

RP052M WiFi EasyMesh Router



User Guide

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Chapter 1



Introduction

This Chapter provides an overview of the WiFi EasyMesh Router features and capabilities.

Congratulations on the purchase of your new WiFi EasyMesh Router. The WiFi EasyMesh Router is a consumer electronic device, which is designed to extend WiFi signal and provide seamless WiFi coverage throughout your home. Compliance with WFA MAP (also called EasyMesh) standard, it enables inter-operability across WiFi access points from different vendors. It is simple for consumers to deploy WiFi mesh network by just pressing one button.

Package Contents

The following items should be included:

- WiFi EasyMesh Router Unit x 1
- Power Adapter x 1
- Ethernet Cable x 1

If any of the above items are damaged or missing, please contact your dealer immediately.

Features

- MT7621DAT processor with 64MB Flash and 128MB RAM
- Two 10/100/1000 Ethernet ports with RJ45 connector
- Internal antenna for WiFi

LEDs

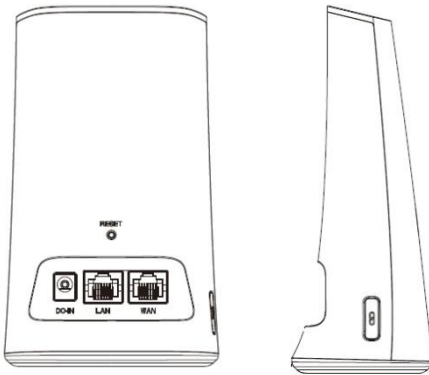
Front Panel

The WiFi EasyMesh Router has 4 LEDs.



POWER (Green)	• On - Power On/Normal Operation • Off - Power Off • Blinking – Device is performing factory reset
WiFi (Green)	• On - WiFi function is enabled • Off – WiFi function is disabled • Blinking – WPS onboarding is processing
WAN (Green)	• On – Device is connected to Internet • Off – Device is not connected to Internet
Error-indication (Red)	• On – Abnormal situation happened (i.e. failed to connect to Internet) • Off – Device works normally

Rear/Side Panel



Power Port	Connect the supplied power adapter here.
ETHERNET Port	There are two Ethernet ports in the device: WAN and LAN ports. • WAN Port. It is used to connect to generic homer router or ADSL modem for Internet access. • LAN Port. It is used to connect to other WiFi EasyMesh routers with physical wire.
Reset	This button has two (2) functions: • Reboot. When pressed and released, the WiFi EasyMesh router will reboot (restart). • Clear All Data. This button can also be used to clear ALL data and restore ALL settings to the factory default values. To Clear All Date and restore the factory default values: 1. Power On. 2. Keep holding the <i>Reset</i> Button down for 10 seconds. Release the Reset Button. The power LED will blink and device will clear all data and restore all settings to default values.
WPS Button	• Push the WPS button for 4~5 seconds to trigger WPS based MAP onboarding process. • During the onboarding process, the WiFi LED will blink till the process is completed

Chapter 2

2

Initial Installation

This Chapter covers the software installation of the WiFi EasyMesh Router.

Requirements

- Use a standard 10/100/1000 BaseT network (UTP) cable with RJ45 connector for Internet connection.

Procedure

1. Choose an Installation Site

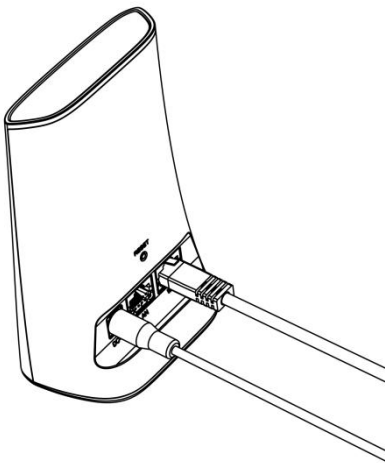
Select a suitable place to install the WiFi EasyMesh Router.

2. Connect WAN Cable

Use a standard Ethernet cable to connect the device to the WAN port on WiFi EasyMesh Router. And the other side of Ethernet cable is connected to Home Router or ADSL modem for Internet connection.

3. Power Up

Connect the supplied power adapter to the WiFi EasyMesh Router. Use only the power adapter provided. Using a different one may cause hardware damage.



4. Check the LEDs

- The *Power* LED should be ON.
- The *WiFi* LED should be ON
- The *WAN* LED should be ON.

Chapter 3

3

EasyMesh Configuration

This Chapter provides Setup details of the WiFi EasyMesh Router.

Configuration

User can configure WiFi EasyMesh Router through Web GUI on Router via WiFi or Ethernet LAN interface.

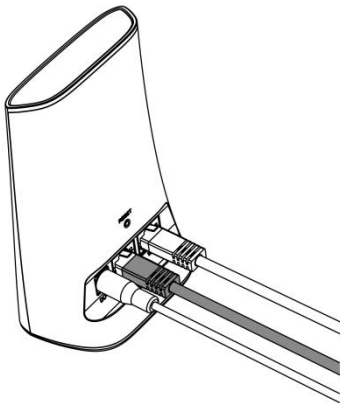
In following example, we will show you how to configure WiFi EasyMesh function through Ethernet LAN to deploy mesh network.

Change device role to be Controller

As all WiFi EasyMesh Routers are configured as Agent by default, therefore, before deploying mesh network, user has to select one of WiFi EasyMesh Routers (we will called this device “Controller” in later section) to play as Controller.

Below steps will guide you how to change device role to be Controller

- Connect Ethernet Cable to LAN port of WiFi EasyMesh Router and the other side of cable is connected to PC.



- Login into Web GUI of WiFi EasyMesh Router via PC browser.

(IP address: <http://192.168.1.1>)

Before access Home page, you need to enter Username/ Password.

(Both default Username and Password are “root”)

OpenWrt

No password set!
There is no password set on this router. Please configure a root password to protect the web interface and enable SSH.
Go to password configuration...

Authorization Required

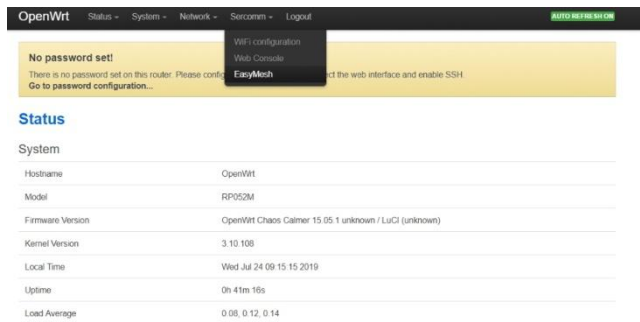
Please enter your username and password.

Username

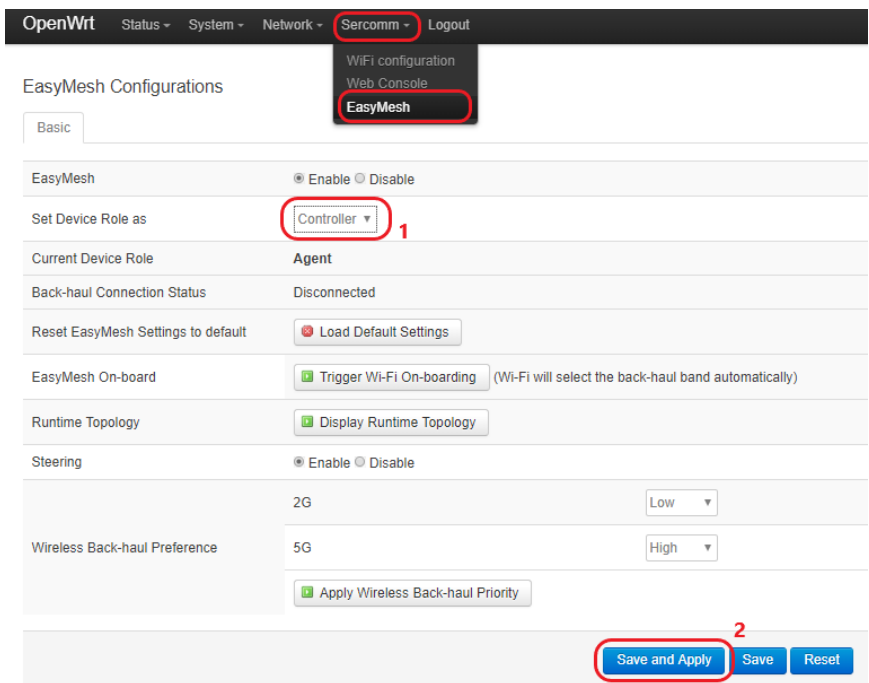
Password

Powered by LuCI (unknown) / OpenWrt Chaos Calmer 15.05.1 unknown

- In Home page, go to Sercomm->EasyMesh



- After entering EasyMesh page, please select device role as “Controller” and then click “Save and Apply” button.



- The WiFi EasyMesh Router will start applying settings to change device to be Controller.

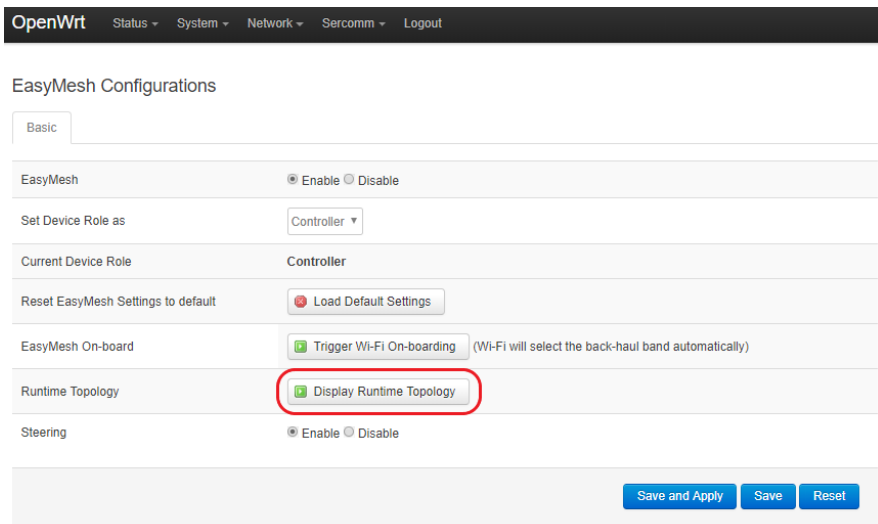
Applying Settings



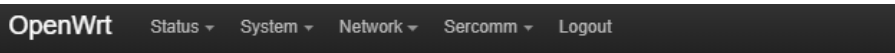
Please wait while the settings are being applied.

Powered by LuCI (unknown) / OpenWrt Chaos Calmer 15.05.1 unknown

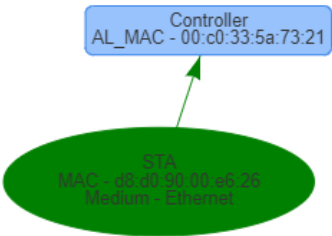
- Once finished, you can find the WiFi EasyMesh has been changed to Controller (as below red rectangle).



- User can also find the WiFi EasyMesh Router has been changed to Controller and User’s PC is connected to Controller in network topology by clicking “Display Runtime Topology” button.



EasyMesh Run-time Topology Display

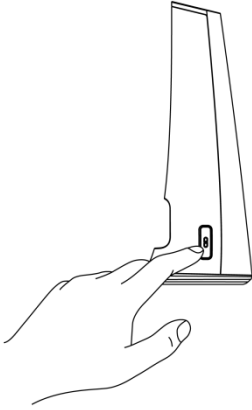


WPS onboarding for deploying mesh network

In this section, we will guide user how to perform WPS onboarding to establish connection between Controller and another WiFi EasyMesh Router (we will call this device “Agent” in later section) to deploy mesh network.

Below are steps to deploy mesh network.

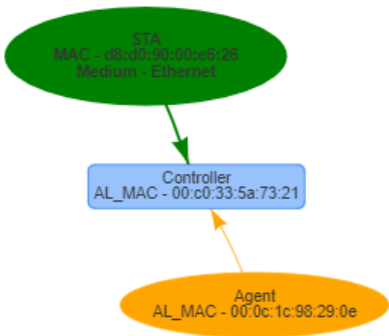
- Press WPS button on both Controller and Agent for about 4~5 seconds and then release.



- Once WPS onboarding process is triggered, the WiFi LED will blink until the process is completed.
- After finishing WPS onboarding process, you will find the Agent is connected to the Controller in network topology.



EasyMesh Run-time Topology Display



- User can repeat the same steps to add more Agents in mesh network to extend WiFi coverage.

SSID configurations

User can change Mesh Network SSID and password by going to Sercomm->EasyMesh->Advanced tab and click “Configure BSS” button.

OpenWrt Status System Network Sercomm Logout

EasyMesh Configurations

Basic Advanced Status

AL_MAC 00:c0:33:5a:73:21

Up-link AP Selection Trigger Up-link AP Selection

BSS Configurations Renew Configure BSS

2G 70 Range: 0 to 100 Unit: Percentage

5GL 80 Range: 0 to 100 Unit: Percentage

5GH 80 Range: 0 to 100 Unit: Percentage

Apply Channel Utilization Threshold

AP Steering RSSI Threshold -54 Range: -90 to 0 Unit: dbm

Apply RSSI Threshold

- Default SSID for 2.4G is “Multi-AP-24G-x” (x:1~4) and password is “12345678” (Default SSID naming rule for 5G is similar with 2.4G) .
- Click “Edit BSS” button to enter edit mode.

OpenWrt Status System Network Sercomm Logout

EasyMesh BSS Configuration

Add BSS Configurations

Configured BSS Information

AL-MAC: FF:FF:FF:FF:FF:FF

2G : BSS-1	SSID	Multi-AP-24G-1	Edit BSS	Remove BSS
	Authentication Mode	WPA2 - Personal		
	Encryption Type	AES		
	Pass-phrase	maprocks1		
	Hidden	Disabled		
	BH BSS Support	Enabled		
	FH BSS Support	Enabled		
	2G : BSS-2	SSID		
Authentication Mode	WPA2 - Personal			
Encryption Type	AES			
Pass-phrase	maprocks2			
Hidden	Disabled			
BH BSS Support	Disabled			
	FH BSS Support	Enabled		

- Once SSID or Password is changed, click “Save and Apply” button.

OpenWrt Status ▾ System ▾ Network ▾ Sercomm ▾ Logout

EasyMesh BSS Configuration

Add BSS Configurations

AL-MAC	FF:FF:FF:FF:FF:FF
Radio Band	2G ▾
SSID	Multi-AP-24G-1
Authentication Mode	WPA2 - Personal ▾
Encryption Type	AES ▾
Pass-phrase	12345678
Hidden	☐
Back-haul BSS Support	☒
Front-haul BSS Support	☒

Save and Apply

Save

Reset

Appendix A

Specifications



WiFi EasyMesh Router

Model	WiFi EasyEasy Router
Dimensions	89mm(W) * 57mm(D) * 150mm(H)
Operating Temperature	0° C to 40° C
Buttons	2
Network Protocol:	TCP/IP
Network Interface:	2 * 10/100/1000BaseT (RJ45) WAN/LAN connection
LEDs	4
Power Adapter	12V, 1A

Appendix B

FCC Statement

Federal Communication Commission Interference 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 of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. Operation of this device is restricted to indoor use only

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.

IMPORTANT NOTE:

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Country Code selection feature to be disabled for products marketed to the US/CANADA