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# WebSocket APPLICATION

Rev: 1.0

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# 1. PRODUCT

This document is applicable to the following product, take HF5111B for example, other product usage is much the same.

 Ethernet IOT	 Wi-Fi IOT	 GPRS IOT	 4G IOT
FreeRTOS Embedded Network Device [Eport-E20-PIN] [Eport-E20] [Eport-E30]	Wi-Fi Serial Module [Wport-W20] [Wport-W10]	GPRS Serial Server [HF2111] [HF2111A]	4G Serial Server [HF2411]
Linux Embedded Network Device [Eport-Pro-EP20-PIN] [Eport-Pro-EP20]	Wi-Fi Serial Server [HF2211] [DTU-H100]		4G+WIFI+GPS Serial Server Device [HF2421G]
Ethernet Serial Server [HF5111A] [HF5111B]	Multiple Port Wi-Fi Serial Server [HF2221]		4G+WIFI Serial Server [HF2421]
Multiple Port Ethernet Serial Server [HF5142A] [HF5142B]	Wifi router (rail) [HF8104W]		Rail 4G Router [HF8102] [HF8104]

 NB-Elfin IOT	 IO Control
4G_LTE [Elfin-EG4X]	Wi-Fi IO [HF6208]
GPRS [Elfin-EG1X]	Ethernet IO [HF6508]
Wi-Fi [Elfin-EW1X]	
Ethernet [Elfin-EE1X]	

# 2. HARDWARE

- HF5111B
- HF2411

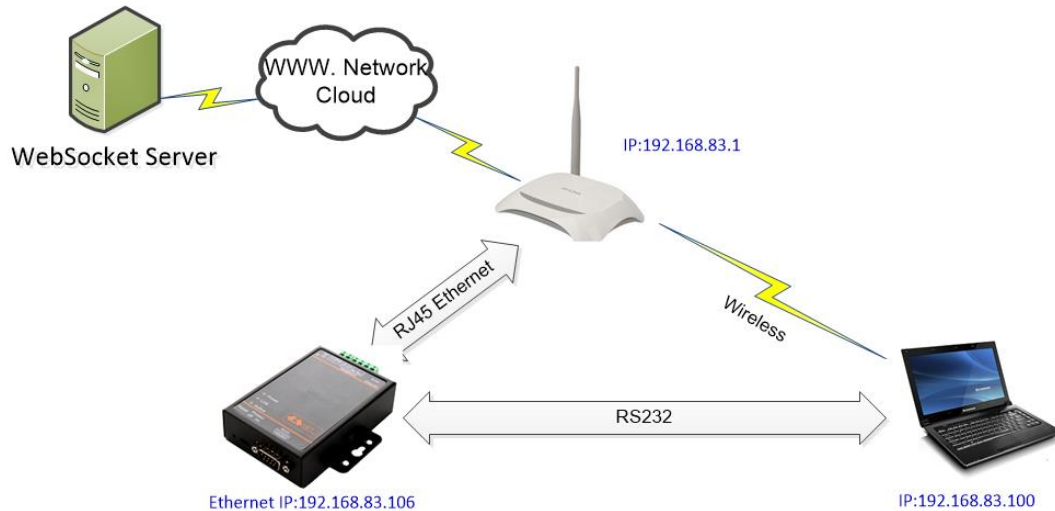
# 3. SOFTWARE

- IOTService
- UART tools

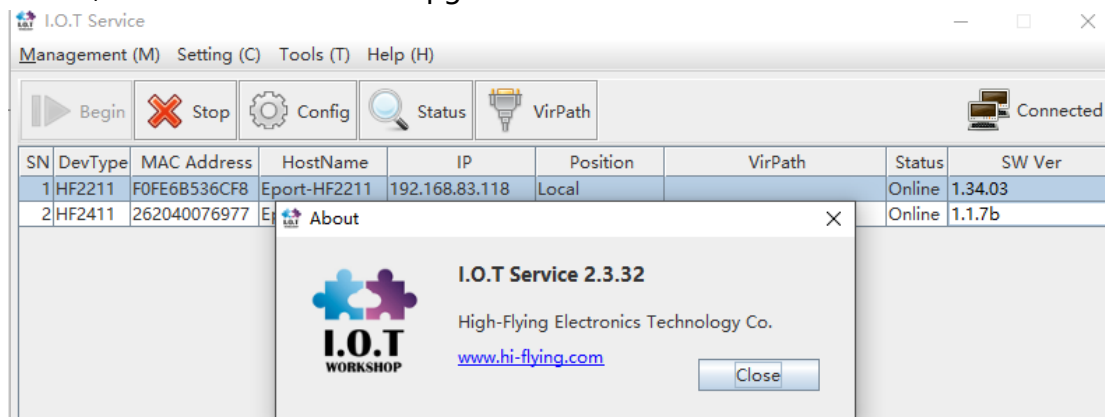
## 4. HF5111B HARDWARE CONNECTION

### 4.1. Test

- Connect device as the following pic



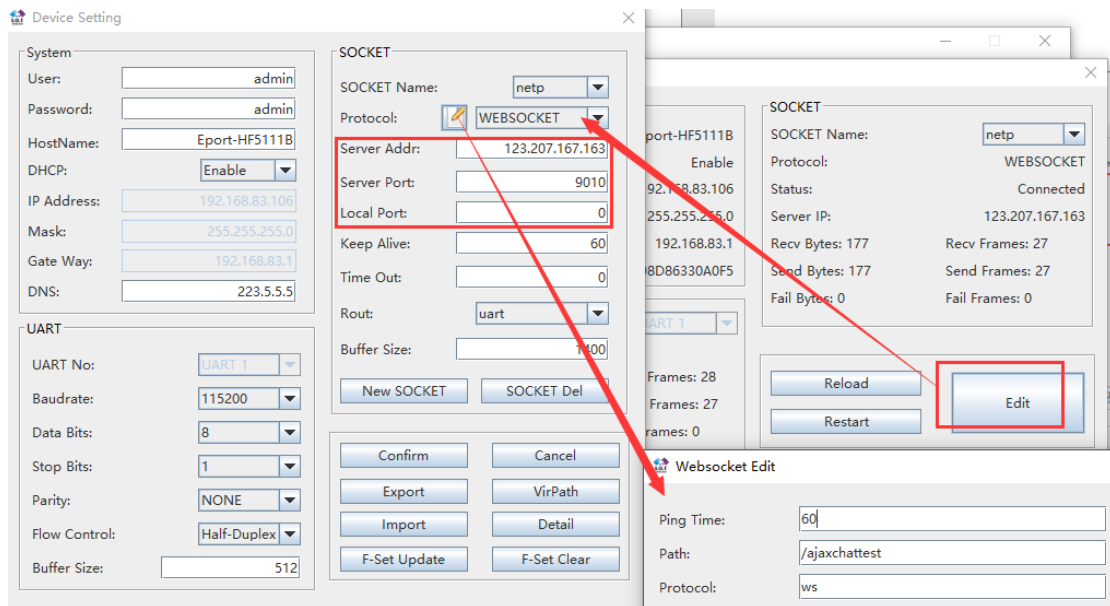
- Open IOTService tools (Tools at least need 2.3.32 Version), See our HF2211 device, Device firmware need upgrade to at least 1.34.XX.



The screenshot shows the I.O.T Service 2.3.32 software interface with a table of devices. The first row is highlighted with a red box.

SN	DevType	MAC Address	HostName	IP	Position	VirPath	Status	SW Ver
1	HF5111B	98D86330A0F5	Eport-HF5111B	192.168.83.106	Local		Online	1.34.3
2	HF5111B	ACCF23202222	Eport-HF5111B	58.33.115.200	Remote		Offline	1.34.3
3	EP20	F0FE6BD53810	Eport-EP20	58.33.115.200	Remote		Offline	1.33.7
4	EG10	300037618851	Gport-EG10	223.104.5.204	China.Shanghai		Offline	1.6.1
5	EG10	300037598137	Gport-EG10	117.136.8.149	Remote		Offline	1.6.1
6	EW10	98D8633B8842	EW10	58.33.115.200	Remote		Offline	1.41.0

- Enable netp WebSocket, test server: 123.207.167.163, port: 9010 (test link: <ws://123.207.167.163:9010/ajaxchattest>) local port fill with 0 (0 for random port). This test server will response with the same data received.

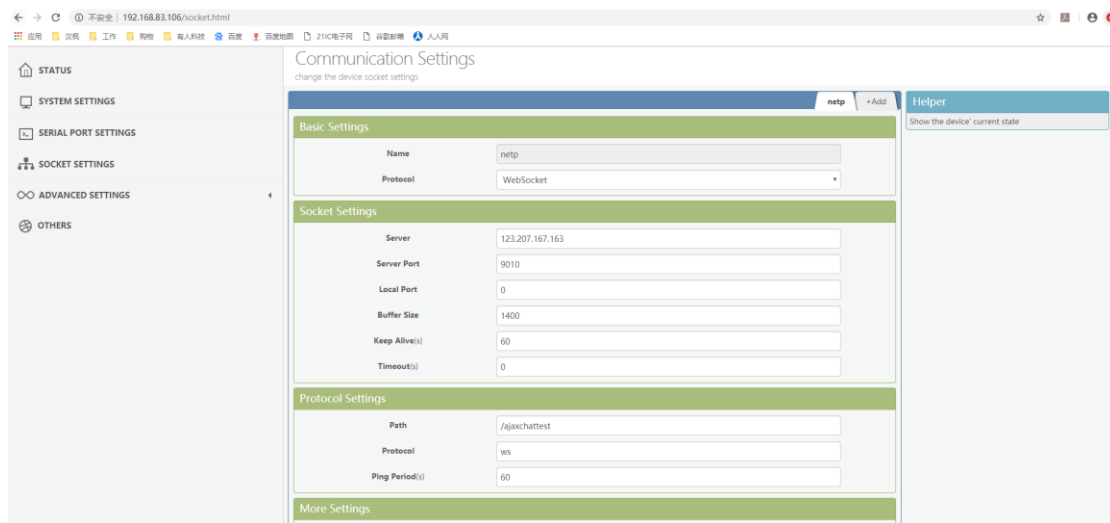


Ping Time: WebSocket Ping interval Unit: second, if server does not allow Ping, fill 0 to disable.

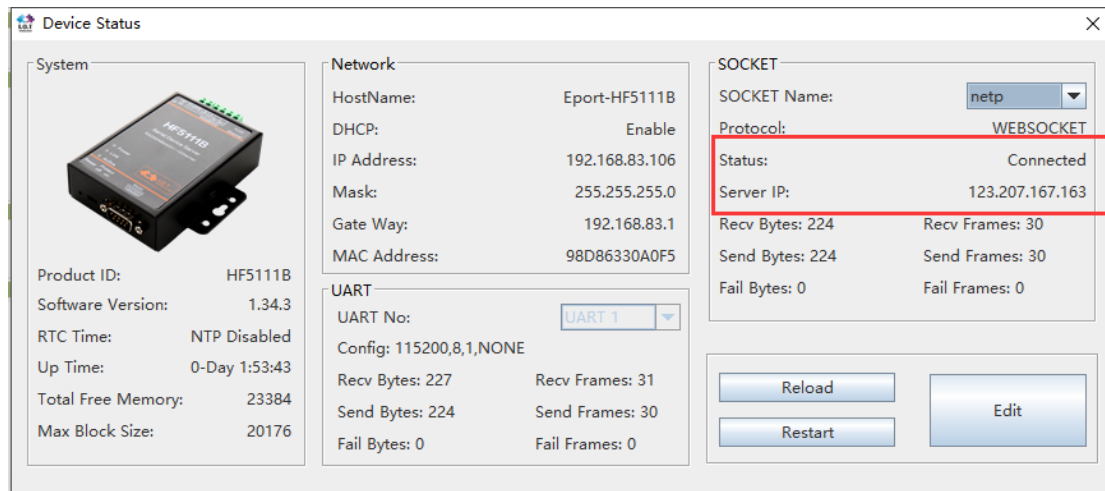
Path: WebSocket Path, test server fill with “/ajaxchattest”

Protocol: Sec-WebSocket-Protocol header, if server does not need it, fill in any content.

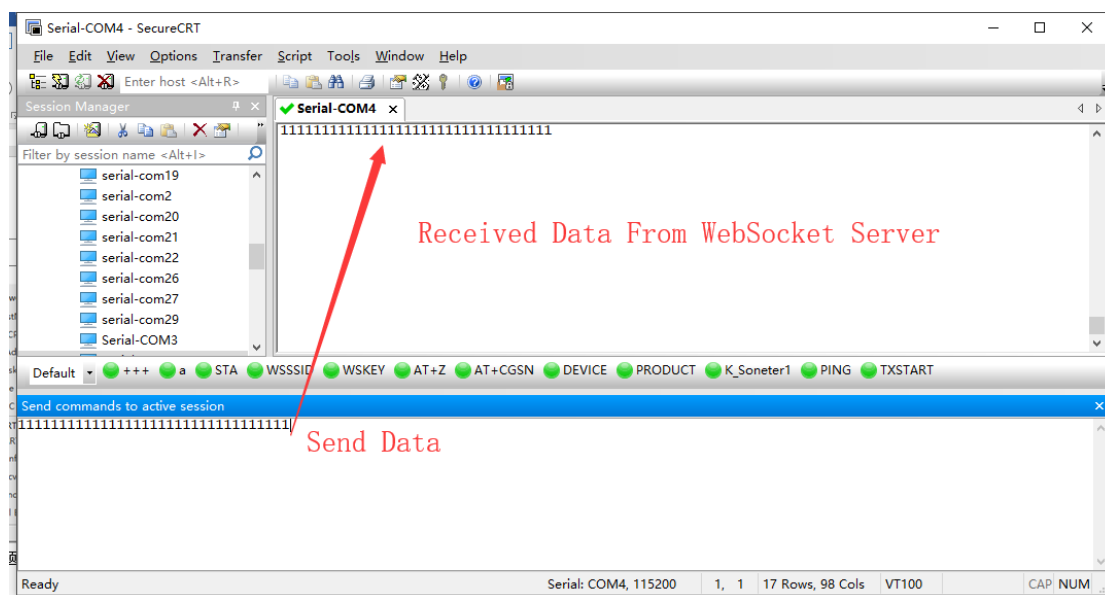
- Open webpage, it can also set such information.



- Confirm server status.



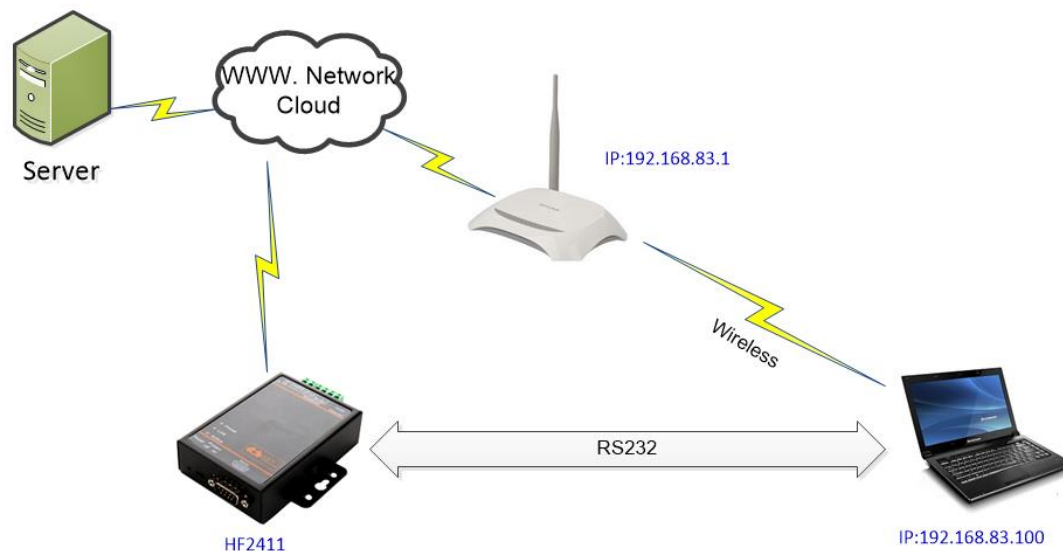
- Open UART tools and send data, the receive area will show the data back.



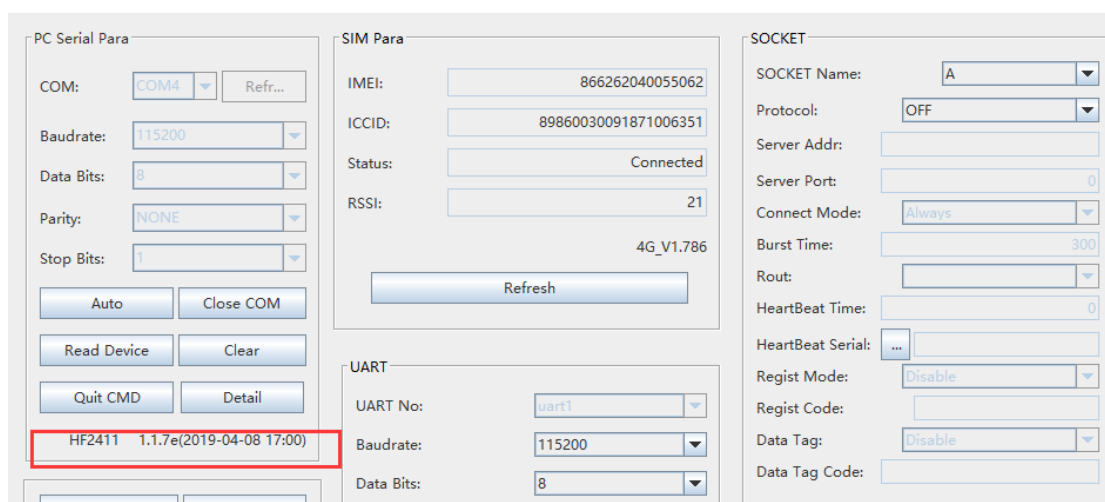
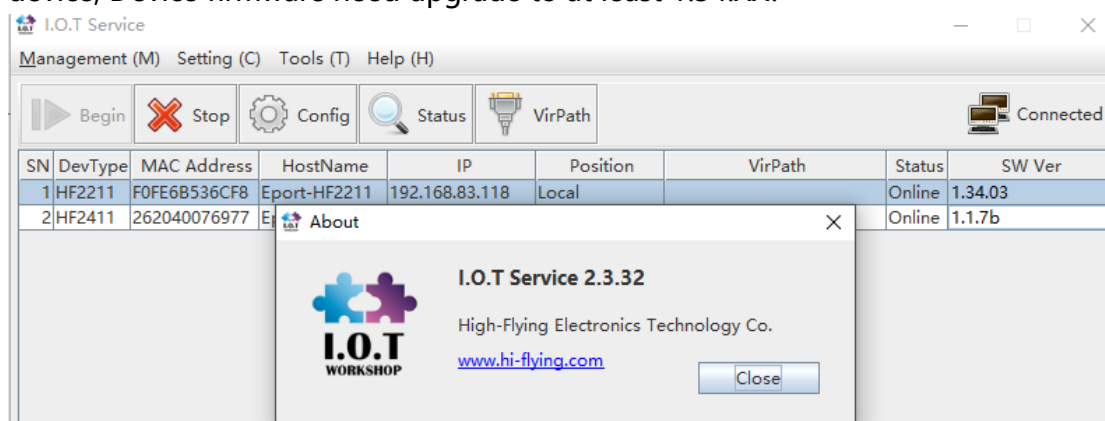
## 5. HF2411 HARDWARE CONNECTION

### 5.1. Test

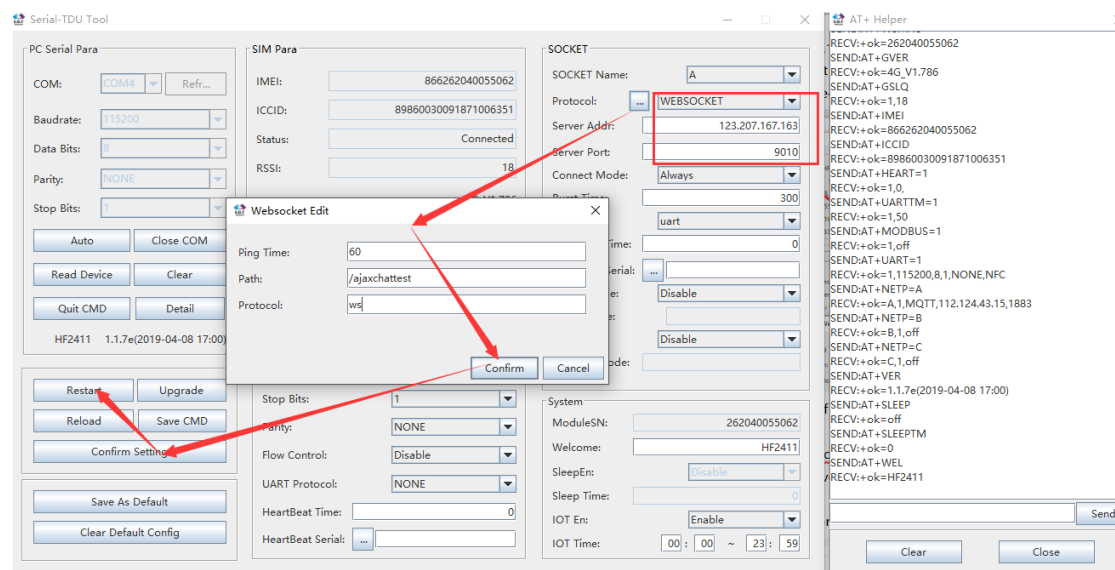
- Connect device as the following pic



- Open IOTService tools(Tools at least need 2.3.32 Version), See our HF2411 device, Device firmware need upgrade to at least 1.34.XX.



- Enable WebSocket, test server: 123.207.167.163, port: 9010(test link: ws://123.207.167.163:9010/ajaxchattest). This test server will response with the same data received.



Ping Time: WebSocket Ping interval Unit: second, if server does not allow Ping, fill 0 to disable.

Path: WebSocket Path, test server fill with “/ajaxchattest”

Protocol: Sec-WebSocket-Protocol header, if server does not need it, fill in any content.

- If bound to IOTService, also can set it wirelessly.



**Device Setting**

**System**

Welcome: HF2411

SleepEn: Disable

Sleep Time: 0

Longitude: 0.0

Latitude: 0.0

IOT Time: 0 : 0 ~ 23 : 59

**SOCKET**

SOCKET Name: A

Protocol: WEBSOCKET

Server Addr: 123.207.167.163

Server Port: 9010

Connect Mode: Always

Burst Time: 300

**UART**

UART No:

Baudrate:

Data Bits:

Stop Bits:

Parity:

Flow Control:

UART Protocol: NONE

HeartBeat Time: 0

HeartBeat Serial: ...

**Websocket Edit**

Ping Time: 60

Path: /ajaxchattest

Protocol: ws

Confirm Cancel

**NETWORK**

APN:

APN User:

APN Password:

SMS ID: #SMS#

SMS Phone: 10086100

SMS Status: 1

Confirm Cancel

Import VirPath

Export Script

- Confirm server status.

**Device Status**

**System**

Product ID: HF2411

Software Version: 1.1.7e

RTC Time: NTP Disabled

Up Time: 0-Day 0:13:32

Longitude: 121.629524231

Latitude: 31.224849701

**GSM**

ModuleSN: 262040055062

ICCID: 89860030091871006351

IMEI: 866262040055062

Connect: Connected(19)

IP Address: 223.104.212.241

4G\_V1.786 Upgrade

**UART**

UART No: UART

Config: 115200,8,1,NONE

Recv Bytes: 4 Recv Frames: 2

Send Bytes: 7 Send Frames: 2

Fail Bytes: 0 Fail Frames: 0

**SOCKET**

SOCKET Name: A

Protocol: WEBSOCKET

Status: Connected

Server IP: 123.207.167.163

Recv Bytes: 224 Recv Frames: 30

Send Bytes: 224 Send Frames: 30

Fail Bytes: 0 Fail Frames: 0

Reload Restart Edit

- Open UART tools and send data, the receive area will show the data back.

