WIFI high performance products Getting Started Manual

Ver2.0

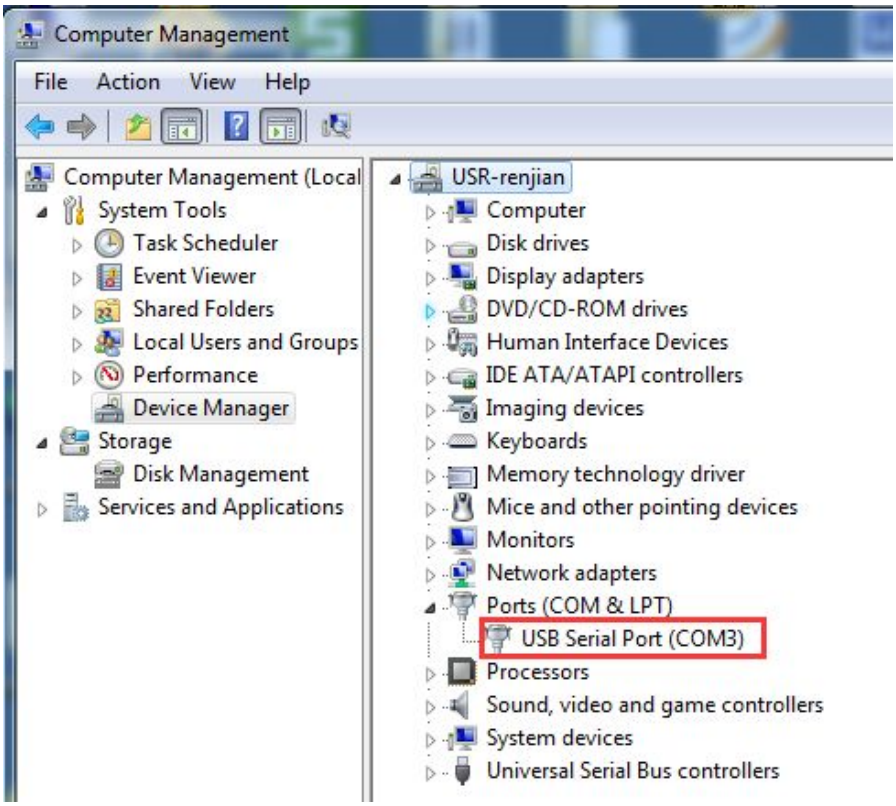
This document for all WIFI high performance series products, as a Quick Beginning, we recommend that users to read the manual and follow the instructions to operate, So you will have a good understanding of this product, the user can also choose your interested chapters read as needed for specific details and instructions, please refer to the detailed manuals and application notes or website quiz.

This document applies to USR-WIFI232-A/B/C/D and their derivative products, such as USR-WIFI232-602/604/610.

1. Initial test

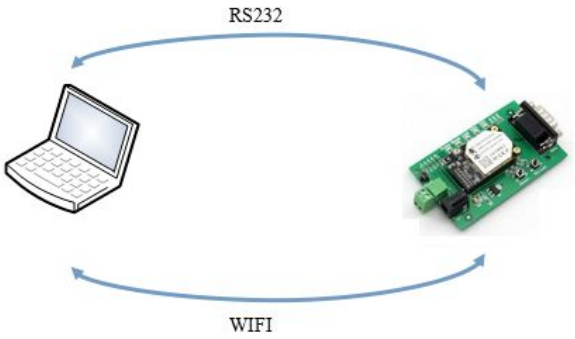
To do this initial test, one aim for have better understanding for your module, another to test if the module work normal or not.

Notice: PC should be disable other network cards, only leave one WIF network cards. Below PC COM port is COM 3, when you test it, you should know your PC COM ports. How to check your PC COM port: “My computer - > properties - > device manager - > port”



1.1. Hardware connect

In order to test module serial port to WIFI data communication, module serial port should be connect with PC serial ports, WIFI network also should be establish communication. You also can use USB to RS232 cable to connect PC.



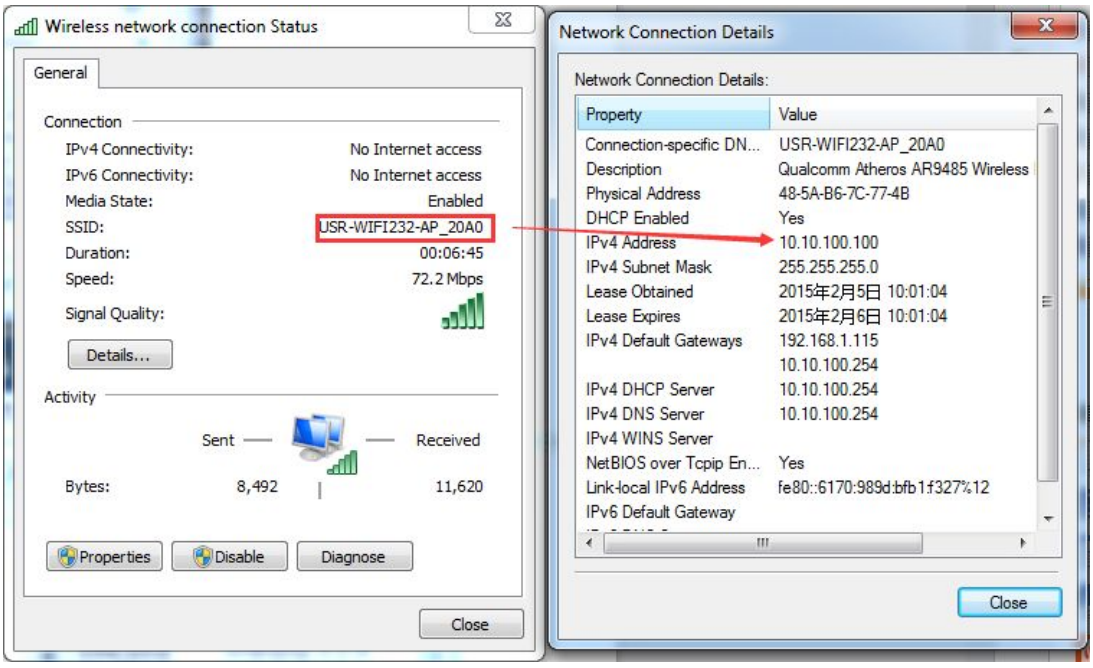
As for serial ports connect, module pin is 3.3v TTL level, it can't connect with PC directly, user should use TTL to RS232 cable, we also suggest user to buy test kits, here USR-WIFI232-B as an example.

After hardware connection, power on the module, waiting for 3-6s, Ready light on, that's mean system completely started, we can go into next step.

1.2. Network connection

Please find this icon on your PC.Search network, as below picture, USR-WIFI232-T is default network name (SSID)

Join into network, select Automatically obtain an IP address, WIFI module support DHCP server and default as open.



Now module Link light on

1.3. Related test software

USR-WIFI232-Setup-AT command setup software **http://www.usr.so/Download/183.html**

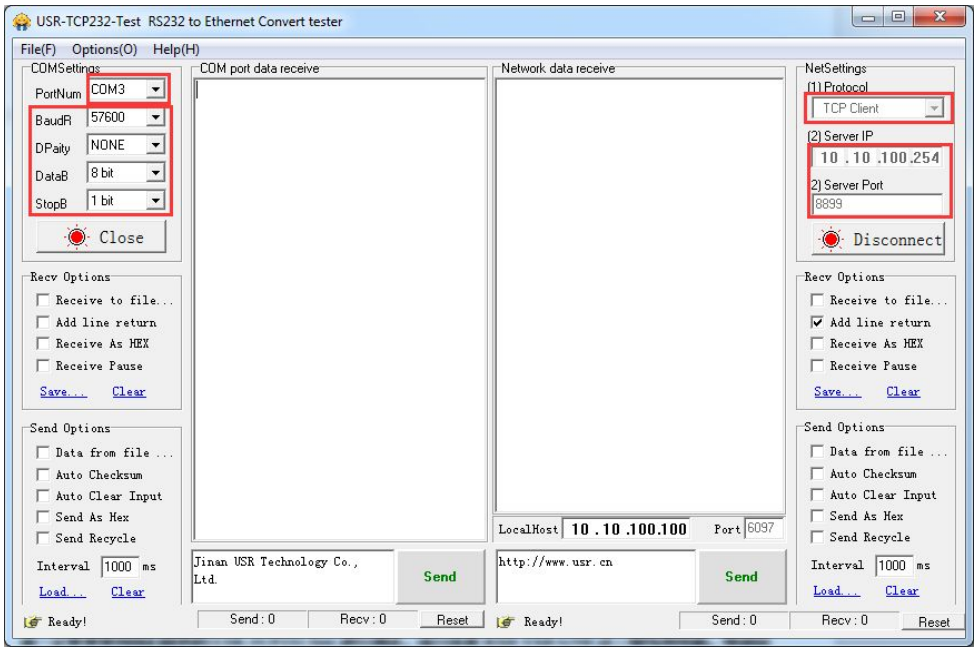
V-COM software **http://www.usr.so/Download/31.html**

TCP232-TEST ssoftware **http://www.usr.so/Download/121.html**

1.4. Data send/receive test

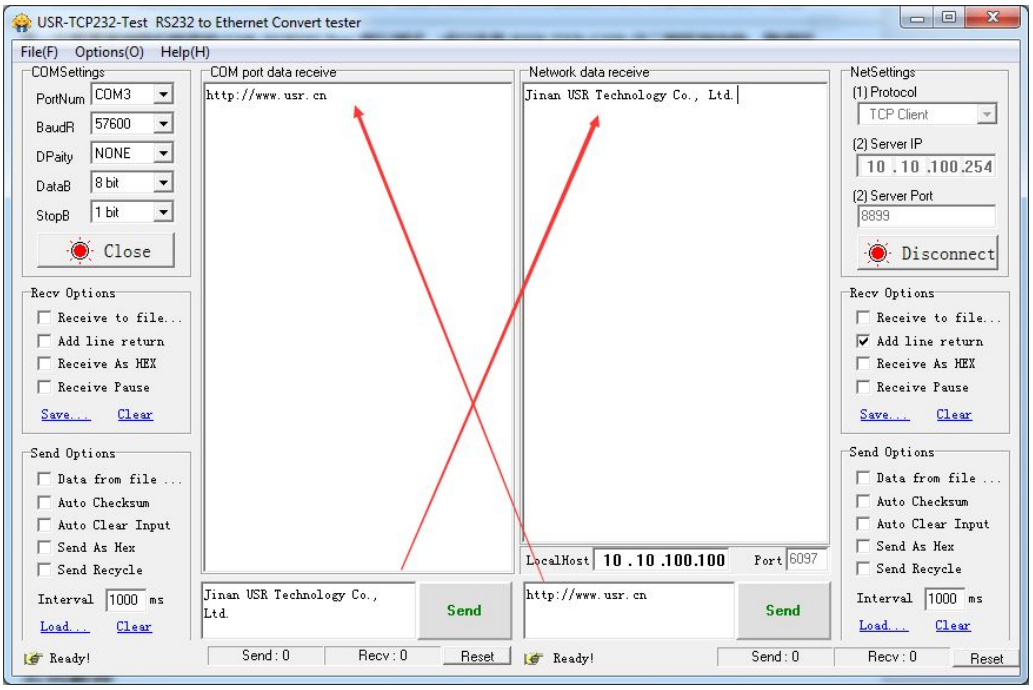
Open USR-TCP232-Test. exe software, select COM 3, baud rate 57600, select open serial ports

Net setting, set as TCP client, server IP as 10.10.100.254, this is module default IP address, server port number 8899, this port for TCP listen port, detail see picture as below:



Serial to network data flow direction: PC serial port->module serial port-> module WIFI->PC WIFI

Network to serial port data flow direction: PC WIFI-> module WIFI->module serial port->PC serial port



2. common use method

2.1. AP+TCP server

Detail please see first chapter module initial test

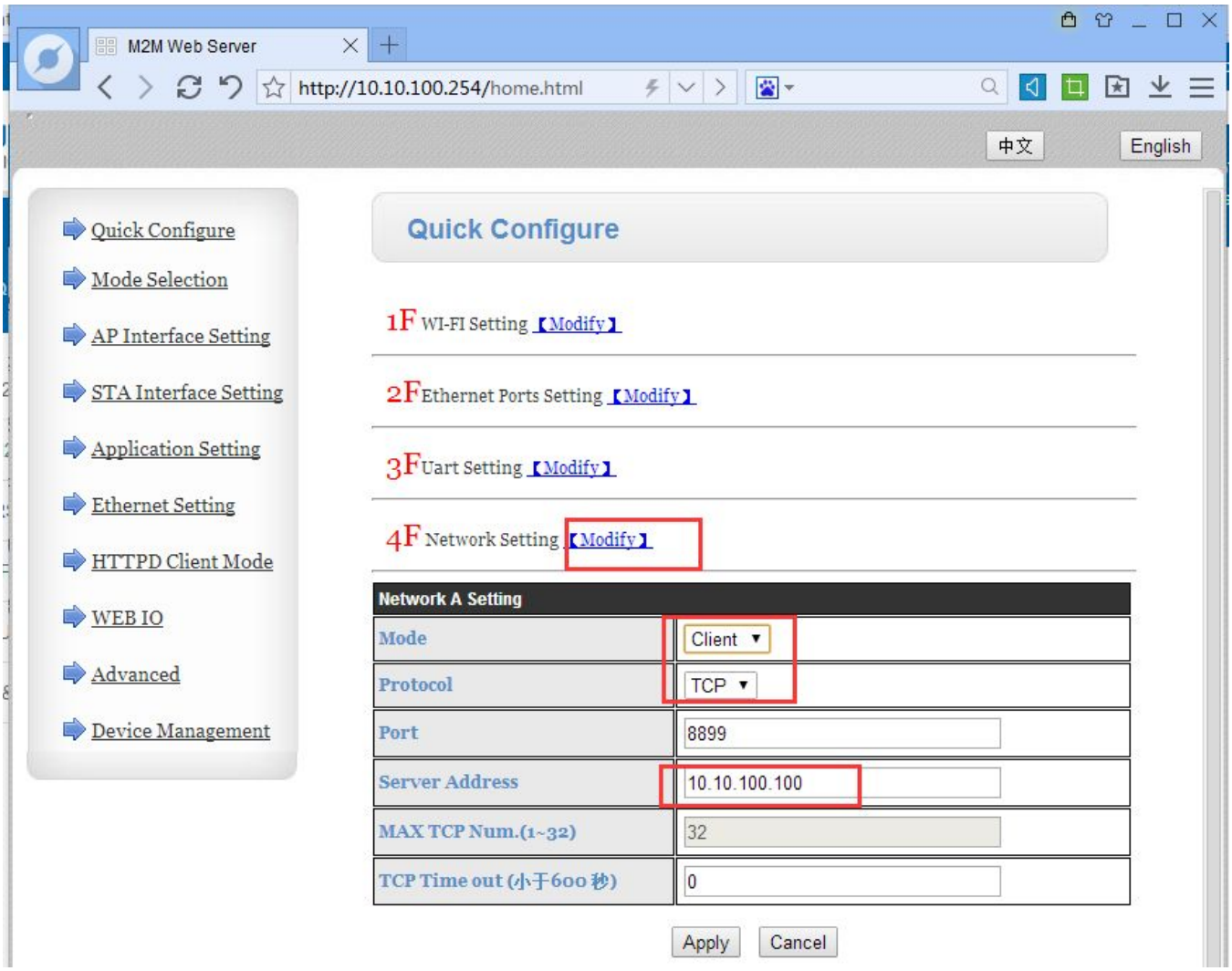
2.2. AP+TCP server

2.2.1. Network connection

Detail please see first chapter module initial test

2.2.2. parameter settings

Query computer IP is 10.10.100.100.Open your browser settings parameters。Enter the IP "10.10.100.254" Network setting ： mode：client。Protocol：TCP ，port：8899. Server address ：10.10.100.100（PC address）。After the success restart module

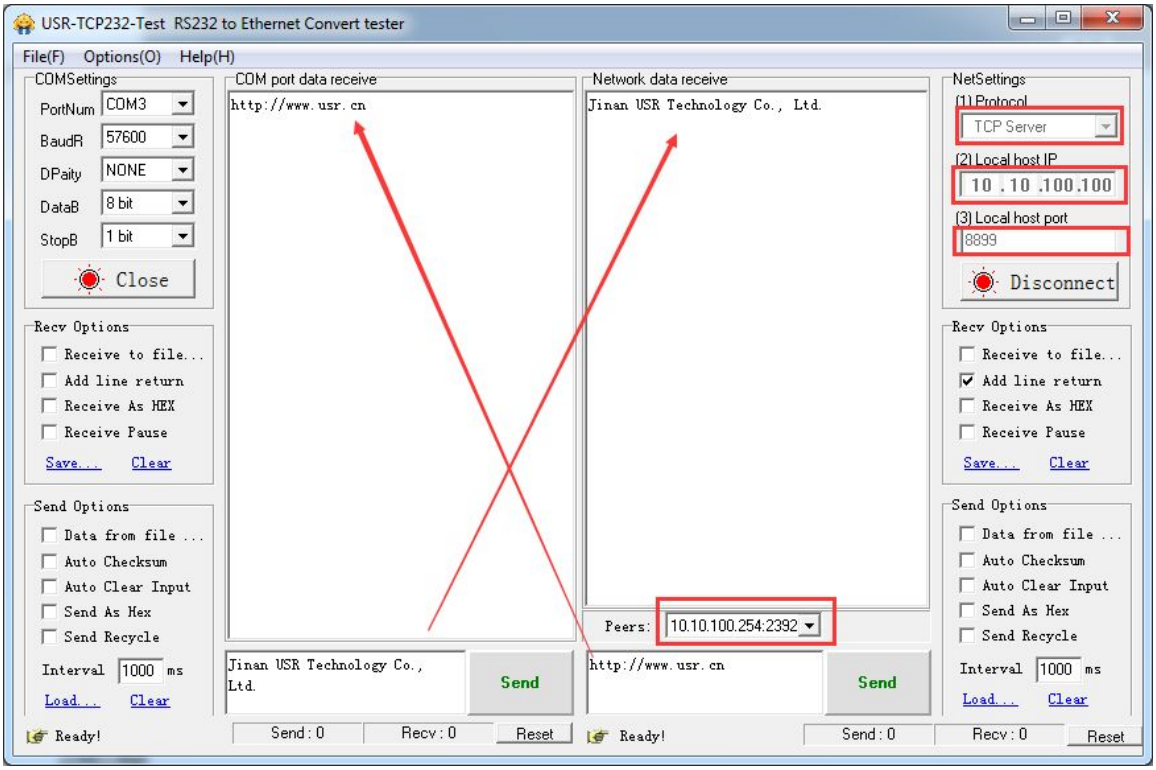


After the success of the Settings, restart the module, then computer connection module SSID.

2.3. Data send/receive test

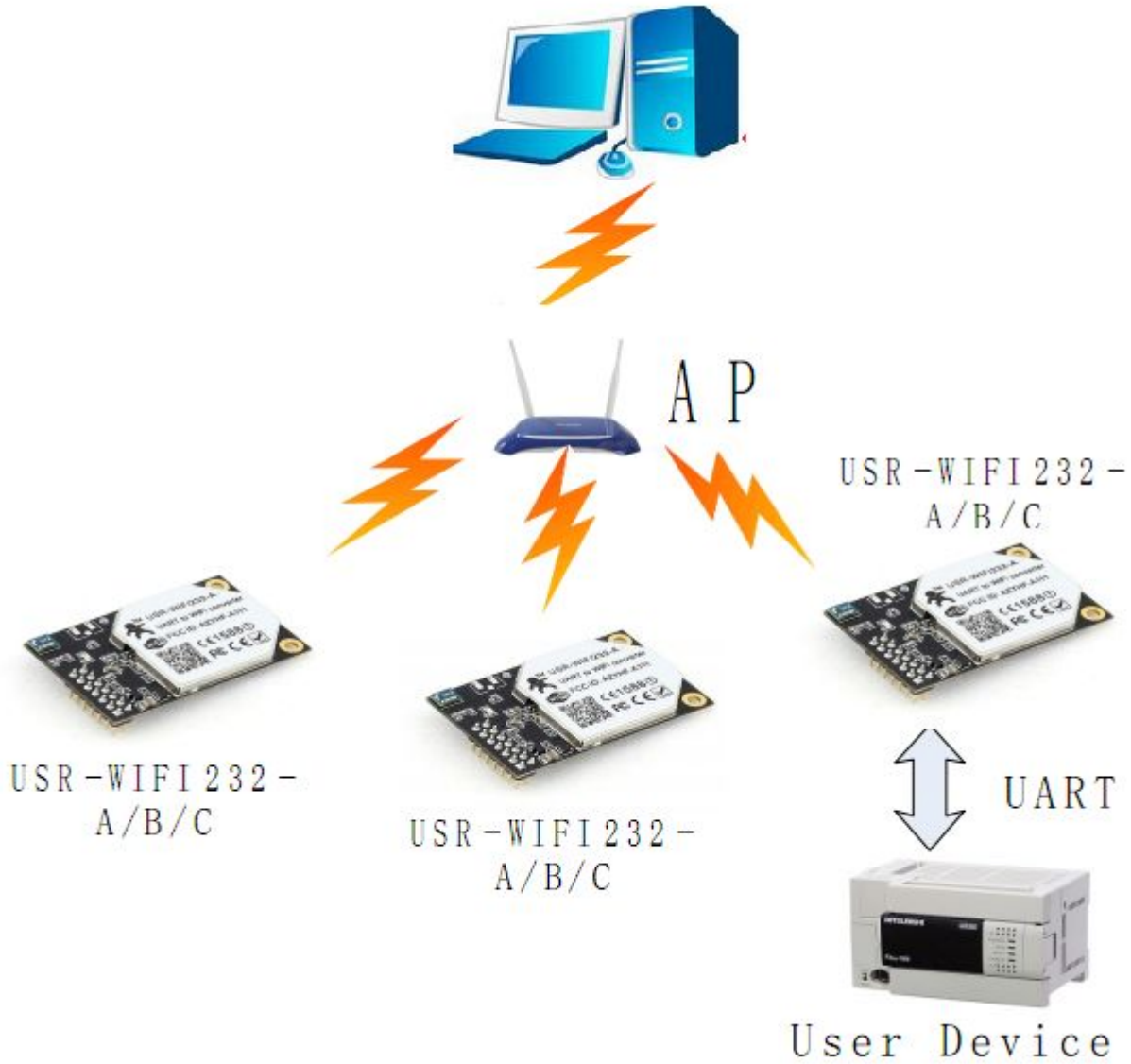
Open USR-TCP232-Test. exe software , select COM 3, baud rate 57600, select open serial ports

Netsetting, set as TCP server, Local host IP as 10.10.100.100, This is the computer's IP address, local host port number 8899, detail see picture as below:



2.4. Module as STA+TCP server

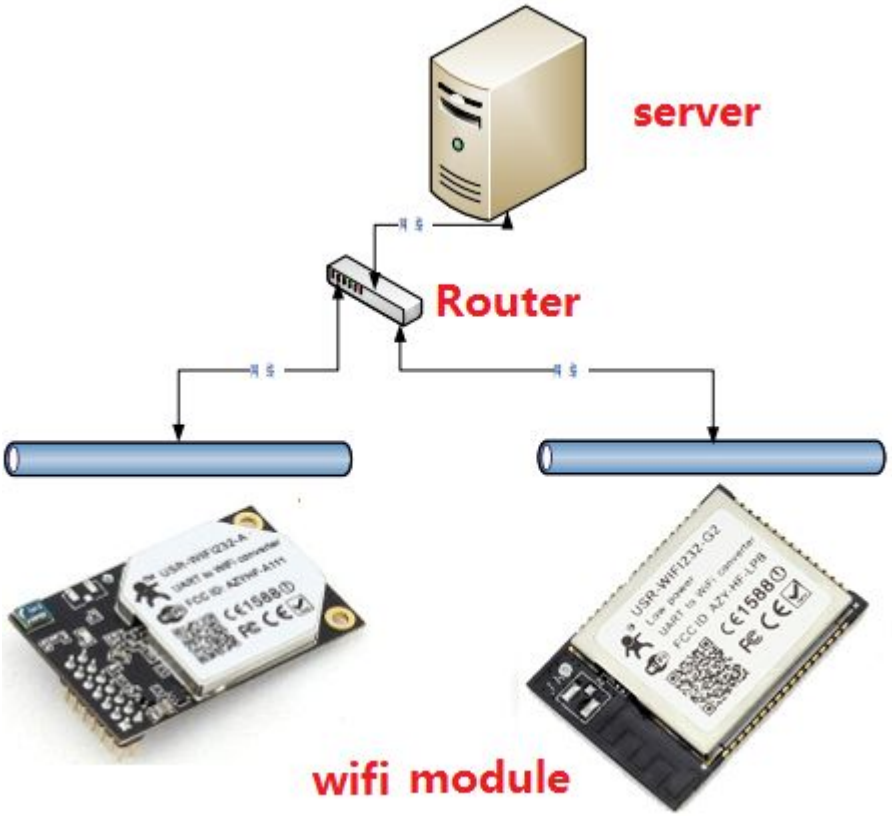
Module as STA to join to router and work as TCP server



Detail operate steps link:
http://www.usr.so/Faq/12.html

2.5. STA+TCP client application

Module as STA join to router and work as TCP client,Connect to the server.



服务器。

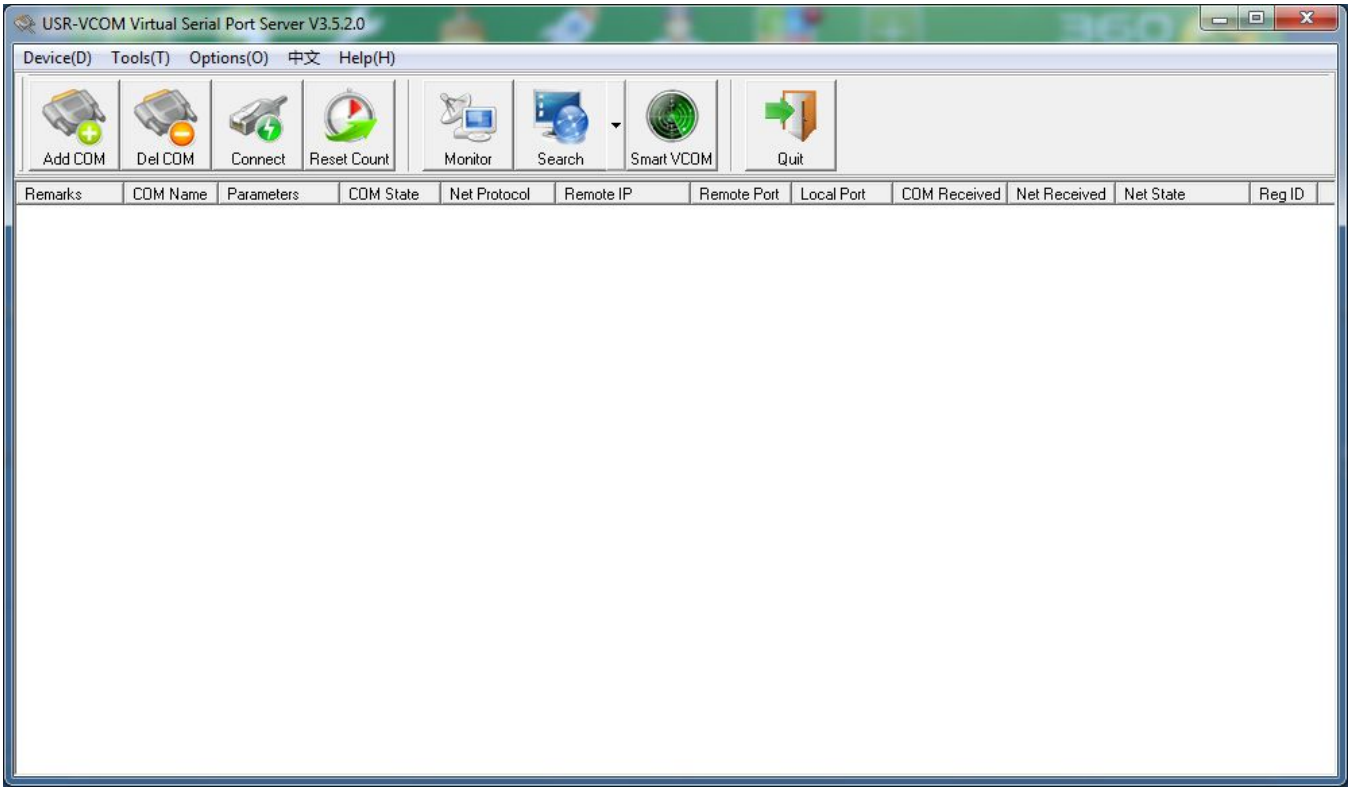
Detail operate steps link: http://www.usr.so/Faq/60.html

3. WiFi module is connected to the virtual serial port software

3.1. Download and install the software

Download link:http://www.usr.so/Download/31.html

Turn off the computer before installing a firewall and anti-virus software.



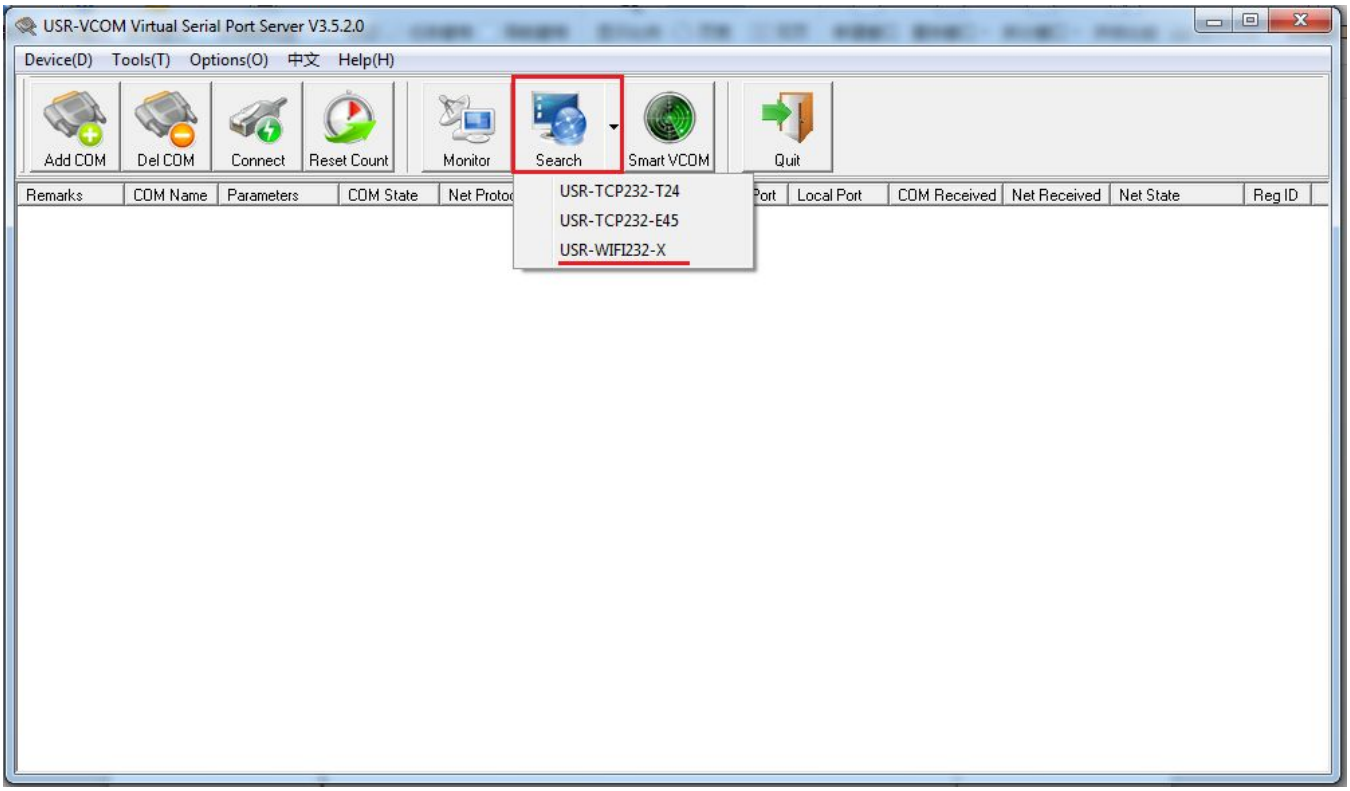
3.2. Module as AP + TCP Server to VCOM communication

3.2.1. Hardware connect and Network connection

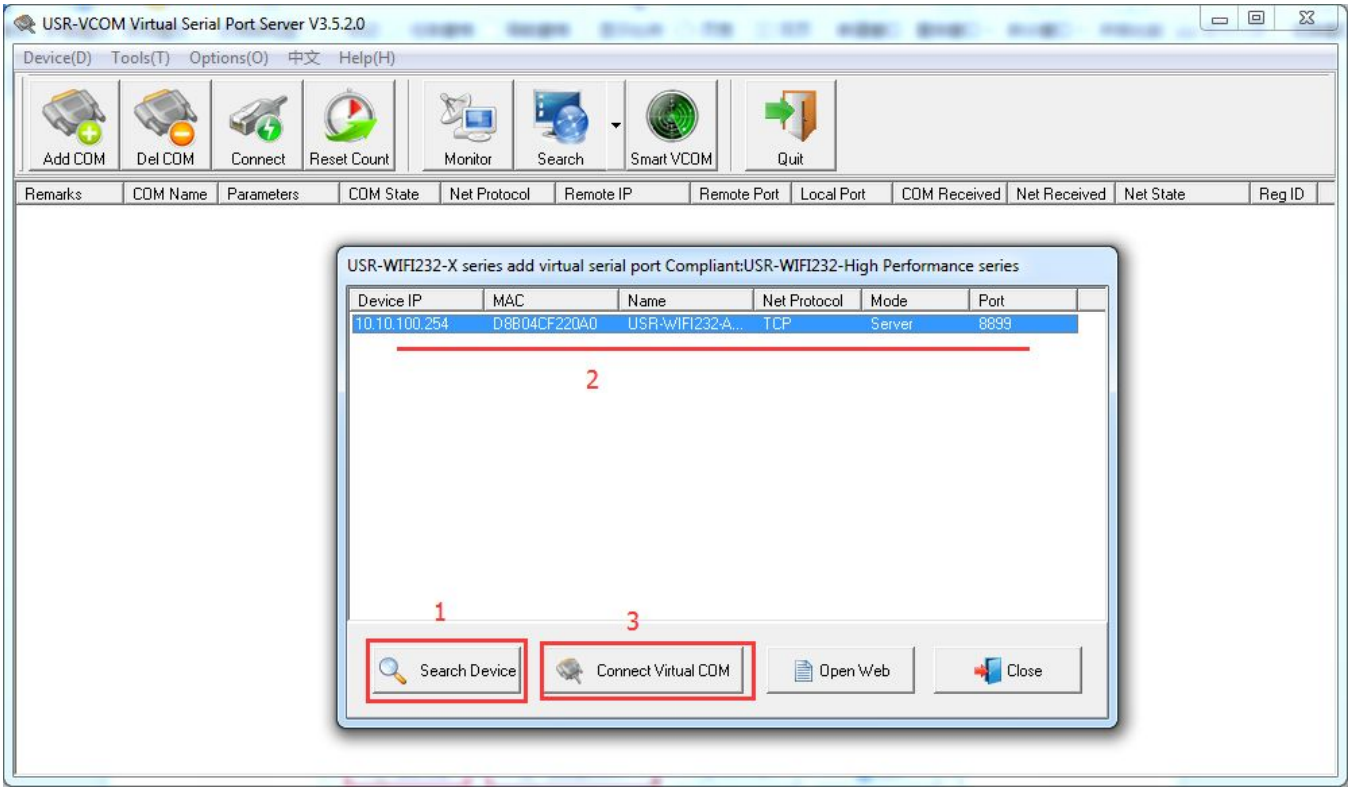
Detail please see first chapter module initial test

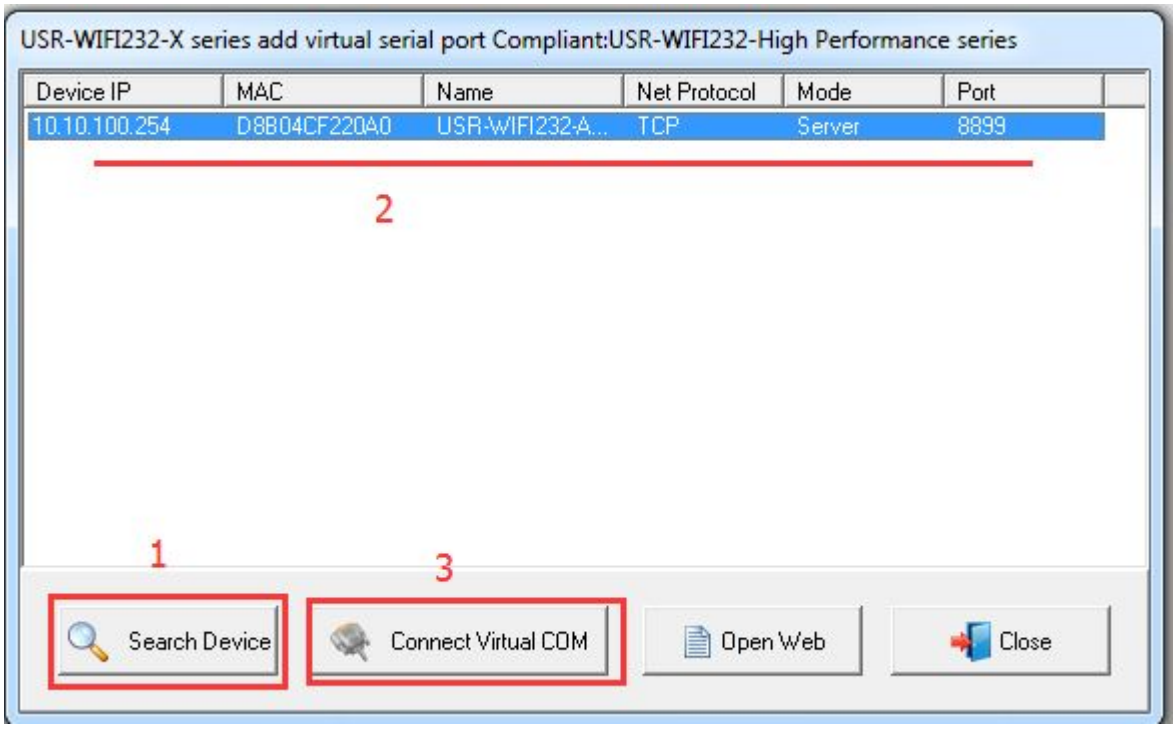
3.2.2. Add a virtual serial port

PC connected to the WiFi module SSID in vcom page by clicking on the "search",In the drop-down menu, select "USR - WIFI232 - X".

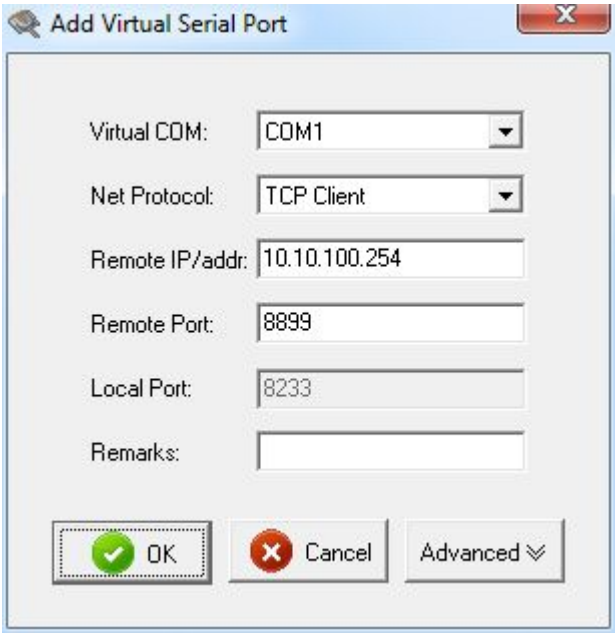


Click on the "seach device", select the device, click on the "connet virtual com"

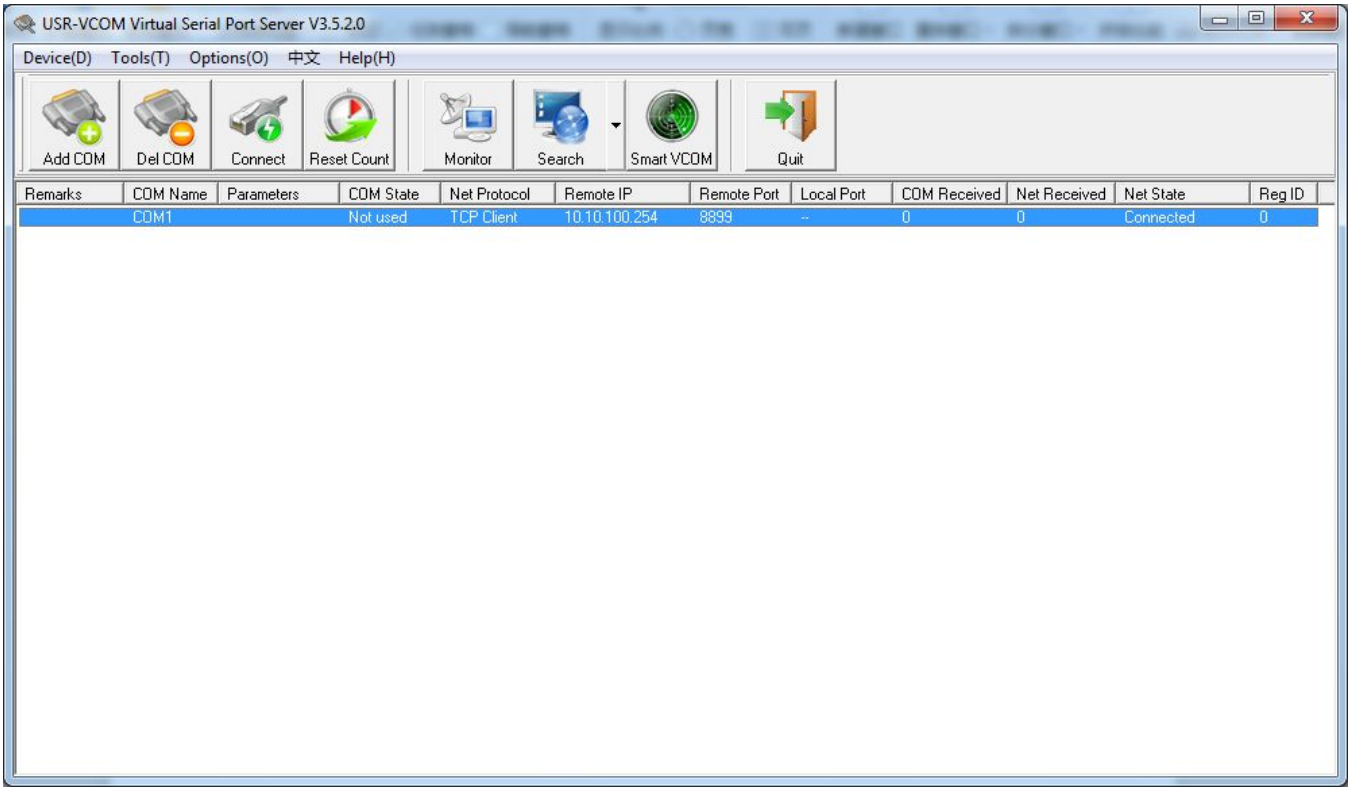




Select com1, click "ok"

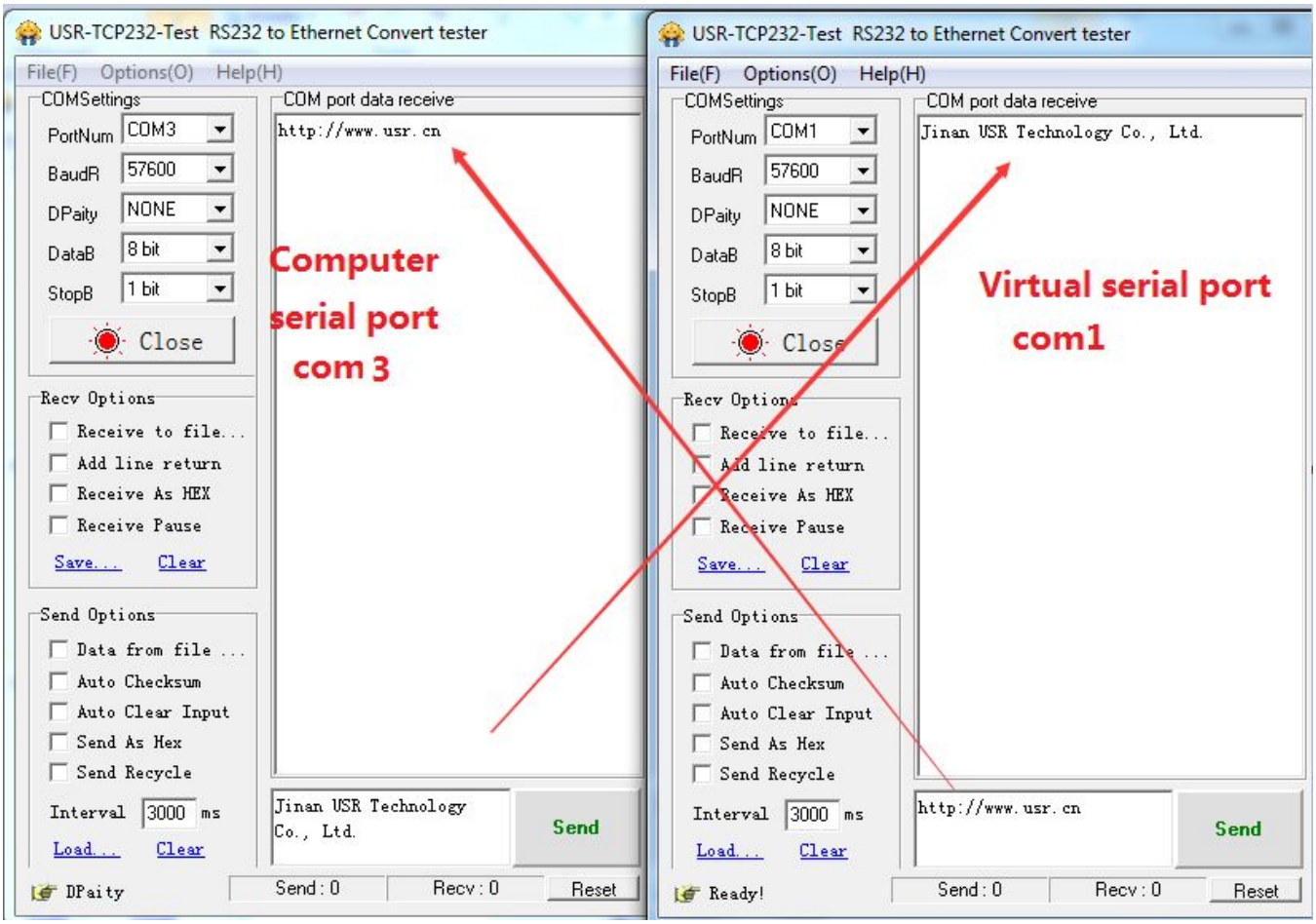


Net state:connected



3.2.3. PC serial port and

Open the two USR - TCP232 - form the Test software, Com1 connection, Com3 connection. Communication diagrams : com1->Virtual serial->WIFI->module->Module of serial port->RS232 serial port line->COM 3



4. Module Settings

4.1. Built-in webpage

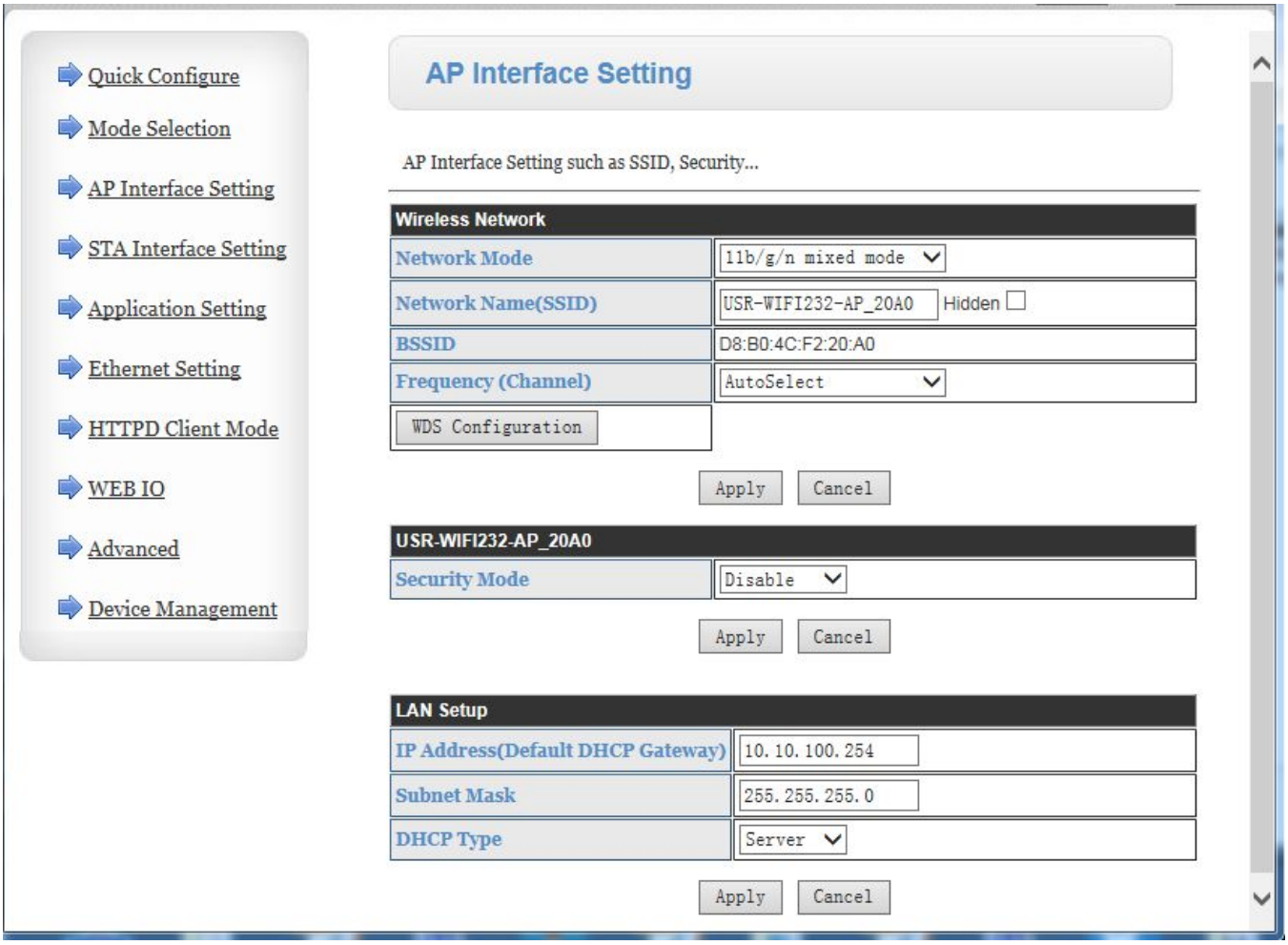
WiFi high-performance modules use web configuration parameters

Module in AP mode, put 10.10.100.254 at browser , come into buit-in webpage, user and password as admin

Reference link: http://www.usr.so/Faq/71.html

Windows Security
The server 10.10.100.254 is asking for your user name and password. The server reports that it is from A11.
Warning: Your user name and password will be sent using basic authentication on a connection that isn't secure.
admin
Remember my credentials
OK
Cancel

中文
English
快速配置
模式选择
无线接入点设置
无线终端设置
串口及网络设置
以太网功能设置
HTTPD Client模式
IO控制
模块管理
快速配置
1F 无线配置 【修改】
无线模式
工作模式
AP模式
无线接入点参数设置
网络名称（SSID）
USR-WIFI232-AP_0000
隐藏
模块MAC地址
AC:CF:00:00:00:00
加密模式
Disable
确定
取消
2F 以太网功能配置 【修改】
3F 串口配置 【修改】



4.2. AT command configuration

Send +++, (notice there is no enter or other character), receive a, within 3s respond a, receive +OK, then come into AT command. Send AT+H can obtain help notice, send AT+ENTM return to transparent transmission.

More reference link:http://www.usr.so/Faq/57.html

5. How to restore to factory settig with the wifi module

1、Module work mode (Ready light on), pull down reload pin for 3-5s, (short connect GND to reload), after that loosen it, wiating for module reload.

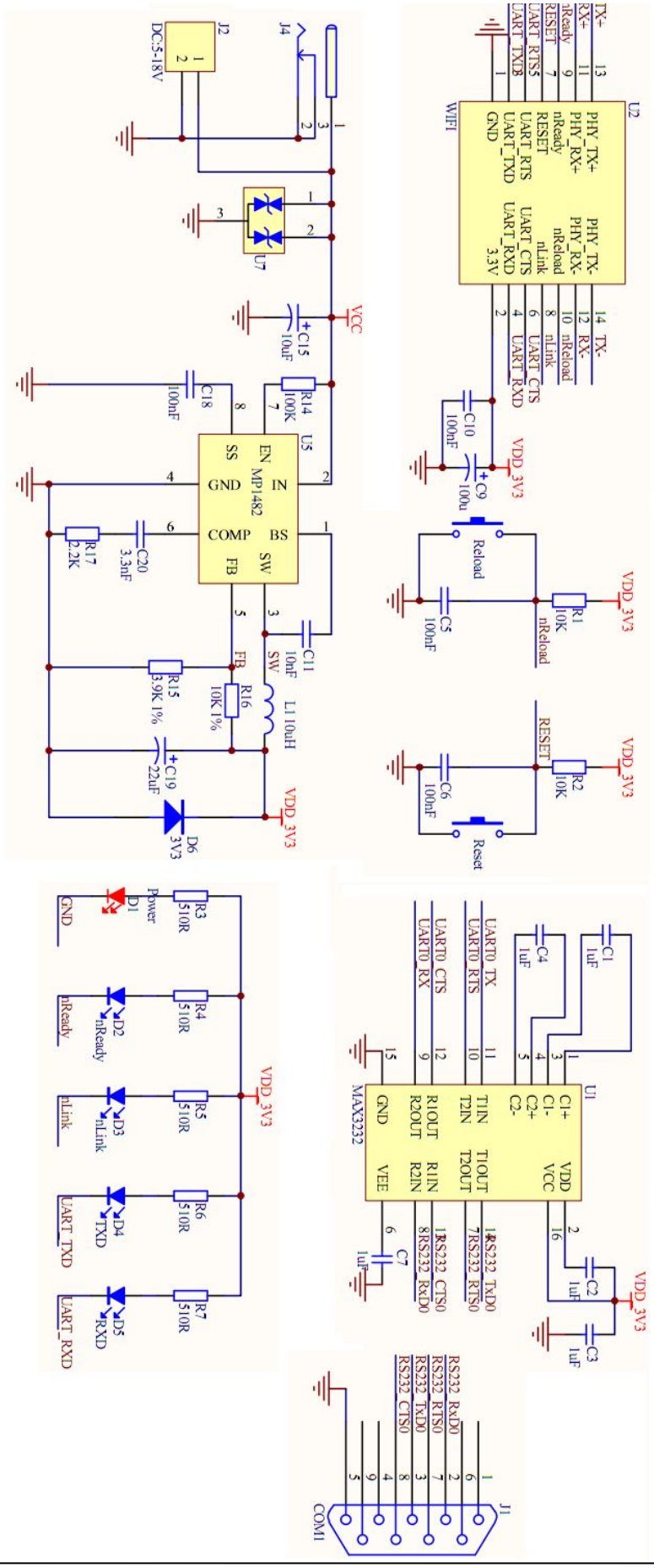
2、Use AT command, AT+RELD

3、Come into module built-in webpage, to selct reload button

Reference link:**http://www.usr.so/Faq/61.html**

6. Hardware circuit design reference

USR-WiFi232 -B Test circuit reference


J2
DC:5-18V
J4
U7
VCC
C15
10uF
C18
100nF
R14
100K
U5
MP1482
EN
IN
SS
GND
COMP
BS
FB
SW
R17
2.2K
C20
3.3nF
C11
10nF
R15
3.9K 1%
R16
10K 1%
L1 10uH
C19
22uF
D6
3V3
VDD_3V3
U2
WIFI
PHY_TX+
PHY_RX+
nReady
RESET
UART_RTS
UART_TXD
UART_CTS
UART_RXD
3.3V
PHY_TX-
PHY_RX-
nReload
nLink
C10
100nF
C9
100u
Reload
C5
100nF
R1
10K
nReload
RESET
R2
10K
C6
100nF
Reset
D1
Power
R3
510R
D2
nReady
R4
510R
D3
nLink
R5
510R
D4
TXD
R6
510R
D5
RXD
R7
510R
GND
UART_TXD
UART_RXD
U1
MAX3232
C1+
C1-
C2+
C2-
VDD
VCC
T1IN
T2IN
T1OUT
T2OUT
R1OUT
R2OUT
R1IN
R2IN
C1
1uF
C4
1uF
C2
1uF
C3
1uF
C7
1uF
UART0_TX
UART0_RTS
UART0_CTS
UART0_RX
RS232_TxD0
RS232_RTS0
RS232_CTS0
RS232_RxD0
J1
COM1

7. Contact

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8. Disclaimer

Body

9. Update History

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