

Wireless USB Adapter Configuration

1.1、 Hardware Preparation

- ① 150Mbps Wireless USB Adapter
- ② Raspberry Pi 2



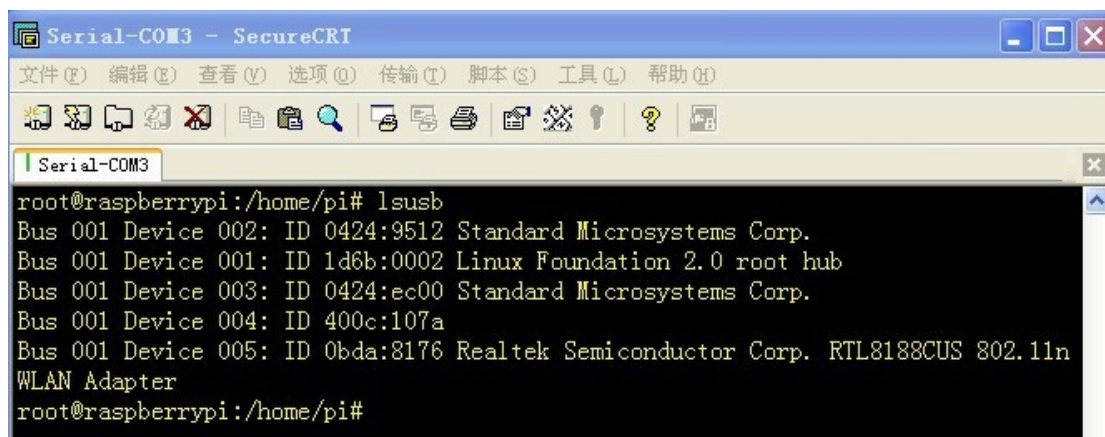
① wireless USB adapter



② Raspberry Pi Mainboard

As Raspbian system integrates most of the USB adapter drivers from mainstream manufacturers , so we do not need to add drivers to the system. When plug in our USB adapter, you can see it via lsusb command. The insert of USB adapter at the moment of system startup, will cause the system to reboot. After that, you can see the USB adapter chip through the lsusb command. Completing USB adapter identification, the next step is to configure it so that it can access to the net.

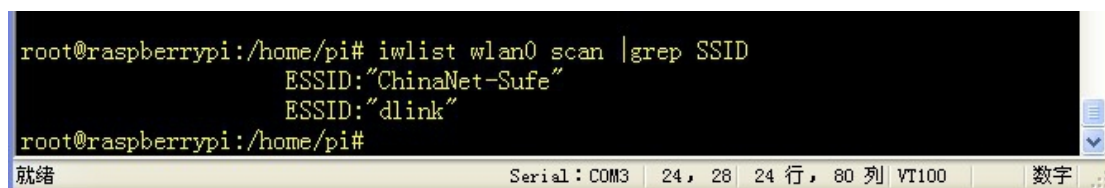
(1) Start the system into the root account in the Terminal , and type lsusb command, then if the screen as below appears, that means the wireless USB adapter has been identified.



```
Serial-COM3 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)
Serial-COM3
root@raspberrypi:/home/pi# lsusb
Bus 001 Device 002: ID 0424:9512 Standard Microsystems Corp.
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 001 Device 003: ID 0424:ec00 Standard Microsystems Corp.
Bus 001 Device 004: ID 400c:107a
Bus 001 Device 005: ID 0bda:8176 Realtek Semiconductor Corp. RTL8188CUS 802.11n
WLAN Adapter
root@raspberrypi:/home/pi#
```

③ Wireless USB adapter

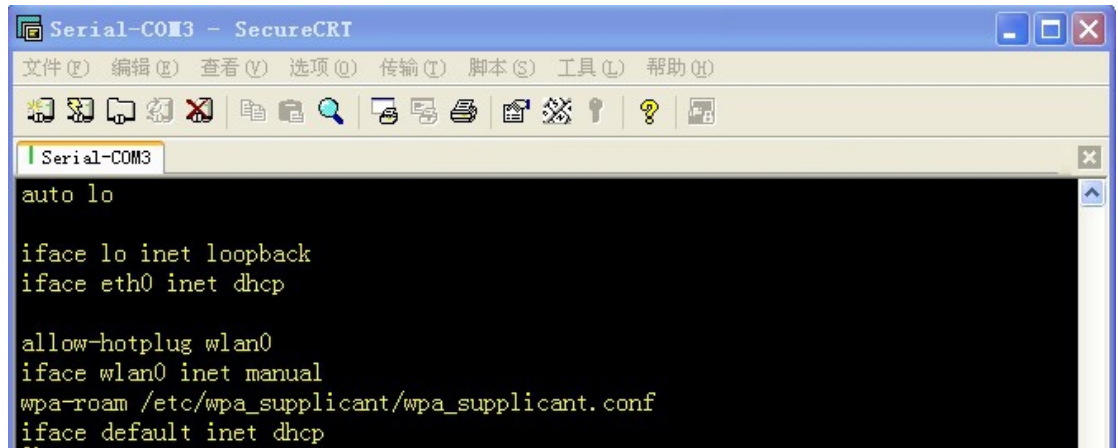
(2) Firstly via iwlist wlan0 scan |grep SSID command, check the LAN searched by wireless USB Adapter.



```
root@raspberrypi:/home/pi# iwlist wlan0 scan |grep SSID
ESSID:"ChinaNet-Sufe"
ESSID:"dlink"
root@raspberrypi:/home/pi#
```

The LAN searched by wireless USB adapter

(3) Through the following command, vi /etc/network/interfaces content should be as below:



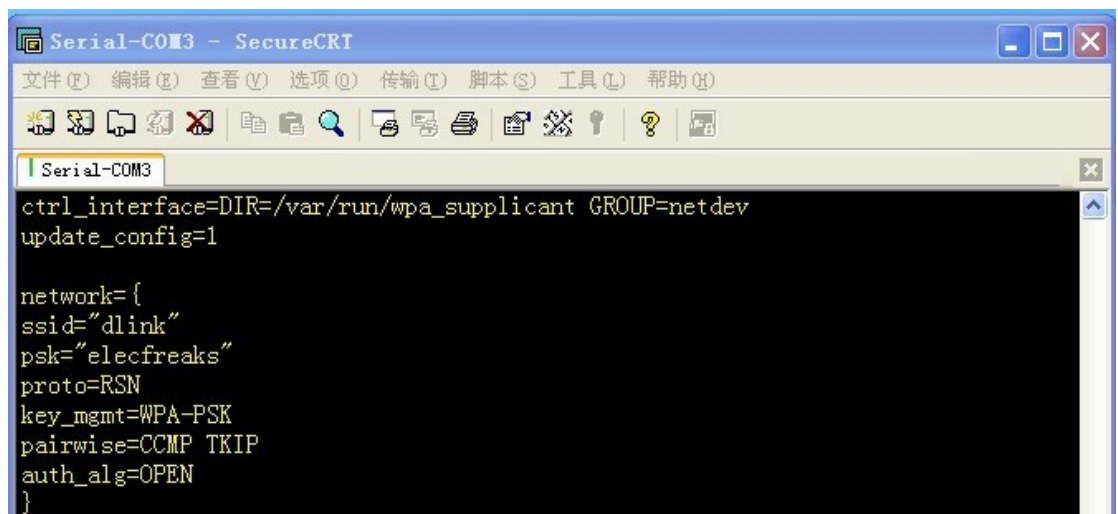
```
Serial-COM3 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)
Serial-COM3
auto lo

iface lo inet loopback
iface eth0 inet dhcp

allow-hotplug wlan0
iface wlan0 inet manual
wpa-roam /etc/wpa_supplicant/wpa_supplicant.conf
iface default inet dhcp
```

The configuration information of the wireless USB adapter in the system

(4) In /etc/wpa_supplicant/wpa_supplicant.conf, add configuration information as below :



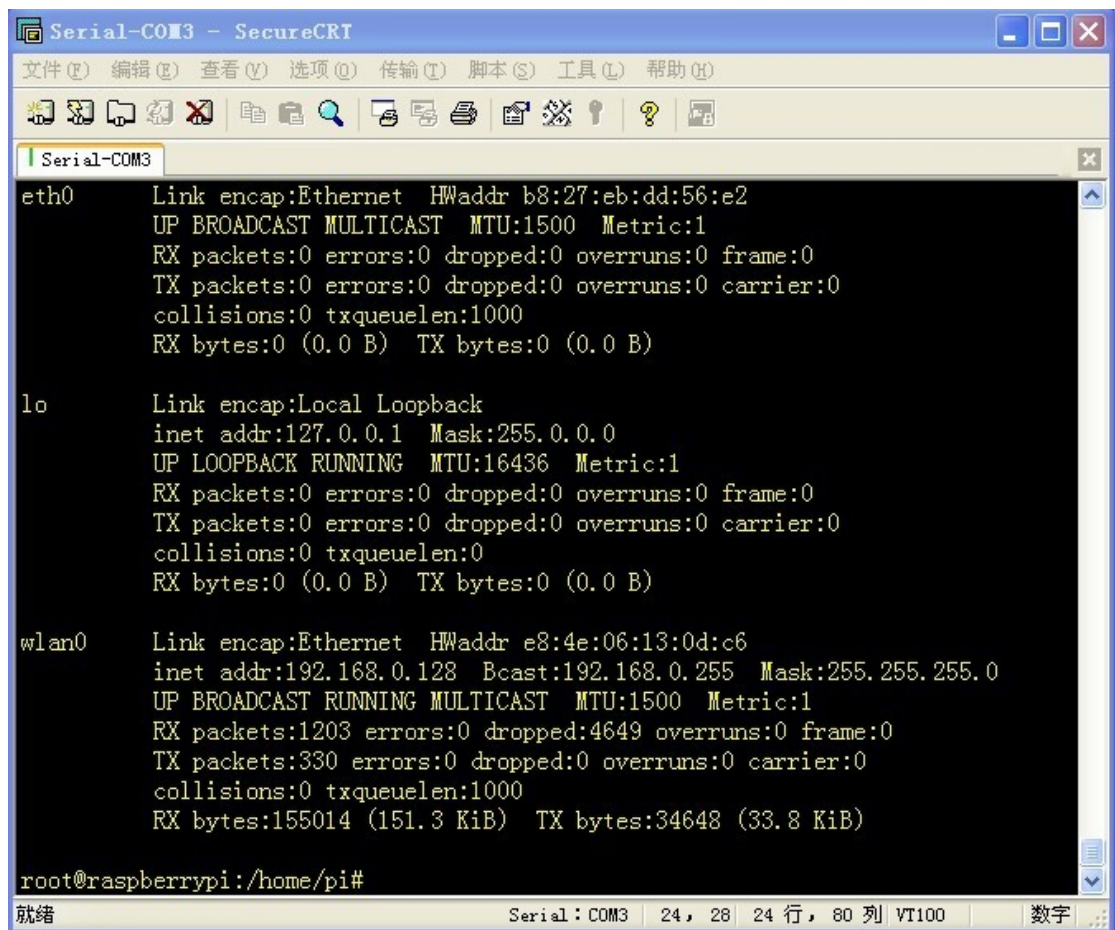
```
Serial-COM3 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)
Serial-COM3
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1

network={
ssid="dlink"
psk="elec Freaks"
proto=RSN
key_mgmt=WPA-PSK
pairwise=CCMP TKIP
auth_alg=OPEN
}
```

Set the LAN information

Please note that ssid is the name of the LAN, received by the command in the first step, and psk expressed LAN password. Users should use their own LAN and password when in configuration, then save the rebooted system. If you see LEDs on the wireless USB adapter blinking, which indicates its configuration is successful.

(5) Input the ifconfig command in the Terminal after reboot the system, and if such information as below appears, the wireless USB adapter has normally worked.



```
Serial-COM3 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)
Serial-COM3
eth0      Link encap:Ethernet  HWaddr b8:27:eb:dd:56:e2
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

wlan0     Link encap:Ethernet  HWaddr e8:4e:06:13:0d:c6
          inet addr:192.168.0.128  Bcast:192.168.0.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:1203 errors:0 dropped:4649 overruns:0 frame:0
          TX packets:330 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:155014 (151.3 KiB)  TX bytes:34648 (33.8 KiB)

root@raspberrypi:/home/pi#
```

Wireless USB adapter networking information

Seeing information as above means the wireless USB adapter have been able to work properly, and the users can use the raspberry Pi to access to the Internet. It is recommended to firstly pass apt-get install vim command to install the vim editor, but the vi coming with system is not complete. If you can not download it, please firstly type apt-get update command in the Terminal to update the system.