DIN-rail 4G router

ZLAN9809M

4G/WIFI/RJ45

ZL DUI 20221222.1.0

Version Information

The following changes have been made to this document:

Modification Record

date	version number	Document Number	Modifications
2022-12-22	Rev.1	ZLDUI 20221222.1.0	release version
2023-12-14	Rev.2	ZLDUI 20221222.2.0	Add WIFI bridge mode Mode

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1.Overview

ZLAN9809M industrial-grade 4G router is a high-performance communication product developed by ZLAN for 4G network needs. It integrates multiple technologies such as routing, switching, 4G, WLAN and encryption, and can meet the diverse needs of industry users in data transmission. This device can realize multiple functions such as RJ45 to RJ45/WIFI, WIFI to RJ45/WIFI and 4G to RJ45/WIFI, providing users with flexible network connection methods. 9809M also supports WEB configuration, making network management more convenient and efficient.

In terms of hardware, ZLAN9809M is equipped with a high-performance 32-bit processor, which can quickly process various network protocols and large amounts of data. In addition, it is equipped with multiple interfaces, including 4 10/100M LAN ports, 1 WAN port, WIFI interface and 4G interface, making it easy to connect to various terminal devices.

picture19809MAppearance

ZLAN9809M can be applied to:

In an environment where IP address resources are limited, establish an internal subnet;

Convert the network-port PLC to WIFI to access the existing network and achieve seamless connection; Using its WIFI relay/bridging function, the WIFI communication range can be further expanded;

When the WLAN port is disconnected, ZLAN9809M can quickly switch to the 4G network;

1.1 Appearance

picture2 ZLAN9809MAppearance

1.2 Product Interface

1.9809M has 4 LAN ports, 2 on the left and 2 on the right, and a WAN port next to the power supply.

When in use, just plug the network cable into the corresponding network port as needed.

2. Antenna installation: The antenna interface of this device adopts 50Ω/SMA (female connector).

Use an antenna suitable for the 4G working band. The WIFI antenna can use a rubber stick antenna or a suction cup 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 full network 4G network, You need to purchase a SIM card from any of the carriers. When installing the SIM card, make sure the device is not powered on. This device uses an embedded SIM card holder. When using it, push the SIM card inward with the chip facing downward. To remove it, push it inward again and the SIM card will pop out automatically.

1.3 Panel Light Introduction

The panel lights of 9809M are shown in the figure:

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

picture3Panel Light

The specific meanings of the indicator lights are shown in the figure below:

name	color	illustrate
WAN/LAN1	green	WAN port indicator light, on means the WAN port is connected
WIFI	green	WiFi indicator light, on/flashing means WiFi is working properly
POWER	red	Power indicator light, the device will light up when powered on
LAN	green	The four LAN port indicator lights correspond to the four LAN ports. If they are on, it means the corresponding LAN port is on. connected
SYS Light	green	4G power-on indicator light, when on, it means the 4G module is powered on
4G Light	blue	The light is always on when dialing is in progress, and flashing when dialing is successful.
reset button	Button	After the device is started: press for 1 second and release, the device will restart after 5 seconds; press Release it within 5 seconds, the device will restart after 5 seconds and reset to factory settings

surface1Indicator light parameters

2.Technical Parameters

Main parameters of the product		
parameter name	parameter	Remark
Support Mode	4G CAT1support3Modes: B1/B3/B5/B8@FDD LTE B34/B38/B39/B40/B41@TDD-LTE B3/B8@GSM Including Unicom4G,2G,move4G,2Gand telecommunications4Gnetwork.	
Transmission rate	LTE:Max 10Mbps(Downward)/Max 5 Mbps(Up) GPRS:85.6Kbps(Downward)/Max85.6Kbps(Up)	

SIMCard	Voltage:3V,1.8V; Size: Medium Card	
Antenna interface	50Ω/SMAGlue stick antenna or suction cup antenna optional	
Power interface	Power supply input via terminal block.	
Input voltage	DC9V~24V	
interface	LANmouth*4,WANmouth*1,SIM*1,4Gantenna*1,Wi-Fiantenna * 1	
basic skills	Network port to network port/WIFI,WIFITransfer network port/WIFI,4GTransfer network port/WIFI	
Advanced Features	Firewall, static routing, log service, channel analysis,DHCP/DNS, Network diagnostics, hostname mapping	
Product Size	37.6(L)x 83.6(W)x 89.2(H)mm	
Configuration	WEBWeb page configuration (default192.168.8.1)	
Operating temperature	- 40Degree~85Spend	
Storage temperature	- 40Degree~120Spend	
Humidity range	0~95%Non-condensing	

3.Instructions for use

(This description takes the win10 system as an example to demonstrate the interconnection between the device and the computer)

3.1.connect9809Mrouter

If you do not have an Ethernet cable and want to connect your device via WIFI, you need to do the following steps first: Open WLAN in the lower right corner of your computer:

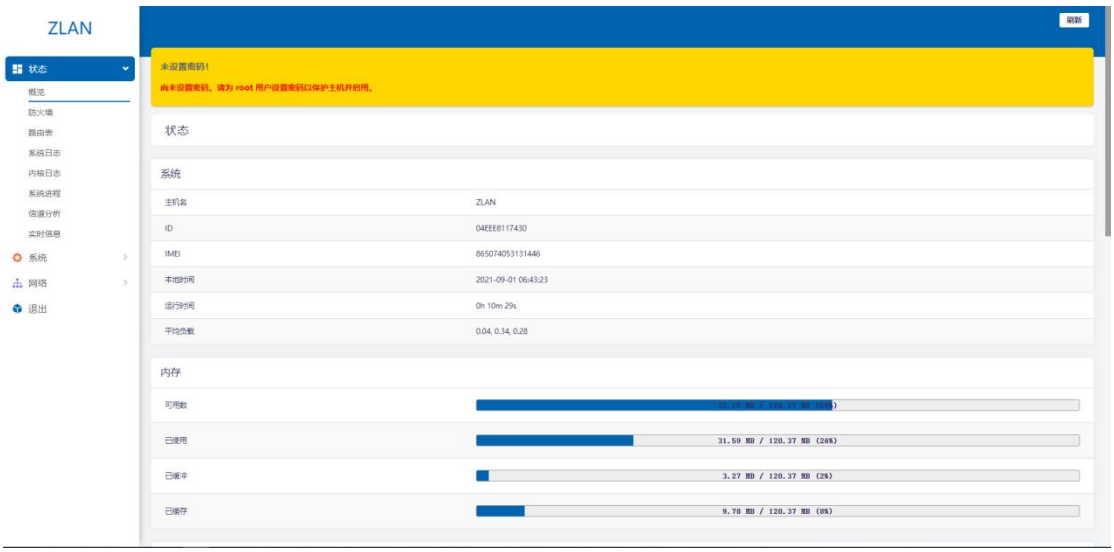
picture4 apname

Connect to the WiFi ZLAN-XXXXXXXX, the default password is 66666666. If you have an Ethernet cable and plan to connect the device via a wired connection, directly connect the Ethernet cable to any LAN port, open your browser, enter 192.168.8.1 in the address bar, press Enter to confirm, and you can open the 9809M web page.

(To use a wired connection, the computer's Ethernet setting must be set to automatic (DHCP), or the IP must be manually set to the same network segment as the router)

picture5 webLogin Page

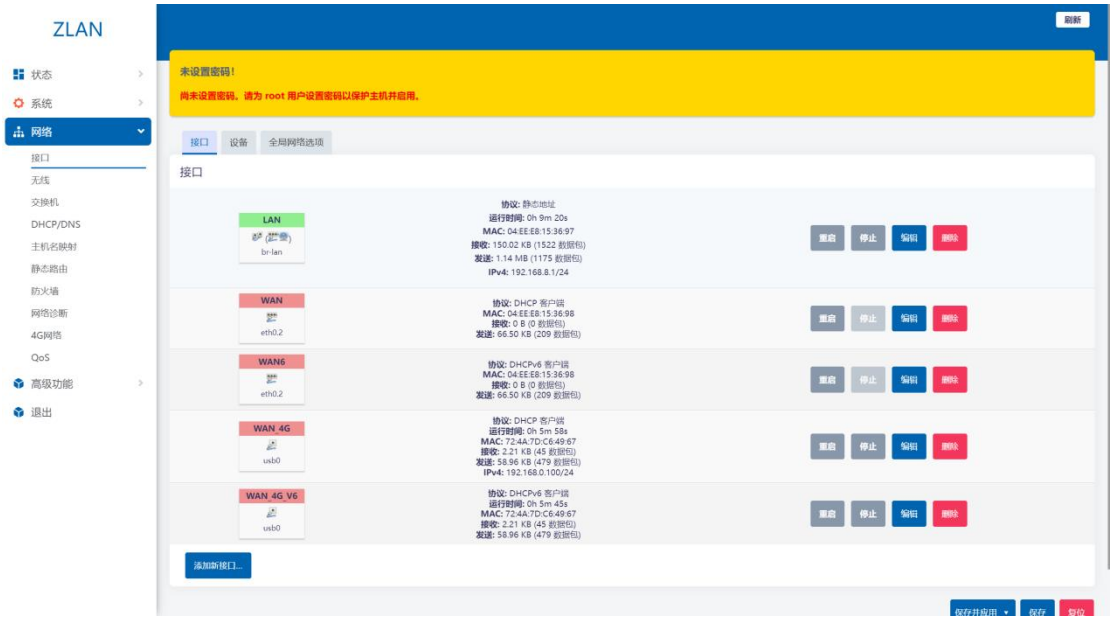
There is no password initially, just click to log in, and you will enter the configuration page after logging in:



picture6 webConfiguration Page

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

The router can receive data packets sent by devices in the local area network and forward them to the Internet or other networks.

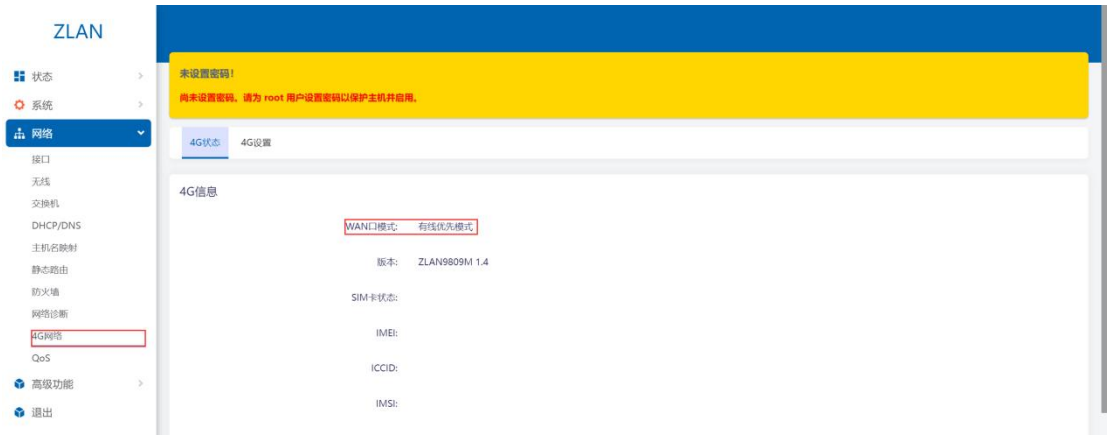


picture7Interface Page

3.2.Configuring Network Connections

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

The default WAN port mode is wired priority mode, that is, the router WAN port accesses the Internet through a network cable. You can view related parameters by clicking Network -> 4G Network.

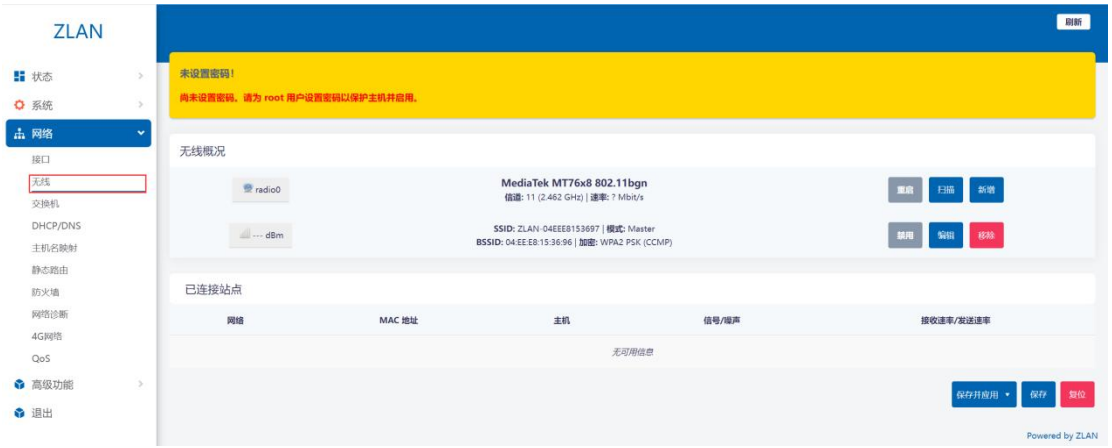


picture8 4Gstate

3.2.1. WIFIRelay Mode

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

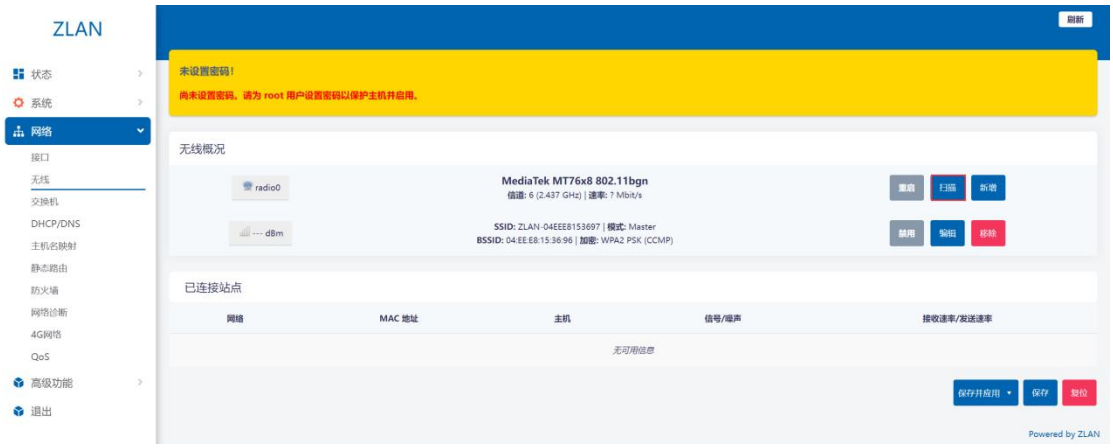
A 2.4G wireless network card.



picture9Wireless Overview

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

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



picture10Scan button

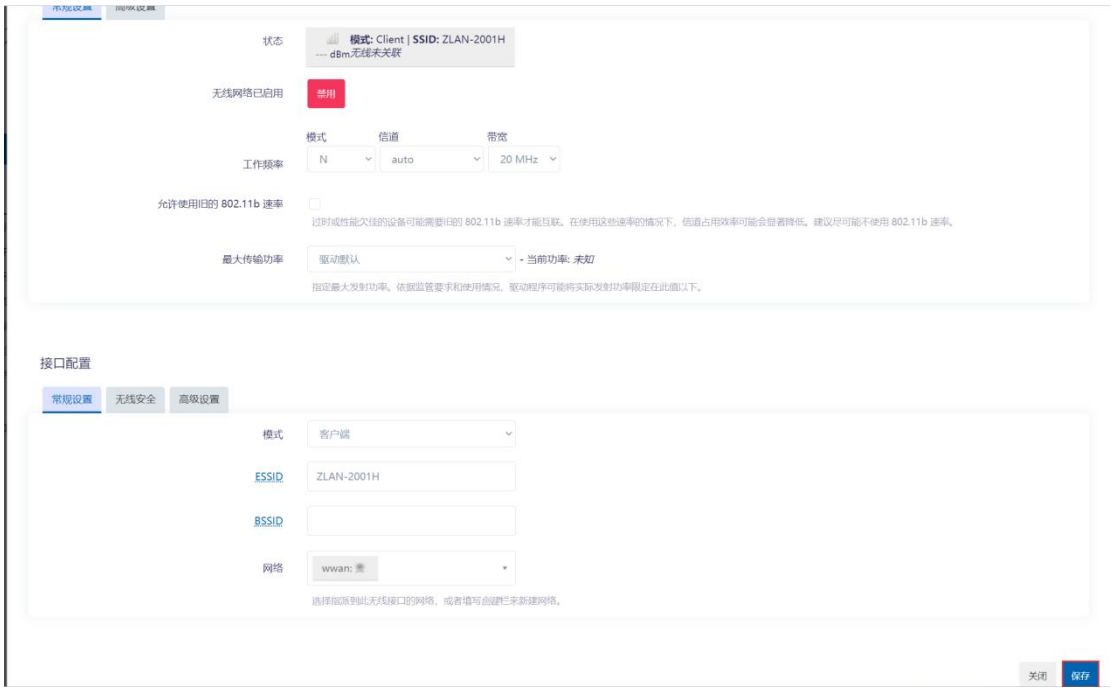
Step 2: On the page that opens, select the parent network you want to access and click Join Network.

picture11Join the network

Step 3: Enter your parent network password on the page that opens). The default new network interface name is wwan, you can modify it yourself, then click the Submit button in the lower right corner, and the second interface will pop up.

picture12Modify the network interface name

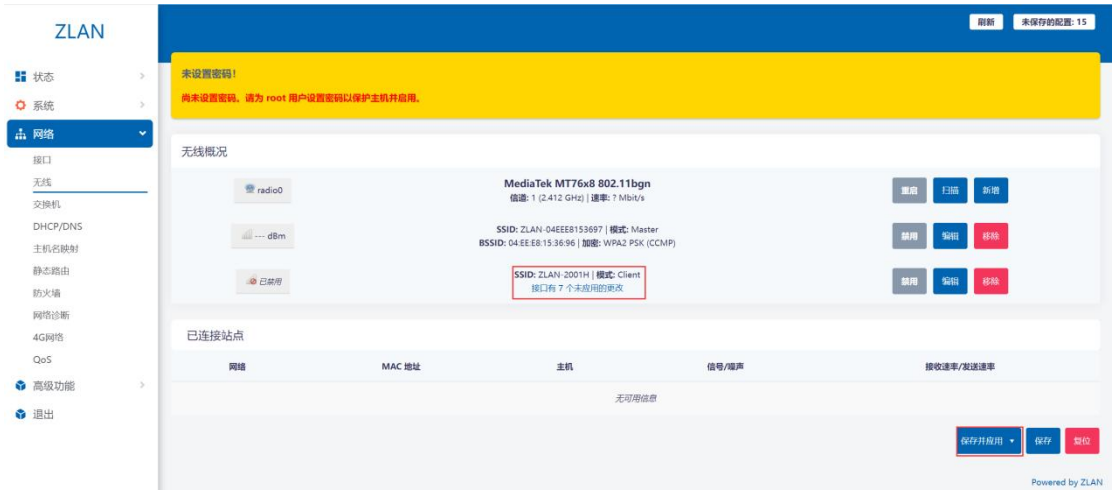
The second page has options such as operating frequency and transmission power. When the Wi-Fi version of the device to be connected is older and does not support 802.11/N, you can change the operating frequency to Legacy. Under normal circumstances, you do not need to set any parameters, just click Save.



picture13Interface Configuration

After clicking Save, you will enter the page shown below, where you can see an additional mode for the wireless profile:ClientWireless.

The web page prompts that there are multiple unapplied changes in the interface. Click Save and Apply to make them take effect.

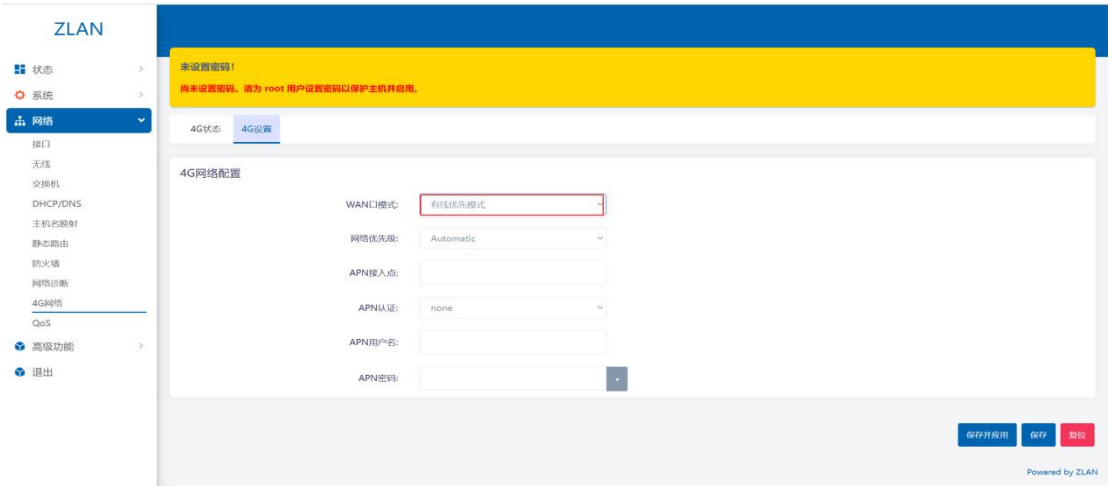


picture14Save Button

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

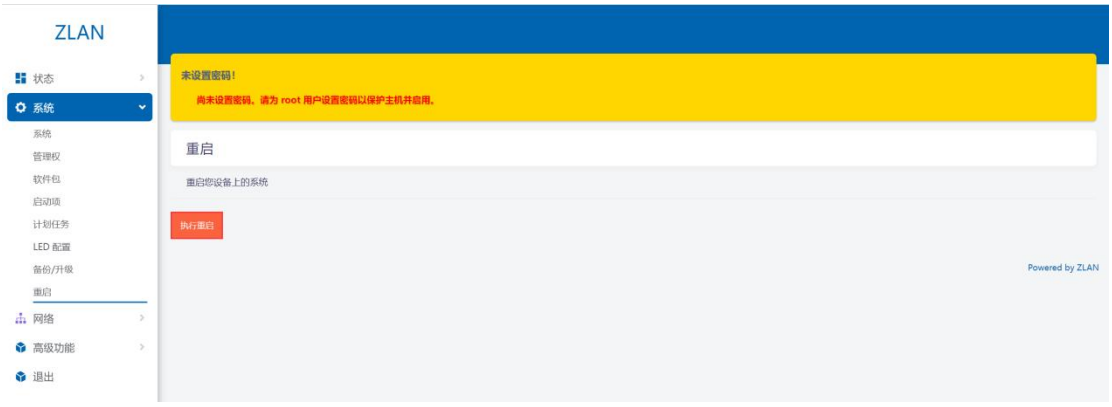
picture15Interface Page

Step 5: Click the left menu bar: Network -> 4G Network -> 4G Settings: Set the WAN port mode to wired_mode: (If it is already wired, you don’ t need to perform this step)



picture16Wired Mode

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



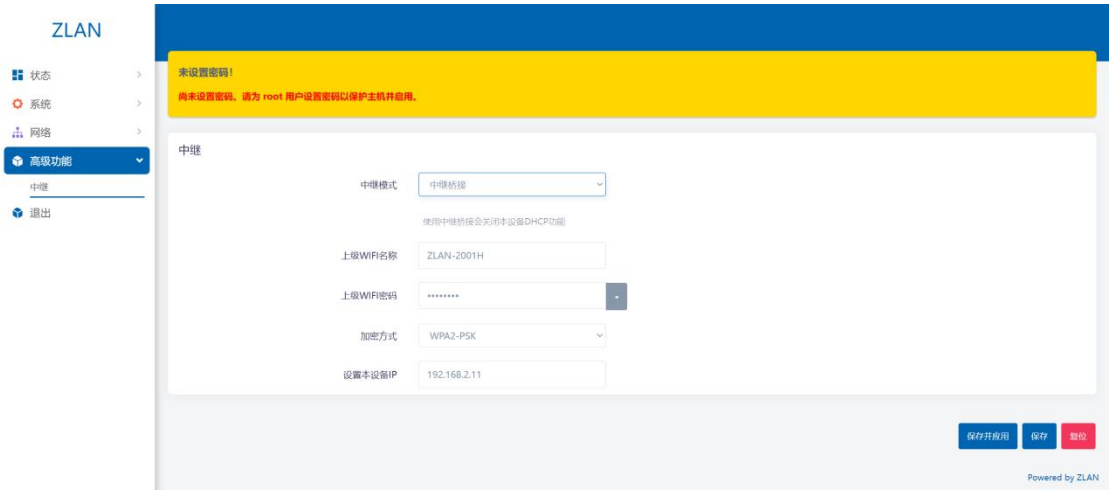
picture17Reboot the device

After the restart is complete, the WiFi relay is set up, and the router has access to the external network through the upper WiFi. Connect your device to the router via wired or WiFi (this WiFi refers to the WiFi sent by 9809M, named zlan+id, the default password is 8 sixes) to access the Internet.

3.2.2. WIFIBridge Mode

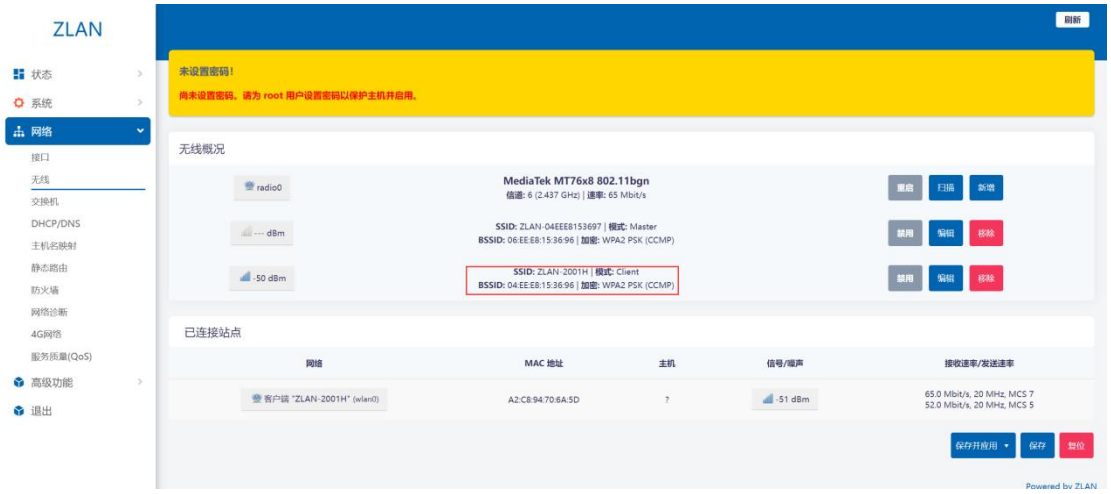
When the LAN port of 9809M needs to be in the same network segment as the parent network, the WIFI needs to be set to bridge mode.

Step 1: Enter the web page, click on the left menu bar: Advanced Functions -> Relay, select Relay Bridging for Relay Mode, select the name of the AP to be bridged for the Parent WIFI Name, fill in the AP password for the Parent WIFI Password, and select the corresponding encryption method. It is best to set the IP of this device to an IP in a different network segment from the parent router:



picture18Advanced Features

Step 2: After filling in the required information, click "Save and Apply" in the lower right corner. After the application is completed, the relay is successful. Menu bar: Network -> Wireless:



picture19Relay Wireless Overview

The parent WiFi will appear here. If the encryption method also appears, it means that the connection to the parent WiFi is successful.

Then click the menu bar: Network->Interface:

Check whether the relay interface has an IP. If there is an IP, it means the relay has been successful.

Figure 20 Relay interface

After the settings are completed, wait for 10 seconds to complete the configuration. At this time, the router can be bridged to the upper-level AP via WIFI, and the network device can obtain the network segment assigned by the upper-level AP by plugging the network cable into the LAN port.

Figure 21 DHCP obtains parameters

3.2.3. Wired Mode

Wired mode means that the router is connected to the external network through the WAN port.

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

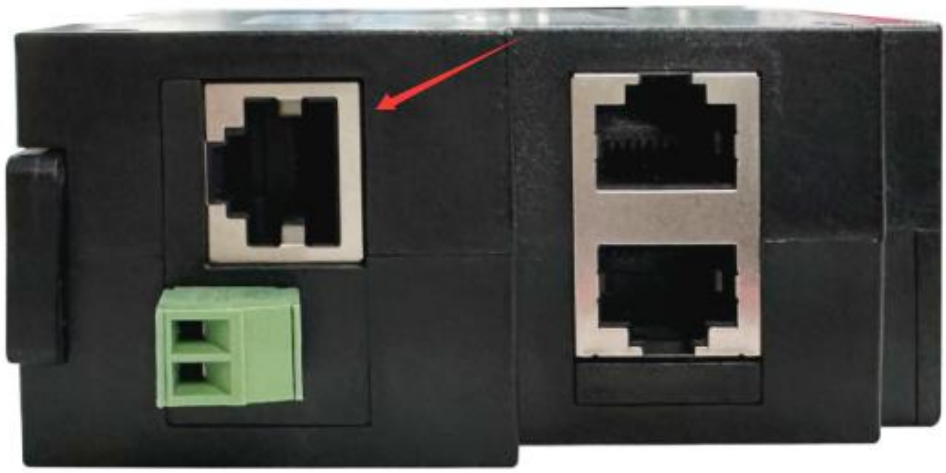


Figure 22 WAN port diagram

Step 2: Click the menu bar on the left: Network -> 4G Network -> 4G Settings: Set the WAN port mode to wired_mode: (If it is already wired, you don’ t need to perform this step) and click Save and Set in the lower right corner.

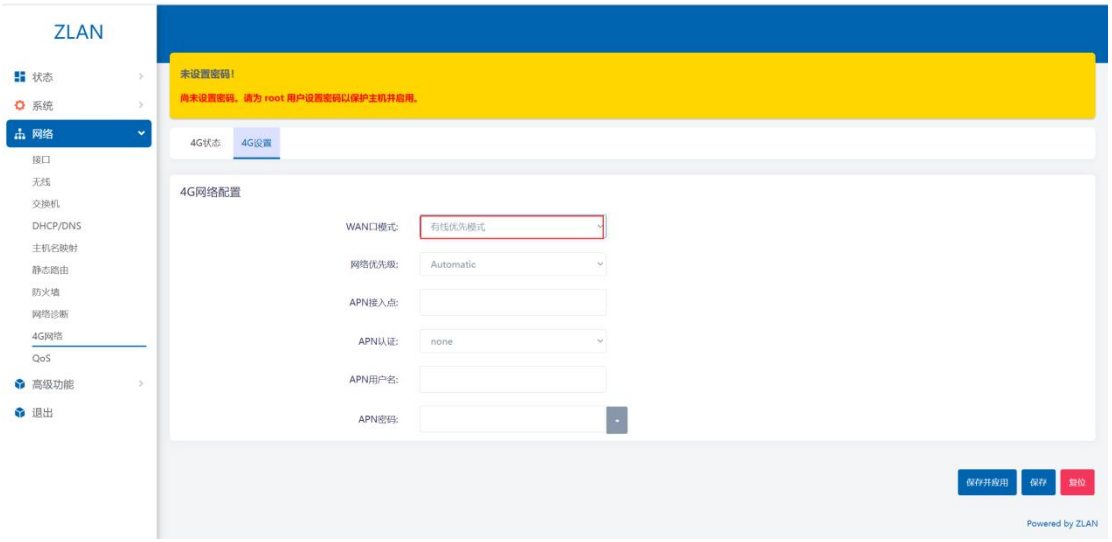


Figure 23 Wired priority mode

After the settings are completed, wait for 10 seconds to complete the configuration. At this time, the router can access the external network through the WAN port cable, and your device can access the Internet after connecting to the router via wired or WiFi.

3.2.4. 4Gmodel

4G mode means 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 the menu bar on the left: Network -> 4G Network -> 4g Settings: Set the WAN port mode to 4g_mode: (If it is already set, you don’ t need to perform this step) and click Save and Set in the lower right corner.

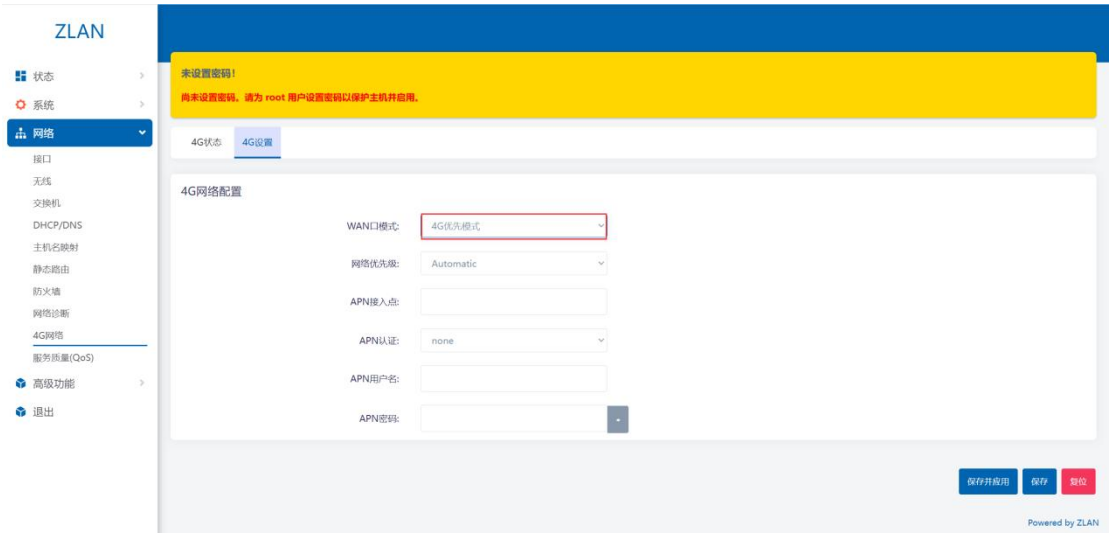


Figure 244G Priority Mode

Wait for the blue light on the router to flash, and then wait for one minute to complete the setup (if you cannot connect to the Internet, wait for one minute and try again. If it still does not work, try restarting the router). After completion, the router can access the external network via 4G, and your device can access the Internet after connecting to the router via WiFi or cable.

4.Device Management

4.1.Set the router login password

Click on the left sidebar: System -> Admin Rights -> Router Password, enter the password you want to set, and then click Save to change the router password. The default router has no password, so it is recommended to set the router password yourself.

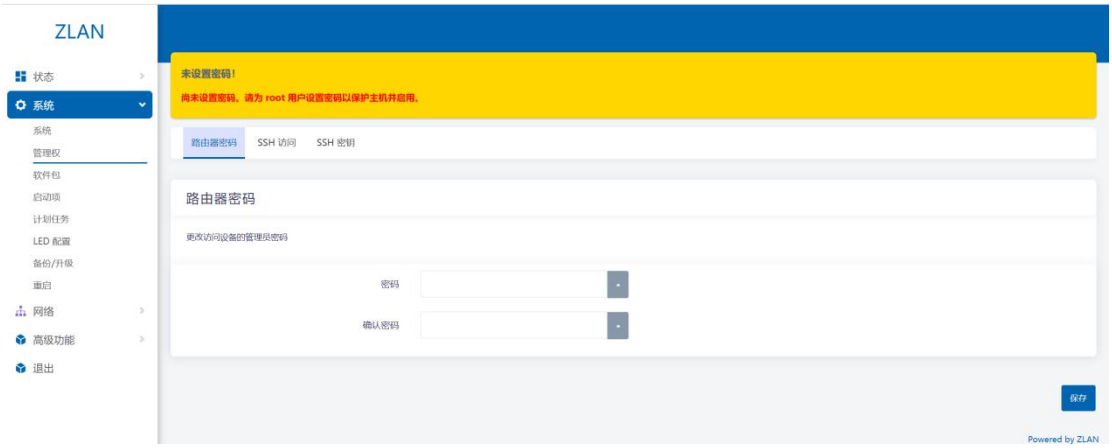


Figure 25 Change login password

4.2.Set up the deviceWiFiParameters

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

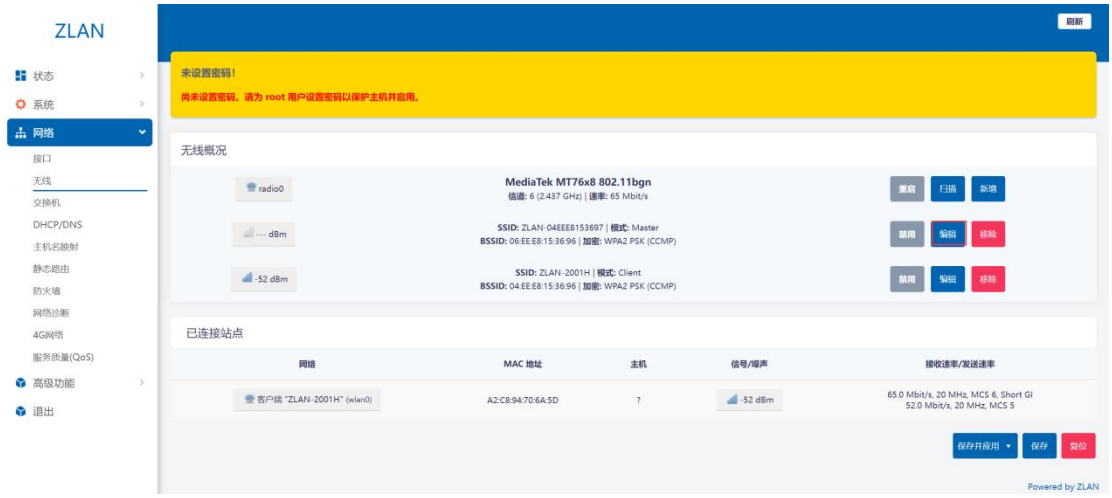


Figure 26 Wi-Fi parameters

In the page that opens, ESSID is the WiFi name, which can be modified here:

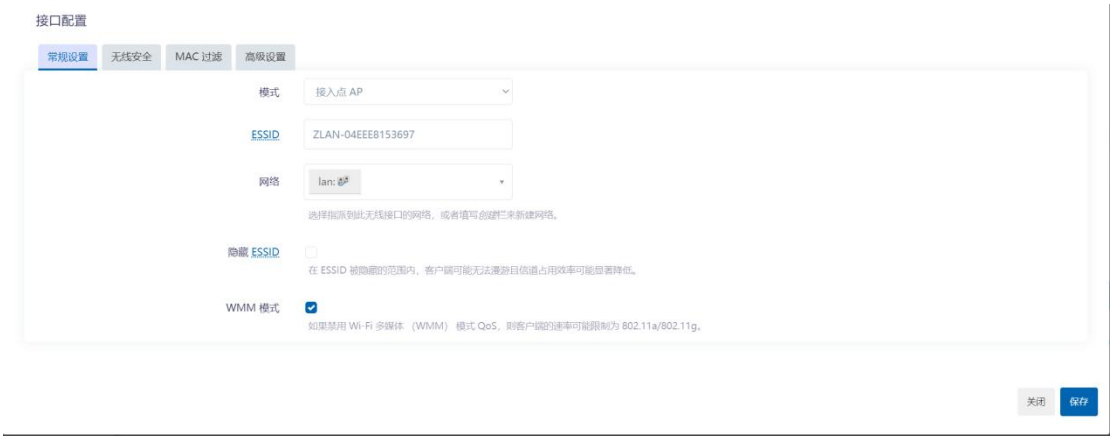


Figure 27 Modify the wifi name

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

Figure 28 Modify encryption method and password

After completing the settings, click Save in the lower right corner.

4.3.routerIPChange

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

Figure 29 Edit LAN parameters

You can modify the IP and other properties of the router itself. When completed, click Save in the lower right corner.

Figure 30 Save LAN parameters

Then click Save and Apply in the lower right corner: (If it fails, you can try to force the application, which is recommended).

Figure 31 Save application

After waiting for about 30 seconds, directly enter the IP address you just set to access the router configuration interface.

4.4.Router firmware upgrade/flashing

By flashing 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:

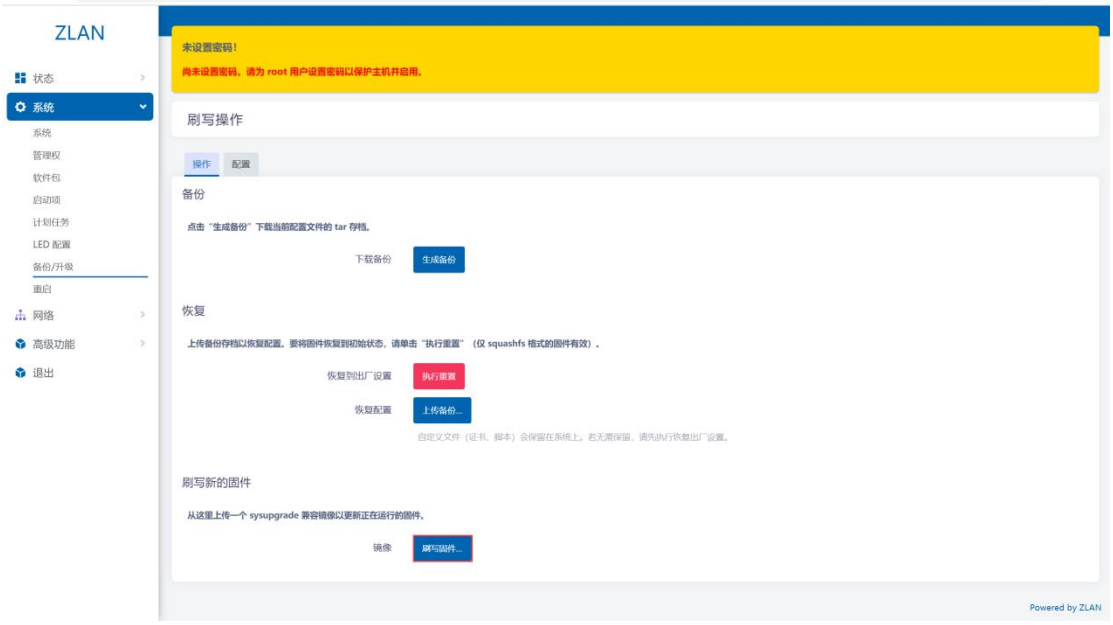


Figure 32 Backup/upgrade

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

Figure 33 Browse firmware

After that, click Upload, and you will be prompted to wait for the firmware to be flashed. The flashing will be completed after about 5 minutes. At this time, you need to refresh the web interface to complete the firmware flashing operation.

Figure 34 Upload firmware

4.5.reset

Click System -> Backup/Upgrade in the left menu bar, and click the Reset button:

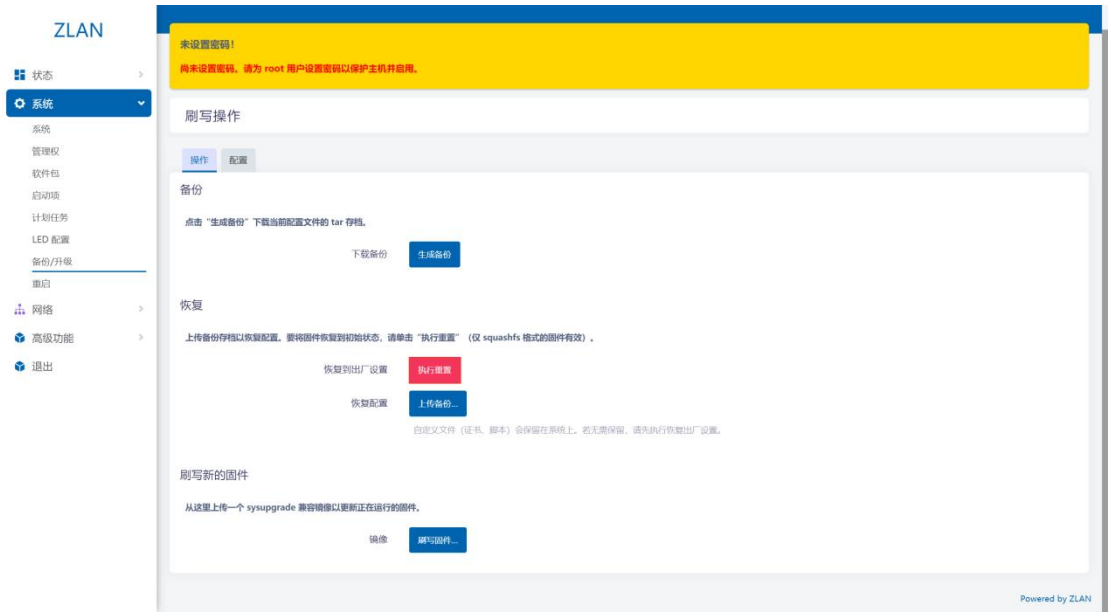


Figure 35 Factory Reset

After the reset is complete, the system returns to the factory settings.

Restoring the device to factory settings will lose all settings you have made and is generally not recommended.

5.After-sales service and support

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