HLK-RM04 Application manual2

Serial to WIFI(AP mode)

Shenzhen Hi-Link ElectronicTechnology co.,Ltd

Note: To ensure the normal operation, please make sure you have purchased the HLK-RM04 Development Kit from us.as the following picture:

	HLK-RM04 module
	HLK-RM04 Test board
	2.4G rod antenna
	5V 1000mA power supply
	mesh line（optional）

Please contact well as the following way in the picture:

Please note the direction that HLK-RM04 plugged into the backplane!

1 Brief Introduction

HLK-RM04 is a new low-cost embedded UART-ETH-WIFI module (serial port - Ethernet - Wireless network) developed by Shenzhen Hi-Link ElectronicTechnology co., Ltd

This product is an embedded module based on the universal serial interface network standard, built-in TCP / IP protocol stack, enabling the user serial port, Ethernet, wireless network (wifi) interface between the conversions.

Through the HLK-RM04 module, the traditional serial devices do not need to change any configuration; data can be transmitted through the Internet network. Provide a quick solution for the user's serial devices to transfer data via Ethernet.

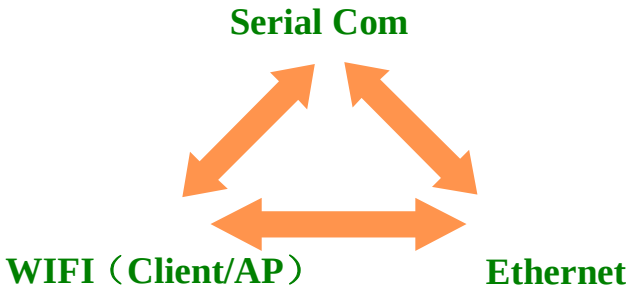
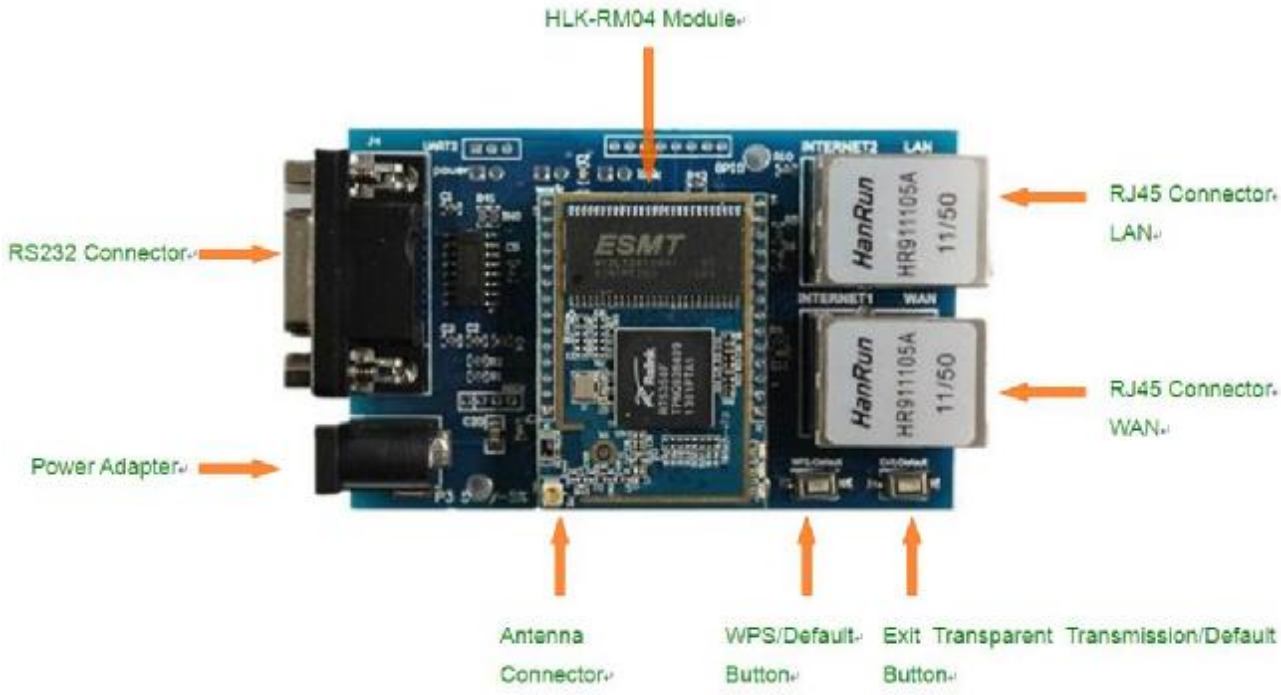


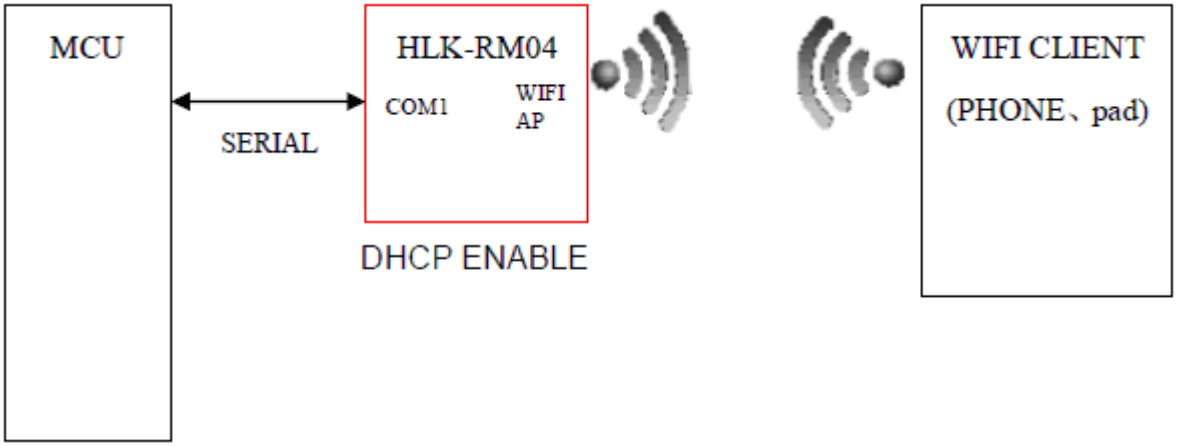
Chart 1. F-structure

Every part's function of Test board:



2. Serial to WIFI (AP) configuration Method

Serial to WIFI(AP mode) model



The module you get from us is the factory defaults value.You can use the serial port to WIFI (AP mode) directly. **The method is as follows**:

1. Power on the test board.The power supply is 5V.Seril RS232 Connector connects with the computer's serial port. (Directly connected serial line).wait 30S, Startup is complete.

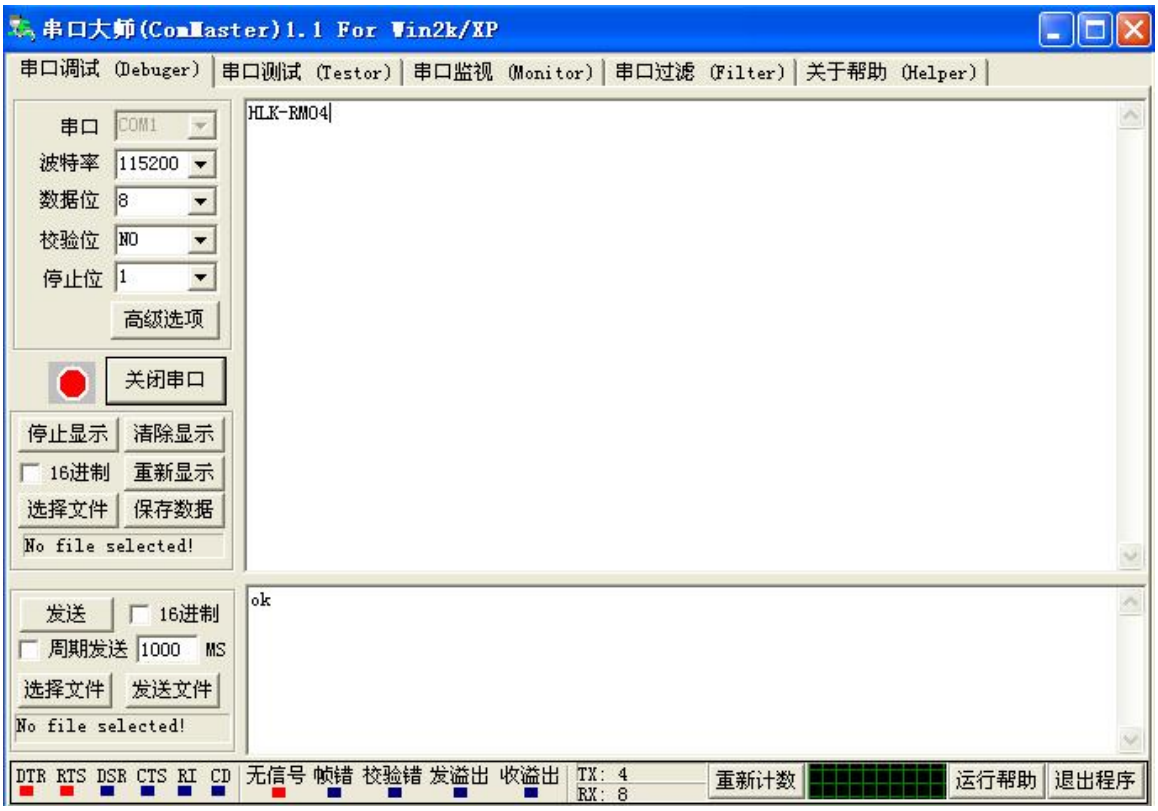
2. Using the WIFI of your mobile phone or computer to scan the WIFI signal in the space. Find the HI-LINK_XXXX (neutral version of the name is: Serial WIFI).

3.Join in the HI-LINK_XXXX（or Serial WIFI）.Password:12345678.Your mobile Phone or computer will get IP automatically.

4 Open the TCP testing software(testing tools) of the phone or computer.connect the IP:192.168.16.254. Port: 8080.Send character:HLK-RM04.

Note: iphone/Android phone can search TCP tools, PC software can search TCP UDP assistant through Baidu Browser.

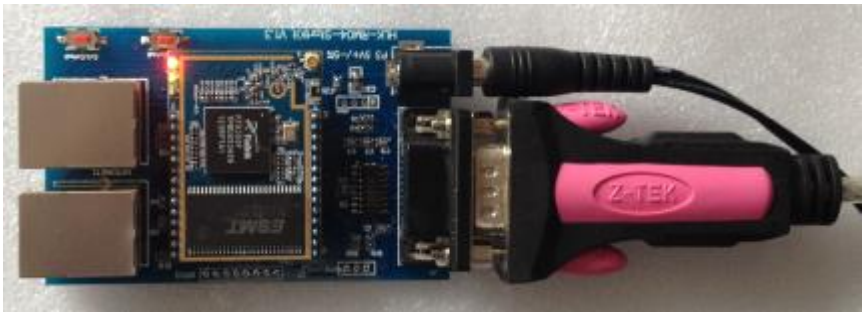
2. PC client opens serial debugging assistant: As shown in the following:



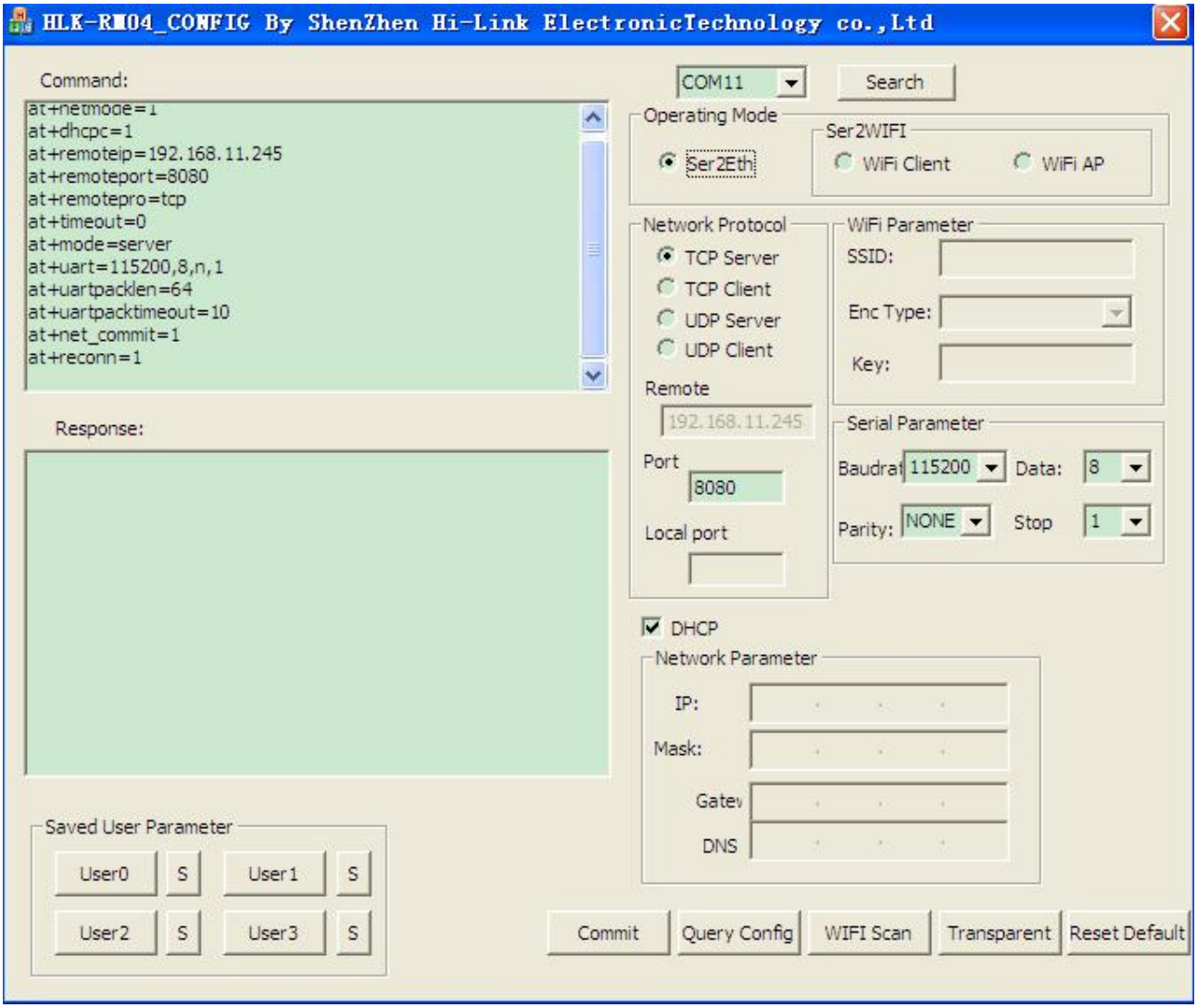
Note: In the default mode, WIFI and Ethernet are both open. The power consumption is relatively large. If you just use the serial to WIFI (AP mode) conversion, the module can be configured through the following methods.

Method one：Through the serial port

1. **First please ensure the module is in default mode.** The method of restoring the factory settings: power-on the module, wait 35 seconds. Then press one of the buttons on the test board and hold on more than 6 seconds.
2. **Power-on the module again, wait 35 seconds until the light on the module blinking**, and then connect the DB9 serial port with the computer's serial port in a straight line. Or connect the test board directly with a USB to serial cable as the following picture:



3. **Press the "Exit transparent transmission / Preset" button, open the configuration software**, select the serial number, click on the search button, If there appears message >: at (: Found Device at COM8 (115200)! In the respose area, it means the module is found.



4 Parameter configuration

Operating mode:WIFI AP

Network Protocol: TCP server

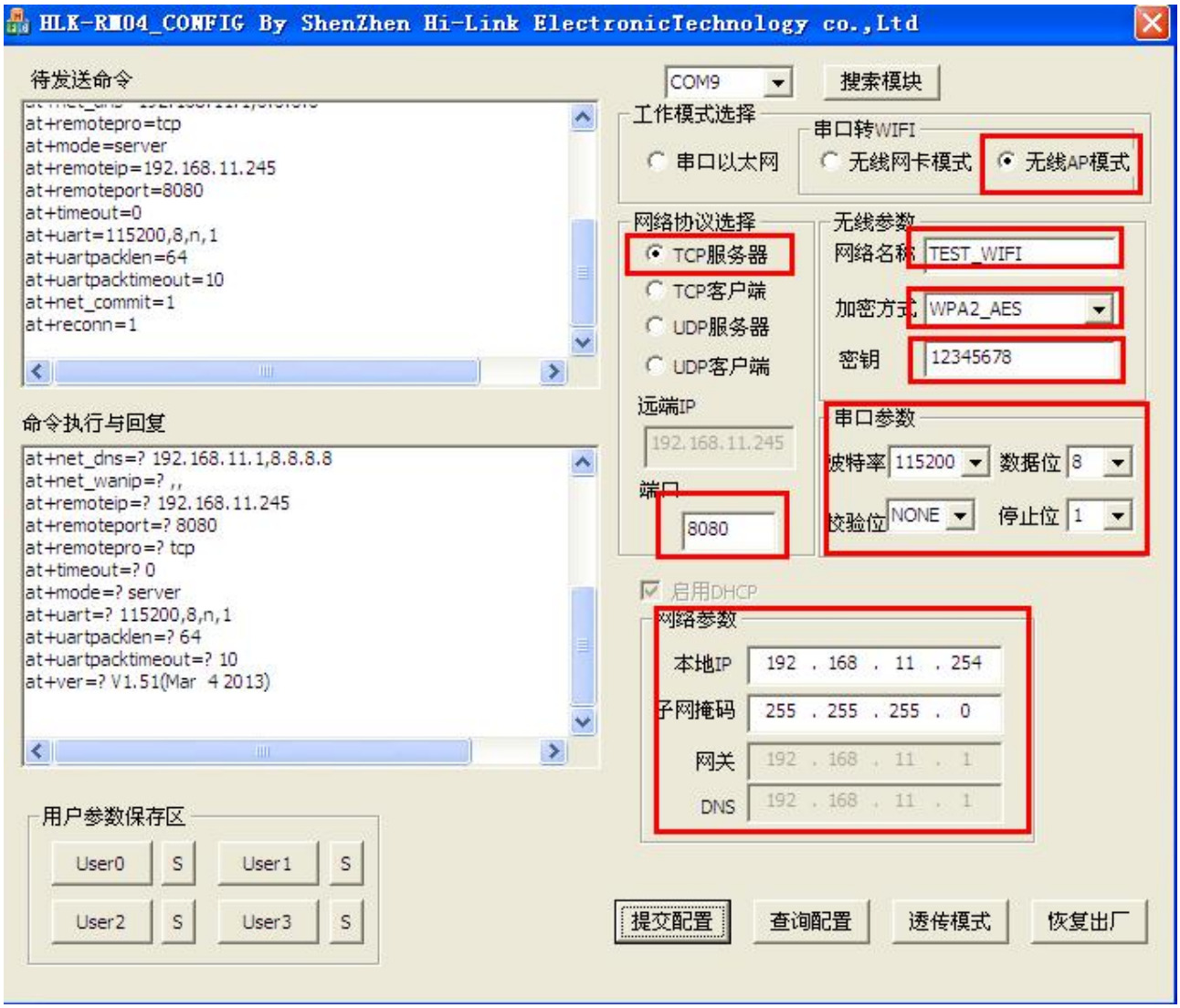
Remote IP: Remote IP is not working as a sever

Port: The monitoring port of the starting TCP server

Serial Parameter: Change the parameters according to your requirement.

Network parameter: IP:192.168.11.254 .This IPis different from the default one,the default IP is 192.168.16.254

Mask:255.255.255.0



After selecting the configuration parameters configuration, click on the ‘commit’ botton.

5.If you use PC to search the WIFI signal,you will find the following interface:

无线网络连接 12
网络任务
刷新网络列表
为家庭或小型办公室设置无线网络
相关任务
了解无线网络
更改首选网络的顺序
更改高级设置
选择无线网络
单击以下列表中的项目以连接到区域内的无线网络或获得更多信息(W)。
ChinaNet-F7Cx
启用安全的无线网络 (WPA2)
iTV-F7Cx
启用安全的无线网络 (WPA2)
ChinaNet-EkVT
启用安全的无线网络 (WPA)
TEST_WIFI
启用安全的无线网络 (WPA2)
V54-HOME001
启用安全的无线网络 (WPA)
连接(C)

无线网络连接 12 状态
常规
支持
连接
状态: 已连接上
网络: TEST_WIFI
持续时间: 00:01:45
速度: 54.0 Mbps
信号强度:
活动
发送
收到
数据包: 596 8
属性(P)
禁用(D)
查看无线网络(V)
关闭(C)

无线网络连接 12 状态
常规
支持
连接状态
地址类型: 通过 DHCP 指派
IP 地址: 192.168.11.1
子网掩码: 255.255.255.0
默认网关: 192.168.11.254
详细信息(D)...
Windows 没有检测到此连接的问题。如果您无法连接，请单击“修复”。
修复(P)
关闭(C)

3. Open the serial debugging tools and network debugging tools.

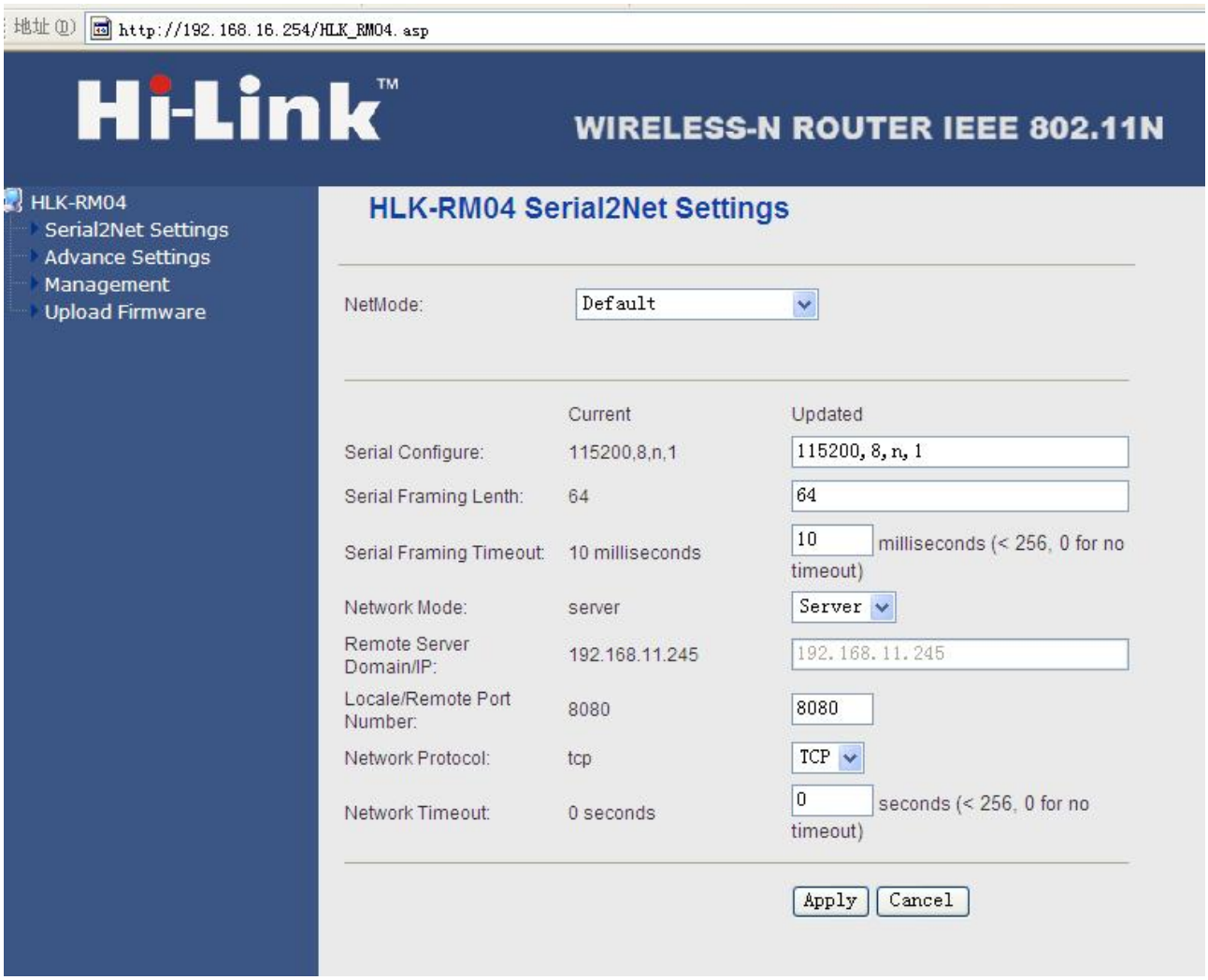
The data sending and receiving from Seril to network is normal.

Method two: Through WIFI web page

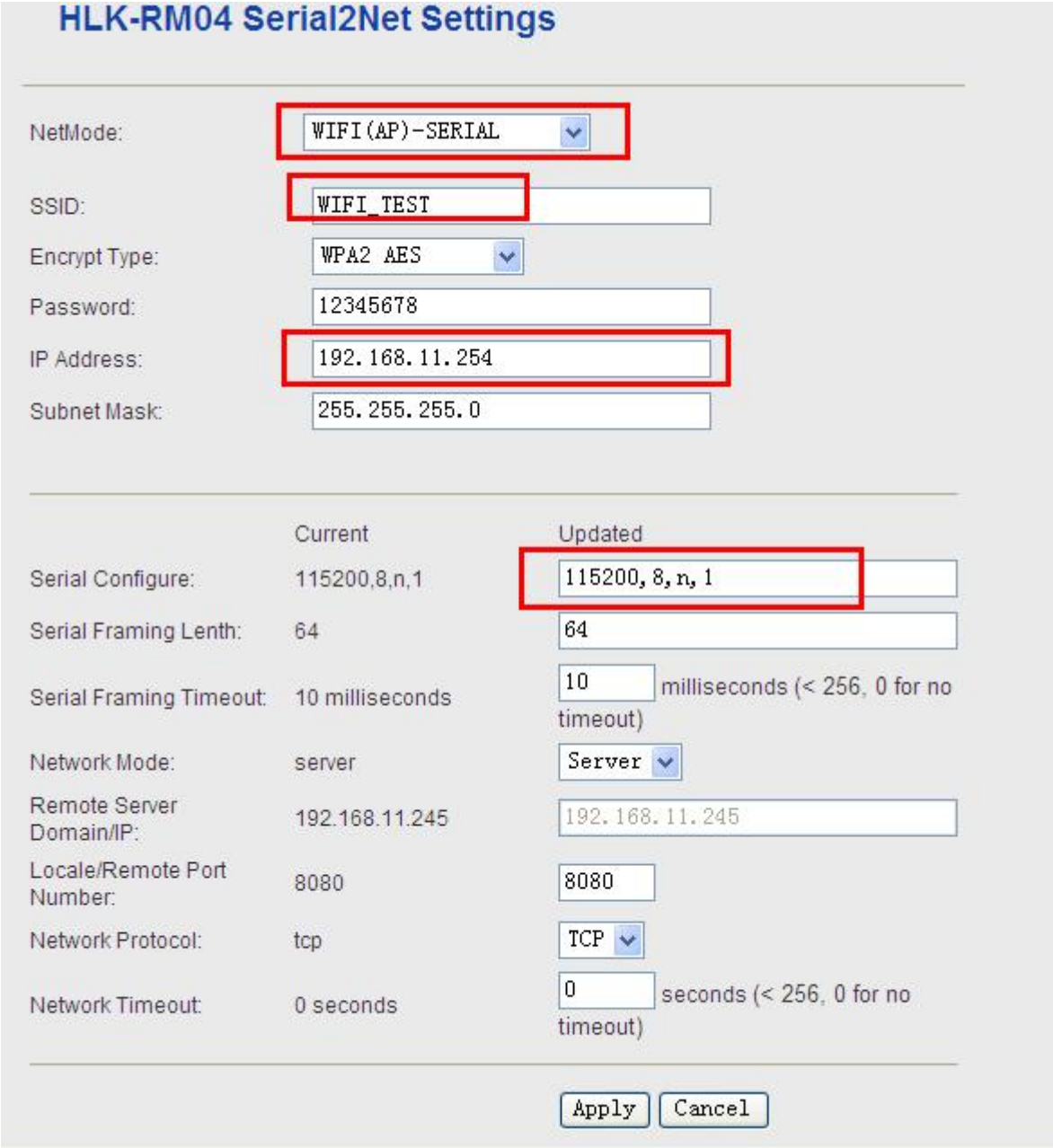
1. First,restore the factory value.Press any button on the test board more than 6 senconds,wait for starting(about 30s),after starting, use the Pc's WIFI to scan the WIFI signal in the space,join in the WIFI,Pass word:12345678

2. Input 192.168.16.254 in the browser, it will pop-up a dialog box, enter the user name and password. Both of the username and password are admin.

You will see the following interface after loging on:



3. Choose WIFI(AP)-SERIALmode,change the IP to 192.168.11.254.



Click on the button‘Apply’ after finishing the parameter configuration, submit the modification.

4. After you have made your changes, please do the operation according to the step5 in the method one.