User Manual and Test Guide

Eport-E20

Operation Guide

Content

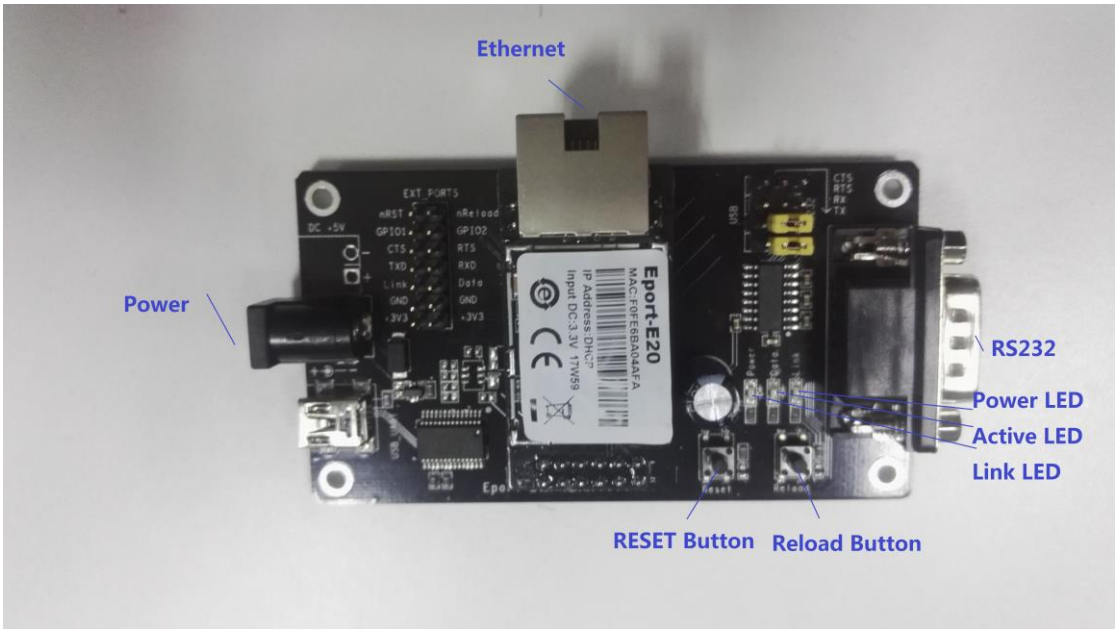
Version List：

2017-11-17 First Draft

1. SERIAL SERVER CONNECTION

1. 1 EPORT-E20 Connection

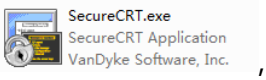
Eport-E20 connects to PC by Ethernet cable or via router. After the Link light on , then open IOTService. IOTService will show IP address of E20. When Eport-E20 use Auto-IP function, the device IP is 169.254.173.207 .If the product is connected to router, the IP address is assigned by the router or can be set statically.



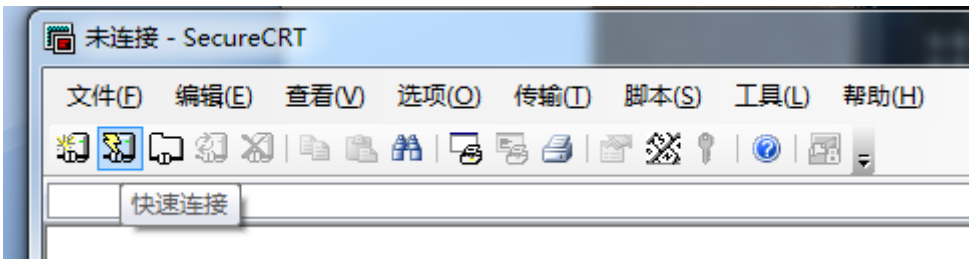
2. SERIAL SETTINGS

2.1. SecureCRT Serial Tool SecureCRT

Download adddress：
http://gb.hi-flying.com/download_detail_dc/downloadsId=22.html

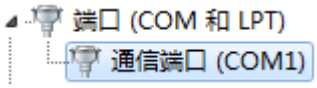
Decompress file and find executable program, 

, then open. Click quick start button  to create connection.



2.2. Configure Serial Parameter

Protocol：Serial

Port: Actual connection port(search by "My PC"->"Device Manager"->"Port(COM and LPT)". As figure: 

)

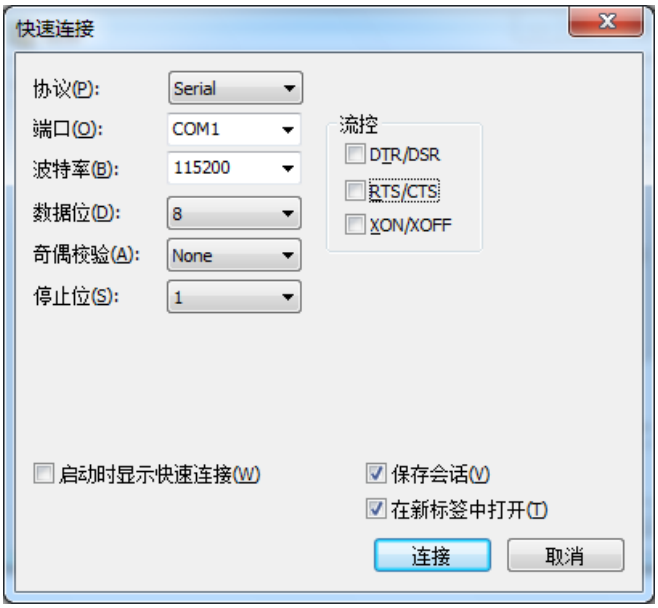
Baud Rate：115200

Data Bits：8

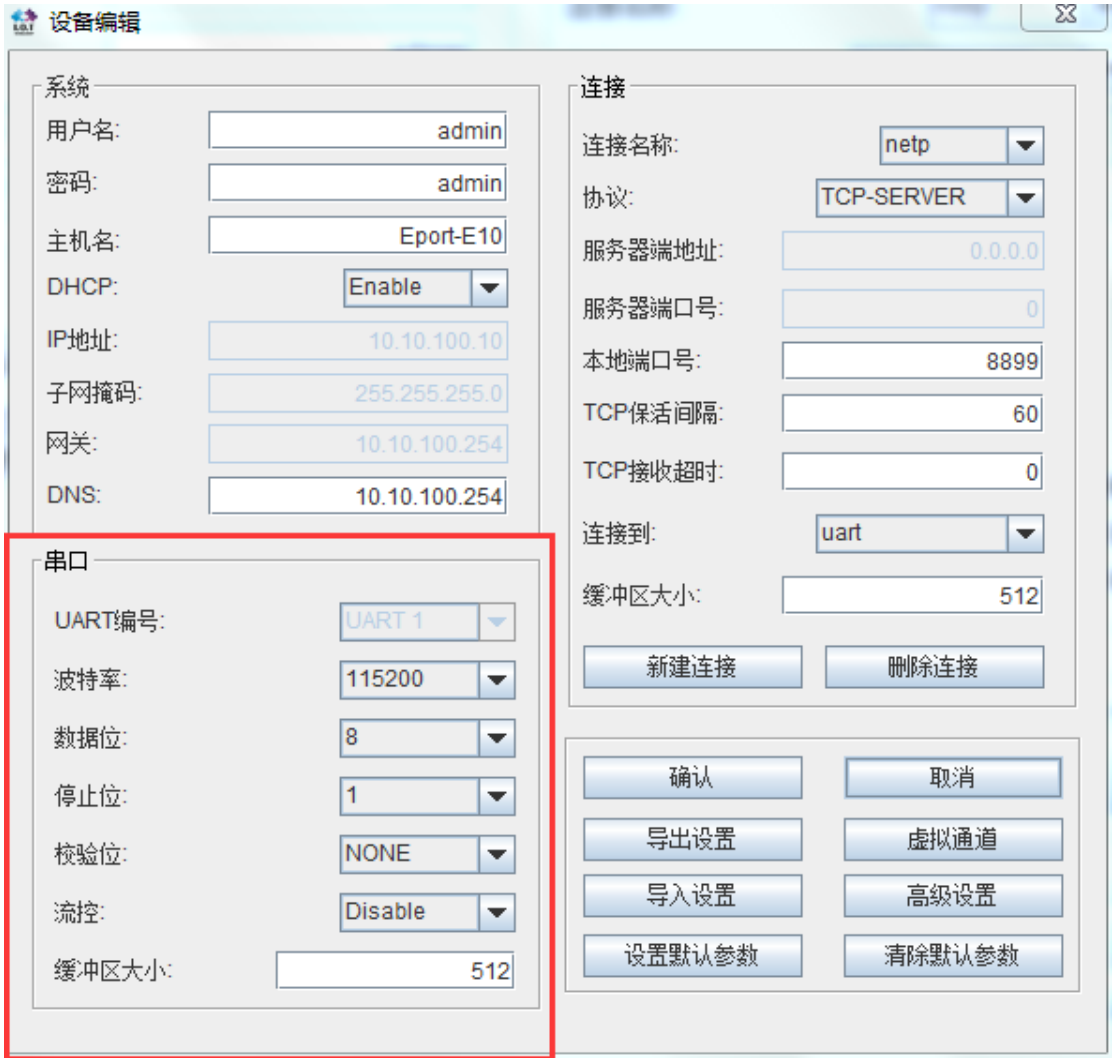
Parity Check Bit：None

Stop Bit：1

Flow Control： None (Please tick off "√" before RTS/CTS)



Notes: Eport-E20 the default serial data is as above and user can modify device working parameter by IOTService.



3. EPORT-E20 NETWORK CREATION

3.1. TCP/IP Princple and Test Purpose

Principle: Network use physical data link to bulid connection among each isolated station or host to combine data link. As a result, it achieves resource share and communication. It is the most important communication protocol in the process of network commmnication. Eport-E20 adopts TCP/IP protocol which contain TCP and UDP etc. IP address and port number are two important parameter during generating connection. First, server should make sure IP address and port number. Then client binds the same IP address and port with server to generate connection successfully.

Test purpose:

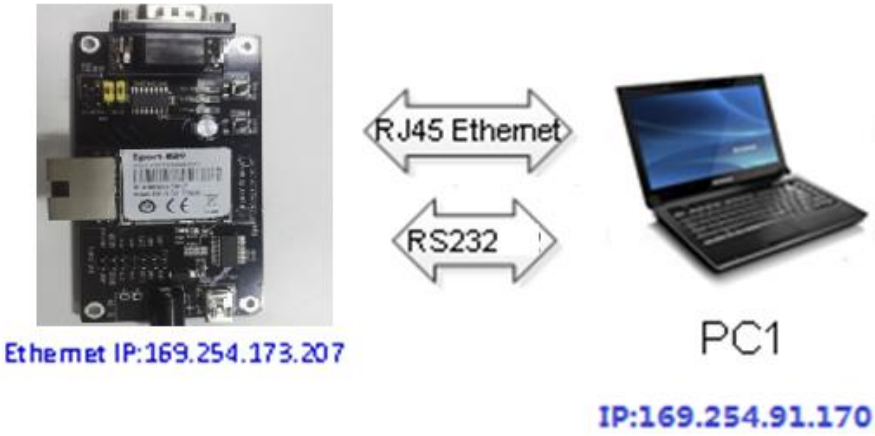
1. PC connects to Eport-E20 by serial cable. Open SecureCRT to verify if serial port can send and receive data normally.

2. Eport-E20 can connect to PC through the network when it works under STA mode. And it can also connect to PC in AP mode. After open tcpudpdbg tool, PC is recognized as client connected with serial side. Above two software can be used to verify data flow between Eport-E20 and PC.

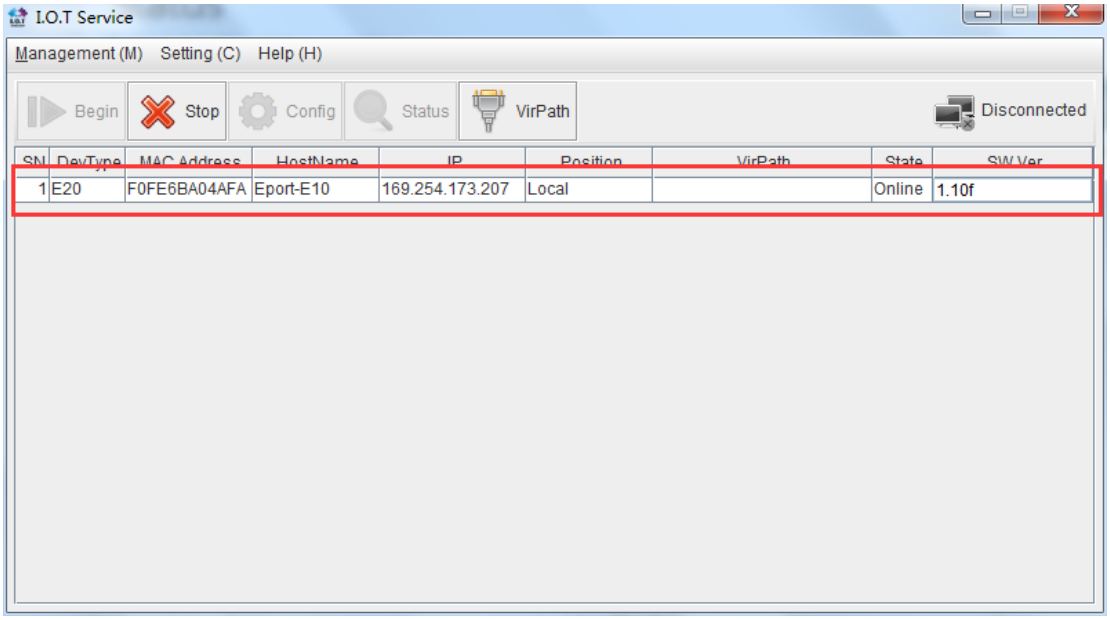
In following test, "TCP Server Test" -Eport-E20 as server and PC as client." TCP Client Local Test" -Eport-E20 as client and PC as server.

3.2. Auto-IP Networking

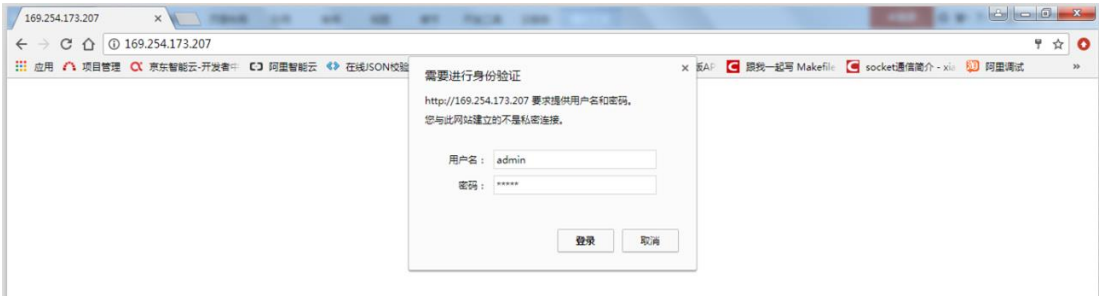
Device can directly connect to PC by Ethernet cable and module will use its default IP for PC directly visit or data transfer communication(approximately 15 seconds until PC use 169.254.XXX.XXX). For example, below module IP: 169.254.173.207(normally fixed IP, if conflict it will change to another IP automatically)

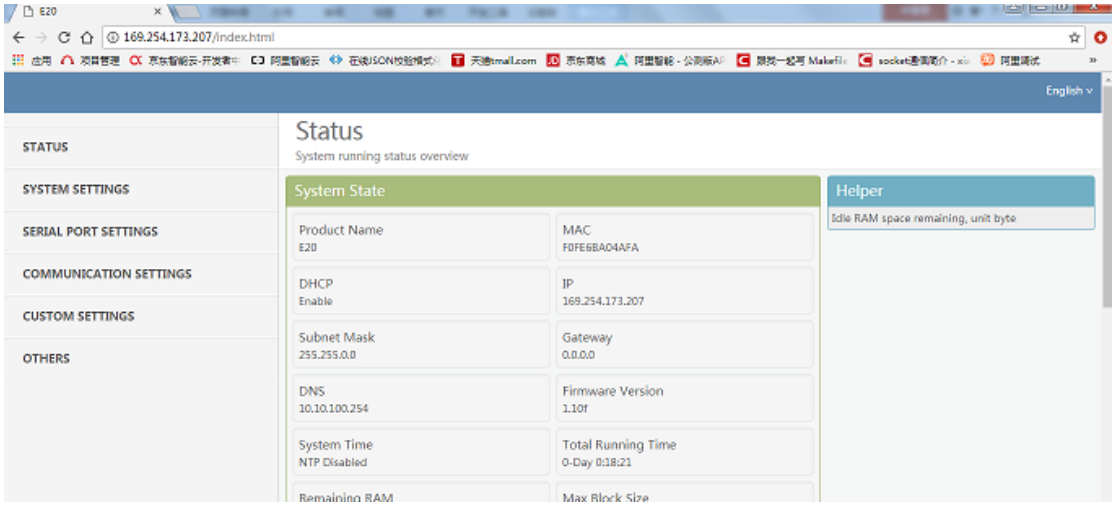


Step 1: Ethernet cable connects RJ45 ports between device and PC. Open IOTService and it will achieve device information automatically. Figure is as below:



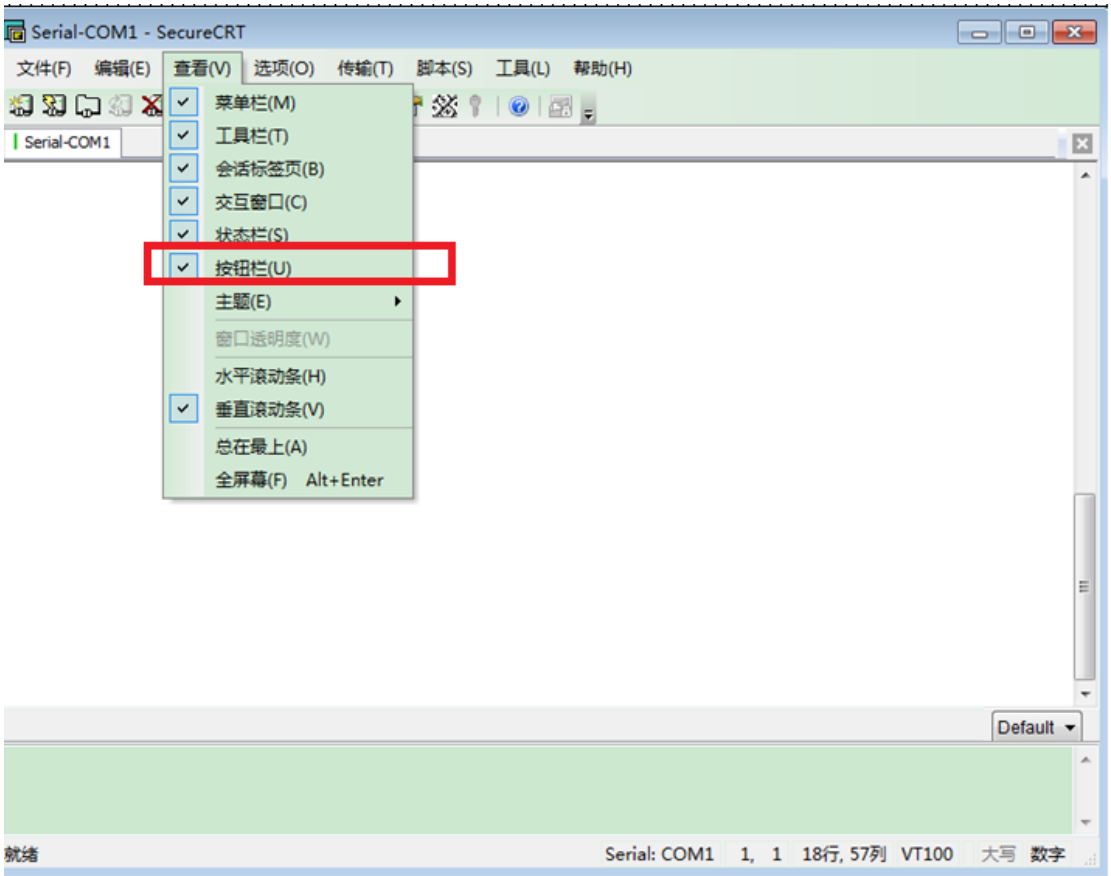
Step 2：According to IP address above, it can be configured parameter by website. Username and password are both admin as default. As below figure:

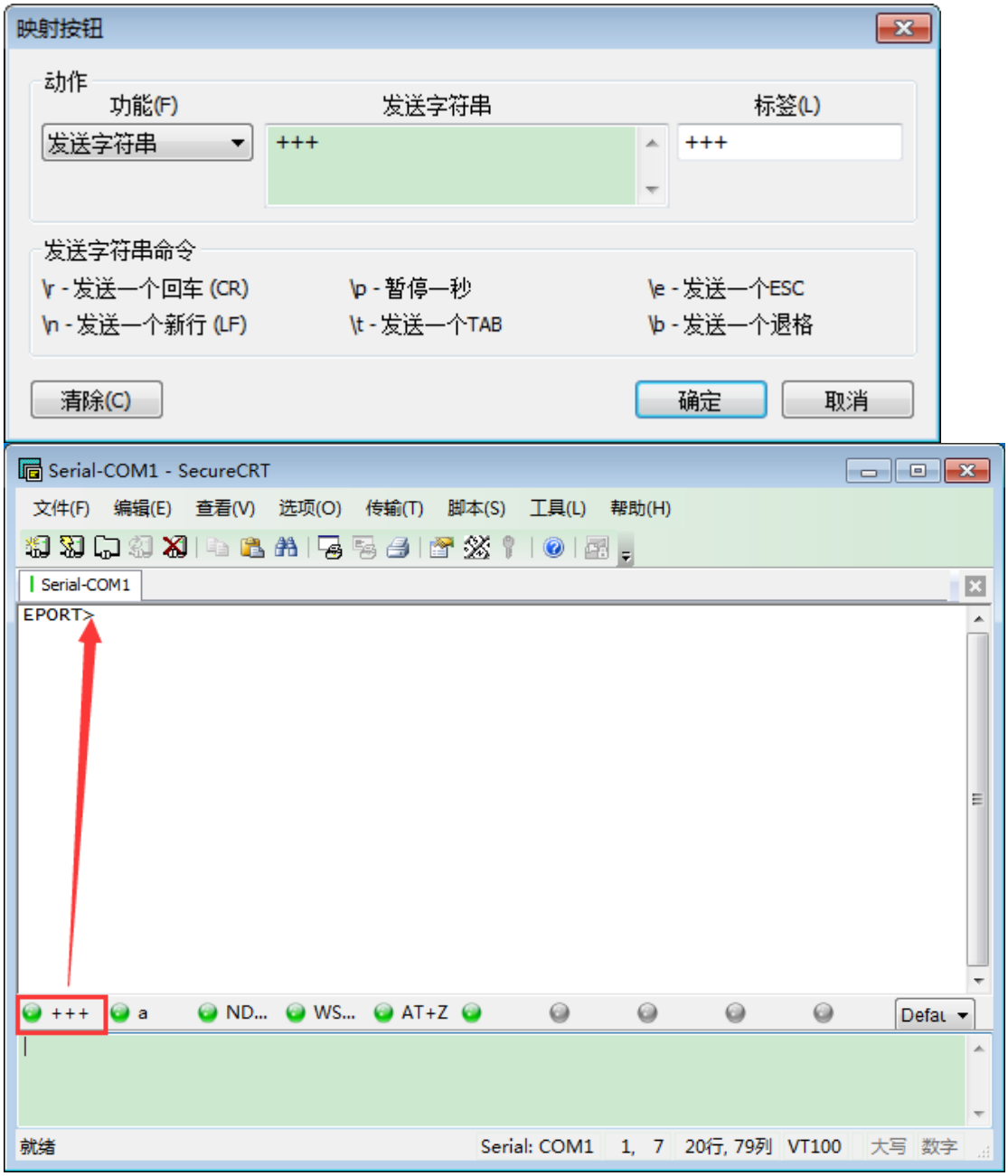




Step 3： Eport-E20 can connect PC to simulate serial signal from lower MCU by RS232.

Step 4 :Open serial configure tool, SecureCRT is recommended(Others is ok but not convenient). Following test is under SecureCRT and serial parameter can refer to Chapter 2.1 and 2.2. The default state is transparent mode when open SecureCRT. If enter into command mode, it needs input three" +" sequently. Afterwards, secreen appear "EPORT>" . It can use CLI command to set the state of Eport-E20 after entering into command mode. Specific operation method can refer to Eport-E20 user manual.

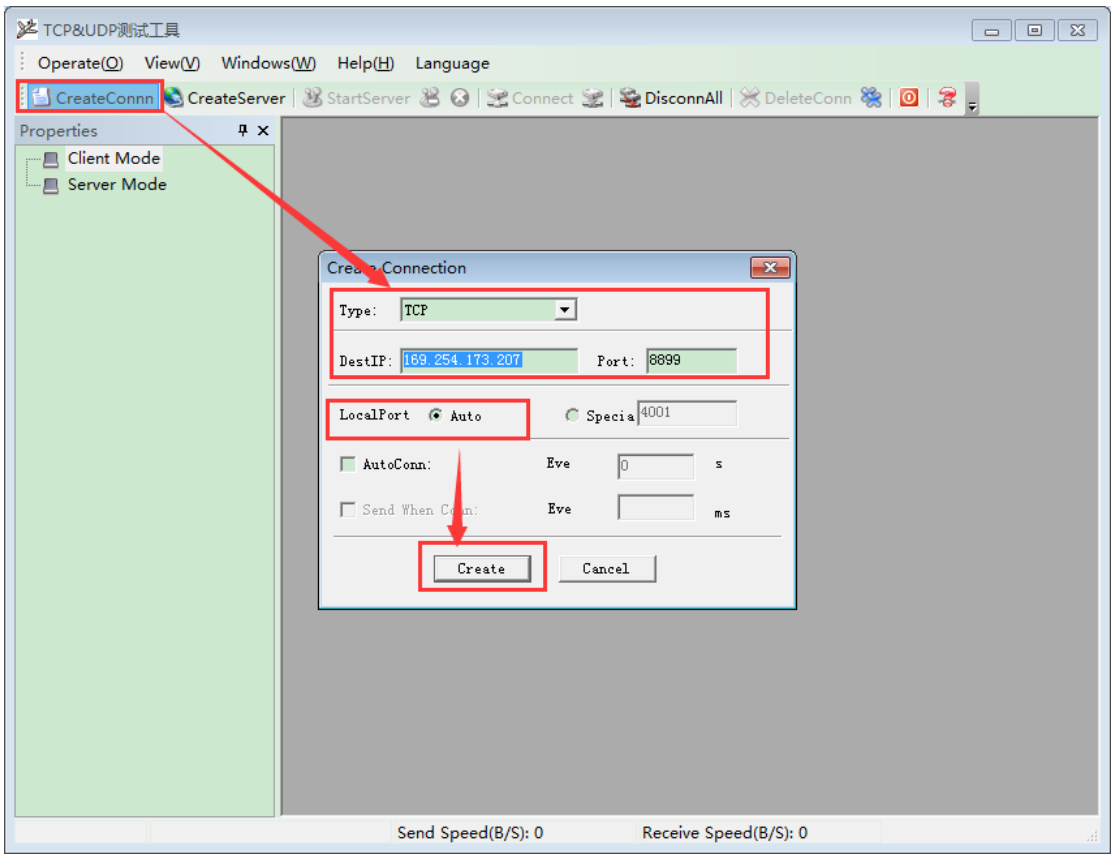


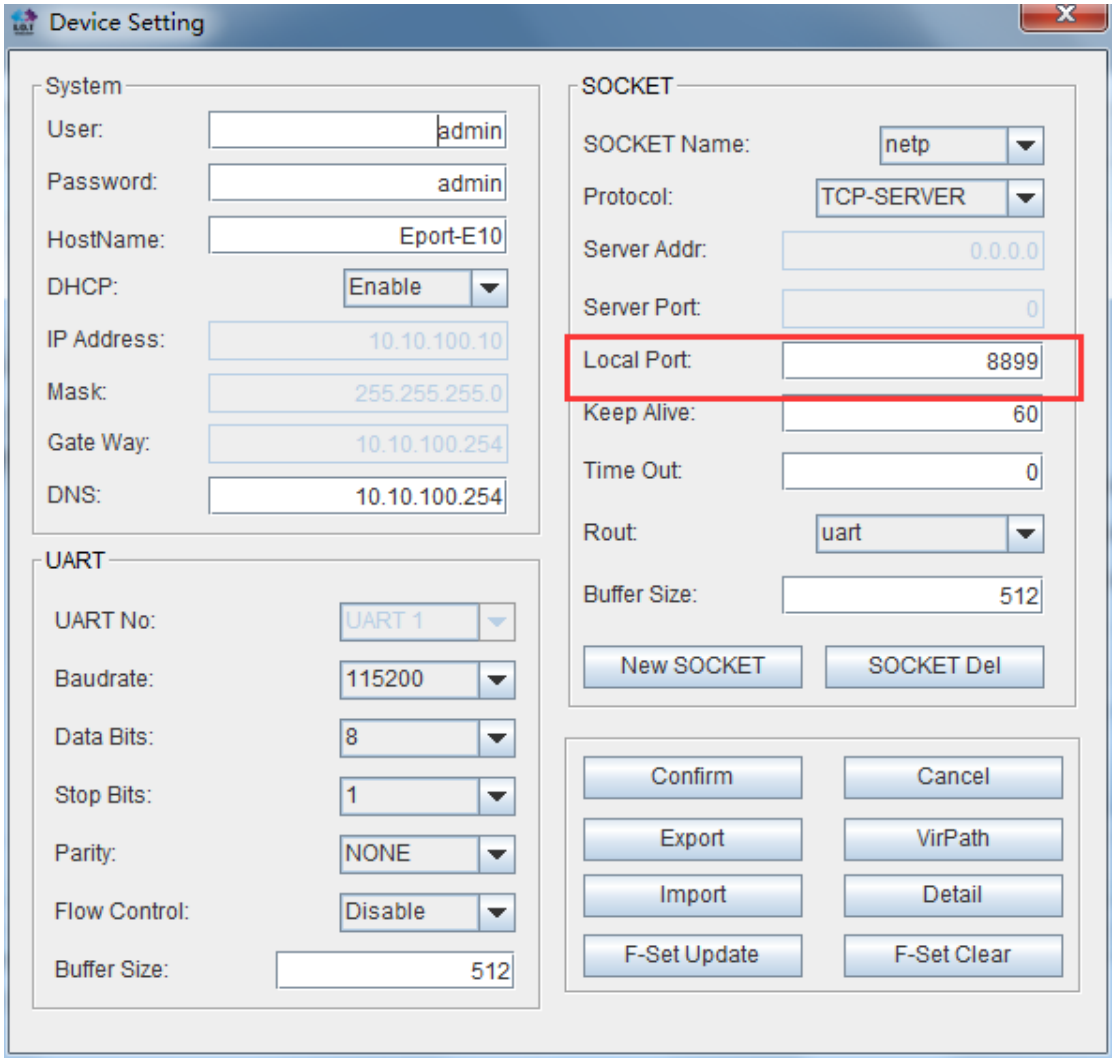


3.3. Auto-IP TCP Server Test

Step 1 : Open TCP&UDP test tool and generate TCP connection as following process.

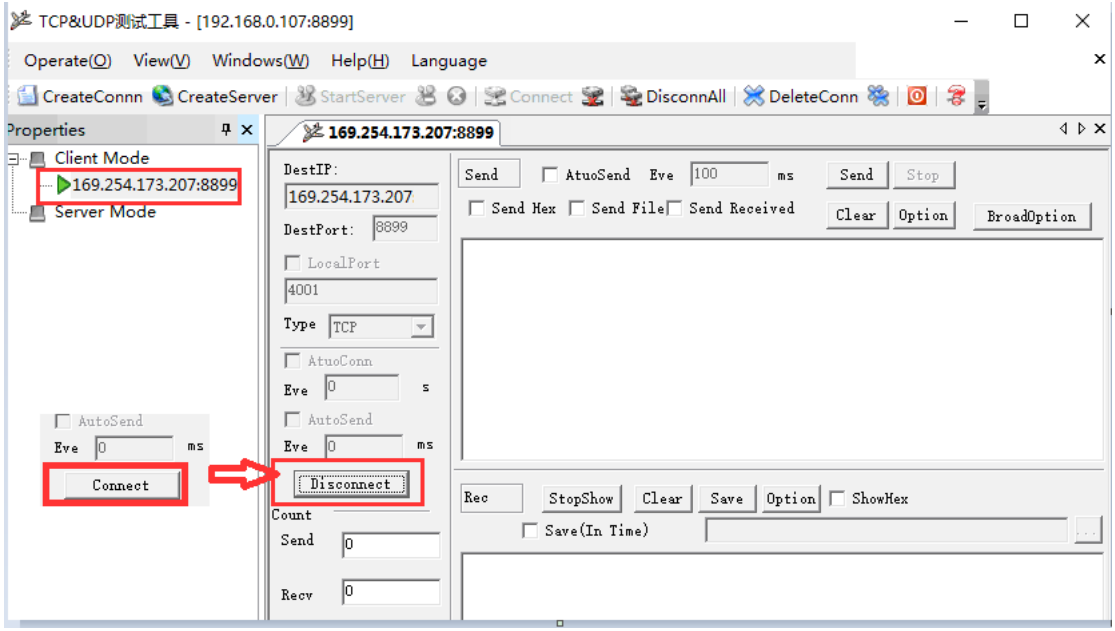
- Product has already created a TCP Server(port 8899) for use.
- TCP&UDP test tool can be downloaded from official website: http://gb.hi-flying.com/download_detail_dc/downloadsId=54.html
- DestIP :IP address of product, this address can be found by IOTService tool.
- Port : TCP Server port number,8899 default which can be modified by IOTService



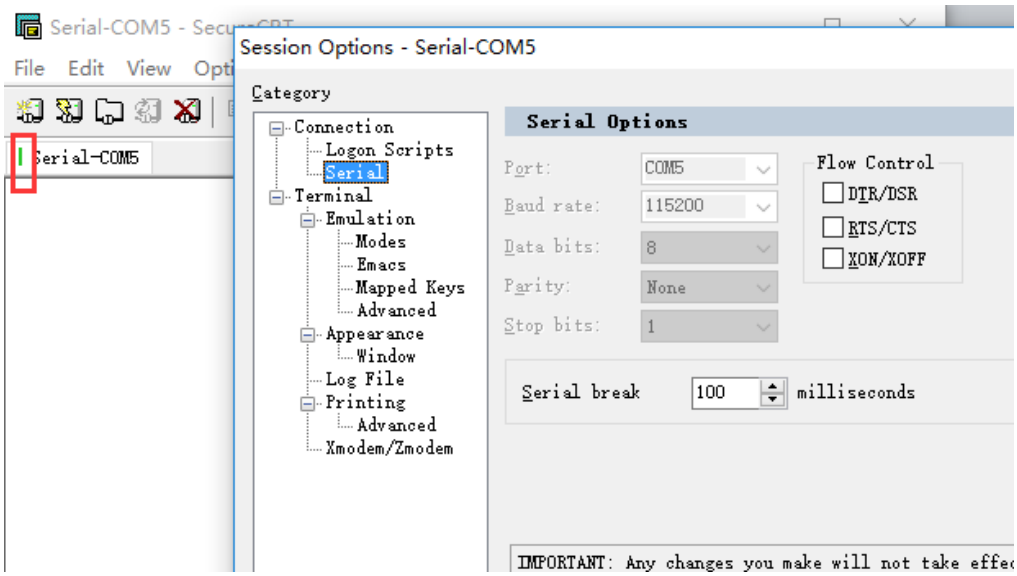


Step 2：Click Connect to build TCP connection

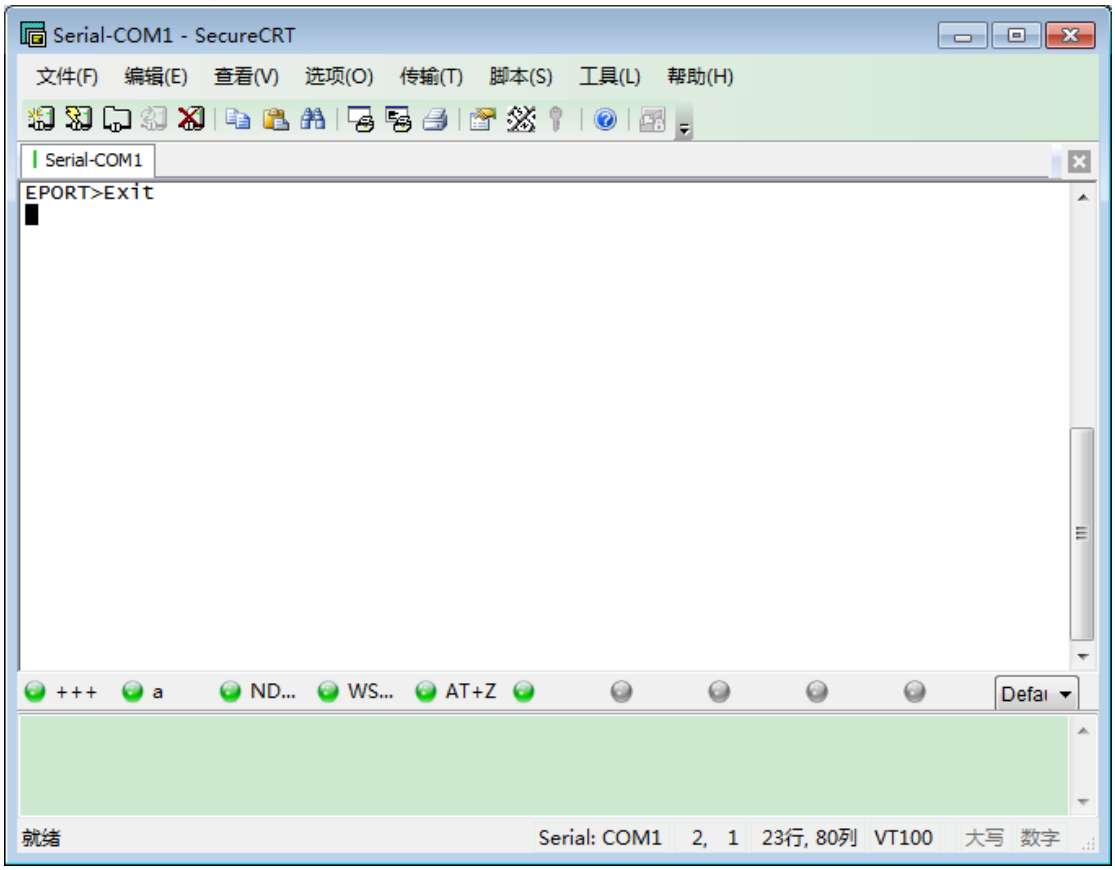
- After successful generation, left side turn to green arrow, yellow if fails.



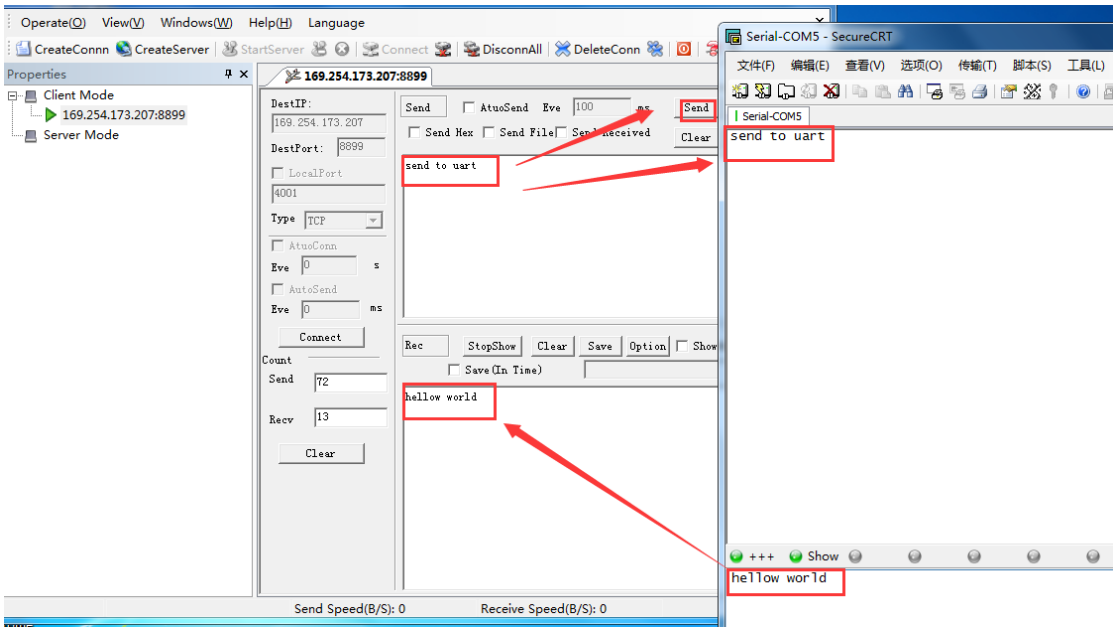
Step 3：Open serial tool according to following parameter(115200 baud rate as default)



Step 4：Make sure if serial tool is CMD mode. Input “Exit” to exit CMD mode and enter into transparent mode(which is default)

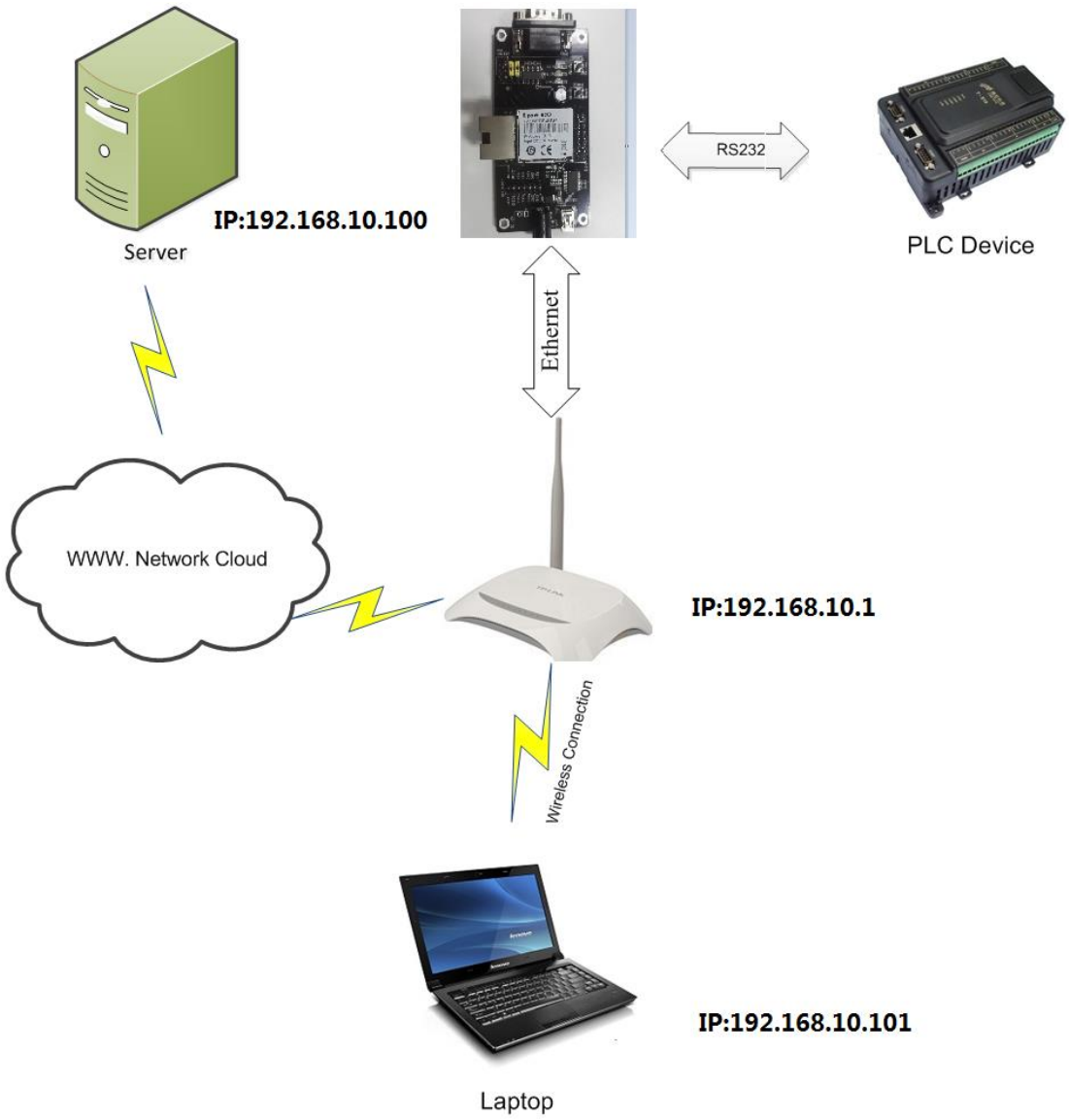


Step 5：Mutual data transmission between TCP and serial port.

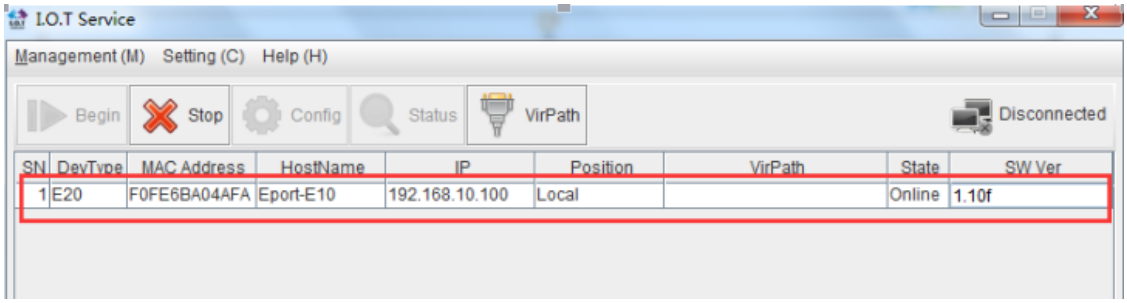


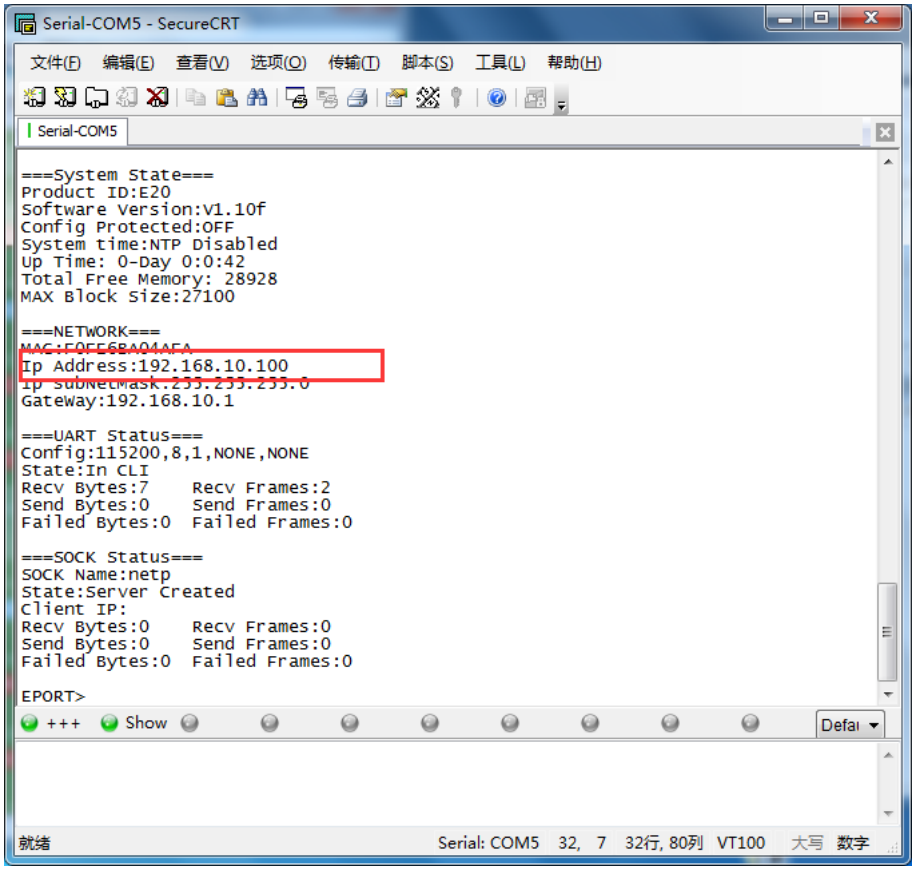
3.4. Networking by Router

After Eport-E20 has created network connection with router, any terminal can communicate with E20. As the figure shows, IP address will automatically change to the same IP segment 192.168.1.X with router.

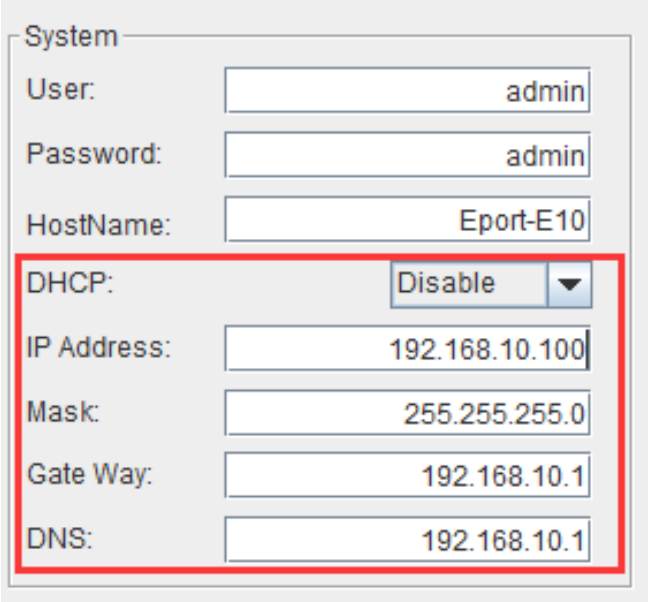


Step 1 : If users want understand real-time IP address of E20, IOTService can be opened for searching or serial query.

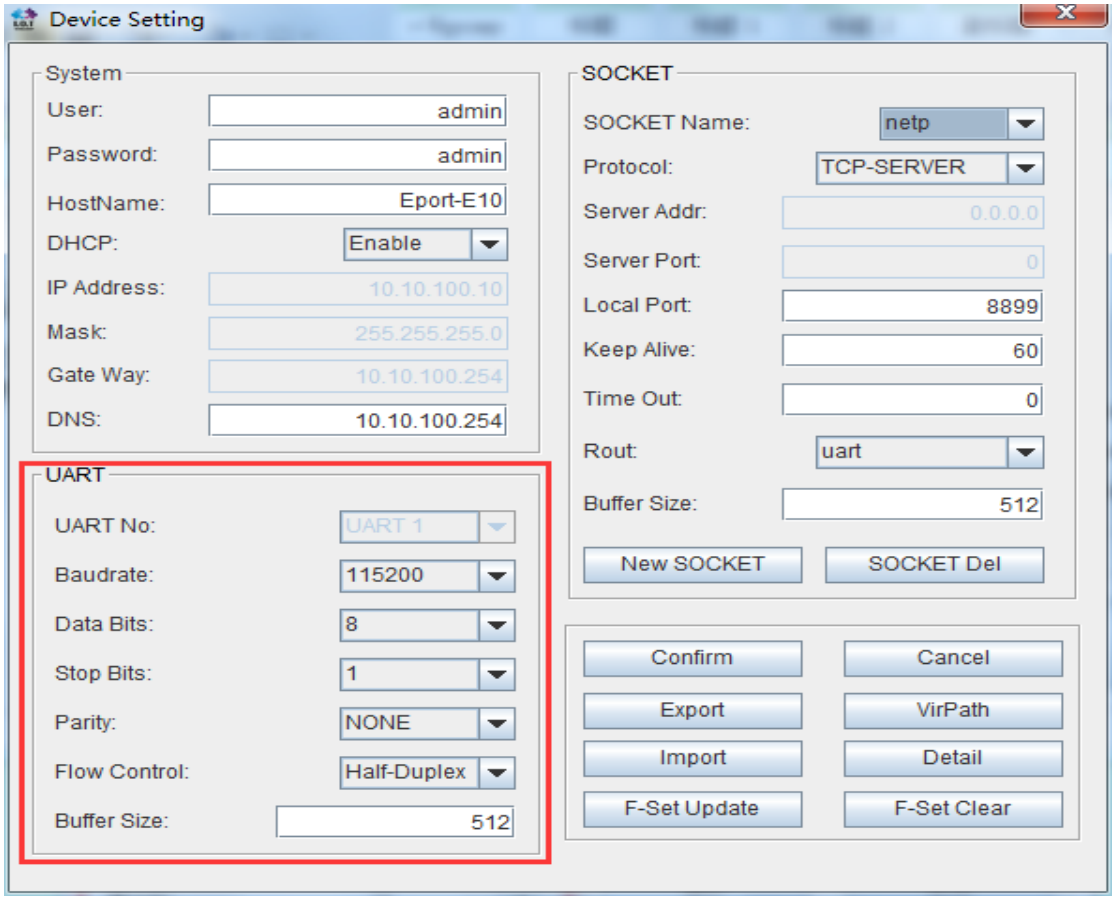




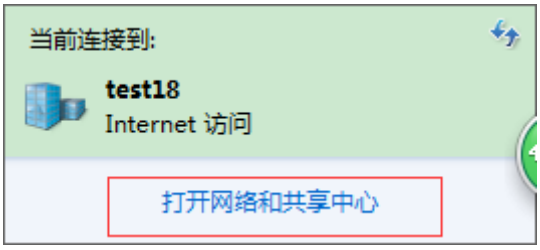
Step 2：Product acquires IP address from upper router. If user need to modify it to static IP address, it can be configured by IOTService(as below). Restart after configured.

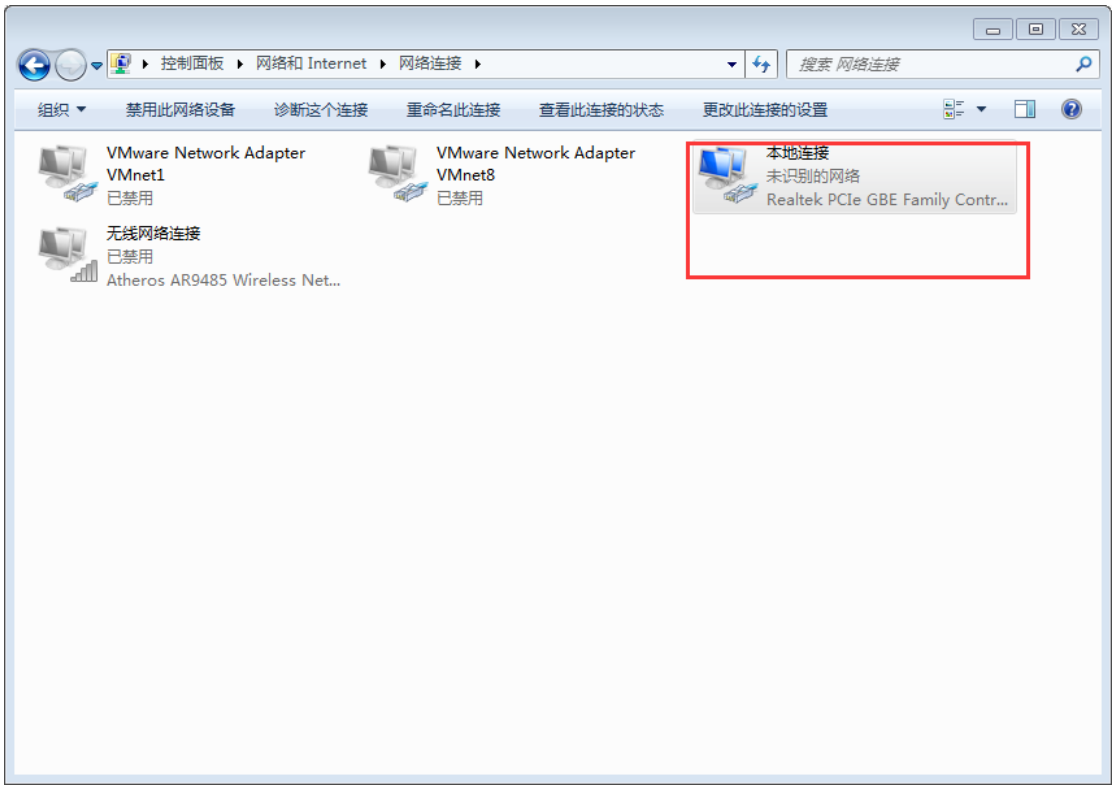


Step 3：Configure relative serial parameter with MCU.

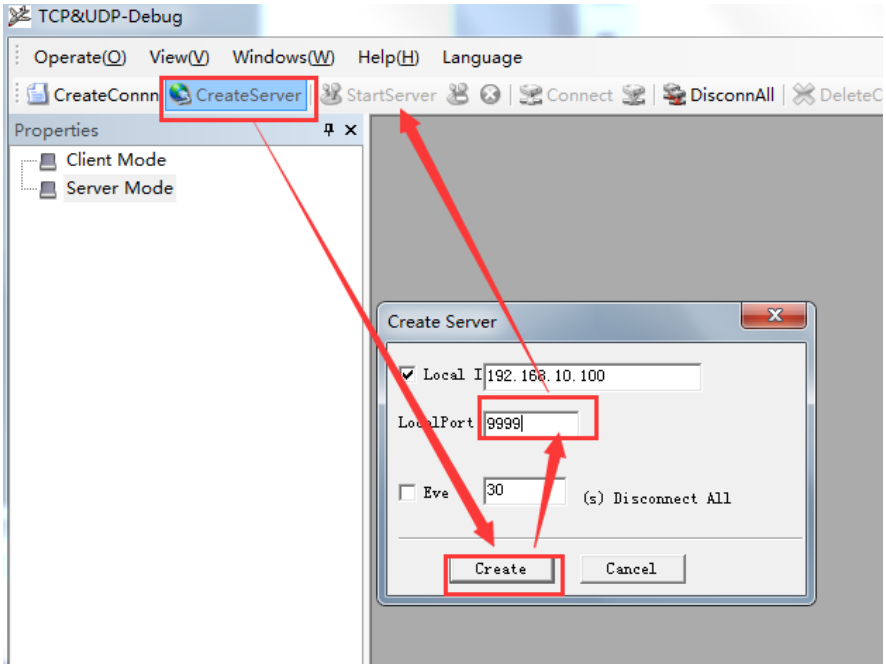


Step 4： Retain local connection and forbid extra network connection.

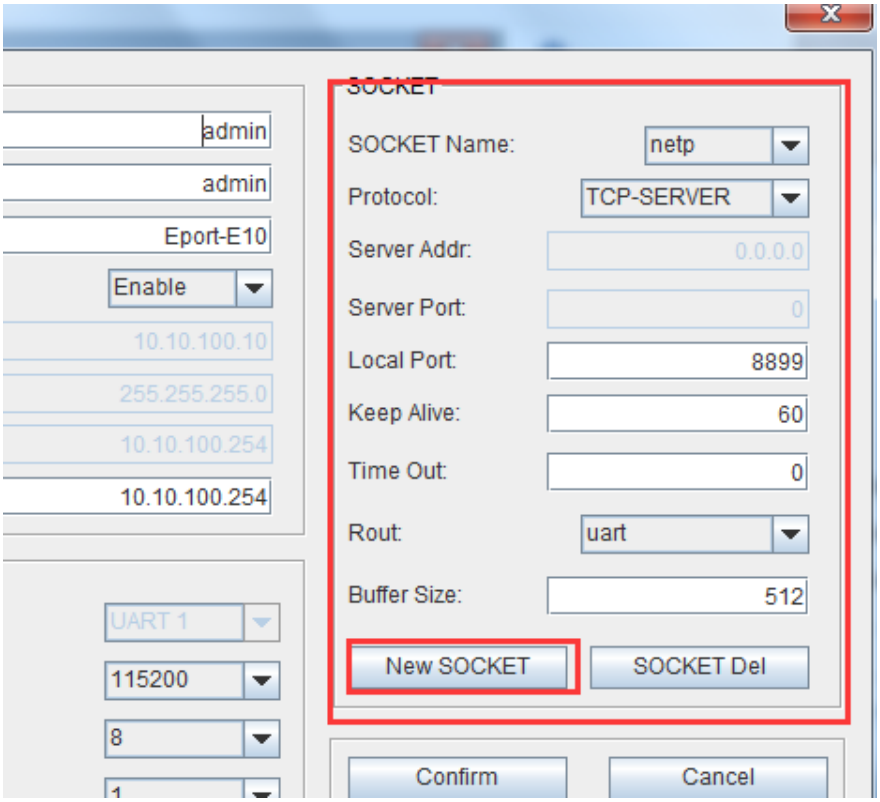


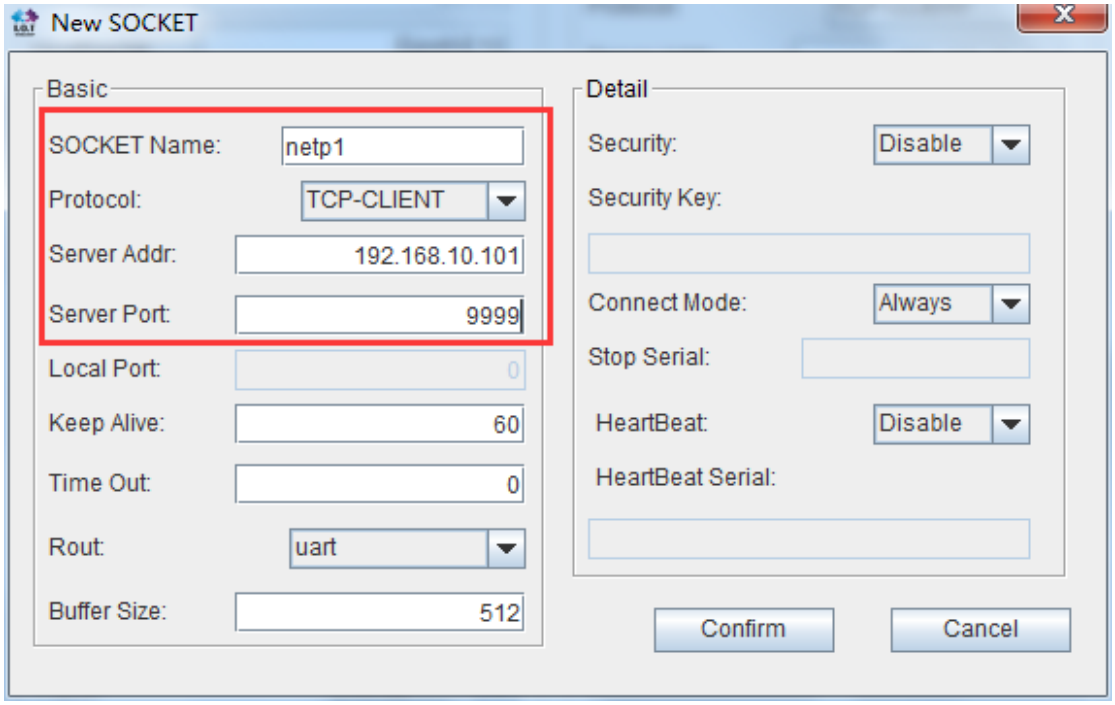


Step 5: Open TCP&UDP tool and create a server.(IP is PC local address, or default. Port is selected randomly as long as not occupied by extra network)



Step 6: Default parameter of socket is netp(name), Tcp Server, 8899(port). User can create a new socket according to demand.





Step 7 : After successfully created socket, restart product and open SecureCRT to simulate data transmission between serial port and terminal.