

User Manual and Test Guide

IOTService Tool

2019-06-04

CONTENT

1. IOTSERVICE INTRODUCTION.....	5
2. IOTSERVICE INSTALLATION	7
3. product connection	10
3.1. Elfin-EE10 Device Connection	10
3.2. Serial Port Configuration	10
3.3.1. Serial port tool:SecureCRT	10
3.3.2. Serial Parameter Configuration.....	11
4. IOTSERVICE INTRODUCTION.....	12
4.1. Main Page Introduction.....	12
4.2. Device Status Interface	18
4.3. Edit Page	19
4.4. Test CASE	21
4.4.1. EVK Test Topology	21
4.4.2. TCP Server Test.....	21
4.4.3. TCP Client Test	23
4.4.4. TCP Client Connect to Remote Test Server	24
4.5. VIRTUAL Path Function	26
4.5.1. Virtual Com Local Network Communication.....	26
4.5.2. Virtual COM Remote Communication	28
4.5.3. Virtual Through Local Communication	30
4.5.4. Virtual Through Remote Communication.....	32
4.6. D2D Function	34
5. IOTBridge ALARM function	35

5.1.	Set IOTBridge Parameters.....	35
5.2.	Set Mail Information	35
6.	IOTBridge Cloud	36
7.	OTA Upgrade	43
8.	IO control tools introduced	45
	Test Cases.....	47
	Introduction of HF6208.....	47
	Test Topology	47
	IO Control Tools	48

History:

2016-08-30 First Version

2017-01-20 Update to IOTService 2.5 Version

2017-04-20 Update IOTService to IOTService. Version 2.0.06

2017-06-15 Update IOTService. Version 2.0.07e

2017-08-22 Update IOTService. Version 2.0.10

2017-12-06 Update IOTService. Version 2.1.01

2018-03-05 Update IOTService. Version 2.3.0.0 ,Add D2D Function.

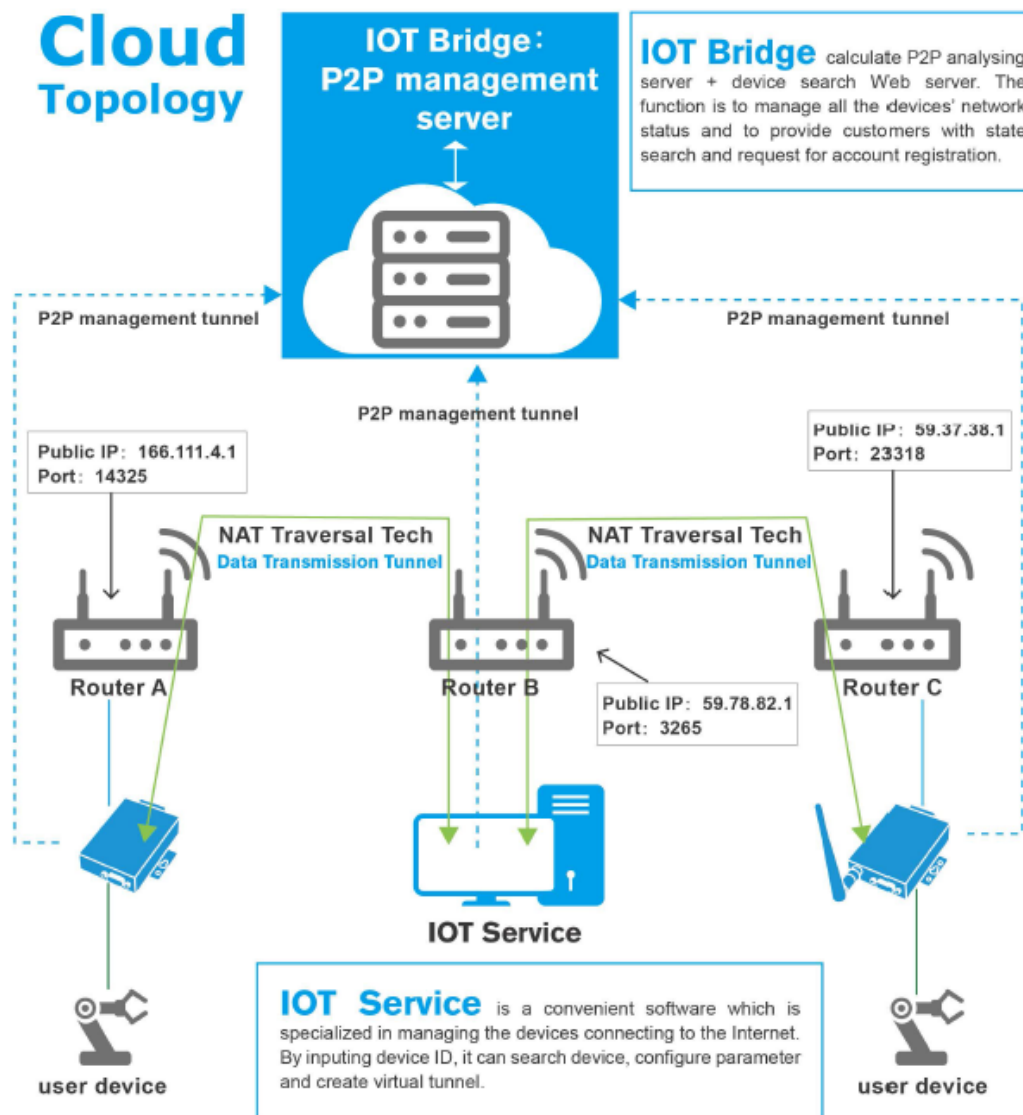
2018-03-05 Update IOTService. Version 2.3.0.07f ,Add HF2411, HF2111A new type.

2019-06-04 Update IOTService. Version 2.3.44.

1. IOTSERVICE INTRODUCTION

IOTService is a management tools for our serial server devices. Add the feature of our IOTBridge cloud for remote device setting and data transfer.

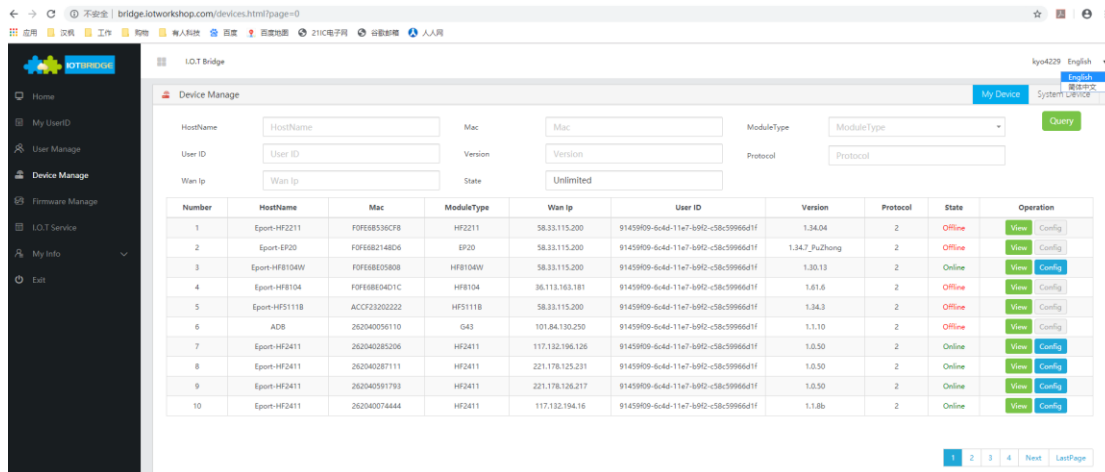
IOTBridge cloud use UDP/P2P/NAT to make the IOTService software remote setting and control devices. The detailed structure is as following picture.



Scenario

1. Virtual Tunnel: TCP/UDP after NAT Traversal can be recognized as a COM. Third-party can communicate with user devices with virtual com, which called virtual tunnel.
2. Transparent Transmission Tunnel: When TCP/UDP is experienced with NAT Traversal, IOTService will create a Socket port number. Third-party software can communicate with this Socket directly, which called virtual tunnel.

IOTBridge website(<http://bridge.iotworkshop.com>) can see all the user device, to check its status and config parameters.



IOTService is tools for config HF IOT Device. (Except HF2111, it use IOTSerial Tools) create virtual com, remote monitor device, OTA upgrade function. It is used for the following product

Ethernet IOT

FreeRTOS Embedded Network Device
[Eport-E20-PIN] [Eport-E20]
[Eport-E30]

Linux Embedded Network Device
[Eport Pro-EP20-PIN]
[Eport Pro-EP20]

Ethernet Serial Server
[HF5111A] [HF5111B]

Multiple Port Ethernet Serial Server
[HF5142A] [HF5142B]

Wi-Fi IOT

Wi-Fi Serial Module
[Wport-W20] [Wport-W10]

Wi-Fi Serial Server
[HF2211] [DTU-H100]

Multiple Port Wi-Fi Serial Server
[HF2221]

Wifi router (rail)
[HF8104W]

GPMS IOT

GPMS Serial Server
[HF2111A]

4G IOT

4G Serial Server
[HF2411]

4G+WiFi+GPS Serial Server Device
[HF2421G]

4G+WiFi Serial Server
[HF2421]

Rail 4G Router
[HF8102] [HF8104]

Elfin IOT

4G_LTE
[Elfin-EG4X]

GPMS
[Elfin-EG1X]

Wi-Fi
[Elfin-EW1X]

Ethernet
[Elfin-EE1X]

IO Control

Wi-Fi IO
[HF6208]

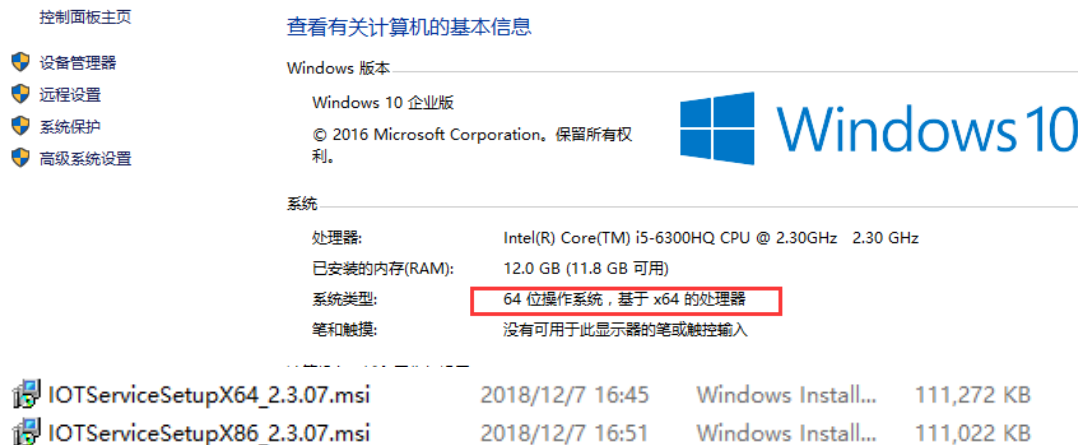
Ethernet IO
[HF6508]

2. IOTSERVICE INSTALLATION

Step 1:Download the IOTService tool as the following link.

<http://www.hi-flying.com/download-center-1/applications-1/download-item-iot-service>

Step 2:Install IOTService tool according to the PC OS(x64 for 64 bit Windows OS, x86 for 32 bit Windows OS). **If already installed old version, please uninstall and reboot, then install this new version.**

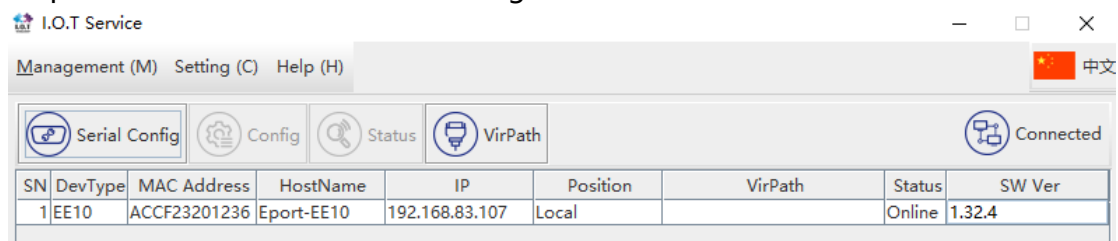


Step 3:After installation, there is a folder for IOTService under the installation path.

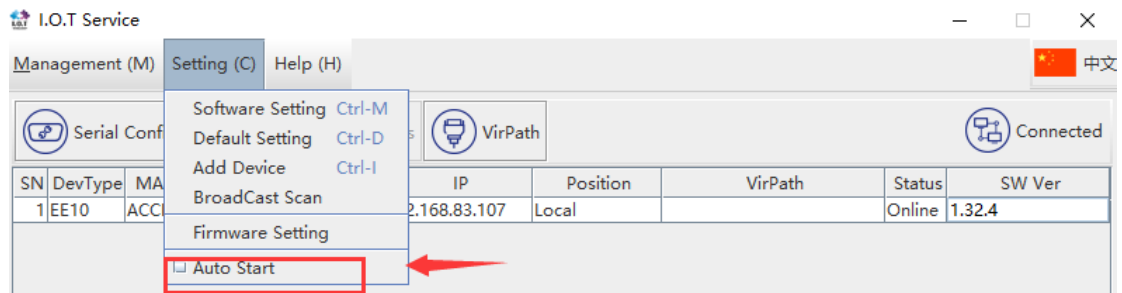
名称	修改日期	类型	大小
IOTService	2018/12/6 15:26	文件夹	
IOTService_V2	2018/12/6 15:26	文件夹	
jre	2018/12/6 15:26	文件夹	
upgrade	2018/12/6 16:09	文件夹	
ApplIOMain.bat	2018/12/4 14:01	Windows 批处理...	1 KB
IOTService.bat	2018/12/4 14:01	Windows 批处理...	1 KB
IOTService.exe	2018/12/4 14:01	应用程序	1,840 KB
IOTService.vbs	2018/12/4 14:02	VBScript Script ...	1 KB
ISJDK32bit.jar	2018/12/4 14:02	JAR 文件	1 KB
SDKCheck.jar	2018/12/4 14:01	JAR 文件	2 KB
Upgrade.bat	2018/12/4 14:01	Windows 批处理...	1 KB
Upgrade.exe	2018/12/4 14:01	应用程序	10 KB
Upgrade.vbs	2018/12/4 14:01	VBScript Script ...	1 KB

Click IOTService icon  and start the tool after installation.

Step 4:The tool will show the following UI.



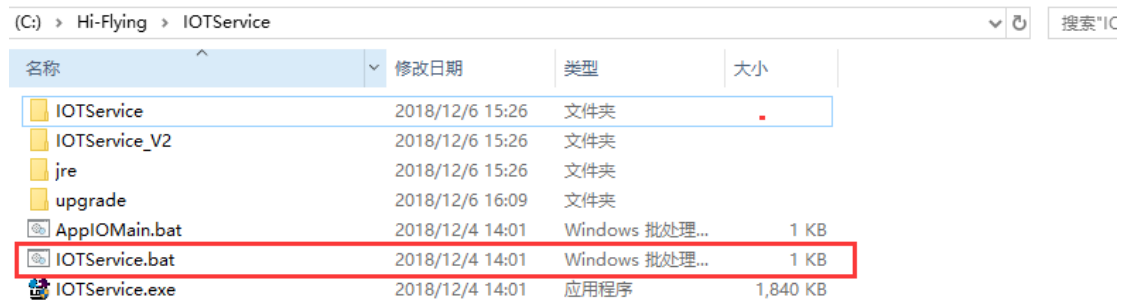
Step 5:Enable Auto Start when needed. (May fail in some OS, please google to find solution about make program auto start)



Notes:

This tools need JRE environment and will automatically install it.

Run following IOTService.bat to send us the log information if encounter tools problem, note this startup method does not support virtual com function.



This tools some function need administrator permission and close firewall, suggest to do as following.



自定义设置

← → ▾ ▴ 自定义设置 > 控制面板 > 所有控制面板项 > Windows Defender 防火墙 > 自定义设置


自定义各类网络的设置

你可以修改使用的每种类型的网络的防火墙设置。

专用网络设置

-  ☐ 启用 Windows Defender 防火墙
- ☐ 阻止所有传入连接，包括位于允许应用列表中的应用
 - ☒ Windows Defender 防火墙阻止新应用时通知我
-  ☒ 关闭 Windows Defender 防火墙(不推荐)

公用网络设置

-  ☐ 启用 Windows Defender 防火墙
- ☐ 阻止所有传入连接，包括位于允许应用列表中的应用
 - ☒ Windows Defender 防火墙阻止新应用时通知我
-  ☒ 关闭 Windows Defender 防火墙(不推荐)

3. PRODUCT CONNECTION

3.1. Elfin-EE10 Device Connection

Connect the EE10 Ethernet to router LAN, and connect RS232 to PC.



3.2. Serial Port Configuration

3.3.1. Serial port tool:SecureCRT

Download address:

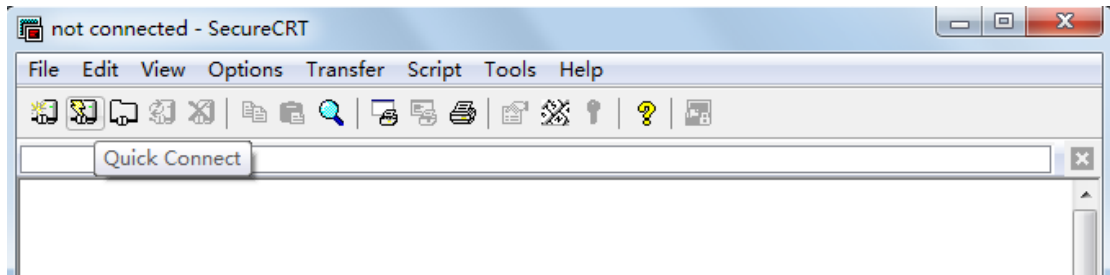
http://www.hi-flying.com/index.php?route=download/category&path=1_4

Unzip the file and find the following icon,



Open and click quick

connect button  to create connection.



3.3.2. Serial Parameter Configuration

Protocol:Serial

Port:Check PC device management, port number should be shown like this figure



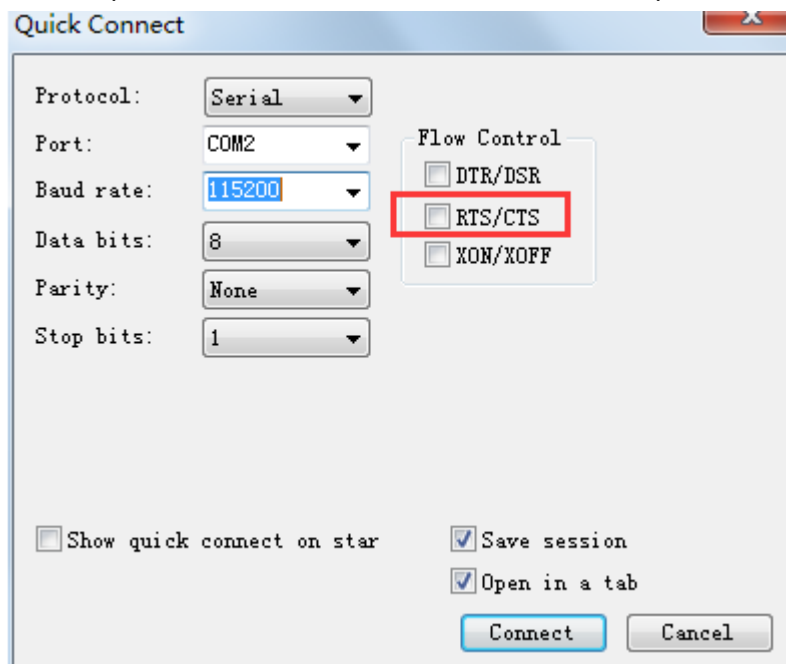
Baud rate:115200

Data bit:8

Parity check:None

Stop bit:1

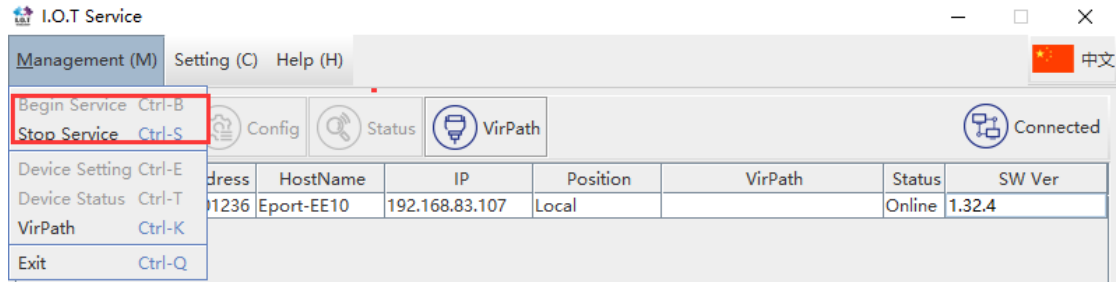
Flow control:NONE(Please remove "√" in front of RTS/CTS)



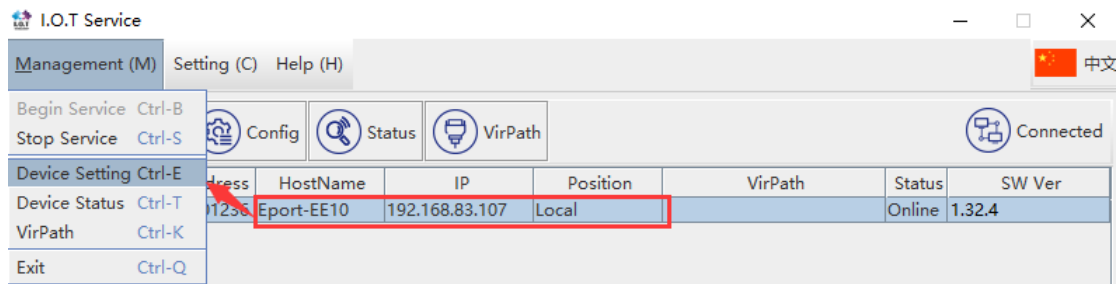
4. IOTSERVICE INTRODUCTION

4.1. Main Page Introduction

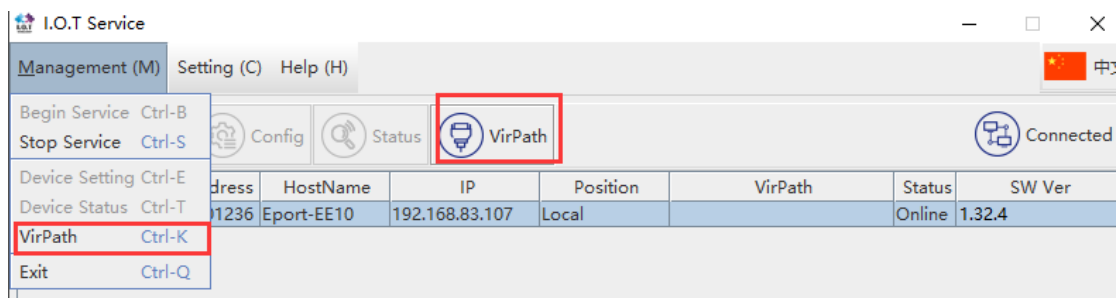
- When it starts, it will show the scanned products in the local area network or remote device in user account. The scan service can be begun or stopped.



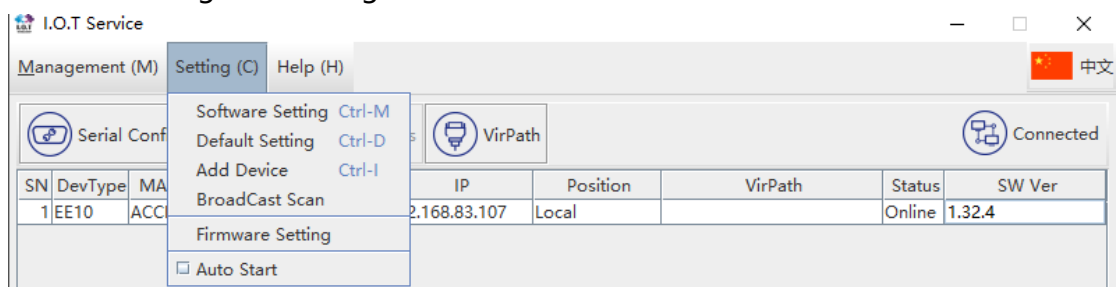
- Check or set the selected device parameters(or double click the selected device)



- VirPath:Virtual serial setting and virtual throughput function. See examples for more detailed usage.



- Setting:Tool setting.



Software Setting

Remote Access

Remote Access Enable:

Service Id:

IOTBridge Server Addr:

EMail Alarm

EMail Alarm Enable:

SMTP Address:

SMTP Port:

EMail Account:

EMail Password:

EMail Send List (eg. a@a.com;b@b.com):

Communication

VirPath UDP Port:

VCOM Parameter Synch:

VCOM Frame Time (ms):

Others

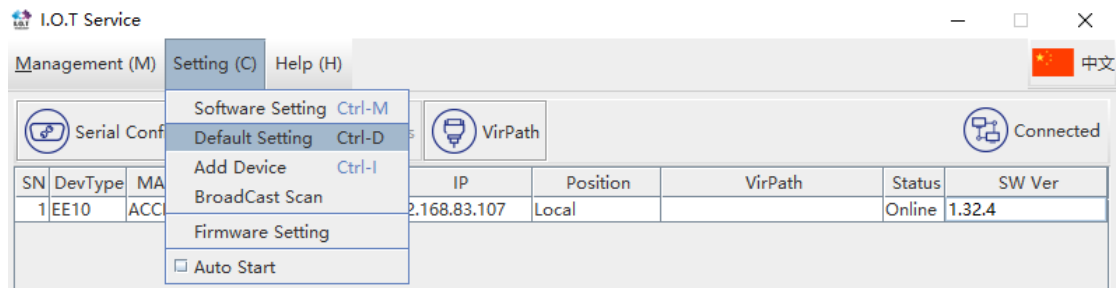
Language:

Start up to Tray:

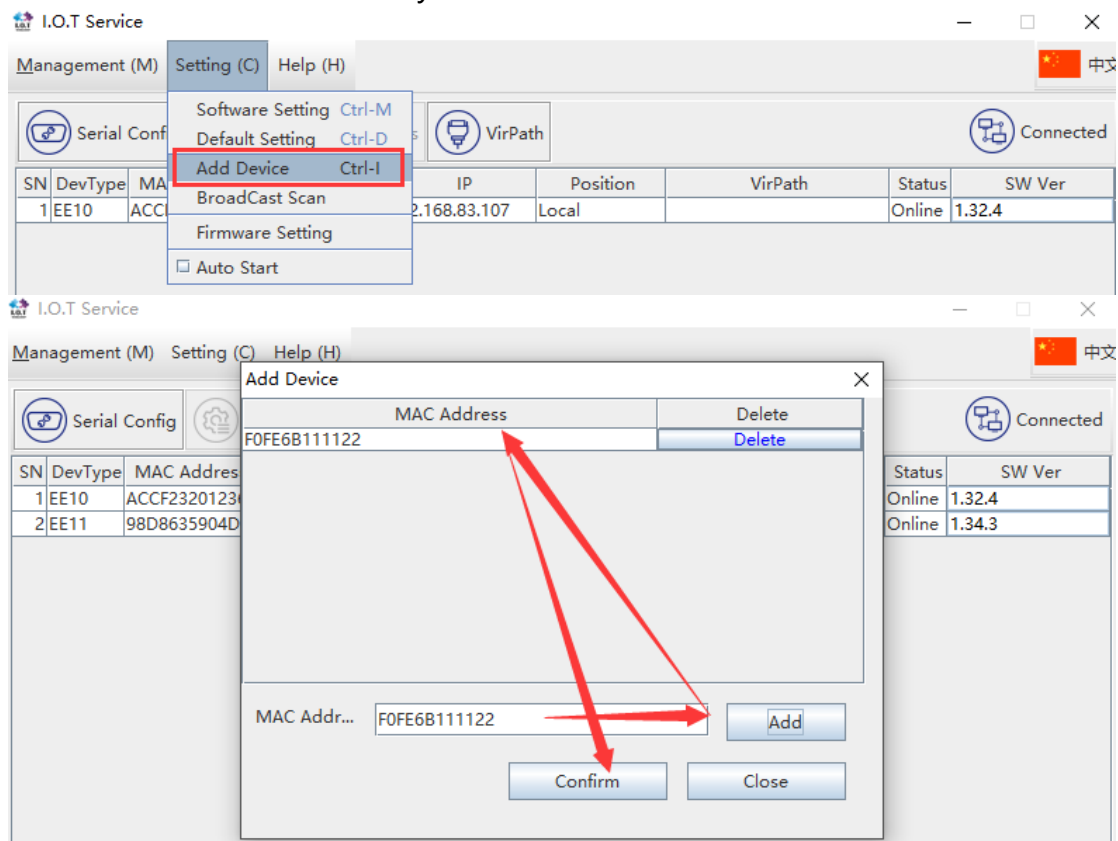
Auto Upgrade:

New Ver: **2.3.41**

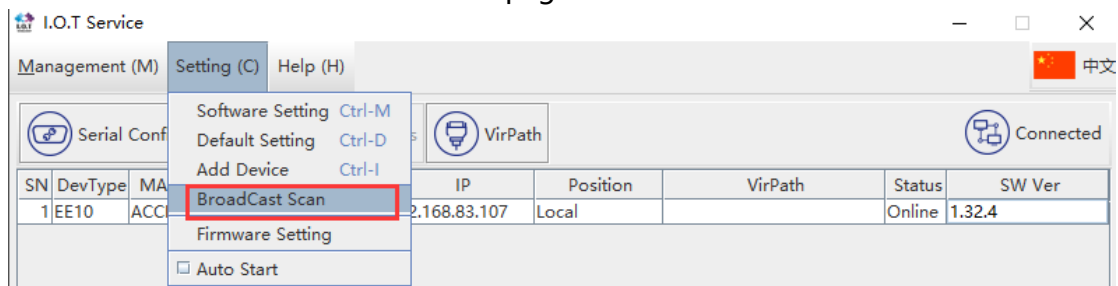
- Remote Access Enable: Enable/Disable our remotely control function, IOTBridge server is used for P2P device management and data transfer if enable.
 - ◆ Service Id: This id is used for IOTBridge to distinguish different user device. Recommend to write User Id in device side, it will automatically bound device to account, otherwise, need manually bound. [See IOTBridge chapter for details to get Service Id and User Id.](#)
 - ◆ IOTBridge Server Addr: Show IOTBridge server information.
- Communication: Virtual Path Communication relevant setting. Normally keep default.
- Email Alarm: Alarm when device offline.
- Others: Other settings.
 - ◆ Language: Chinese or English.
 - ◆ Start up to Tray: Minimize to pallets at startup
 - ◆ Auto Upgrade: Auto upgrade.
 - ◆ Upgrade: click to upgrade when tools have new version.
- Default Setting: Restore tool setting to default.

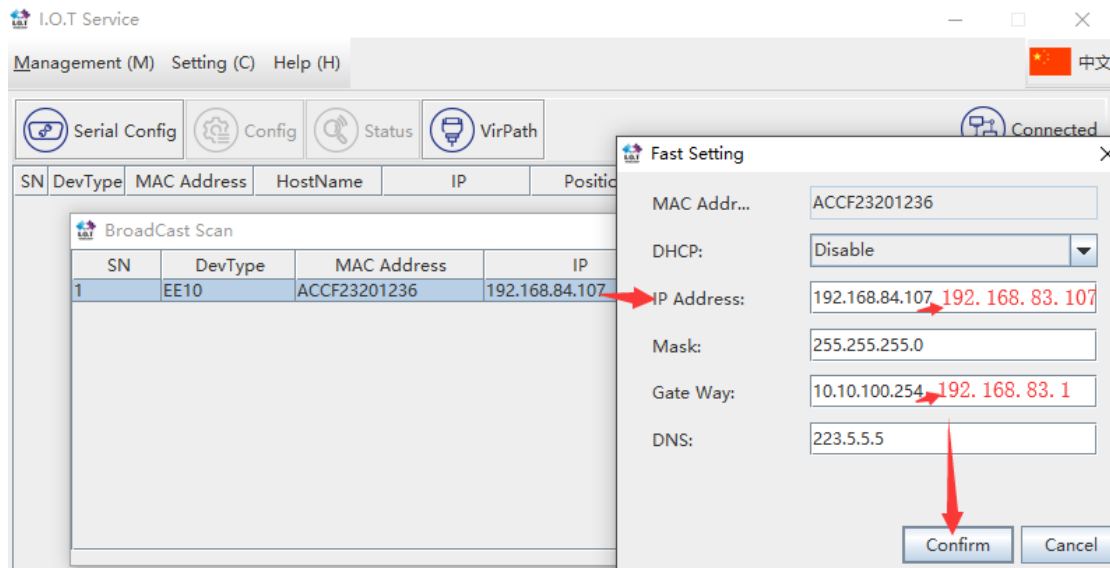


- **Add Device:** Add remote device under Service Id (The User Id should first be written via Cli SYS/UserID command), if IOTService locally scan find device, it will be added automatically.

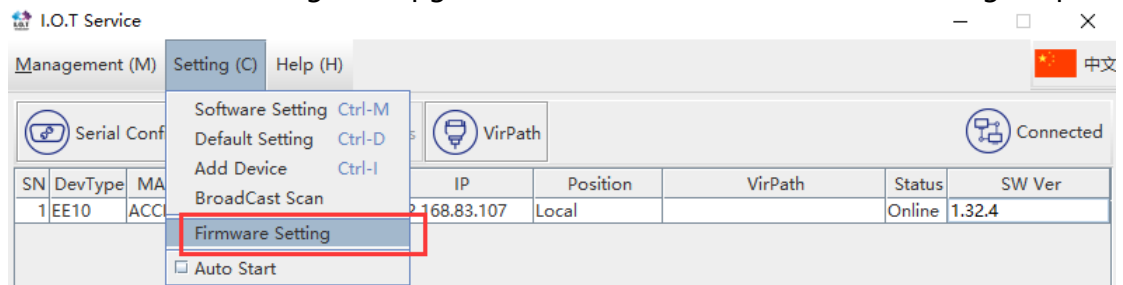


- **BroadCast Scan:** Send 255.255.255.255 broadcast packet to search device. This is useful when forgot device static IP. Ex, in subnet mask 255.255.255.0 device set to 192.168.84.XXX, but router is 192.168.83.XX, use this broadcast scan to search device and modify device IP to 192.168.83.XXX, then the device will show in the IOTService main page.

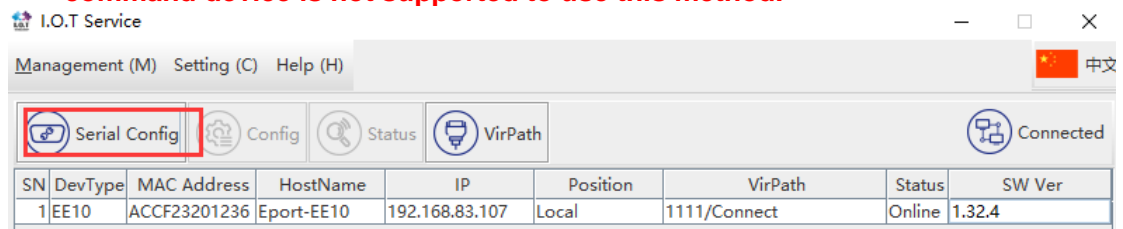




- Firmware Setting:OTA upgrade device, more details in the following chapter.



- Serial Config:Config device via UART, **only support AT command device(G10, G11, G12, EG10, EG11, EG40, EG41, G43, HF2111A, HF2411). Cli command device is not supported to use this method.**



I.O.T Service Serial

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

PC Serial Para
COM: COM3 Baudrate: 115200 Data Bits: 8 Parity: NONE Stop Bits: 1

DUT Para

UART Para
UART No: Baudrate: 57600 Data Bits: 8 Parity: NONE Stop Bits: 1
Flow Control: Disable UART Protocol: NONE
HeartBeat Time: HeartBeat Serial: ...

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

SIM Para
IMEI: ICCID:
Status: RSSI: Refresh

Others
ModuleSN: Welcome: HostName:
APN: APN User: APN Passw...
Detail

Clear Send

- VirPath: The virtual channel, virtual serial port information. Show status.

I.O.T Service

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

Serial Config Config Status VirPath Connected

SN	DevType	MAC Address	HostName	IP	Position	VirPath	Status	SW Ver
1	EE10	ACCF23201236	Eport-EE10	192.168.83.107	Local	1111/Connect	Online	1.32.4

VirPath List

Vircom: 1111 Routuart, Connected

ACCF23201236 COM1 RX:0, TX:0

- Connected: the status of connecting to our IOTBridge server.

I.O.T Service

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

Serial Config Config Status VirPath **Connected**

SN	DevType	MAC Address	HostName	IP	Position	VirPath	Status	SW Ver
1	EE10	ACCF23201236	Eport-EE10	192.168.83.107	Local	1111/Connect	Online	1.32.4

- DeviceType:device name. This name can be changed by cli command (SYS/CustomerId)
- Position:Show device position.
- VirPath:Show virtual path status.

I.O.T Service

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


Serial Config Config Status VirPath Connected

SN	DevType	MAC Address	HostName	IP	Position	VirPath	Status	SW Ver
1	EE10	ACCF23201236	Eport-EE10	192.168.83.107	Local	1111/Connect	Online	1.32.4

4.2. Device Status Interface

- Device Status: Indicates the device information, including software version, network, serial port and socket communication status.
 - Reload button: Restore parameter to the factory parameter.
 - Restart button: Restart product
 - Edit button: Enter into parameter setting interface

Device Status



Product ID: EE10

Software Version: 1.32.4

RTC Time: NTP Disabled

Up Time: 0-Day 1:1:57

Total Free Memory: 19144

Max Block Size: 15152

Network

HostName: Eport-EE10

DHCP: Disable

IP Address: 192.168.83.107

Mask: 255.255.255.0

Gate Way: 192.168.83.1

MAC Address: ACCF23201236

UART

UART No: UART 1

Config: 115200,8,1,NONE

Recv Bytes: 0 Recv Frames: 0

Send Bytes: 0 Send Frames: 0

Fail Bytes: 0 Fail Frames: 0

SOCKET

SOCKET Name: 1111

Protocol: UDP-CLIENT

Status: Disconnect

Server IP: 192.168.83.106

Recv Bytes: 0 Recv Frames: 0

Send Bytes: 0 Send Frames: 0

Fail Bytes: 0 Fail Frames: 0

Reload

Restart

Edit

4.3. Edit Page

Device Setting X

System User: <input type="text" value="admin"/> Password: <input type="text" value="admin"/> HostName: <input type="text" value="Eport-EE10"/> DHCP: <input type="text" value="Disable"/> IP Address: <input type="text" value="192.168.83.107"/> Mask: <input type="text" value="255.255.255.0"/> Gate Way: <input type="text" value="192.168.83.1"/> DNS: <input type="text" value="223.5.5.5"/>	SOCKET SOCKET Name: <input type="text" value="1111"/> Protocol: <input type="text" value="UDP-CLIENT"/> Server Addr: <input type="text" value="192.168.83.106"/> Server Port: <input type="text" value="28987"/> Local Port: <input type="text" value="35895"/> Keep Alive: <input type="text" value="60"/> Time Out: <input type="text" value="0"/> Rout: <input type="text" value="uart"/> Buffer Size: <input type="text" value="1400"/> <input type="button" value="New SOCKET"/> <input type="button" value="SOCKET Del"/>
UART UART No: <input type="text" value="UART 1"/> Baudrate: <input type="text" value="115200"/> Data Bits: <input type="text" value="8"/> Stop Bits: <input type="text" value="1"/> Parity: <input type="text" value="NONE"/> Flow Control: <input type="text" value="Disable"/> Buffer Size: <input type="text" value="512"/>	<input type="button" value="Confirm"/> <input type="button" value="Cancel"/> <input type="button" value="Export"/> <input type="button" value="VirPath"/> <input type="button" value="Import"/> <input type="button" value="Detail"/> <input type="button" value="F-Set Update"/> <input type="button" value="F-Set Clear"/>

- ◆ New SOCKET: Create new SOCKET.
- ◆ SOCKET Del: Delete current SOCKET
- ◆ Confirm: Confirm modified parameter
- ◆ Cancel: Exit edit page
- ◆ Export: Export current config file. This file can be used to config another device.
- ◆ Import: Import config file.
- ◆ VirPath: Set virtual path function, the following chapter will describe this function.
- ◆ Detail: More advanced parameter settings.

Setup Detail

System

Telnet:

Telnet Port:

Telnet Echo:

Embedded Web:

Web Port:

NTP:

NTP Server:

NTP Port:

NTP GMT:

WiFi Roaming

WiFi Roaming:

Scan RSSI Threshold:

Connect RSSI Threshold:

UART

UART No:

UART Protocol:

Frame Length:

Frame Time:

Tag Enable:

Tag Start:

Tag End:

SW Flow Control:

Xon:

Xoff:

Cli Getin:

Serial-String:

Cli Wait Time:

Gap Time:

SOCKET

SOCKET Name:

Security:

Security Key:

Connect Mode:

Stop Serial:

HeartBeat:

HeartBeat Time:

HeartBeat Serial:

Regist Mode:

Regist Code:

Max Client NumMax ...

- Edit Script: HIS script function. See following for more detail.

<http://www.hi-flying.com/download-center-1/application-notes-1/download-item-his-script>

Edit Script

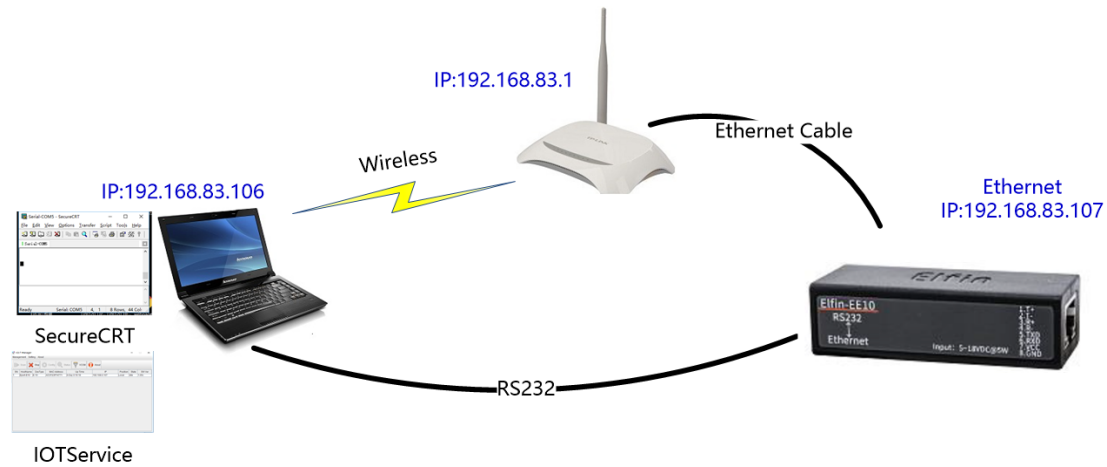
- ◆ F-Set Update: Set the current parameters as factory setting, when do reload operation, restore to this saved setting.
- ◆ F-Set Clear: Clear the factory setting, when do reload operation, restore to the default factory setting.

Notes:.

Some device has hardware protect DIP switch(HF5111A/HF5111B/HF2211), when the protect DIP switch is set to "on" , then some setting of the tools is forbidden.

4.4. Test CASE

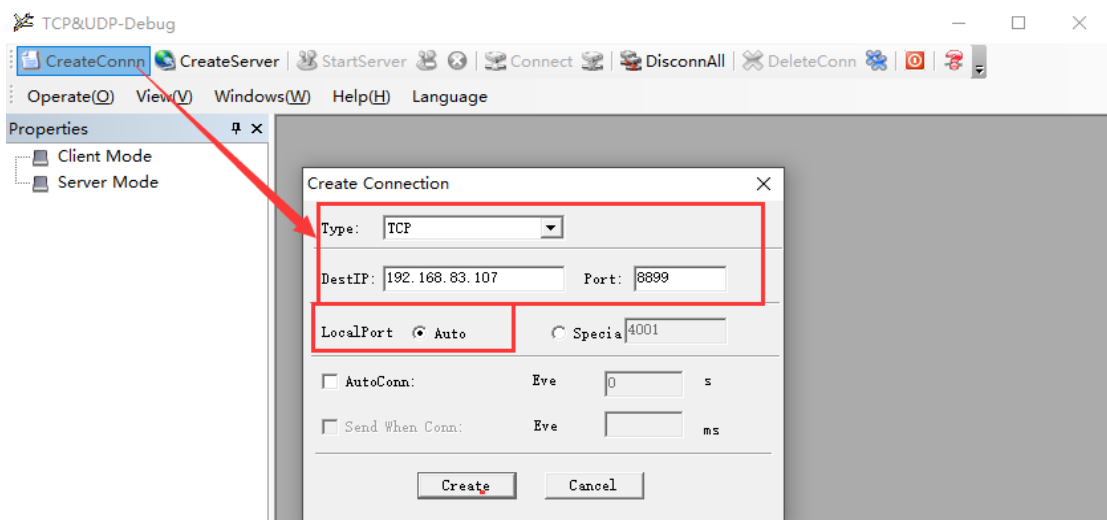
4.4.1. EVK Test Topology



4.4.2. TCP Server Test

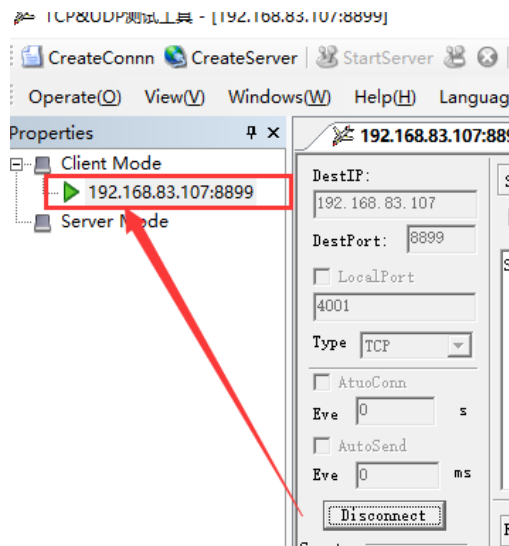
Step 1: Open TCP&UDP test tool and build TCP connection as following steps.

- Products provides with a built TCP server (Port 8899)
- TCP&UDP test tool can be downloaded from website:
 - http://www.hi-flying.com/index.php?route=download/category&path=1_4
- DestIP: Destination IP address
- Port: Destination Port

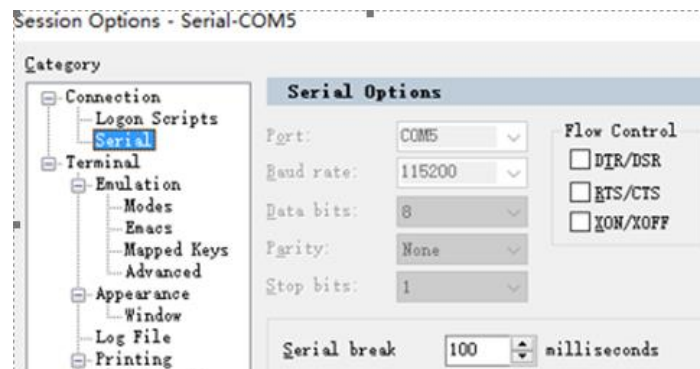


Step 2: Click Connect to build TCP connection.

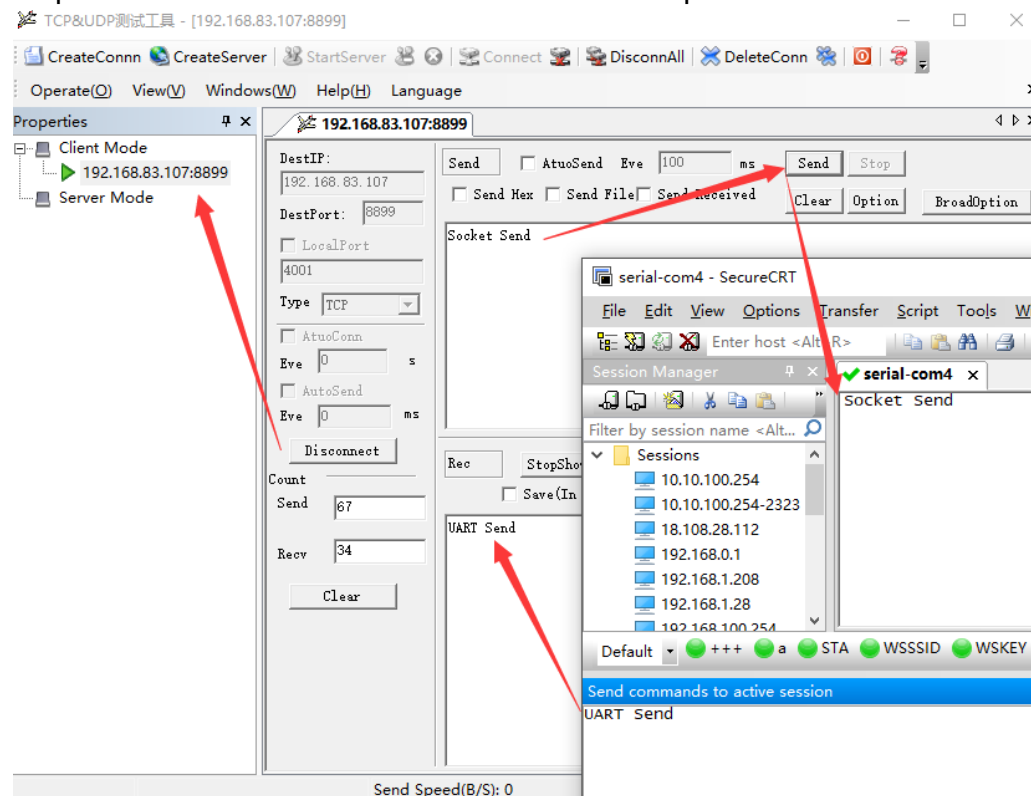
- After build successfully, the left arrow will turn to green.



Step 3: Open the serial port as following parameters (115200 baud rate default)



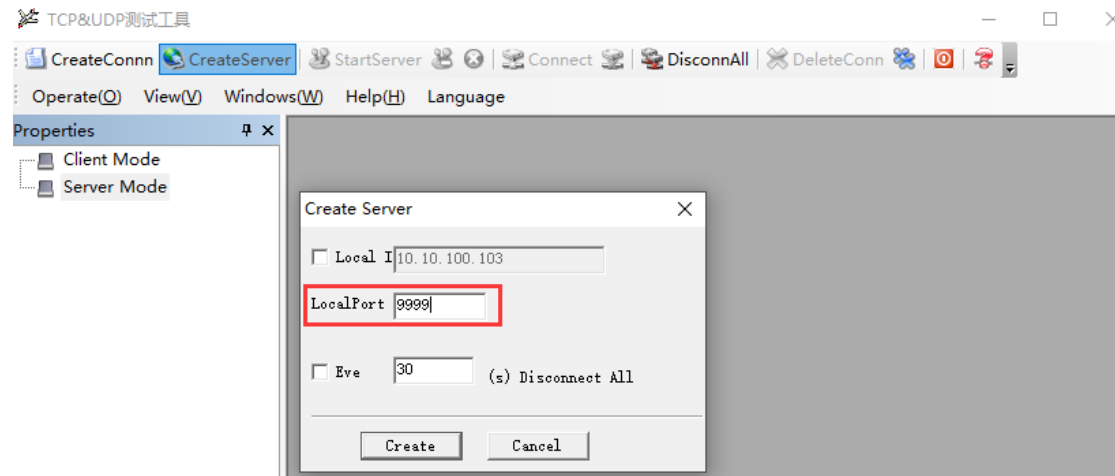
Step 4: Transmit data between TCP tool and serial port tool.



4.4.3. TCP Client Test

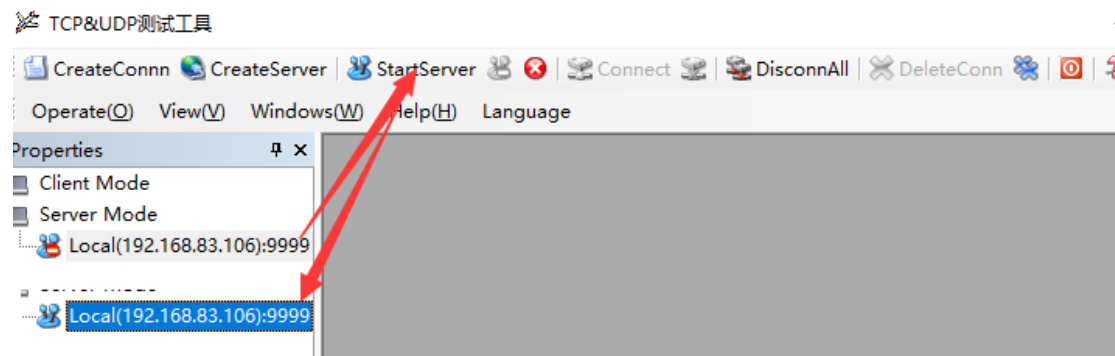
Step 1: Open TCP&UDP test tool and build TCP connection as following steps.

- Local IP: PC IP address. Do not select it, tool will automatically recognize PC IP.
- Local Port: TCP Server port number



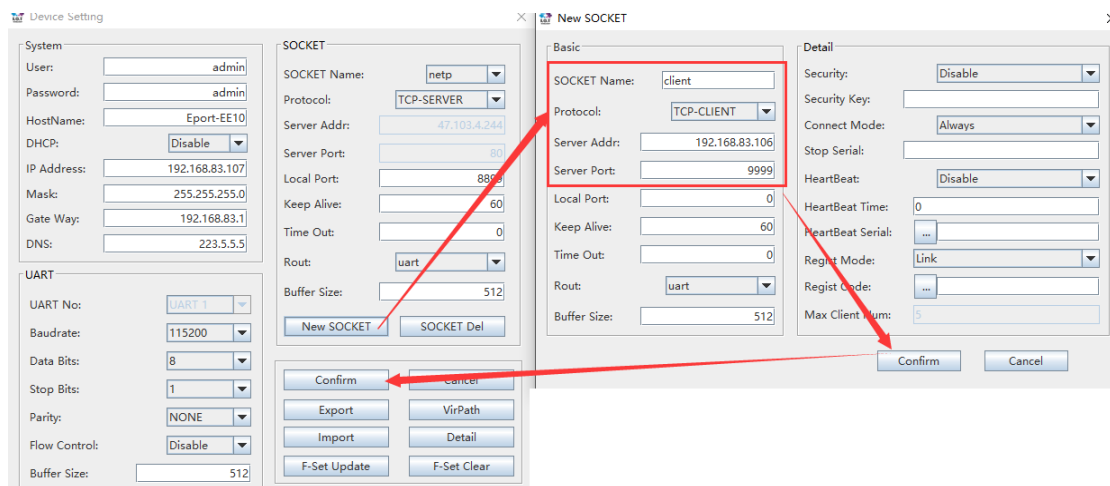
Step 2: Click StartServer to launch PC TCP Server function

- After created successfully, the icon has the following changes.

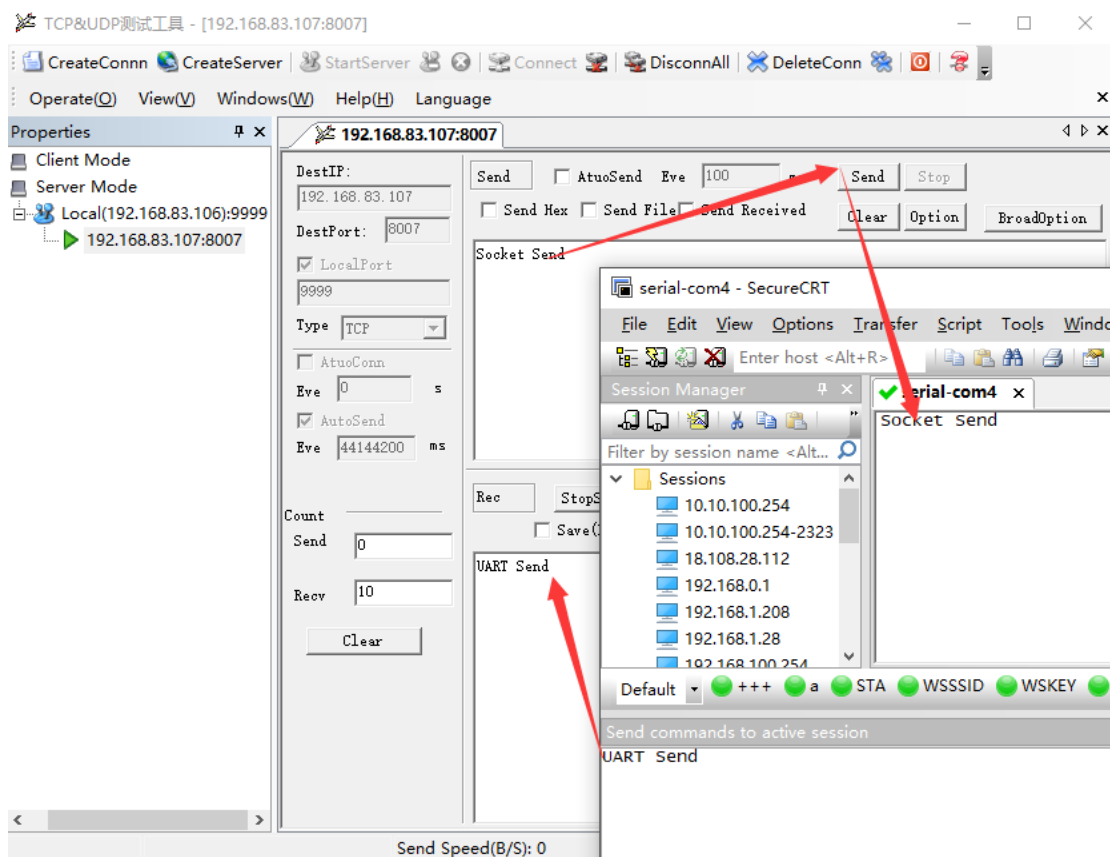


Step 3: Open IOTService tool and create socket to connect tool as following step.

- Socket Name: Socket name can be set randomly (differ from other sockets), maximum 5 sockets.
- Protocol: Select TCP-Client
- Server Addr: Server IP address, fill in the above PC IP
- Server Port: Server port number, fill in the above PC port (9999)

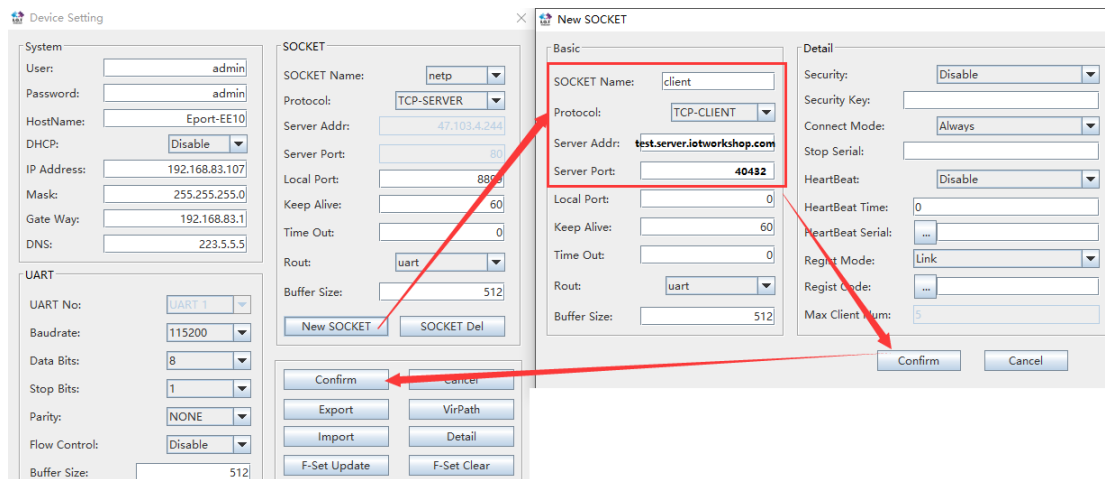


Step 4: Transmit data between TCP tool and serial port tool

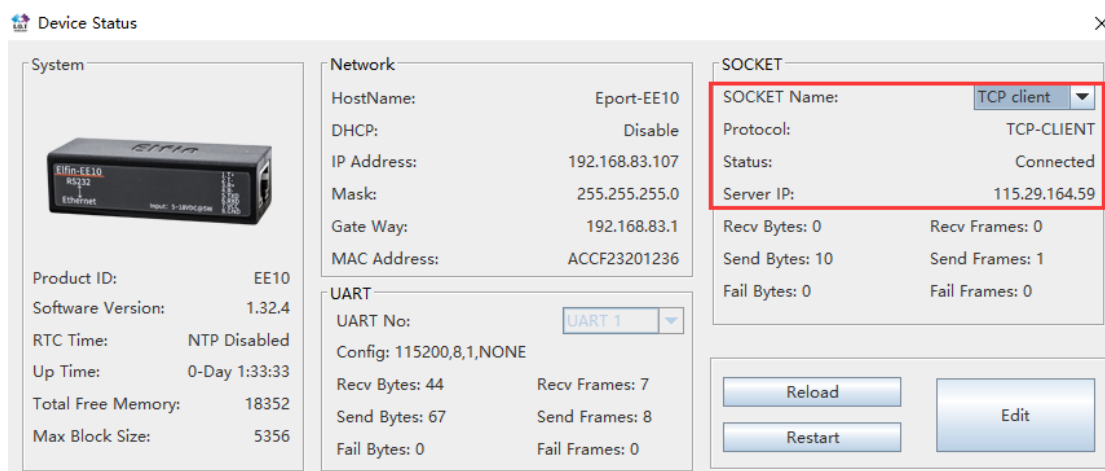


4.4.4. TCP Client Connect to Remote Test Server

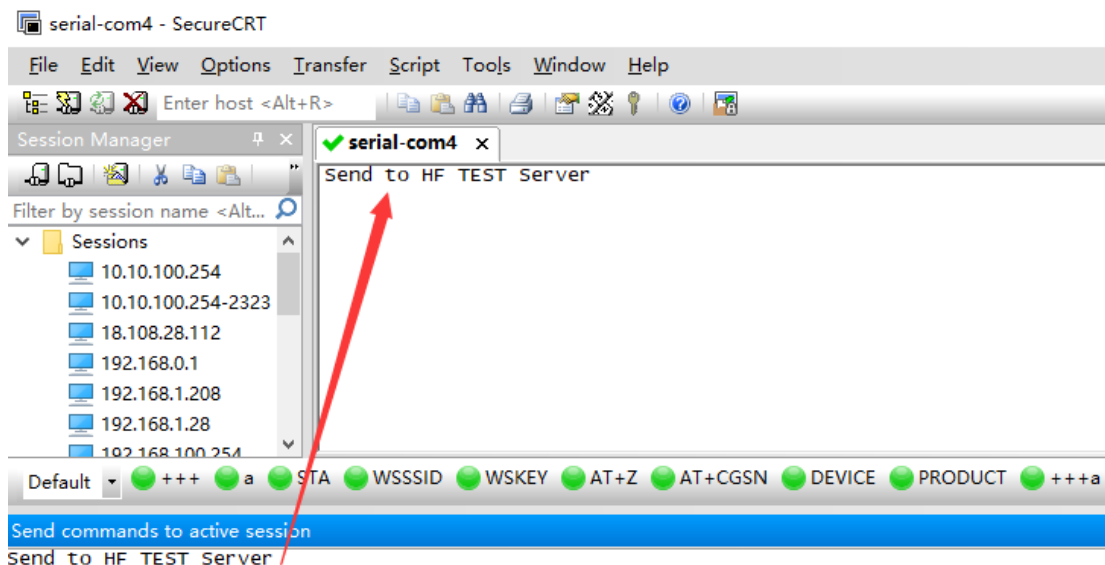
Step 1: Open IOTService and create TCP client socket, HF test server: test.server.iotworkshop.com,TCP port: 404325, UDP port: 40431



Step 2: Device status page to confirm if server is connected



Step 3: Serial port sends "Send to HF TEST Server" and the server will respond with the same data. The UART tools shows the server feedback packet.

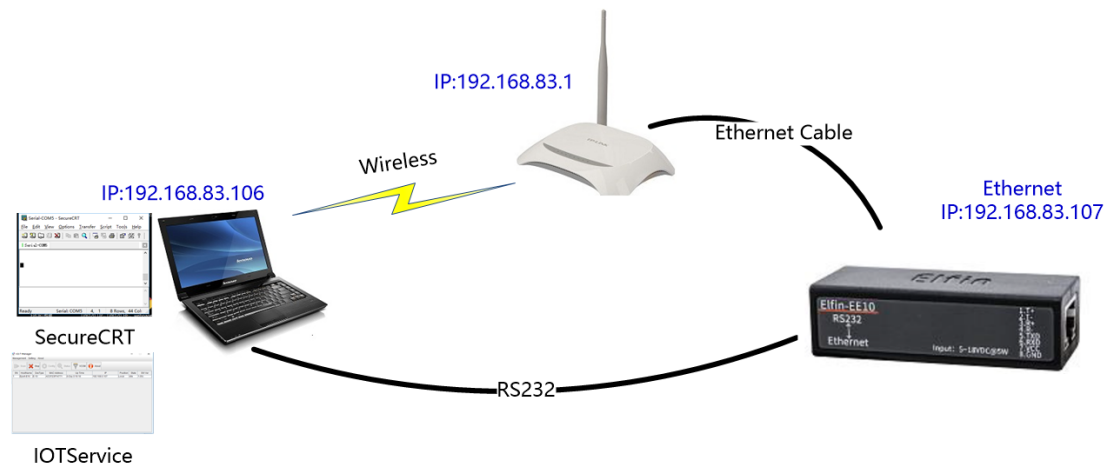


4.5. VIRTUAL Path Function

The virtual path uses the serial port or the network way to transfer the data locally or remotely. The two methods are introduced.

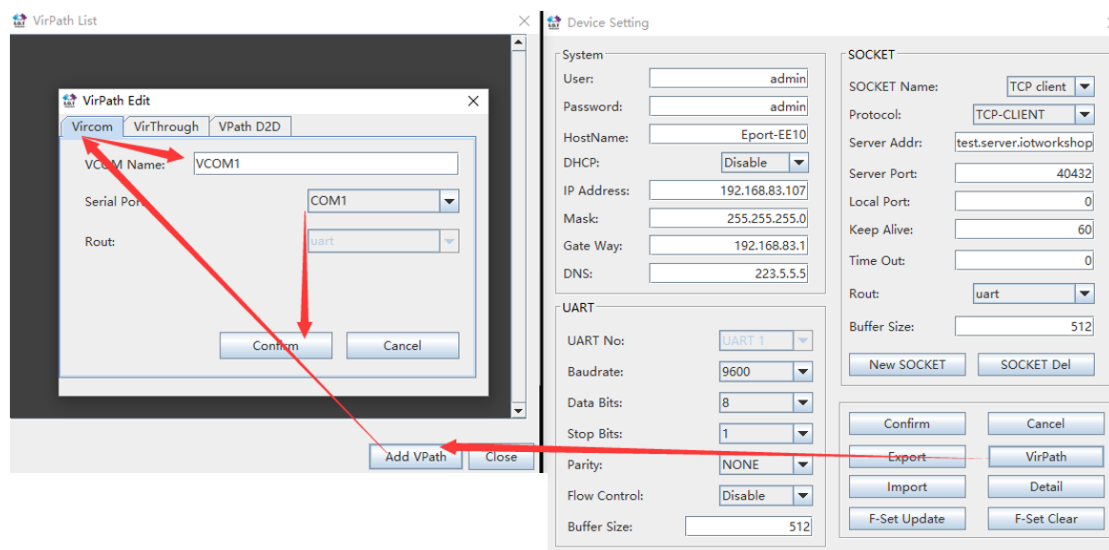
4.5.1. Virtual Com Local Network Communication

Virtual com is used for communication from PC COM to device COM. Use the following topology for test.

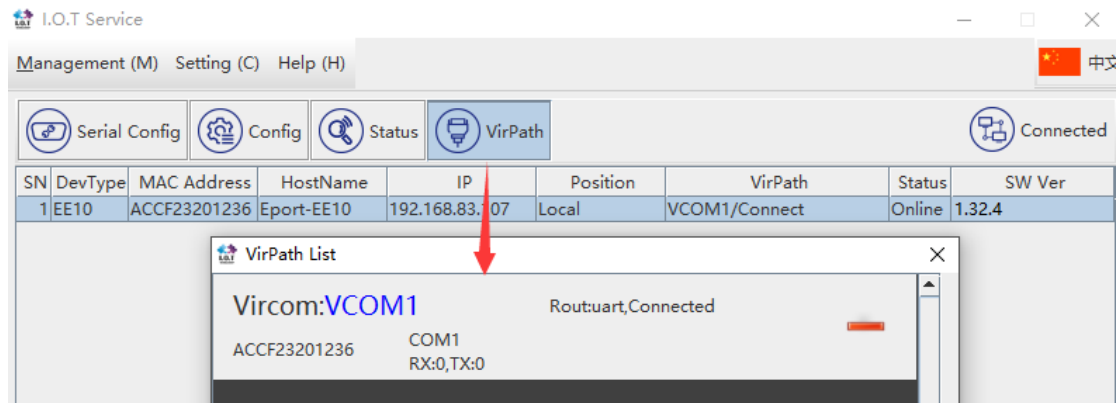


Step 1: Open IOTService Tool and create virtual com as follows:

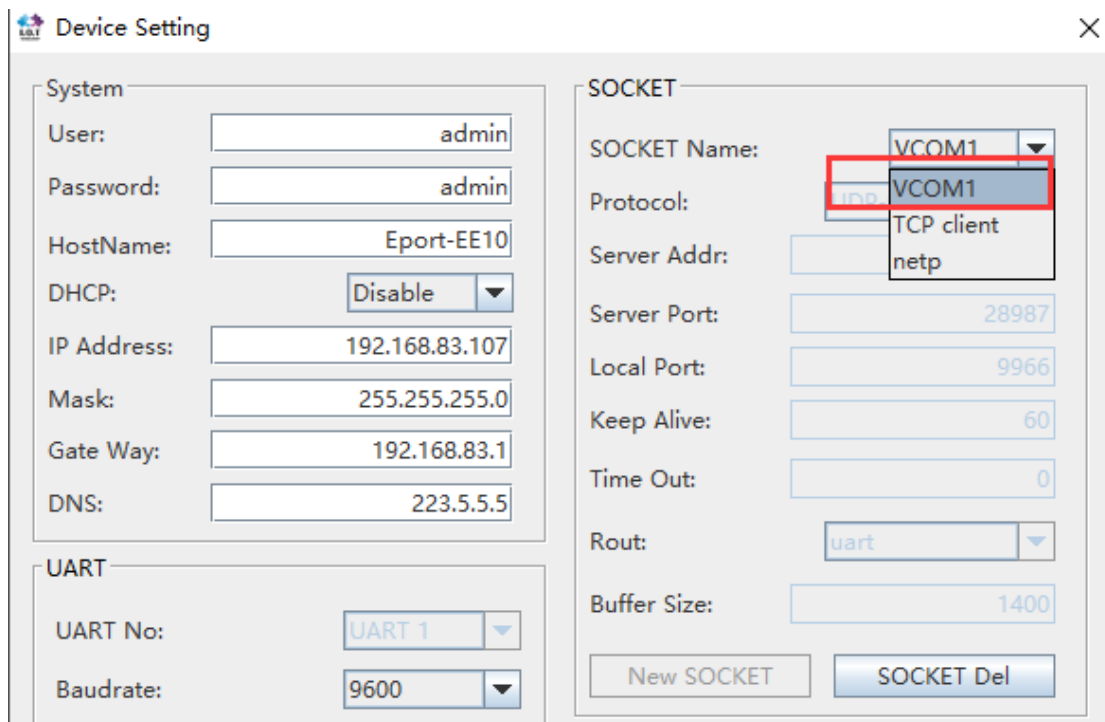
- Add Vpath: Add the virtual path.
- VCOM Name: Virtual COM name. **it should be unique.**
- Serial Port: Virtual COM serial number.
- Rout: The data transfer route after receiving from virtual COM, usually is sent to hardware uart, but can also be set to other created socket.



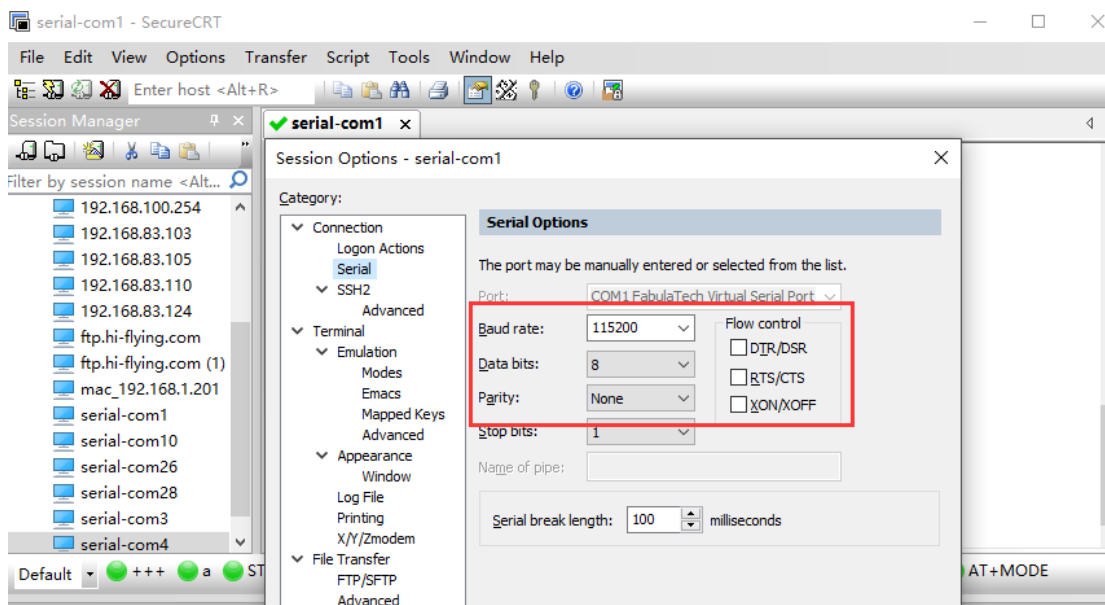
Step 2: Check status in the VirPath menu. It shows connection status and data transfer status. Click the red button to delete the virtual COM.



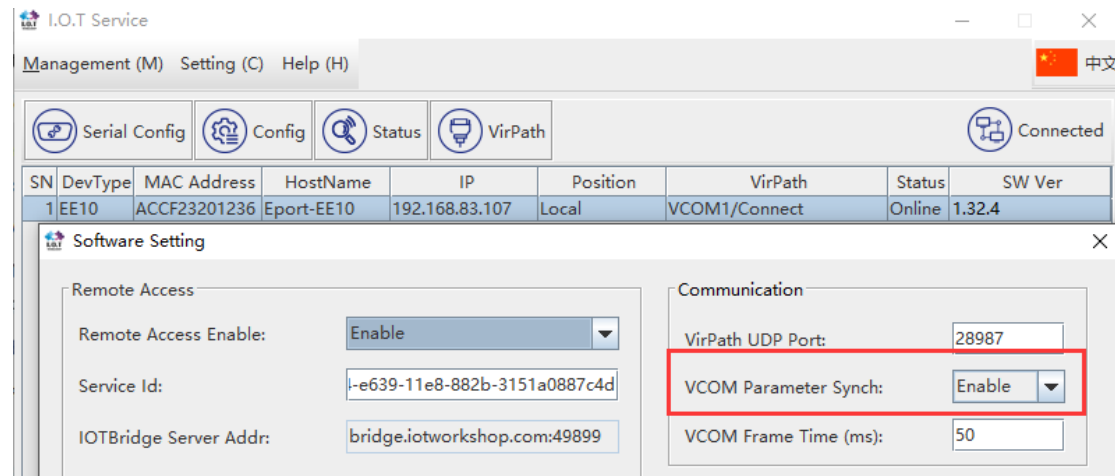
The virtual COM will occupy one Socket resource.



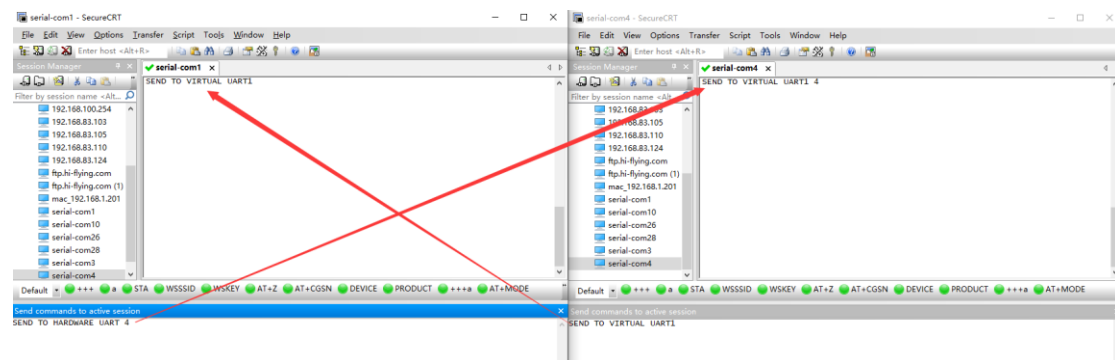
Step 3: Open serial port tool and set virtual port baud rate.



Device supports VCOM parameter synchronize function, if virtual COM UART parameters changed, the hardware device baud rate also changed. This function can be disabled.

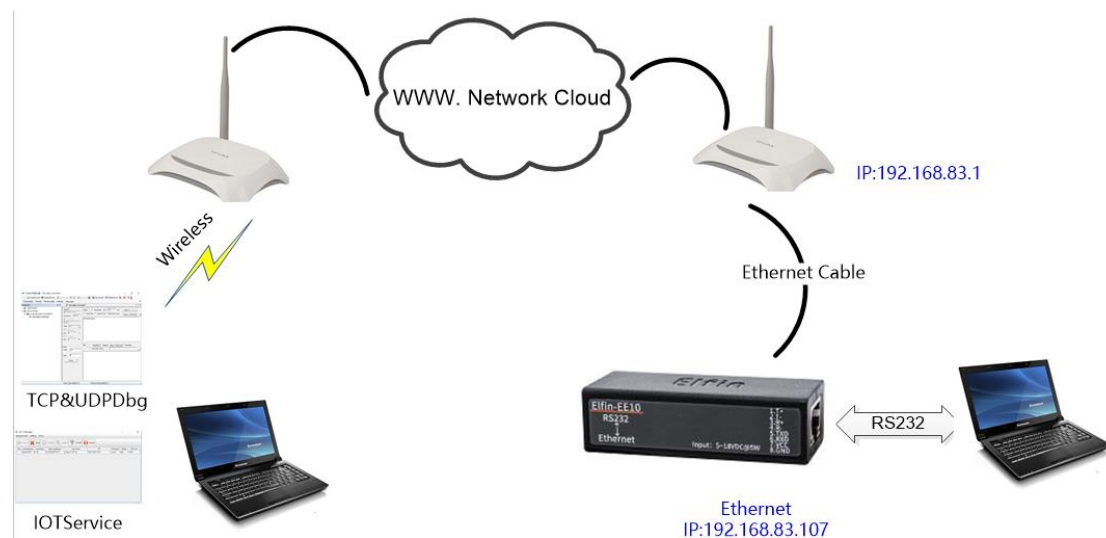


Step 4: Send and receive data

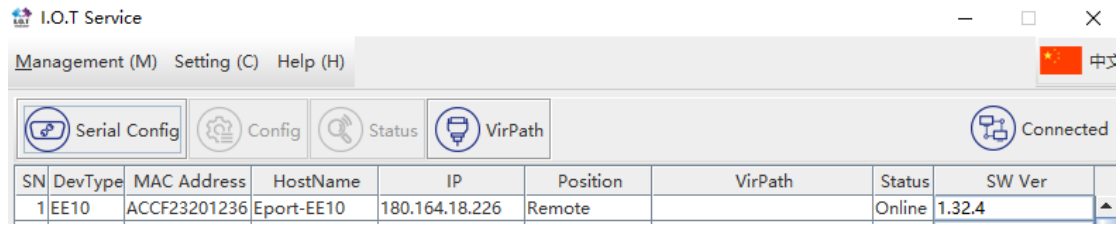


4.5.2. Virtual COM Remote Communication

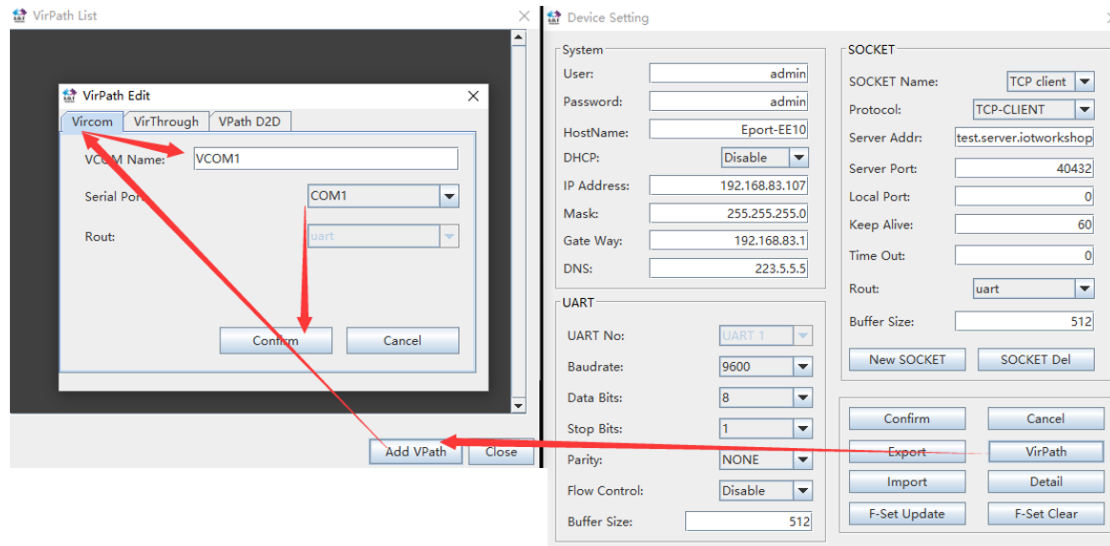
The following device is in the remote environment and UART connect to PC, the two PC can also send/receive packet to each other via virtual COM.



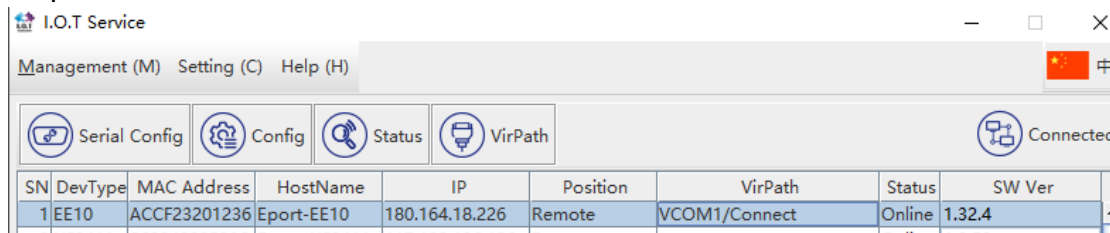
Step 1: Bound device to IOTBridge account. Refer to IOTBridge chapter for detail.



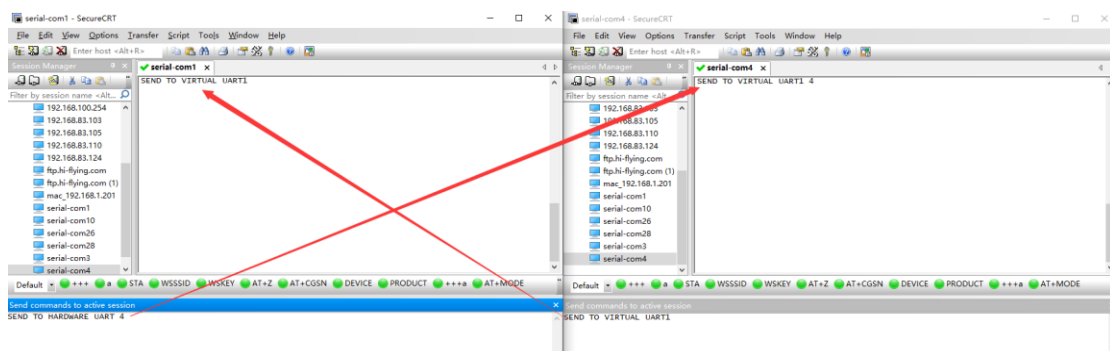
Step 4: Create Virtual Com. The setting is the same as previous.



Step 3: It show VCOM1/Connect, means virtual COM works OK.

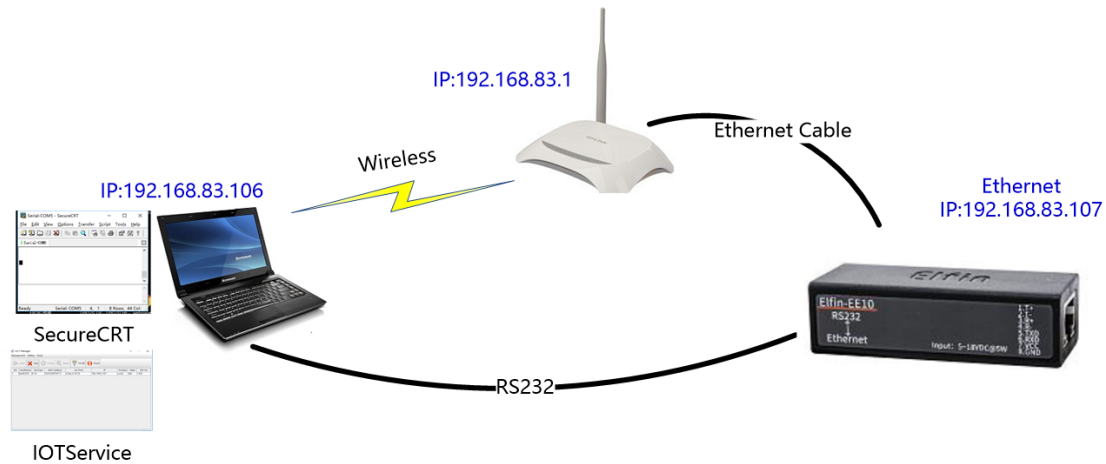


Step 4: Sending and receiving serial port data



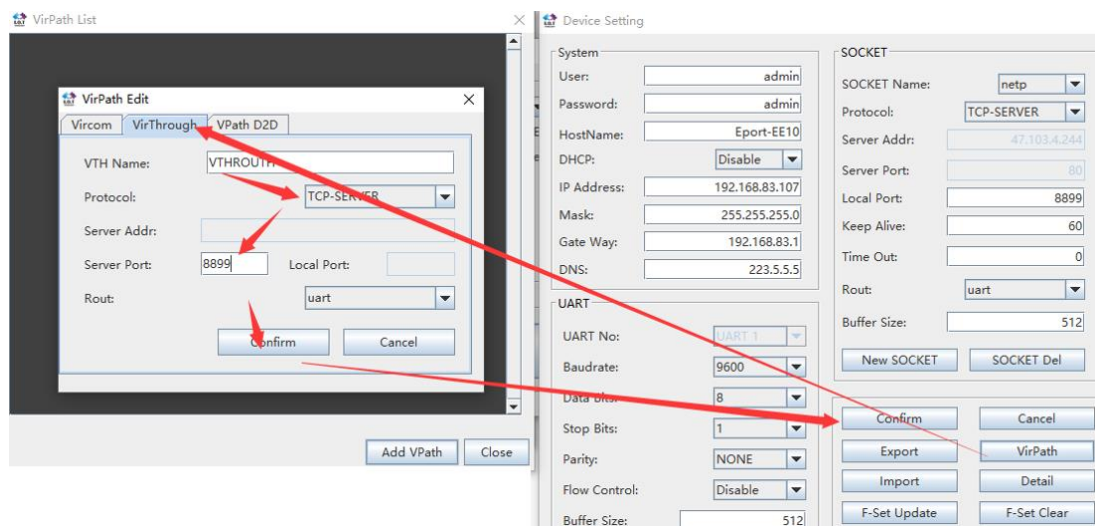
4.5.3. Virtual Through Local Communication

Virtual Through can use TCP or UDP method to transfer data with device. (While virtual COM use serial COM)

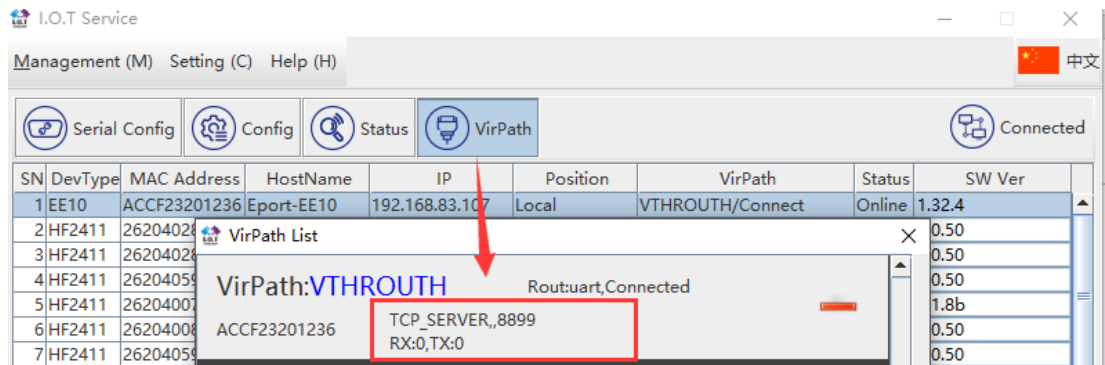


Step 1: Open IOTService tools, follow the following steps to create virtual through path.

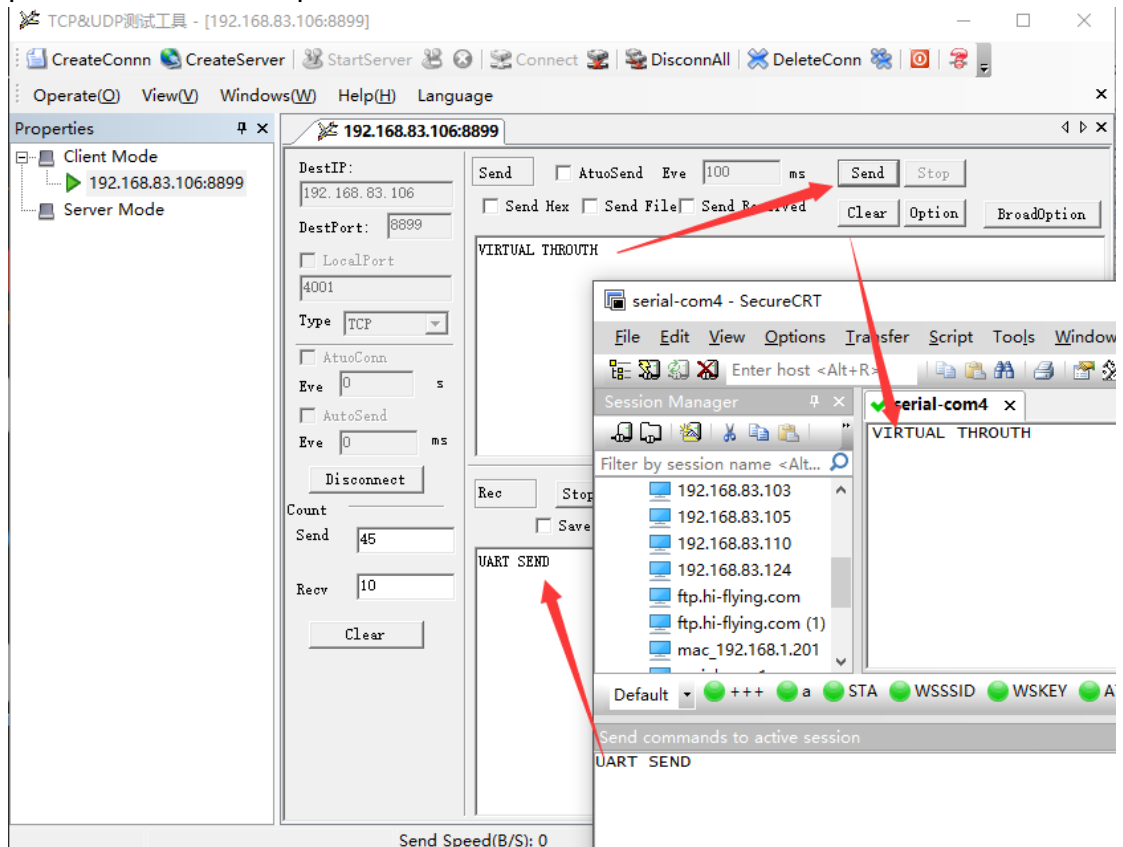
- VTH Name: The name of virtual through, must be unique.
- Protocol: TCP Server, TCP Client or UDP.
- Server Addr: PC itself IP for TCP Server. Destination IP for TCP Client and UDP.
- Server Port: Server Port.
- Rout: Packet destination route, usually is UART, can also set to other Socket created in device.



Step 2: Check the created Virtual Through information. It created it TCP Server with port number 8899.

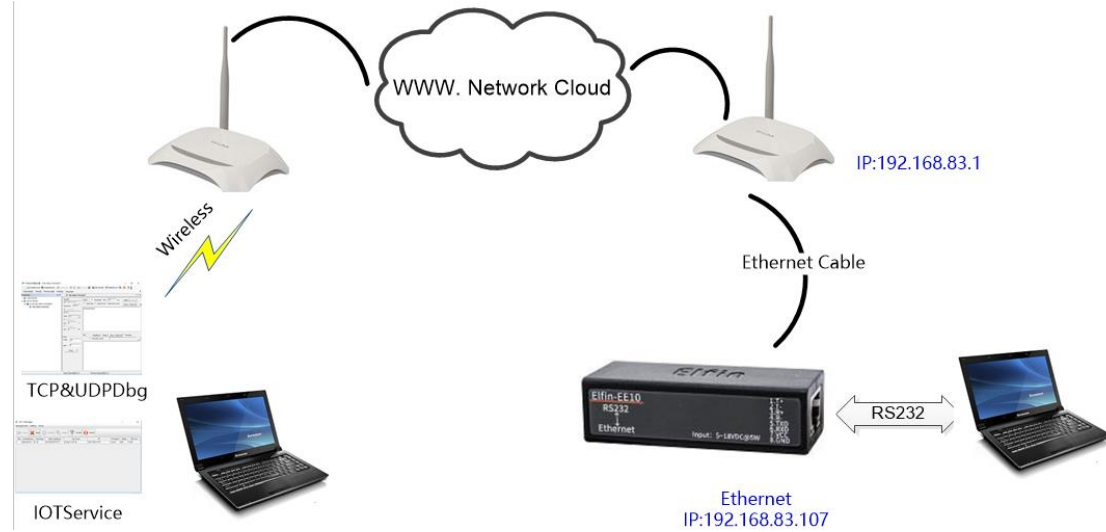


Step 3: PC create a TCP client, connect Virtual Through, set destination PC IP and port 8899, then send packet to UART.

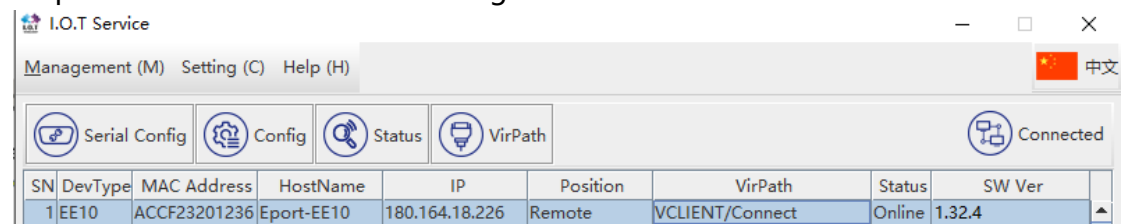


4.5.4. Virtual Through Remote Communication

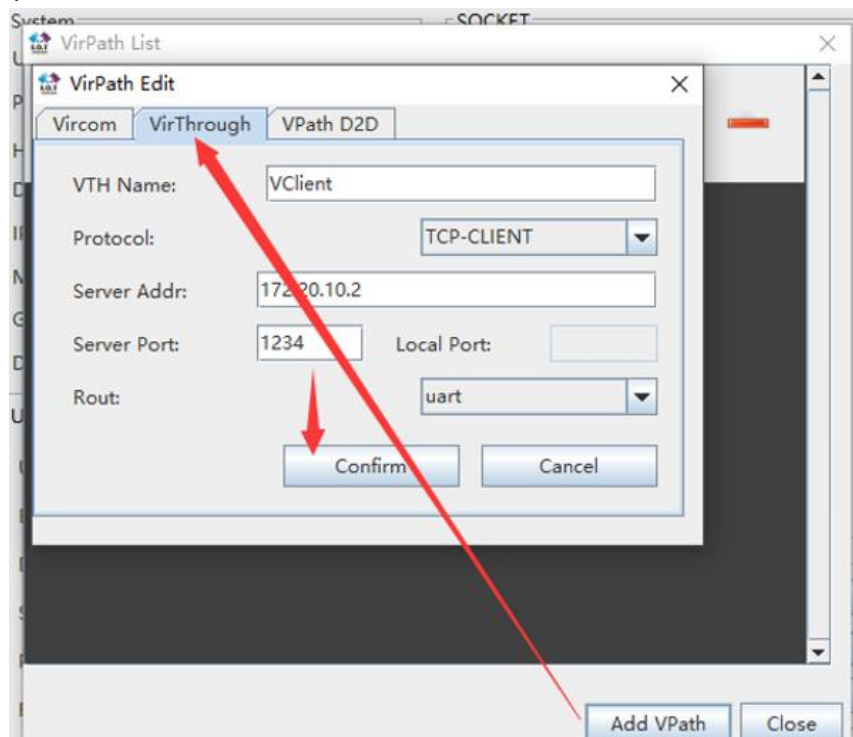
The following test case is in remote environment, the PC can create virtual through path to transfer data with remote PC.

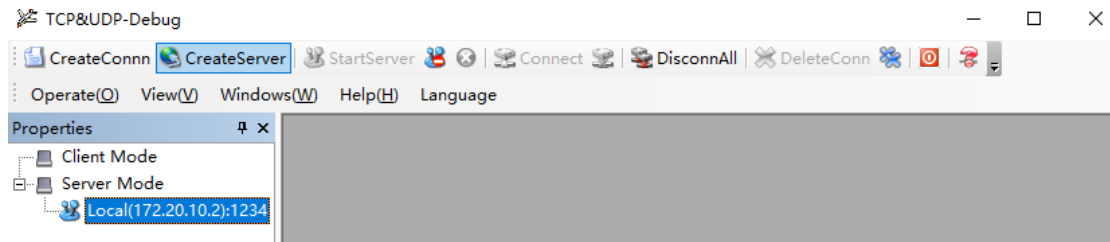


Step 1: Bound the device to IOTBridge account.

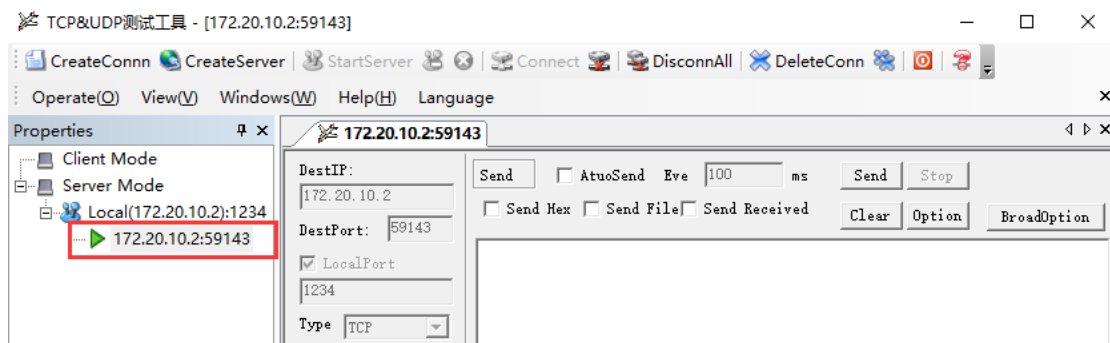
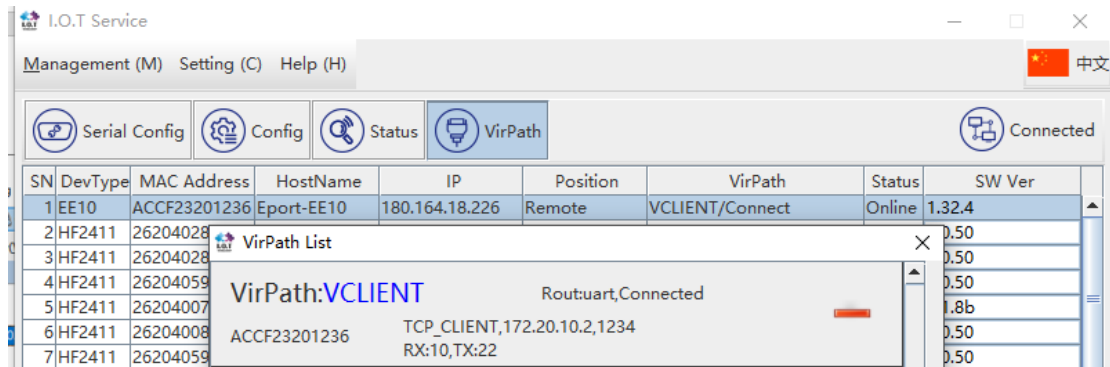


Step 2: Create the Virtual Through Path as following . Create a TCP Client and fill in the TCP Server information created by the TCP&UDP tools (PC IP 172.20.10.2 and port 1234)

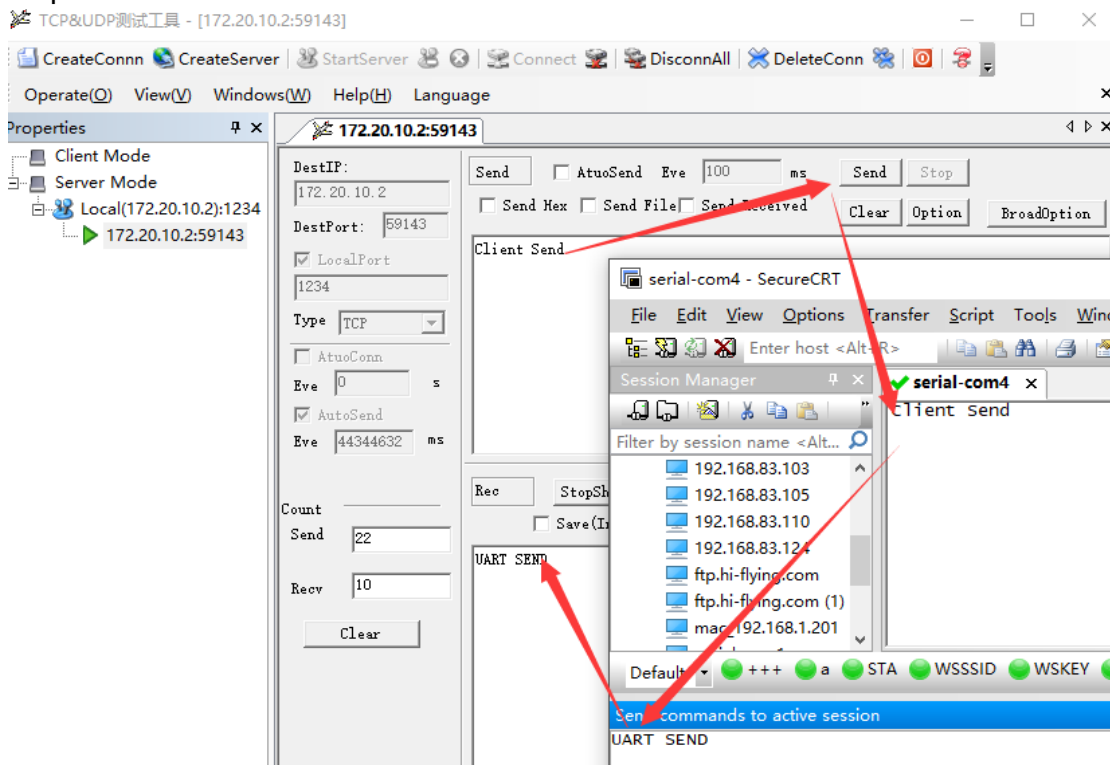




Step 3: Check Virtual Path Status.

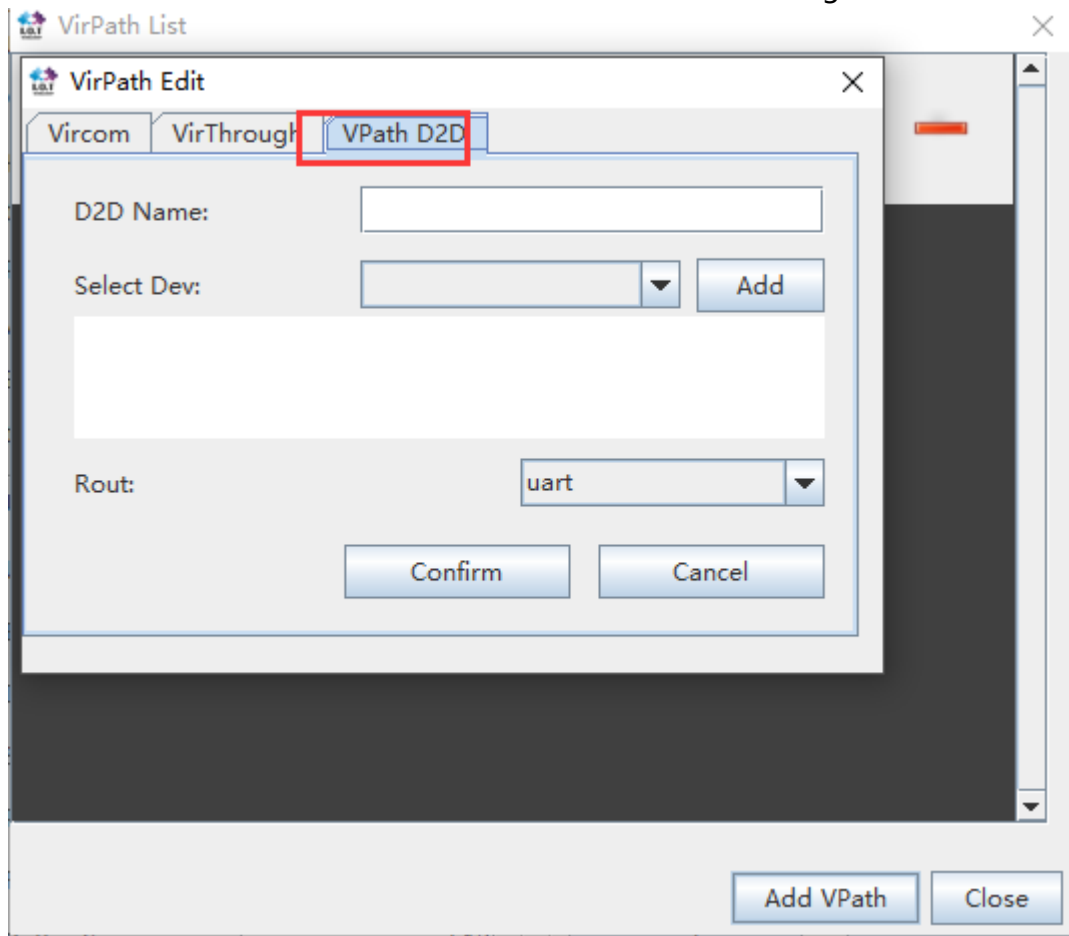


Step 4: Data transfer.



4.6. D2D Function

D2D is the used for device to device transmission via IOTBridge.



See following for this test case.

<http://www.hi-flying.com/download-center-1/application-notes-1/download-item-industry-products-application-manual-20190528>

5. IOTBRIDGE ALARM FUNCTION

5.1. Set IOTBridge Parameters

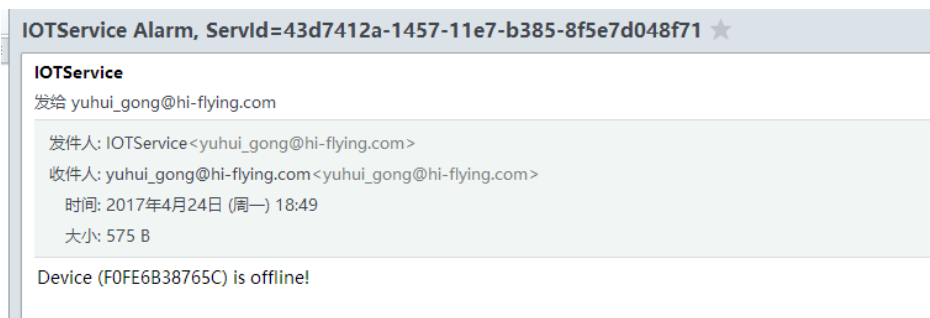
Remote Access	
Remote Access Enable:	Enable
IOTBridge Server Addr:	bridge.iotworkshop.com
Service Id:	5-7b57-11e7-a6a0-b7685b134cb1
Service Name:	My Service

5.2. Set Mail Information

When IOTBridge find device is off line, it will auto send mail to the mail address.

EMail Alarm	
EMail Alarm Enable:	Enable
SMTP Address:	smtp.hi-flying.com
SMTP Port:	25
E-mail Account:	yuhui_gong@hi-flying.com
E-mail Password:	xxxxxxx
E-mail Send List (eg. a@a.com;b@b.com):	
yuhui_gong@hi-flying.com;	

Example:



6. IOTBRIDGE CLOUD

IOT Bridge cloud is for customer to check device status in its account and used for remote setting and data transfer with IOTService tools. The user guide is as following.

Step 1: Open <https://www.iotworkshop.com/>



Step 2: Open I.O.T bridge and fill in the account information



Welcome to I O T Workshop!

IOT Bridge

超强P2P云解析 轻松云端管理



IOT Service

I.O.T Workshop I.O.T Forum Hiflying 关于我们

Step 3: Fill in the personal information.

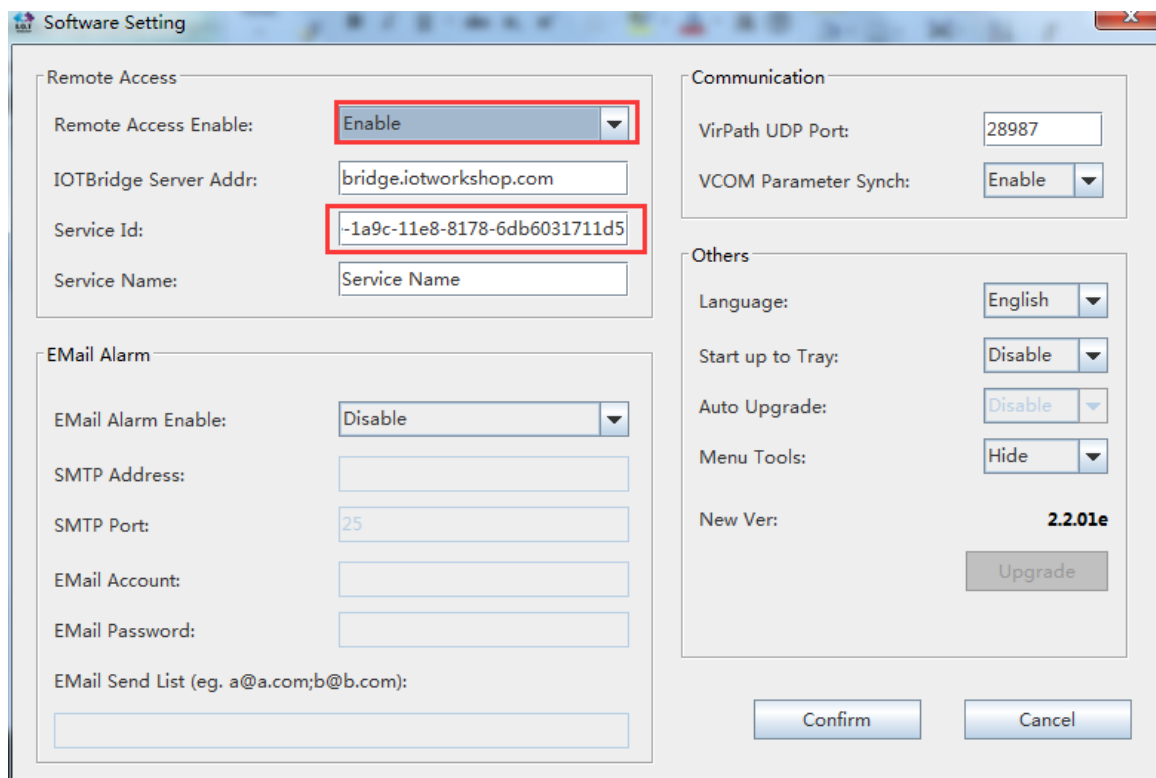
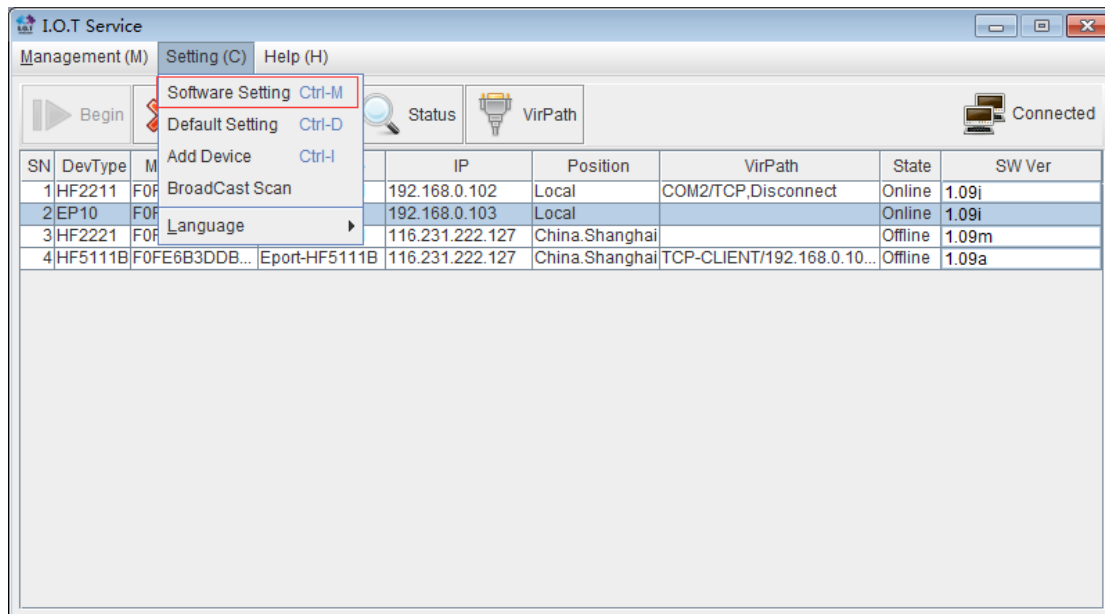
Step 4: After register success, fill in the account information(Service Id) in the IOTService tool.

The screenshot shows the IOT Bridge web interface. On the left is a dark sidebar with navigation links: 首页, 我的 UserID, 设备管理, I.O.T Service (highlighted), 我的信息, and 退出. The main content area is titled 'I.O.T Service' and has a '我的Service' button in the top right. Below the title are three buttons: 添加, 启用, and 删除. A table lists the services:

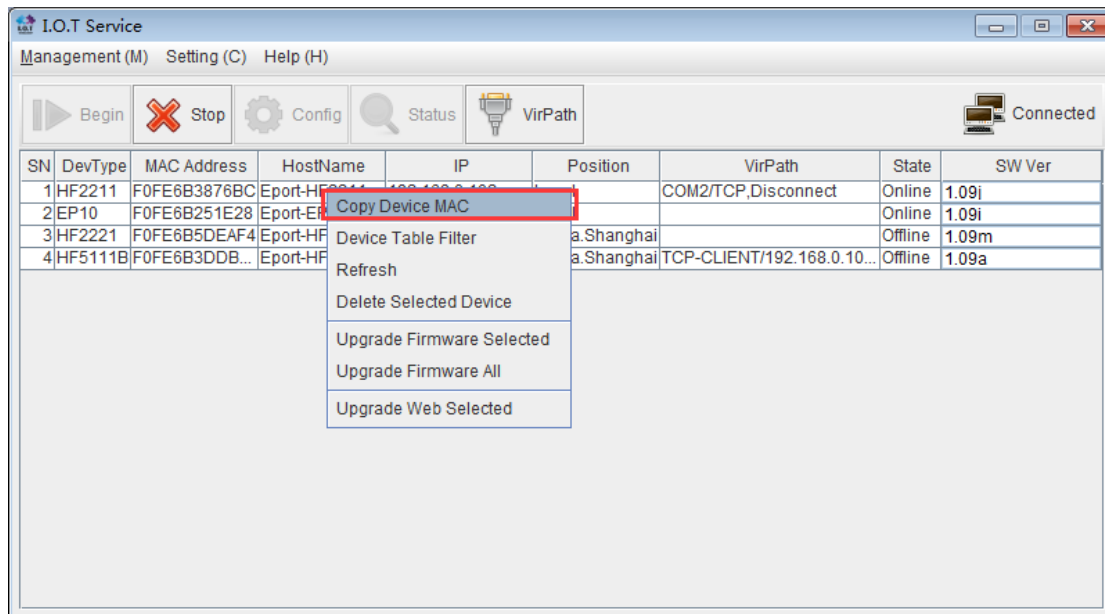
<input type="checkbox"/>	序号	Service ID	操作
<input type="checkbox"/>	1	a70875fe-1a9c-11e8-8178-6db6031711d5	<input type="button" value="查看"/> <input type="button" value="禁用"/> <input type="button" value="删除"/>

At the bottom right of the table area is a blue button labeled '1'.

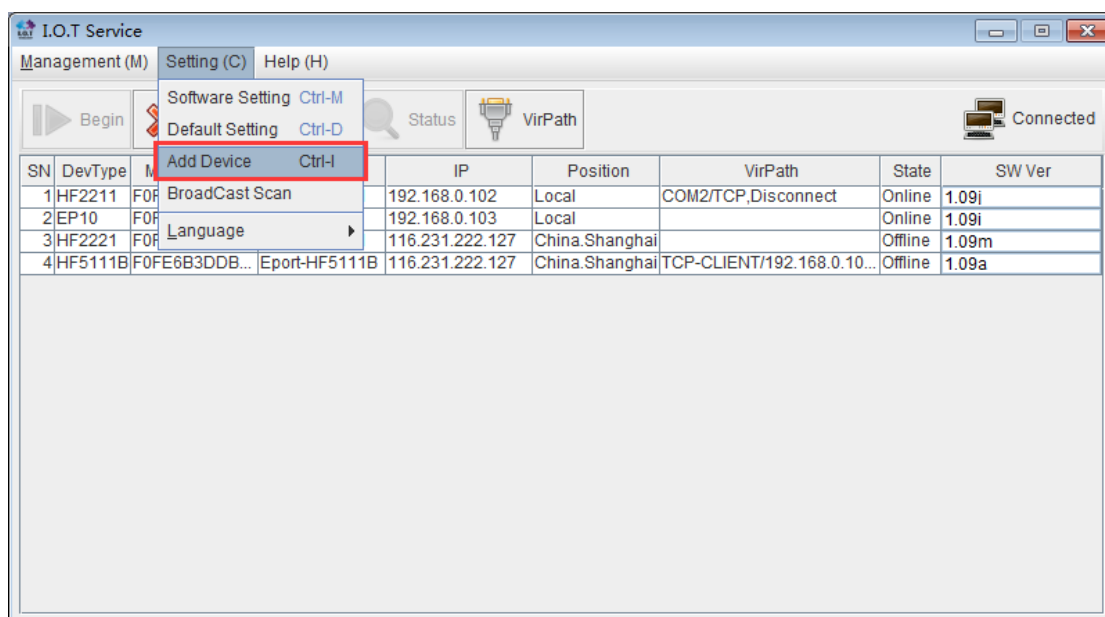
Step 5 : Fill Service Id in IOTService.

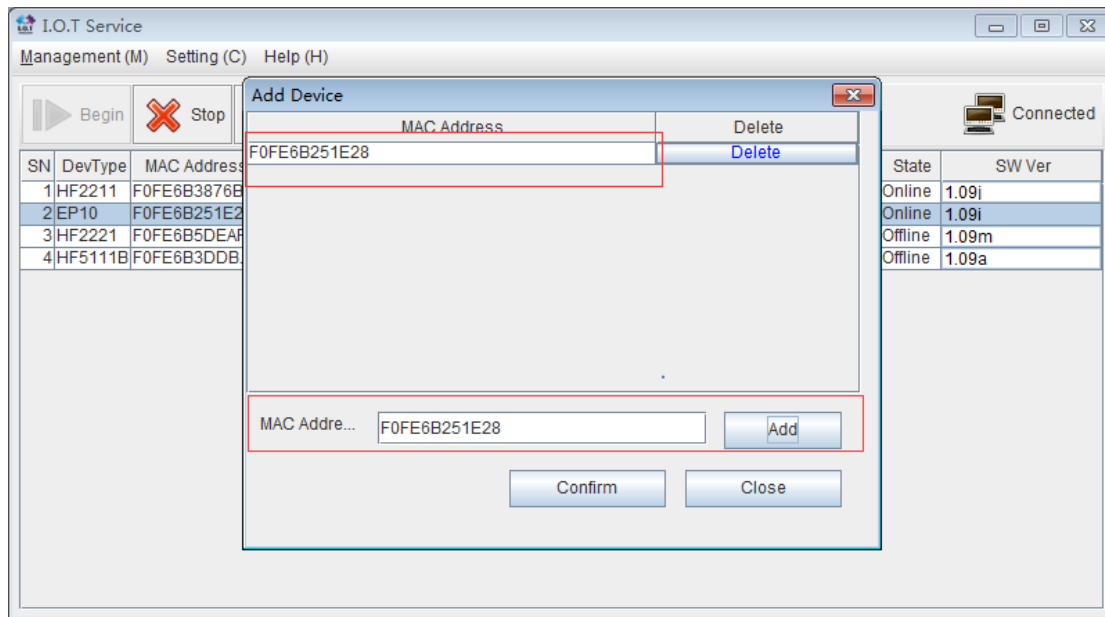


Step 6 :Copy device mac.

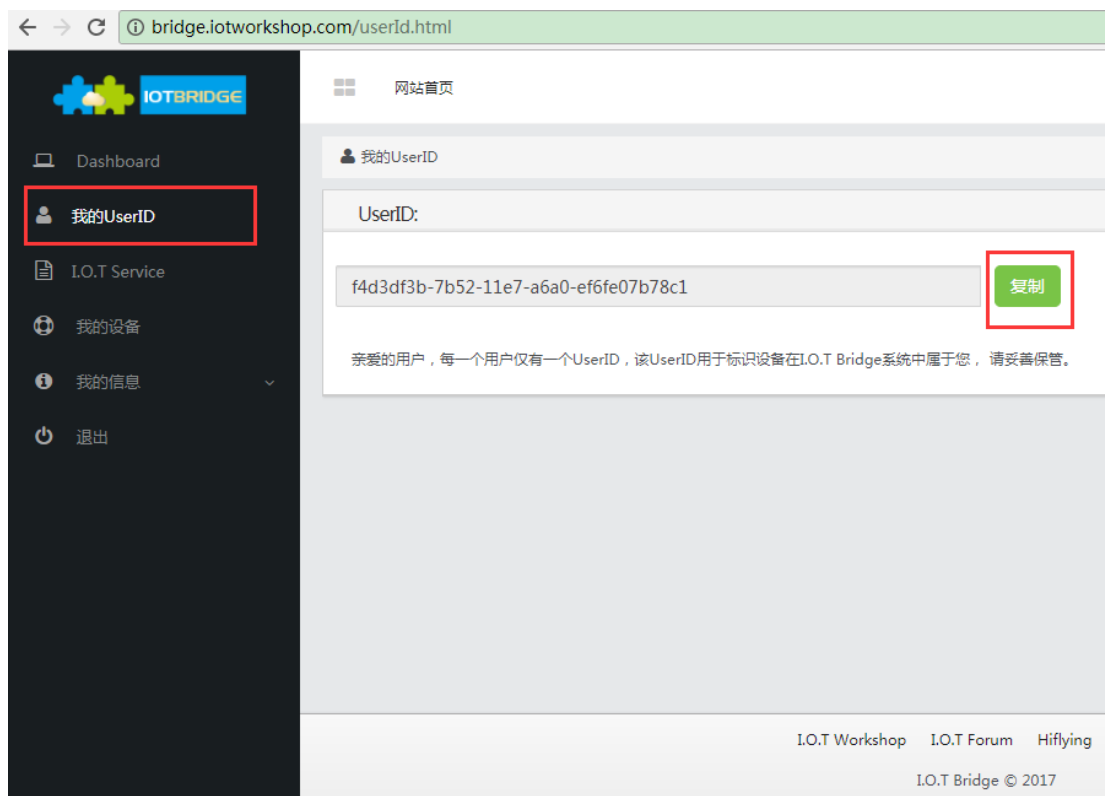


Step 7 :Ad device into IOTService.

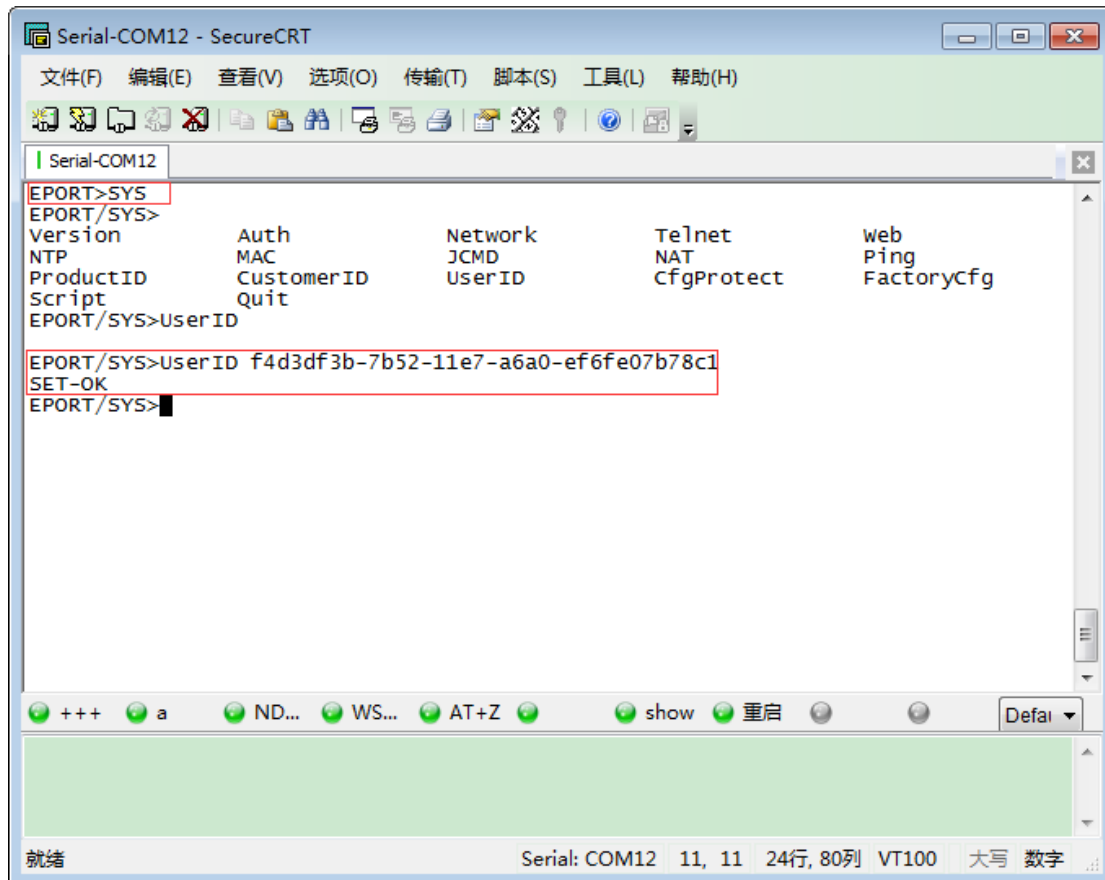
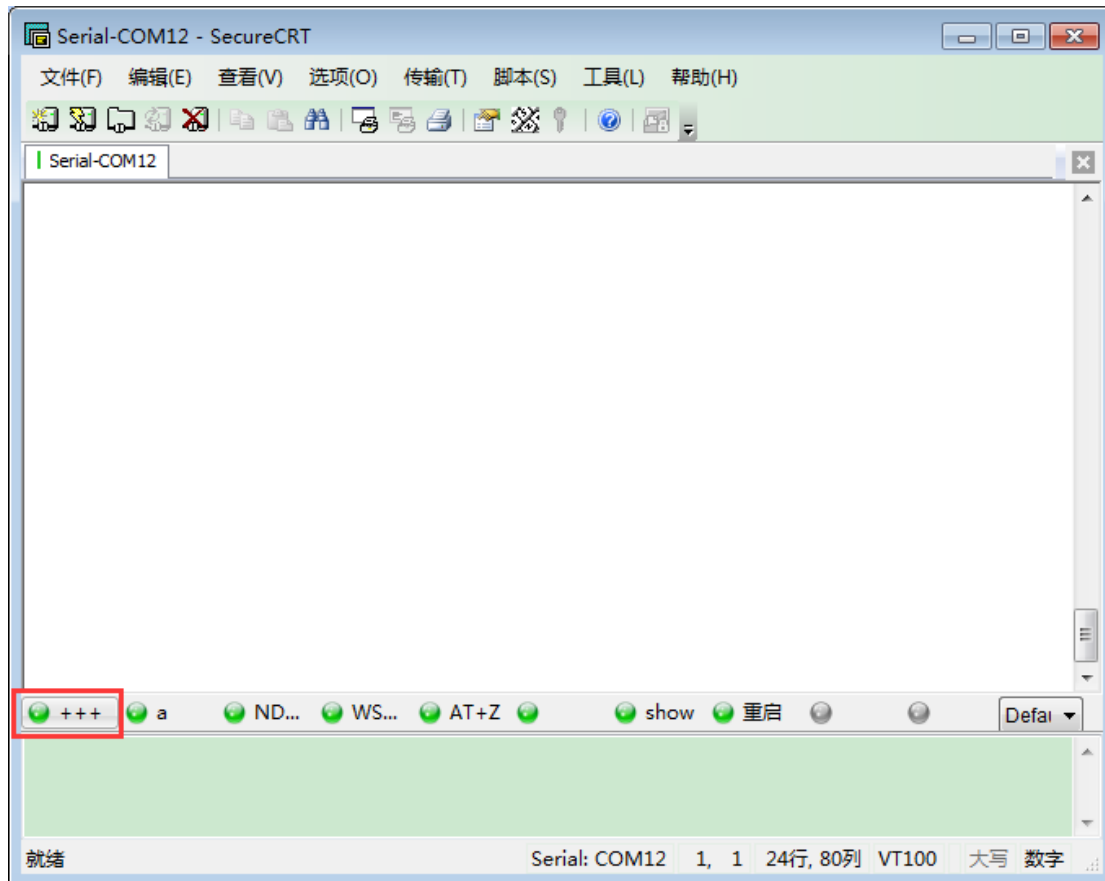




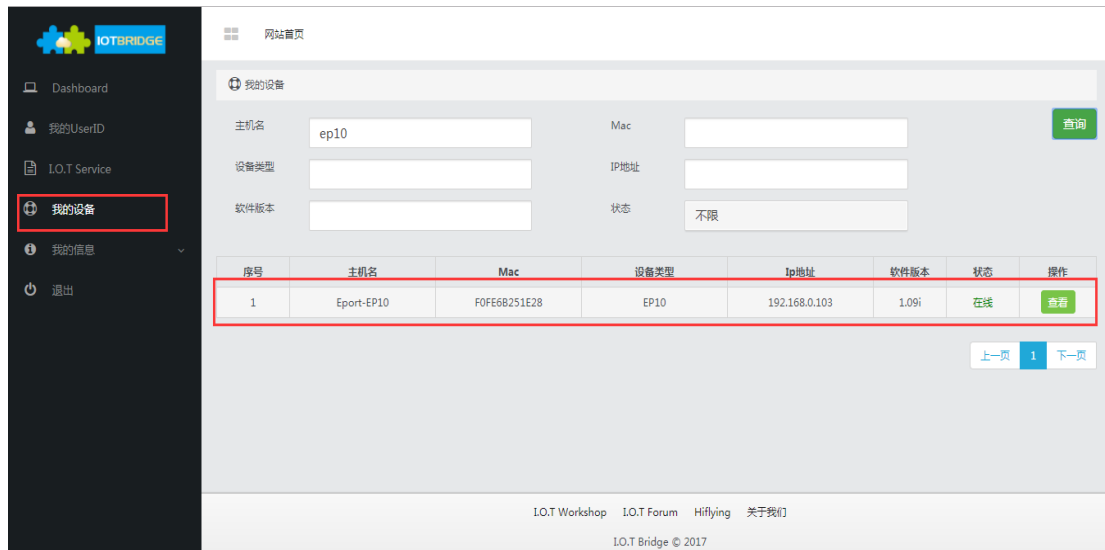
Step 8 :Copy User ID.



Step 9 :Fill User Id into device, see user manual to enter Cli command mode.



Step 11 :The device will be shown in IOTBridge website.



网站首页

我的设备

主机名: ep10 Mac: 查询

设备类型: IP地址:

软件版本: 状态: 不限

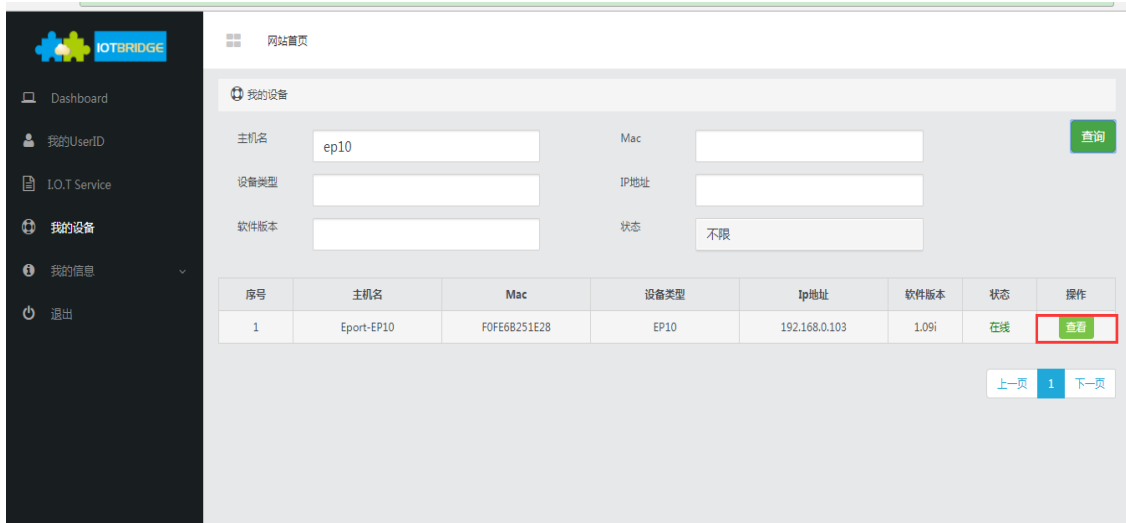
序号	主机名	Mac	设备类型	Ip地址	软件版本	状态	操作
1	Eport-EP10	F0FE6B251E28	EP10	192.168.0.103	1.09i	在线	查看

上一页 1 下一页

I.O.T Workshop I.O.T Forum Hiflying 关于我们

I.O.T Bridge © 2017

Step 12:Check detailed information



网站首页

我的设备

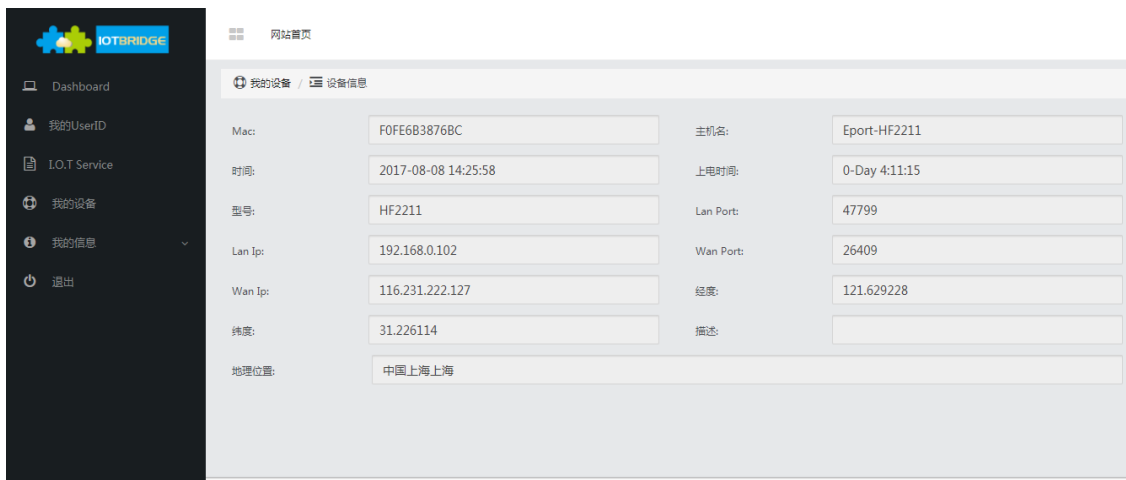
主机名: ep10 Mac: 查询

设备类型: IP地址:

软件版本: 状态: 不限

序号	主机名	Mac	设备类型	Ip地址	软件版本	状态	操作
1	Eport-EP10	F0FE6B251E28	EP10	192.168.0.103	1.09i	在线	查看

上一页 1 下一页



网站首页

我的设备 / 设备信息

Mac: F0FE6B3876BC 主机名: Eport-HF2211

时间: 2017-08-08 14:25:58 上电时间: 0-Day 4:11:15

型号: HF2211 Lan Port: 47799

Lan Ip: 192.168.0.102 Wan Port: 26409

Wan Ip: 116.231.222.127 经度: 121.629228

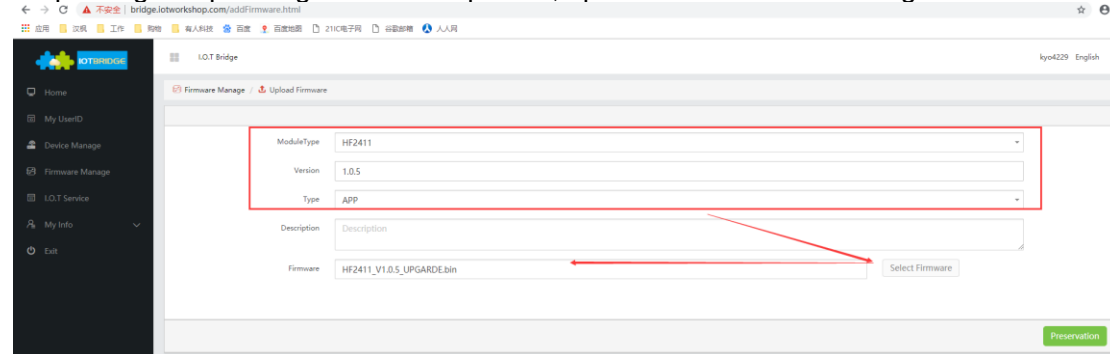
纬度: 31.226114 描述:

地理位置: 中国上海上海

7. OTA UPGRADE

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

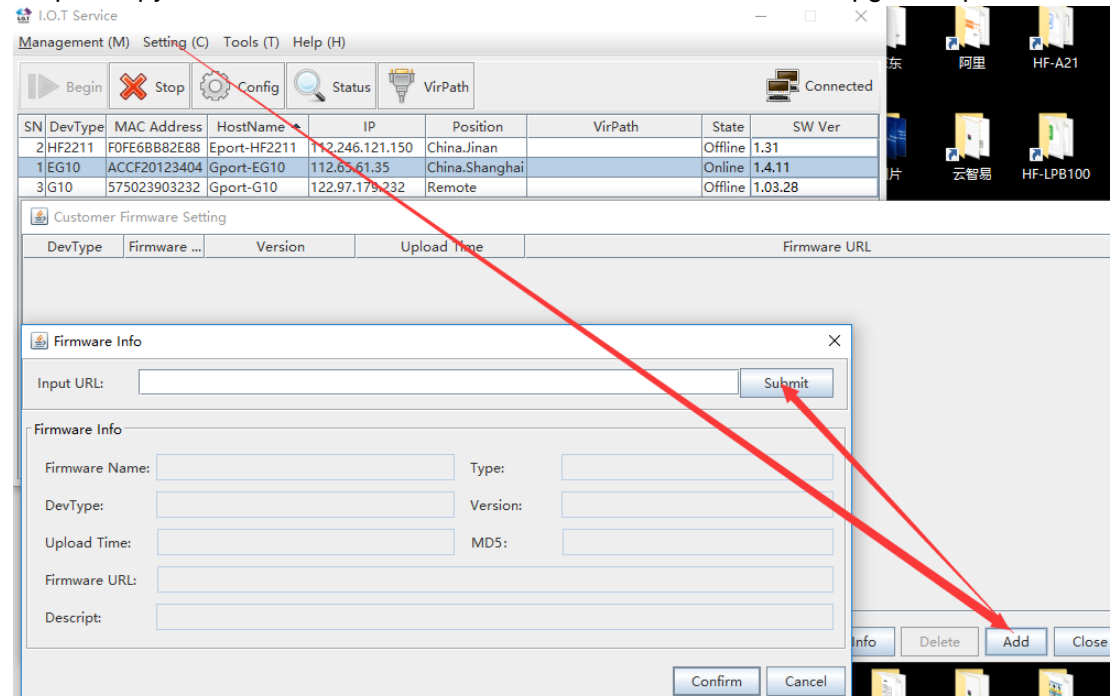
Step 2: Login <http://bridge.iotworkshop.com/>, upload firmware in IOTBridge.



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	Rem		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 ▶

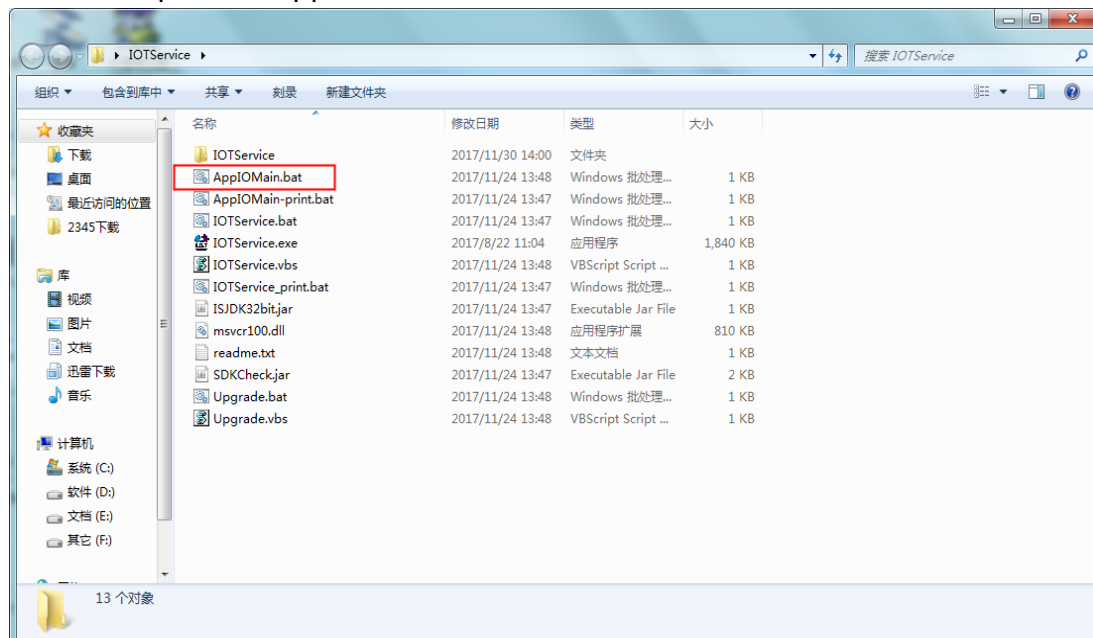
8. IO CONTROL TOOLS INTRODUCED

The IO Control Tool is a software for remote IO controller modules that allows users to easily set up, control, and view remotely.

The list of currently supported products is as follows, the following HF6208 products is an example.

Product Type	HF6108	HF6208	HF6508
Product Name			

This tool location is located in the IOTService folder under the IOTService installation path for ApplOMain. Double-click to use.



IO control tool interface is shown as below.

DI Count

Port No.	Initiate	Read Data	Count	Unit Time	Frequency
DI1					
DI2					
DI3					
DI4					
DI5					
DI6					
DI7					
DI8					

DI Input

Manually

DI1: 0
DI2: 0
DI3: 0
DI4: 0
DI5: 0
DI6: 0
DI7: 0
DI8: 0

AI Input

Manually

Port No.	Read Data	Unit	Converted	Unit Conv.
AI1				
AI2				
AI3				
AI4				
AI5				
AI6				
AI7				
AI8				

Relay

RL1 + RL5 +
RL2 + RL6 +
RL3 + RL7 +
RL4 + RL8 +
All + All -

Others

Baudrate: 1200 Auto Report: Enable Setup ☒ Auto Refresh Version: 0

Note:The settings under the red line box in the IO tool interface are not set for the time being, and their functions are reserved.

- I / OSetup:IO settings. In this interface can monitor IO port.
- Manually:Acquire manually, you can refresh the data.
- Setup:Setup for making connection settings and device settings.

Test Cases

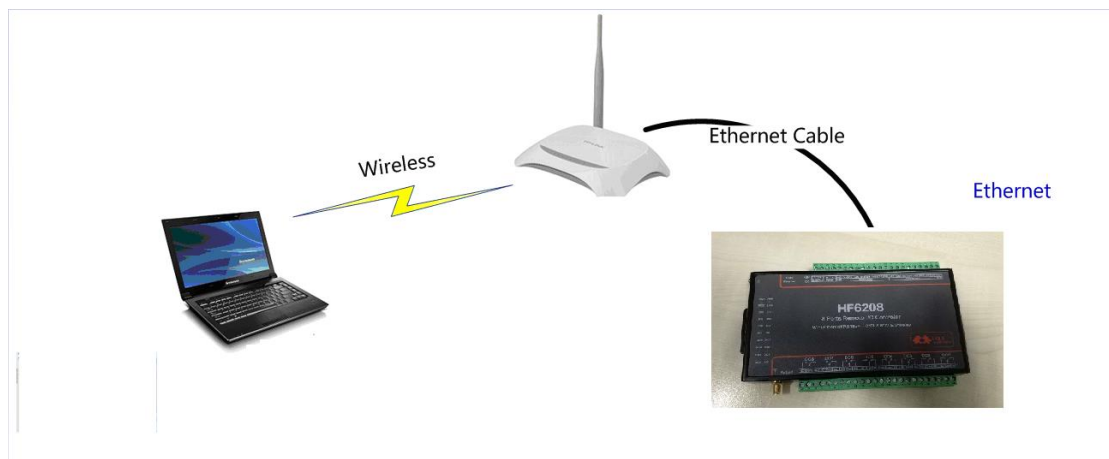
The test to HF6208 as an example.

Introduction of HF6208

The HF6208 is a remote IO control product with eight relay switches (DO), eight DI inputs and eight AI inputs, a standard Ethernet port RJ45, and an RS485 serial port.



Test Topology



IO Control Tools

The first to use IOTService tool HF6208 set to TCP server mode, working mode for transparent mode (HF6208 manual has a detailed introduction)

The screenshot shows the IOTService tool configuration window. The 'SOCKET' tab is active, and the 'Protocol' is set to 'TCP-SERVER'. The 'UART' tab is also visible, with 'UART No.' set to 'UART 1' and 'UART Protocol' set to 'NONE'. Both 'Protocol' and 'UART Protocol' are highlighted with red boxes.

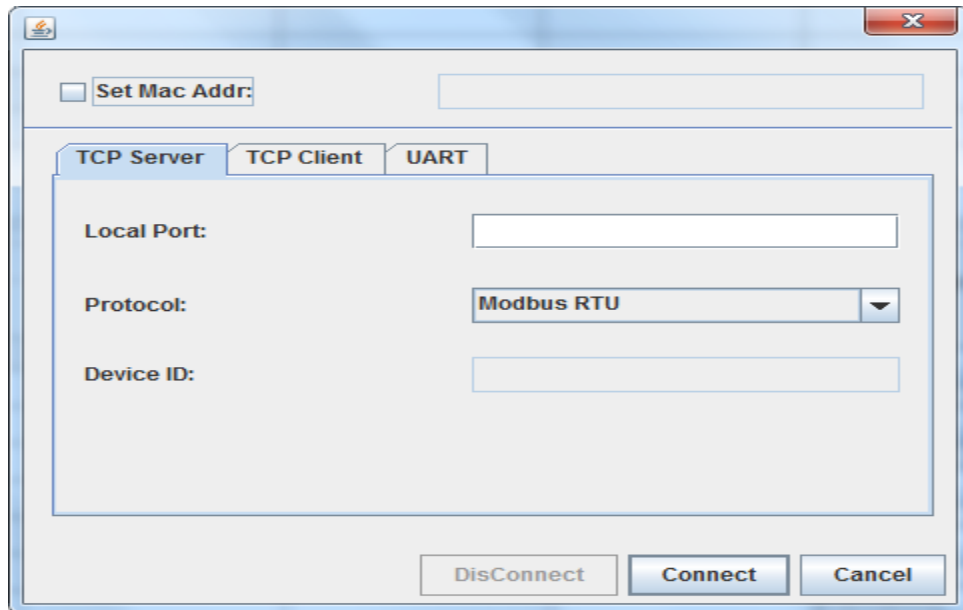
SOCKET	UART
SOCKET Name: netp	UART No: UART 1
Protocol: TCP-SERVER	UART Protocol: NONE
Server Addr: 0.0.0.0	Frame Length: 16
Server Port: 0	Frame Time: 100
Local Port: 8899	Tag Enable: Disable
Keep Alive: 60	Tag Start: 0
Time Out: 0	Tag End: 0
Rout: uart	SW Flow Control: Disable
Buffer Size: 512	
New SOCKET	
SOCKET Del	

The following describes the IO tool as a client, the device as a server and the port number is 8899.

Step 1 :Open the IO control tool (located in IOTService folder under the path named APPIOMain), and then click Settings -> then click on the connection settings will pop up a window to set the connection.

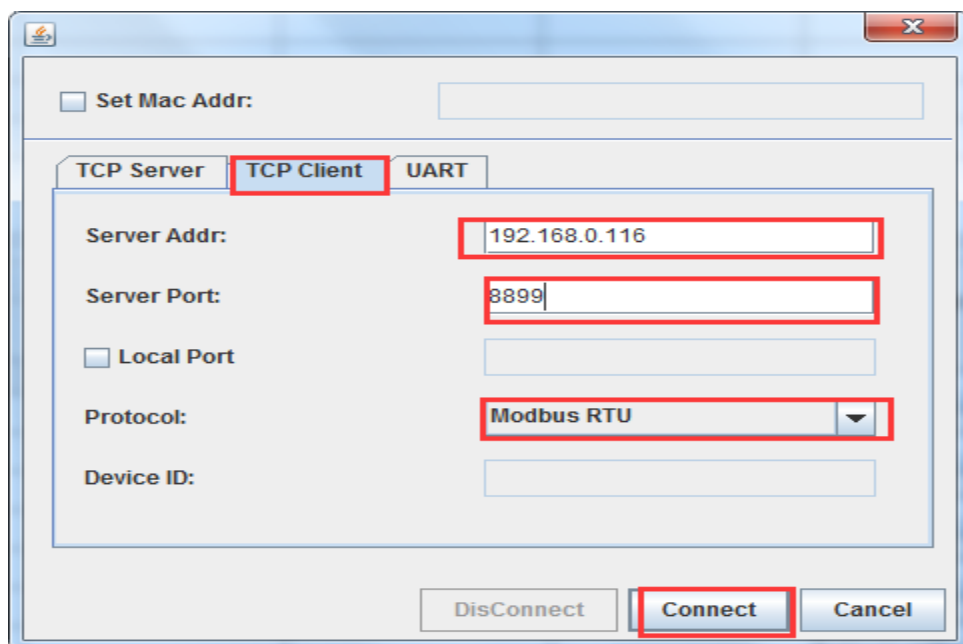
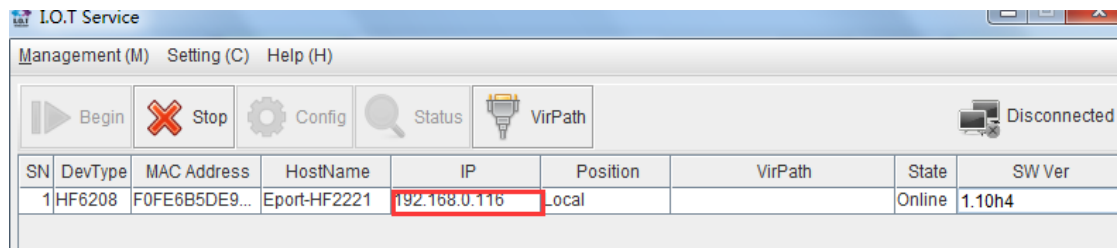
The screenshot shows the 'I/O Setup' window. The 'Setup' tab is active, and the 'Connect Setup' sub-tab is selected. A table with 6 columns (Port No., Initiate, Read Data, Count, Unit Time, Frequency) and 8 rows (DI1 to DI8) is displayed. The 'Manually' button is visible at the bottom right.

Port No.	Initiate	Read Data	Count	Unit Time	Frequency
DI1					
DI2					
DI3					
DI4					
DI5					
DI6					
DI7					
DI8					



Note: The above setting MAC address can not be set, this function has not been realized.

Step 2: Click TCPClient and fill in the server IP and port number, and the choice of the agreement, then click connect. Server address can be obtained through iotservice tools.



Protocol: Modbus RTU

Device ID: Modbus RTU
Modbus TCP

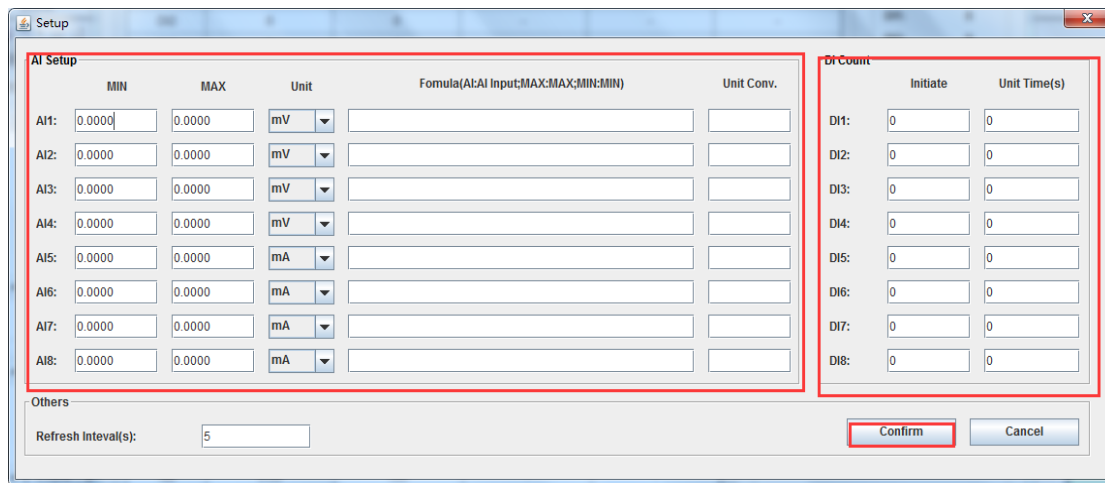
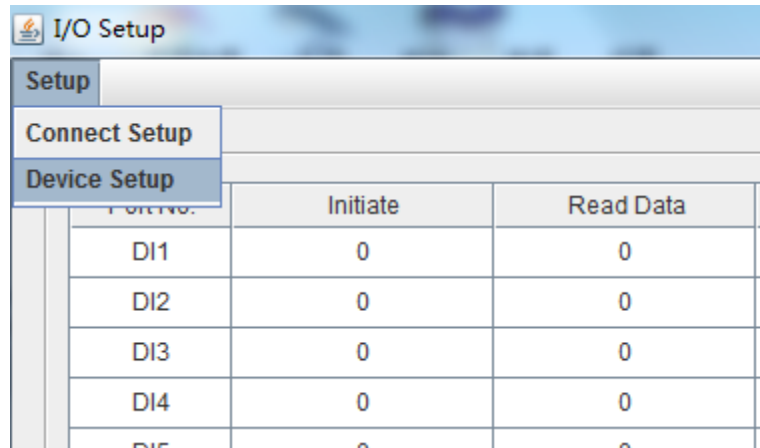
Note: The choice of protocol is to choose according to the set communication mode. In chapter 3 above, there are two kinds of communication modes that are transparent transmission mode and the other one is modbus protocol to transmit data. If the device is working under transparent transmission mode and the protocol should select Modbus RTU. If the device is Modbus protocol to transfer data, the protocol selection is Modbus TCP protocol.

Step 3: After the connection is successful, the following interface will appear. In the interface, we can see DI count, DI input, AI input and control of the relay.

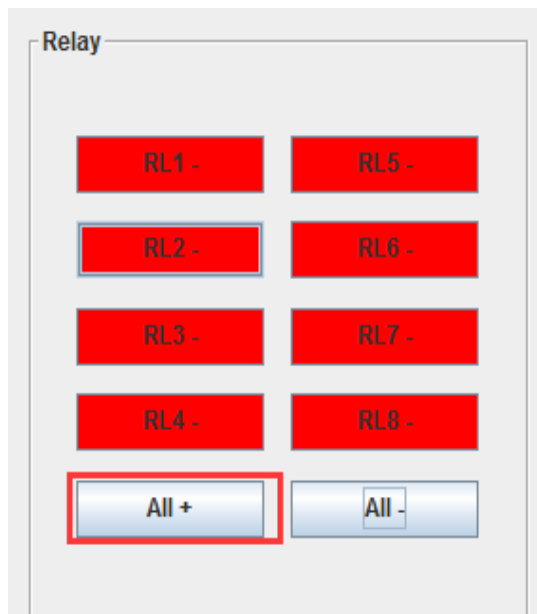
The screenshot shows the 'I/O Setup' window with several panels:

- DI Count:** A table with 6 columns: Port No., Initiate, Read Data, Count, Unit Time, and Frequency. It lists ports DI1 through DI8.
- DI Input:** A panel with a 'Manually' button and a list of DI1 through DI8, each with a value of 0.
- AI Input:** A panel with a 'Manually' button and a table with 5 columns: Port No., Read Data, Unit, Converted, and Unit Conv. It lists ports AI1 through AI8.
- Relay:** A panel with 8 red buttons labeled RL1 through RL8, and two buttons labeled 'All +' and 'All -'.
- Others:** A panel at the bottom with settings for Baudrate (9600), Auto Report (Enable), a Setup button, a checked Auto Refresh checkbox, and a Version field (0).

Step 4: After the connection between IO tool and device succeeds, the corresponding AI and DI initial settings of the device can be customized according to user requirements as shown in the following figure. Here you can set the maximum and minimum AI, and can also set the formula to convert. DI's initial value and unit time can also be set.



Step 5: When the connection is successful, a simple test can be performed. Click the button in the following figure to control the relay. Corresponding indicators are also displayed on the device. The picture below is the full click effect.





Step 6: DI test. Follow-up is just a test case, not as a practical application. Devices DO1 and DO2 can be connected to DI6 and DI7, and then the DI6 and DI7 input states can be checked by controlling relays RL1 and RL2. The result is shown below. The digital inputs represent the various DI access states. DI has two cases of access, dry contacts and wet contacts. Dry contact logic 0 is left floating, 1 is grounded. Wet contact logic 0 indicates access 0 ~ 3V power supply, wet contact 1 means access 5 ~ 40V power supply. The current value (Read Data) for the device access and disconnect the number of times. The current value (Read Data is counted from the initial value, the initial value can be set.

DI Input		Setup			
Manually		DI Count			
DI1:	0	Port No.	Initiate	Read Data	Count
DI2:	0	DI1	0	0	-
DI3:	0	DI2	0	0	-
DI4:	0	DI3	0	0	-
DI5:	0	DI4	0	0	-
DI6:	1	DI5	0	0	-
DI7:	0	DI6	0	2	-
DI8:	0	DI7	0	7	-
		DI8	0	0	-

Step 7: The module comes with a 5V voltage, 5V voltage received AI 1, the test results as shown below. AI data needs to be manually acquired, AI (1-4) is the voltage value, AI (5-8) is the current value.