


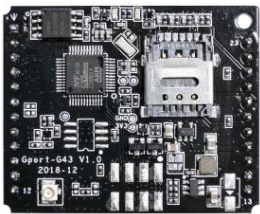







4G_2G_NB DTU Products

Operation Guide

This document is applicable for the following product, see corresponding product user manual for hardware description.

4G Products		Protoss-PG41
		Elfin-EG40 Elfin-EG41
		HF2411
		Gport-G43

2G Products		Protoss-PG11
		Elfin-EG10, Elfin-EG11
		HF2111A
		Gport-G10、 Gport-G11、 Gport-G12
		HF2611
NB-IoT		

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1. 4G PRODUCT

The PG41/HF2411/G43/EG41 support LTE-TDD, LTE-FDD, WCDMA, TD-SCDMA, GPRS full network. 4G network support maximum download data rate 150Mbps, upload data rate 50Mbps.

The PG41/HF2411/G43/EG41 support TCP/IP protocol, with its UART interface, it make traditional UART device easy connecting to IOT.

HF2611 support NB-IoT Band3/Band5/Band8.

1.1. Protoss-PG41



1.2. HF2411&HF2611

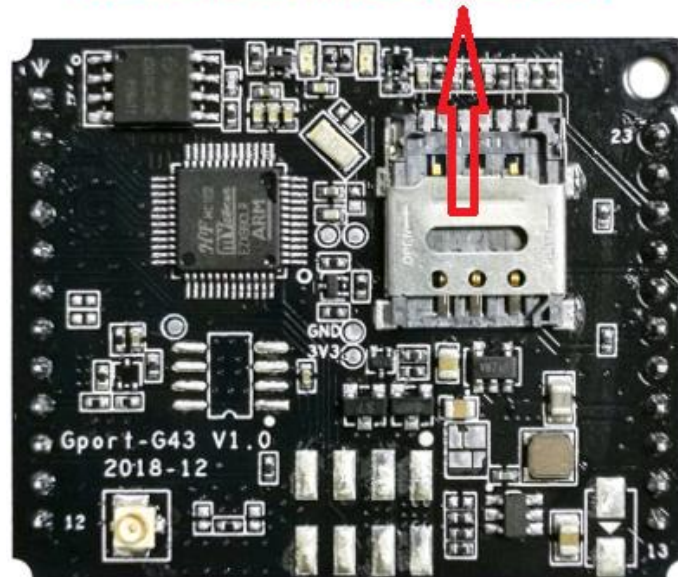


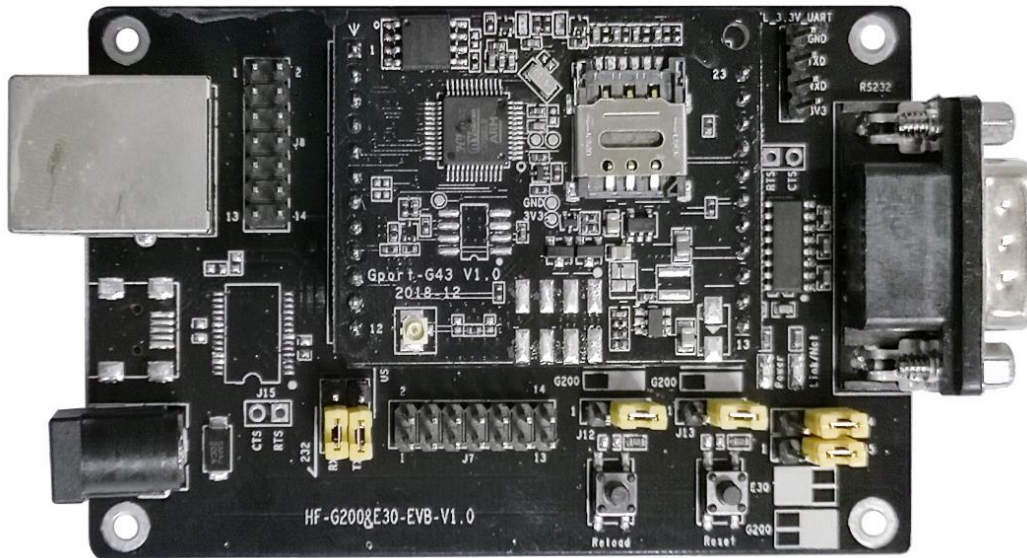
1.3. Gport-G43 EVK

Insert SIM card and use 9~12VDC adapter to power supply the EVK.

向上方向推打开卡座

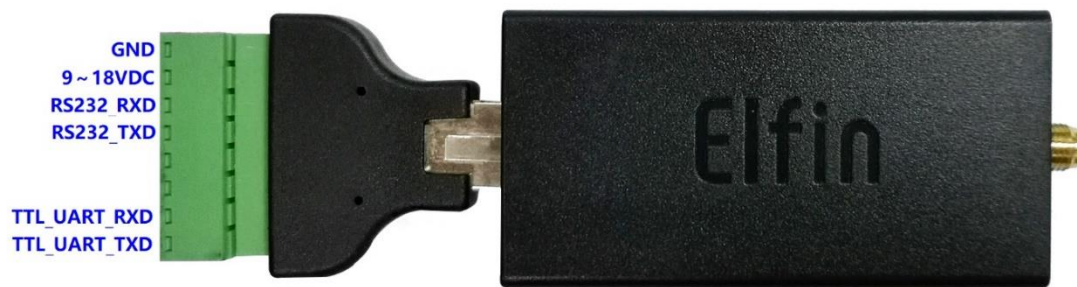
Push in this direction to open the slot





1.4. Elfin-EG40

8PIN Header

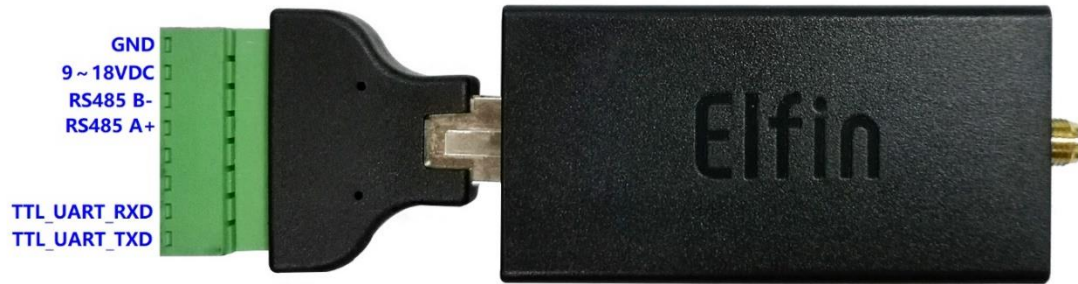


4PIN Header



1.5. Elfin-EG41

8PIN Header



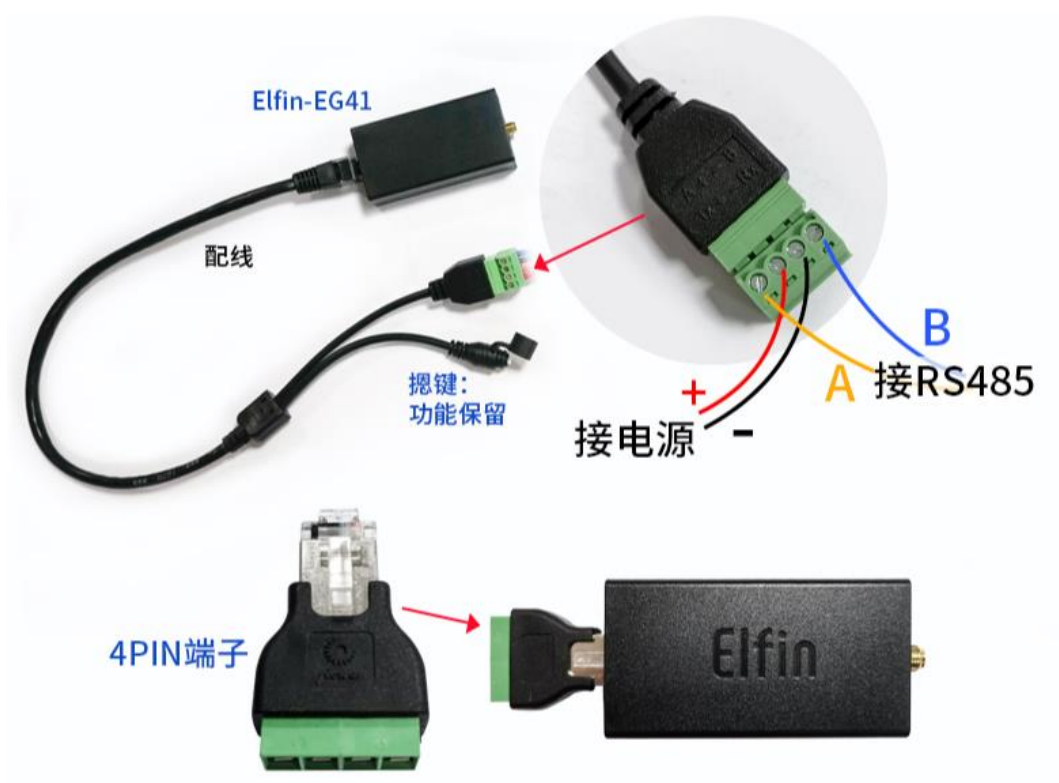
4PIN Header



1.6. EG40 Cable



1.7. EG41 Cable



2. 2G PRODUCT

The PG11, EG1X, HF2111A, G10, G11, G12 support GPRS 2G network.

The PG11, EG1X, HF2111A use G11 for its core module.

2.1. Protoss-PG11



2.2. Elfin-EG10 4PIN Connector



2.3. Elfin-EG11 4PIN Connector



2.4. Elfin-EG10 8PIN Connector



2.5. Elfin-EG11 8PIN Connector



2.6. EG10 Interface Conversion Cable



Figure 1. Interface Conversion Cable

2.7. EG11 Interface Conversion Cable




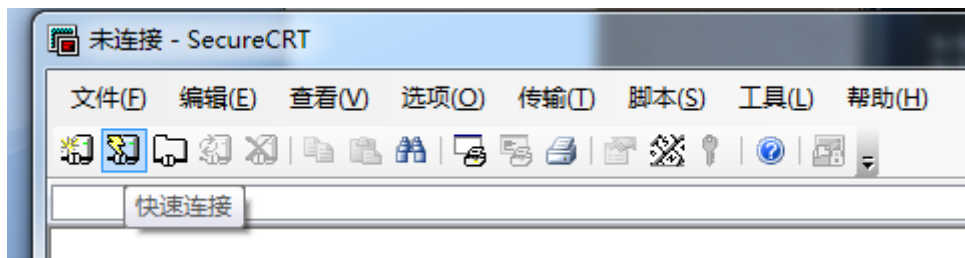
Figure 2. Interface Conversion Cable

3. SERIAL SETTING

3.1. Serial Tool SecureCRT

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

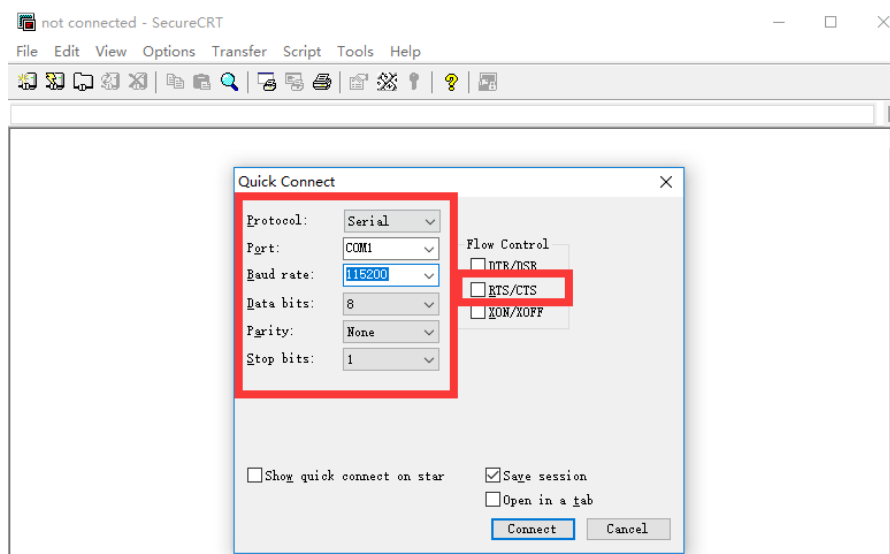
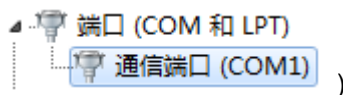
Decompress file and find executable program, then open. Click quick start button  to create connection.



3.2. 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.

4. TEST EXAMPLE

4.1. 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-iot-service>

The screenshot shows the HF website's download center for IOTService. It includes a search bar, navigation links (Home, IOT Module, IOT Device, Support, News, Company, Cloud, Mall), and a QR code. The breadcrumb trail is: Home > Download Center > Applications > IOTService. The page title is 'IOTService' with a date of '12/03/2018 09:35:59'. A 'File List' table is displayed below.

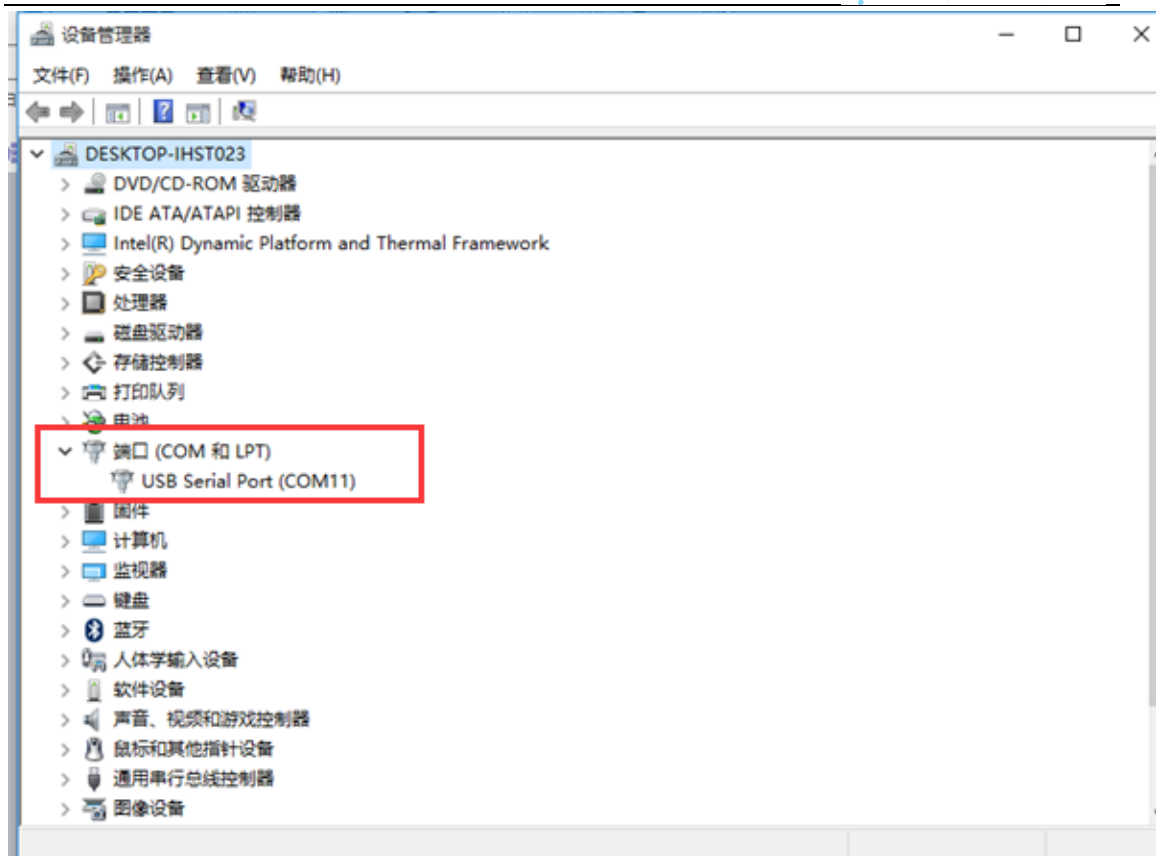
Name	File Name	Download Times	Date Update	Download
IOTService 2.3.00	IOTService 2.3.00.rar	144	12/03/2018 09:33:18	

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

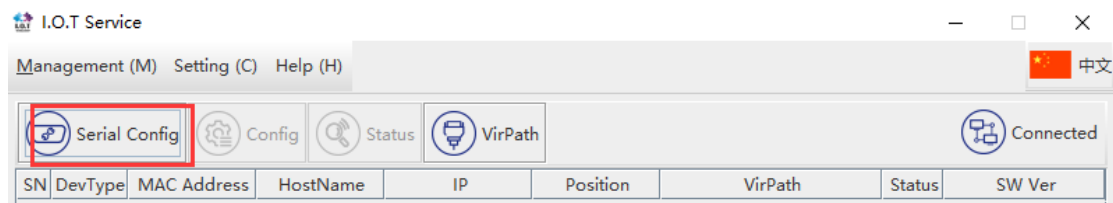
The screenshot shows the 'Software Setting' window for IOTService. It has several tabs: Remote Access, Communication, Others, and Email Alarm. The 'Remote Access' tab is active, showing fields for Remote Access Enable (set to 'Enable'), IOTBridge Server Addr (bridge.iotworkshop.com), Service Id (7fa02726-79a), and Service Name (Service Name). The 'Communication' tab shows VirPath UDP Port (28987) and VCOM Parameter Synch (set to 'Enable'). The 'Others' tab shows Language (English), Start up to Tray (Disable), Auto Upgrade (Disable), and Menu Tools (Show). The 'Email Alarm' tab shows Email Alarm Enable (Disable), SMTP Address, SMTP Port (25), Email Account, Email Password, and Email Send List. A red box highlights the 'New Ver:' field showing '2.3.04h' and an 'Upgrade' button. At the bottom are 'Confirm' and 'Cancel' buttons.

4.2. IOTService Introduction

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



Step 2: Open IOTService UART tools



I.O.T Service Serial

Close COM Auto GetIn CMD Quit CMD Reload Restart Upgrade Read Device Write Device Batch Set

PC Serial Para
COM: COM4 Baudrate: 115200 Data Bits: 8 Parity: NONE Stop Bits: 1

DUT Para
UART Para
UART No: Baudrate: 115200 Data Bits: 8 Parity: NONE Stop Bits: 1
Flow Control: Disable UART Protocol: NONE
HeartBeat Time: 0 HeartBeat Serial: ...

SOCKET
SOCKET Name: A Protocol: OFF Rout: ...
Server Addr: Server Port: 0
Connect Mode: Always Burst Time: 300
HeartBeat Time: 0 HeartBeat Serial: ...
Regist Mode: Disable Regist Code: ...
Data Tag: Disable Data Tag Code: ...

SIM Para
IMEI: 866262040283870 ICCID: ...
Status: Disconnect RSSI: 0 4G_V1.639 Refresh

Others
ModuleSN: 262040283870 Welcome: EG41 HostName: Eport-EG41
APN: APN User: APN Passw...
EG41 1.1.10c(2019-06-06 16:30) Detail

SEND:+++
SEND:AT+PID
RECV:+ok=EG41
SEND:AT+APN
RECV:+ok=,
SEND:AT+WSMAC
RECV:+ok=262040283870
SEND:AT+GVER
RECV:+ok=4G_V1.639
SEND:AT+GSLQ
RECV:+ok=0,0
SEND:AT+IMEI
RECV:+ok=866262040283870
SEND:AT+ICCID
RECV:
SEND:AT+HEART=1
RECV:+ok=1,0
SEND:AT+UARTTM=1
RECV:+ok=1,50
SEND:AT+MODBUS=1
RECV:+ok=1,off
SEND:AT+UART=1
RECV:+ok=1,115200,8,1,NONE,NFC
SEND:AT+NETP=A
RECV:+ok=A,1,off
SEND:AT+NETP=B
RECV:+ok=B,1,off
SEND:AT+NETP=C
RECV:+ok=C,1,off
SEND:AT+VER
RECV:+ok=1.1.10c(2019-06-06 16:30)
SEND:AT+HOST
RECV:+ok=Eport-EG41
SEND:AT+WEL
RECV:+ok=EG41

Clear Send

Main Menu:

Auto: Auto detect device UART parameters.

GetIn CMD: Enter AT command mode.

Quit CMD: Quit AT command mode.

Reload: Reload product, restore parameters to default.

Restart: Reset product

Upgrade: Upgrade product.

Read Device: Read product parameters.

Write Device: Write modified product parameters

Batch Set: For massproduction parameters setting.

UART Information:

UART No: UART number, for multiple UART product.

UART Protoco: UART protocol, Modbus TCP to RTU function.

HeartBeat Time: UART HeartBeat time

HeartBeat Serial: UART HeartBeat content.

Socket Function:

SOCKET Name: Socket name, choose A/B/C.

Protocol: Protocol, TCP/UDP/HTTP

Connect Mode: short or long connection.

Burst Time: When in long connection ,it is AT+TCPTO reconnection time. When for short conection, it is connection keep 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.

Data Tag: Used for multiple data socket distinguishing.

SIM Information:

IMEI: Product IMEI

ICCID: Product ICCID

State: Product GPRS Status

RSSI: Product GPRS signal strength

Others:

Module SN: Product MAC

Welcome: Bootup information.

HostName: Product name shown in IOTBridge.

Detail:

SMS: Short message function.

IOT En: Enable/Disable IOTBridge.

IOT Time: IOTBridge Enable time. Save data flow

I.O.T Service Serial

Close COM Auto GetIn CMD Quit CMD Reload Restart Upgrade Read Device Write Device Batch Set

PC Serial Para
COM: COM4 Baudrate: 115200 Data Bits: 8 Parity: NONE Stop Bits: 1

DUT Para

UART Para
UART No: uar... Baudrate: 115200 Data Bits: 8 Parity: NONE Stop Bits: 1
Flow Control: Disable UART
HeartBeat Time: 0 Heart

SOCKET
SOCKET Name: A Proto
Server Addr:
Connect Mode: Always Burst
HeartBeat Time: 0 Heart
Regist Mode: Disable Regist
Data Tag: Disable Data

SIM Para
IMEI: 866262040283870 ICCID:
Status: Disconnect RSSI: 0 4G_V1.639 Refresh

Others
ModuleSN: 262040283870 Welcome: EG41 HostName: Eport-EG41
APN: APN User: APN Passw...
EG41 1.1.10c(2019-06-06 16:30) Detail

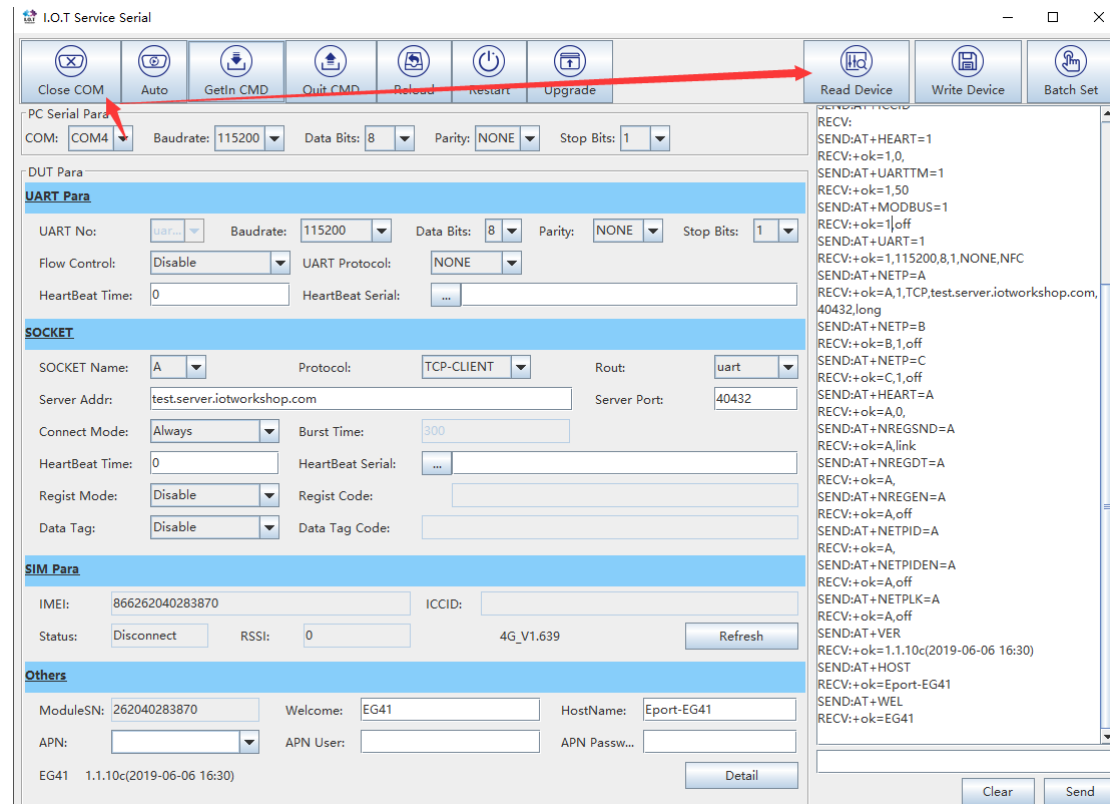
Detail
Network
SMS ID: #SMS#
SMS Phone:
SMS Status: 1
IOT En: Enable
IOT Time: 00:00 ~ 23:59
His Para Confirm Cancel

SEND:AT+APN
RECV:+ok=,
SEND:AT+WSMAC
RECV:+ok=262040283870
SEND:AT+GVER
RECV:+ok=4G_V1.639
SEND:AT+GSLQ
RECV:+ok=0,0
SEND:AT+IMEI
RECV:+ok=866262040283870
SEND:AT+ICCID
RECV:
SEND:AT+HEART=1
RECV:+ok=1,0
SEND:AT+UARTTM=1
RECV:+ok=1,50
SEND:AT+MODBUS=1
RECV:+ok=1,off
SEND:AT+UART=1
RECV:+ok=1,115200,8,1,NONE,NFC
SEND:AT+NETP=A
RECV:+ok=A,1,off
SEND:AT+NETP=B
RECV:+ok=B,1,off
SEND:AT+NETP=C
RECV:+ok=C,1,off
SEND:AT+VER
RECV:+ok=1.1.10c(2019-06-06 16:30)
SEND:AT+HOST
RECV:+ok=Eport-EG41
SEND:AT+WEL
RECV:+ok=EG41
SEND:AT+SMSID
RECV:+ok=#SMS#,1
SEND:AT+IOTEN
RECV:+ok=on,00:00,23:59

Clear Send

4.3. Test Case One: IOTService UART Config

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

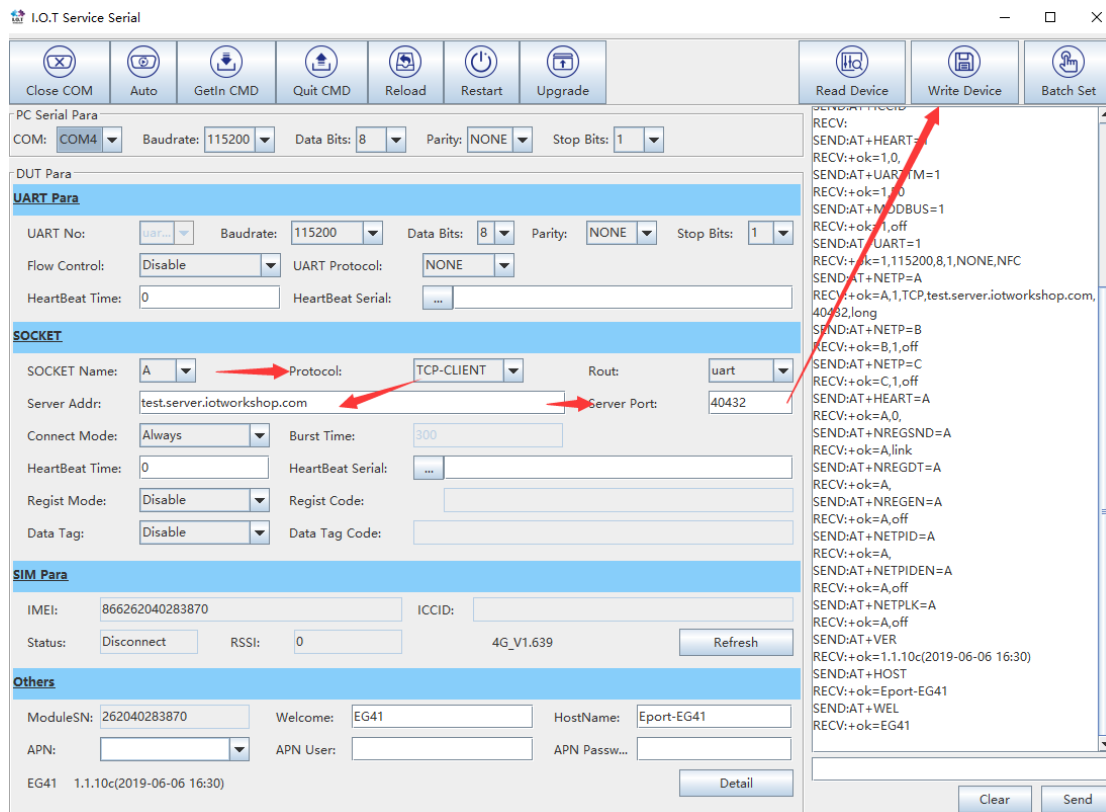


Step 2: The tools show the module parameters. Click **【Write Device】** to change parameter. The following set Socket A to our test server. and reboot

Test Server: test.server.iotworkshop.com

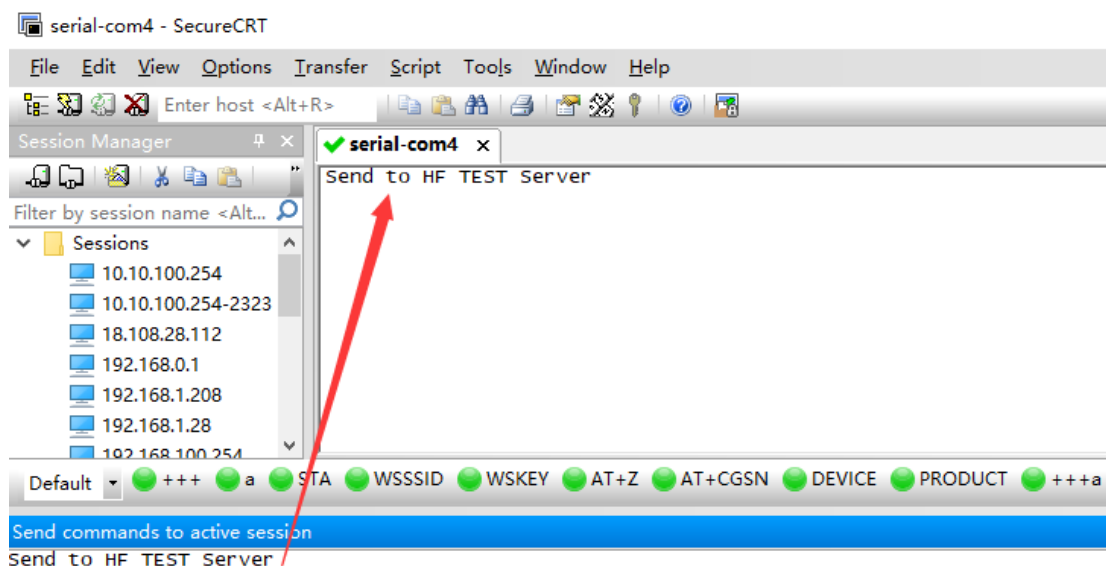
TCP Port: 40432

UDP Port: 40431



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

Step 3: Wait for network connection OK, then send UART data, the server will response the received 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 mode.

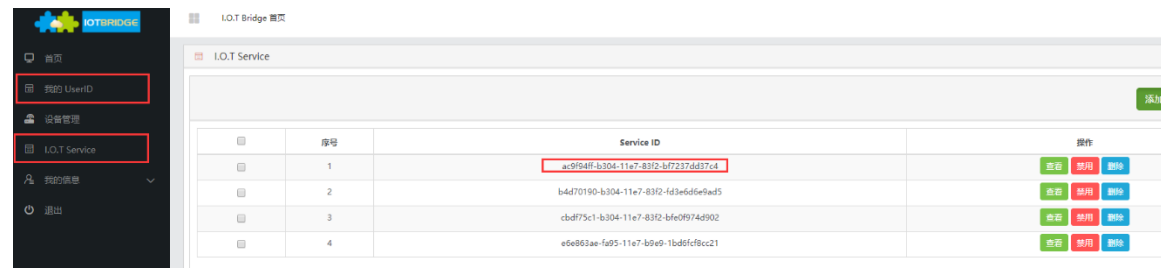


4.4. Test Case Two: IOTService Network Config

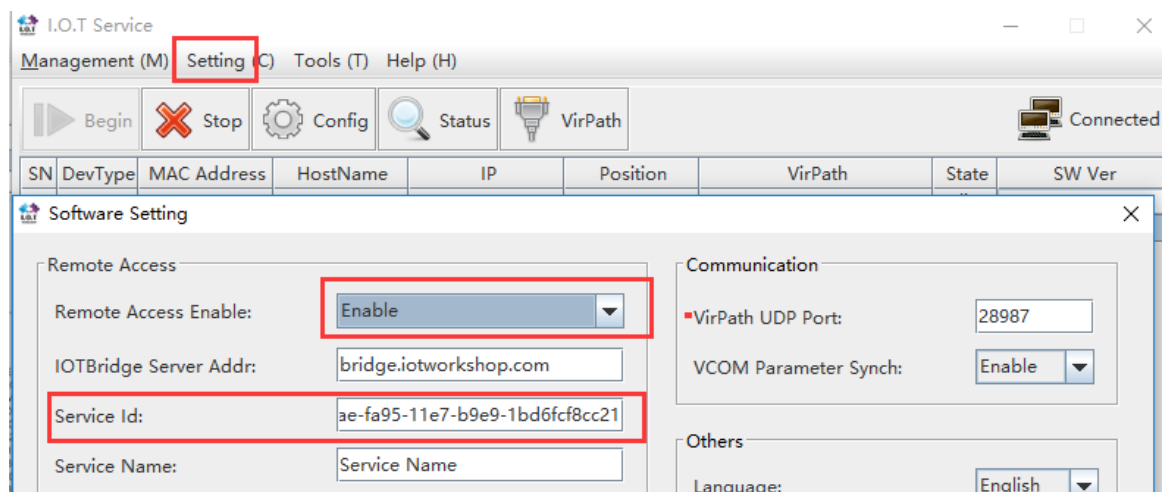
Step 1: Login IOTBridge(<http://bridge.iotworkshop.com/>) to register account.



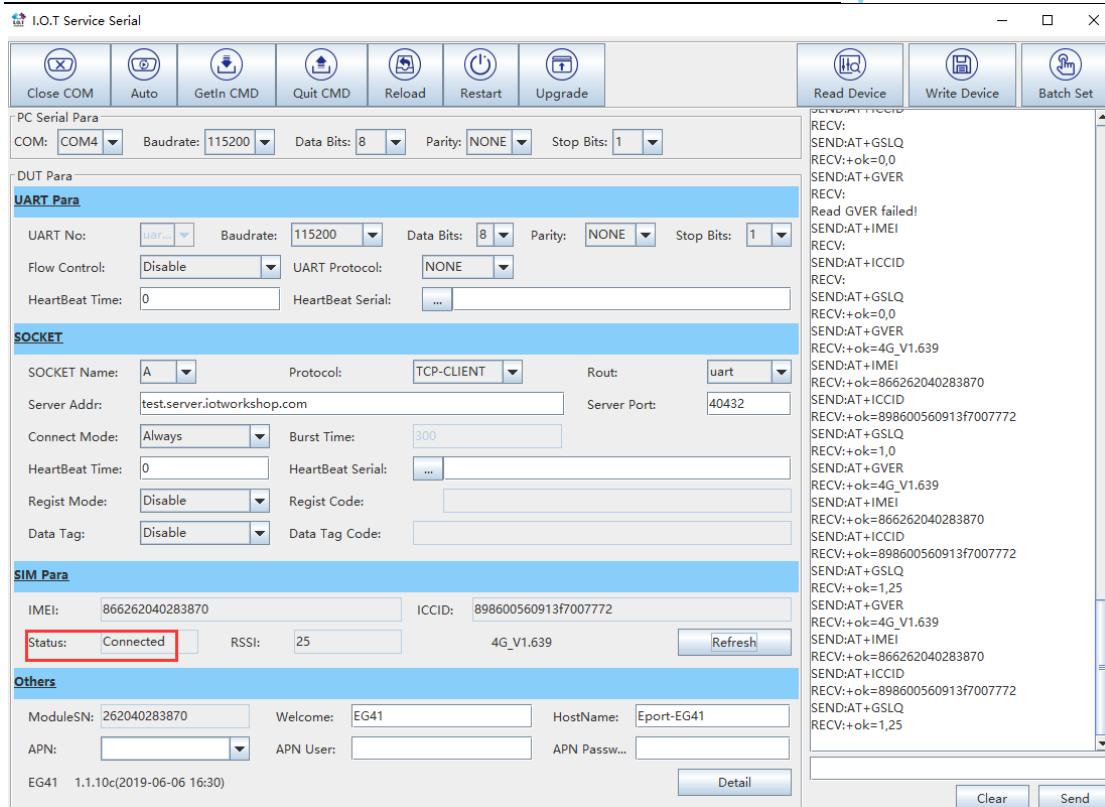
Step 2: Get UserId(device side)and ServiceId(IOTService side)



Step 3: Input ServiceId in IOTService.

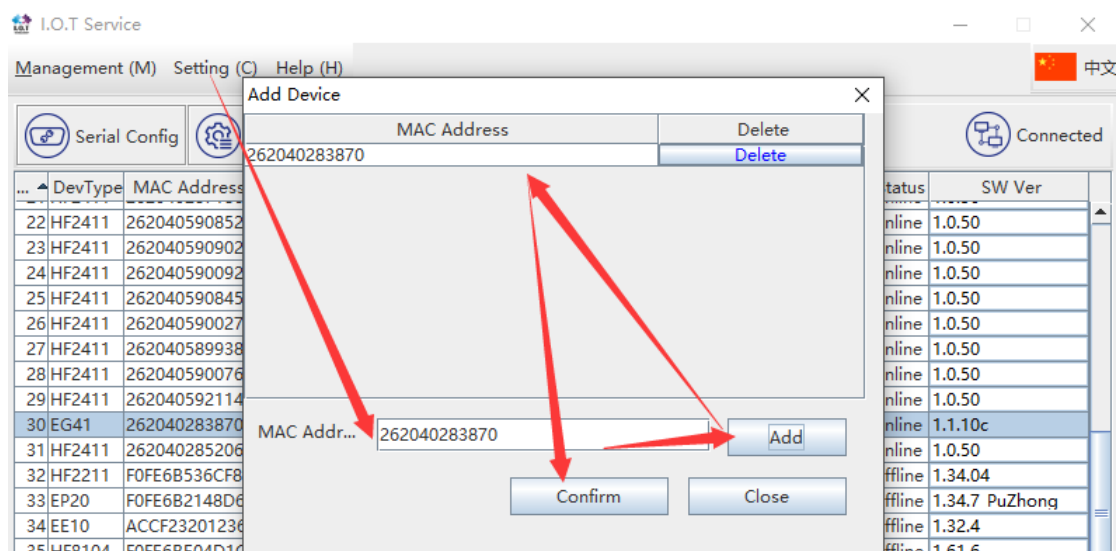


Step 4: Insert SIM card and power on device, wait for device connects to network. The UART tools also shows the network status.



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.

Note:HF2611 only enable the IOTBridge remote device management function at 10:00 to 10:30 in order to save data flow. Other products enable all day by default. This time can be changed via IOTService UART config.



Step 6: Double click device entering the config page.

I.O.T Service


Management (M) Setting (C) Help (H)

Serial Config Config Status VirPath Connected

...	DevType	MAC Address	HostName	IP	Position	VirPath	Status	SW Ver
22	HF2411	262040590852	Eport-HF2411	117.132.196.57	China.Shaanxi		Online	1.0.50
23	HF2411	262040590902	Eport-HF2411	221.178.127.13	China.Shaanxi		Online	1.0.50
24	HF2411	262040590092	Eport-HF2411	221.178.127.99	China.Shaanxi		Online	1.0.50
25	HF2411	262040590845	Eport-HF2411	223.104.255.181	China.Shaanxi		Online	1.0.50
26	HF2411	262040590027	Eport-HF2411	221.178.125.53	China.Shaanxi		Online	1.0.50
27	HF2411	262040589938	Eport-HF2411	221.178.124.54	Remote		Online	1.0.50
28	HF2411	262040590076	Eport-HF2411	221.178.127.216	China.Shaanxi		Online	1.0.50
29	HF2411	262040592114	Eport-HF2411	221.178.126.32	China.Shaanxi		Online	1.0.50
30	EG41	262040283870	Eport-EG41	223.104.210.6	China.Shangh...		Online	1.1.10c
31	HF2411	262040285206	Eport-HF2411	218.204.253.149	China.Shaanxi		Online	1.0.50
32	HF2211	F0FE6B536CF8	Eport-HF2211	58.33.115.200	Remote		Offline	1.34.04

Device Status

System



Product ID: EG41
Software Version: 1.1.10c
RTC Time: NTP Disabled
Up Time: 0-Day 0:4:39
Longitude: 121.620697021
Latitude: 31.217960357

GSM

ModuleSN: 262040283870
ICCID: 898600560913f7007772
IMEI: 866262040283870
Connect: Connected(22)
IP Address: 223.104.210.6
4G_V1.639 Upgrade

SOCKET

SOCKET Name: A
Protocol: TCP-CLIENT
Status: Connected
Server IP:
Recv Bytes: 0 Recv Frames: 0
Send Bytes: 0 Send Frames: 0
Fail Bytes: 0 Fail Frames: 0

UART

UART No: UART
Config: 115200,8,1,NONE
Recv Bytes: 4 Recv Frames: 2
Send Bytes: 5 Send Frames: 2
Fail Bytes: 0 Fail Frames: 0

Reload Edit Restart

Step 7: Can modify the parameters.

Device Setting

System

Welcome:

HostName:

Longitude:

Latitude:

IOT Time: : ~ :

UART

UART No:

Baudrate:

Data Bits:

Stop Bits:

Parity:

Flow Control:

UART Protocol:

HeartBeat Time:

HeartBeat Serial:

Confirm

Cancel

Import

VirPath

Export

Script

SOCKET

SOCKET Name:

Protocol:

Server Addr:

Server Port:

Connect Mode:

Burst Time:

Route:

HeartBeat Time:

HeartBeat Serial:

Regist Mode:

Regist Code:

Data Tag:

Data Tag Code:

Network

APN:

APN User:

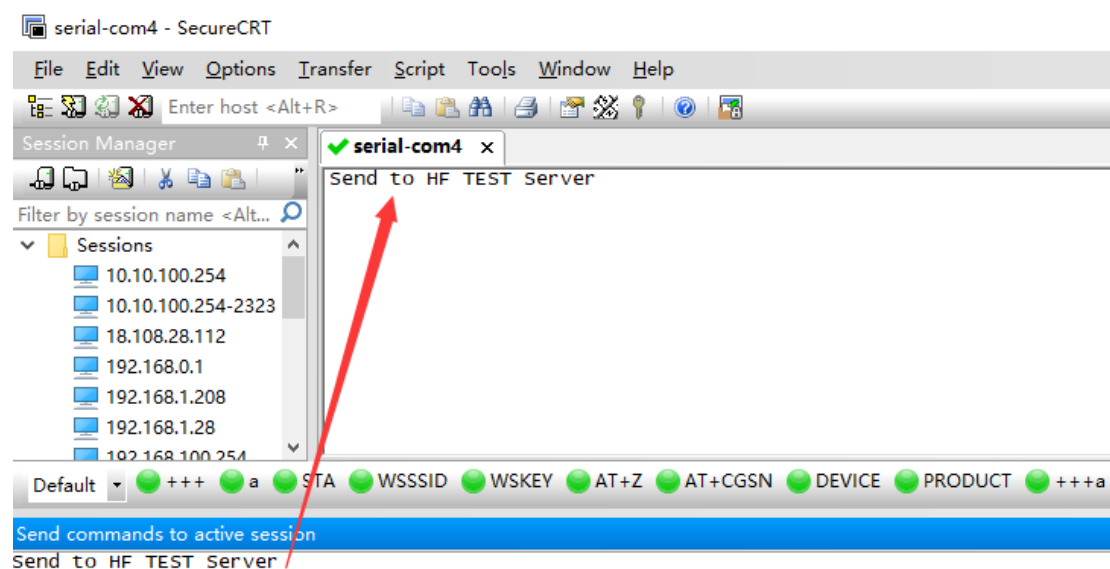
APN Password:

SMS ID:

SMS Phone:

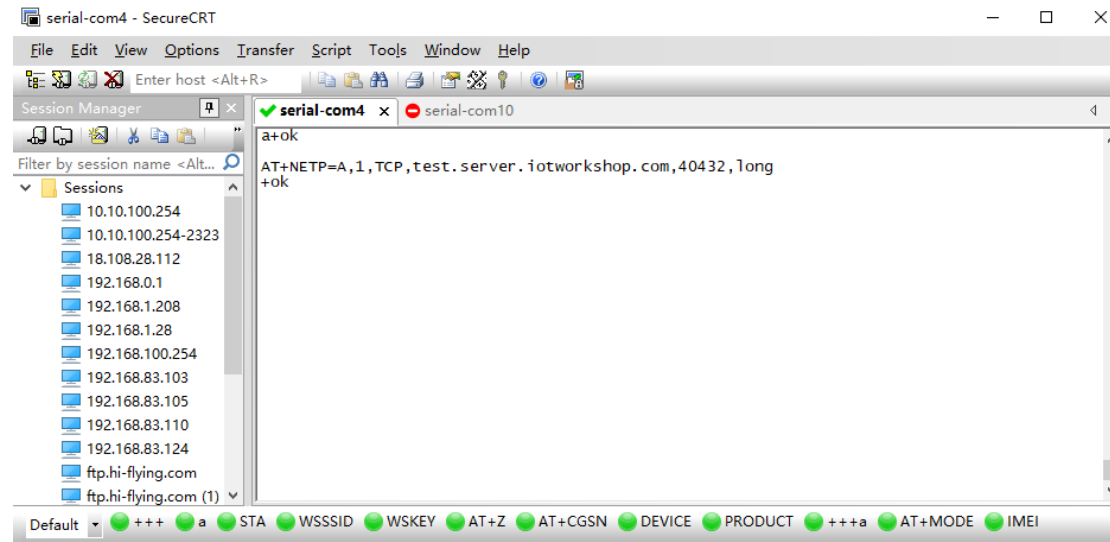
SMS Status:

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



4.5. 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.

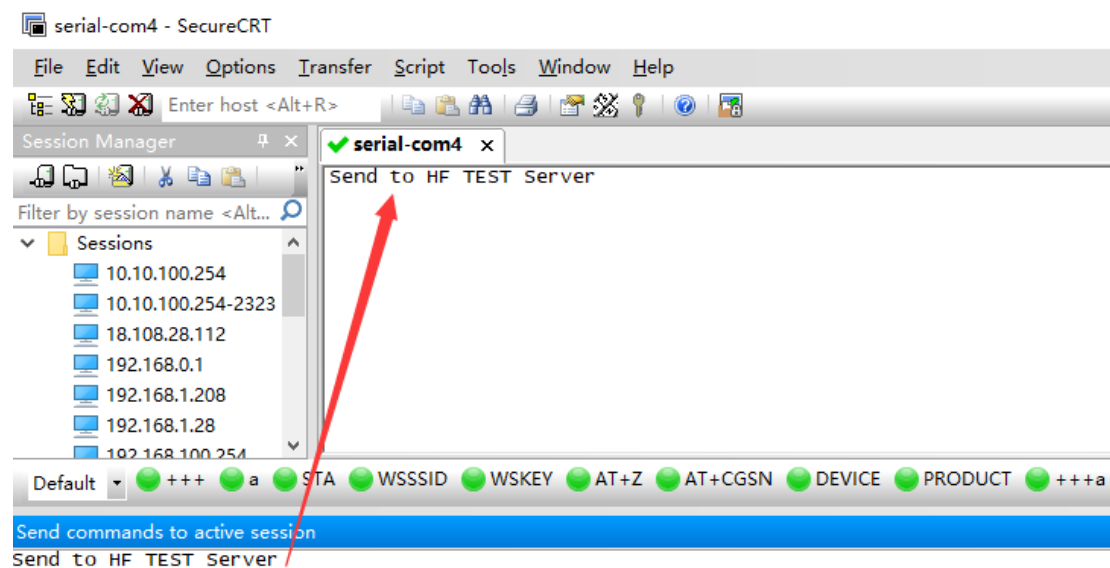


AT+UART to query or change setting.

Step 2: Input “AT+NETP=A,1,TCP,test.server.iotworkshop.com,40432,long” to set socket A, and “AT+Z” to reboot.

```
AT+NETP=A,1,TCP,test.server.iotworkshop.com,40432,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).



4.6. 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

I.O.T Service Serial

PC Serial Para
COM: COM4 Baudrate: 115200 Data Bits: 8 Parity: NONE Stop Bits: 1

DUT Para

UART Para
UART No: UART Baudrate: 115200 Data Bits: 8 Parity: NONE Stop Bits: 1
Flow Control: Disable UART Protocol: NONE
HeartBeat Time: 0 HeartBeat Serial: ...

SOCKET
SOCKET Name: A Protocol: TCP-CLIENT Rout: uart
Server Addr: test.server.iotworkshop.com Server Port: 40432
Connect Mode: Always Burst Time: 300
HeartBeat Time: 10 HeartBeat Serial: ... %IMEI
Regist Mode: Link Regist Code: ... %ICCID
Data Tag: Disable Data Tag Code: ...

SIM Para
IMEI: 866262040283870 ICCID: 898600560913f7007772
Status: Connected RSSI: 19 4G_V1.639 Refresh

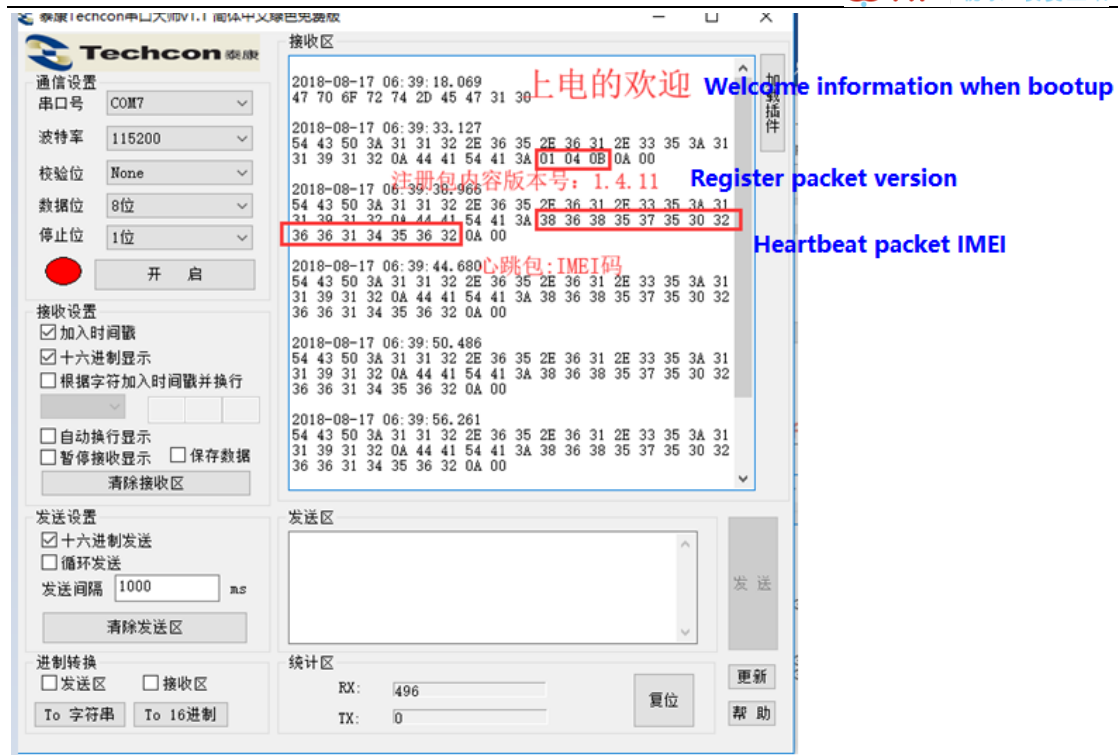
Others
ModuleSN: 262040283870 Welcome: EG41 HostName: Eport-EG41
APN: APN User: APN Passw...
EG41 1.1.10c(2019-06-06 16:30) Detail

Read Device Write Device Batch Set

RECV: +ok=898600560913f7007772
SEND: AT+HEART=1
RECV: +ok=1,0
SEND: AT+UARTTM=1
RECV: +ok=1,50
SEND: AT+MODBUS=1
RECV: +ok=1,off
SEND: AT+UART=1
RECV: +ok=1,115200,8,1,NONE,NFC
SEND: AT+NETP=A
RECV: +ok=A,1,TCP,test.server.iotworkshop.com,40432,long
SEND: AT+NETP=B
RECV: +ok=B,1,off
SEND: AT+NETP=C
RECV: +ok=C,1,off
SEND: AT+HEART=A
RECV: +ok=A,0
SEND: AT+NREGSND=A
RECV: +ok=A,link
SEND: AT+NREGDT=A
RECV: +ok=A,
SEND: AT+NREGEN=A
RECV: +ok=A,off
SEND: AT+NETPID=A
RECV: +ok=A,
SEND: AT+NETPIDEN=A
RECV: +ok=A,off
SEND: AT+NETPLK=A
RECV: +ok=A,on
SEND: AT+VER
RECV: +ok=1.1.10c(2019-06-06 16:30)
SEND: AT+HOST
RECV: +ok=Eport-EG41
SEND: AT+WEL
RECV: +ok=EG41

Clear Send

Step 2: Reboot it. The device will output UART data as following.



Example 1:

Register Code Requirement: FFFFFFFFA+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

Example 2:

Heartbeat Content: %TIME;%HOST;%DATE;%IMEI;%IMSI;%GPS;

Upload real data: :

165036;Eport-

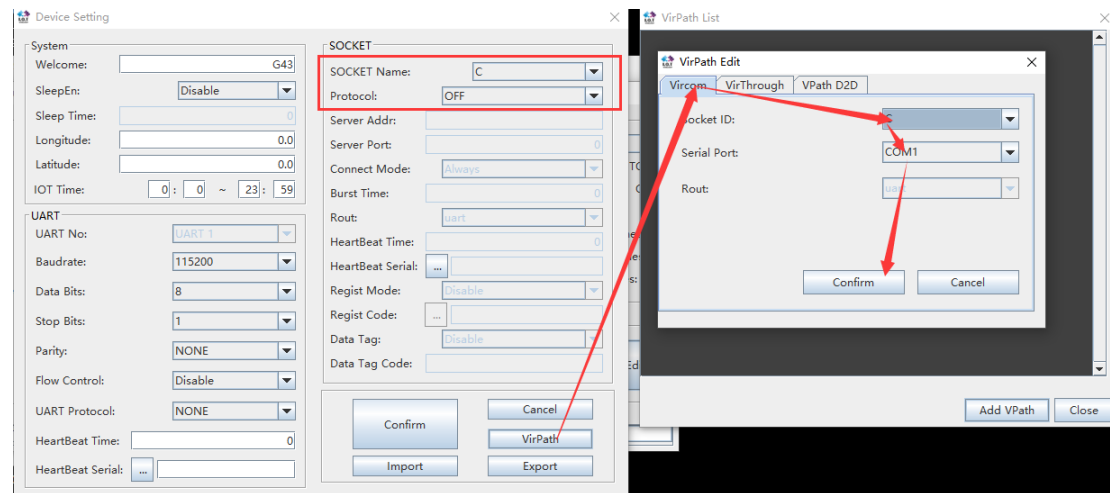
HF2411;20190211;862285030465284;460011352509105;121.623046,31.221429;

4.7. Test Case Five: Virtual COM

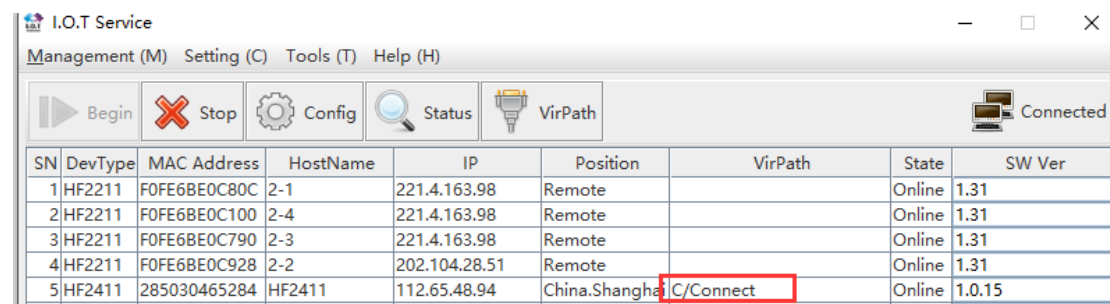
Step 1: Add device to IOTService according to Case Two.

I.O.T Service								
Management (M) Setting (C) Tools (T) Help (H)								
<div> Begin Stop Config Status VirPath Connected </div>								
SN	DevType	MAC Address	HostName	IP	Position	VirPath	State	SW Ver
1	HF2211	F0FE6BE0C80C	2-1	221.4.163.98	Remote		Online	1.31
2	HF2211	F0FE6BE0C100	2-4	221.4.163.98	Remote		Online	1.31
3	HF2211	F0FE6BE0C790	2-3	221.4.163.98	Remote		Online	1.31
4	HF2211	F0FE6BE0C028	2-2	202.104.28.51	Remote		Online	1.31
5	HF2411	285030465284	HF2411	112.64.68.19	China,Shanghai		Online	1.0.5
6	HF2421	F0FF688832AC	Eport-HF2421	117.132.195.230	Remote		Offline	1.10h

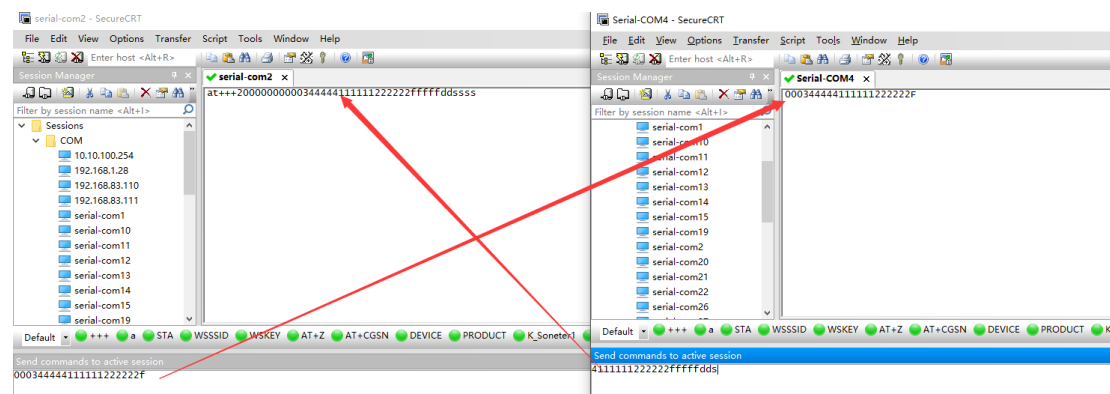
Step 2: Click into the config page, fill the Vircom Socket ID with C(A/B/C all can be used for virtual COM, must choose off socket to use for virtual COM).



Step 3: Wait for VirtualCom Connect.



Step 4: Use virtual com to communicate.

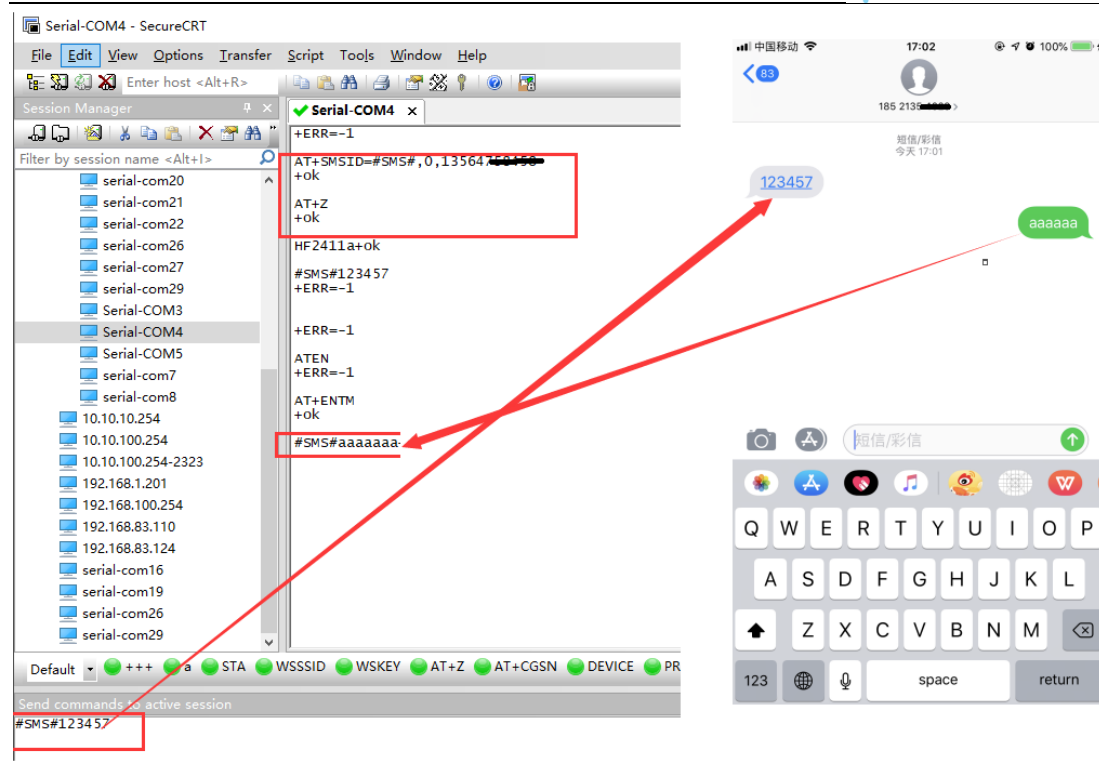


4.8. Test Case Six: SMS Throughput

Step 1: Enter AT command mode, and set SMS parameters.
AT+SMSID=#SMS#,0,135647584XX.

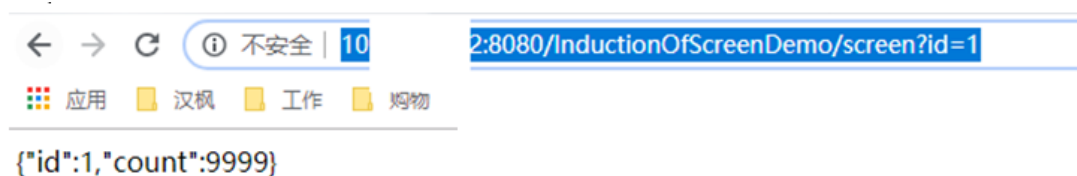
Step 2: Reboot and wait for network connected, UART send "#SMS#123457" to module, the phone will receive the SMS data "123457".

Step 3: Phone send "aaaaaa", product will send out "#SMS#aaaaaa"

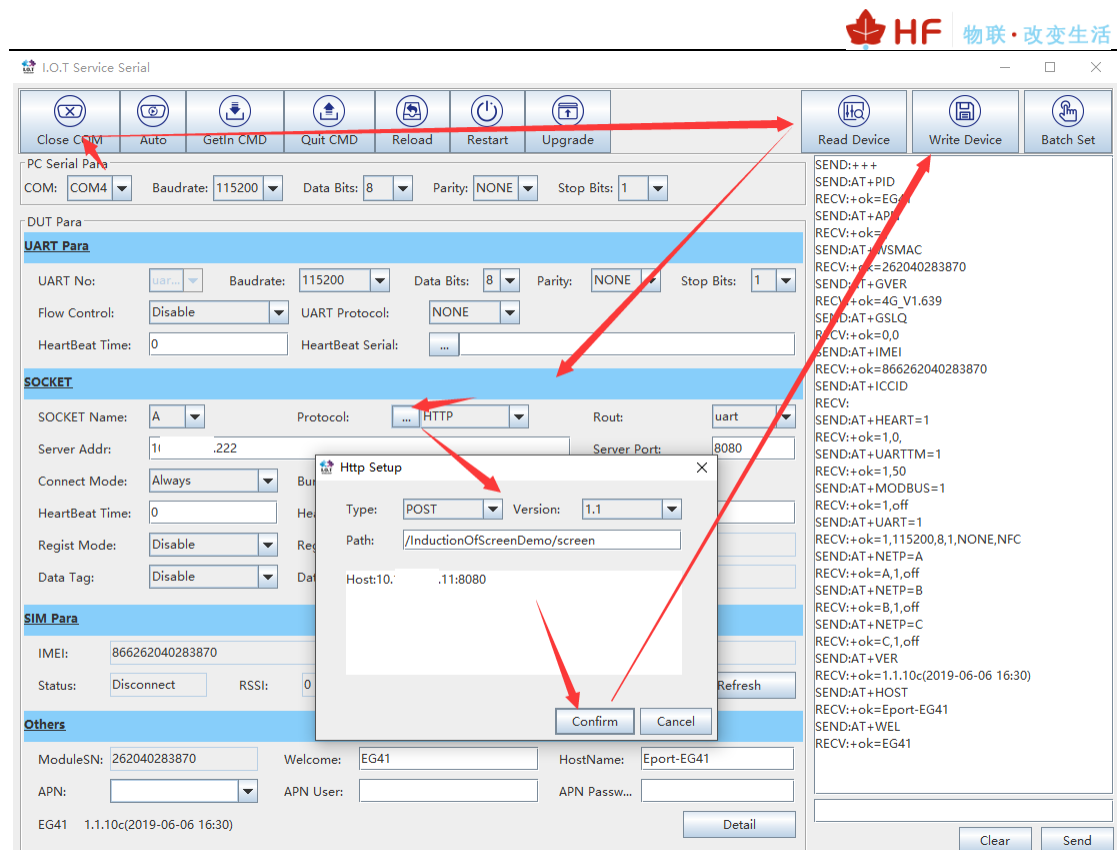


4.9. Test Case Seven: HTTP Request

Step 1: Browser open <http://XX.XX.XX.2:8080/InductionOfScreenDemo/screen?id=1>, got the response as following:



Step 2: Input the HTTP parameters as the following steps.



Protocol: HTTP

Server Addr: Server address, IP or domain name.

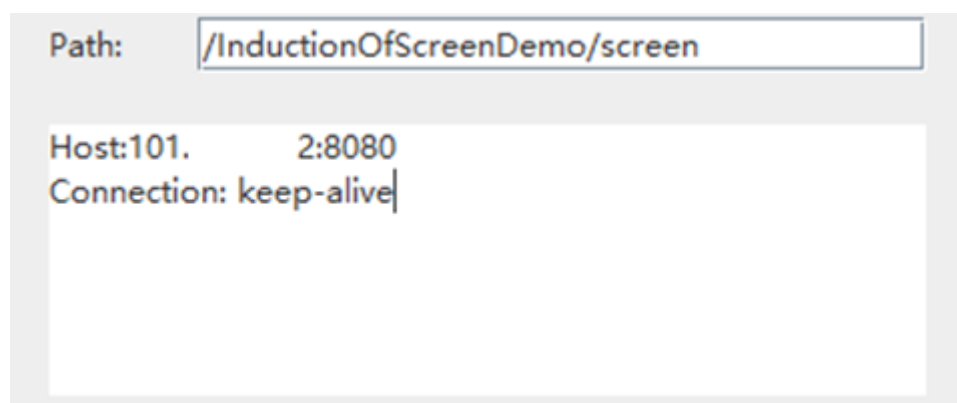
Server Port: Server port.

Type: HTTP Type, GET or POST.

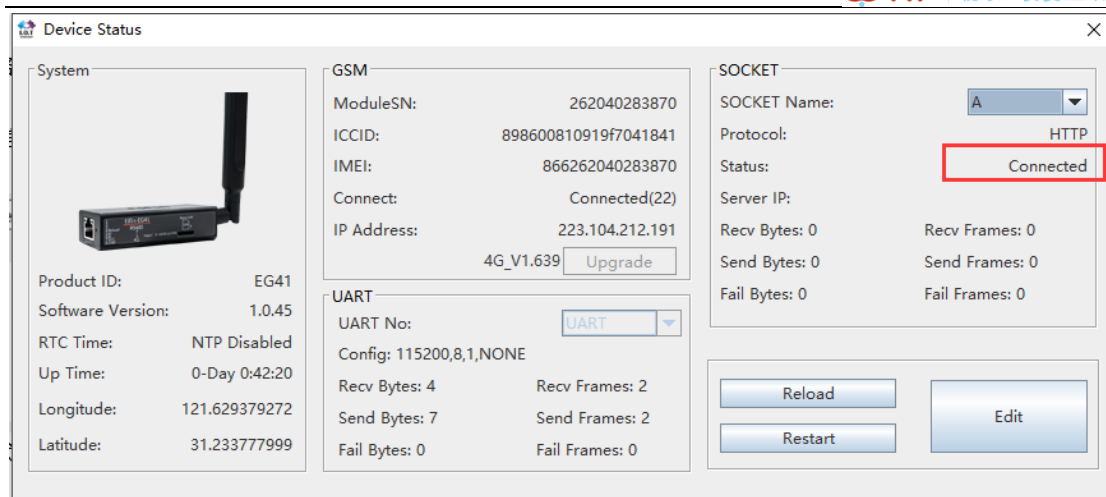
Version: HTTP Version, 1.1.

Path: HTTP path

HTTP header input: Input HTTP header. Usually is Host information.



Step 3: Reboot and wait for SOCKA connection.



Step 4: UART send data id=1, and got response of the server.



Note:

Refer to "4G_2G DTU products function" for more detail.

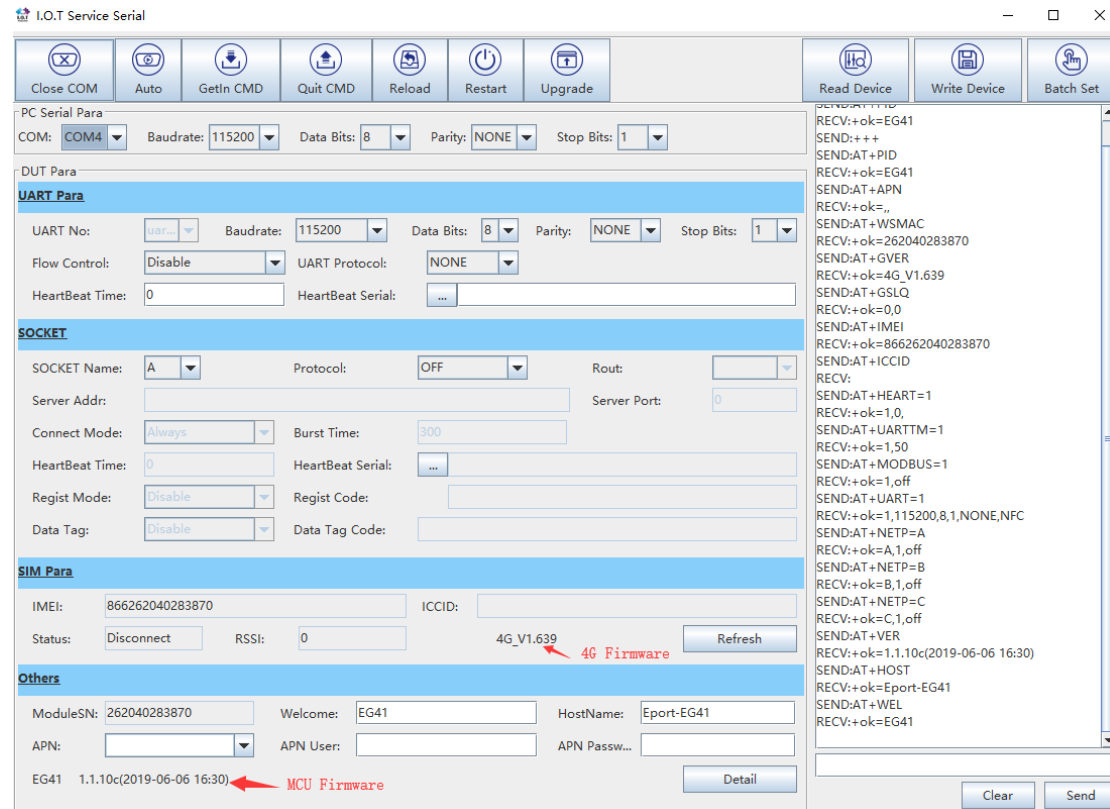
4.10. SMS AT Command

All AT command support using SMS to set. AT+Z do reboot operation, so it won't response.



4.11. UART Upgrade

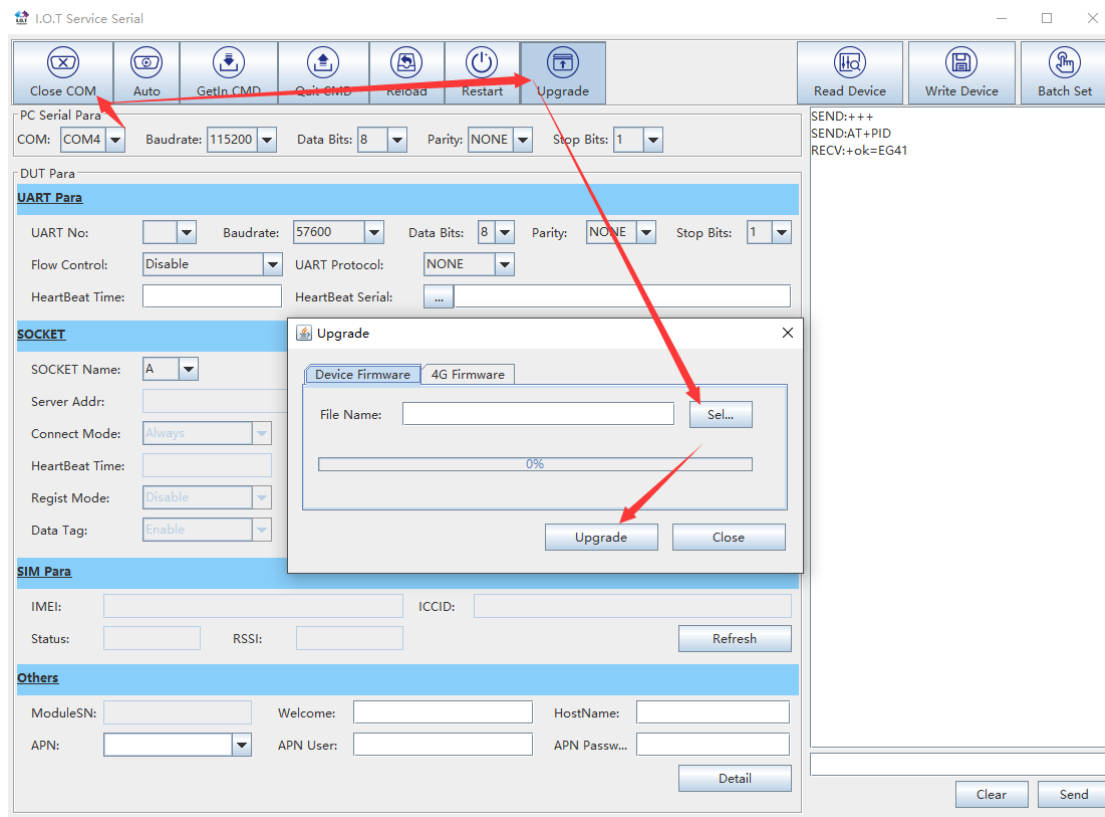
There is MCU firmware and 4G core module firmware. Get the latest firmware from the following link.



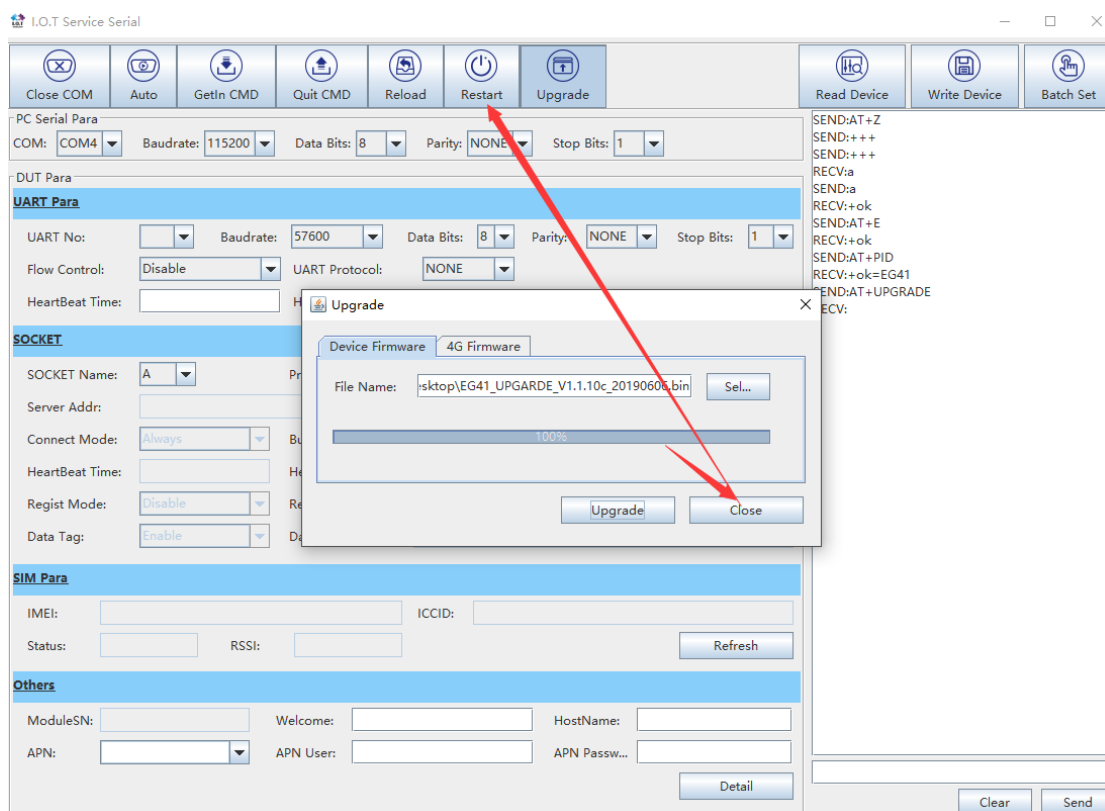
<http://www.hi-flying.com/download-center-1/firmware-1/download-item-hf2411-firmware-v1-0-11>

4.11.1. MCU Firmware

Load the firmware.



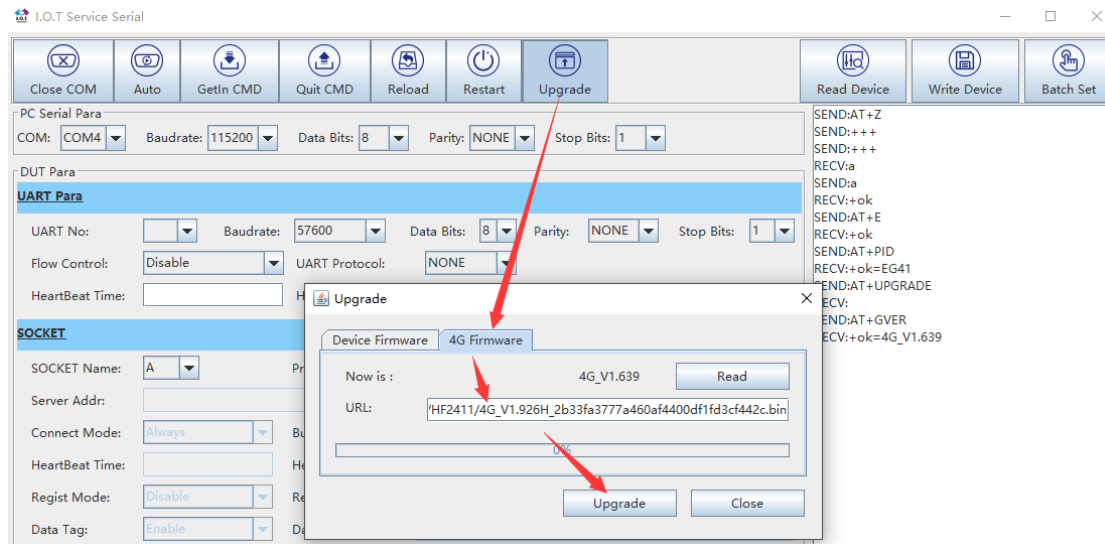
Reboot after upgrade success.



4.11.2. 4G Firmware(Only 4G Product)

After the device connect to network(Show connected), input the 4G download address(Get the latest download address from our website.). The firmware size is about 5MB, it takes about 2 minutes to upgrade.W

http://download.iotworkshop.com/iotbridge/firmwares/HF2411/4G_V1.926H_2b33fa3777a460af4400df1fd3cf442c.bin



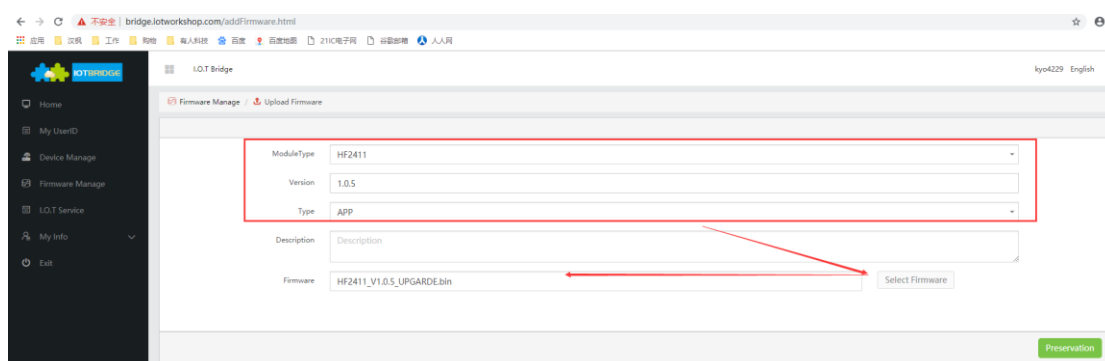
4.12. Remote OTA Upgrade

Currently only support MCU remote OTA update, later will support 4G upgrade

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

4.12.1. MCU Firmware

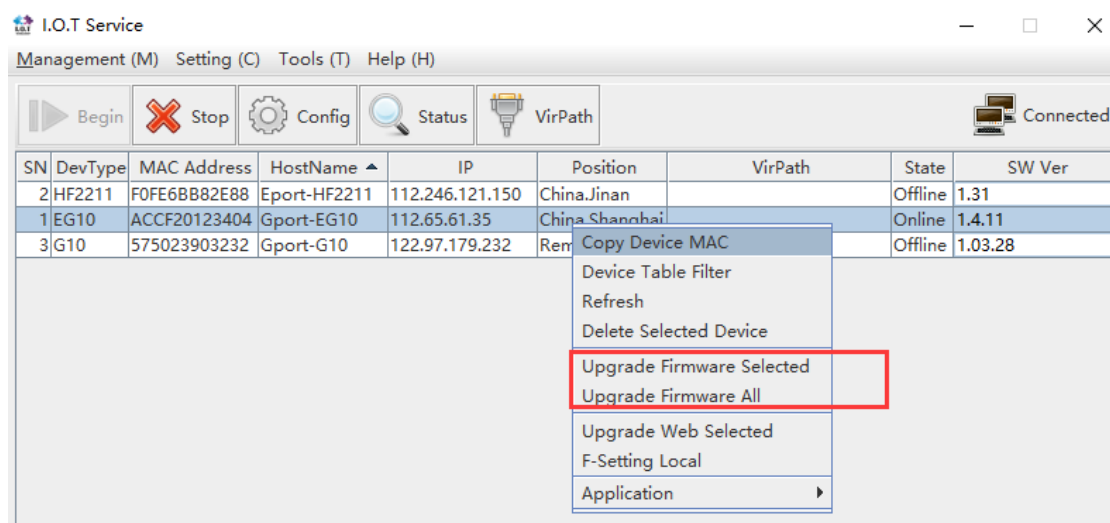
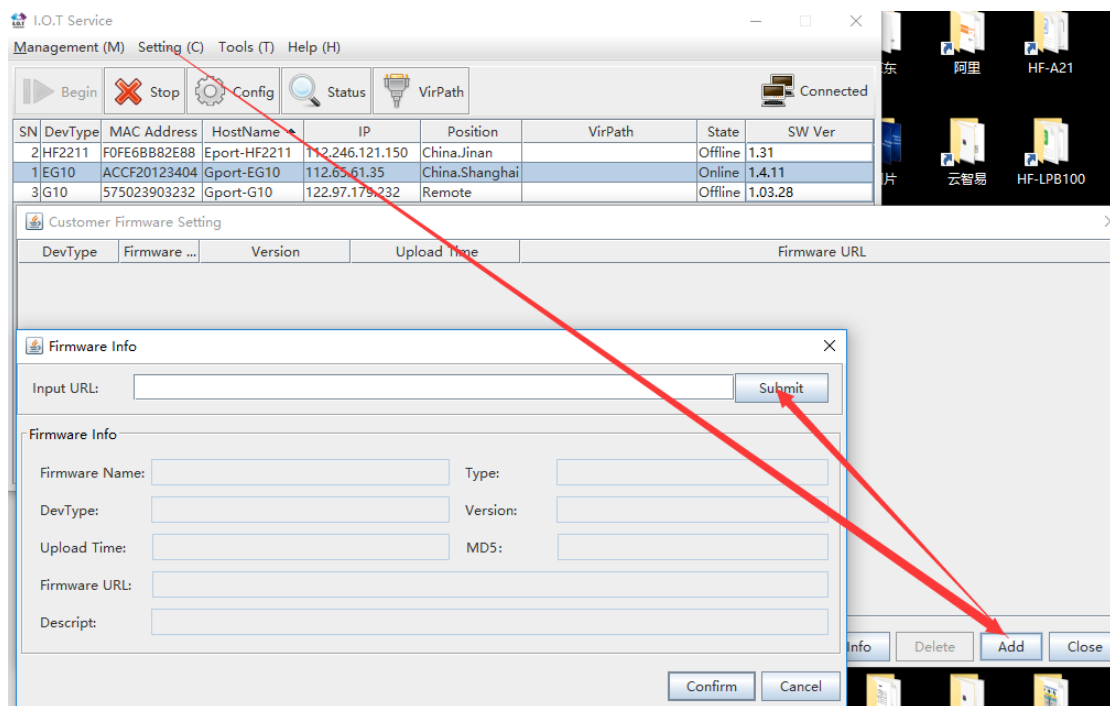
Step 2: Login <http://bridge.iotworkshop.com/>, upload firmware in IOTBridge.



Step 3: Copy the download link as following.

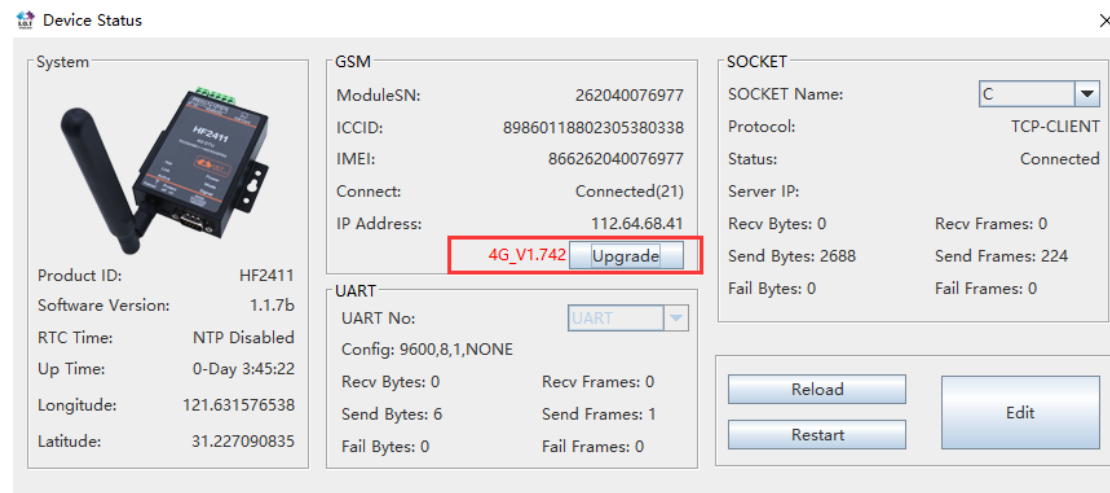


Step 4: Copy the download link into the IOTService tools. And do upgrade operation.



4.12.2. 4G Firmware(Only 4G Product)

Step 1: Add device to account, and click the 【Upgrade】 button. It will take about 2minutes to upgrade. After upgrade success, it will restart.

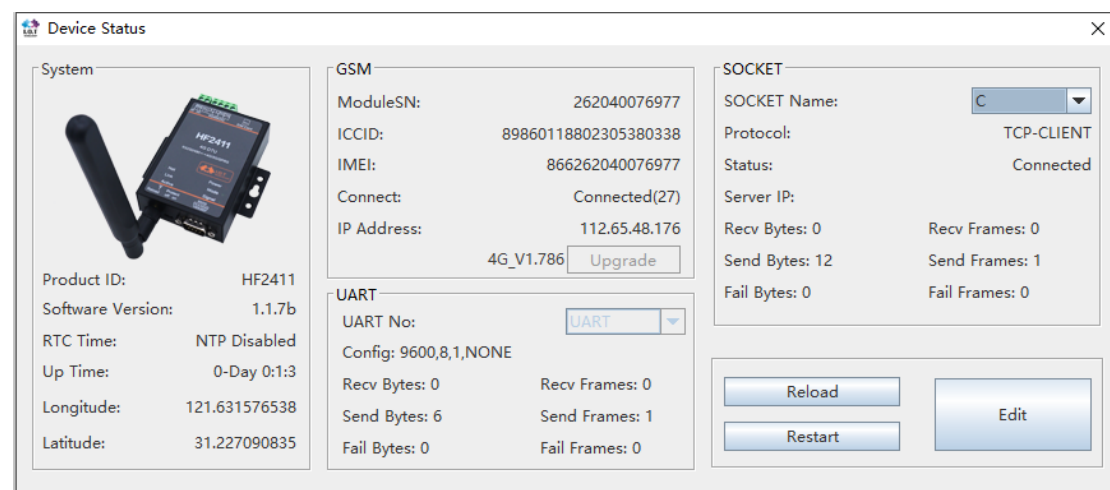


The screenshot shows the 'Device Status' window for a device named HF2411. The 'System' tab is active, displaying various system parameters. The 'GSM' section shows the device is connected to a 4G network. The 'Upgrade' button is highlighted with a red box, indicating the next step in the process.

System	GSM	SOCKET
Product ID: HF2411 Software Version: 1.1.7b RTC Time: NTP Disabled Up Time: 0-Day 3:45:22 Longitude: 121.631576538 Latitude: 31.227090835	ModuleSN: 262040076977 ICCID: 89860118802305380338 IMEI: 866262040076977 Connect: Connected(21) IP Address: 112.64.68.41 4G_V1.742 Upgrade	SOCKET Name: C Protocol: TCP-CLIENT Status: Connected Server IP: Recv Bytes: 0 Recv Frames: 0 Send Bytes: 2688 Send Frames: 224 Fail Bytes: 0 Fail Frames: 0

Buttons: Reload, Restart, Edit

Step 2: Check the software version.



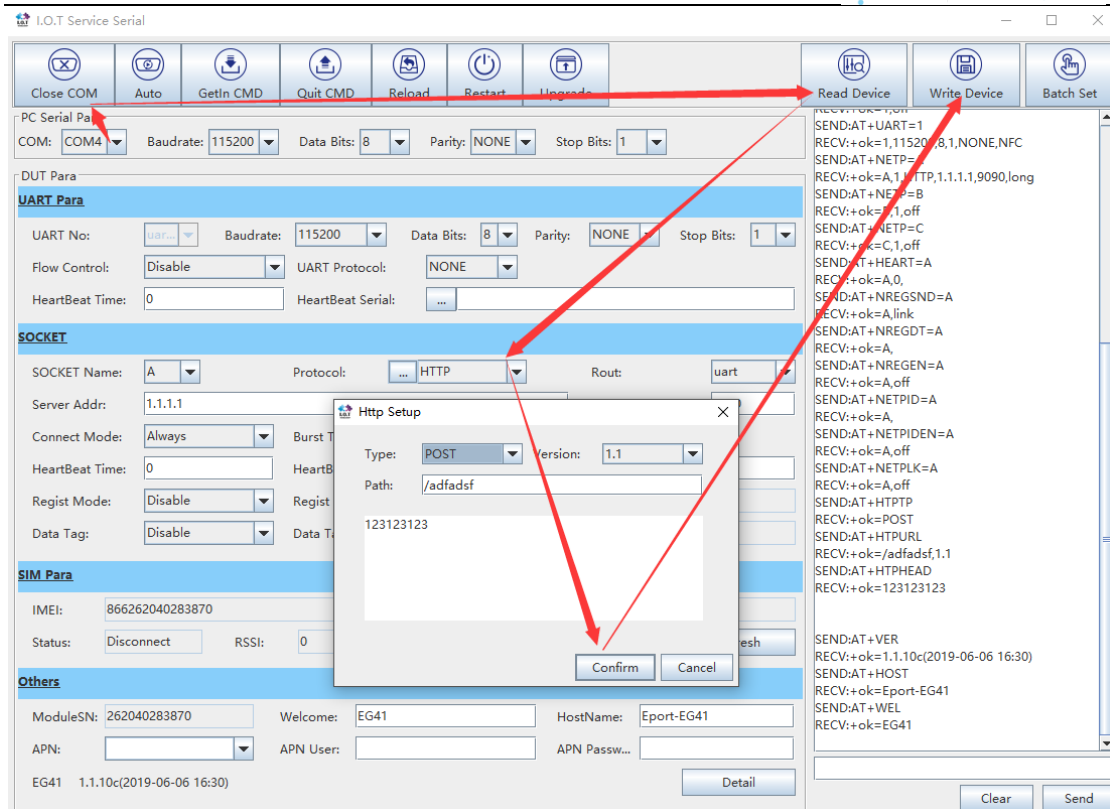
The screenshot shows the 'Device Status' window for the same device HF2411. The 'Software Version' is now 1.1.7b. The 'Upgrade' button is still present, but the '4G_V1.786' label is visible, indicating a successful upgrade.

System	GSM	SOCKET
Product ID: HF2411 Software Version: 1.1.7b RTC Time: NTP Disabled Up Time: 0-Day 0:1:3 Longitude: 121.631576538 Latitude: 31.227090835	ModuleSN: 262040076977 ICCID: 89860118802305380338 IMEI: 866262040076977 Connect: Connected(27) IP Address: 112.65.48.176 4G_V1.786 Upgrade	SOCKET Name: C Protocol: TCP-CLIENT Status: Connected Server IP: Recv Bytes: 0 Recv Frames: 0 Send Bytes: 12 Send Frames: 1 Fail Bytes: 0 Fail Frames: 0

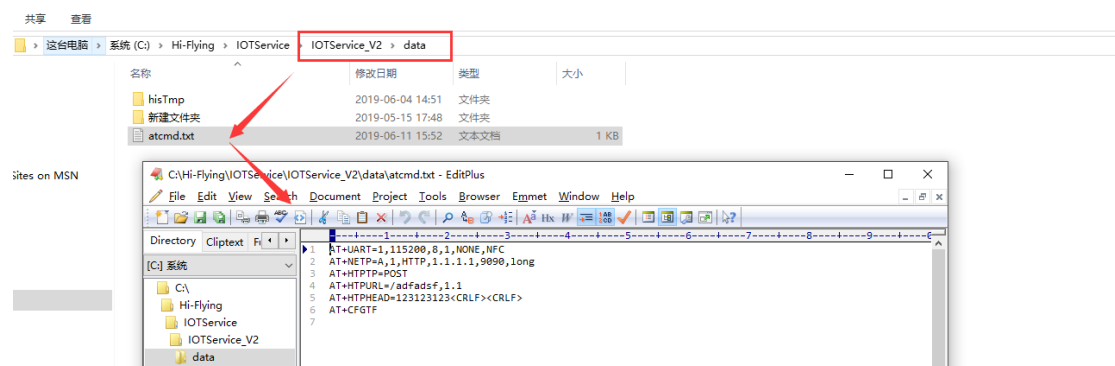
Buttons: Reload, Restart, Edit

4.13. Massproduction Config

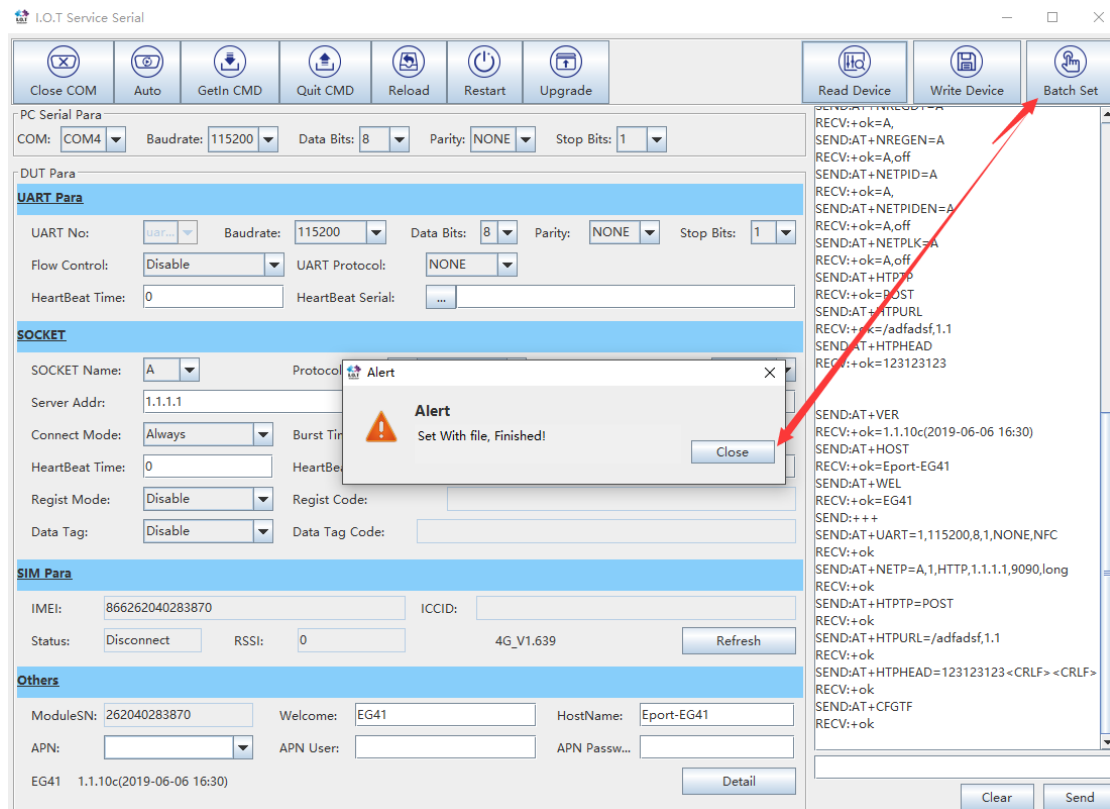
Step 1: Config the first product.



Step 2: The config information will be saved in the following file. This file can be used for massproduction product config. May also direct modify this file.



Step 3: Click **【Batch Set】** for fast config multiple products.



4.14. Data Collect Gateway and More Function

Products support collect packet and upload to server, see more application notes in the following link.

<http://www.hi-flying.com/download-center-1/application-notes-1/download-item-industry-products-application-manual>

APPENDIX A: REFERENCES

A.1. Test Tools

IOTService Configure Software:

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