Guide rail router

ZLAN9809M

4G/WIFI/RJ45

ZL DUI 20221222.1.0

Version Information

The History of the revision to this document：

History

Date	Version No.	Doc No.	Contents
2022-12-22	Rev.1	ZLDUI 20221222.1.0	Published
2023-12-14	Rev.2	ZLDUI 20221222.2.0	Add WIFI bridge connection mode

CATALOGUE

1. Summary

ZLAN9809M industrial 4G router is a 4G/WIFI communication product with excellent performance developed by ZLAN based on 4G network requirements. It is mainly used in the data transmission service of industry users, combined with routing, switching, 4G, WLAN, encryption and other technologies, providing a variety of functions such as RJ45 to RJ45/WIFI, WIFI to RJ45/WIFI, 4G to RJ45/WIFI.

The ZLAN9809M features a high-performance 32-bit processor that can handle protocols and large amounts of data at high speeds and can be paired with a variety of 4G industrial modules. Provides 4 10/100M LAN ports, 1 WAN port, WIFI interface, 4G. It can connect to various terminal devices.

Figure 19809M Appearance

ZLAN9809M applications:

Create an internal subnet when IP address resources are scarce.

The network port PLC is converted into WIFI access to the existing network to achieve seamless connection;

With its WIFI relay/bridge function, the WIFI communication range can be further expanded;

When the WLAN interface is disconnected, the ZLAN9809M can quickly switch to the 4G network.

1.1. Product Appearance

Figure 2 ZLAN9809M Appearance

1.2. Device interface descriptions

1. The 9809M has four LAN ports, two LAN ports on the left and two LAN ports on the right, and the WAN port next to the power supply. Connect the network cable to the corresponding network port as required.

2. Antenna installation. The antenna interface of the device uses 50 Ω/SMA (female), and the external antenna must use an antenna suitable for the 4G working band. WIFI antennas generally only need to install one antenna on the left, and generally use a glue stick antenna. The 4G antenna is on the front panel and generally uses a suction cup antenna

3. There is a SIM card slot next to the panel light. SIM card

installation, this device uses the 3G/4G network of all Netcom, you need to buy the SIM card of any operator, ensure that the device is not powered on when installing the SIM card, this device uses the embedded SIM card holder, just push the SIM card chip downward to use, if you need to pull out, push the SIM card again to automatically ejects.

1.1 panel light introduction

9809M panel light as below:

POWER	SYS	4G
WIFI	LAN2	LAN4
WAN/LAN1	LAN3	LAN5

Figure 3panel light

Panel lights same as below:

Name	Color	Instructions
WAN/LAN1	Green	WAN interface panel light, once light on, WAN interface is connected
WIFI	Green	WiFi panel light, Steady or blinking: The WiFi is working properly
POWER	Green	Power indicator: When the device is powered on
LAN	Green	Four LAN port indicators correspond to four LAN ports. If on, the corresponding LAN ports are connected
SYS light	Green	4G power on indicator. On: The 4G module is powered on
4G light	Blue	If the indicator is steady on, the dial is being dialed. If the indicator is blinking, the dial is successful
Reset button	Button	After the device is started: press 1 second to release, the device will restart after 5 seconds; Press for 5 seconds to release, the

		device restarts after 5 seconds, and the device is reset to factory Settings

Figure 1 panel light parameter

1. Technical parameter

Product main parameter		
Parameter name	Parameter	Remarks
support mode	4G CAT1 support 3 modes： B1/B3/B5/B8@FDD LTE B34/B38/B39/B40/B41@TDD-LTE B3/B8@GSM It includes Unicom 4G, 2G, mobile 4G, 2G and telecom 4G networks	
Transmission rate	LTE：Max 10Mbps（upload）/Max 5 Mbps（upload） GPRS：85.6Kbps（download）/Max85.6Kbps（download）	
SIM card	Voltage：3V，1.8V；size：medium	
Antenna interface	50Ω/SMA Glue stick antenna or sucker antenna is optional	
Power supply interface	Power terminal input	
input voltage	DC9V~24V	
Interface	LAN 口*4，WAN 口*1，SIM*1， 4G antenna*1，wifi antenna*1	
basic function	LAN to LAN/WIFI、WIFI to LAN/WIFI、4G to LAN/WIFI	
Advanced function	Firewall, Static routing, Log services, channel analysis, DHCP/DNS, Network diagnostics, host name Mapping	
Product size	37.6(L)x 83.6(W)x 89.2(H)mm	
Configuration	WEB web page configuration（default 192.168.8.1）	
Working temperature	-40 degree~85 degree	
Storage temperature	-40 degree~120 degree	
Humidity range	0~95% non condensing	

2. Usage

（This note uses Windows 10 as an example to demonstrate device and computer interconnection）

2.1. Connect 9809M router

If you don't have an Internet cable and want to connect your device over WIFI, you need to do the following first:

Turn on WLAN in the lower right corner of your computer:

Figure 4 ap name

Connect ZLAN-XXXXXXXX this WiFi, default password is 66666666.

If you have a network cable and plan to connect the device through the cable, directly connect the network cable to any LAN port, open your browser, enter 192.168.8.1 in the address bar, press enter to confirm,

and then open the web page of 9809M. (Using a wired connection requires the computer's Ethernet to be set to automatic (DHCP), or the IP to be set manually to the same network segment as the router)

Figure5 web page

The initial password is not required. You can directly click to log in. After login, the configuration page will be displayed:

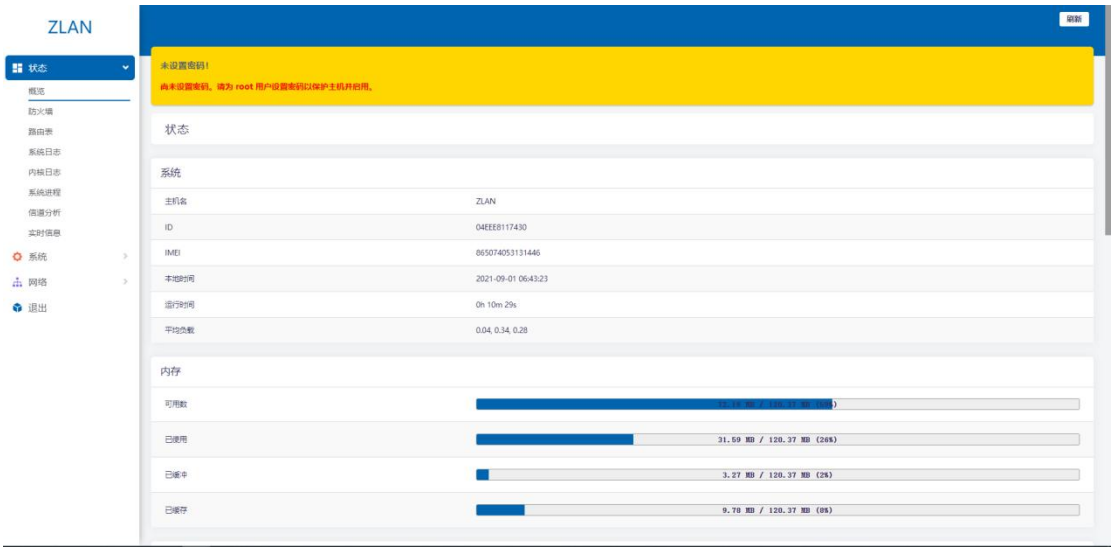

Figure 6 web page

Click Network > Interface, you can see the existing interfaces of the device, mainly LAN port, WAN port, and WAN_4G port. The WAN interface is used to provide users with external network access services, while the LAN interface is used to provide users with local LAN access or output interfaces. Specifically, through WAN ports, routers can receive data packets from the Internet and forward them to devices in the local LAN; Through the LAN interface, routers can receive data packets from devices in the local LAN and forward them to the Internet or other networks.

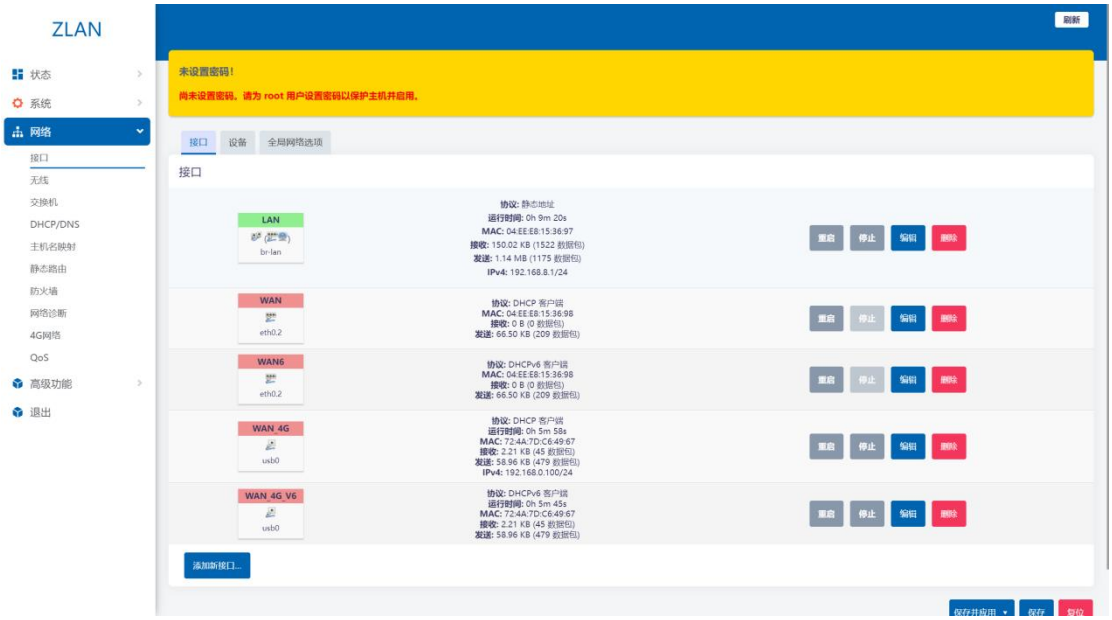

Figure 7interface page

2.2. Configuring network connections

Initial configuration: Click the menu bar on the left side of the web page: Network -- > Interface, you can see the interface page as shown in Figure 7. (ctrl+ mouse wheel to enlarge)

WAN Port mode The default mode is Wired priority mode, that is, the WAN port on the router connects to the Internet through a network cable. Related parameters can be viewed by clicking Network -- >4G network

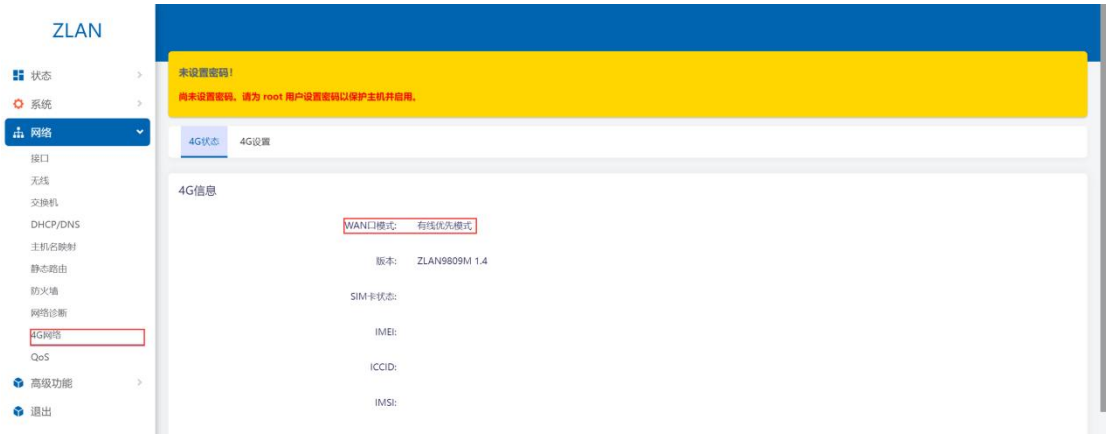

Figure 8 4Gstatus

2.2.1. WIFI relay mode

Click the menu bar on the left side of the web page: Network -- > Wireless, you can see the wireless overview, 9809M has a 2.4G band wireless card.

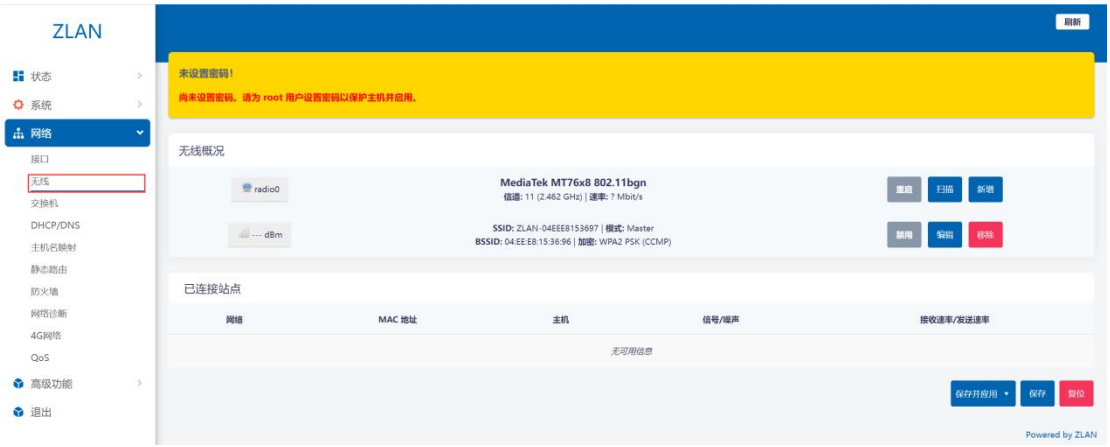

Figure 9wireless summary

WIFI relay mode, that is, the 9809M router connects to the upper-level network through the upper-level WIFI, and your device connects to the 9809M router through wired or WiFi. Before setting, please ensure that the upper-level WiFi network can connect to the public network and connect the WiFi antenna.

Step 1: Go to the web page, click the left menu bar: Network -- >WIFI, click the scan button on the right side of the network card:

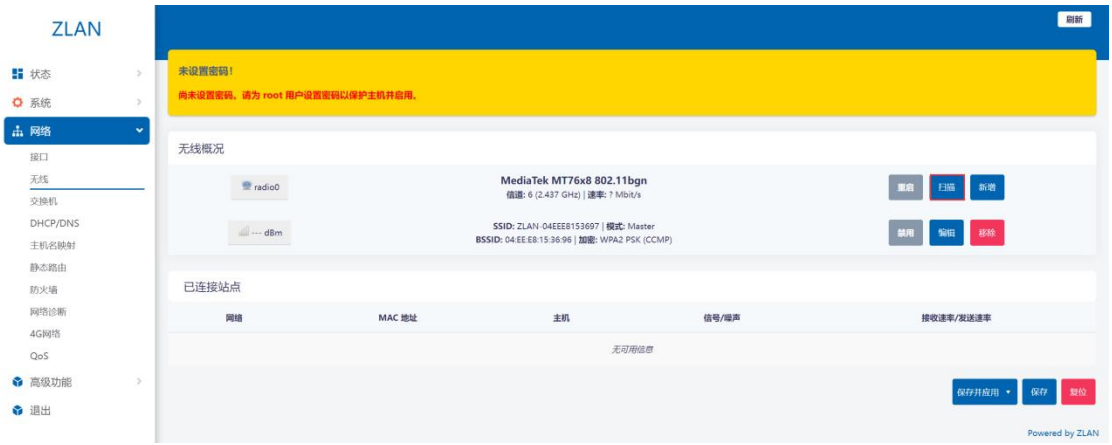

Figure 10 scan button

Step 2: Select the upper-level network you want to access on the open page and click Join Network.

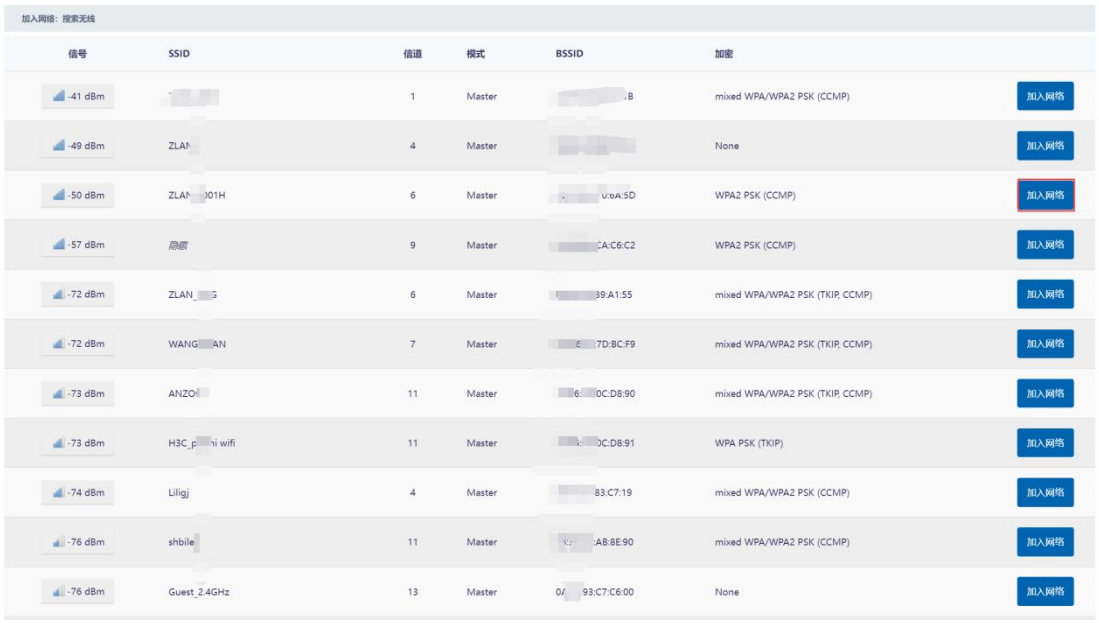

Figure 11 add into network

Step 3: Enter your superior network password on the open page), the default name of the new network interface is wan, you can modify it yourself, then click the Submit button in the lower right corner, the second interface will pop up.

Figure 12 Modify the name of a network interface

The second page has operating frequency, transmission power and other options. If the wifi version of the device to be connected is older and does not support 802.11/N, you can change the operating frequency to Legacy. Under normal circumstances, there is no need to set any parameters, just click Save.

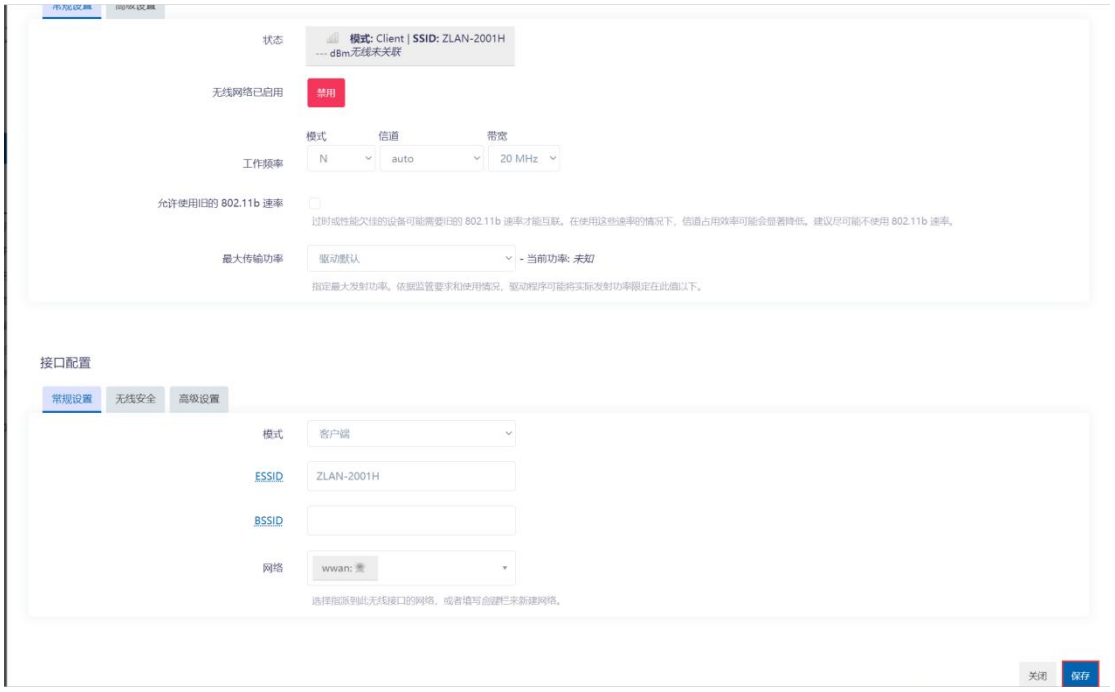

Figure 13 interface configuration

Click Save and enter the page as shown in the following figure. You can see an additional mode in the wireless overview: Client wireless. The web page indicates that the interface has multiple unapplied changes. Click Save and apply them to take effect.

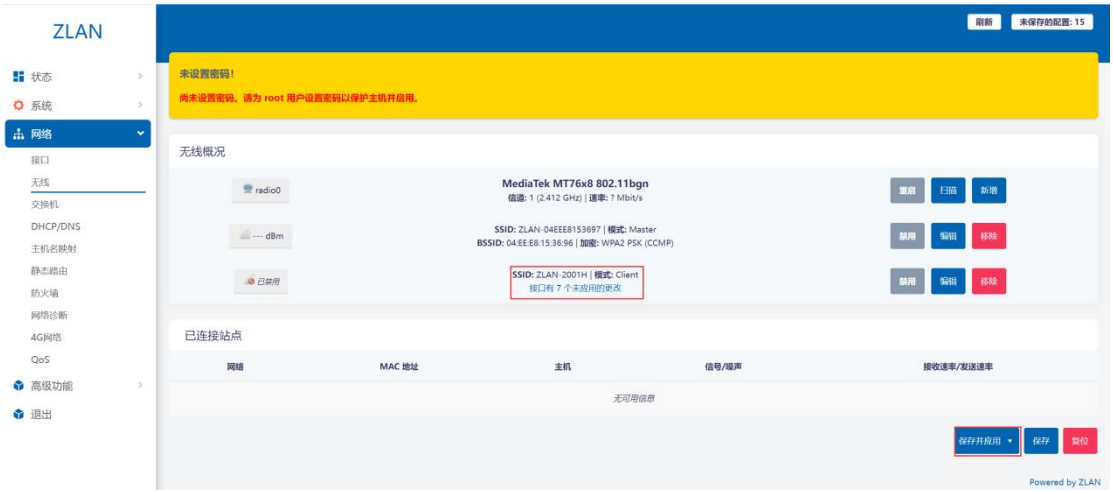

Figure 14 save button

Step 4: Click on the left menu bar: Network -- > Interface, then we can see the newly added interface.

Figure 15 interface page

Step 5: Click on the left menu bar: Network -- >4G Network -- >4g Settings: Set the WAN port mode to wired_mode: (if it is already there is no need to perform this step).

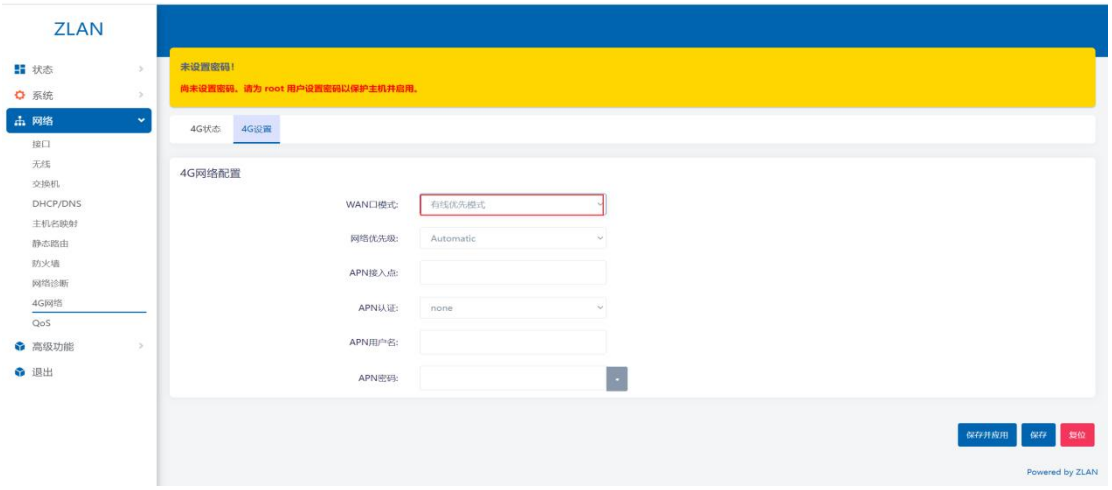

Figure 16 Wired mode

Step 6: Click the right menu bar: System -- > Restart, click the restart button to restart the router:

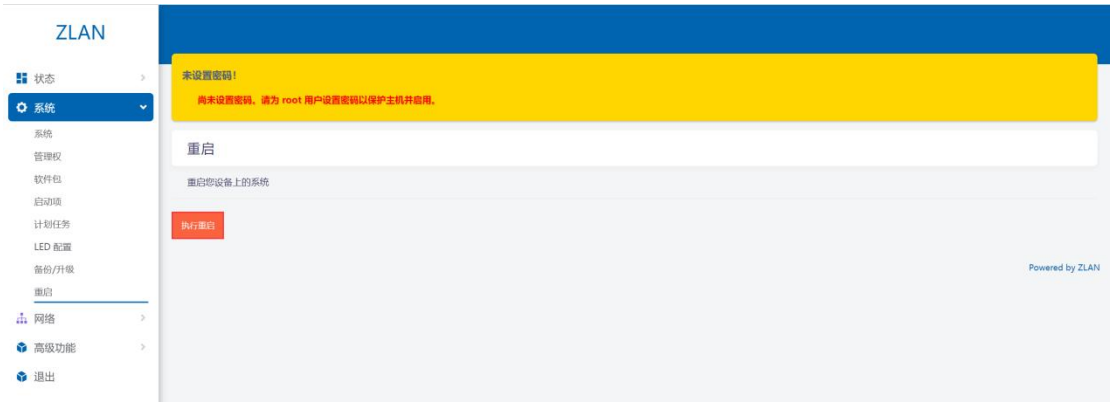

Figure 17 Re-start equipment

After the restart is complete, the WiFi trunk is set, and the router connects to the external network through the upper-layer WiFi. Connect your device to the router via cable or WiFi (this WiFi refers to the WiFi emitted by the 9809M, named zlan+id, default password 8 6).

2.2.2. WIFI bridge connection mode

If the LAN port of the 9809M and the upper-layer network are in the same network segment, the WIFI must be set to bridge mode.

Step 1: Go to the web page, click the menu bar on the left: Advanced Function -> Trunk, trunk mode Select trunk bridge, upper-level WIFI name Select the name of the AP to be brided, upper-level WIFI password Enter the AP password, select the corresponding encryption mode, and set the IP address of the device to an IP address in a different network segment from that of the upper-level route:

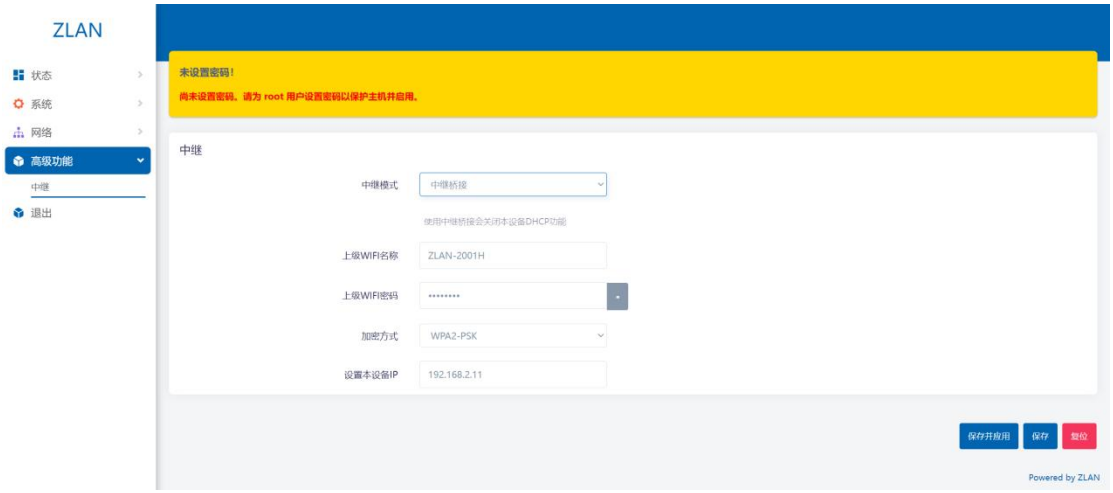

Figure 18 Advanced function

Step 2: Fill it out as required, click "Save and apply" in the lower

right corner, and you can finish the application

After the relay is successful, menu bar: Network -> Wireless:

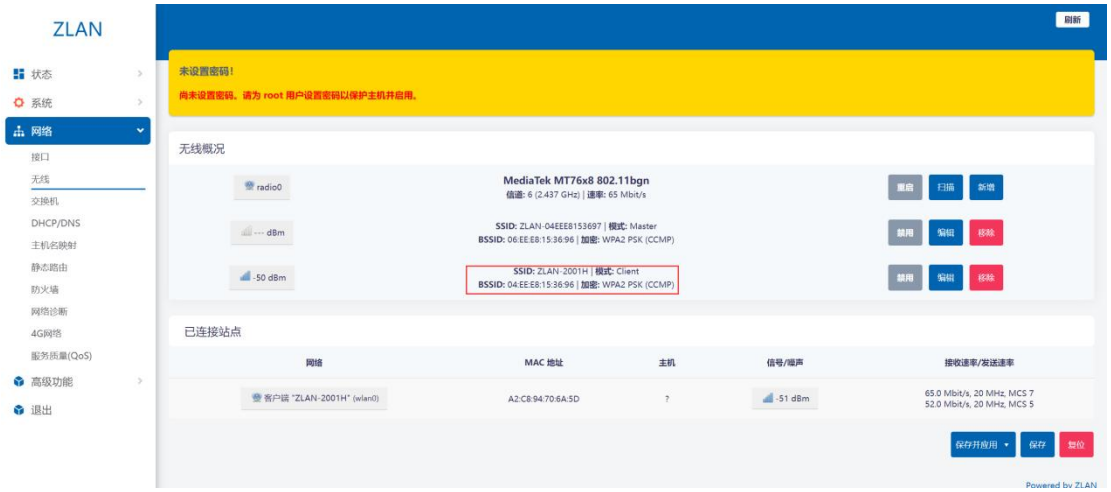

Figure 19 Relay wireless Overview

The upper-level WiFi is displayed here. If the encryption mode is also displayed, the connection to the upper-level WiFi is successful

Then click on the menu bar: Network -> Interface:

Check whether the relay interface has an IP address. If an ip address exists, the relay is successful.

Figure 20relay interface

After the configuration is complete, wait 10 seconds. In this case, the router can bridge to the upper-layer AP over WIFI, and the network device can connect to the LAN port through a network cable to obtain the network segment assigned by the upper-layer AP.

Figure 21DHCP Obtain parameter

2.2.3. Wired mode

In wired mode, the router connects to the Internet through the WAN port.

Step 1: Connect the network cable to the WAN port on the router:

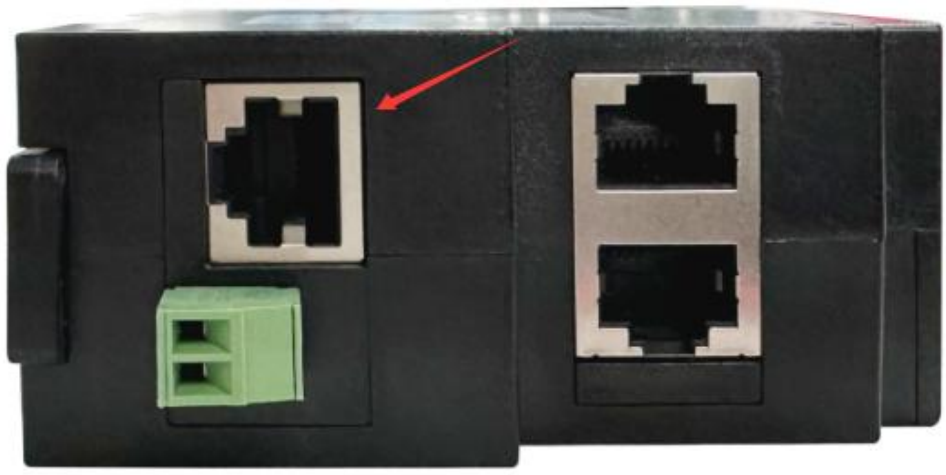

Figure 22 WAN interface

Step 2: Click the left menu bar: Network -->4G Network -->4g Settings: Set the WAN port mode to wired_mode (if it is already there is no need to perform this step) and click Save and set in the lower right corner.

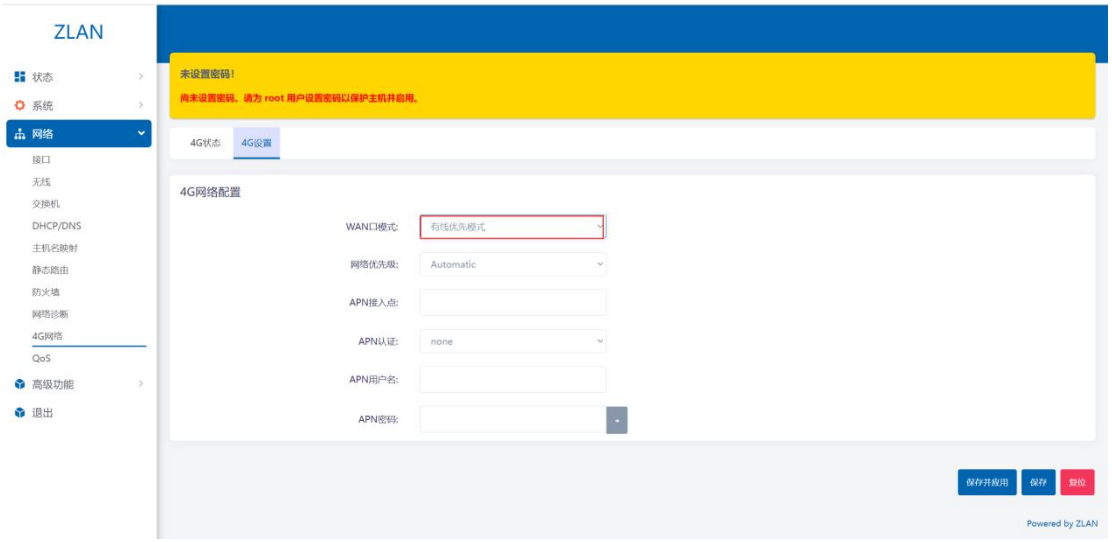

Figure 23 wired priority mode

Wait 10 seconds after the setting is complete, that is, the configuration is complete. At this time, the router can access the external network through the WAN port network cable, and your device can be connected to the Internet after connecting to the router through the cable or WiFi.

2.2.4. 4G mode

In 4G mode, the router accesses the external network by inserting a 4G SIM card.

Step 1: Insert the SIM card and connect the 4g antenna.

Step 2: Click on the left menu bar: Network -- >4G Network -- >4g Settings: Set WAN port mode to 4g_mode (no need to perform this step if it is already there) and click Save and set in the lower right corner.

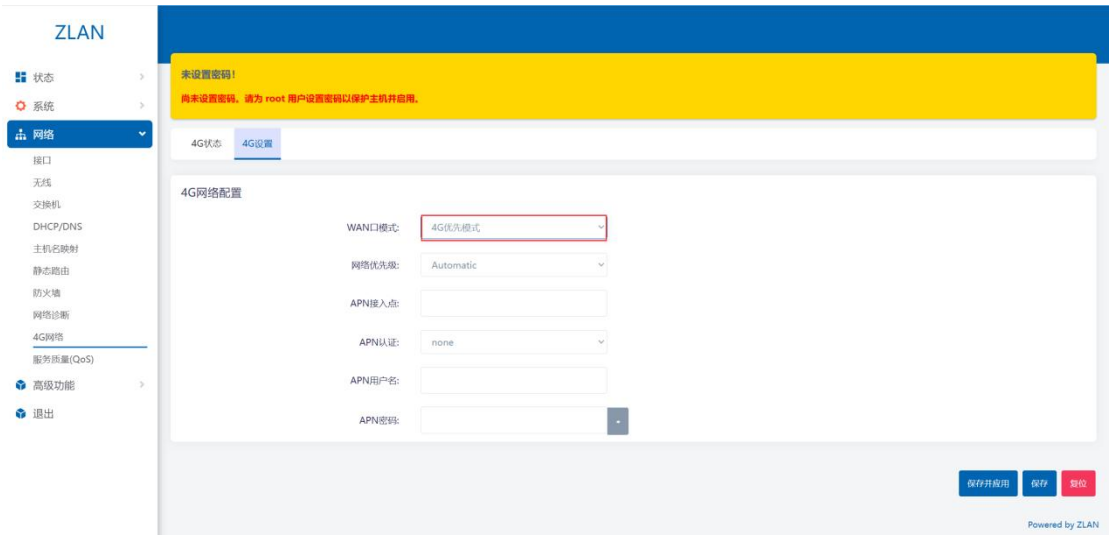

Figure 244G priority mode

Wait for the blue light of the router to blink, and then wait for one minute to complete the setting (if you cannot connect to the Internet, wait one minute and see again, or try restarting the router). After completion, the router can access the external network through 4g, and your device can access the Internet through WiFi or wired access to the router.

3. Device management

3.1. Set the router login password

Click on the left sidebar: System -- > Management Rights -- > Router Password, enter the password you want to set, then click Save, you can change the router password. The default router does not have a password. You are advised to set your own router password.

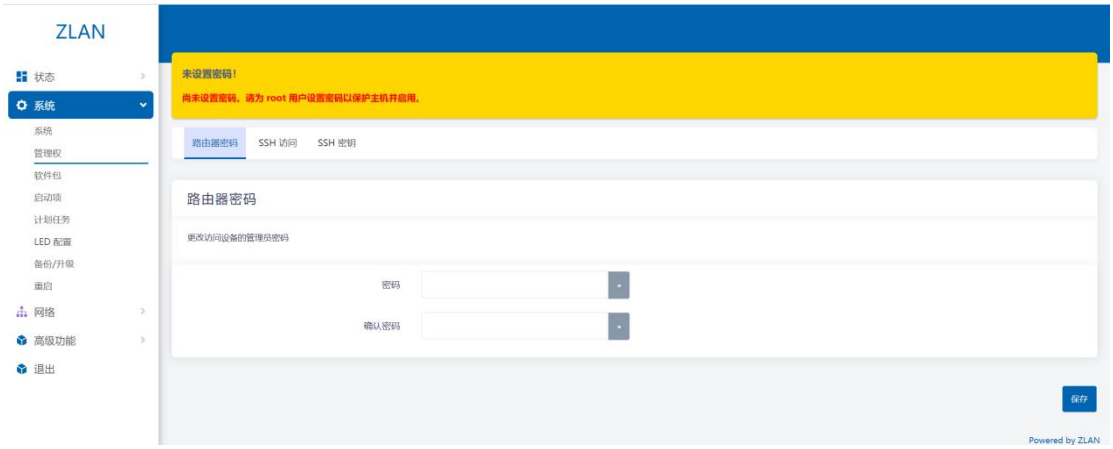

Figure 25revise login in password

3.2. Set the WiFi parameters of the device

On the left menu bar, click Network -- > Wireless, select the WiFi you want to edit, and click the edit button:

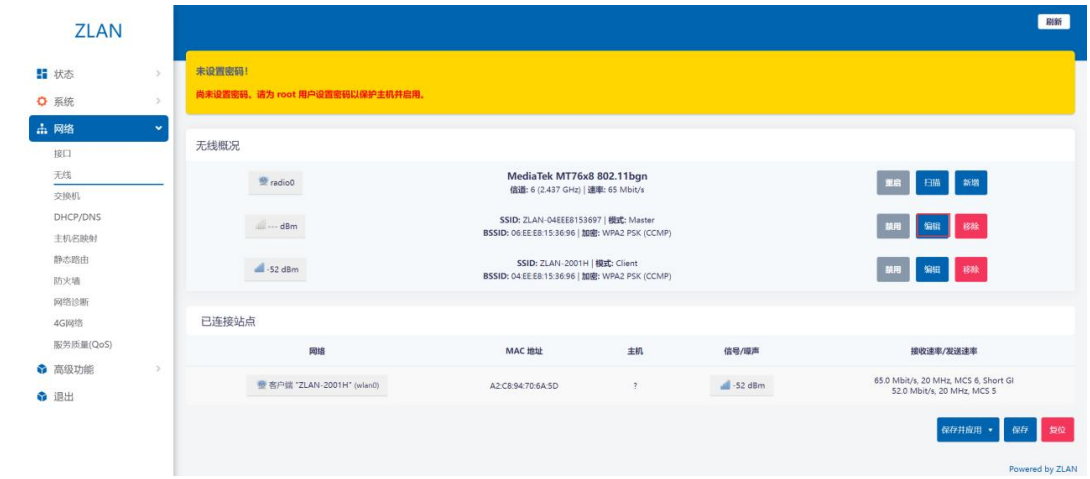

Figure 26wifi parameter

In the open page, ESSID is the name of WiFi, you can modify the name of WiFi here:

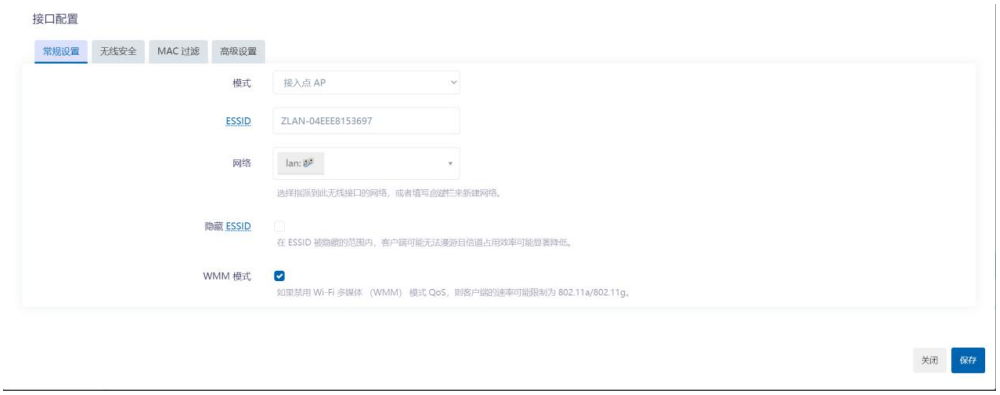

Figure 27revise wifi name

Click the Wireless security button to modify the WiFi password and encryption method here:

Figure 28Change the encryption mode and password

After setting, click the lower right corner to save.

3.3. Router IP revise

Open the left menu bar: Network -- > Interface: Click the Edit button under LAN.

Figure 29compile LAN parameter

You can modify the IP and other attributes of the router itself, and click the lower right corner to save.

Figure 30save LAN parameter

Then click the lower right corner to save and apply: (If it fails, you can try to force the application, it is recommended to use the forced application).

Figure 31keep application

Wait 30 seconds and enter the IP address to access the router configuration page.

3.4. Router Firmware upgrade/refresh

By brushing the router firmware, you can get the latest features and more stable performance of the 9809M router. Open the left menu bar: System -- > Backup/Upgrade:

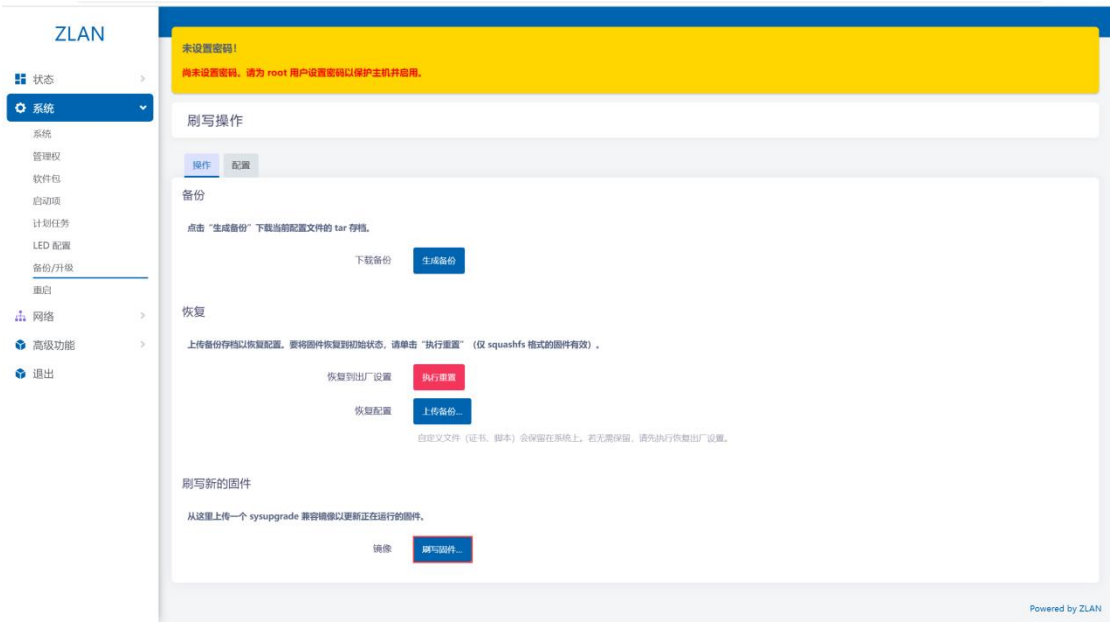

Figure 32Backup/upgrade

Click the Write Firmware button, and in the page that opens, click Browse to select the firmware in your computer:

Figure 33 Browse firmware

After you click Upload, you will be prompted to wait for firmware writing. After about 5 minutes, you need to refresh the web interface again to complete the firmware writing operation

Figure 34 upload firmware

3.5. factory data reset.

Click System > Backup/Upgrade on the left menu bar and click the Reset button:

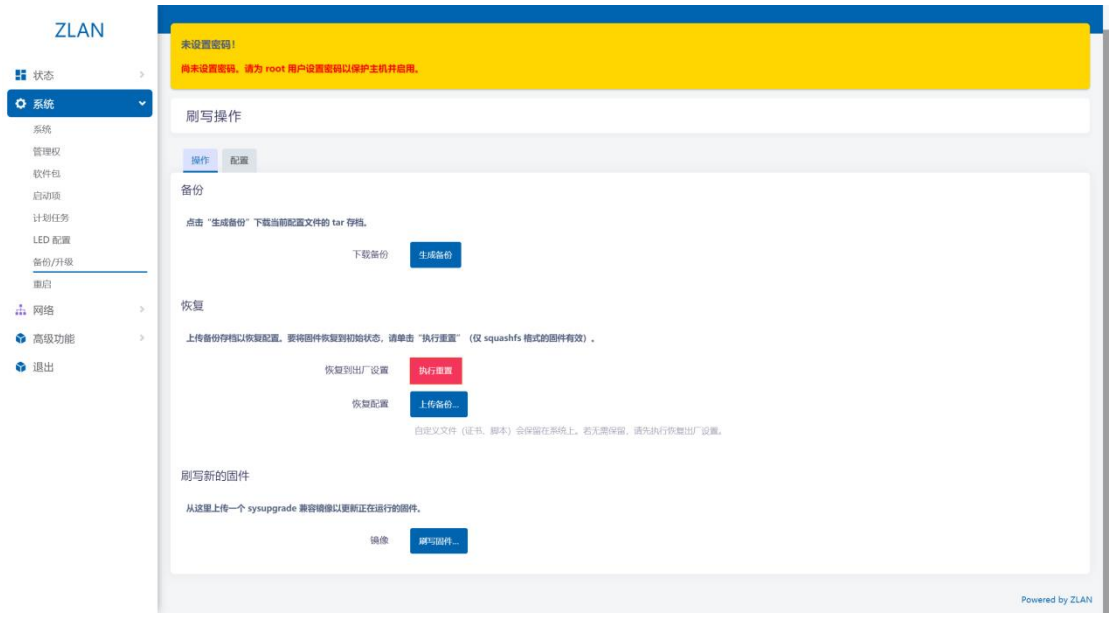

Figure 35factory data reset

After the reset is complete, it is restored to the factory Settings.

Restoring factory Settings will lose the Settings you have made and is generally not recommended.

4. After sales service and support

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