# SHFiM2-Lite Mesh Router user Manual



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# Network

The SHFiM2-Lite Wi-Fi System creates dedicated high-speed Wi-Fi connections to your Internet service. The SHFiM2-Lite Router connects to your modem or gateway. The SHFiM2-Lite node extends the Wi-Fi signal throughout your home. This manual describes how to manage your SHFiM2-Lite Wi-Fi System from your SHFiM2-Lite router web interface. You can know how to connect your mesh node.

# **1.Product Overview**

#### 1.1 SHFiM2-Lite Router Front/Top View



### You can use the status lights on the front of the mesh node to verify various conditions

Status Light	Description
Red solid	Mesh and WAN are disconnected
Blue solid	Mesh and WAN are connected
🔶 Fast Blink Blue	The node is resetting to factory default settings

#### 1.2 SHFiM2-Lite Router Bottom View



Wan Ethernet Port	Incoming connection from Internet Service Provider (ISP) designated port or from modem	
Lan Ethernet Port	LAN connection for your computer/device	
DC Power Jack	DC 12V 1.5A	
Reset Button	Press and hold for 7 seconds and LED light will blink in blue. Then it will turn off and restart the router to factory setting. Wait for 30 seconds for the restart process to finish or to be completed	

## 1.3 SHFiM2-Lite Node Front/Top /Bottom View





# You can use the status lights on the front of the mesh nodeto verify various conditions.

Status Light	Description
Red solid	Mesh disconnection
🔆 Fast Blink Red	Main mesh and node connection is fair
Blue solid	The main mesh and node connection is good
🔶 Fast Blink Blue	The node is resetting to factory default settings

Note: Different Area match different Specification Plug PIN.

# **2.Connect Your Router**

#### 2.1Connect your Router

- 1. Use the included Ethernet cable to connectyour modem to the Wan Ethernet on your SHFiM2-Lite router. Note: If you want to connect your SHFiM2-Lite router to an existing gateway, we recommend that you turn off your existing gateway's Wi-Fi.
- 2. Connect your SHFiM2-Lite router to a power Source. Connect the power adapter to your router and plug the power adapter into an outlet.



#### 2.2 Place Your Node

If your Node came with your SHFiM2-Lite Wi-Fi System, the node attempts to sync with your router automatically. If you bought an add-on node, you must manually sync your node. Note that your node must be within range of your router's Wi-Fi signal in order to sync with the router. Use each nodes LED to help you determine where to place your node.



#### 2.3 Sync Your SHFiM2-Lite node

The sync process for your node depends on whether your node came with your SHFiM2-Lite Wi-Fi System.

#### 1.Sync a node from an SHFiM2-Lite Wi-Fi System

The SHFiM2-Lite Wi-Fi System includes an SHFiM2-Lite router and two nodes. the nodes in the Wi-Fi system attempt to sync with your router automatically.

#### 2. To sync your node

- Place your node
- Connect the node to a power outlet.
- Waiting for about 2minutes, and observing the light status.

Status Light	Description
Blue solid	The SHFiM2-Lite router and Node successfully synced, and the connection between the SHFiM2-Lite router and SHFiM2-Lite node is good.
🔆 Fast Blink Red	The connection between the SHFiM2-Lite router and SHFiM2-Lite node is fair. Consider moving the SHFiM2-Lite node closer to the SHFiM2-Lite router.
Red solid	The SHFiM2-Lite router and nodes failed to sync. Move the SHFiM2-Lite node closer to the SHFiM2-Lite router.

# **3 Manual Setup & Advance setting**

#### **Connect to the Network**

You can connect to the SHFiM2-Lite network through a wired or Wi-Fi connection. If you set up your computer to use a static IP address, change the settings so that it uses Dynamic Host Configuration Protocol (DHCP).

### 3.1 Wired Connection

You can connect your computer to the router using an Ethernet cable and join the router's local area network (LAN).To connect your computer to the router with an Ethernet cable:

- 1. Make sure that the router is receiving power (its Power LED is lit).
- 2. Connect an Ethernet cable to an Ethernet port on your computer.
- 3. Connect the other end of the Ethernet cable to SHFiM2-Lite router's Ethernet port. Your computer connects to the local area network (LAN). A message might display on your computer screen to notify you that an Ethernet cable is connected.

#### 3.2 Wi-Fi Connection

To find and select the Wi-Fi network:

- 1. Make sure that the router or node is receiving power (its Power LED is lit).
- 2. On your Wi-Fi-enabled computer or mobile device, find and select the Wi-Fi network. The Wi-Fi network name is on the router label. The Wi-Fi network name is the same for the router and the node in the SHFiM2-Lite Wi-Fi System.
- Join the Wi-Fi network and enter the Wi-Fi password. The password is on the router label. Your Wi-Fi-enabled computer or mobile device connects to the Wi-Fi network.

### 3.3 Use a Web Browser to Access the Router

When you connect to the network (either with Wi-Fi or with an Ethernet cable), you can use a web browser to access the router to view or change its settings. The first time you access the router, a Quick start guide displays.

- 1. Access your router with a Web Browser
- Launch a web browser to access the router by 192.168.8.1,
- When Log-in widow opens, enter password:1235678.
- When Home page displays, select Networking Setting. Then you can begin to setup your network.



2. Join the Wi-Fi network and enter the Wi-Fi password. The password is on the router label. Your Wi-Fi-enabled computer or mobile device connects to the Wi-Fi network.

# **4.Specify Your Internet Settings**

#### 4.1 Quick installation Guide

The quickest way to setup the router to use your Internet connection is to follow the Quick installation Guide when you first access the router with a web browser. Before you start the setup process, get your ISP information and make sure that the computers and devices in the network use the settings described here.

When your Internet service starts, your Internet service provider (ISP) typically gives you all the information needed to connect to the Internet.

For DSL service, you might need the following information to set up your router:

- The ISP configuration information provide for your DSL account
- Fixed or static IP address settings (special deployment by ISP; this setting is rare) If you cannot locate this information, ask your ISP to provide it. Then Click save.



and setting your Wi-Fi name and password, Click save.

If you connect your internet by wired cable , you can back to Mesh interface and check Status , if wan port have parameter , you can surf the internet. Or if you connect your internet by Wi-Fi, you can reconnect the new SSID and try to surf the internet directly.

· · · · · · · · · · · · · · · · · · ·		a h	3
T WWW Setting Int WWW and websit	2 Wi-Fi Setting Set 16 fi same and passoord	3 Complete Setting complete	
	2.4 G		
Wi-Fi name:	Mcntek-010123-2G		
Set Wi-Fi password:	Please enter your 8 or more Characters		
	5 G		
Wi-Fi name:	Mcntek-010123-5G		
Set Wi-Fi password:	Please enter your 8 or more Characters		
	Save		

#### 4.2 Use the Network setting

Make sure that the network settings of the computer are correct. Wired and wireless connected computers must use network (IP) addresses on the same network as the router. The simplest way to do this is to configure each computer to obtain an IP address automatically using DHCP.

To use the Network setting:

1. Launch a web browser from a computer or mobile device that

network.

2. Enter 192.168.8.1 in the Web browser A login window opens.



3. Enter password. The password is 12345678. The BASIC Home page displays.



#### 4. Select Networking Setting. The network setting page displays. As below.



Networking Setting

WAN Access Type:	DHCP Client	
Host Name:	Mesh	
MTU Size:	1500	
	1280-1550 Judge	

WAN Access Type	
Field	Description
DHCP Clien	Your ISP uses DHCP to assign you IP address. Your ISP automatically assigns these addresses.
PPPoE	The ISP provide a login and password for your DSL account, Generally This login name is often an email address.

Static IP	Enter the IP address, IP subnet mask, and the gateway IP address that your ISP assigned. The gateway is the ISP router to which your router connects.
Host Name	The router's device name is its model number. You can assign a name for the Default Mesh.
MTU Size	The Default range is 1500 bytes, but it can go from 1280 to 1550.

# **5.Access Wi-Fi Settings**

#### 5.1 Wi-Fi settings

Make sure that the Wi-Fi setting in the Wi-Fi-enabled computer or mobile device and the router match. The Wi-Fi network name (SSID) and Wi-Fi security setting must match exactly. If you setup an access list, you must add each Wi-Fi-enabled computer or mobile device's MAC address to the router's access list.

Click Wi-Fi setting, An interface pop-up as bellows.

Basic Settings	Basic Settings			
Advanced Settings	2.4G This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you in encryption settings as well as wireless network parameters.	This page is used to configure the parameters for wrinkes UAK cleats which may connect to your Access Nort. Here you may change writess encogation writings as well as writess related a parameters.		
Advanced Settings	-56 MG-El Band Combination O ON O OFF			
	UN UNIT			
	2.4G Wi-Fi			
	Wi-Fi name: Mcntek-010334-2G			
	Encryption: Open 0			
	SG Wi-Fi			
	Wi-Fi name: Mcntek-010334-5G			
	Encryption: Open •			
	Save & Apply			

Field	Description		
Wi-Fi Band Combination	<ul> <li>There are two buttons to choose from:</li> <li>1. When choosing OFF, there are two bands,</li> <li>2.4G and 5G (default setting)</li> <li>2. When choosing ON, there is only one SSID for</li> <li>5G. (In fact, it can auto switch internally according to signal intensity)</li> </ul>		
Wi-Fi Name	Rename it or keep the default name		
Wi-Fi Password	Choose 8 or more characters including numbe letters, and symbols		

asic Setup	Advanced configuration		
dvanced configuration 2.4G	These settings are only for more technically advanced users who have a sufficient loowledge about winniess LAN. These settings should not be changed unleasy you know what effect the changes will have on your Access Roint.		
dvanced configuration 5G			
		Disable Wireless LAN	Interface
	Band:	2.4 GHz (8+G+N)	٩
	Mode:	AP+MESH	٥
	Channel Width:	40MHz	0
	Control Sideband:	Upper	0
	Channel Number:	11	٥
	Broadcast SSID:	Enabled	0

Advanced Configuration 2.4GHz band		
Field Description		
Band	2.4GHz: means 2.4GHz(B/G/N) - You can keep it as default	
Mode	There are many types of mode, keep AP+MESH as the default mode	
Channel Width	Select the channel width from the drop-down list. The default setting is 40MHz	

Control Sideband	You can choose upper or lower
Channel Number	Select the channel you want to use from the drop-down list. This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point
Broadcast SSID	Enables the SSID as a public network



Advanced Configuration 5GHz band		
Field	Description	
Band	5GHz: means 5GHz(A/N/AC) - You can keep it as default	
Mode	There are many types of mode, keep AP+MESH as the default mode	
Channel Width	Select the channel width from the drop-down list. The default setting is 80MHz	

Control Sideband	You can choose upper or lower
Channel Number	Select the channel you want to use from the drop-down list. This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point
Broadcast SSID	The SSID may appear as a public network

#### 5.2 Guest Wi-Fi Network

- At the Wi-Fi Setting page, select Guest Network Setting. Then select to enable Guest Network.
- To change the network name, type a new name in the Guest Wireless Network Name (SSID) field.
- Add a password if needed.
- Click the Save & Apply button to apply and save all changes.



# **6.Access Firewall Setting**

#### 6.1 Access DMZ Setting

The default DMZ server feature is helpful when you are using some online games and videoconferencing applications that are incompatible with Network Address Translation (NAT). The router is programmed to recognize some of these applications and to work correctly with them, but other applications might not function well. In some cases, one local computer can run the application correctly if the IP address for that computer is entered as the default DMZ server.

- Access the Home page > Select Firewall > Select DMZ.
- Enable the Default DMZ Server, then type the IP address.
- Click Save & Apply to apply and save all settings.





### 6.2 Setup MAC Filtering

You can use Mac Filtering to block access to your network

To setup MAC Filtering:

- Access the Home page > Select Firewall > Select MAC Filtering.
- Then the Block Sites page will be displayed



Field	Description	
Enable MAC Filter (Blacklist)	Forbid typed MAC addresses to access Internet	
Enable MAC Filter (Whitelist)	Allow typed MAC addresses to access Internet	

### 6.3 Setup URL Filtering

You can use keywords or web addresses to block certain Internet sites from your network:

- Access the Home page > Select Firewall > Select URL Filtering.
- As the Block Sites page displays, choose to enable URL Filtering and Forbid URL Address check Box.
- In the URL Address field, enter a keyword or domain that you want to block. For example:
- Specify XXX page to block (e.g. http://www.badstuff.com/xxx.html).
- Specify .com if you want to allow only sites with domain suffixes such as edu or .gov.
- Enter a period (.) to block all Internet browsing access.
- Click Save & Apply button to enable the blocking.

DMZ	URL Filtering			
WC Filtering	The URL filter is used to restrict UAN users ao	cess to the internet. Block those U	Ls which contain keys	vords listed below.
Port Forwarding		Enable URL Filtering		
JRL Filtering		deny url address(black	ist)	
Parental Control		allow url address(white	list)	
QoS	URL Address			
		Save & Apply		
	Current Filter Table:			
		URL Address:		Select
		Delete Selected		

#### 6.4 Setup Parental Controls

Parental Control enables you to limit online time, block inappropriate contents for each family member, and pause WiFi on kids' devices like during dinner or bedtime.

To set up Parental Controls:

- Access The Basic home page > Select Firewall > Select Parental Controls.
- A list of connected devices are shown.
- Click to enable the parental control and limit the device from accessing the network.

DMZ	Parental Control		
MAC Filtering	Nextual Carolin dealing you to inclusive three and block inappropriate contents for each lendy member, and paper Will on kild devices, like during driver or testime. Networking Access Control		
Port Forwarding			
URL Filtering			
Parental Control	Device Name	MAC Address	Restrict Networking Access
QoS	DESKTOP-PGRH2UF	48:F1:7F:95:6D:52	

# 6.5 Setup QoS

Quality of Service (QoS) allows you to prioritize the online activities that are most important to users on your network, You can set a high-priority time during which the bandwidth for a device is guaranteed. For example, if you are using

your laptop for an important video conference and want to avoid a dropped call, you can set your laptop as high-priority during the time of your video conference.

DMZ	QoS	
MAC Filtering Entries in this table improve your online gaming experience by ensuing that your game torffic is prioritized over other network too		
Port Forwarding	Enable CoS	
URL Filtering		
Parental Control	QoS Rule Setting:	
	Name:	
	Local IP Address:	
	Local Port:(1~65535)	
	Mode:	Guaranteed minimum I
	Uplink Bandwidth (Kbps):	
	Downlink Bandwidth (Kbps):	

- Access the Home page > Select Firewall > Select QoS, then the Port Forwarding page displays.
- Click to enable QoS, then type the IP address in the Local IP address fields.

Field	Description
Name	Name the QoS rule
Local IP Address	Choose the devices to which this rule will apply
Local Port Range	For the local port range and Remote port range, use the same port range for Internal port check box selected or enter the ports in the Internal port range field. FTP(21), TELNET (23), SMTP(25), DNS (53), HTTP (80), POP3 (110), PPTP(1723) or Remote Desktop (3389) <b>Type 1 - 65535 if not sure</b>

Mode	Guaranteed minimum bandwidth. Set the Uplink and Downlink bandwidth minimum guaranteed value Restricted maximum bandwidth. Set the Uplink and Downlink bandwidth the maximum allowable bandwidth
Uplink Bandwidth (Kbps)	Upload speed. Please refer to ISP data plan for maximum speed 1MB = 1,045 KB 10MB = 10,240 KB 1GB = 1,048,576 KB
Downlink Bandwidth (Kbps)	Download speed. Please refer to ISP data plan for maximum speed 1MB = 1,045 KB 10MB = 10,240 KB 1GB = 1,048,576 KB

• Click Save & Apply button to apply and save all settings.

# 7. Manage Your Network

### 7.1 LAN TCP/IP Settings

The router is preconfigured to use private IP addresses on the LAN side and to act as a DHCP server. The router's default LAN IP configuration is as follows:

- LAN IP address. 192.168.8.1
- Subnet mask. 255.255.255.0

These addresses are part of the designated private address range for use in private networks and are suitable for most applications. If your network requires a different IP addressing scheme, you can change these settings. You might want

to change these settings if you need a specific IP subnet that one or more devices on the network uses, or if you use competing subnets with the same IP scheme. Change the LAN Interface settings:

Access Point Status	LAN Interface Setup		
LAN Interface Setup	This page is used to configure the parameters change the settings for IP addresss, subnet mar	for the local area network that connects ik, DHCP, etc	to the LAN port of your Access Point. Here you may
Dynamic DNS Setting			
Time Zone Setting	IP Address:	192.168.8.1	
DNS	Subnet Mask:	255.255.255.0	
Upgrade Firmware	DHCP Client Range:	192.168.8.100	- 192.168.8.200
Save/Reload Settings			
Password Setup		Save & Apply	
Logout			

- Access the Home page > Select Management > Select LAN interface setup
- In the IP Address field, type the IP address (default setting is 192.168.8.1)
- In the IP Subnet Mask, type the subnet mask of the router. The IP address and subnet mask identifies which addresses are local to a specific device and which must be reached through a gateway or router.

#### 7.2 Dynamic DNS

Internet service providers (ISPs) assign numbers called IP addresses to identify each Internet account. Most ISPs use dynamically assigned IP addresses. This means that the IP address can change at any time. You can use the IP address to access your network remotely, but most people don't know what their IP addresses are or when this number changes.

To make it easier to connect, you can get a free account with a Dynamic DNS service that lets you use a domain name to access your home network. To use this account, you must set up the router to use Dynamic DNS. Then the router notifies the Dynamic DNS service provider whenever its IP address changes. When you access your Dynamic DNS account, the service finds the current IP address of your home network and automatically connects you.

If your ISP assigns a private WAN IP address(suchas192.168.x.xor10.x.x.x), the Dynamic DNS service does not work because private addresses are not routed on the Internet. Set Up a New Dynamic DNS Account To set up Dynamic DNS and register for a free account:

Access Point Status	Dynamic DNS Setting		
LAN Interface Setup	Dynamic DNS is a service that provides you with a valid, unchanging, internet domain name (an URL) to go with a (possibly changing) IP-address.		
Dynamic DNS Setting	Enable DDNS		
Time Zone Setting	Sanisa Bravidas DueDNC +		
DNS	Jervie Plovider. Dynamia		
Upgrade Firmware	Domain Name: host.dyndns.org		
Save/Reload Settings	User Name/Email:		
Password Setup	Password/Key:		
Logout	Save & Apply		

How to change the Dynamic DNS settings

- Access the Home page > Select Management > Dynamic DNS setting.
- Select DDNS box to enable Dynamic DNS Service, Then in the Service Provider list, select DynDNS.
- In the domain name field, type the name that you want to use for your URL.
- In the Email field, type the email address that you want to use for your account.
- In the Password (6-32 characters) field, type the password for your account.
- Click Save & Apply button to apply and save all settings.

#### 7.3 Setup Time Zone

Modify your Time Zone

- Access the Home page > Select Management > Select Time Zone settings.
- Choose the Time Zone



### 7.4 Setup DNS

• Access the Home page > Select Management > Select DNS

Access Point Status	DNS
LAN Interface Setup	
Dynamic DNS Setting	Manual
Time Zone Setting	Save & Apply
DNS	
Upgrade Firmware	
Save/Reload Settings	
Password Setup	
Logout	

• Click to enable Manual setting and fill the DNS Parameters. If not, you will not be able to access the Internet.

Access Point Status	DNS	
LAN Interface Setup		
Dynamic DNS Setting	Ø	Manual
Time Zone Setting	DNS 1:	
DNS	DNS 2	
Upgrade Firmware	DNS 3:	
Save/Reload Settings		
Password Setup		Save & Apply
Logout		

#### 7.5 Update the Router Firmware

Any firmware update will be supplied exclusively by Sunhans (if applicable). Any third party firmware shall not be used in order to prevent damage or data breaches.

Access Point Status	Upgrade Firmware					
LAN Interface Setup	This page allows you to upgrade the Access Point firmware to the latest version. Please note, do not power off the device during the upload as it may crash the watern					
Dynamic DNS Setting						
Time Zone Setting	Firmware Version: 4.1.0.1					
DNS	Uptime: 0day:23h:28m:10s					
Upgrade Firmware	Build Time: Mon Aug 5 17:51:24 CST 2019					
Save/Reload Settings	Select File: Select					
Password Setup	Unioad					
Logout						

- Access the Home page > Select Management > Select Upgrade Firmware
- Click the Select File button and find the .bin file supplied by Sunhans, then click Upload.

Note: To avoid the risk of corrupting the firmware, do not interrupt the upgrade. For example, do not close the browser, click a link, or load a new page. Do not turn off the router

When the upload is complete, your router restart. The update process typically takes about two minutes. Read the new firmware release notes to find out if you must reconfigure the router after updating.

### 7.6 Save/Reload Setting

Router setting and configuration can be saved and reload if needed.

- Access the Home page > Select Management > Select Save/Reload Setting
- Click Save when you wish to confirm current setting and configuration. Then the .dat format file will be automatically saved to your computer.
- Click Select File button > Find the .dat file in your computer system, then click Upload.

Access Point Status	Save/Reload Settings						
LAN Interface Setup	This page allows you to save current settings to a file or reload the settings from a file that was saved previously. You can also reset the current configurations to further defaulting						
Dynamic DNS Setting	correspondences of another second second						
Time Zone Setting	Sava Sattinge to Filer	Sava					
DNS	Jure Jacongs to The	Juren					
Upgrade Firmware	Load Settings from File:		Select	Upload			
Save/Reload Settings	Reset Settings to Default:	Reset					
Password Setup							
Logout							

Note : To avoid the risk of corrupting the configuration file, do not interrupt the upgrade. The update process typically takes about forty seconds.

• To reset Settings to Default : Click the reset button and click OK to confirm resetting the router to factory settings. (The reset and restart process typically takes about twenty seconds.)

## 7.7 Password Change

This feature let you change the default password that is used to login to the router with the user name admin. This password is not the one that you use for Wi-Fi access. The router label shows your unique Wi-Fi network name (SSID) and password for Wi-Fi access.

Note: Be sure to change the password for the username admin to a secure password. The ideal password contains no dictionary words from any language and contains uppercase and lowercase letters, numbers, and symbols. It can be up to 27 characters. To set the password for the username admin: