

WAVLINK



see the world

**WiFi6 AX3000 Dual-Band Whole Home Mesh System
with TouchLink**

Model: CUBE AIR X3

**@WavlinkOfficial
@WavlinkTechSupport**

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About This Guide

This guide is a complement to Quick Installation Guide. The Quick Installation Guide provides instructions for quick internet setup, while this guide contains details of each function and demonstrates how to configure them.

When using this guide, please notice that features of the router may vary slightly depending on the model and software version you have, and on your location, language, and internet service provider. All screenshots, images, parameters and descriptions documented in this guide are used for demonstration only.

Conventions

In this guide the following conventions are used :

Convention	Description
<u>Underlined</u>	Underlined words or phrases are hyperlinks. You can click to redirect to a website or a specific section.
Teal	The content and text that needs to be emphasized on the web page is the theme color #1D428A , including menus, items, buttons, etc.
>	The menu structures to show the path to load the corresponding page. For example, More > Network > Mode Selection means the Mode Selection function page is under the Network menu that is located in the More tab.
Note:	Do not ignore this type of comment, it is to remind you to better use the device, to avoid the operation of the error that will cause the function to be invalid.
Tips:	Indicates important information that helps you make better use of your device.

More Info

The latest software, management app and utility are available from the Download Center at <https://docs.wavlink.xyz/Firmware/> .

A quick installation guide can be found in this guide.

Specifications can be found on the product page at <https://docs.wavlink.xyz/>.

If you encounter any issues, please don't hesitate to email contact@wavlink.com to provide feedbacks or contact online customer service, thank you !

Speed/Coverage Disclaimer

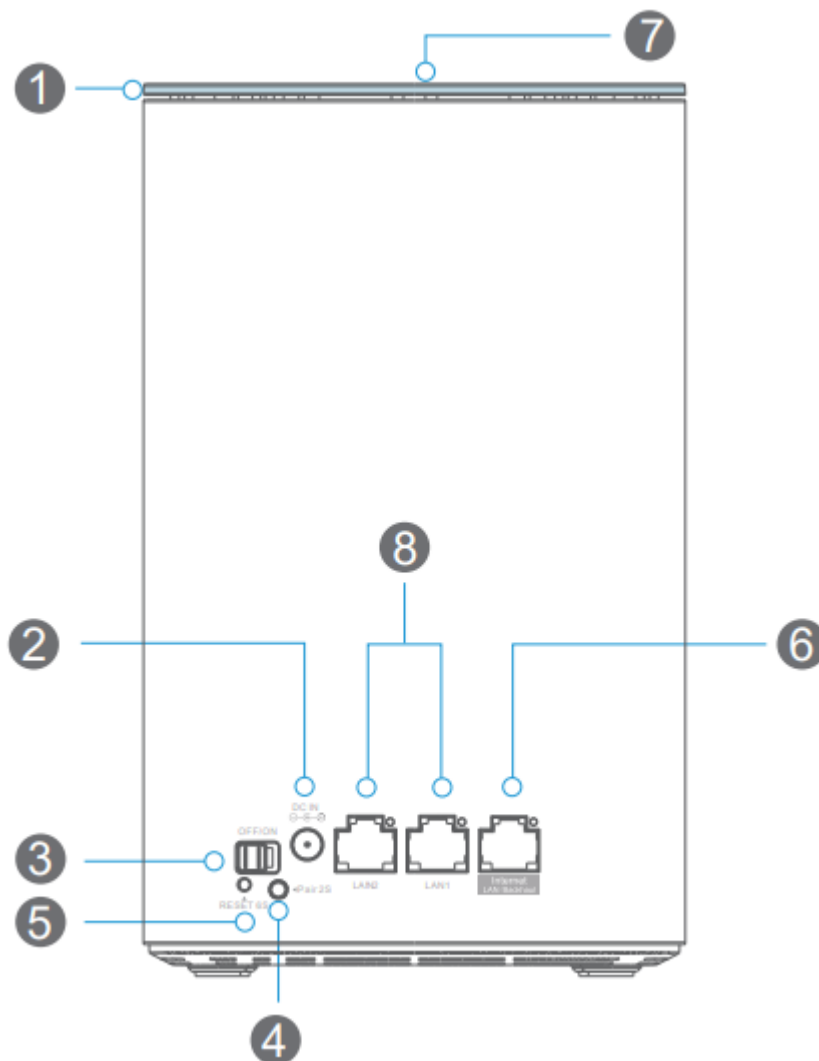
*Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and wireless coverage are not guaranteed and will vary as a result of 1) environmental factors, including building materials, physical objects, and obstacles, 2) network conditions, including local interference, volume and density of traffic, product location, network complexity, and network overhead, and 3) client limitations, including rated performance, location, connection, quality, and client condition.

Overview

This chapter contains the following sections:

- [Overview](#)
- [LED Indicators](#)
- [Basic Info](#)

1. Overview



- ① LED Indicator
- ② Power Port
- ③ On/Off Switch
- ④ Pair Button

- ⑤ Reset Button
- ⑥ Internet/LAN Backhaul Port
- ⑦ Touchlink Pad
- ⑧ LAN Port

1 . Pair Button: Press and hold for **2** seconds to add an extra mesh device to the existing Wi-Fi system.

2 . Reset Button: Press and hold for **6** seconds to reset the mesh device

2. LED Indicators

LED	Description
Blue light	Internet is connected
Slow flashing (Red light)	Internet is disconnected
Quick flashing (Red light)	The extender is disconnected
Flashing (Blue light)	Touchlink/Pair mode is on

3. Basic Info

Default IP: **192.168.20.1**

Login: **<http://wavlogin.link>**

Mesh SSID: **WAVLINK-Mesh_XXXX**

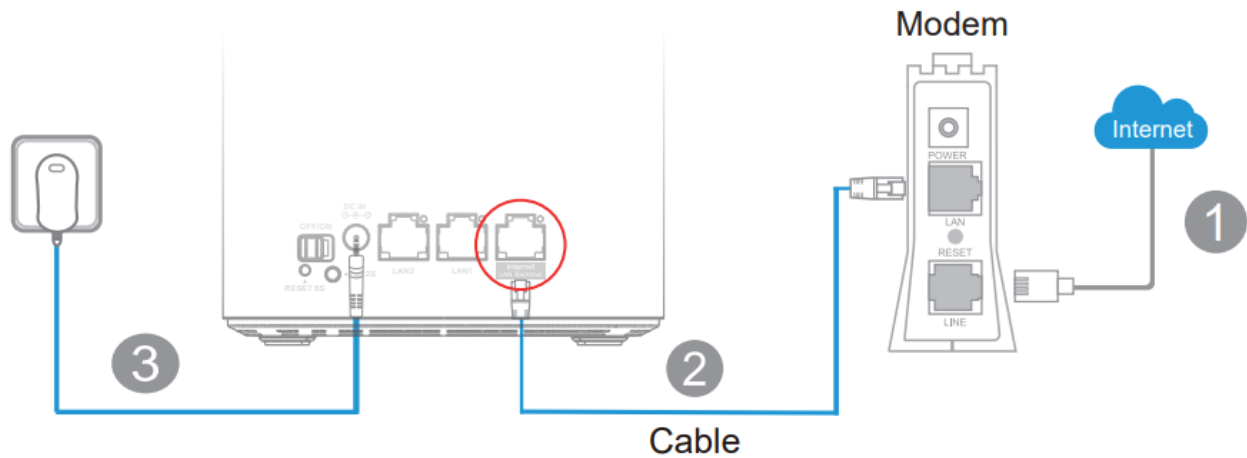
Touchlink SSID: **WAVLINK_Touch**

Setup Guide

This chapter introduces steps for setup guide:

Step 1: Access to the Internet

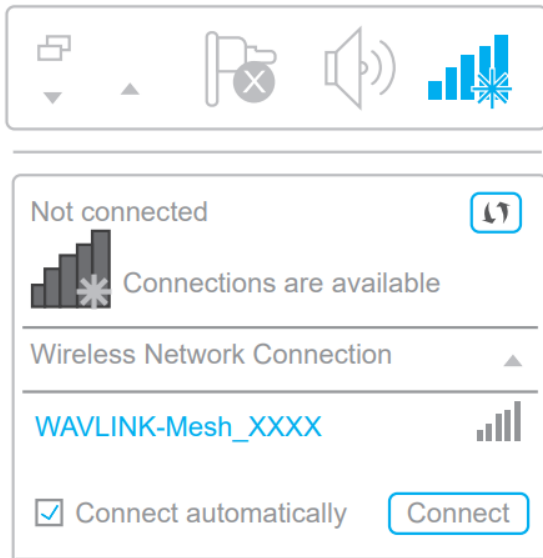
Select one of mesh devices as your router, connect its Internet LAN/Backhaul to the modem then plug it in a power outlet.



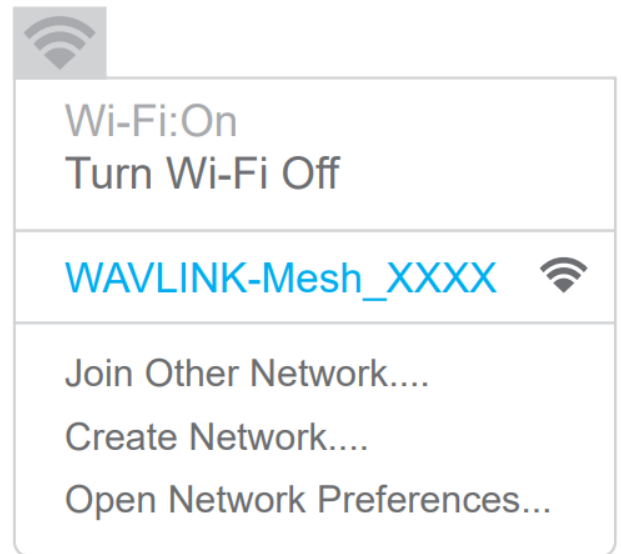
Step 2: Connecting the Router

2.1 Via Wireless

Turn on your Wi-Fi, search SSID “WAVLINK-Mesh_XXXX” and connect to it; then you can start configuring.

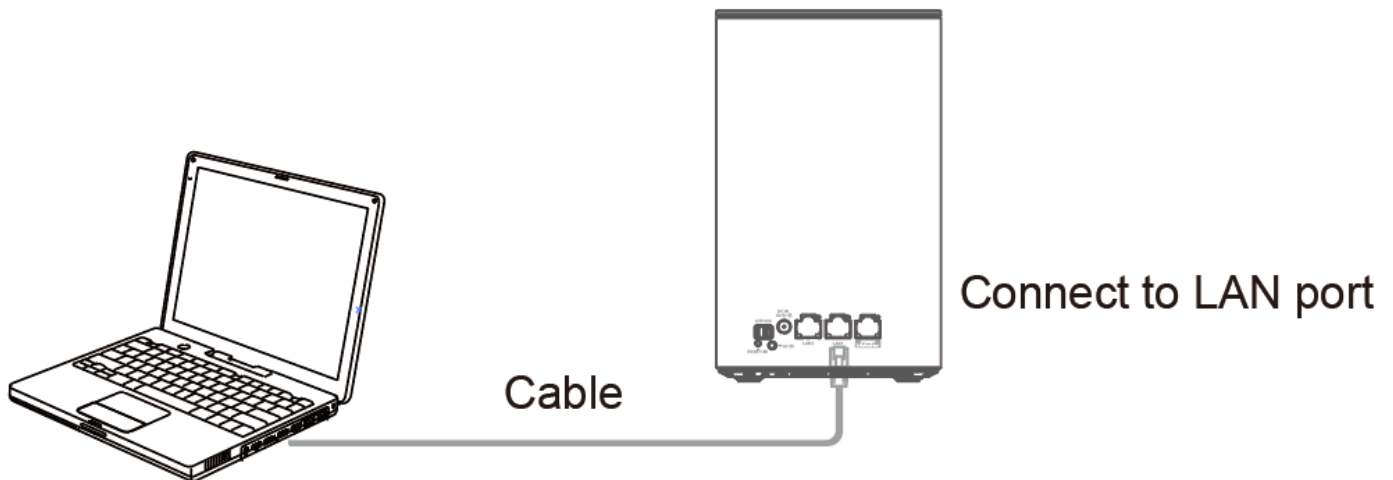


For Windows users



For Mac users

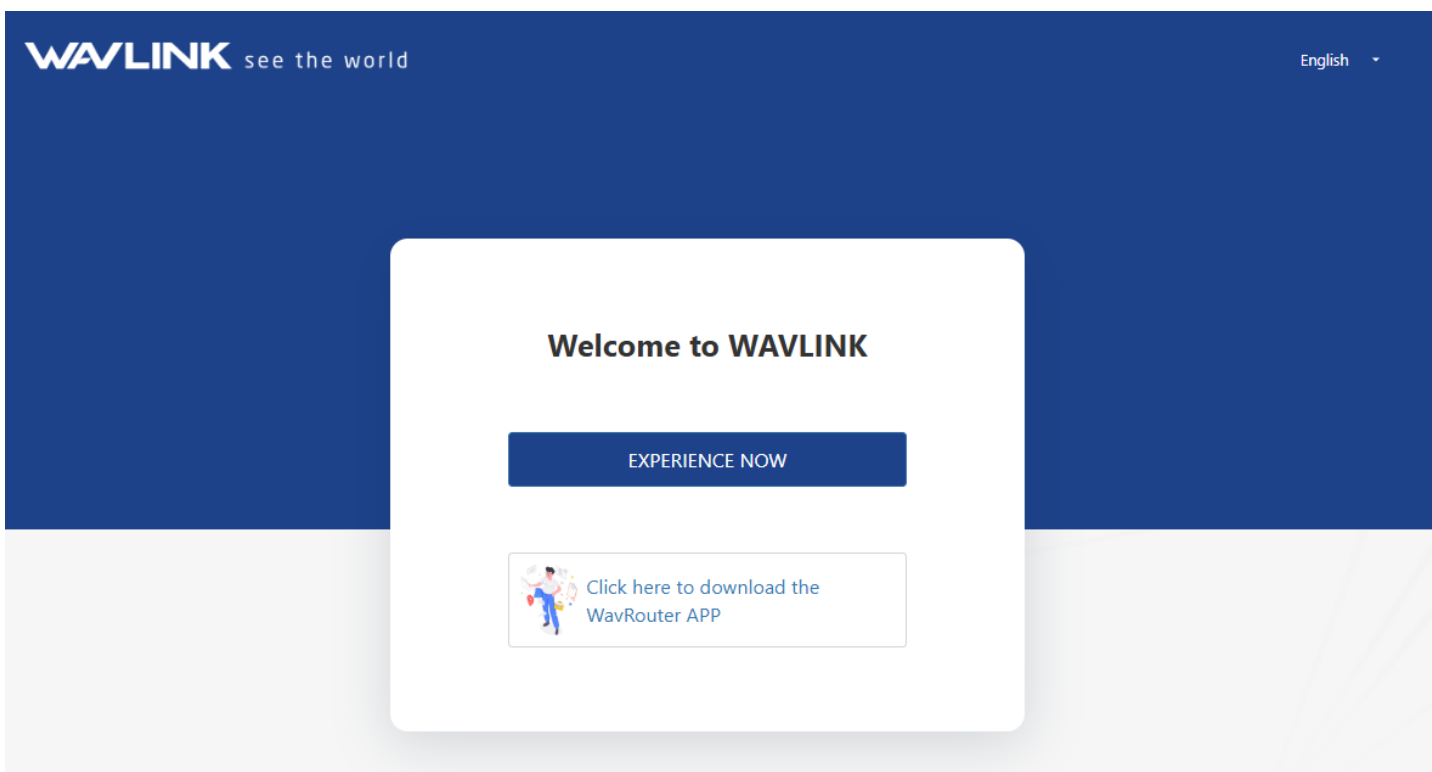
2.2 Via Cable



Connect Ethernet cable to your PC/laptop and device LAN port, then you can start configuring.

Step 3: Logging in to Management Page

Launch a browser from your laptop/PC or smart phone and enter <http://wavlogin.link> or 192.168.20.1 in the address field.



Step 4: Selecting WAN Mode

Select the WAN Type according to the type of your network.

A screenshot of the WAVLINK router's "Internet access method" configuration page. The page has a blue header with the WAVLINK logo and "see the world". The main content area is white and contains the following settings: "WAN Type" is set to "DHCP" in a dropdown menu, with a note "DHCP assigned by upstream device." below it; "Internet VLAN ID" is a toggle switch that is currently turned off; "Auto Mesh" is a toggle switch that is currently turned on. Below the "Auto Mesh" toggle, there is a small text block: "Auto Mesh : When this function is turned on, the device automatically switches to mesh router or mesh extender mode, depending on the network topology. Otherwise, the device keeps in mesh router mode." At the bottom of the configuration area is a blue button labeled "NEXT".

• Which WAN (Ethernet) Mode should I choose?

If the ISP provides you with an account and password, please choose PPPOE. If the ISP doesn't provide any parameters, and the computer can access the Internet directly by connecting the Internet cable, then can surf the Internet, please choose DHCP. If the ISP provides you a fixed IP and other information, please choose Static IP.

Step 5: Basic Settings

Select your Country/Region, and Time Zone; for your network security, we suggest that you set a new login password following the rules accordingly.

Country code/Time zone

Country/Region

Global

Time Zone

(UTC-00:00) Dublin, Edinburgh, Lisbon, London

Wi-Fi Settings

Dual-band convergence ☒

Wi-Fi Name

WAVLINK-Mesh_282E

Using identical names for 2.4GHz and 5GHz Wi-Fi.

Wi-Fi Password

8 to 30 characters(Same as the management password)

Device management password

Same as the Wi-Fi password ☒

BACK

SAVE

Note: The Dual-Band convergence switch is on by default. 2.4G WiFi and 5G WiFi use the same SSID and password. Turning off the Dual-Band convergence switch allows you to set the SSID and password for 2.4G WiFi and 5G WiFi separately.

Step 6: Done

Please wait patiently for the process to complete, then you can enjoy your wireless network.

Setting successful, please wait for the setup to complete. Use the new Wi-Fi password to connect to the Wi-Fi.

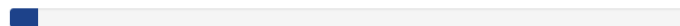
Wi-Fi Name :

WAVLINK-Mesh_282E

Wi-Fi Password :



Scan the QR code to download the WavRouter APP for easier router management



4%, Please wait...

Step 7: Switching to Other Modes

Click "**More**", enter Network and select "**Mode Selection**". You can select Router Mode and LAN Bridge (AP Mode).

Device Status

Network

Internet

LAN

Static IP

IPv6

IPTV/VLAN

Dynamic DNS

Mode Selection

SQM QoS

URL Filter

Wireless

Mesh

Net Guardian

NAT Forwarding

Security

VPN

Remote Access

NET Tools

System

Logout

Mode Selection

Mode Selection

LAN Bridge (AP Mode)

Smart DHCP Service

WAN Status

Connected

SAVE

Help

Router Mode

Convert the wired network of the network provider into a Wi-Fi signal to realize the functions of wireless Internet access and wired Internet access.

LAN Bridge (AP Mode)

When extending an existing network in Access Point (AP) mode, it is important to ensure that the WAN port of this device is connected to the network via a cable. Please note that some functions may not be available in this mode, so it is advisable to refer to the on-screen display or user manual for detailed information.

Note:

If you need to set up the device after successfully connecting to the superior in this mode, you need to connect to the Wi-Fi of the device and access the web pages by <http://wavlogin.link/>.

Repeater Mode

Bridge(Recommend) :

This mode can relay any wireless network signal, but does not have DHCP service function. IP is managed by the upper device. Select the wireless signal you want to relay and enter the password of the relay signal. Note that if you need to set up this device after successful relay in this mode, please visit the setting page via <http://wavlogin.link/>.

WISP :

More Mesh Devices

Generally, a mesh router device supports up to 10 devices(including the existing mesh device). Therefore, if you need to add more mesh devices to build up a stronger network in your home, you simply need to pair the new mesh devices with the existing network.

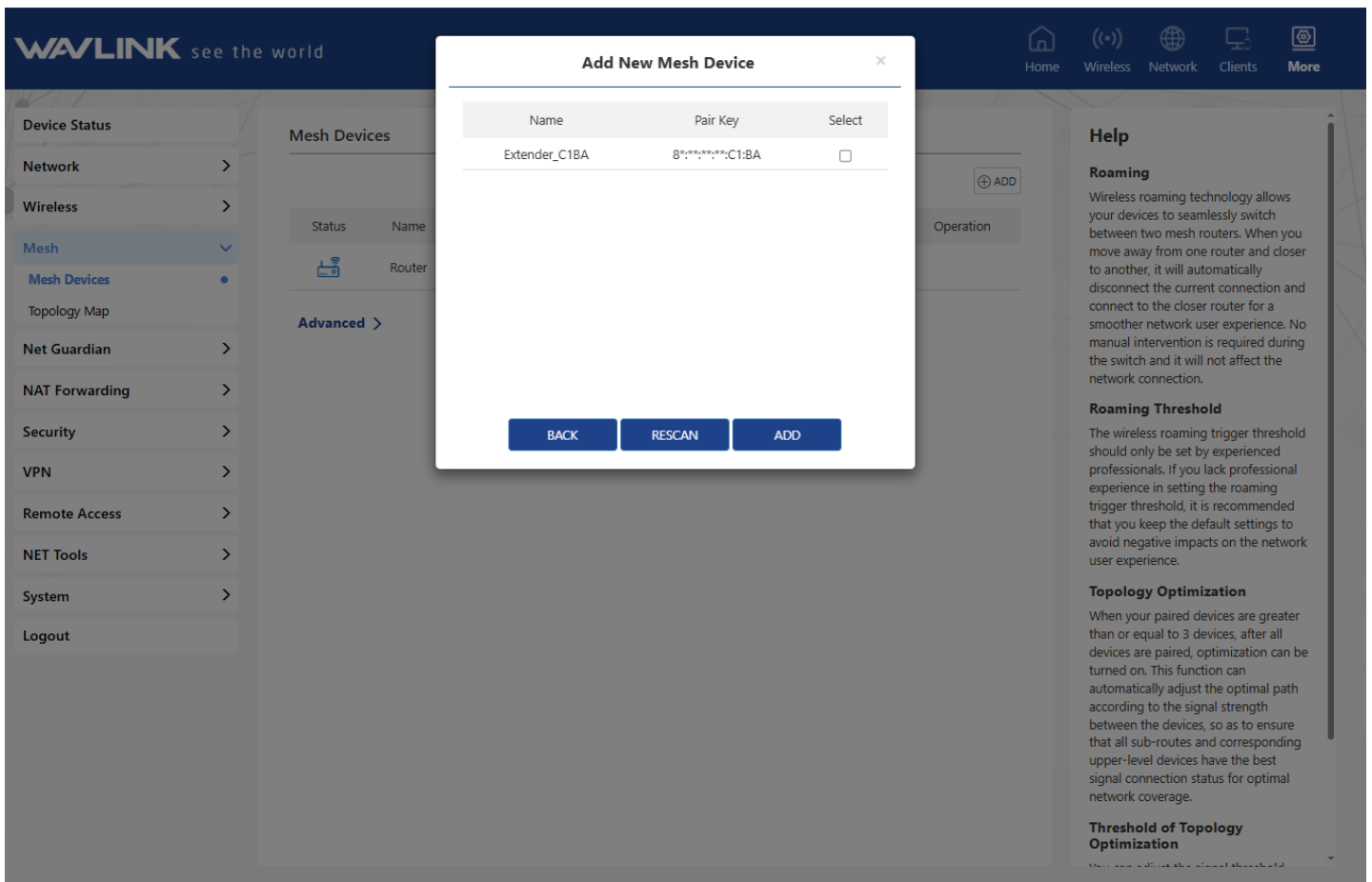
Pairing on the web

- 1 . Click **“Mesh”** and then select **“Mesh Devices”**.
- 2 . Click on **“ADD”** and then follow the prompts on the screen.

The screenshot displays the Wavlink web interface. The top navigation bar includes the Wavlink logo and the tagline 'see the world', along with icons for Home, Wireless, Network, Clients, and More. On the left, a sidebar menu lists various settings: Device Status, Network, Wireless, Mesh (selected), Mesh Devices (sub-selected), Topology Map, Net Guardian, NAT Forwarding, Security, VPN, Remote Access, NET Tools, System, and Logout. The main content area is titled 'Mesh Devices' and features a table with columns for Status, Name, IP, MAC, Signal Strength, and Operation. A single device is listed: a Router with IP 192.168.20.1 and MAC 88:88:88:88:69:2E. An 'ADD' button is visible in the top right of the table. Below the table is an 'Advanced' link. On the right side of the interface, there is a 'Help' section with three articles: 'Roaming' (explaining wireless roaming technology), 'Roaming Threshold' (discussing the trigger threshold for roaming), and 'Topology Optimization' (describing how the system adjusts paths based on signal strength). A 'Threshold of Topology Optimization' section is partially visible at the bottom of the help area.

Status	Name	IP	MAC	Signal Strength	Operation
	Router	192.168.20.1	88:88:88:88:69:2E		

- 3 . After scanning, please make sure the device you want to add is listed, and click **“ADD”**. If not, make sure the Mesh extender to be added is in a paired state. Click **“RESCAN”**.



After configuring the main router, when the main router has the network, press and hold the pair button of the main router and the mesh extender at the same time for 2 seconds. When LED lights become solid blue, the pairing process is successfully completed.

Firmware Upgrade

This chapter contains the following sections:

- Local Upgrade
- Online Upgrade

If you need to update firmware, please proceed as the following steps:

Option I : Local Upgrade

1. Download the latest firmware file from our official website.
2. Extract the firmware from the downloaded file.
3. Log in to [192.168.20.1](#). Then click **“More”**, open **“System”** and select **“Firmware Upgrade”**.
4. Click on the red arrow's place to locate the extracted firmware file.
5. Click on **“UPLOAD FILE”** and choose **“Apply”**, and wait for the firmware upgrade process to complete.

WAVLINK see the world

Home

Wireless

Network

Clients

More

Device Status

Network

Wireless

Mesh

Net Guardian

NAT Forwarding

Security

VPN

Remote Access

NET Tools

System

Firmware Upgrade

Change Password

System log

Time Zone

Led Control

Backup & Restore

Timing Reboot

Logout

Local Upgrade

Manually upgrade the firmware. You can download a new firmware file from the official WAVLINK website. The following devices are the same model as the devices you currently connect to.

☐	Mesh Device	Current Version
☐	Router	M51X3B_V240729
☐	Extender_C1BA	M51X3B_V240729

New Firmware

Choose File



UPLOAD FILE

The following devices are different models from the devices you are currently connected to. You can upgrade them by clicking the Upgrade link to access the Manual Upgrade page.

Mesh Device	Current Version	Upgrade Link
Extender_C2BA	M51X3_V240411	192.168.20.120

Online Upgrade

If the device has Internet access, you can upgrade online. After checking the latest firmware version, click the "ONE-CLICK UPGRADE" button.

☐	Mesh Device	MAC	Current Version	Latest Version	Status
☐	Router	8*:***:***:57:59	M51X3B_V240729	No new version available	Not upgradable
☐	Extender_C2BA	8*:***:***:C2:BA	M51X3_V240411	No new version available	Not upgradable
☐	Extender_C1BA	8*:***:***:C1:BA	M51X3B_V240729	No new version available	Not upgradable

CHECK FOR NEW VERSION

ONE-CLICK UPGRADE

Tip: If your all mesh devices are same model, you can check and upgrade your devices together at ①. If the model of your devices are not same, please visit the web interface of each device and upgrade it in ②.

Option II : Online Upgrade

1. Log in to 192.168.20.1. Then click **“More”**, open **“System”** and select **“Firmware Upgrade”**.
2. Select the Mesh Node Name in ③ that needs to be upgraded.

WAVLINK see the world

Home Wireless Network Clients More

Device Status

- Network >
- Wireless >
- Mesh >
- Net Guardian >
- NAT Forwarding >
- Security >
- VPN >
- Remote Access >
- NET Tools >
- System** >
 - Firmware Upgrade**
 - Change Password
 - System log
 - Time Zone
 - Led Control
 - Backup & Restore
 - Timing Reboot
- Logout

Local Upgrade

Manually upgrade the firmware. You can download a new firmware file from the official WAVLINK website. The following devices are the same model as the devices you currently connect to.

☐	Mesh Device	Current Version
☐	Router	M51X3B_V240729
☐	Extender_C1BA	M51X3B_V240729

New Firmware

UPLOAD FILE

The following devices are different models from the devices you are currently connected to. You can upgrade them by clicking the Upgrade link to access the Manual Upgrade page.

Mesh Device	Current Version	Upgrade Link
Extender_C2BA	M51X3_V240411	192.168.20.120

Online Upgrade

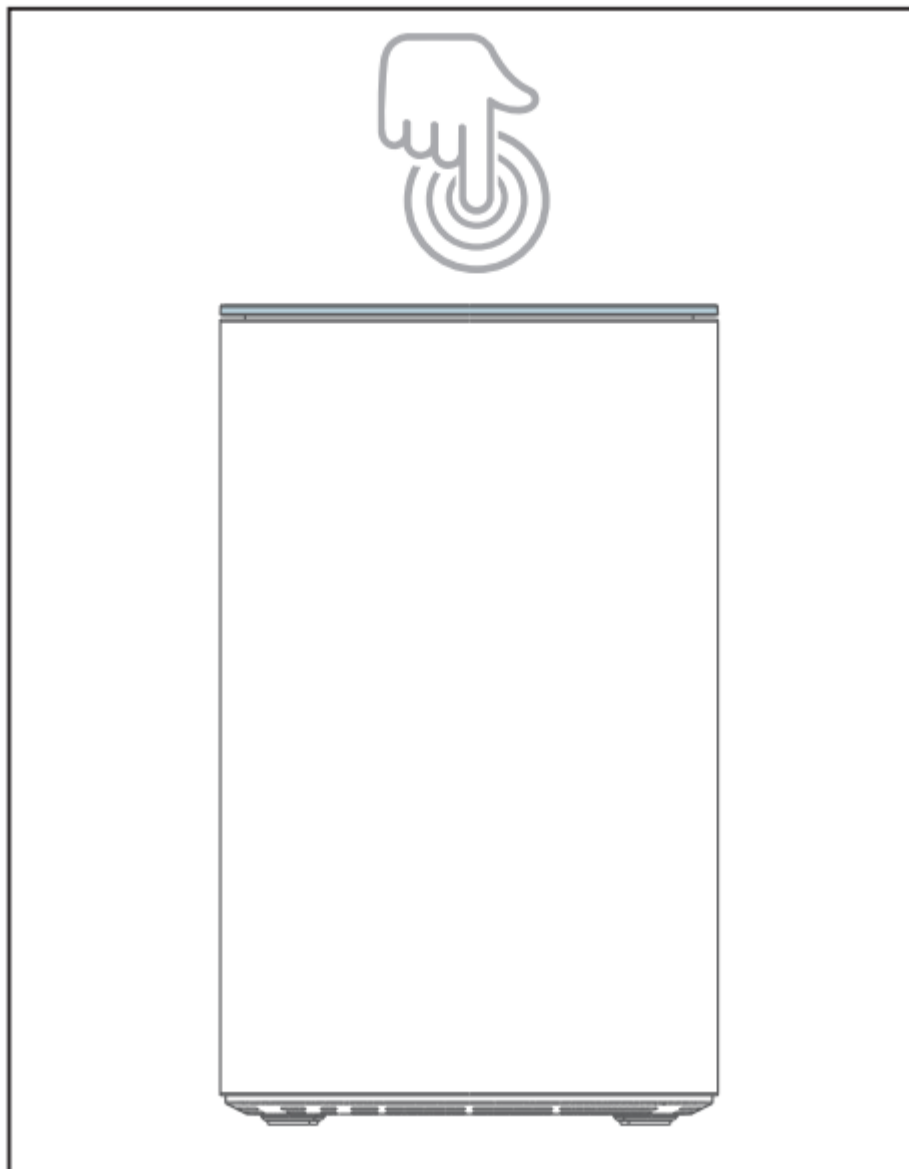
If the device has Internet access, you can upgrade online. After checking the latest firmware version, click the "ONE-CLICK UPGRADE" button.

☐	Mesh Device	MAC	Current Version	Latest Version	Status
☐	Router	8*:~*:~*:~*:57:59	M51X3B_V240729	No new version available	Not upgradable
☐	Extender_C2BA	8*:~*:~*:~*:C2:BA	M51X3_V240411	No new version available	Not upgradable
☐	Extender_C1BA	8*:~*:~*:~*:C1:BA	M51X3B_V240729	No new version available	Not upgradable

CHECK FOR NEW VERSION **ONE-CLICK UPGRADE**

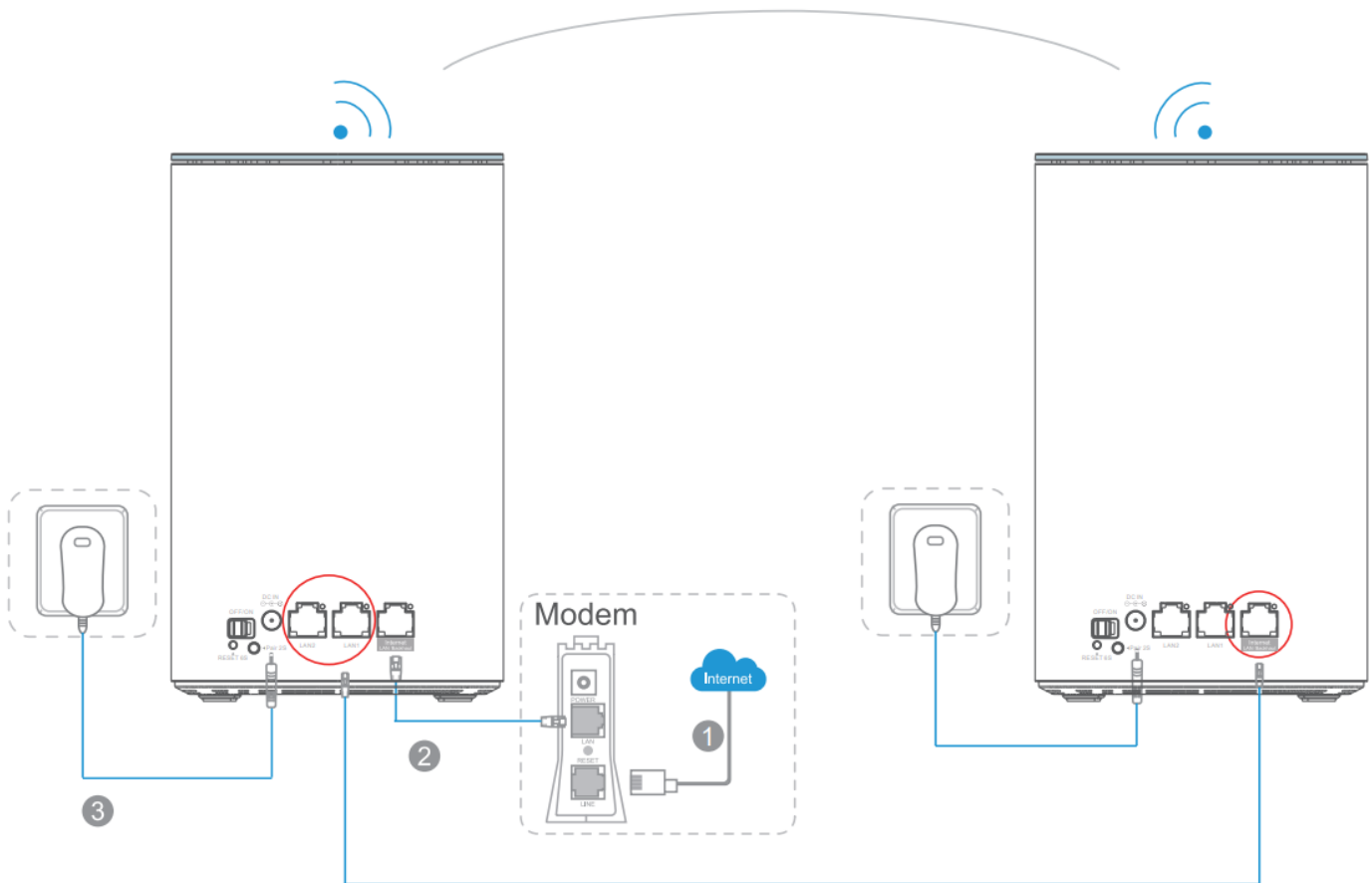
Touchlink Technology

At the top of the mesh device there is the TouchLink sensing pad; once you touch the pad with your hand or other devices, the sensing pad will blink in blue, indicating that TouchLink is in process, then you can search **“WAVLINK_Touch”** and connect to it without any password.



LAN Backhaul

1. If the wireless signal weakens because of complex environment, you can try the second option LAN Backhaul.
2. After mesh router is paired with mesh extender, then connect the **“WAN”** port of the extender to **“LAN”** port of your router.



FAQ

Q1. Why doesn't the login page appear after entering <http://wavlogin.link>?

- If your computer is wirelessly connected, please verify that you have connected to the device's SSID. If your computer is connected via an Ethernet cable, please verify that the connection is stable.
- Make sure your PC is set to obtain IP address automatically.
- Please make sure you entered the correct website.

Q2. What can I do if I can not access the Internet?

- Make sure your Internet works normally, please contact your ISP (Internet Service Provider) if it doesn't.
- Initiate your browser, enter 192.168.20.1 then set up following the quick start guide.
- Reboot your device and try again.

Q3. How do I restore the device to factory default setting?

- Press and hold the reset button of the device for [6](#) seconds.

Q4. What can I do if I forget my administration management password?

- Please reset the device.

Q5. How do I find the best location for my device?

- Please put your device in a relatively open space to avoid obstacles such as metal objects, reinforced concrete walls and so on.

Q6. What should I do if I can't have access to 192.168.20.1 on my android phone?

- We suggest you turn off your mobile Network first before you set up the network, then turn it on when the configuration is done.

Q7. Why the flow monitoring is inaccurate?

- The Hardware NAT Settings' default open status leads to the absence of monitored data. If you wanna keep the flow monitoring accurate, you have to turn off the Hardware NAT Settings function manually, which will inevitably increase the CPU usage.

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After Sales

Need help?

We' re here for you!



Online support: wavlink.com

Available Mon-Fri 8:30 am-5:30pm (UTC+8)



support@wavlink.com

Available Mon-Fri 8:30 am-5:30pm (UTC+8)



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Mon-Fri 9:00 am - 10:00 pm (UTC-5)

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