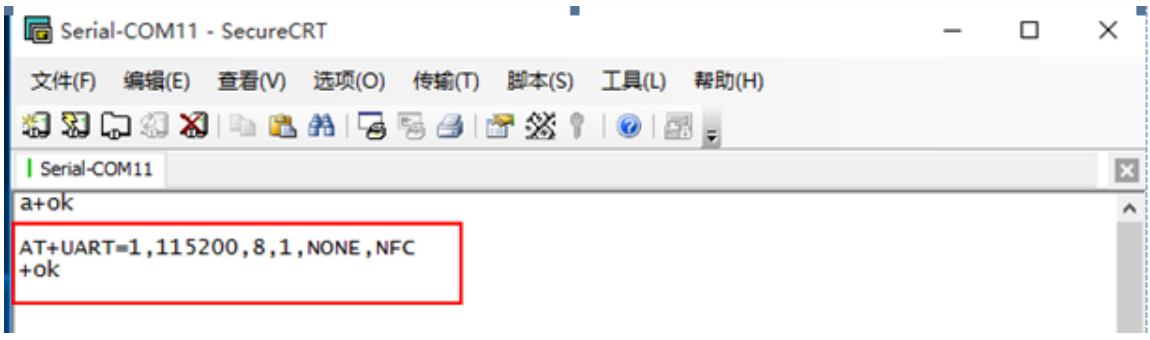


3.5. Test Case Three: Throughput Via SecureCRT

Step 1: Open SecureCRT(Baudrate default:115200)，Input “+++” (device will response with “a”)and then “a” (device will response with “+ok”) to enter AT command mode.



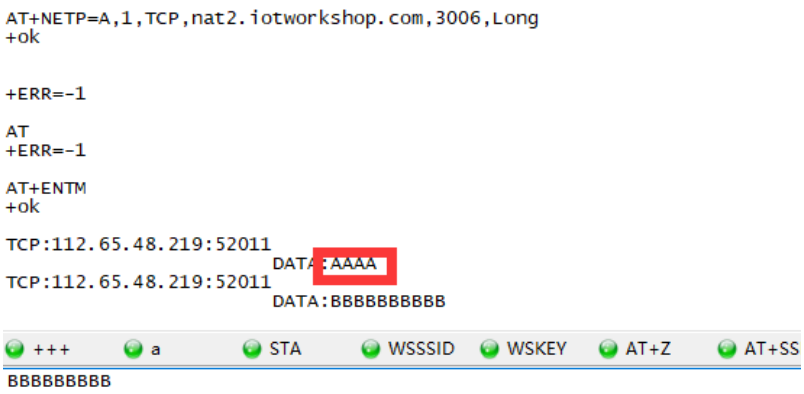
AT+UART to query or change setting.



Step 2: Input “AT+NETP=A,1,TCP,nat2.iotworkshop.com,3006,Long” to set socket A, and “AT+Z” to reboot.

```
AT+NETP=A,1,TCP,nat2.iotworkshop.com,3006,Long
+ok
```

Step 3: Wait for network connecting OK. Then send UART data to device, the test server will response with data in defined format(Protocol type, port number and data as following picture).



3.6. Test Case Four: Heartbeat and Resister Packet

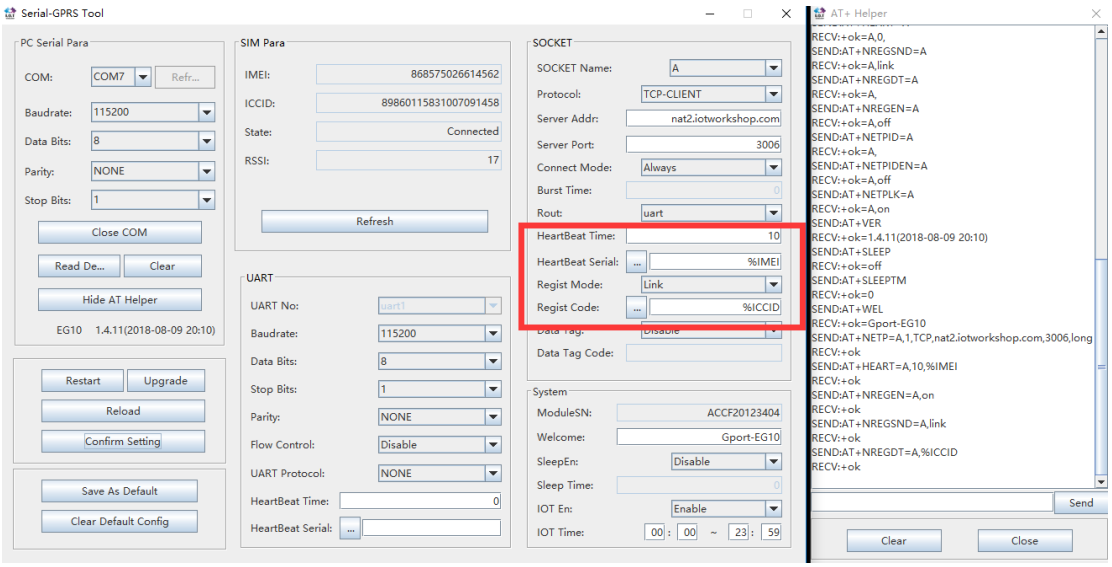
Step 1: Set the parameter as following..

AT+HEART=A,10,%IMEI //Enable heartbeat for 10 seconds upload its IMEI.

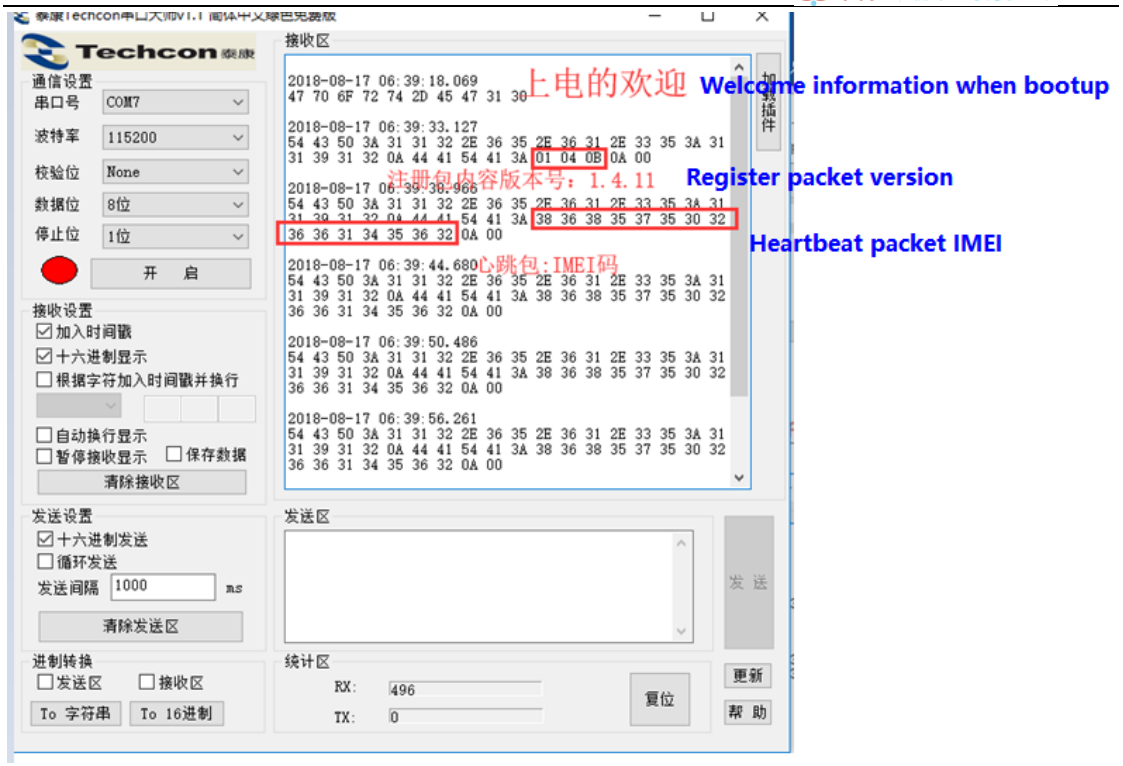
AT+NREGEN=A,on //Enable Register Packet

AT+NREGSND=A,link //Send Register packet when connection established.

AT+NREGDT=A,%VER //Register content is software version



Step 2: 按上图设置之后重启，数据连接到测试服务器之后按如下的输出显示服务器的回包.



Other example:

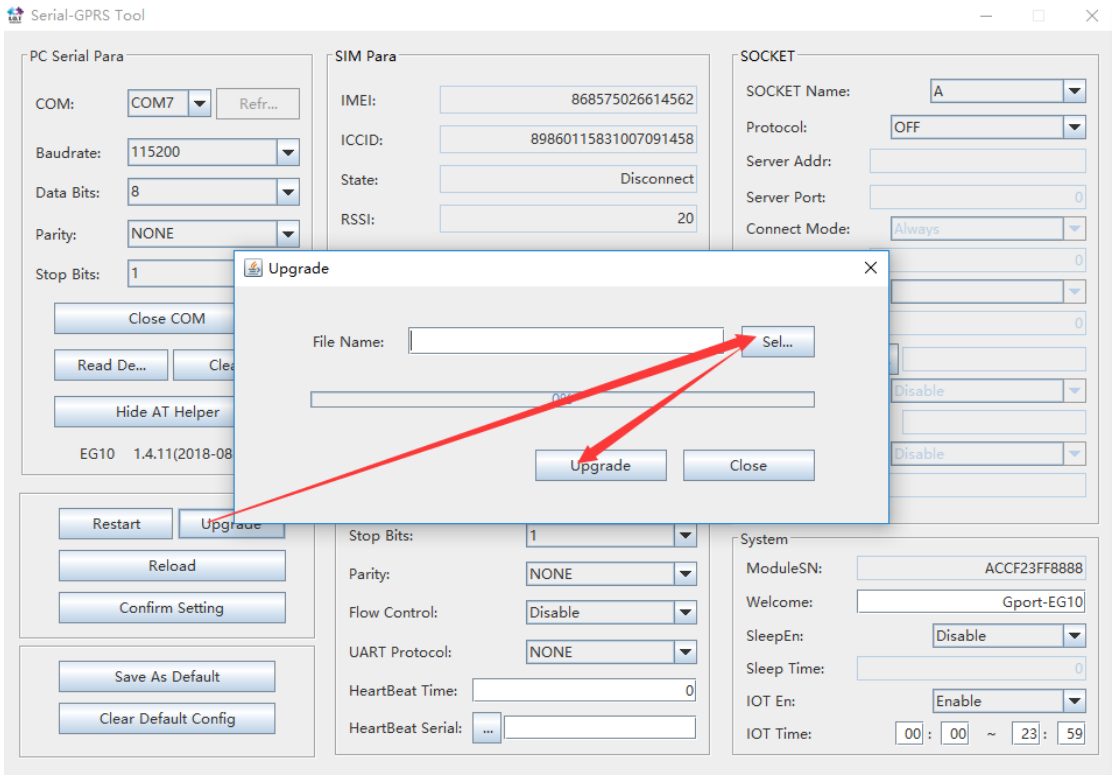
Register Code Requirement: FFFFFFFFFA+IMEI+0F

Setting Parameter: %FF%FF%FF%FF%FA%IMEI%0F

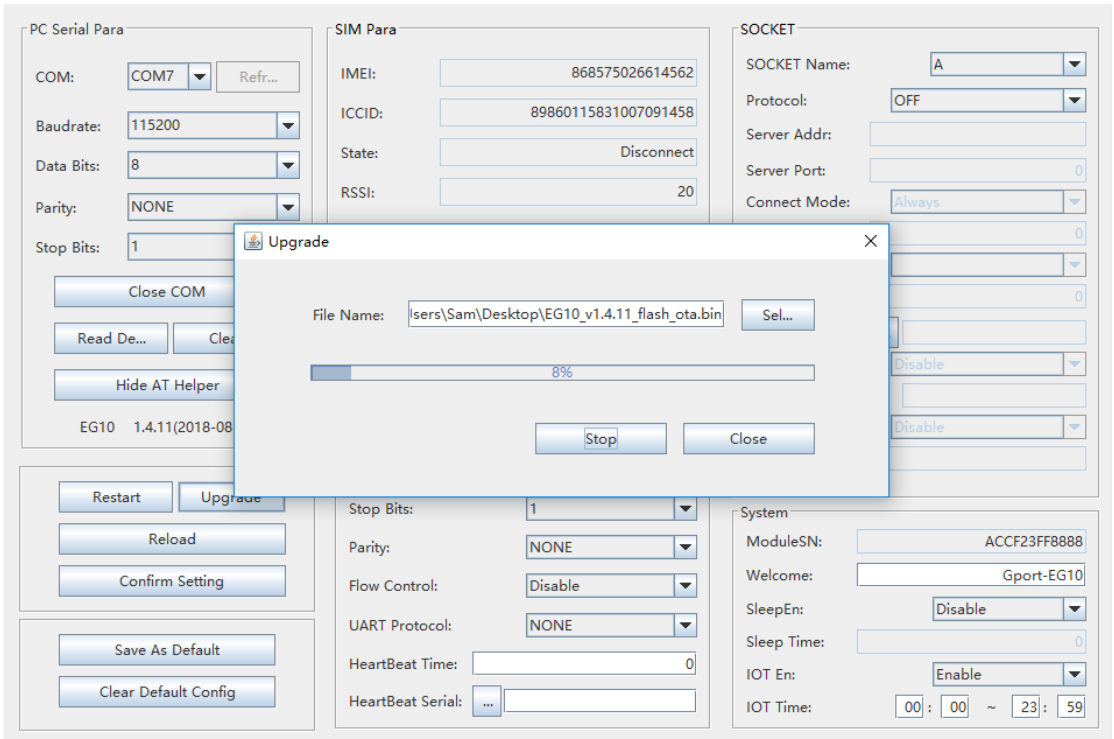
Upload real data: FF FF FF FF FA 38 36 38 35 37 35 30 32 36 36 31 34 35 36 32 0F

3.7. UART Upgrade

Load the firmware.



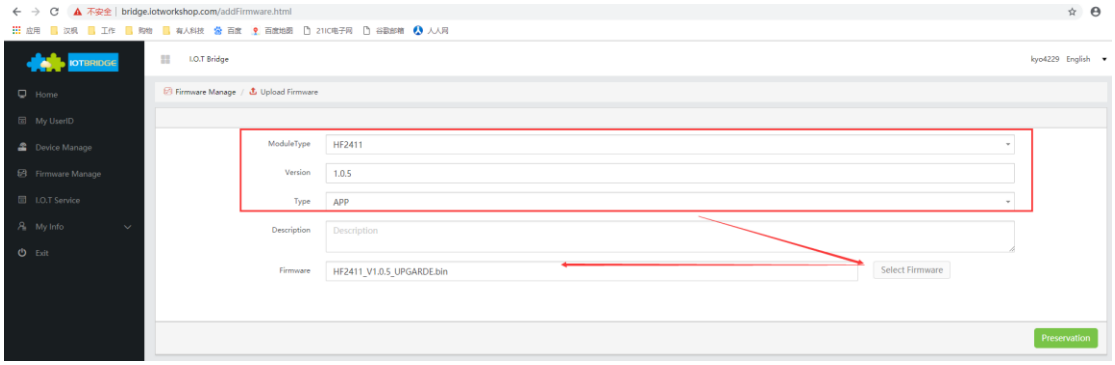
Do reboot after upgrade success.



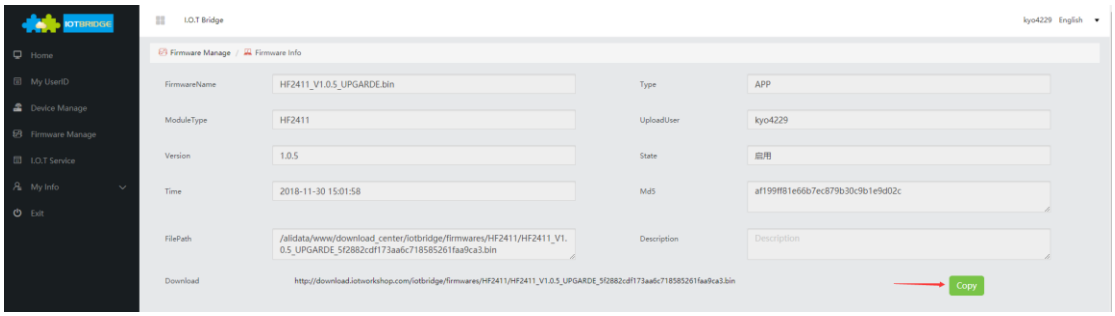
3.8. Remote Upgrade

Step 1: Remote upgrade is using our IOTBridge cloud, download firmware from our IOTBridge. Bound device to account as the previous steps.

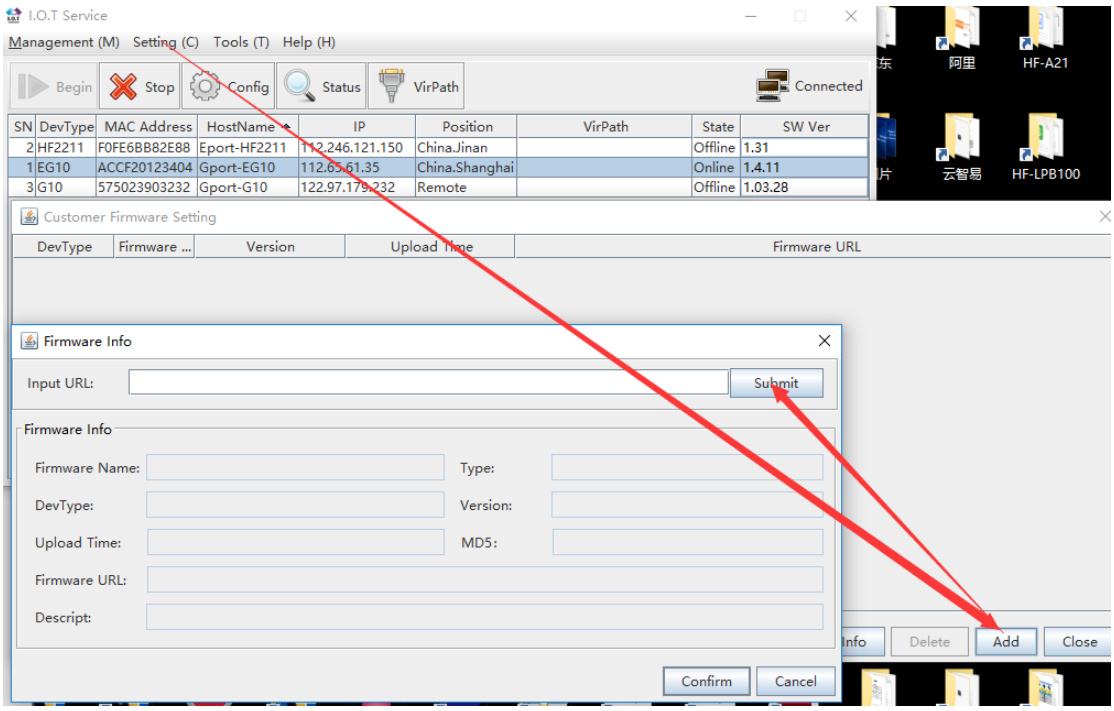
Step 2: Login http: //bridge.iotworkshop.com/, upload firmware in IOTBridge.

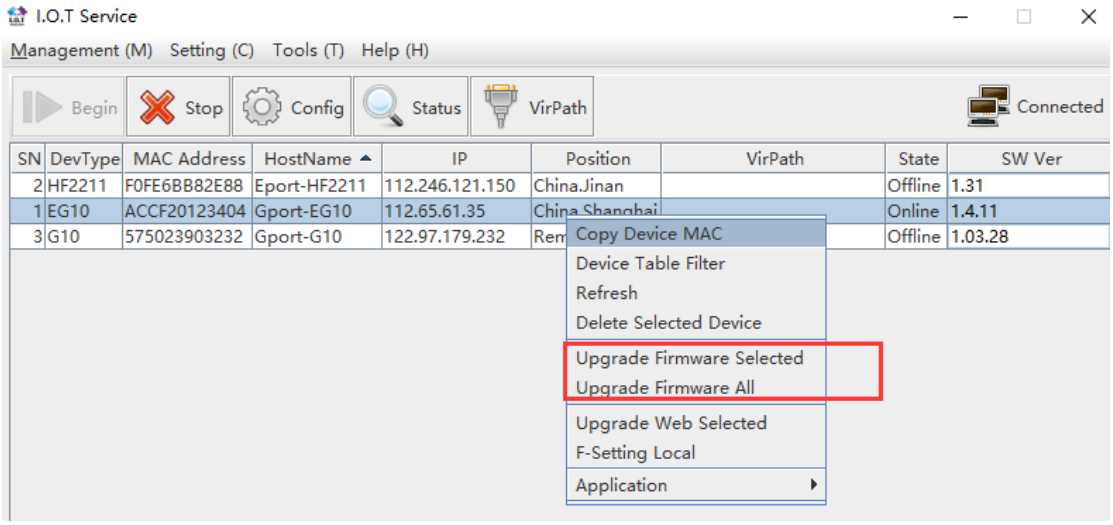


Step 3: Copy the download link as following.



Step 4: Copy the download link into the IOTService tools. And do upgrade operation.


I.O.T Service
Management (M) Setting (C) Tools (T) Help (H)
Begin
Stop
Config
Status
VirPath
Connected
SN DevType MAC Address HostName IP Position VirPath State SW Ver
2 HF2211 F0FE6BB82E88 Eport-HF2211 112.246.121.150 China.Jinan Offline 1.31
1 EG10 ACCF20123404 Gport-EG10 112.65.61.35 China.Shanghai Online 1.4.11
3 G10 575023903232 Gport-G10 122.97.179.232 Remote Offline 1.03.28
Customer Firmware Setting
DevType Firmware ... Version Upload Time Firmware URL
Firmware Info
Input URL:
Submit
Firmware Info
Firmware Name:
Type:
DevType:
Version:
Upload Time:
MD5:
Firmware URL:
Descript:
Confirm
Cancel
Info
Delete
Add
Close
阿里
HF-A21
云智易
HF-LPB100


I.O.T Service
Management (M) Setting (C) Tools (T) Help (H)
Begin
Stop
Config
Status
VirPath
Connected
SN DevType MAC Address HostName IP Position VirPath State SW Ver
2 HF2211 F0FE6BB82E88 Eport-HF2211 112.246.121.150 China.Jinan Offline 1.31
1 EG10 ACCF20123404 Gport-EG10 112.65.61.35 Online 1.4.11
3 G10 575023903232 Gport-G10 122.97.179.232 Offline 1.03.28
Copy Device MAC
Device Table Filter
Refresh
Delete Selected Device
Upgrade Firmware Selected
Upgrade Firmware All
Upgrade Web Selected
F-Setting Local
Application

APPENDIX A: REFERENCES

A.1. Test Tools

IOTService Configure Software:
http: //www.hi-flying.com/index.php?route=download/category&path=1_4