

LipRouter

H7

User Manual

REV 1.1

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1. Hardware Specifications

1.1 Packing List

Name/Model	Package	Specification	Number of pieces	Actual number	Remarks
Device	Carton Packing	LipRouter H7	1	1	
Antenna	Carton Packing	Standard	4	4	
Power Cable	Carton Packing	Standard	1	1	
Power Adapter	Carton Packing	Standard	1	1	
Warranty Card Certificate	Carton Packing	Nagasoftware Customization	1	1	
Manual	Carton Packing	Nagasoftware Customization	1	1	

1.2 Device Parameters

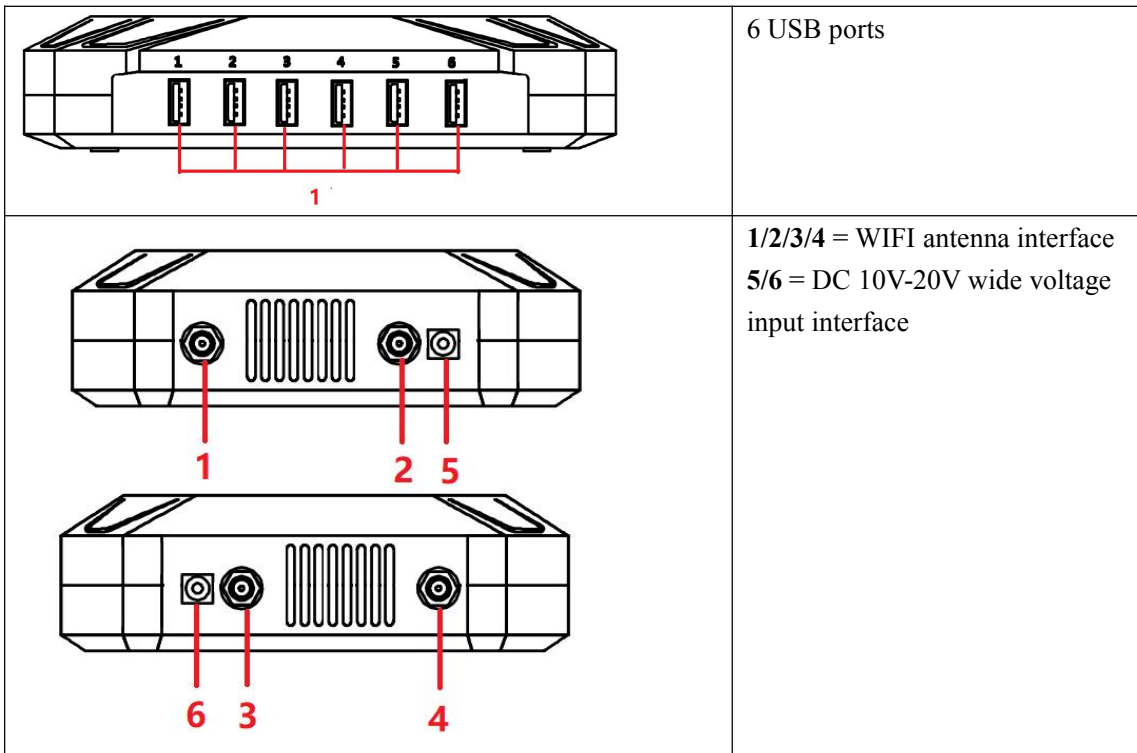
Features	8-channel bonding network (the bandwidth of 1-7 4G cards is aggregated with the bandwidth of 1-gigabit wired network) into WIFI and wired network exit bandwidth
Extensions	<ul style="list-style-type: none">● Kernel-level aggregation algorithm, super-efficient multi-channel bandwidth overlay, transparent to application layer● Efficient bandwidth detection and congestion control algorithms to fully mine each channel's bandwidth● Support port forwarding and provide public network IP● Dynamic data split and encrypted transmission to improve private data security● One-click to restore factory● Online firmware upgrade
Bandwidth Bonding	Up to 300Mbps
SIM Card Expansion	Supports up to 7 SIM cards (requires 4G USB Dongle)
Network Type	Support Telecom 4G, Unicom 4G, Mobile 4G
WAN Interface	1 Gigabit Ethernet interface
LAN Interface	4 Gigabit Ethernet interfaces
WIFI Frequency	Dual-band 2.4GHz + 5.8GHz, up to 1.3Gbps physical speed
Antenna	4x4 MIMO 802.11ac 2.4G/5.8G WIFI AP, 4 external antennas
Adapter	DC 19V/2.1A

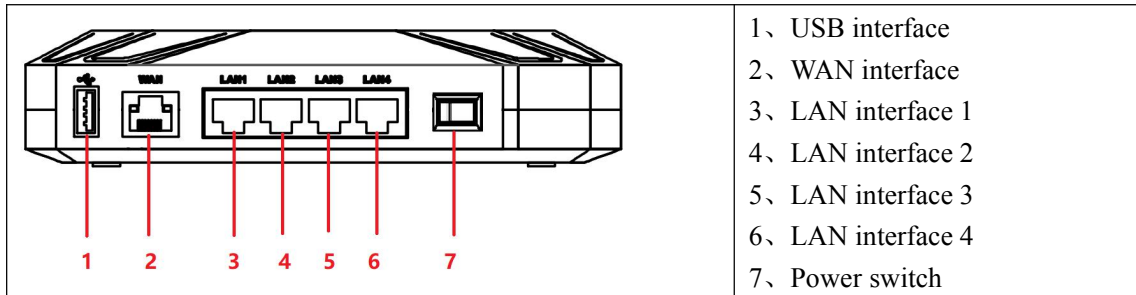
Supply Voltage	Dual DC redundant power supply, intelligent power supply switching, 10V-20V wide voltage input, support battery power supply
Screen	5-inch touch screen
Hot Shoe	Built-in bottom, 1/4-20
Size	187*126*43.5mm
Weight	0.6KG
Operating Temperature	0°C - 45°C
Anti-vibration	5.5~200Hz

1.3 Plan



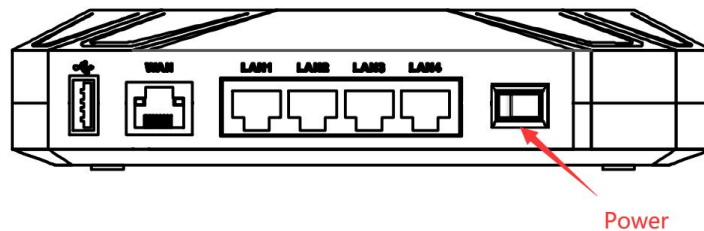
1.4 Interface Diagram



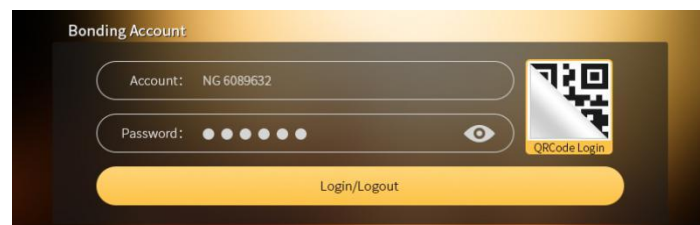


2. Installation and Commissioning

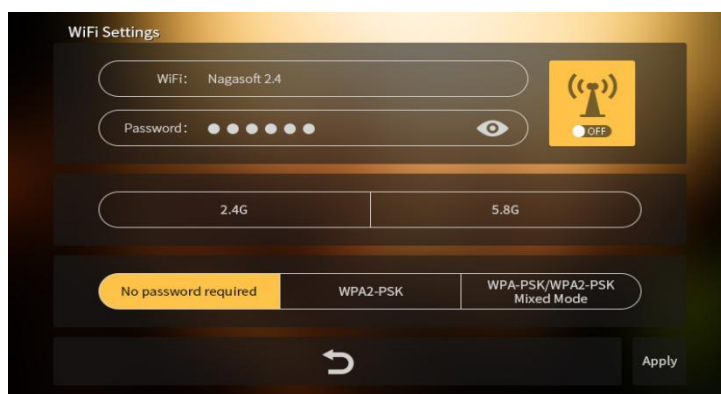
1. Remove the LipRouter from the packaging and place it on a stable desktop.
2. Take out the power adapter and connect it to the DC 19V interface on the left side of the LipRouter.
3. Take out 4 WIFI antennas and connect them to the 4 WIFI antenna interfaces of the LipRouter.
4. Connect the USB 4G network card to any USB interface of the LipRouter.
5. Use a network cable from the Internet to the WAN interface of the LipRouter.
6. Switch on the power switch of the LipRouter to start the device. As shown below:



7. After entering the main interface, please click the "Settings" icon button in the lower right corner to enter the setting interface.
8. In the setting interface, click the "Bonding account" button, enter the account / password or scan the QR code to log in, and then you can use the bonding function, as shown in the figure below:



9. In the setting interface, click the "WAN" button, you can set to automatically assign or manually assign an external network IP address.
10. In the setting interface, click the "WIFI" button, manually enter the network name and connection password of the WIFI hotspot, and select 2.4G / 5.8G and secure connection mode to share the WIFI hotspot, as shown in the figure below:




11. In the setting interface, click the "LAN" button to manually set the IP address of the local area network.
12. After the network setting is completed, the relevant internet access device can achieve the network data transmission function by connecting the WIFI hotspot or the wired interface to the LAN interface
13. After used, turn off the power of the LipRouter, remove the connected network cable, USB 4G network card, WIFI antenna, and put the main device and power adapter into the box.

3. Software Functions

3.1 Boot Interface

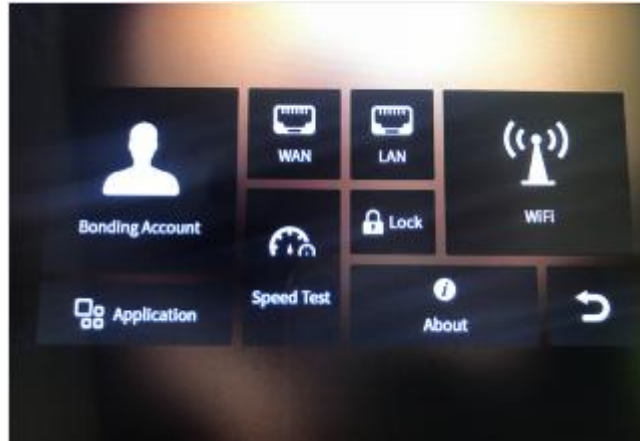
After the LipRouter is powered on, its 5-inch touch screen control interface is as follows:




1. Bonding network: Real-time monitoring of the network speed of the bonding network, with the function of real-time monitoring of aggregated traffic.
2. Wired network: Real-time monitoring of wired network speed.
3. 4G network: Real-time monitoring of multiple 4G network speeds and traffic, and support bonding 4G network speed and traffic monitoring.
4. Bonding status: Bonding account status and account flow information monitoring.
5. Setting: Click the button  in the lower right corner to enter the setting interface.

3.2 Setting Interface

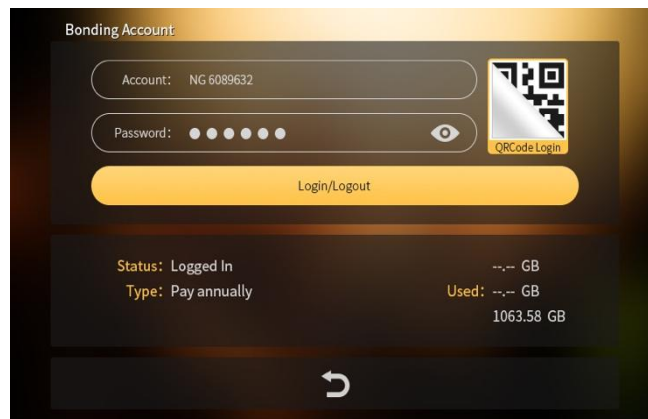
The setting interface provides WIFI settings, WAN settings, LAN settings, Bonding account settings, Speed test, and (device serial number, upgrade, etc.) interfaces. The interface is shown below:



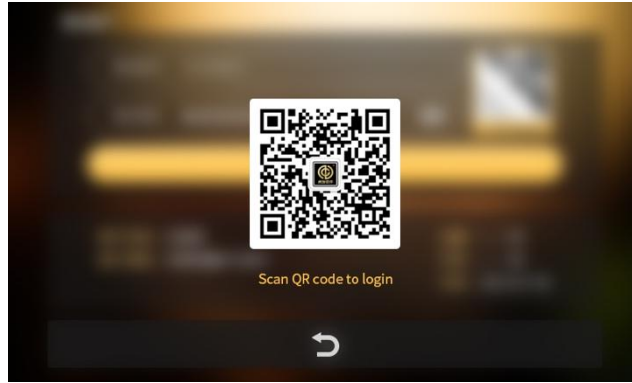
Click  button in the lower right corner to return to the main interface.


3.3 Account Management

Click the "Bonding Account" button in the settings interface to enter the bonding account management interface, as shown in the figure below:



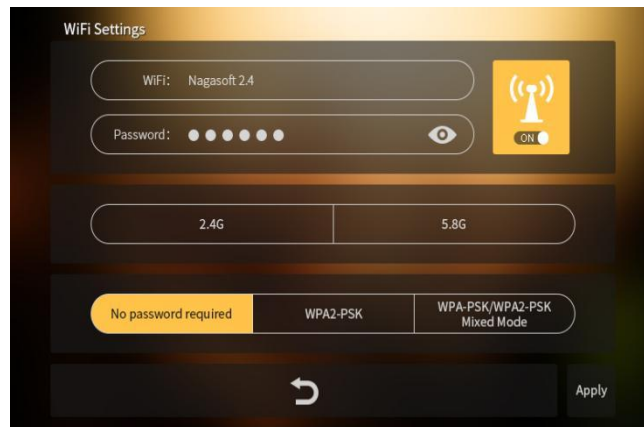
In the account management interface, you can log in to the bonding account by entering the account and password, or you can log in by scanning the QR code, as shown in the following figure:




After logging in, you can get the type of bonding account and traffic usage information. Click  button at the bottom to return to the main interface of settings.

3.4 WIFI Management

Click the "WIFI" button on the settings interface to enter the WIFI management interface, as shown in the figure below:

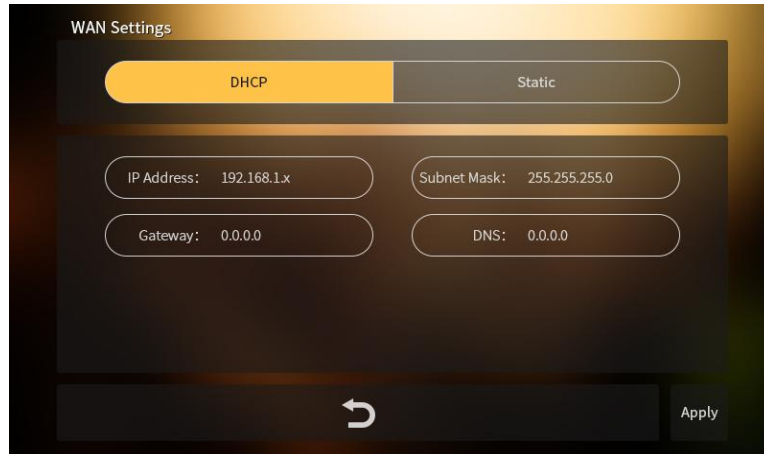



In the WIFI management interface, you can customize the WIFI network name and network password. You can operate WIFI to turn it on or off, select 2.4G / 5.8G mode, and select 3 secure connection modes.

After the setting is completed, click the "Apply" button in the lower right corner to make the setting take effect. Click  button at the bottom to return to the setting interface.

3.5 WAN Management

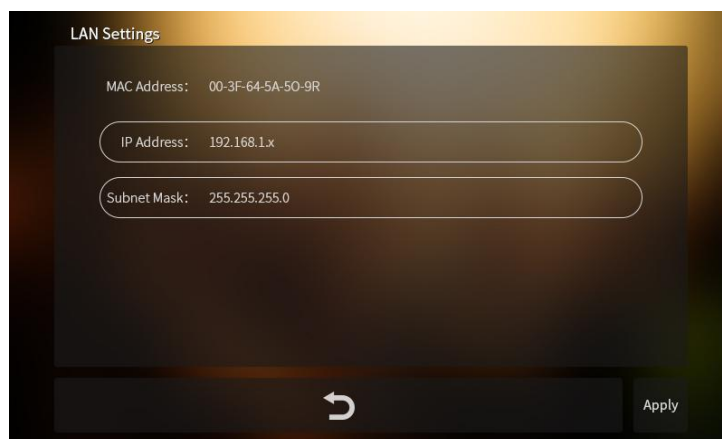
Click the "WAN" button on the setting interface to enter the WAN setting interface, as shown in the figure below:




In the WAN setting interface, you can choose to assign IP dynamically or set IP manually; after selecting the "Static IP" setting, please enter IP address, mask, gateway and DNS manually. Click "Apply" button for the setting to take effect. Click  button at the bottom to return to the setting interface.

3.6 LAN Management

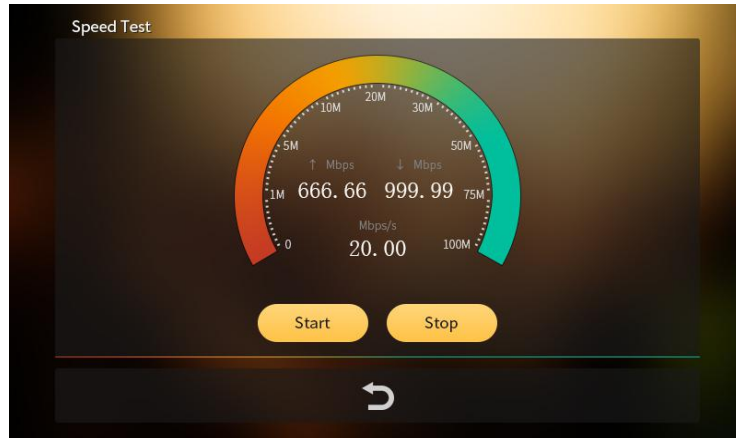
Click the "LAN" button on the setting interface to enter the LAN setting interface, as shown in the figure below:




Set the LAN connection settings in the LAN setting interface, and set the "IP address" and "Subnet mask" respectively. Click "Apply" button for the settings to take effect. Click  button at the bottom to return to the main interface of settings.

3.7 Network Speed Test

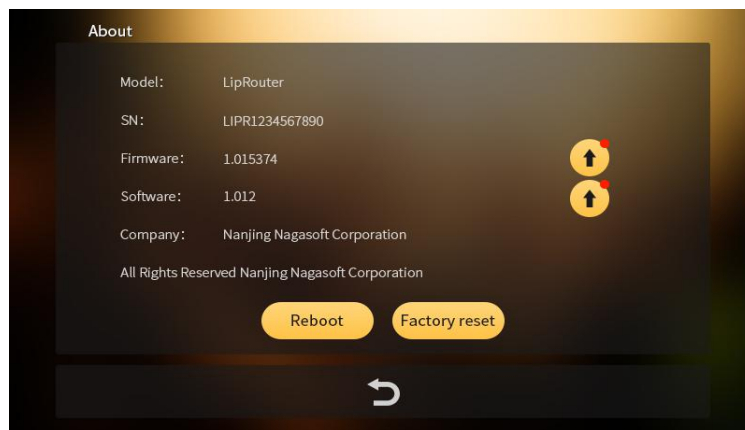
Click the "Speed Test" button on the setting interface to enter the network speed test interface, as shown in the figure below:



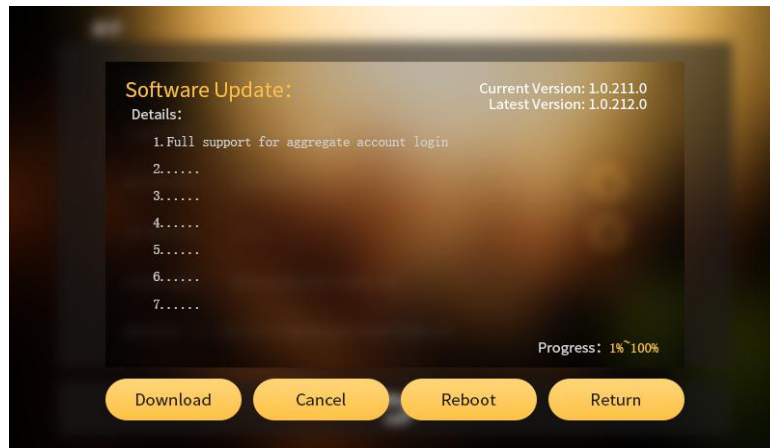
On the network speed test interface, the current bonding network can be tested in real time, and the speed test can be started and stopped separately. Click  button at the bottom to return to the setting interface.

3.8 Device Information

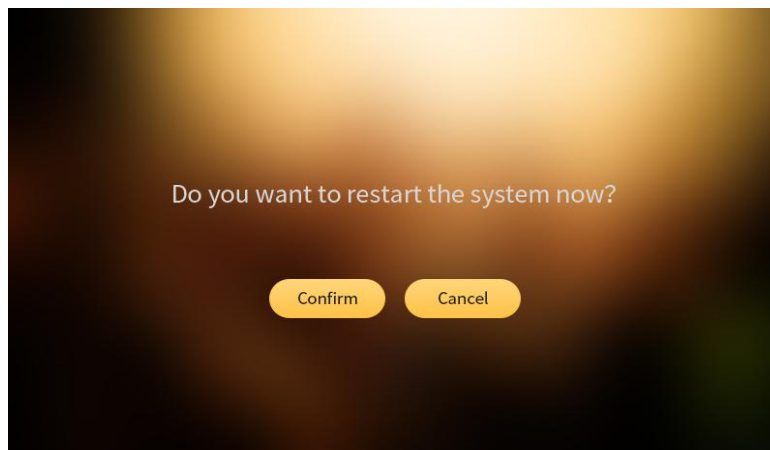
Click the "About" button on the setting interface to enter the device information interface, as shown in the figure below:



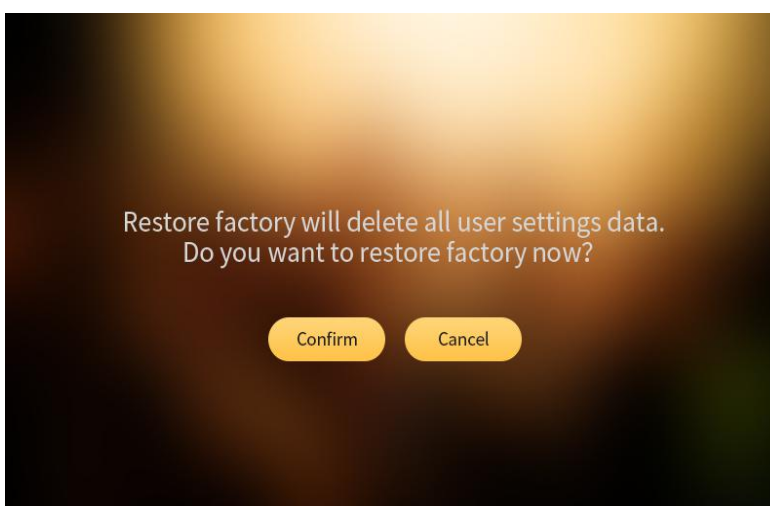
In the device information interface, you can view the device serial number and software / firmware version information. If there is a new version, there is an upgrade button on the interface to prompt firmware upgrade and software upgrade. Click the update button, and the interface will pop up as shown below:



Click "Reboot" to pop up the restart device prompt interface, and click "Confirm" to implement soft reset device, as shown in the figure below:

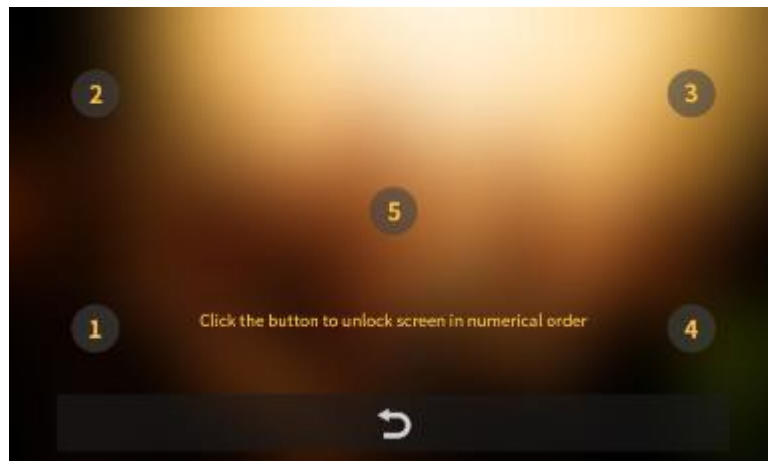


Click "Factory Reset" to pop up the restore factory prompt interface, click "Confirm" to restore the parameters to the original factory state, as shown in the figure below:



3.9 Screen Lock

Users can click the ‘Lock’ button to lock the screen for safety issue. The screen will be fully locked in case of careless touch. To unlock the screen, you need to click the unlock button to the below page, and click 1 to 5 in numerical order.



3.10 Application

Users can click the ‘Application’ button to choose whether to use the TCP or UDP protocol application. The details of the scenarios will be seen in the page. Click the apply button on the bottom right to confirm.



4.FAQs

Q: How to register a bonding account?

A:Go to <https://lipmallcdn.nagasoft.cn/> to register and purchase data package

Q: Can I access the Internet by plugging in a single network card?

A: If you don't log in bonding account, you can use a single card network access the Internet under normal circumstances.

Q: Can multi card networks be used after logging in to the bonding account?

A: Yes and you need to buy bonding data package, <https://lipmallcdn.nagasoft.cn/buy>

Q: Can the bonding account be used by multiple LipRouters at the same time?

A: Can, and will charge the data at the same time in total, but will not affect the network performance.

Q: Why the login time is too long?

A: When first time logging to the bonding account, the server will be assigned, which may take up to 1-2 minutes to get.

Q: The remaining data is not noticed during use and all used up. Will the network be disconnected if there is no traffic suddenly during use?

A: The network will not be disconnected, but the bonding function can no longer be used. Only single line or single SIM card network can be used.

Q: Why does the software display unrecognized status after inserting the USB dongle network card?

A: Check whether the SIM card is installed reversely.

Check if the SIM card have valid data

Check the USB dongle network status, whether the indicator light is in normal working state

Q: What do the main interface Prompt symbols mean?

A: Red X means no network connection. Yellow exclamation point means the network unstable, abnormal or the Ping test site is blocked. Key means when not logged in, it is the master card.

Q:Is it working to use same brand of Sim Cards?

A:The speed superposition of the same operator is limited, and it is recommended to insert SIM cards from different operators.

Q: Why are multiple cards inserted and the test network is still poor?

A: Check the speed of each card to determine the signal quality and delay. In addition, it is recommended to use the networks of different network operators, Because the base station of the same operator is limited, the operator's speed superposition is limited.

Q: Why the network speed is not ideal?

A: Pull out the card with poor signal and test the speed of single card if it has been limited

Q: Do I need to log in to the bonding account every time you start up?

A: Log in by entering the account and password, and it will log in automatically after starting up and connect to internet.

Q: What does the key icon on the router main interface mean?

A: When bonding account is not logged in, the card is the main link with key icon.

Q: Multiple SIM cards are connected, but still can't log in or the network is blocked after logging in?

A: Please check whether the SIM card is not recognized or the SIM card itself cannot access the Internet. Try to keep one SIM card that can be connected to the Internet, and then update to the latest version under the 'About' section in interface.

Q: Why can't the laptop connect to the WiFi hotspot of the LipRouter?

A: The main reason is that the WiFi channel conflicts. Try to turn off the WiFi function of the network card and restart the LipRouter and your laptop.

Q: What does the WAN port and LAN port mean, how can I connect?

A: WAN port is used for external network and LAN port is used for internal network. When the WAN port is connected to the external network, the devices in this LAN can discover and access each other.

Q: The computer is connected to the LAN port of the LipRouter. Why can't connect to Internet?

A: Check if there is a problem with the line. Check whether the computer has fixed IP before. Set the LipRouter to automatically obtain IP, or the computer can fix the same network segment as the LipRouter.

Q: What does DHCP mean in the WAN setting in software?

A: DHCP means to automatically obtain the IP address and subnet mask assigned by the server

Q: Can the LipRouter be used outdoors with an external power supply? (notebook external power supply battery, camera external power supply, electric battery, etc.)

A: Yes, the DC interface specification is 5.5 outside and 2.5 inside, the input voltage is 10-20v, and the full load power of the whole device is 38W.

Q: What model of the USB modems can use for LipRouter?

A: The models we suggest are Huawei E3372H (4G), E8372 (4G), E6878-870 (5G), ZTE MF833V (4G)

Q: What is the application choice and how should I select?

A: TCP and UDP protocols differ in security and speed. You can select according to the usage application and the introduction on the software. Select TCP for Live video broadcasting, RTMP streaming, file uploading and downloading, searching website, and select UDP for video return, SRT streaming, and UDP for TVU / LiveU return.