MERCUSYS®

User Guide

AX1800 Whole Home Mesh Wi-Fi System

Contents

About This Guide

This guide provides a brief introduction to Halo Whole Home Mesh Wi-Fi System and the Halo app, as well as regulatory information.

Note: Features available in Halo may vary by model and software version. Halo availability may also vary by region or ISP. All images, steps, and descriptions in this guide are only examples and may not reflect your actual Halo experience.

Conventions

In this guide, the following conventions are used:

Convention	Description
Halo	Stands for Halo Whole Home Mesh Wi-Fi System/Unit.
Underline	Hyperlinks are in teal and underlined. You can click to redirect to a website or a specific section.
Red	Key information appears in teal, including management page text such as menus, items, buttons and so on.
Note:	Ignoring this type of note might result in a malfunction or damage to the device.
Tips:	Indicates important information that helps you make better use of your device.

More Info

- Specific product information can be found on the product page at https://www.mercusys.com.
- Our Technical Support contact information can be found at the https://www.mercusys.com/support.

- Seamless roaming requires clients to support 802.11k/v/r and may require additional set up. Performance may vary depending on the client device.

- Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and wireless coverage, and quantity of connected devices are not guaranteed and will vary as a result of network conditions, client limitations, and environmental factors, including building materials, obstacles, volume and density of traffic, and client location.

- Use of MU-MIMO requires clients to also support MU-MIMO.

- Please note that the Halo H series and S series cannot work together.

Appearance

Each Halo has an LED that changes color according to its status, at least 2 WAN/LAN auto-sensing ports, a power slot, and a Reset button.

See the explanation below:

*Halo H70X(Ver:1.0) is used for demonstration in this guide.

LED Status

● **Solid Yellow:**
Halo is starting up.

Pulsing Yellow:
Halo is being reset.

● **Solid Blue:**
Halo is setting up.

Pulsing Blue:
Halo is ready for setup.

○ **Solid White:**
Halo is registered and all is well.

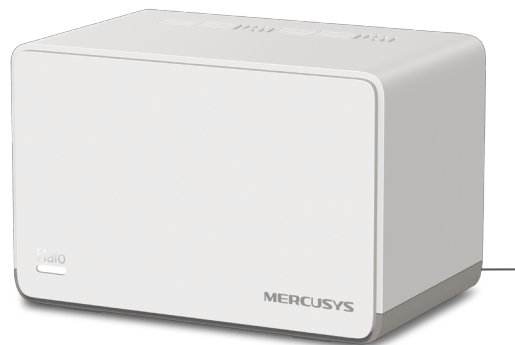**Pulsing White:**
Halo is updating its firmware, please wait.

● **Solid Red:**
Halo has an issue.

Pulsing Red:
Halo is disconnected from main Halo.

Ethernet Ports:
For connecting Halo to your modem, the Ethernet outlet or other internet devices.

Power Slot:
For connecting Halo to the power socket via the provided power adapter.

Reset Button:
Press 1 second to reset Halo to factory default settings.

Set Up Your Halo

Follow the steps below to set up your Halo Whole Home Mesh Wi-Fi System.

1. Download and install the MERCUSYS app

Scan the QR code below or go to Google Play or the Apple App Store to download the **MERCUSYS** app.

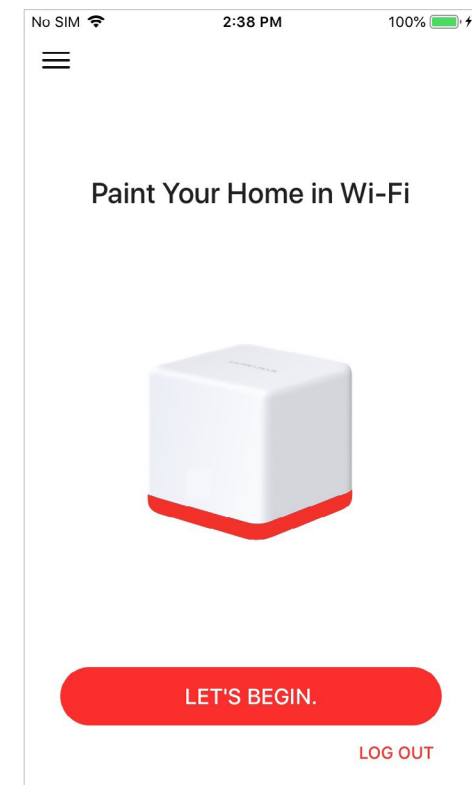Install the app on your phone or tablet.

or

2. Log in or sign up with Mercusys ID

Open the app. Use your Mercusys ID to log in.

Note: If you don't have a Mercusys ID, tap Sign Up. The app will guide you through the rest.

3. Connect and configure Halo Device

Tap **"LET'S BEGIN"** and follow the step-by-step instructions to connect and configure your Halo.
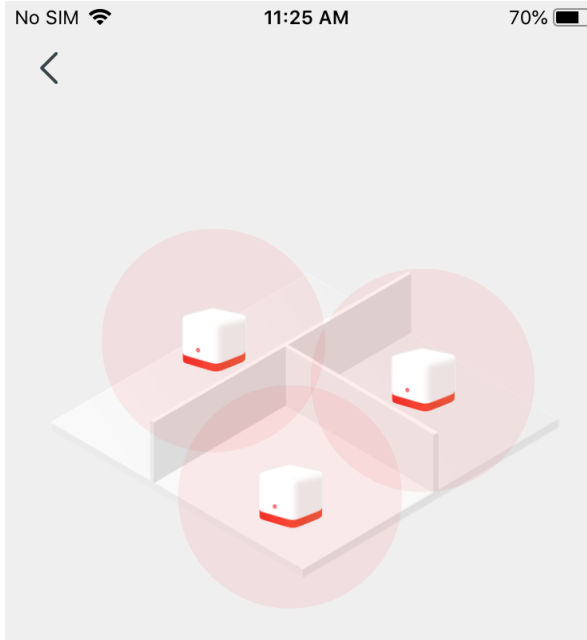
4. Done!

Your Halo network is now up

This Halo is ready to use. Please connect all devices to the Halo network for better connections.

NEXT

5. Tap the + button on the top right corner to add more Halo(s)

Find a suitable spot

Select the layout that looks like your home. We'll tell you where to place Halos.
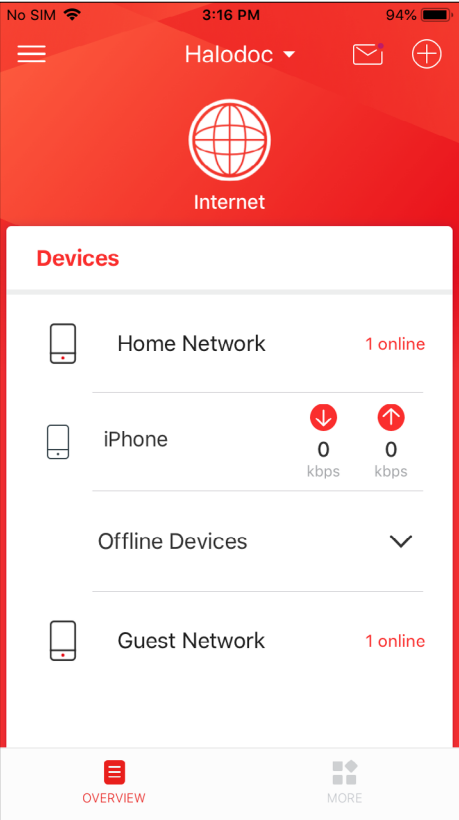
▼ **1 floor** ▲
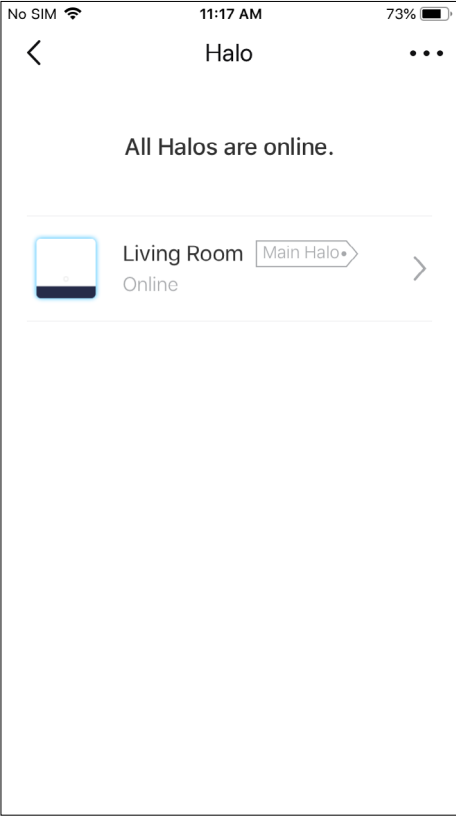
Next

See Placement Guide

Dashboard

After you successfully set up your Halo network, you will see the dashboard of the app. Here you can check the working status of all the Halos, manage the connected devices, add more Halos, and more.
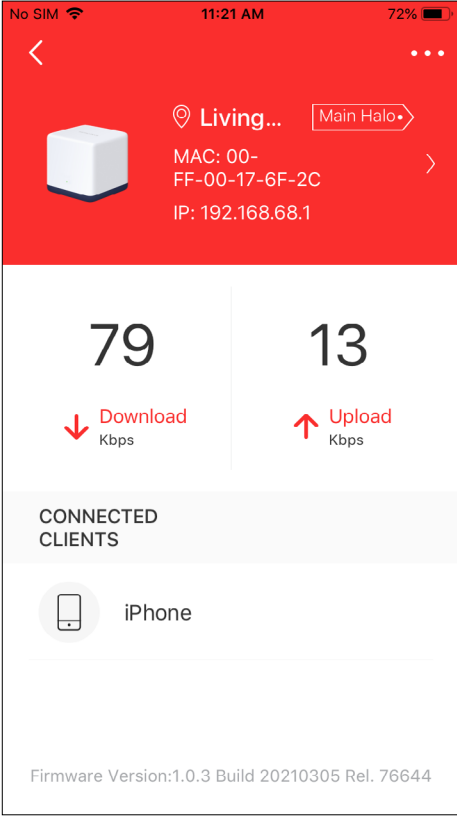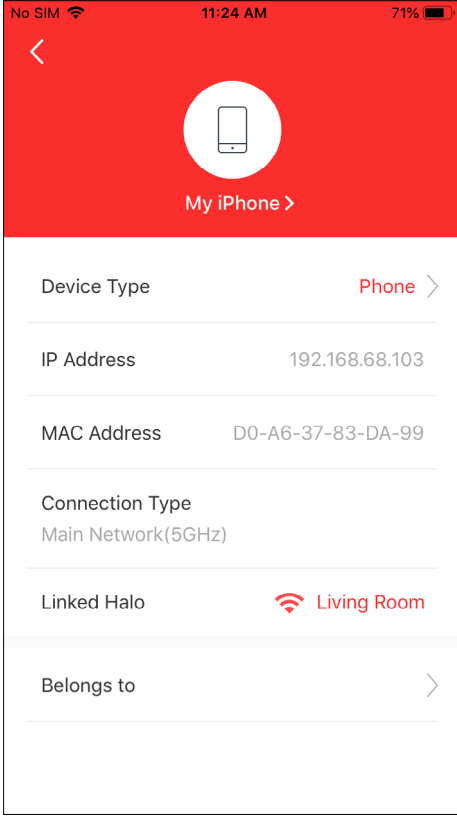
Tap 🗐 to view connected devices

No SIM 📶	3:16 PM	94% 🔋
☰	Halodoc ▾	✉ ⊕

🌐

Internet

Devices

📱	Home Network	1 online
📱	iPhone	↓ 0 kbps ↑ 0 kbps
	Offline Devices	⌄
📱	Guest Network	1 online

OVERVIEW   MORE

Tap 🌐 to check all Halo status

No SIM 📶	11:17 AM	73% 🔋
‹	Halo	•••

All Halos are online.

| 🔲 | **Living Room** Main Halo• Online | › |

Select a Halo to view the details

No SIM 📶	11:21 AM	72% 🔋
‹		•••

📍 **Living...** Main Halo•
MAC: 00-FF-00-17-6F-2C
IP: 192.168.68.1   ›

79   **13**

↓ Download Kbps   ↑ Upload Kbps

CONNECTED CLIENTS

| 📱 | iPhone |

Firmware Version:1.0.3 Build 20210305 Rel. 76644

View connected devices details

No SIM 📶	11:24 AM	71% 🔋
‹		

📱

My iPhone ›

Device Type	Phone ›
IP Address	192.168.68.103
MAC Address	D0-A6-37-83-DA-99
Connection Type Main Network(5GHz)	
Linked Halo	📶 Living Room
Belongs to	›

7

Tap ⚏ to set up more features

No SIM 📶   11:25 AM   70% 🔋

☰

ROUTER SETTINGS

📶
Wi-Fi

⚙️
Advanced

⬆️
Update Halo

👤🚫
Blacklist

WPS
WPS

MORE SETTINGS

👥
Parental Controls

⇒
QoS

📅
Monthly Report

👤⚙️

OVERVIEW   MORE
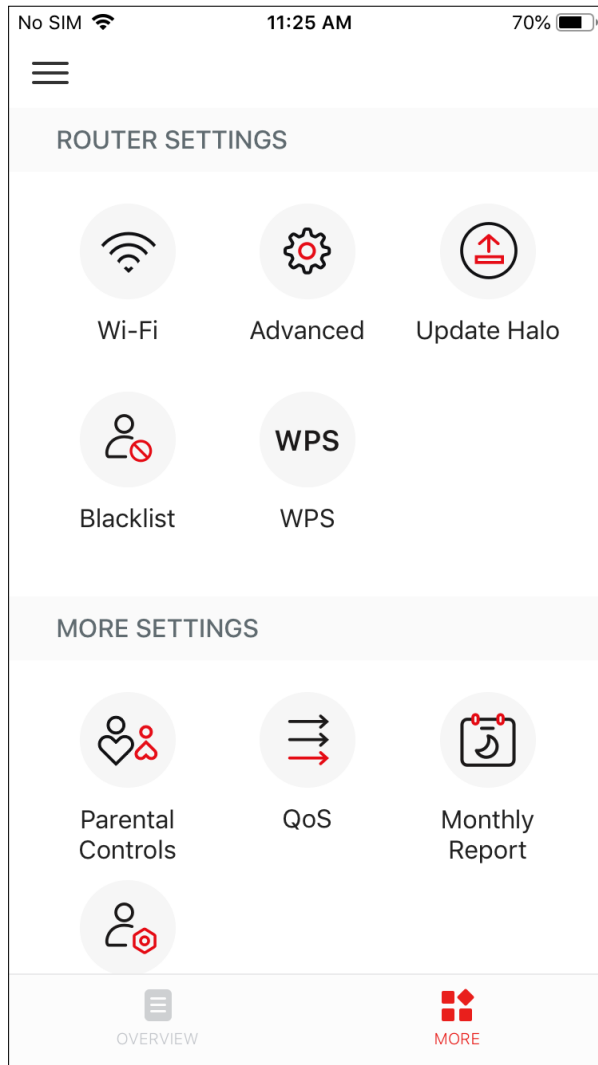
Swipe right to open the menu

No SIM 📶   11:25 AM   70% 🔋

☰

👤   eileen.chen@tp-link.com

Halo WiFi   ⇄
Owner

?   **Help**

i   **About**

ROU

W

👤

Blac

MOR

Par
Cor

👤

Tap ＋ to add more devices

No SIM 📶   11:25 AM   70% 🔋

‹

Find a suitable spot
Select the layout that looks like your home. We'll tell you where to place Halos.

▼ **1 floor** ▲
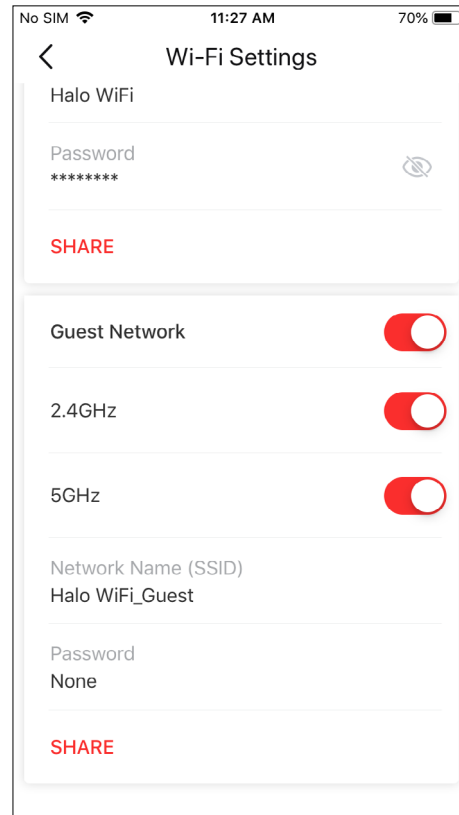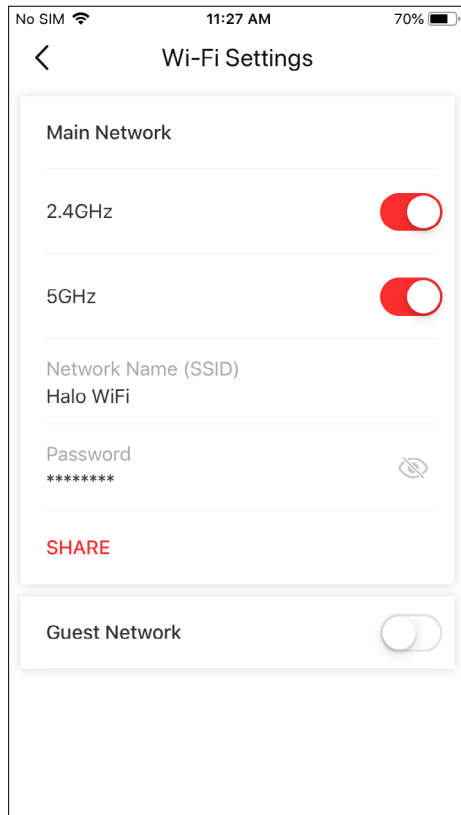
Next

See Placement Guide
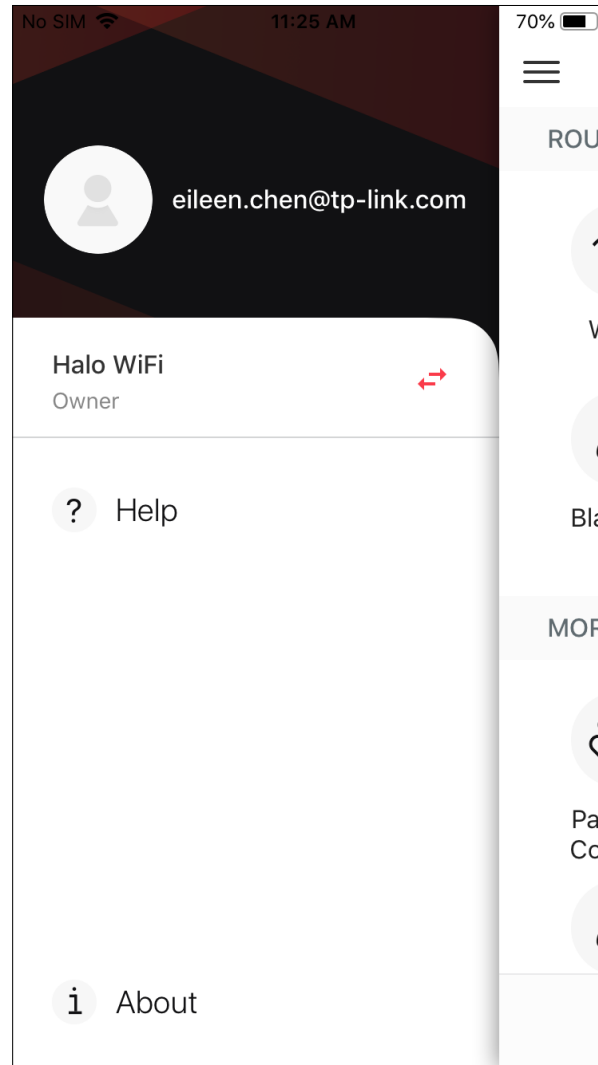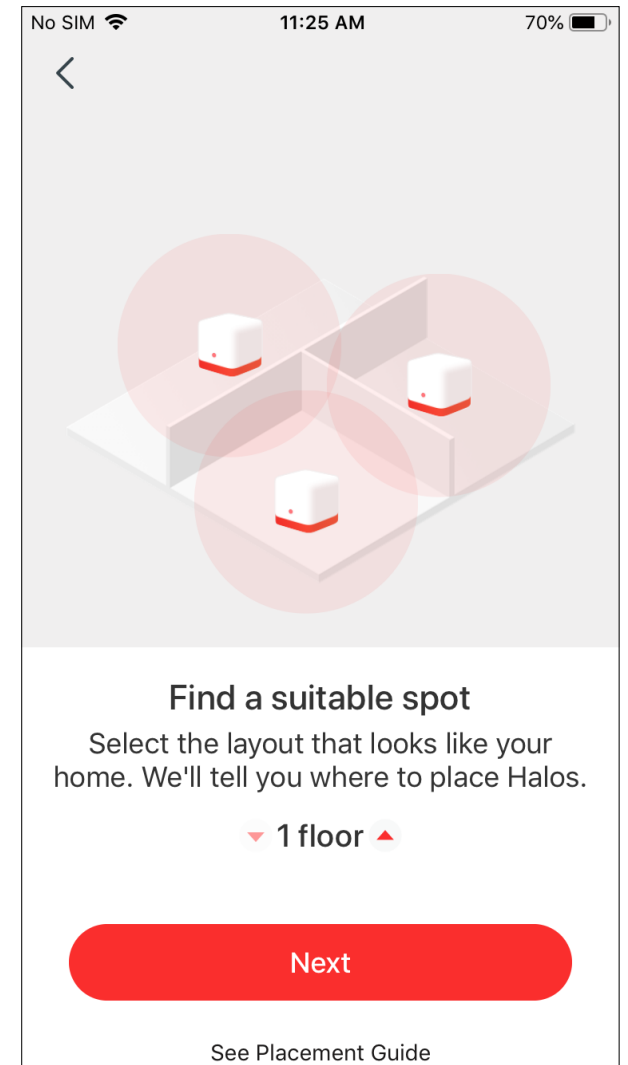
Wi-Fi Settings

You can change the network name and password of your main network, create a separate network for guests, and share your device to share the network details easily with family and friends.
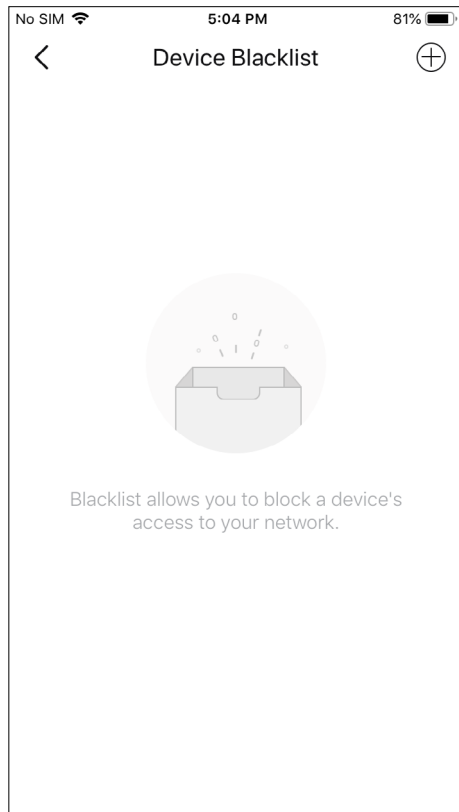
Tap ⠿ > Wi-Fi

Enable guest network

Blacklist

Compile a blacklist to avoid devices added on the blacklist to access to your network, ensuring the safety of your personal information shared in the network.

Tap ⊞ > Blacklist	Add clients to blacklist	Add other devices to blacklist
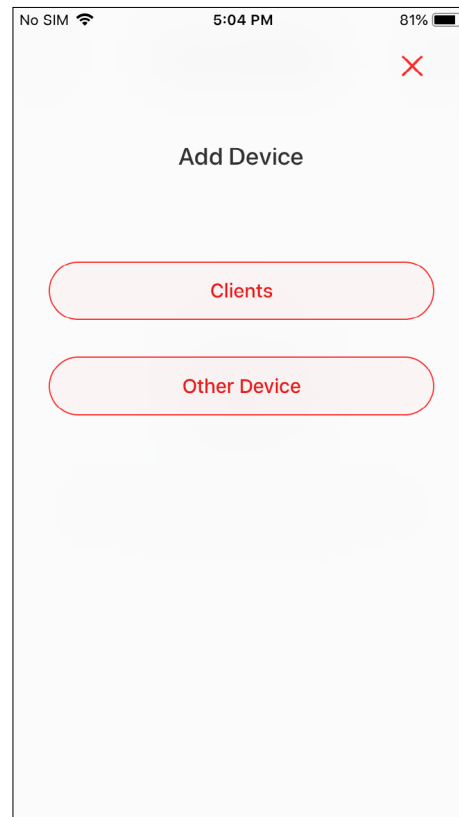
Device Blacklist

Blacklist allows you to block a device's access to your network.

Add Device

Clients

Other Device

Add Device   Done

MAC Address

Enter the MAC address of the device you want to block.
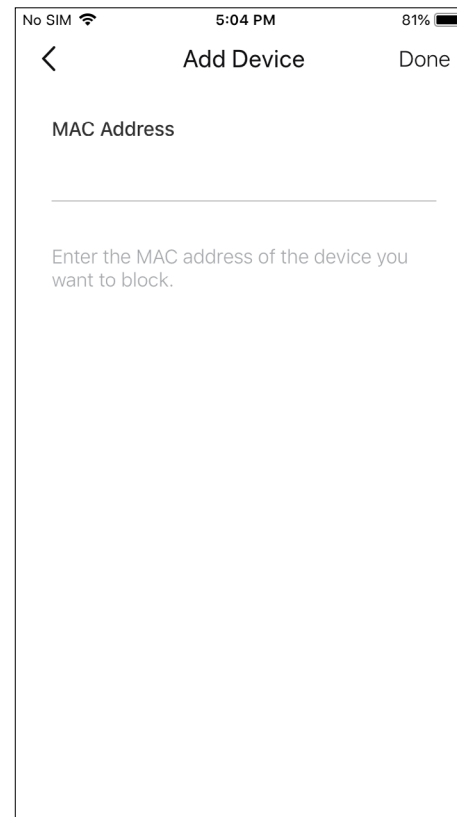
Online Update

Update Halo when prompted in the MERCUSYS app.

Tap ⊞ > Update Halo

No SIM 📶	5:04 PM	80% 🔋

< Update Halo

Checking for Updates...
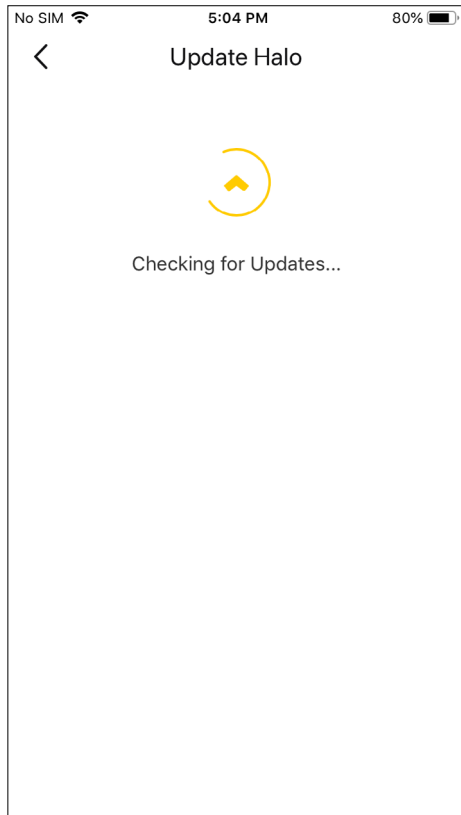
Advanced Features

Additional features are available under the Advanced menu. You can modify WAN settings (IPv4 & IPv6), add IPv6 firewall rules, modify LAN IP, set up DHCP server, enable VLAN/IPTV/MAC Clone mode, reserve the same IP address for a specific device, set up port forwarding rules to make your local computers accessible to other devices over the internet, SIP ALG, fast roaming and beamforming, control Halo's LED, change the working mode, and configure the notification settings.

Tap ⊞ > Advanced
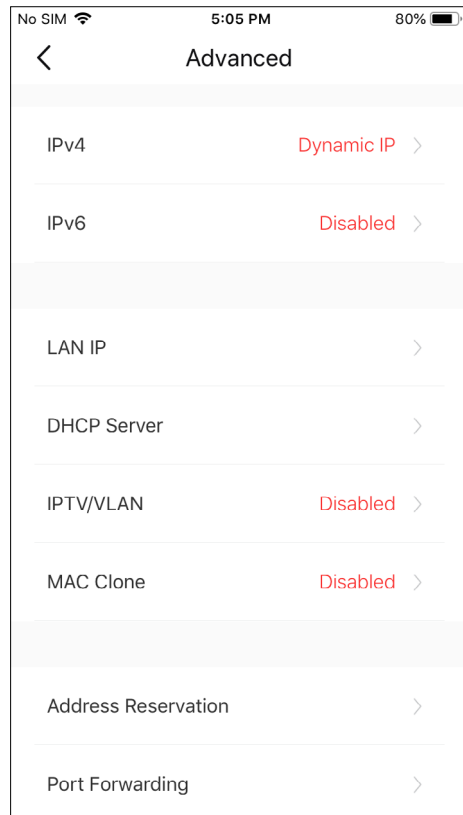
Modify LAN IP

No SIM 📶 | 5:05 PM | 80% 🔋

<   LAN IP   Save

LAN IP

192.168.4.1

Subnet Mask   255.255.252.0 ›

Set DHCP server

No SIM 📶 | 5:05 PM | 80% 🔋

<   DHCP Server   Save

3 IP addresses assigned.

Start IP

192.168.4.50

End IP

192.168.7.250

Default Gateway

192.168.4.1

Primary DNS (Optional)

Secondary DNS (Optional)

Enable VLAN mode

No SIM 📶 | 5:05 PM | 80% 🔋

<   IPTV/VLAN   Save

IPTV/VLAN   ⬜

Enable MAC Clone

No SIM 📶 | 5:05 PM | 80% 🔋
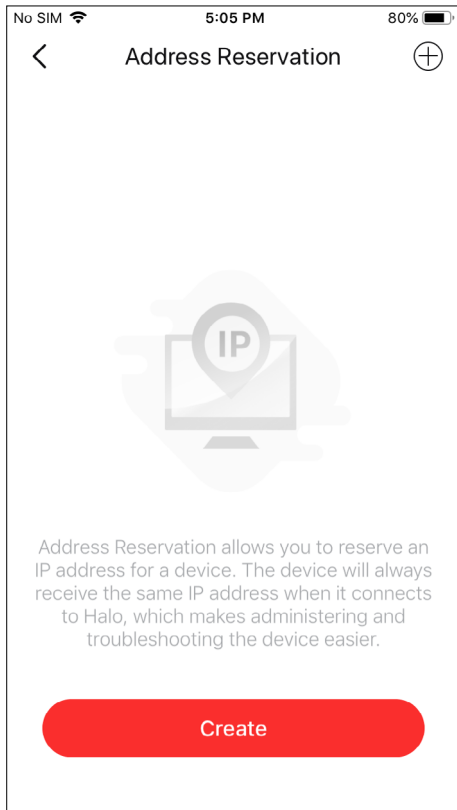
<   MAC Clone   Save

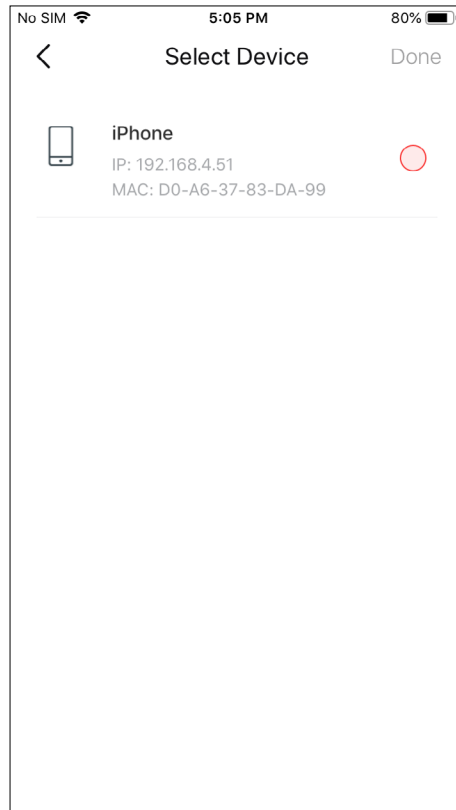MAC Clone   🔴

Use Client MAC Address   ⚪

Use Custom MAC Address   ⚪

Tip: Make sure you select or enter the MAC address specified by your ISP.
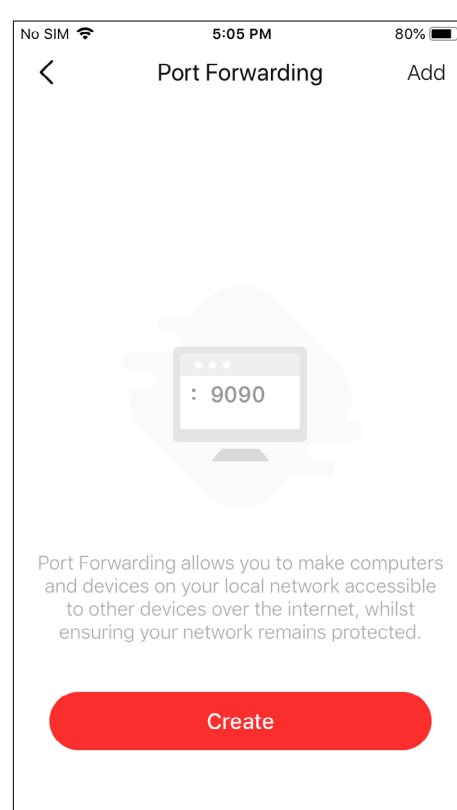
13

Reserve IP addresses for specific devices

No SIM 📶   5:05 PM   80% 🔋

‹   **Address Reservation**   ⊕

IP

Address Reservation allows you to reserve an IP address for a device. The device will always receive the same IP address when it connects to Halo, which makes administering and troubleshooting the device easier.

Create

Reserve IP addresses for specific devices

No SIM 📶   5:05 PM   80% 🔋

‹   **Select Device**   Done

📱 **iPhone**
IP: 192.168.4.51
MAC: D0-A6-37-83-DA-99   ⬤

Set up port forwarding rules

No SIM 📶   5:05 PM   80% 🔋

‹   **Port Forwarding**   Add

: 9090

Port Forwarding allows you to make computers and devices on your local network accessible to other devices over the internet, whilst ensuring your network remains protected.

Create

Register a DDNS domain name

No SIM 📶   5:06 PM   80% 🔋

‹   **MERCUSYS DDNS**

www.

DDNS(Dynamic DNS) allows you to create a friendly domain name that can be used instead of an IP address to access your Halo and local resources over the internet.

Register

14

Enable SIP ALG

No SIM   5:06 PM   80%

SIP ALG

SIP ALG ⬤

When enabled, clients can communicate with SIP (Session Initiation Protocol) servers via NAT.

Enable Fast Roaming

No SIM   5:06 PM   80%

Fast Roaming

Fast Roaming ⬜

Fast roaming with IEEE 802.11r allows wireless devices to switch connection to different Halos seamlessly.

Note:

1.Turning on this feature may result in some older wireless device being disconnected from the Halo Network.

2.If some devices are disconnected from Halo network after turning on/off this feature,try forgetting the Halo network on these devices and then join the network again.

Enable Beamforming

No SIM   5:06 PM   80%

Beamforming

Beamforming ⬤

Beamforming concentrates Wi-Fi signal towards connected devices for stronger connections.

Enable LED controls

No SIM   5:06 PM   80%

LED Control

LED ⬤

Night Mode ⬜

Enable Night Mode to automatically turn off the LED.

15

Change the operating mode

No SIM 📶   5:07 PM   80% 🔋

Operation Mode

Router (Default) ⦿

In wireless router mode, Halo connects to the internet directly via Dynamic IP, Static IP, PPPoE, etc., and shares internet access to multiple wired or wireless devices. NAT and DHCP server are enabled by default.

Access Point ○

In access point mode, Halo connects to a wired or wireless router via an Ethernet cable and extends the wireless coverage of your existing network. Functions like NAT, Parental Controls and QoS are not supported in this mode.

Set notifications

No SIM 📶   5:07 PM   80% 🔋

Notifications   Save

Notifications   Enabled

Notifications are enabled. You'll receive alerts in the Notifications bar. Disable it on your device's Settings > Notifications page.

Firmware Updates ⬤

Parental Controls ⬤

New Device Detected ⬤

Monthly Reports ⬤

Enable UPNP

No SIM 📶   5:06 PM   80% 🔋

UPNP

UPNP ⬤

When enabled, devices on your local network are allowed to dynamically open ports for applications such as multiplayer gaming and real-time communications.
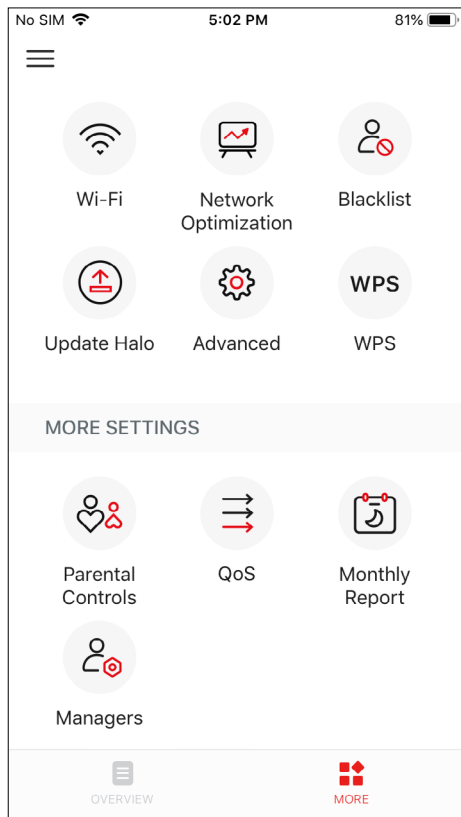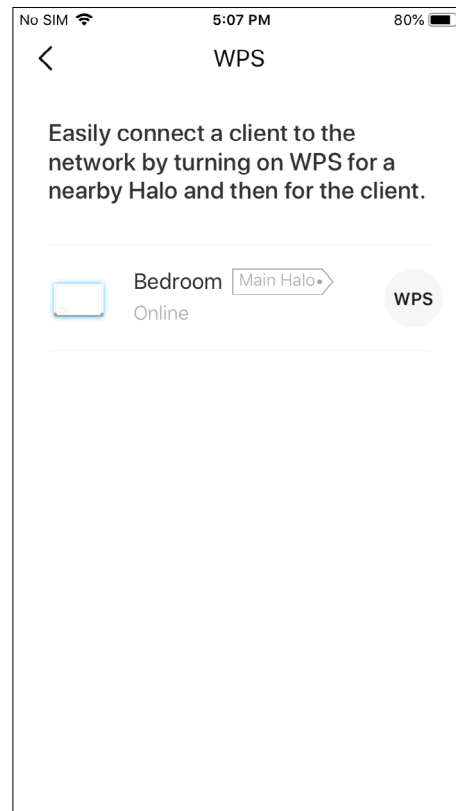
WPS

Easily connect a client to the network by turning on WPS for a nearby Halo and then for the client.

Tap ⠿ > WPS

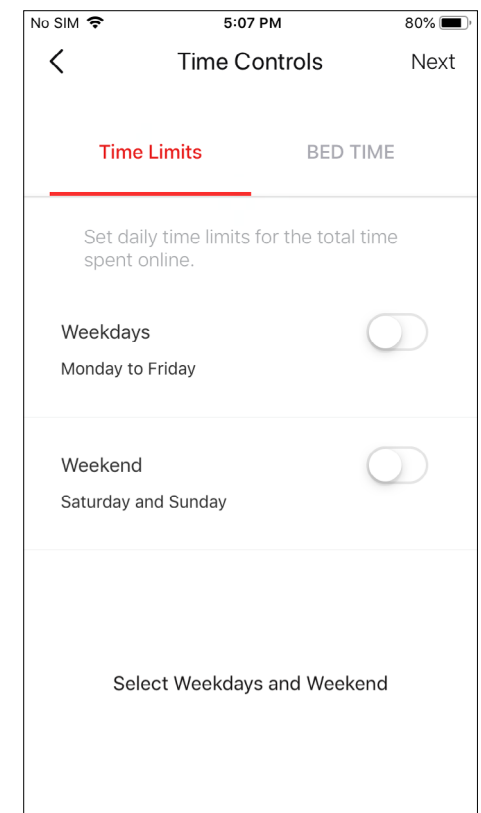Tap the WPS icon on Halo app and then on the client
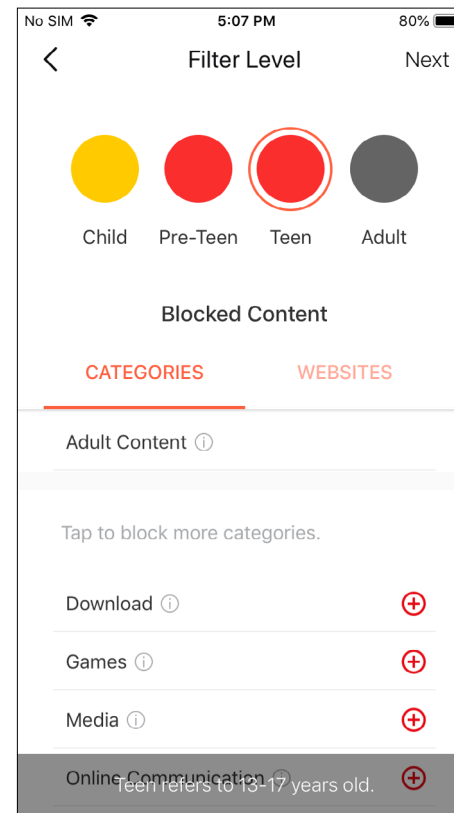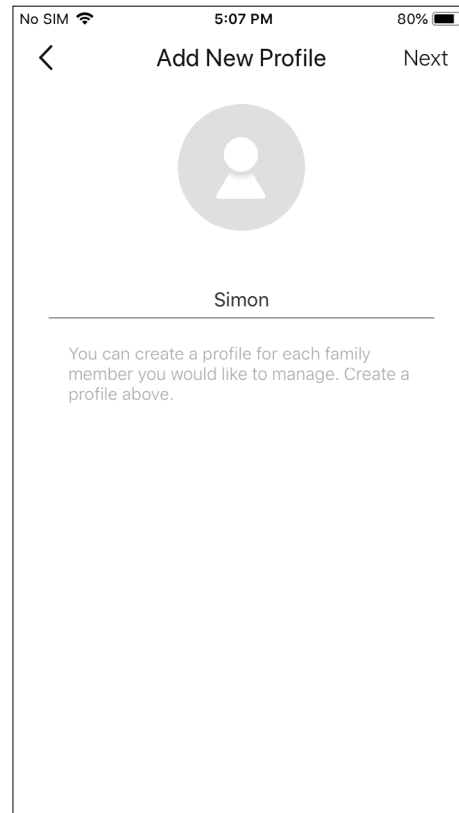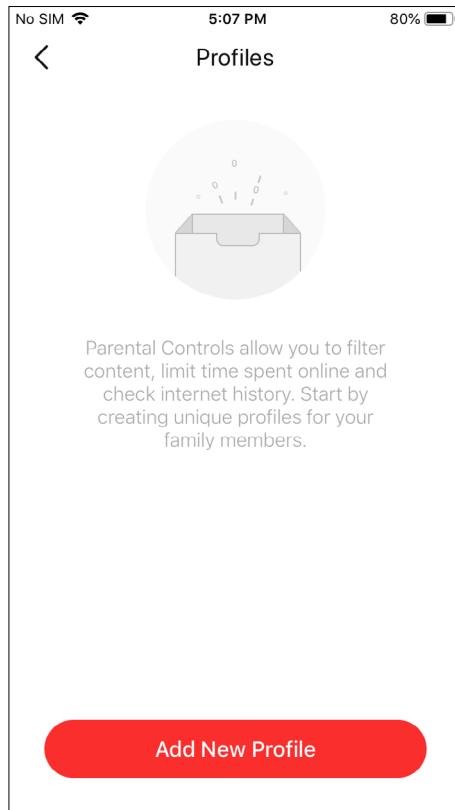
Parental Controls

Create profiles for family members and specify the devices that belong to them. Set individualized parental controls including when and for how long each person can access the internet. Block inappropriate content and pause the internet if necessary.

Tap ▦ > Parental Controls

No SIM 📶   5:07 PM   80% 🔋

‹ Profiles

Parental Controls allow you to filter content, limit time spent online and check internet history. Start by creating unique profiles for your family members.

Add New Profile

Add new profile

No SIM 📶   5:07 PM   80% 🔋

‹ Add New Profile   Next

Simon

You can create a profile for each family member you would like to manage. Create a profile above.

Set filter level

No SIM 📶   5:07 PM   80% 🔋

‹ Filter Level   Next

Child   Pre-Teen   Teen   Adult

Blocked Content

CATEGORIES   WEBSITES

Adult Content ⓘ

Tap to block more categories.

Download ⓘ   ⊕

Games ⓘ   ⊕

Media ⓘ   ⊕

Online Communication ⓘ   ⊕
Teen refers to 13-17 years old.

Set time controls

No SIM 📶   5:07 PM   80% 🔋

‹ Time Controls   Next

Time Limits   BED TIME

Set daily time limits for the total time spent online.

Weekdays ⬜
Monday to Friday

Weekend ⬜
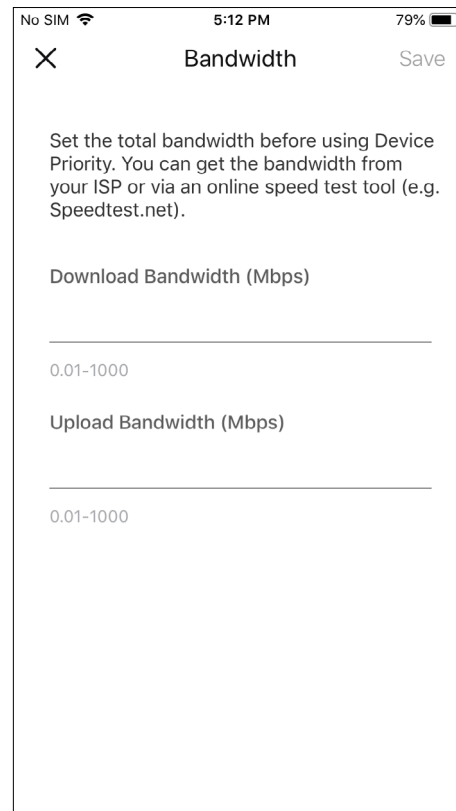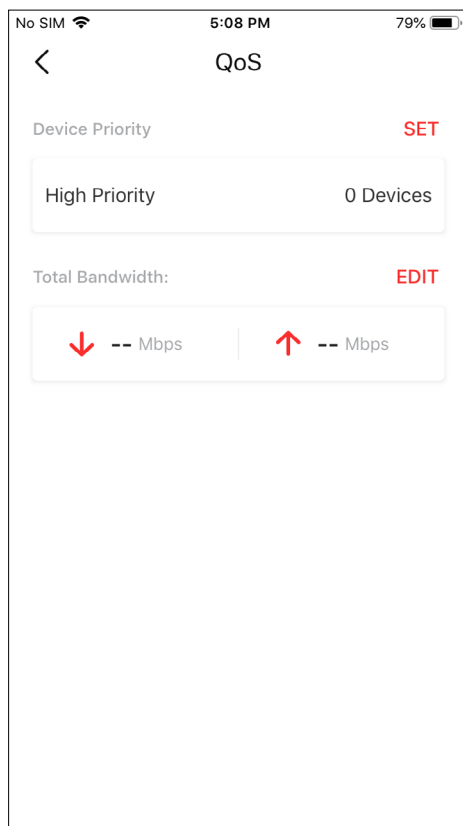Saturday and Sunday

Select Weekdays and Weekend

QoS

Prioritize the connection of a particular device for a set duration, such as a family member's laptop for one hour during a video call.
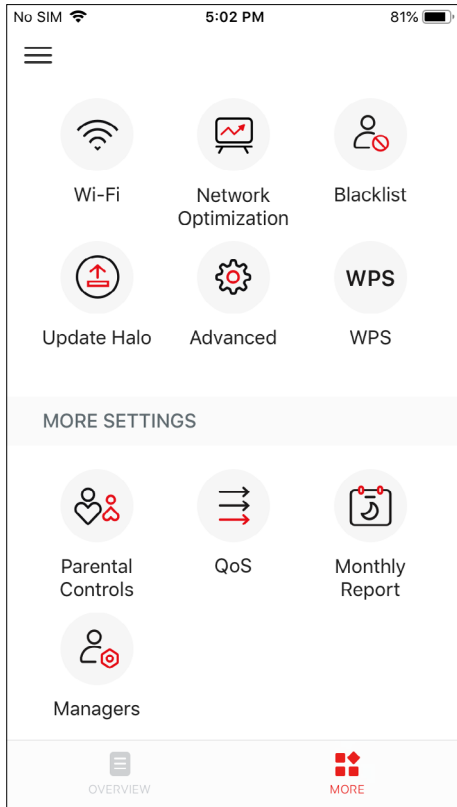
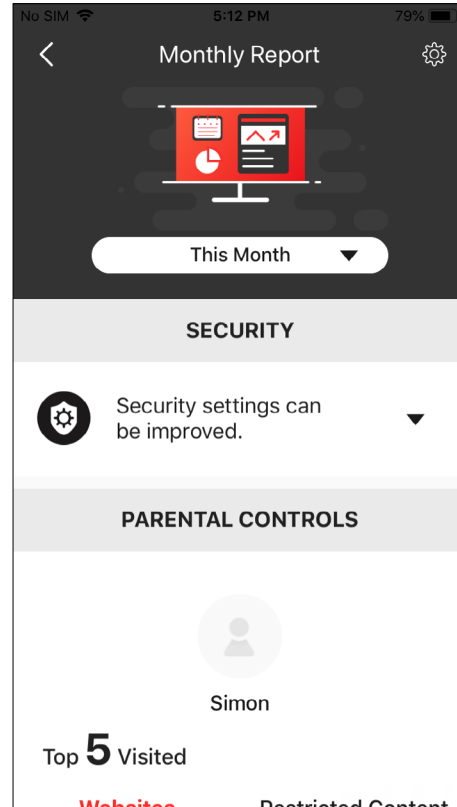Tap ⊞ > QoS   Set bandwidth

No SIM 📶	5:08 PM	79% 🔋

⟨   **QoS**

Device Priority   **SET**

High Priority   0 Devices

Total Bandwidth: **EDIT**

↓ -- Mbps   ↑ -- Mbps

No SIM 📶	5:12 PM	79% 🔋

✕   **Bandwidth**   Save

Set the total bandwidth before using Device Priority. You can get the bandwidth from your ISP or via an online speed test tool (e.g. Speedtest.net).

Download Bandwidth (Mbps)

_____

0.01-1000

Upload Bandwidth (Mbps)

_____

0.01-1000

Monthly Report

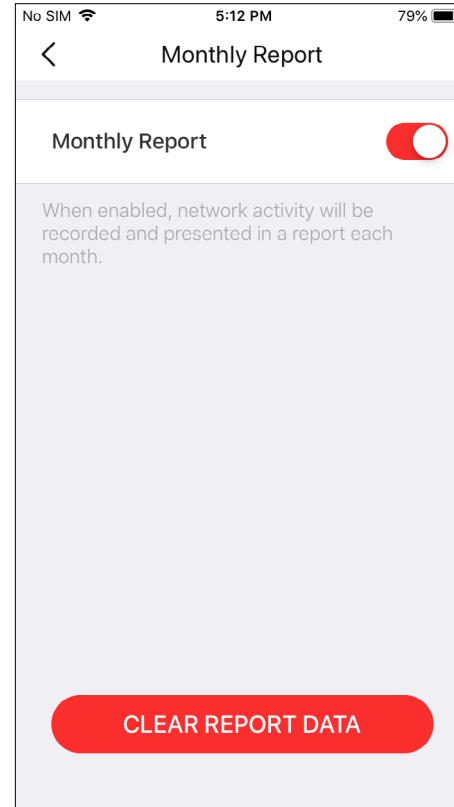Review the monthly usage statistics, such as security threats and total connected network devices each day.

Tap ⊞ > Monthly Report

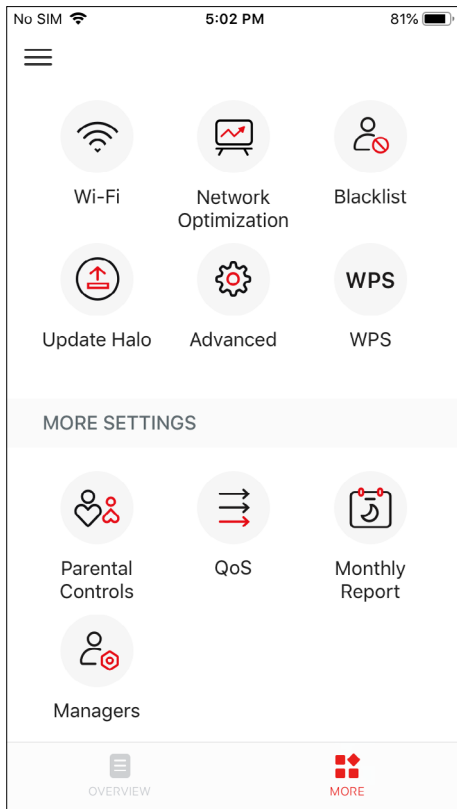| No SIM 📶	5:02 PM	81% 🔋

☰

📶	📈	👤🚫
Wi-Fi	Network Optimization	Blacklist

⬆	⚙	WPS
Update Halo	Advanced	WPS

MORE SETTINGS

👥	⇄	📅
Parental Controls	QoS	Monthly Report

👤⚙
Managers

OVERVIEW   MORE

View monthly reports

No SIM 📶	5:12 PM	79% 🔋

‹   Monthly Report   ⚙

This Month ▾

SECURITY

🛡 Security settings can be improved.   ▾

PARENTAL CONTROLS

👤

Simon

Top **5** Visited
Websites   Restricted Content

Enable or disable monthly report

No SIM 📶	5:12 PM	79% 🔋

‹   Monthly Report

Monthly Report   🔴

When enabled, network activity will be recorded and presented in a report each month.
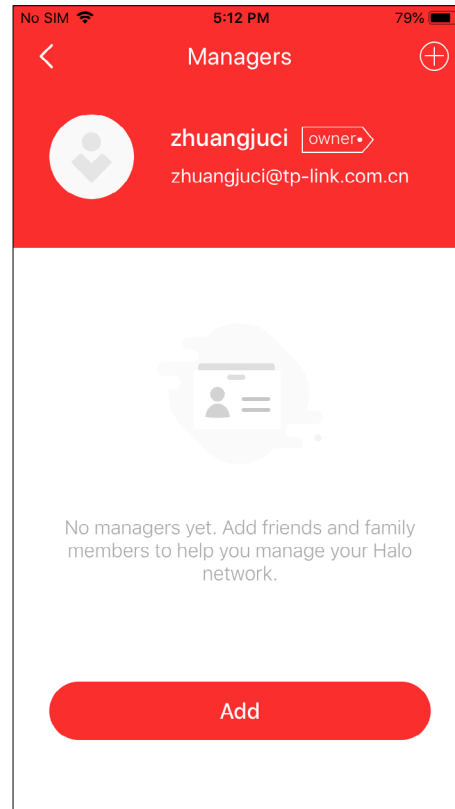
CLEAR REPORT DATA

20

Managers

Add friends and family members to help manage your network. Each manager should have their own Mercusys ID.

Tap ⊞ > Managers
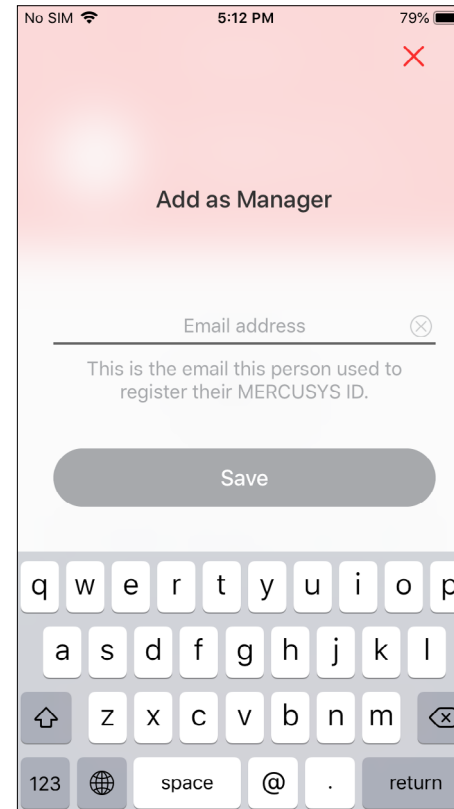
Add managers

Enable or disable monthly report

Wi-Fi   Network Optimization   Blacklist
Update Halo   Advanced   WPS

MORE SETTINGS

Parental Controls   QoS   Monthly Report

Managers

OVERVIEW   MORE

Managers

zhuangjuci owner▾
zhuangjuci@tp-link.com.cn

No managers yet. Add friends and family members to help you manage your Halo network.

Add

Add as Manager

Email address

This is the email this person used to register their MERCUSYS ID.

Save

Authentication

CE Mark Warning

C€

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

OPERATING FREQUENCY (the maximum transmitted power)

2400 MHz -2483.5 MHz(20dBm)

5150 MHz -5250 MHz(23dBm)

EU declaration of conformity

MERCUSYS hereby declares that the device is in compliance with the essential requirements and other relevant provisions of directives 2014/53/EU, 2009/125/EC, 2011/65/EU and (EU)2015/863.

The original EU declaration of conformity may be found at **http://www.mercusys.com/en/ce**

RF Exposure Information

This device meets the EU requirements (2014/53/EU Article 3.1a) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.

The device complies with RF specifications when the device used at 20 cm from your body.

National restrictions

Attention: This device may only be used indoors in all EU member states, EFTA countries and Northern Ireland.

Attention: This device may only be used indoors in Great Britain.

AT	BE	BG	CH	CY	CZ	DE	DK
EE	EL	ES	FI	FR	HR	HU	IE
IS	IT	LI	LT	LU	LV	MT	NL
NO	PL	PT	RO	SE	SI	SK	UK(NI)

UK

UK Declaration of Conformity

Mercusys hereby declares that the device is in compliance with the essential requirements and other relevant provisions of the Radio Equipment Regulations 2017.

The original UK Declaration of Conformity may be found at https://www.mercusys.com/support/ukca/

Продукт сертифіковано згідно с правилами системи УкрСЕПРО на відповідність вимогам нормативних документів та вимогам, що передбачені чинними законодавчими актами України.

Korea Warning Statements:

당해 무선설비는 운용중 전파혼신 가능성이 있음.

NCC Notice & BSMI Notice:

注意！

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前述合法通信，指依電信管理法規定作業之無線電通信。

低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

應避免影響附近雷達系統之操作。

高增益指向性天線只得應用於固定式點對點系統。

安全諮詢及注意事項

- 請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。
- 注意防潮，請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。
- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。
- 請不要私自打開機殼，不要嘗試自行維修本產品，請由授權的專業人士進行此項工作。

限用物質含有情況標示聲明書

設備名稱：AX1800 Whole Home Mesh Wi-Fi System Equipment name	型號（型式）：Halo H70X Type designation (Type)

單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
PCB	◯	◯	◯	◯	◯	◯
外殼	◯	◯	◯	◯	◯	◯
電源供應器	—	◯	◯	◯	◯	◯
備考1.〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值 Note 1："Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition. 備考2.〝◯〞係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2："◯" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence. 備考3.〝—〞係指該項限用物質為排除項目。 Note 3：The "—" indicates that the restricted substance corresponds to the exemption.						

Safety Information

- Keep the device away from water, fire, humidity or hot environments.

- Do not attempt to disassemble, repair, or modify the device. If you need service, please contact us.

- Do not use damaged charger or USB cable to charge the device.

- Do not use any other chargers than those recommended

- Do not use the device where wireless devices are not allowed.

- Adapter shall be installed near the equipment and shall be easily accessible.

- Use only power supplies which are provided by manufacturer and in the original packing of this product. If you have any questions, please don't hesitate to contact us.

- Operating Temperature: 0℃ ~ 40℃ (32℉ ~ 104℉)

- This product uses radios and other components that emit electromagnetic fields. Electromagnetic fields and magnets may interfere with pacemakers and other implanted medical devices. Always keep the product and its power adapter more than 15 cm (6 inches) away from any pacemakers or other implanted medical devices. If you suspect your product is interfering with your pacemaker or any other implanted medical device, turn off your product and consult your physician for information specific to your medical device.

Please read and follow the above safety information when operating the device. We cannot guarantee that no accidents or damage will occur due to improper use of the device. Please use this product with care and operate at your own risk.

Explanation of the symbols on the product label

$=\!=\!=$	DC voltage
$\sim$	AC voltage
▫	Class II equipment
◇—C—⊕	Polarity of output terminals
VI	Energy efficiency Marking
⌂	Indoor use only
⚠	Caution
📖i	Operator's manual
♻	RECYCLING This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment. User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.