

## Guideline to configure Serial communication with Virtual COM for 4G Router

The following content uses a Local test environment as an testing example, shown as Figure1. For User's public Server network environment just refer to Figure2.

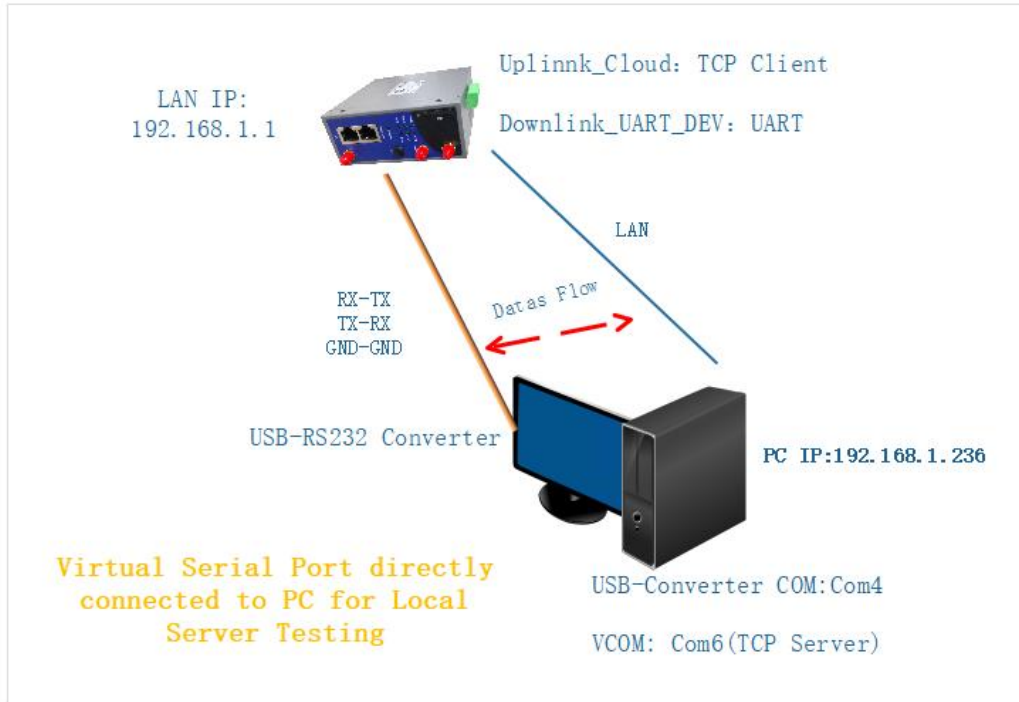
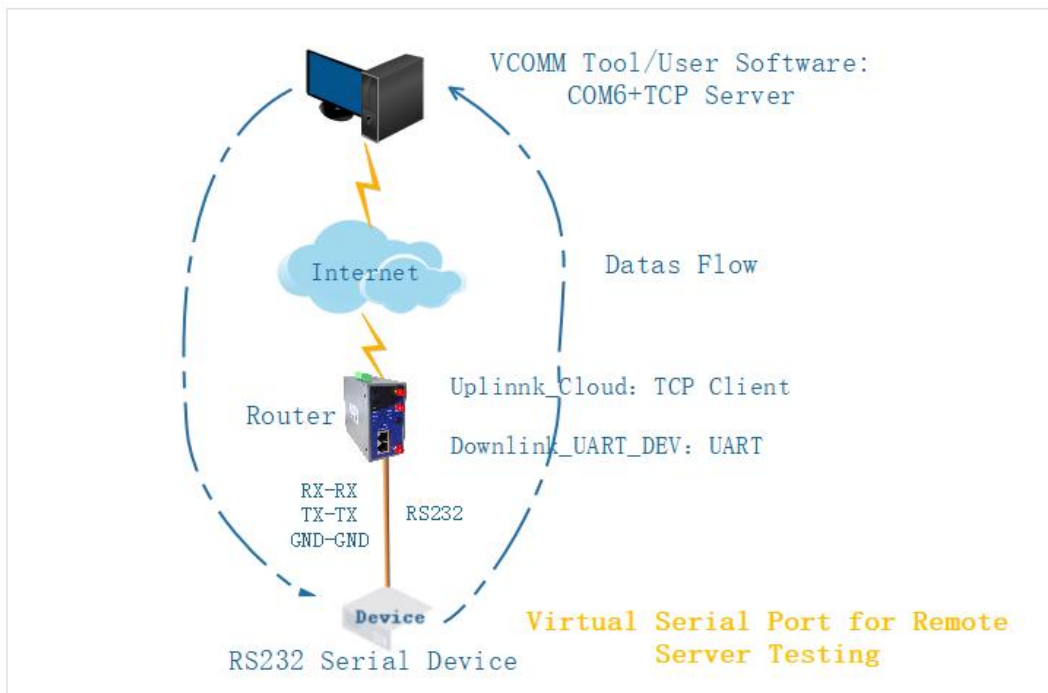
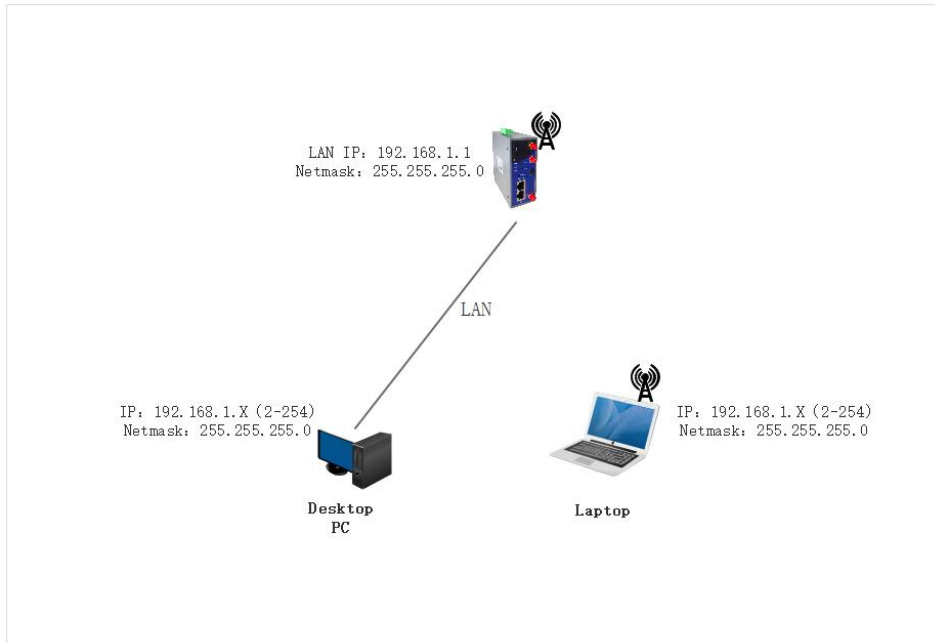


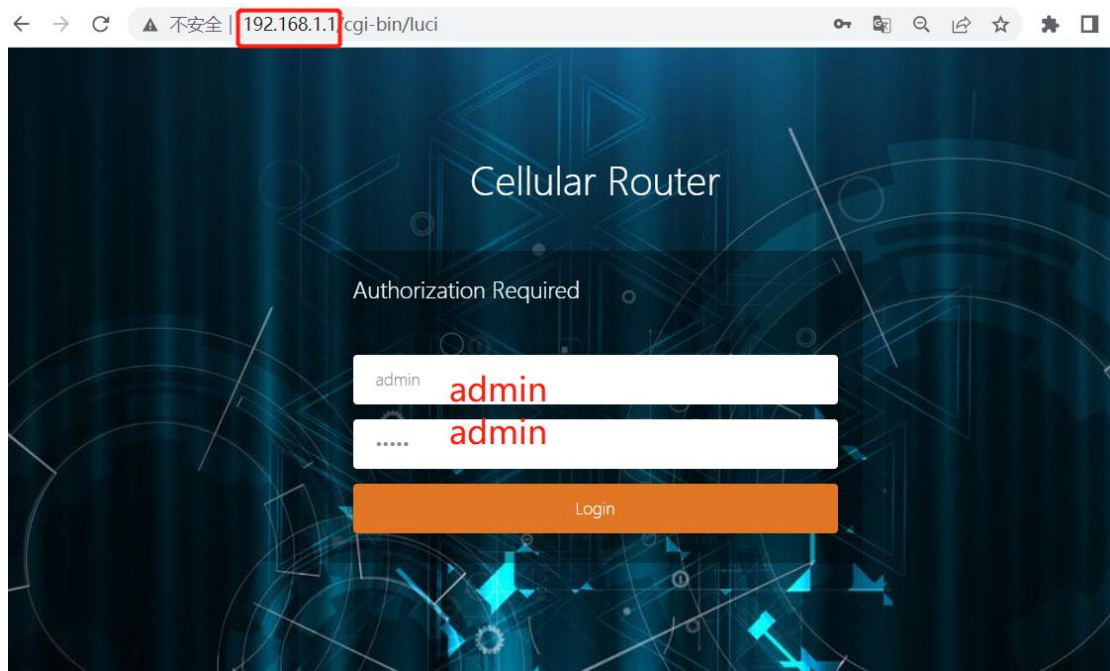
Figure1



1. Connect the LAN port of the router to the computer, and set the automatic dhcp mode for the computer Network Interface Card, and ensure that the computer can obtain the address 192.168.1.x, netmask 255.255.255.0.



2. Open the browser, type the default IP address of the router with 192.168.1.1, then press Enter. And then input the username/password with admin/admin to login the Router.



3. After logging in, you will see overview details about the router system, including the software/hardware version, product model, product id, networking mode, and MAC address, etc.

The screenshot shows the web interface for an M2M wireless terminal. The browser address bar displays '192.168.1.1/cgi-bin/luci/'. The page title is 'M2M wireless terminal' and 'Cellular Router'. The left sidebar contains navigation options: System Status, Overview, Routes, System Log, Kernel Log, Realtime Graphs, Basic Network, Advanced Network, VPN Configuration, System Management, and Logout. The main content area is titled 'Status' and contains a table with system information:

System			
Router Name	M2M	Product Name	ZR2721S
Firmware Version	Premium Wireless Router v2.5.221125	Product ID	1120ZR21908270518
Local Time	Mon Nov 28 19:44:33 2022	Hardware Class	Single Model Single Card
Uptime	0h 8m 39s	MAC Address	34:0a:68:24:b8:ec
Load Average	1.06, 1.11, 0.58	WAN Mode	4G/5G and Wired

Below the system table is the 'MobileWAN Status' section, which includes fields for Interface, Gateway, IPv4Address, DNS, Modem Type, Modem IMEI, Modem IMSI, Modem ICCID, and Network Operator.

4. Check the LAN IP address of the router and PC address connected to router, shown as follows:

The screenshot shows the 'Wired Network' configuration page in the web interface. The left sidebar is expanded to 'Wired Network'. The main content area is titled 'Interfaces - LAN' and contains a form for configuring the LAN interface. The 'IPv4 address' field is highlighted with a red box and contains the value '192.168.1.1/24'.

Common Configuration

General Setup | Advanced Settings

Status: Collecting data...

Protocol: Static address

IPv4 address: 192.168.1.1/24

Use custom DNS servers: [ ]

IPv6 assignment length: 64

IPv6 assignment hint: [ ]

The screenshot shows the 'System Status' page with the 'Overview' tab selected. The left sidebar contains navigation options: Overview, Routes, System Log, Kernel Log, Realtime Graphs, Basic Network, Advanced Network, VPN Configuration, System Management, and Logout. The main content area displays network details for the 'eth1' interface, including MAC Address (34:0A:68:24:B8:EC), Netmask (255.255.255.255), and Gateway (0.0.0.0). Below this, there are sections for Active Connections (160 / 16384 (0%)), Memory usage (Total Available: 72172 kB / 123688 kB (58%), Free: 64404 kB / 123688 kB (52%), Buffered: 7768 kB / 123688 kB (6%)), and DHCP Leases. A table of DHCP Leases is shown with a red box highlighting the first entry:

Hostname	IP Address	MAC-Address	Leasetime remaining
mc007	192.168.1.236	E4:E7:49:1A:A7:F3	11h 49m 21s

At the bottom, the 'Wireless' section shows details for a Generic MAC80211 802.11bgn Wireless Controller (radio0), including SSID (ZR2721S-24b8ec), Mode (Master), Channel (6 (2.437 GHz)), Bitrate (? Mbit/s), BSSID (34:0A:68:24:B8:EE), Encryption (mixed WPA/WPA2 PSK (CCMP)), and Uptime (0h 10m 57s).

5. Start to configure smartlink usage.

5.1 to config 'cloud'/'uplink device' option: set it to TCP Client mode, and make sure the IP address and port of the server must be the same as that of the PC.

The screenshot shows the 'Smartlink' configuration page. The left sidebar is expanded to show 'Smartlink' options: M2M Platform, Network Monitor, Link Control, Dynamic DNS, and SNMP Service. The main content area has three tabs: General, Collection, and Advance. The 'General' tab is active and shows the following configuration sections:

**Mode Configuration**

Enabled	Uplink Device	Downlink Device	EDIT	DELETE
<input checked="" type="checkbox"/>	Cloud	UART_DEV	<a href="#">EDIT</a>	<a href="#">DELETE</a>

**Connection Configuration**

Enabled	Name	Working Mode	Target Address	Status	Conns	Protocol	EDIT	DELETE
<input checked="" type="checkbox"/>	Cloud	TCP Server	30001	Listening	0	Pass-Through	<a href="#">EDIT</a>	<a href="#">DELETE</a>
<input checked="" type="checkbox"/>	UART_DEV	UART	COM1	Connected	1	Pass-Through	<a href="#">EDIT</a>	<a href="#">DELETE</a>

**Serial Configuration**

Interface	Speed	Data Bit	Stop Bit	Parity	Flow Control	EDIT
COM1	115200	8	1	None	None	<a href="#">EDIT</a>

At the bottom right, there are buttons for 'SAVE & APPLY' and 'RESET'.

System Status > Overview x Smartlink x Wired Network x Tab operation >

Basic Network >

Advanced Network >

QoS

DMZ

Firewall

Port Forwards

Static NAT

**Smartlink**

M2M Platform

Network Monitor

Link Control

Dynamic DNS

SNMP Service

General Collection Advance

Cloud

Enabled

Name Cloud

Working Mode TCP Client

Server Address 192.168.1.236:20000 +

PPort

Protocol Pass-Through

Enable Heartbeat

BACK TO OVERVIEW

SAVE & APPLY

RESET

## 5.2 Set serial port parameters, such as baud rate, data bit, and parity bit.

System Status > Overview x Smartlink x Wired Network x Tab operation >

Basic Network >

Advanced Network >

QoS

DMZ

Firewall

Port Forwards

Static NAT

**Smartlink**

M2M Platform

Network Monitor

Link Control

Dynamic DNS

SNMP Service

VPN Configuration >

System Management >

Logout

Mode Configuration

Enabled	Uplink Device	Downlink Device	EDIT	DELETE
√	Cloud	UART_DEV	EDIT	DELETE

ADD

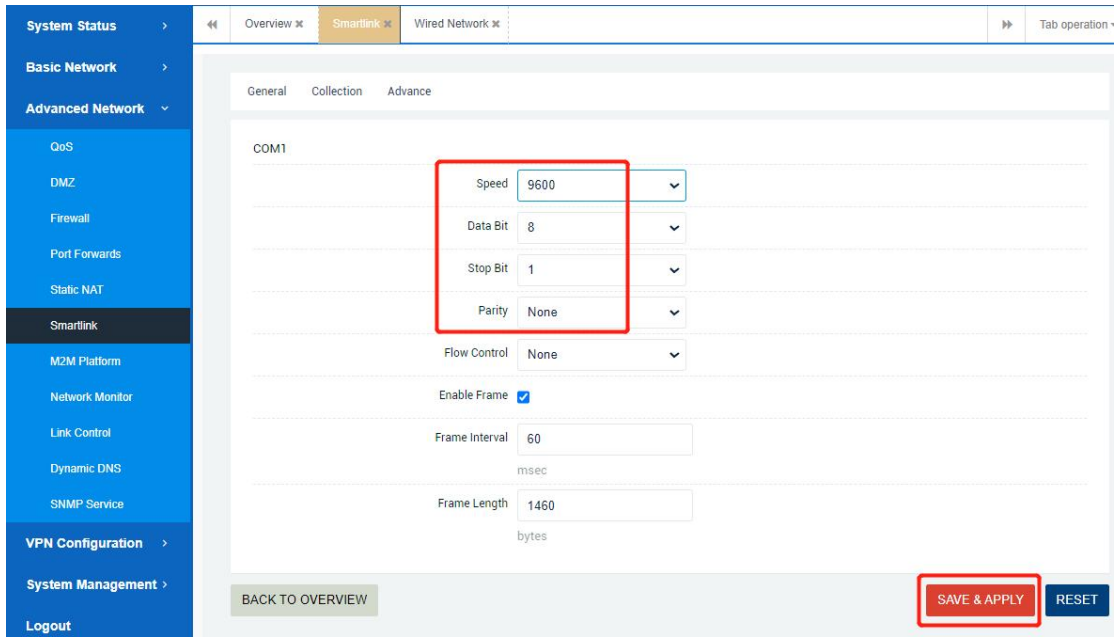
Connection Configuration

Enabled	Name	Working Mode	Target Address	Status	Conns	Protocol	EDIT	DELETE
√	Cloud	TCP Client	192.168.1.236:20000	Disconnect	0	Pass-Through	EDIT	DELETE
√	UART_DEV	UART	COM1	Connected	1	Pass-Through	EDIT	DELETE

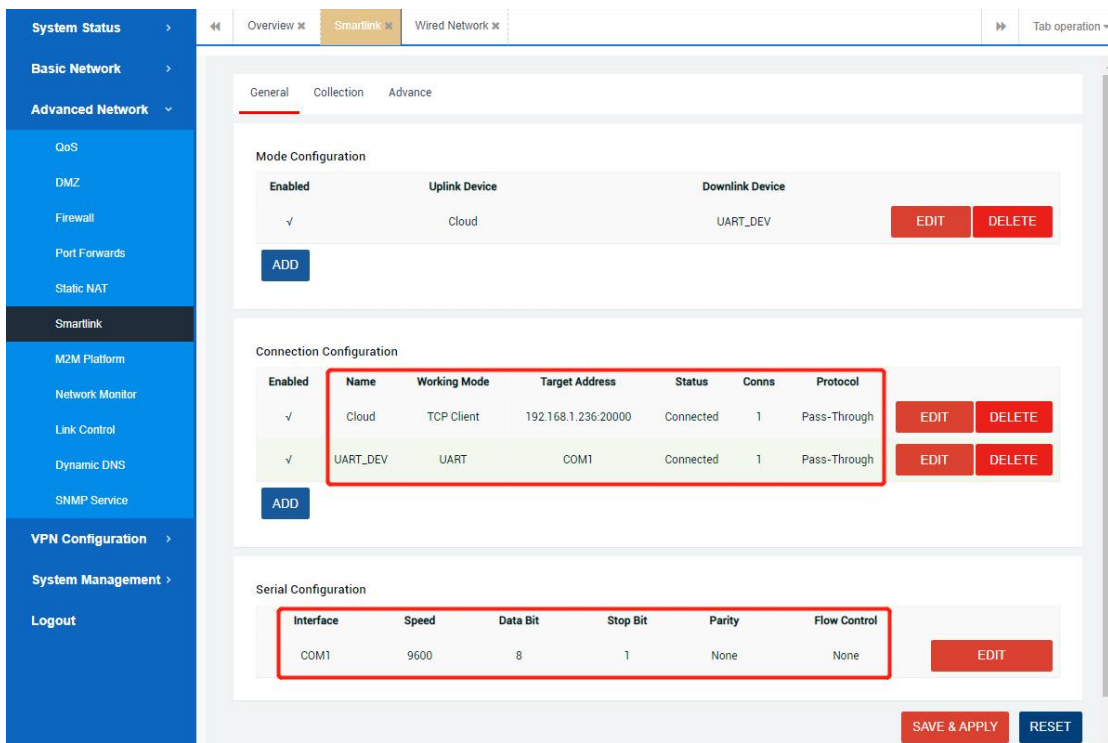
ADD

Serial Configuration

Interface	Speed	Data Bit	Stop Bit	Parity	Flow Control	EDIT
COM1	115200	8	1	None	None	EDIT

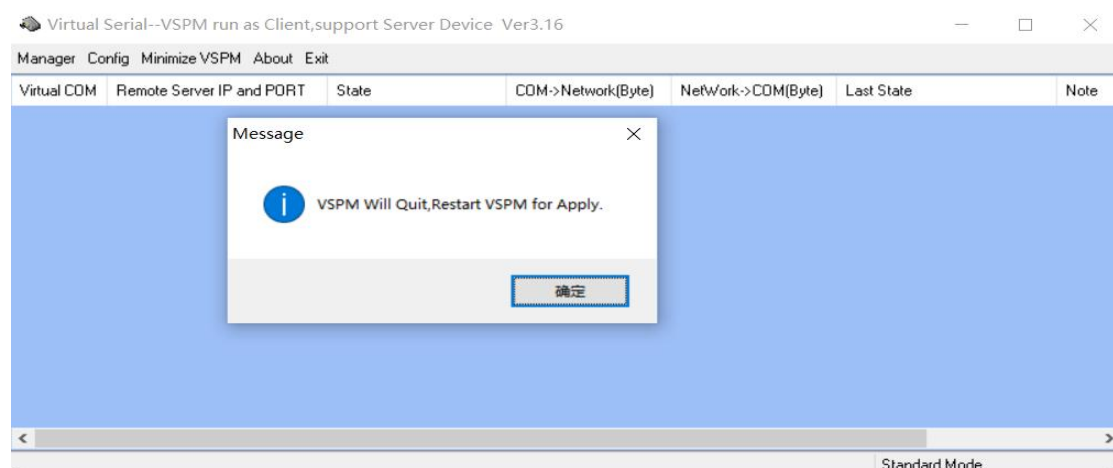
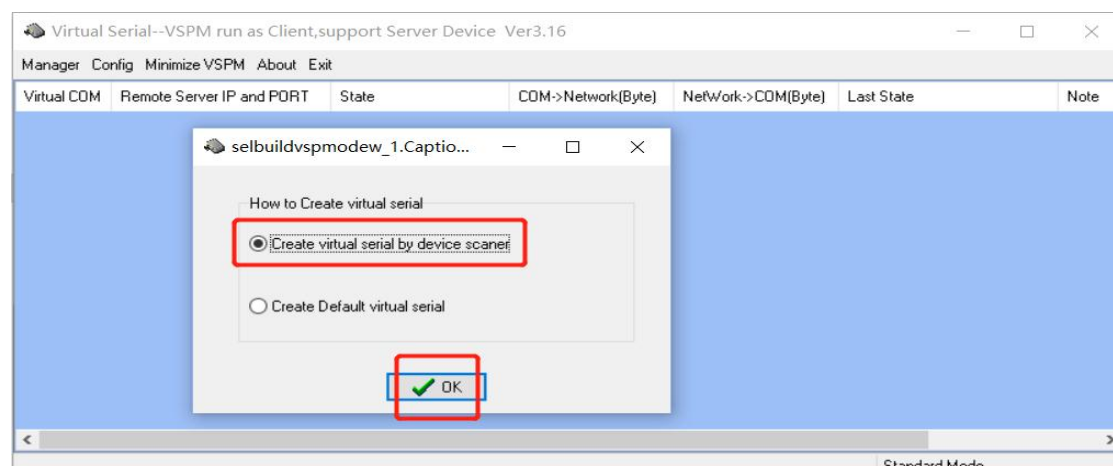
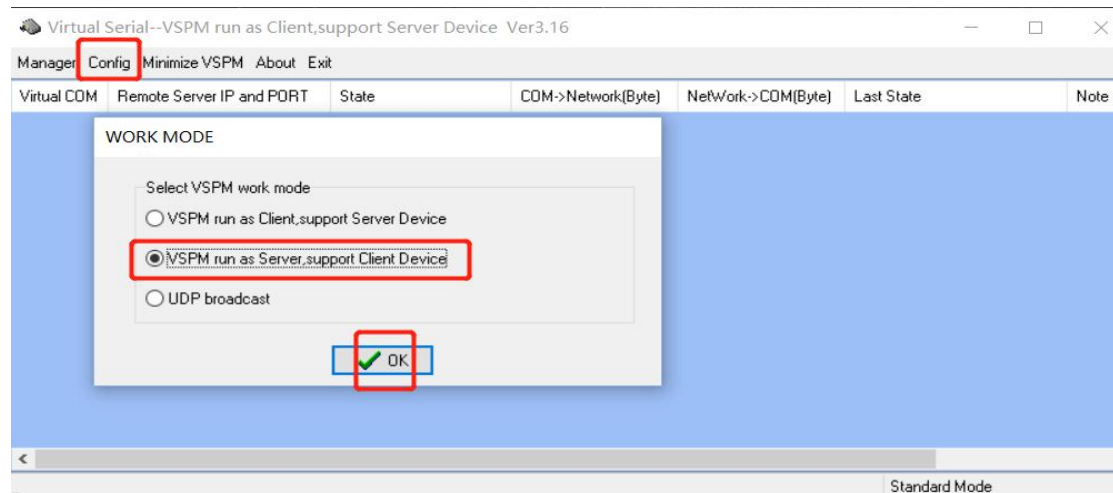


5.3 All configuration finished , show as figure below.

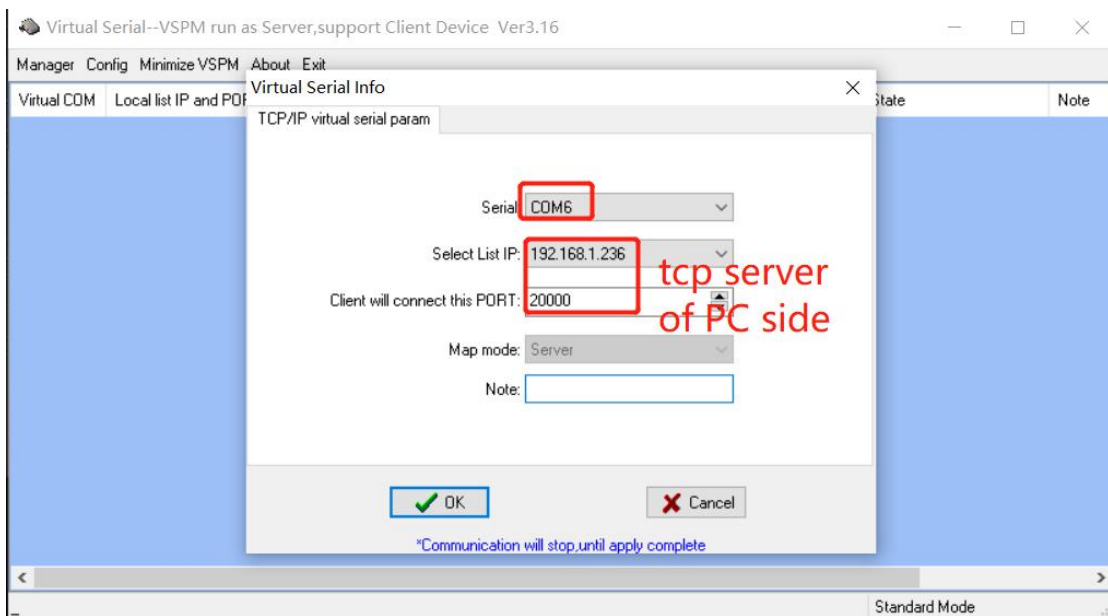
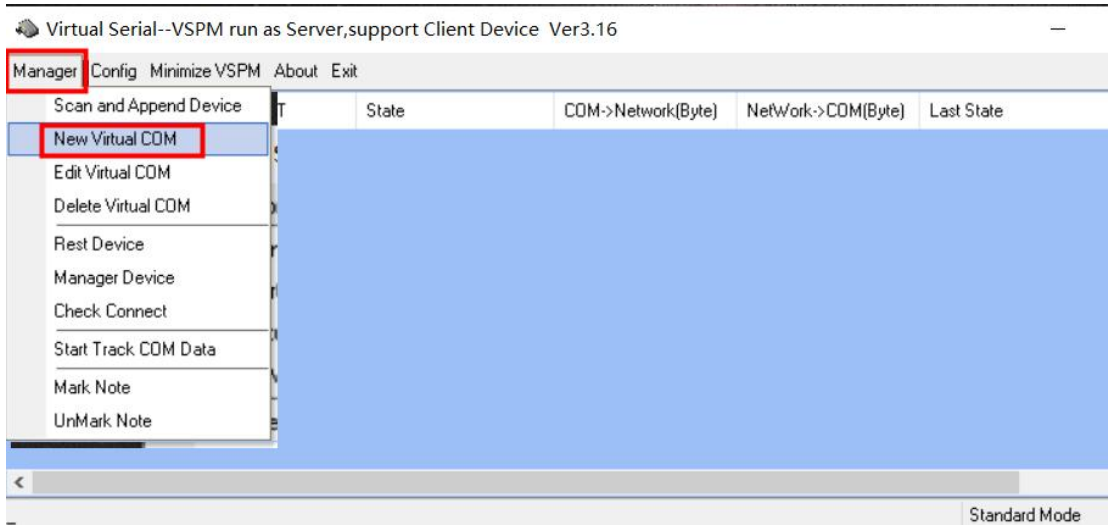


6.Install and run the VCOMM virtual serial port tool on the PC.

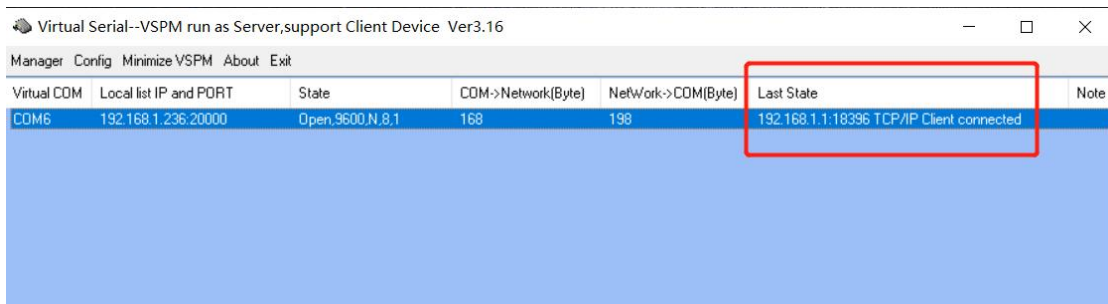
6.1 First, set the working Mode to TCP Server Mode(cause the router is set to TCP Client mode), and then set the following parameters:



6.2 Create a new virtual serial port , such as com6, and configure the server address and listening port of PC .



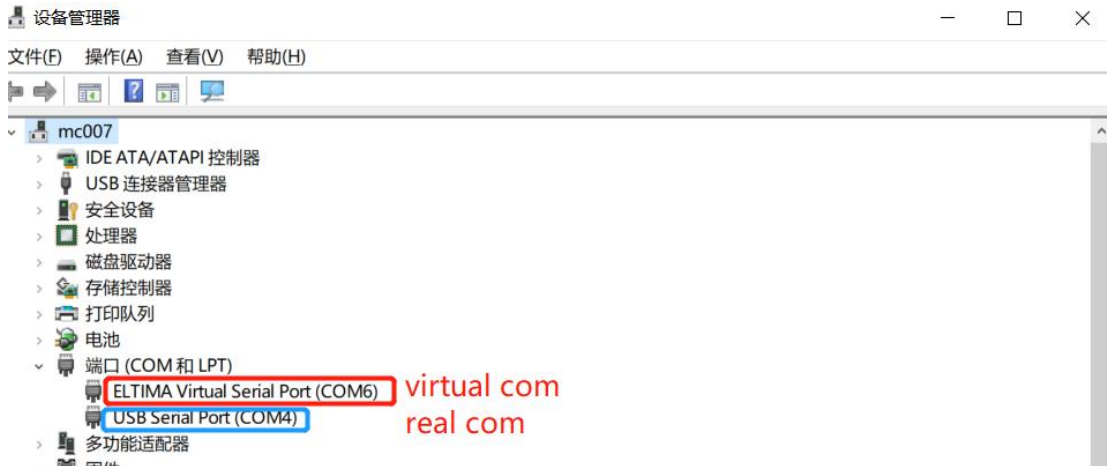
6.3 Now you can see that the router is successfully connected to the VOMM virtual software.



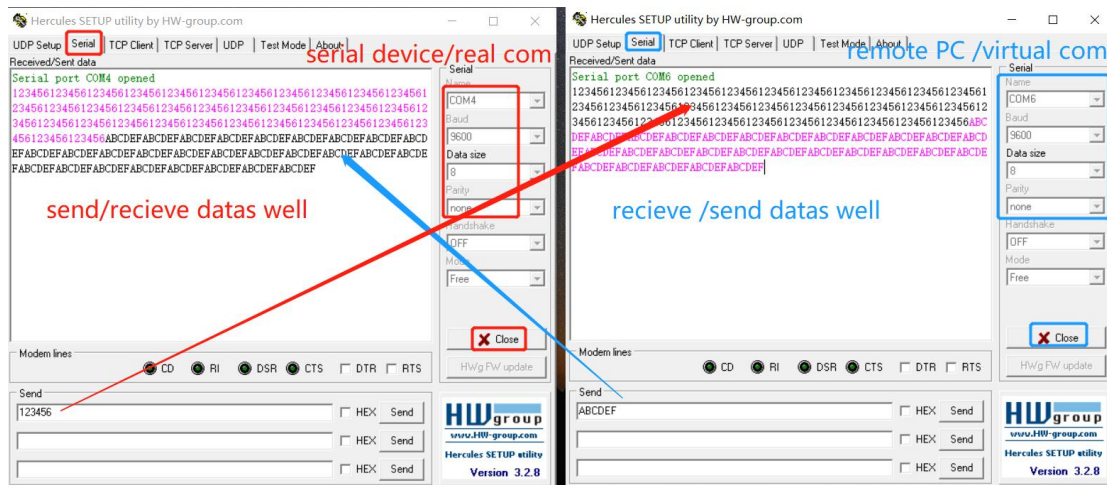


7. Start sending and receiving data testing between the serial port device and the virtual serial port tool on the PC.

7.1 View the com port created by the USB-232 converter on the PC (com4 for example); a new virtual com created by VCOMM tool shown as below(com6 for example).



7.2 The testing for sending and receiving data between the serial port device and the virtual serial port tool is as follows.



7.3 Additional note:

You can also set the data tracking mode of the VCOMM tool. You will see the details of the data sending and receiving as follows.

