Zhibotong(ShenZhen)Electronics CO., Ltd

Manual

Mode ： MOFI4500-4GXeLTE

Producer ： 宋審

Verifier ：

Release Date：

■ **Remark：**

Zhibotong(ShenZhen)Electronics CO., Ltd

Table of Contents

Zhibotong(ShenZhen)Electronics CO., Ltd

1. Product Overview

■ 1.1 Simply Description

ZBT-WE826 provide an easy way to expend your wired Ethernet to wireless. It work well on gateway, and you could configure it via Web.　It could meet both enterprise and the home's requirements economically, its user could browser the internet and time and anywhere. It has multi-function ,highly-perfomance and easy install. Will be your best choice to build your own WLAN. About the wireless security, WE826 provide multi-protection, support unable SSID broadcast , also provide 64/128/152 bit WEP encryption , support for WPA / WPA-PSK, WPA2/WPA2-PSK security mechanism , in order to protect your data .Comply with 802.11n/ 802.11g/ 802.11b/ 802.113/802.113u standard has 300Mbps , Our smart antenna management, makes the ZBT-WE826 performs much better than other similar product in WiFi transmission distance, perfectly compitable with other network device.

■ 1.2 Features and Specification

◆ 1.2.1 Main Features

- ➢ Provide 5 10M/100M Ethernet ports
- ➢ DHCP server
- ➢ Support RTS/CTS protocol , ensure the communication quality
- ➢ Roaming technology , efficient wireless connect
- ➢ DHCP serve static IP address
- ➢ Web manage

◆ 1.2.2 Specification

- ➢ Comply with 802.11n/802.11g/802.11b/802.113/802.113u standard

- ➢ Support TCP/IP、DHCP、ICMP protocol

- ➢ Auto MDI/MDIX port
- ➢ Indictor LED, power adapter(12V 1A)
- ➢ Work temperature 0℃- 40℃

- ➢ Operating Humidity：10%~90% non-condensing

2. Hardware Description

■ 2.1 Panel Layout

◆ 2.1.1 Front Panel

Pic 2-1 Front Panel

Indictor LED (Will adjust with the specific mode)

Indictor LED	Description	Function
POWER	Power LED	Keep ON - Power in Keep Off - No Power
Mode or USB	Mode or USB LED	Flashing - Mode or USB work Keep Off - Mode or USB not work
LAN	LAN LED	On - The relevant port connect Off - No connect to the relevant port Flashing- Data transmission on the relevant port
WLAN	Wifi LED	Off - Wireless function unable On - Wireless function enable

Interface((Will adjust with the specific mode)

Interface	Description	Function
USB	USB2.0 Port	External USB device or USB net card
Micro SD(TF)	Micro SD(TF) slot	External Micro SD card slot, data exchange

◆ **2.1.2 Back Panel**

Pic 2-2 Back Panel
Port(Will adjust with the specific mode)

Port	Description	Function
DC	Power Port	Connect the supplied power adapter.
LAN	LAN Port (RJ45)	Connect to the devices in the LAN, such as HUB, switches or PC
WAN	WAN Port (RJ45)	Connect to the WAN device, data exchange with the internet

Button(Will adjust with the specific mode)

Button	Description	Function
REST/WPS	REST/WPS Multi-function button	Rest: Press for 8 seconds WPS: Press one times.
Antenna	2* 5Dbi omni antenna	Wireless data transfer and receive

■ 2.2 Rest

If you want to rest to the factory default settings, please refer the below steps
     1) To plug the power adapter.
     2) When the router works normally, press the REST/WPS button for 8 seconds.
     3) All the router's LEDs will off and then on again, wait until it work normally.
     4) When above 3 steps done, the router will rest to the factory default setting.

     Warming:
     Before steps finishing, don't cut the power off, or it will break your router.

■ 2.3 System Requirements.

- ➢ Network card and Ethernet cable
- ➢ TCP/TP net software (Windows 95 or higher version has pre-install)
- ➢ IE 5.0 or higher version

■ 2.4 Install Condition

When you install the router, please refer the below
- ➢ Put the device horizontally
- ➢ Keep away from any heat device
- ➢ Do not put it in some place which is too dirty or too humidity.

Remark:

The environment will effect the transfer distance , recommend using environment:
Temperature: 0℃~40℃ ,Humidity: 10%~95% RH

3. TCP/IP Configuration

Before using the device, you need to configure the network correctly, this manual is based on the Windows 2000/XP, the IP of the device is 192.168.1.1 , subnet mask is 255.255.255.0 .

Firstly, connect your PC to the LAN port, and then you can configure the IP of your PC in 2 ways.

✧ **Set the IP**

Set your PC's IP as 192.168.1.xxx(xxx could be any number in 2~254), subnet mask to be 255.255.255.0 , default gateway 192.168.1.1 , DNS server 192.168.1.1

✧ **Auto set the IP by the DHCP server.**

Set the TCP/IP to "automatically get IP address", after setting , you could use the Ping command to check if the device has connected to the PC. For an example, in Windows 2000, run the cmd.exe , and the enter ping 192.168.1.1 If the screen shows as the below, means OK, the device connected to the PC.

```
Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<10ms TTL=64
Reply from 192.168.1.1: bytes=32 time<10ms TTL=64
Reply from 192.168.1.1: bytes=32 time<10ms TTL=64
Reply from 192.168.1.1: bytes=32 time<10ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms
```

If it shows as below, it means fail

```
Pinging 192.168.1.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms
```

When it fails to connect, you could check as below.

1）：If the hardware connect in right way?

>>The relevant LED to the PC must be on

2）：If your PC's TCP/IP sets right?

>>If the IP of the device is 192.168.1.1 , your PC's IP must be 192.168.1.xxx(xxx should be 2~253)

4. Configuration Guide

■ 4.1 Start and Login

The router provide the UI based on the IE, this solution could work in any MS Windows, Macintosh or UNIX system . Run the browser, unable the VPN (if the VPN is working) , and then input the 192.168.1.1 in browser. After doing that, you will see the login page, you should enter it as the administer, which means you should enter the username: root /Password: admin   , and then click the "log in"

The system of the ZBT-WE826 is OpenWrt
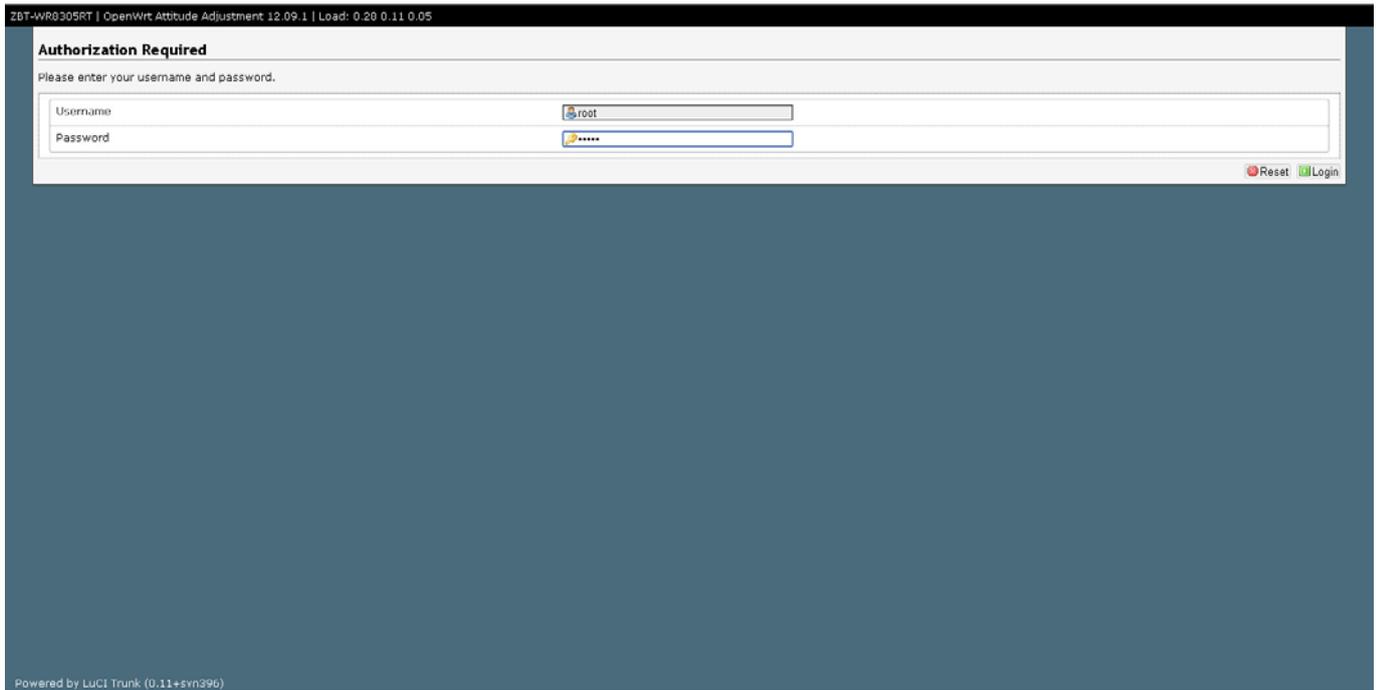
4-1 Log in webpage

When everything goes well, the browser will show as the 4-2. There are several tag, click some tag, you could configure relevant function settings.
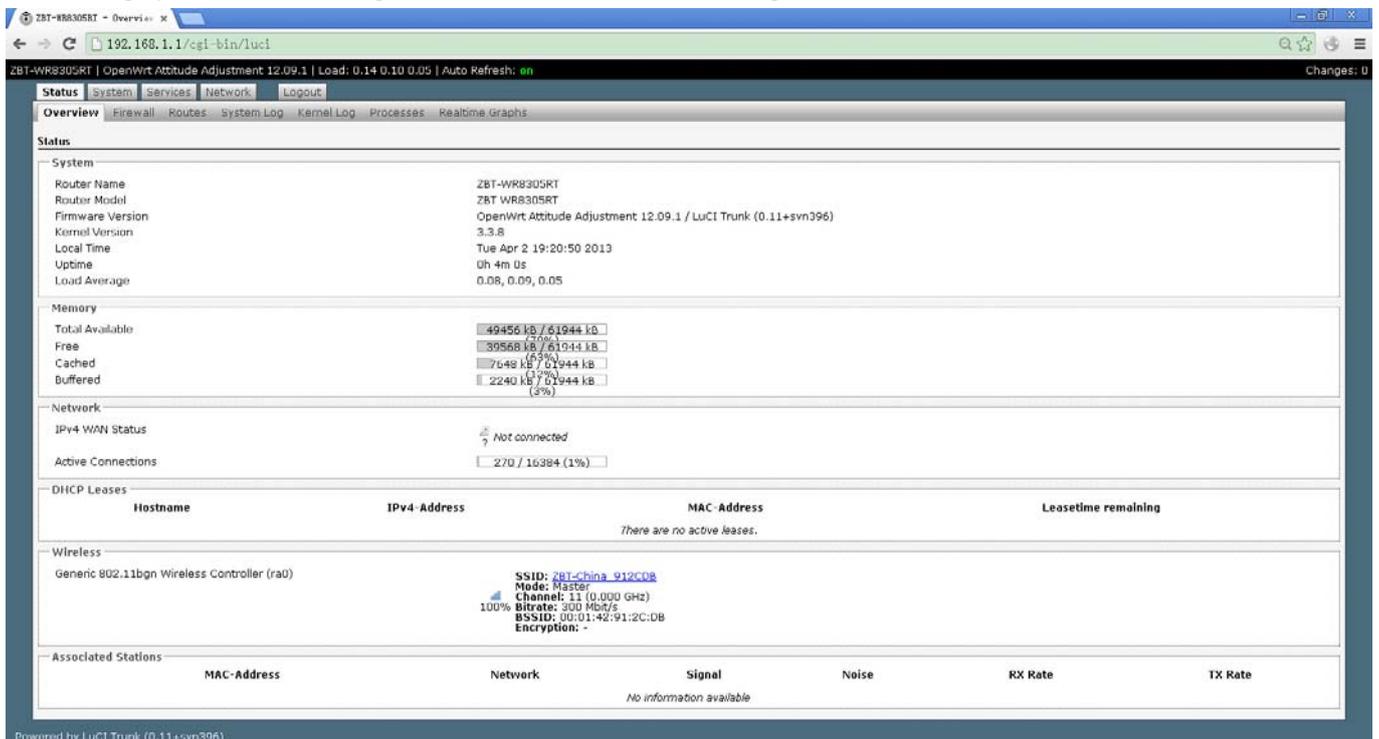
4-2

I will explain each menu.

■ **4.2 us**

◆ **4.2.1 Overview**

Click the "Overview" You could check the running information, included system information, Memory, network, DHCP leases, wireless and associate stations, as 4.2.1

4.2.1 Status

➢ System: Router name, Router model, Firmware version, Kernel version, Local Time, Uptime, Load average.
➢ Memory: Total available , Free, Caches, Buffered
➢ Network: The connection status of the WAN port.
➢ DHCP Leases: Show the IP address ,MAC, and the Lease time
➢ Wireless: It is about the wireless status , will included SSID, Mode, Work Channel, Bitrates, the MAC of the wireless interface , the Encryption of the transmission.
➢ Associate: Shows the status of all the device connect to the router via Wireless

◆ 4.2.2 Firewall

Click the firewall tag, you could check the firewall status of the device

ZBT-WR8305RT | OpenWrt Attitude Adjustment 12.09.1 | Load: 0.04 0.08 0.05 — Changes: 0

Status System Services Network — Logout

Overview **Firewall** Routes System Log Kernel Log Processes Realtime Graphs

Firewall Status

Actions
- Reset Counters
- Restart Firewall

Table: Filter

Chain *INPUT* (Policy: *ACCEPT*, Packets: 0, Traffic: 0.00 B)

Rule #	Pkts.	Traffic	Target	Prot.	Flags	In	Out	Source	Destination	Options
1	2457	173.78 KB	delegate_input	all	--	*	*	0.0.0.0/0	0.0.0.0/0	-

Chain *FORWARD* (Policy: *DROP*, Packets: 0, Traffic: 0.00 B)

Rule #	Pkts.	Traffic	Target	Prot.	Flags	In	Out	Source	Destination	Options
1	0	0.00 B	delegate_forward	all	--	*	*	0.0.0.0/0	0.0.0.0/0	-

Chain *OUTPUT* (Policy: *ACCEPT*, Packets: 0, Traffic: 0.00 B)

Rule #	Pkts.	Traffic	Target	Prot.	Flags	In	Out	Source	Destination	Options
1	2623	252.32 KB	delegate_output	all	--	*	*	0.0.0.0/0	0.0.0.0/0	-

Chain *delegate_forward* (References: 1)

Rule #	Pkts.	Traffic	Target	Prot.	Flags	In	Out	Source	Destination	Options
1	0	0.00 B	forwarding_rule	all	--	*	*	0.0.0.0/0	0.0.0.0/0	/* user chain for forwarding */
2	0	0.00 B	ACCEPT	all	--	*	*	0.0.0.0/0	0.0.0.0/0	ctstate RELATED,ESTABLISHED
3	0	0.00 B	zone_lan_forward	all	--	br-lan	*	0.0.0.0/0	0.0.0.0/0	-
4	0	0.00 B	zone_wan_forward	all	--	eth2.2	*	0.0.0.0/0	0.0.0.0/0	-
5	0	0.00 B	reject	all	--	*	*	0.0.0.0/0	0.0.0.0/0	-

Chain *delegate_input* (References: 1)

Rule #	Pkts.	Traffic	Target	Prot.	Flags	In	Out	Source	Destination	Options
1	1968	130.69 KB	ACCEPT	all	--	lo	*	0.0.0.0/0	0.0.0.0/0	-
2	489	43.09 KB	input_rule	all	--	*	*	0.0.0.0/0	0.0.0.0/0	/* user chain for input */
3	384	32.75 KB	ACCEPT	all	--	*	*	0.0.0.0/0	0.0.0.0/0	ctstate RELATED,ESTABLISHED
4	29	1.47 KB	syn_flood	tcp	--	*	*	0.0.0.0/0	0.0.0.0/0	tcp flags:0x17/0x02
5	105	10.35 KB	zone_lan_input	all	--	br-lan	*	0.0.0.0/0	0.0.0.0/0	-
6	0	0.00 B	zone_wan_input	all	--	eth2.2	*	0.0.0.0/0	0.0.0.0/0	-

Chain *delegate_output* (References: 1)

Rule #	Pkts.	Traffic	Target	Prot.	Flags	In	Out	Source	Destination	Options
1	1968	130.69 KB	ACCEPT	all	--	*	lo	0.0.0.0/0	0.0.0.0/0	-
2	655	121.64 KB	output_rule	all	--	*	*	0.0.0.0/0	0.0.0.0/0	/* user chain for output */
3	655	121.64 KB	ACCEPT	all	--	*	*	0.0.0.0/0	0.0.0.0/0	ctstate RELATED,ESTABLISHED
4	0	0.00 B	zone_lan_output	all	--	*	br-lan	0.0.0.0/0	0.0.0.0/0	-
5	0	0.00 B	zone_wan_output	all	--	*	eth2.2	0.0.0.0/0	0.0.0.0/0	-

Chain *reject* (References: 3)

Rule #	Pkts.	Traffic	Target	Prot.	Flags	In	Out	Source	Destination	Options
1	0	0.00 B	REJECT	tcp	--	*	*	0.0.0.0/0	0.0.0.0/0	reject-with tcp-reset
2	0	0.00 B	REJECT	all	--	*	*	0.0.0.0/0	0.0.0.0/0	reject-with icmp-port-unreachable

4.2.2

◆ 4.2.3 Routing List

Click the status-routes, you could check the routing list of the device, the currently active on the device.

ZBT-WR8305RT | OpenWrt Attitude Adjustment 12.09.1 | Load: 0.03 0.07 0.05 — Changes: 0

Status System Services Network — Logout

Overview Firewall **Routes** System Log Kernel Log Processes Realtime Graphs

Routes

The following rules are currently active on this system.

ARP

IPv4-Address	MAC-Address	Interface
192.168.1.3	bc:5f:f4:f8:72:05	br-lan

Active IPv4-Routes

Network	Target	IPv4-Gateway	Metric
lan	192.168.1.0/24	0.0.0.0	0

4.2.3

◆ 4.2.4 System Log

Click the System Log, you could check the running status and the operate history
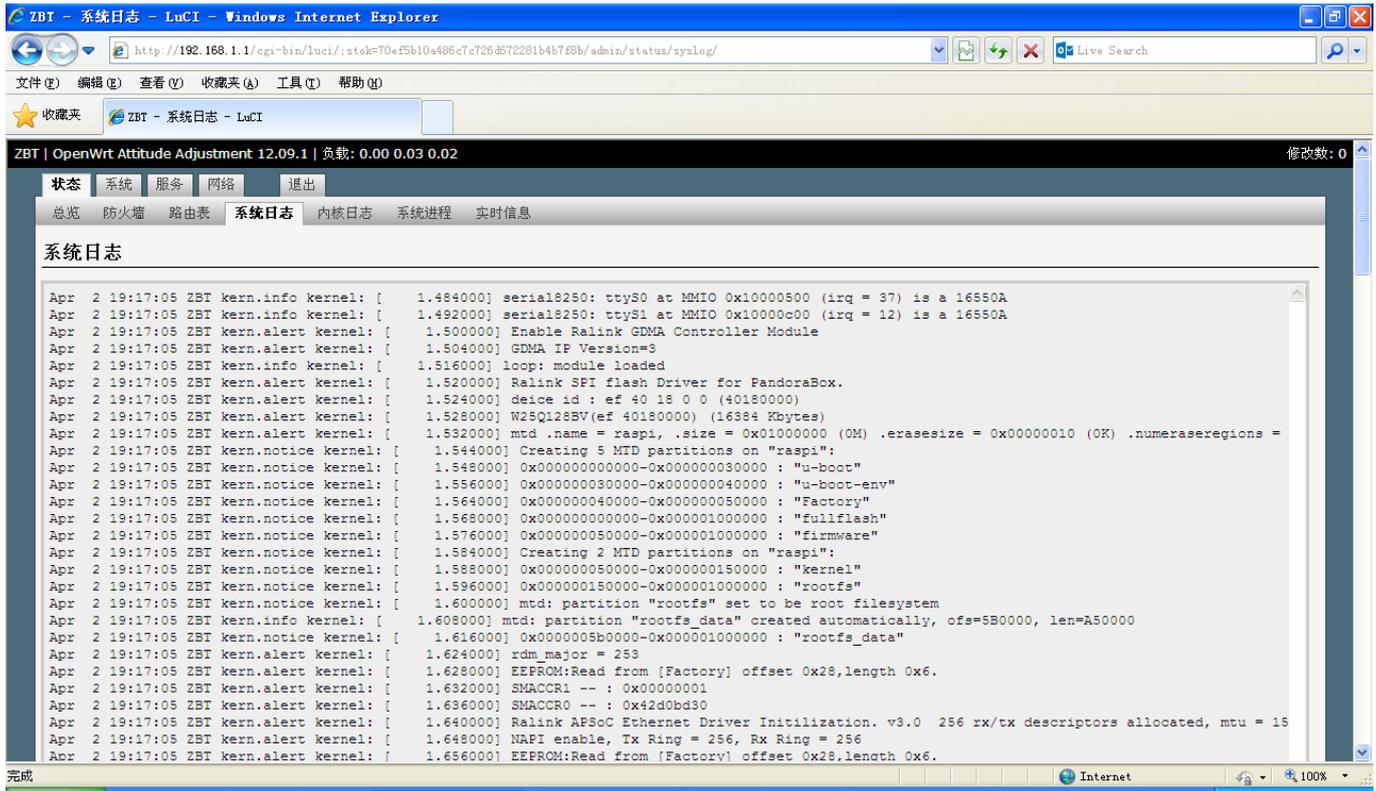
4.2.4

◆ 4.2.5 Kernel Log

Click the Kernel Log , you could check some information about the device's system
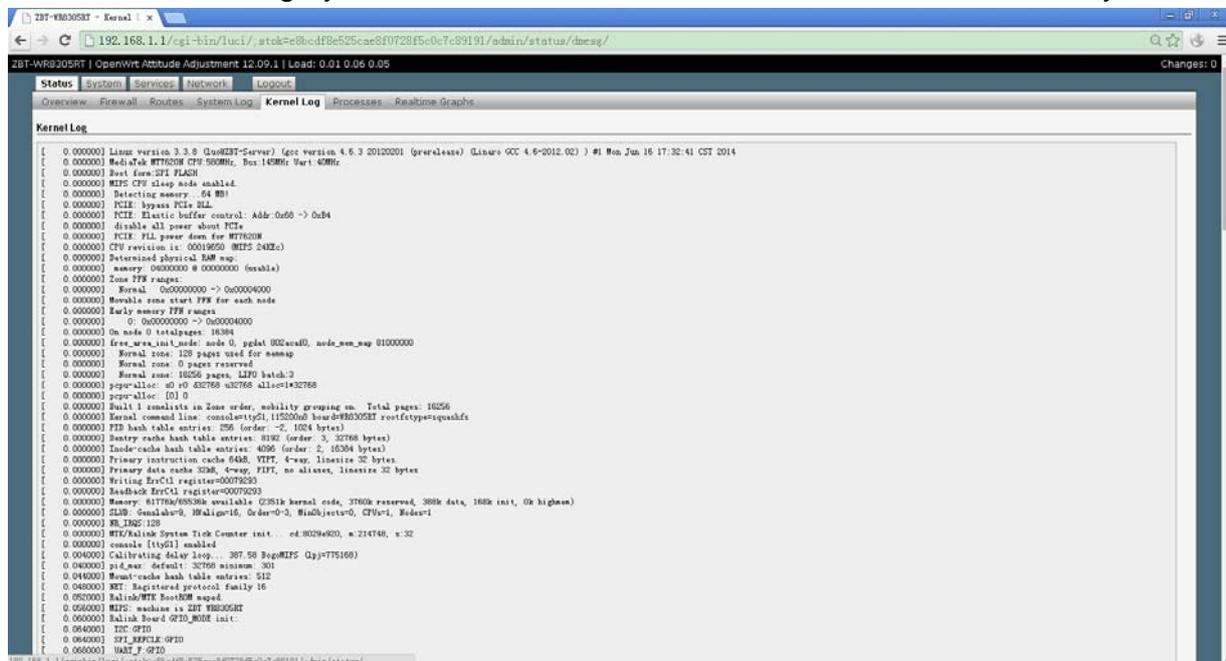
◆ 4.2.6 Processes

Click the progresses, you could check an overview over currently running system processes and their status. Such as CPU usage, Memory usage. You could hang up ,terminate or even kill the program, depends on your requirements.

As the 4.2.6

4.2.6

◆ **4.2.7 Realtime Graphs**

Click the Realtime Graphs ,you could check the load, traffic, wireless and connection of the device.
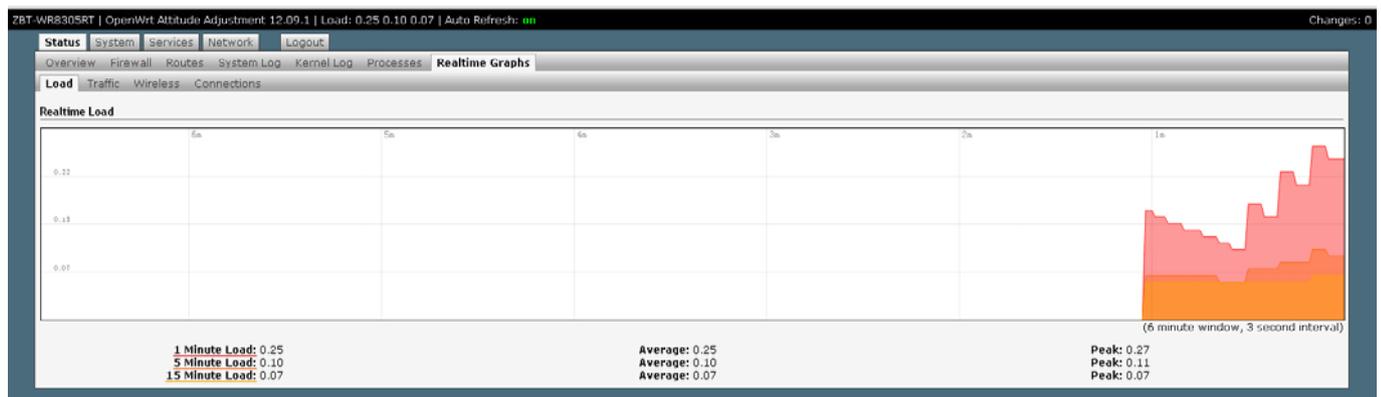
图 4.2.7

◆ **4.3.1 System**

Click the System tag, you could check and edit some basic information of the device, including Local time, Hostname, time zone.
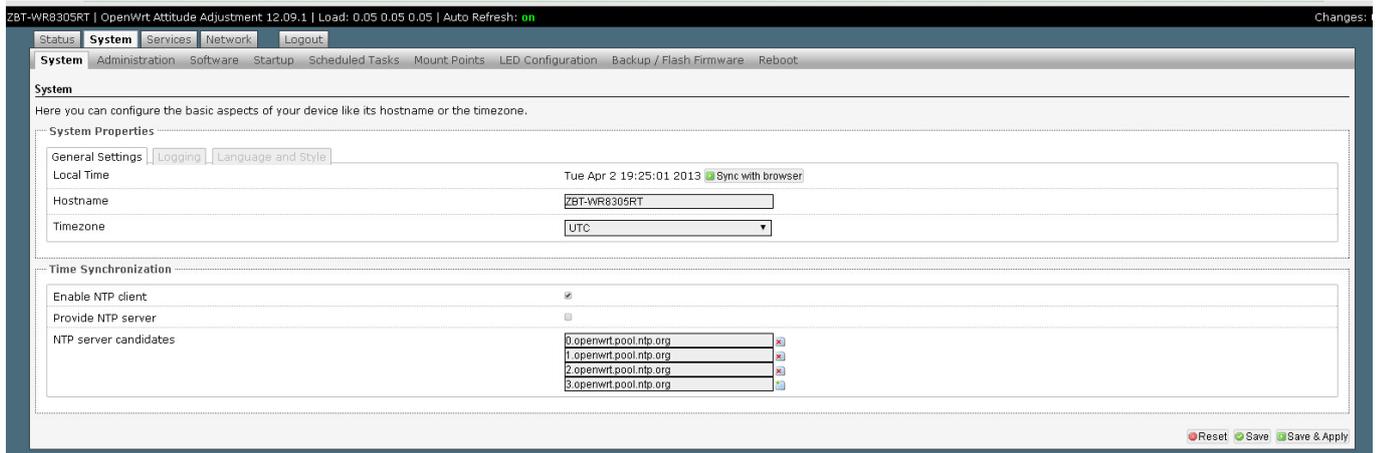
4.3.1

◆ 4.3.2 Administration

You can edit the administrator password for accessing the device
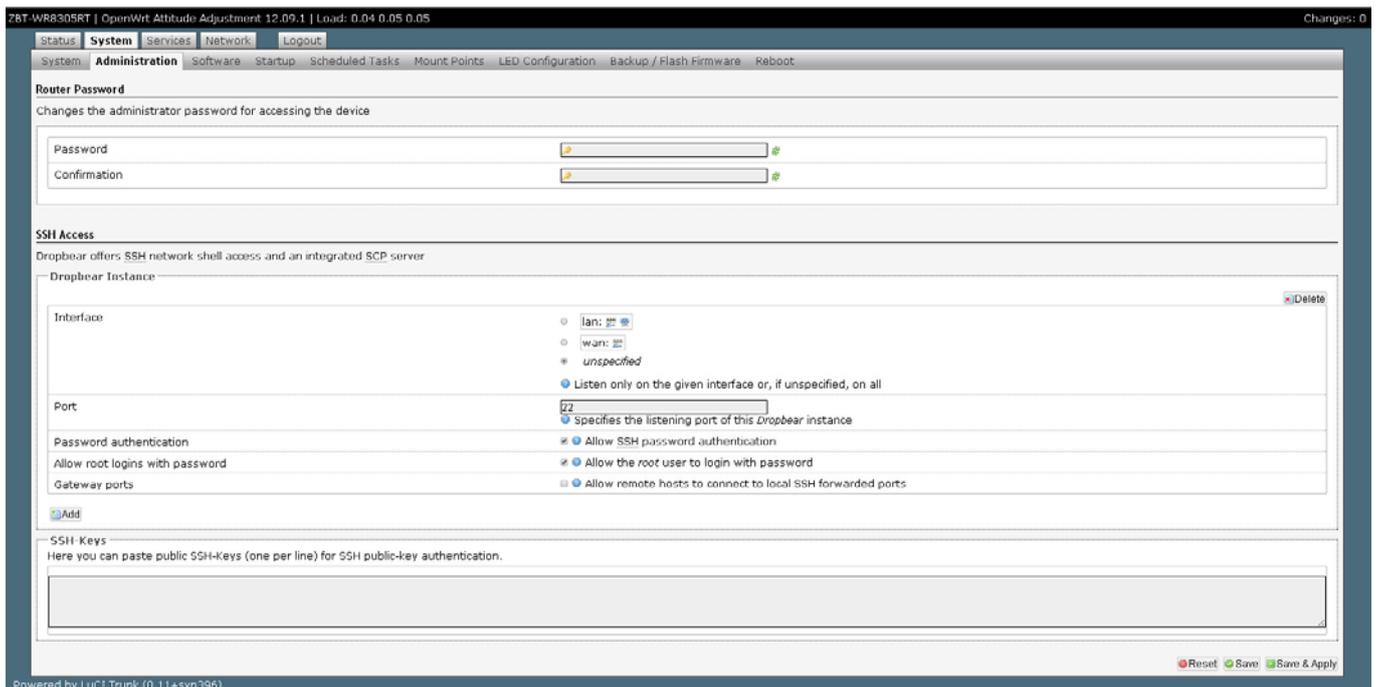
◆ 4.3.3 Software

Click the software page, you could download and install the package , do not operate it without a professional engineer.

◆ 4.3.4 Startup

Click to the Startup page, You can enable or disable installed init scripts here. Changes will applied after a device reboot, do not operate it without a professional   engineer.

◆ 4.3.5 Schedule Tasks

This is the system crontab in which scheduled tasks can be defined.，do not operate it without a professional engineer.

◆ 4.3.6 Mount Points, LED Configuration

Do some edition about the system , do not operate it without a professional engineer.

◆ 4.3.7 Backup/Flash Firmware

You could upgrade the firmware or backup it in this page, as below.

4.3.7

◆ 4.3.8 Reboot

选择菜单系统- 重启，您可以重启设备。

When you click the Reboot tag, the device will reboot.
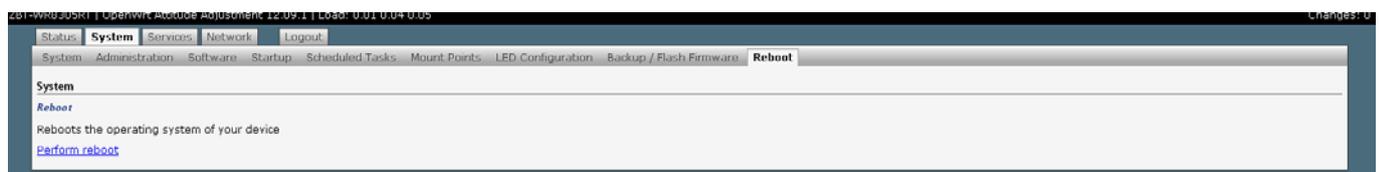
■ 4.4. Service

◆ 4.4.1 Dynamic DNS

Dynamic DNS allows that your router can be reached with a fixed hostname while having a dynamically changing IP address

■ 4.5 Network

◆ 4.5.1 Interfaces

Click the Interface tag, you could check the wired port's status and edit it.
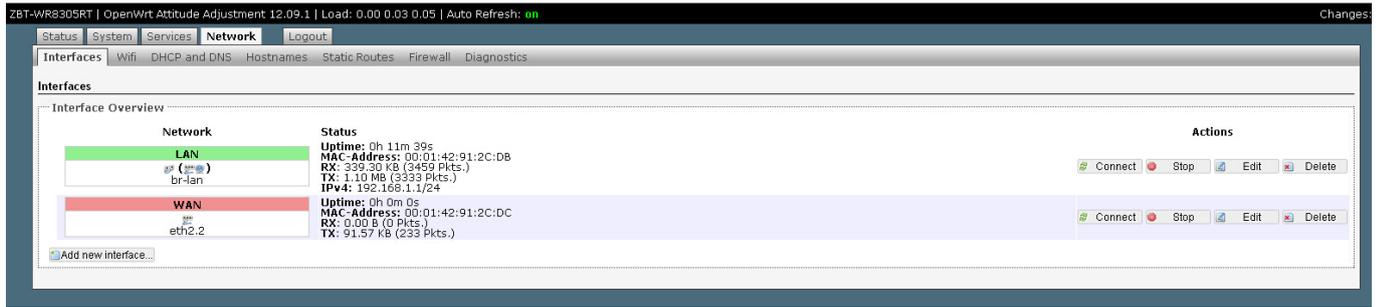
4.5.1

◆ **4.5.2 Wireless**

Click the Interface tag, you could check the wireless port's status and edit it.
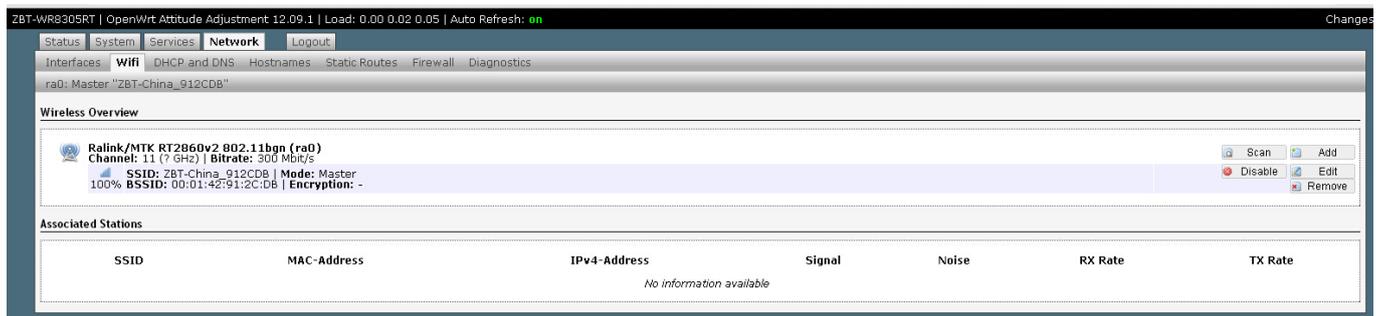
4.5.2

◆ **4.5.3 DHCP/DNS、Hostnames, Static Routes,**

You could edit these setting in relevant page. do not operate it without a professional engineer.

◆ **4.5.4 Firewall**

The firewall creates zones over your network interfaces to control network traffic flow
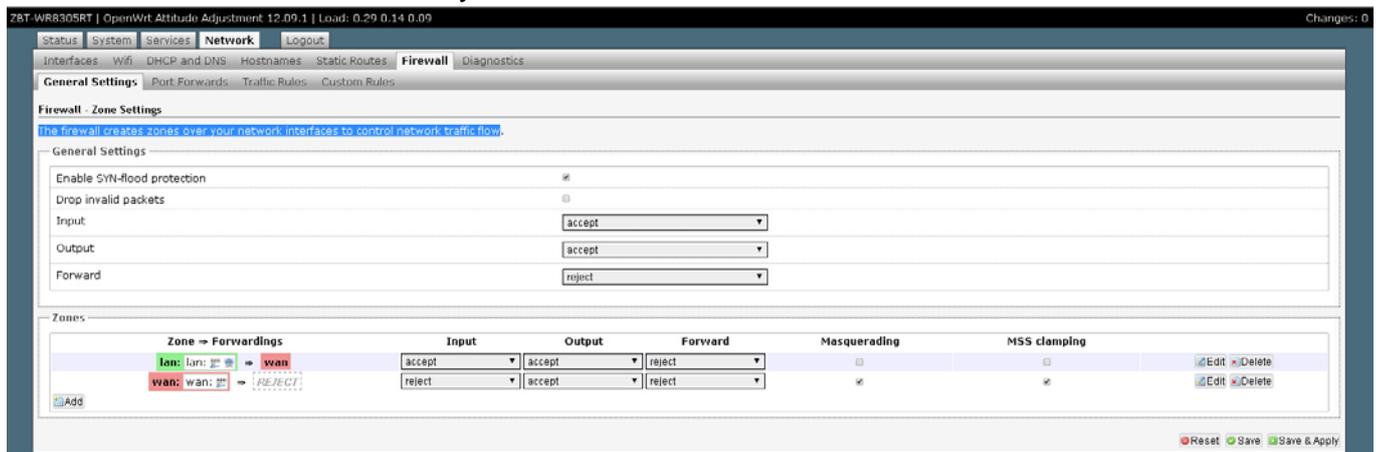
Pic 4.5.4

◆ **4.5.5 QOS**

With QoS you can prioritize network traffic selected by addresses, ports or services.

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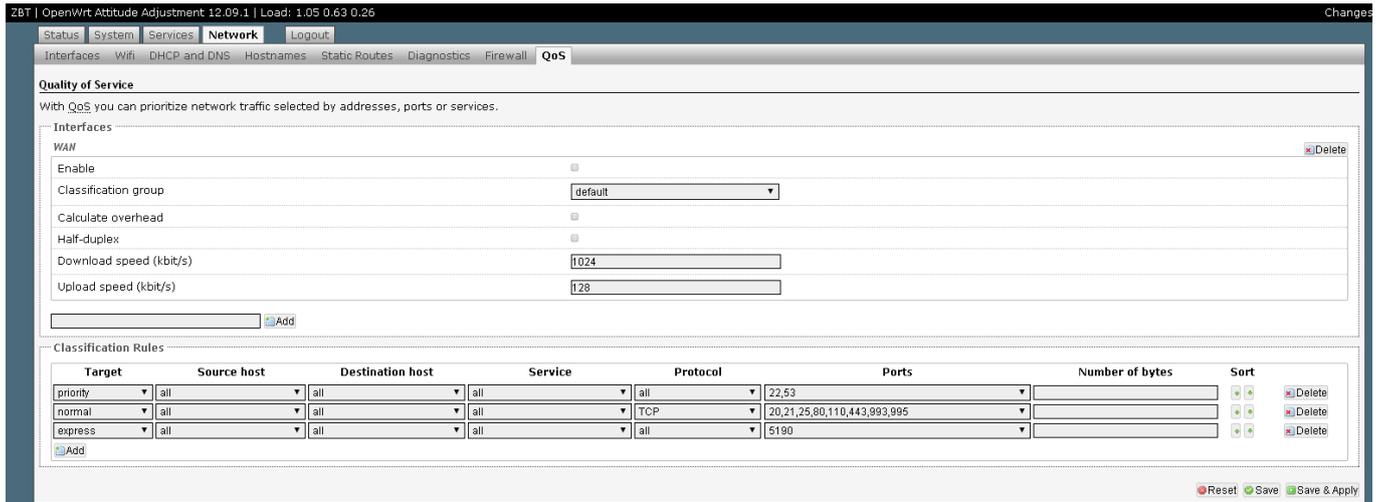
Pic 4.5.5

■ 4.6 Log out

Click the Log Out tag, you will log out the website.

More details about the system. Please refer the https://openwrt.org/

■ 4.7 Flash Firmware

Operate this keep the router connecting computer status.

First, use sharp item Pressing the RESET button as "Picture 1" below, then power on the router.
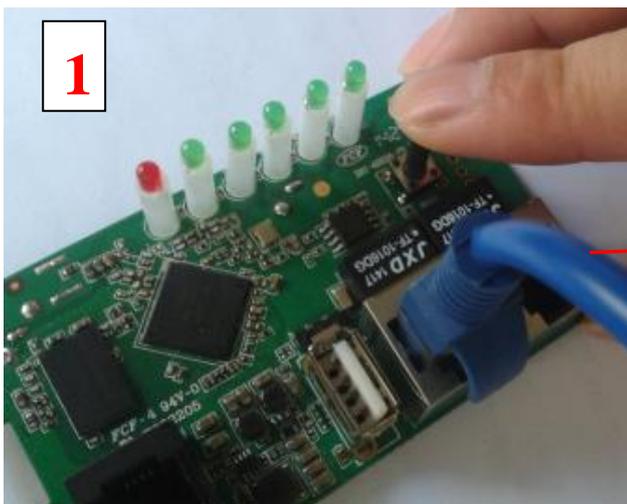
Second, set the computer TCP/IP in to static IP 192.168.1.X (X means any number between 2 to 255) and Subnet mask into 255.255.255.0
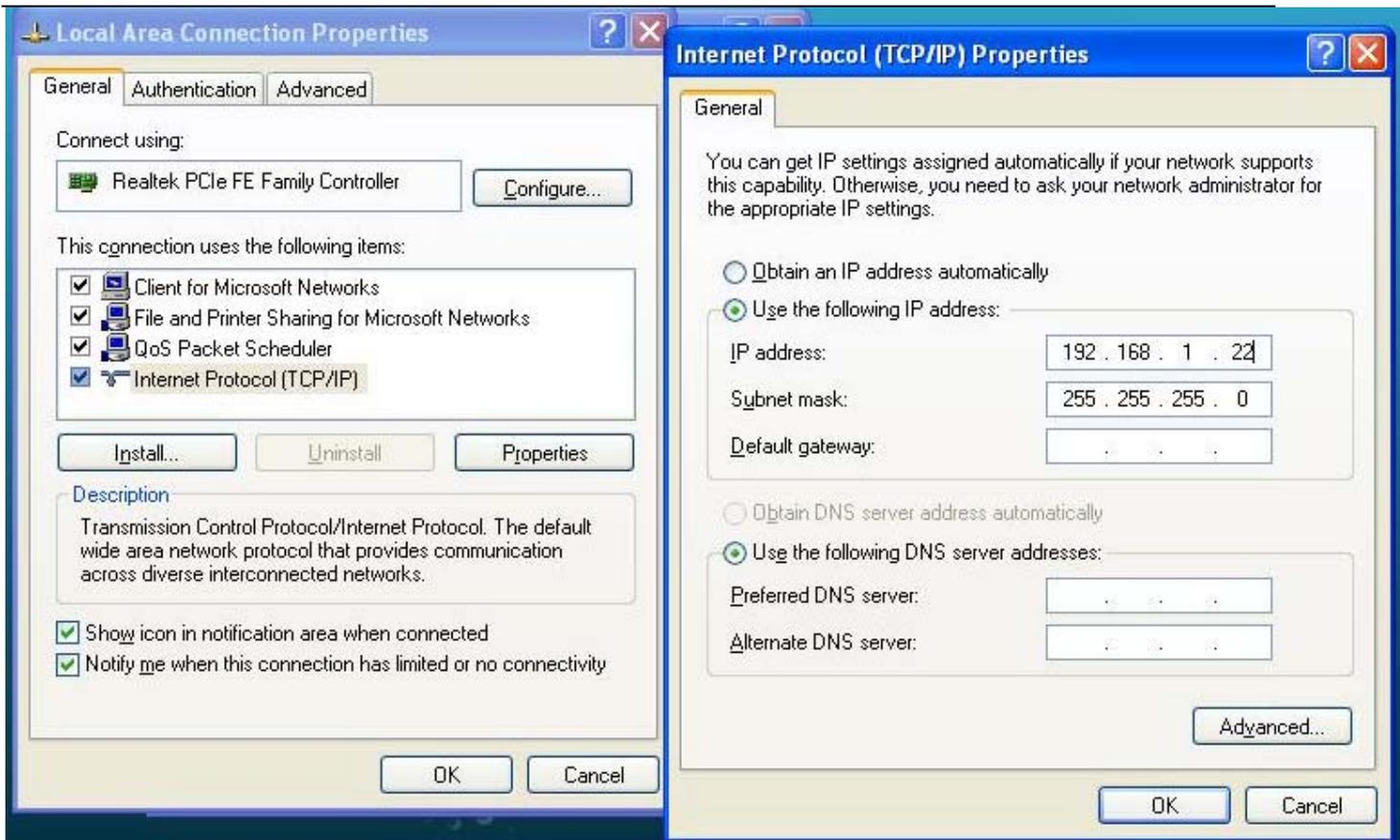
Third,key in 192.168.1.1 into browser, come into " Firmware recovery page" as below pic. (this system developed based on Chinese ,so the page shows Chinese word)

Click " Brower " button find the firmware "root_uImage.uImage" from your computer, double click "root_uImage.uImage" to hang on it. Then click "刷新固件"to start uploading

(During uploading time,don't move or power off the router!! Otherwise will cause the router dead !!)

About 100seconds, the file upload success will show "升级完毕" as below picture show. And the router will automatic restart

oft Internet Explorer

ites   Tools   Help

Search   Favorites

:.1.1/

拯救模式

升级完毕!
系统将在更新完成后自动重启。

请不要断电或者重启。

Upload success, router will restart.

Local Area Connection is now connected
Speed: 100.0 Mbps

拯救模式 - Microsoft...

Fourth, Set the computer TCP/IP into automatic obtain IP
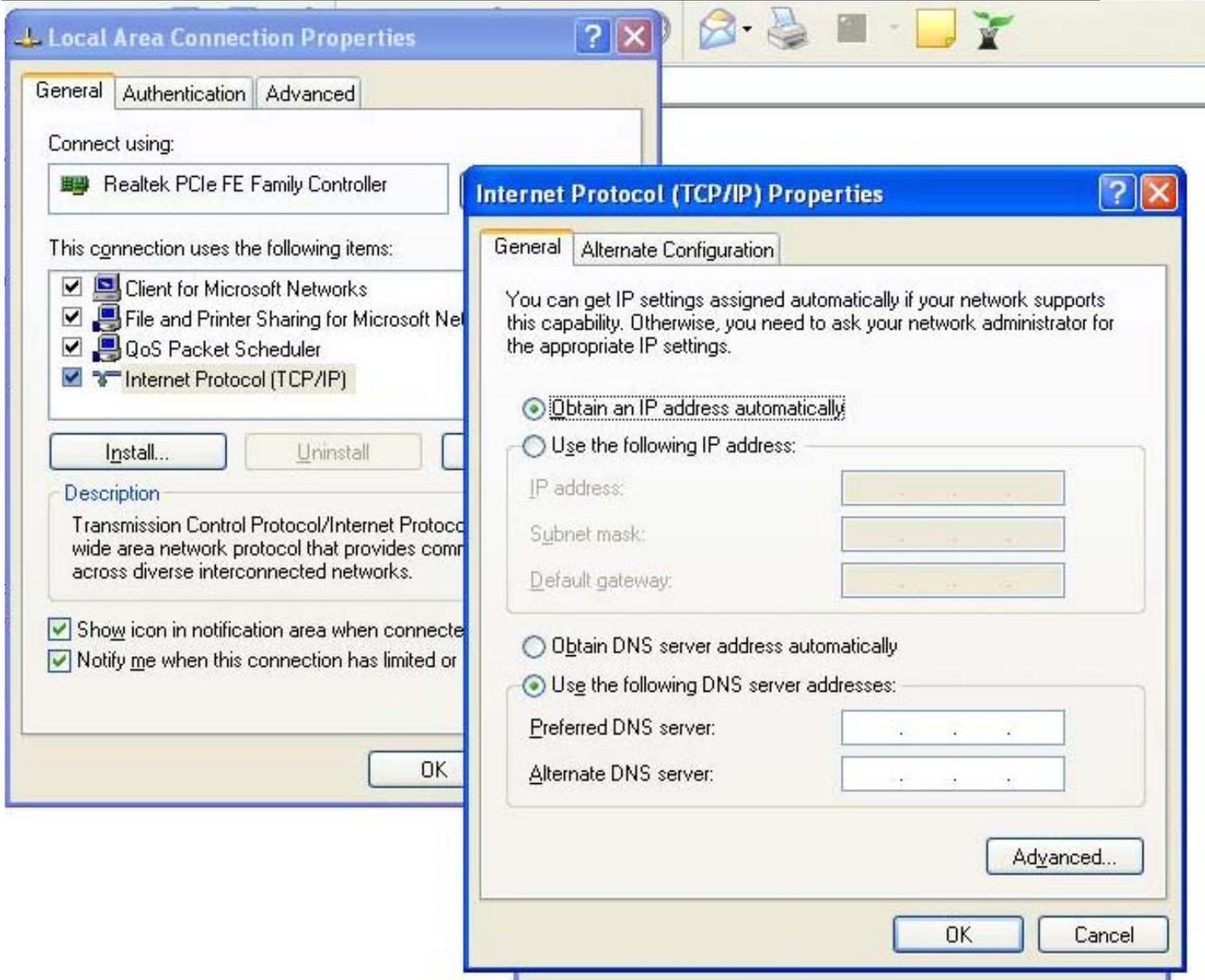
5. FAQ

1、LAN LED off

It is about the hardware connection issue, you could check follow below steps
- ➢ To check if the Ethernet cable plug into the port firmly.
- ➢ To check if the network device is power on
- ➢ Make sure the Ethernet cable are working well

2、The device work normally after setting . But the link will become unsteady after working

   some time, such as delay and package dropping.

It means there are some interference in the work environment, you could follow the below steps
   to solve such problem.

➢ To check if each part of the connection are steady.
➢ If the signal strength are too weak, you can try to change the work channel, in order to reduce the reference.
➢ Reboot the device.

Reset to the factory default setting.

After all the above steps, if it still have the same questions, please contact to the reseller or our FAE.

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.   These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or   television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: Modifications to this product will void the user's authority to operate this equipment.