

Configuring the RN XV module to communicate in AP mode

For this experiment you need two PCs with WiFi enabled in one and in the other PC we need to connect a RN XV module mounted on zigbee adaptor through USB cable.

Here we will communicate between two PCs through WiFi of RN XV module in one PC and inbuilt WiFi in the other PC.

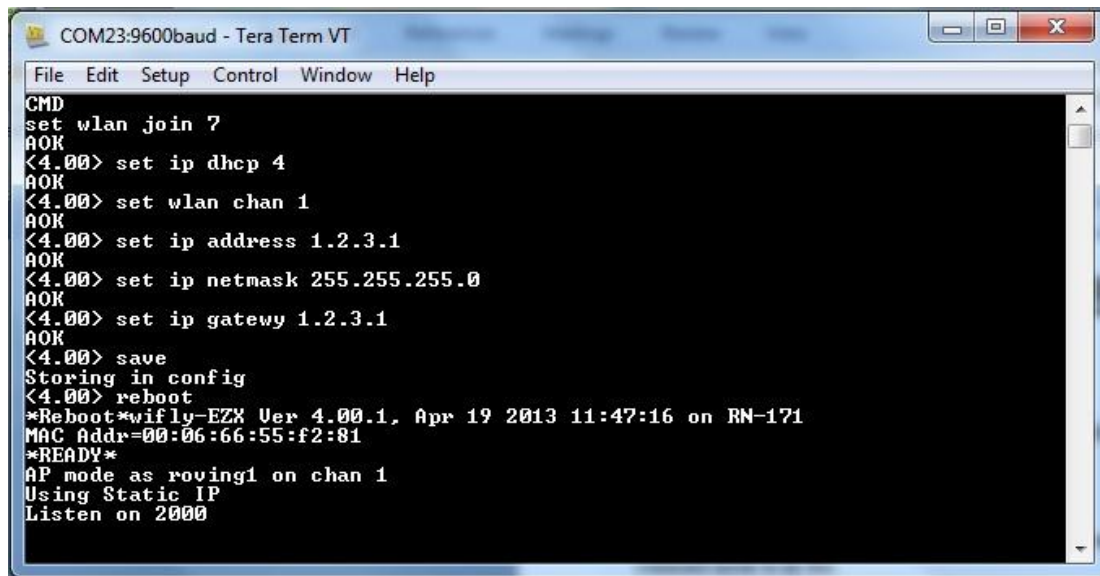
Step 1:

In first PC connect the RN XV module to set AT command. Read the manual to enter command mode to do this.

Step 2:

Enter the following commands in the Tera term terminal

Command	Comments
set wlan join 7	// enables access point mode
set ip dhcp 4	// set dhcp to mode 4, (Server)
set wlan chan 1	// sets the wlan channel 1
set ip address 1.2.3.1	// sets the ip address to 1.2.3.1
set ip netmask 255.255.255.0	// sets the netmask
set ip gateway 1.2.3.1	// sets the gateway IP address
save	//saves the settings
reboot	//reboots the module

A screenshot of a Tera Term VT window titled "COM23:9600baud - Tera Term VT". The window has a menu bar with "File", "Edit", "Setup", "Control", "Window", and "Help". The main area is a black terminal with white text. The text shows a sequence of commands and responses: "CMD", "set wlan join 7", "AOK", "<4.00> set ip dhcp 4", "AOK", "<4.00> set wlan chan 1", "AOK", "<4.00> set ip address 1.2.3.1", "AOK", "<4.00> set ip netmask 255.255.255.0", "AOK", "<4.00> set ip gateway 1.2.3.1", "AOK", "<4.00> save", "Storing in config", "<4.00> reboot", "*Reboot*wifly-EZX Ver 4.00.1, Apr 19 2013 11:47:16 on RN-171", "MAC Addr=00:06:66:55:f2:81", "*READY*", "AP mode as roving1 on chan 1", "Using Static IP", and "Listen on 2000".

```
CMD
set wlan join 7
AOK
<4.00> set ip dhcp 4
AOK
<4.00> set wlan chan 1
AOK
<4.00> set ip address 1.2.3.1
AOK
<4.00> set ip netmask 255.255.255.0
AOK
<4.00> set ip gateway 1.2.3.1
AOK
<4.00> save
Storing in config
<4.00> reboot
*Reboot*wifly-EZX Ver 4.00.1, Apr 19 2013 11:47:16 on RN-171
MAC Addr=00:06:66:55:f2:81
*READY*
AP mode as roving1 on chan 1
Using Static IP
Listen on 2000
```

Fig. 1 command mode settings

Step3:

Now enable the inbuilt WiFi in the other PC and connect it to this RN XV module from wireless network connections.



Fig. 2 Wireless Network Connections from PC 2

Step 4:

Now in the other PC open Tera term software and setup a new connection of TCP/IP type.

SET:

Host IP address as 1.2.3.1

Service: Telnet

TCP port: 2000

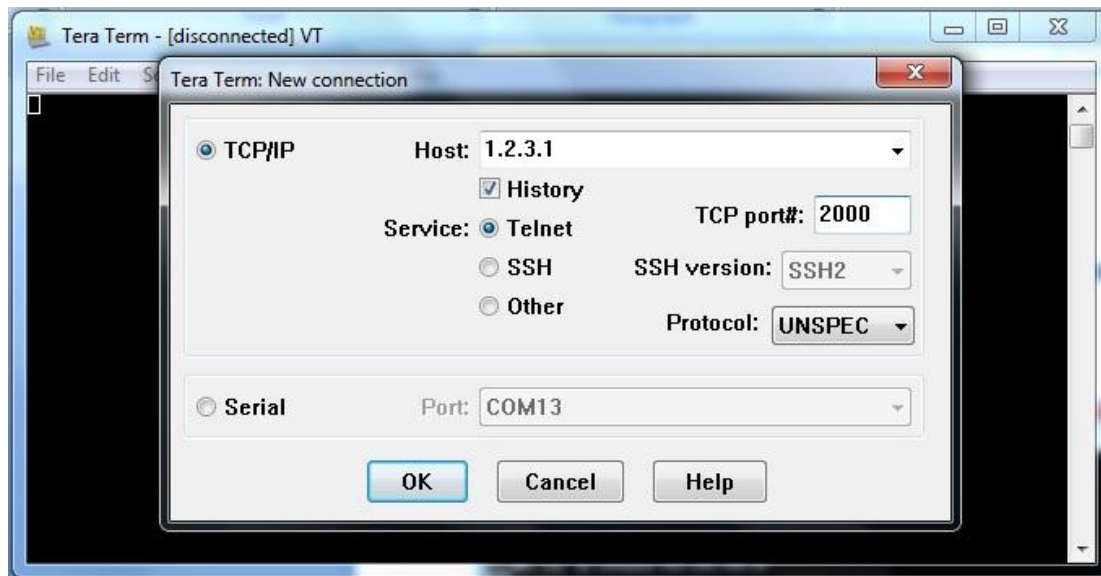


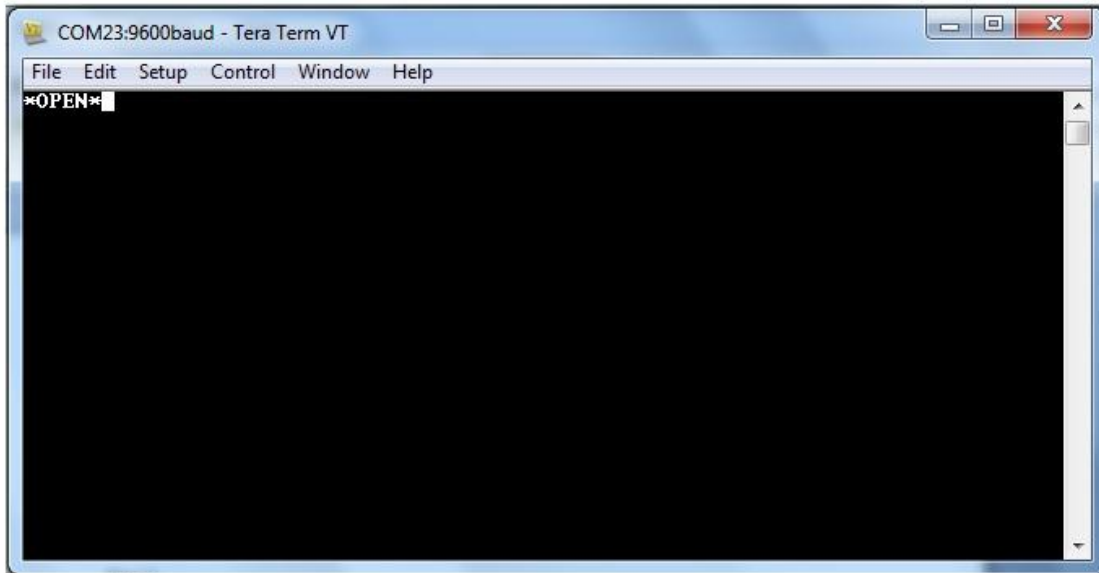
Fig. 3 TCP/IP settings in PC2

Press ok.

Step 5:

Now you can transmit message from one PC to the other through the workspace of Tera term software.

PC 1



PC 2

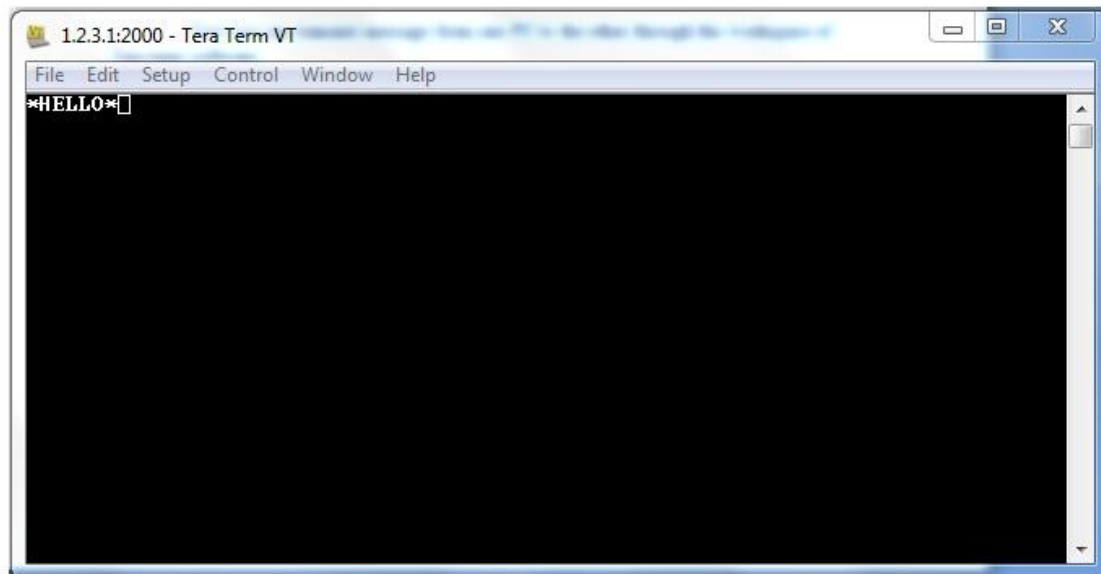
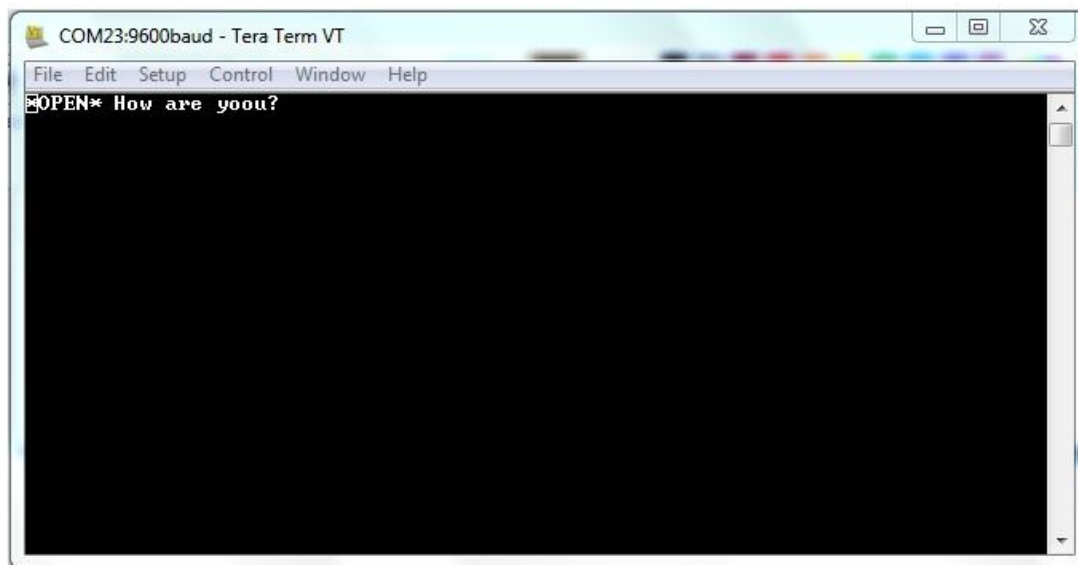


Fig. 4 Handshake

PC 1



PC 2

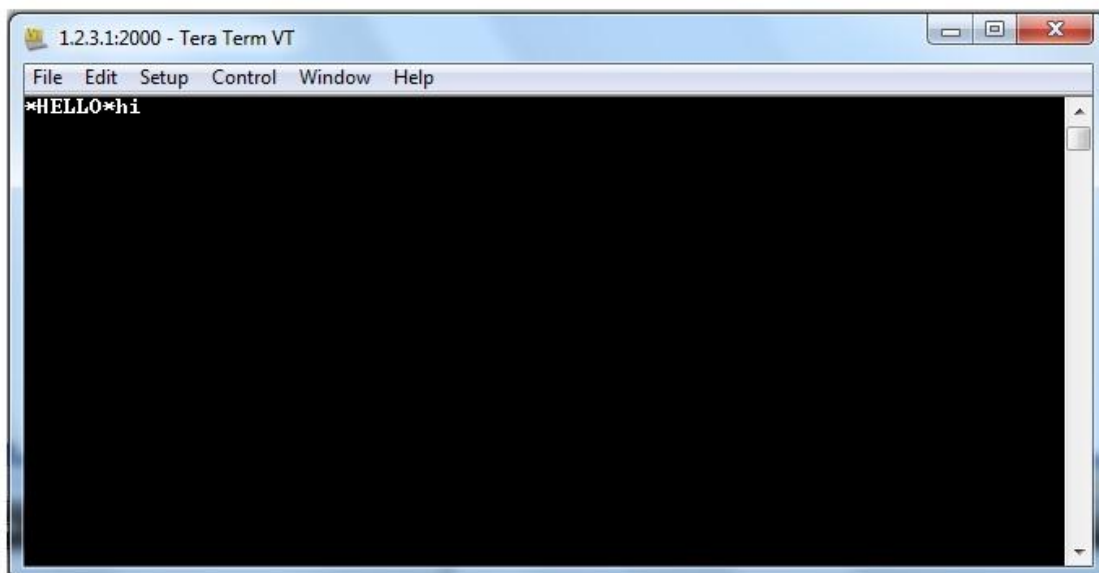


Fig . 5 message communication

NOTE:

- If you have problem setting the module in AP mode try factory resetting the module by sending factory RESET command in command mode then reconfiguring the module with above settings.

Note: AD-HOC mode

As of recently there is a new 4.0 firmware for the wifly chip that no longer supports Adhoc mode. It is replaced with AP mode.