



User Guide

AV1000 Gigabit Powerline Wi-Fi Extender

MP510



REV1.0.0
1910080054

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<http://www.mercusys.com>

CE Mark Warning



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)

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 <https://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 20cm from your body.

Korea Warning Statements

당해 무선설비는 운용중 전파혼신 가능성이 있음 .

NCC Notice

注意！

依據低功率電波輻射性電機管理辦法

LP0002低功率射頻器材技術規範_章節3.8.2

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限用物質含有情況標示聲明書

設備名稱：AV1000 Gigabit Powerline Wi-Fi Extender Equipment name				型號（型式）：MP510 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	○	○	○	○	○	○
電源供應板	—	○	○	○	○	○
網綫	○	○	○	○	○	○
備考 1. "超出 0.1wt%" 及 "超出 0.01wt%" 系指限用物質之百分比含量超出百分比含量基準值。 備考 2. "○" 系指該項限用物質之百分比含量未超出百分比含量基準值。 備考 3. "—" 系指該項限用物質為排除項目。						



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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 the device where wireless devices are not allowed.
- The socket-outlet shall be installed near the equipment and shall be easily accessible
- Plug the powerline devices directly into the wall outlets but not the power strips.
- Plug the powerline devices into the wall outlets with earthing connection.

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.

CAUTION:

Double pole, neutral fusing.
Disconnect mains before servicing.

ATTENTION:

Double pôle/fusible sur le neutre.
Déconnecter du réseau électrique avant toute intervention de maintenance.

Explanation of the symbols on the product label

Symbol	Explanation
	Class II equipment with functional earthing
	AC voltage
	DC voltage
	Indoor use only
	Functional earth wiring terminals only
	Warning electric shock
	Fuse is used in neutral N
	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.

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Conventions

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 in typical scenarios.

When using this guide, please notice that features of the powerline adapter may vary slightly depending on the model and software version you have. The powerline adapter 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 powerline adapter experience.

*Compatible with all HomePlug AV and AV2 Standard Powerline adapters. This product may not be compatible with routers or gateways with firmware that has been altered, is based on open source programs, or are non-standard or outdated.

More Info

Specifications and the latest software can be found at the product page at the official website <http://www.mercusys.com>.

The Quick Installation Guide can be found where you find this guide or inside the package of the router.

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 network conditions, client limitations, and environmental factors, including building materials, obstacles, volume and density of traffic, and client location.

*Maximum Powerline signal rates are the physical rates derived from HomeplugAV/AV2 specifications. Actual Powerline data throughput and Powerline range are not guaranteed and will vary as a result of network conditions and environmental factors, including electrical interference, volume of traffic and network overhead, AFCI circuit breaker, and Powerline being located in a separate circuit.

Chapter 1 Introduction

1.1 Product Overview

Mercusys powerline adapter aims to extend your existing home network, with the help of your home's electrical circuit.

1.2 Product Appearance

Your powerline adapter may differ in appearance slightly from that depicted because of the region and product version.

Note: MP510(EU Version) is used for demonstration in this guide.

1.2.1 LED Legend



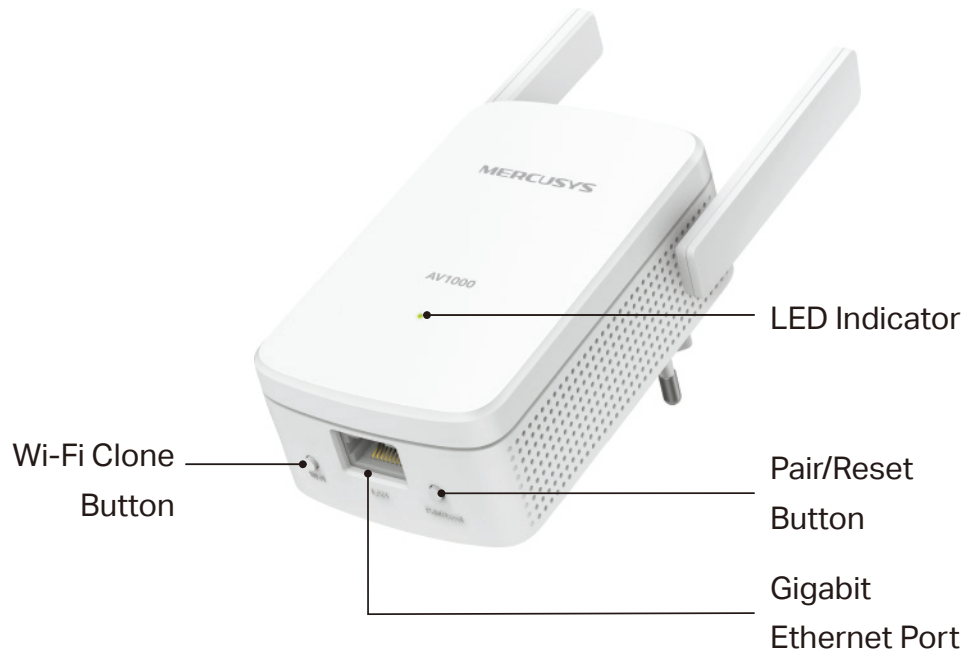
LEDs indicate the powerline adapter's working status. For more details, please refer to the following table.

Status	Indication	
Solid Green	The powerline device is on.	
Blinking Green	Blinking quickly	The powerline device is booting. Or pairing is in process.
	Blinking slowly	The powerline device is not paired.
Solid Orange	The Wi-Fi is off.	
Blinking Orange	Wi-Fi Clone or Wi-Fi Move is processing.	
Off	The powerline device is off. Or Power-Saving Mode is on (the extender excluded).	

*Five minutes after the device connected to the powerline adapter is turned off or inactive, the powerline adapter will automatically switch to Power-Saving Mode.

*(MP500 Only)

1.2.2 Physical Interface



Power Plug

The powerline adapter has a Plug that can be connected to a power socket.

Pair/Reset Button

Press and hold the button for 1 second to join a powerline network. Go to **Secure Powerline Network by Pairing** for more information.

Press and hold for more than 6 seconds to reset the powerline adapter.

Ethernet Port

Connect the Ethernet port to your wired devices, such as a computer, a router or a game console, via an Ethernet cable.

Wi-Fi Clone Button

Press and hold the button for 1 second to copy wireless settings from the main router to the extender. Go to **Wi-Fi Clone** for more information.

Press and hold the button for about 5 seconds to turn the wireless function on or off.

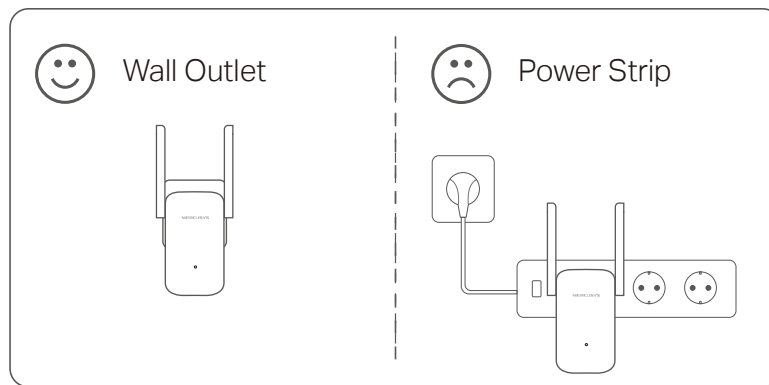
The wireless function is on by default.

Chapter 2 Use the Powerline Device

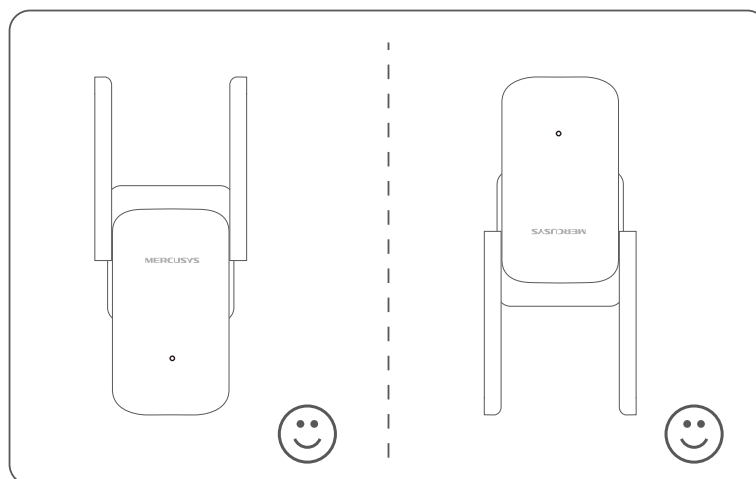
2.1 Requirements

Powerline devices work in pairs. You should have at least two powerline products to build a powerline network. To optimize your network performance, please follow these principles:

- All powerline devices should be on the same electrical wiring system.
- Avoid plugging in powerline devices and high-powered household devices (such as washing machines and refrigerators) close to one another.
- Plug the powerline device directly into a wall outlet. Do not plug the powerline device into a power strip, extension cord, or surge protector.



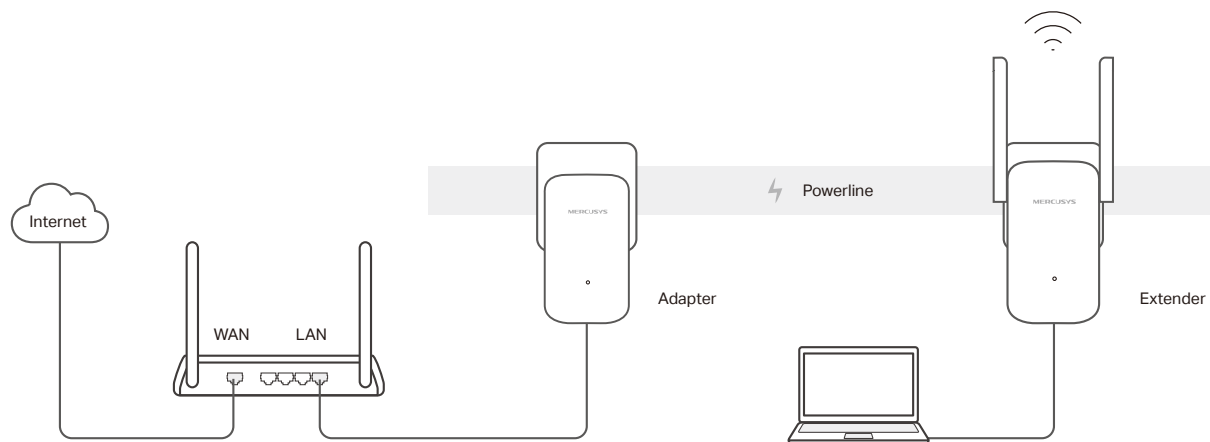
- Use the powerline device only in below directions.



2.2 Extend Wired Network by Plug & Play

If your router's wireless signal cannot reach every corner in the house, you can solve the problem with a Powerline Wi-Fi Kit to extend the wireless network. The Powerline Wi-Fi Kit includes a powerline adapter and a powerline extender.

1. Connect the adapter to a LAN port of your router using an Ethernet cable.
2. Plug the extender into the wall outlets on the same electrical circuit.
3. Wait until the Power LED on any powerline device turns solid green.
4. Connect to the Wi-Fi using the SSID and password on the product label.



Done! Now enjoy the internet!

2.3 Secure Powerline Network by Pairing

All powerline devices share some common factory settings, and can communicate with one another. If you want your powerline devices to communicate only with your own powerline devices, you should pair them. Thus a secured powerline network is formed and other powerline devices can no longer join your powerline network without being paired.

Note: You can only pair two devices at a time.

If you have extended the network using the Plug & Play method, but you want to secure the powerline network and prevent other powerline devices from being added to it, please follow the steps below.

1. Verify all powerline devices' LEDs are solid on.

Tips: We recommend that you plug in your powerline devices near each other, or as close to each other as possible when pairing. Your settings will not be affected. The devices can be relocated to where they are needed once pairing is complete.

2. Press the Pair button for 1 second on the adapter. Its LED starts blinking green quickly.
3. Within 2 minutes, press the Pair button for 1 second on the extender. Its LED starts blinking green quickly as well. When the LED turns solid green, the pairing process is complete.



4. Relocate the extender to the Wi-Fi "dead" zone. Connect to the Wi-Fi using the SSID and password on the product label.

Done! Enjoy your secure powerline network!

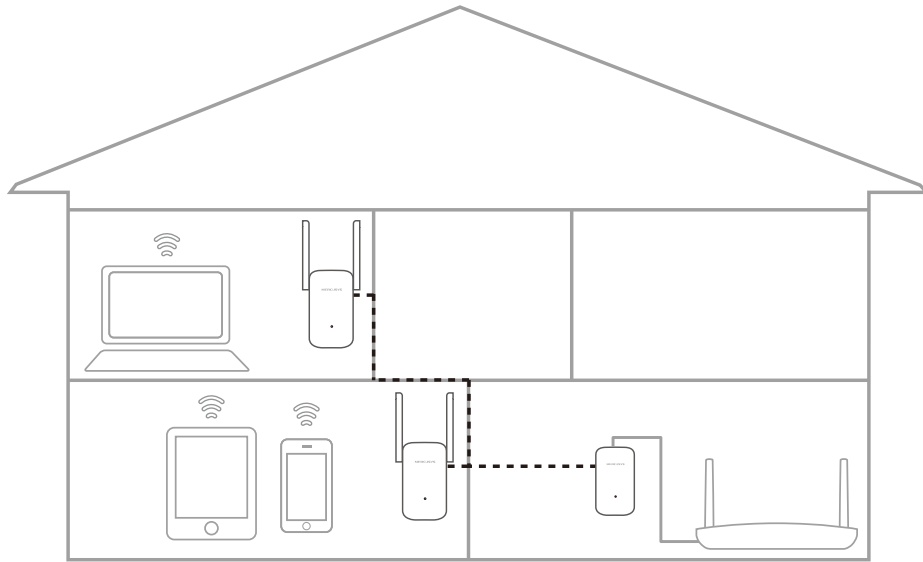
2.4 Add Another Powerline Adapter

If you have already set up a wireless network using powerline devices, but the wireless network is still not big enough to reach the top floor, you can add a new powerline extender to extend the wireless network.

1. Plug the new powerline extender into a wall outlet near one of the existing powerline devices.
2. Wait for a minute, and check whether the LED turns on. If it's on, skip to step 3. If it's not, continue with step 2 to pair the new powerline extender into the secured powerline network.
 - a . Press the Pair button on one of the existing powerline devices for 1 second. Its LED starts blinking green quickly.
 - b . Within 2 minutes, press the Pair button on the new powerline extender for 1 second. Its LED starts blinking green quickly as well. When the LED turns solid green, the pairing process is complete.



3. Relocate the new extender to the Wi-Fi “dead” zone. Connect to the Wi-Fi using the SSID and password on the product label.
 - a . Connect to the Wi-Fi using the SSID and password on the product label.
 - b . If you cannot find the default SSID in your Wi-Fi network list, this may mean the Wi-Fi Move feature has automatically copied over the existing wireless settings. In this case, use the SSID and password of your existing powerline network to connect.

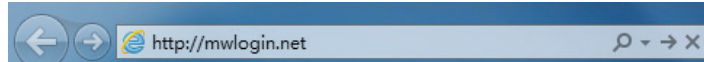


Done! Enjoy the internet through your extended network!

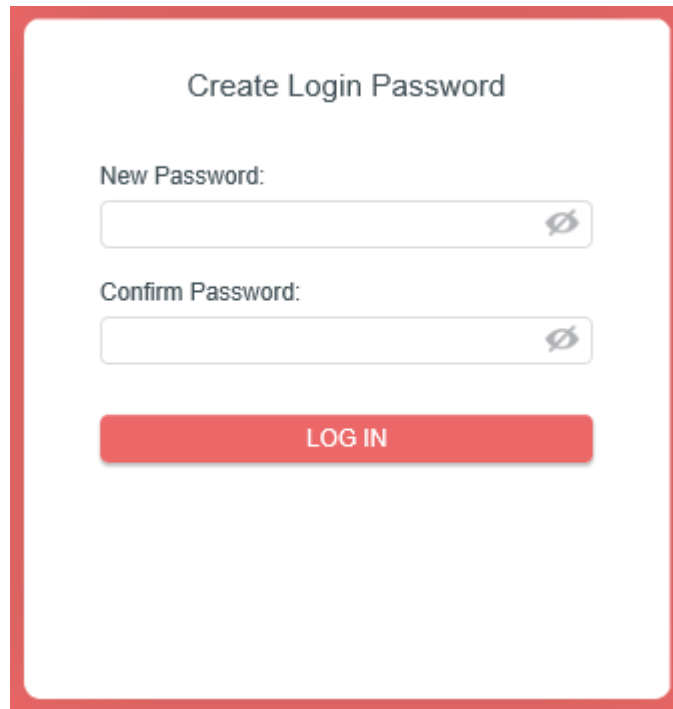
Chapter 3 Configure via Web Management Interface

3.1 Log In Web Management Interface

1. Connect your device to the powerline extender wirelessly.
2. Launch a web browser and enter the default domain name **http://mwlogin.net** in the address bar.



3. A login window will appear. Create a login password when prompted. Then click **LOGIN IN**. For subsequent login, use the password you have set.

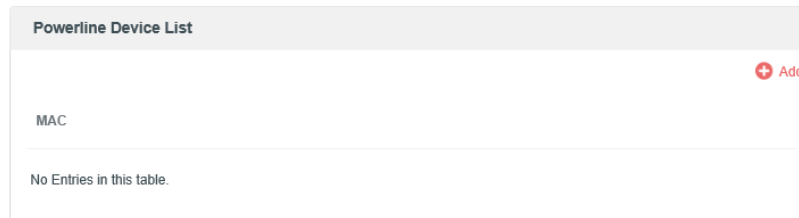
A screenshot of a web form titled 'Create Login Password'. The form is enclosed in a red border. It contains two text input fields: 'New Password:' and 'Confirm Password:'. Each field has a small eye icon to its right. Below the fields is a red button labeled 'LOG IN'.

3.2 Manage Powerline Network

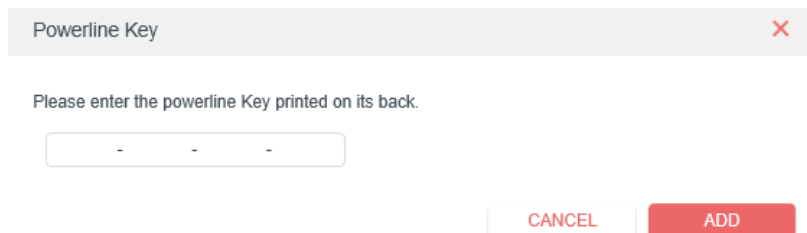
A powerline network is formed of powerline devices, including adapters and extenders. Powerline devices in the same powerline network share the same powerline network name.

3.2.1. Add a New Device to the Powerline Network

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to the **Status** page and click the **Powerline Network** icon to open the Powerline Device List.



3. Click the add icon  and enter the Powerline Key of the device you want to add. The Powerline Key contains 16 capital letters, formed like XXXX-XXXX-XXXX-XXXX. It is printed on the back of the powerline device.



4. Click **ADD** to add the device.

3.2.2. Change Powerline Network Name

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender
2. Go to **Basic > Powerline**.

Powerline

MAC Address: 1C-FA-62-11-22-88

Powerline Key: IRFA-ZJTB-LAND-MWIW

Network Name:

Default

SAVE

3. Change the **Network Name**. You can also click **Default** to use the default network name, e.g. HomePlugAV. However, if the default name is used, the Wi-Fi Move function will be automatically disabled.
4. Click **Save** to make the settings effective.

3.3 Wi-Fi Move

Wi-Fi Move is enabled by default. With the feature enabled, any changes made to the Wi-Fi settings and LED schedules of one powerline extender will be automatically synchronized to other powerline extenders whose Wi-Fi Move feature is also enabled on the same powerline network .

Follow the steps below to enable the Wi-Fi Move feature:

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Advanced > Wireless > Wi-Fi Move**.
3. Toggle on Wi-Fi Move to enable the feature.

Wi-Fi Move

Note: Wi-Fi Move function synchronizes all Wi-Fi Settings and LED Schedules.

Wi-Fi Move: **Note:**

When Wi-Fi Move is enabled, the following features will be synced: Wireless SSID & Password, Wireless Security, Wireless Mode, Wireless Radio Status, Wi-Fi Schedules, LED Schedules, Wi-Fi Clone Settings, MAC Filter Settings, Parental Controls, and Guest Network.

3.4 Wi-Fi Clone

If you want to copy wireless settings from the router to the extender and use the same SSID and password to access the internet in the house, please follow steps as below.

1. Before cloning, make sure your router supports the same band as your extender.
2. Plug your extender near your router.
3. Press the WPS button on your router
4. Within two minutes, press the Wi-Fi button on the bottom of the extender for 1 second. The LED starts blinking orange.

Done!

When the LED blinks orange quickly for 3 seconds and then stays solid green on, the Wi-Fi Clone process is complete.

3.5 Wireless Network

3.5.1. Customize Wireless Settings

The powerline extender's wireless network name (SSID), password, and security option are preset in the factory. The preset SSID and password can be found on the product label. You can customize the wireless settings according to your needs.

Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.

Go to **Basic > Wireless Settings** page.

To enable or disable the wireless function:

Select the box to enable the wireless function. Deselect the box to disable wireless function. If disabled, all wireless settings will be ineffective.

Wireless Settings

Host Network: ☒ Enable ☐ Sharing Network

To change the wireless network name (SSID) or hide SSID:

The default SSID is MERCUSYS_XXXX, and the default password is printed on the product label. You can change the default ones by directly entering new ones in the field. SSID is up to 32 characters, and the value in both SSID and password is case-sensitive.

Select Hide SSID, and your SSID will not be broadcasted. It won't display when you scan for local wireless network list on your wireless device and you need to manually join the network.

Note:

Remember to write down the new SSID, for you will be disconnected when new settings are effective.

SSID: ☐ Hide SSID

To customize more advanced settings:

Security: ▾

Version: ▾

Encryption: ▾

Password:

Channel: ▾

Mode: ▾

Channel Width: ▾

Transmit Power: ☒ High ☐ Middle ☐ Low

Security: Select an option from the Security drop-down list. The extender provides three options, No Security, WPA/WPA2 Personal (Recommended), and WEP. WPA2 uses the newest standard and the security level is the highest. Don't change the default settings unless necessary.

Version: You can select one of following versions.

- **Auto** (Recommended) - Select WPA-Personal or WPA2-Personal automatically based on the wireless station's capability and request.
- **WPA-PSK** - Pre-shared key of WPA.

Eryption: You can select either Automatic(Recommended), TKIP or AES

Password: Set the password of the Wi-Fi network.

Channel: 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.

Mode: Select the desired mode.

- **802.11n only:** Select only if all of your wireless clients are 802.11n devices.
- **802.11g/n mixed:** Select if you are using both 802.11g and 802.11n wireless clients.
- **802.11b/g/n mixed:** Select if you are using a mix of 802.11b, 11g, and 11n wireless clients.

Note: When 802.11n only mode is selected, only 802.11n wireless clients can connect to the extender. It is strongly recommended that you select 802.11b/g/n mixed, so that all of 802.11b, 802.11g, and 802.11n wireless clients can connect to the extender.

Channel Width: Select the channel width. The default setting is Auto, which can adjust the channel width for your clients automatically.

Transmit Power: Select the level of transmit power. We recommend you choose **High** to have the best signal strength.

3. 5. 2. Wireless Clients

Follow the steps below to view detailed information of all wireless clients connected to the extender.

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Wireless > Clients** page.

Online Wireless Clients

Total Clients: 0  Refresh

Device Type	Name	IP Address	MAC	Connection Info
No Entries in this table.				

3. Now you can view the detailed information, including device name, MAC address, connected wireless band, and IP address.

Tips:

You can also see the wireless details by clicking the wireless clients icon on the **Status > Wireless Clients** page.

3.6 LED Schedules

If you want to automatically turn off LEDs at times when you do not want light in the room, please follow steps as below.

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Wireless > Device Settings > LED Control**.
3. Enable **LED Status** to turn on the extender's LEDs.

LED Control

Turn the extender's LEDs on or off.

LED Status: ☒

LED Schedule

LED Schedule: ☒

Notes: Before enabling LED Schedule, please make sure the **Time Settings** is correct.

Current Time: 01/03/2020 10:27:38 PM

 Add

4. Enable **LED Schedule**.
 5. Click **Add** to add an entry.
 6. Choose **LED Off Time**, and check the boxes from Sunday to Saturday you prefer.
- Note:** Please make sure that the system time is correct before using this function.
7. Click **SAVE**.

Add
✕

LED Off Time: From

To (next day)

Repeat: ☒ S ☒ M ☒ T ☒ W ☒ T ☒ F ☒ S

CANCEL
SAVE

Done!

3.7 Schedule Your Wireless Function

If you want to automatically turn off the wireless network at times when you do not need the wireless connection, please follow steps as below.

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Advanced > Wireless > Wi-Fi Schedule**.

WiFi Schedule
Schedule when to automatically turn off your extender.

WiFi Schedule: ☒

☐ Do not turn off WiFi while clients are connected to it

Notes: Before enabling WiFi Schedule, please make sure the **Time Settings** is correct.

Current Time: 01/01/2020 4:09:12 PM

+ Add

WiFi Off Time	Repeat	Status	Modify
No Entries in this table.			

3. Enable **Wi-Fi Schedule**.

Note: If you check the box of Do not turn off Wi-Fi while clients are connected to it, the Wi-Fi schedule are not enabled when any clients are connected to your extender.

4. Click **Add** to add an entry.
 5. Choose **WiFi Off Time**, and check the boxes from Sunday to Saturday you prefer.
- Note:** Please make sure that the system time is correct before using this function.
6. Click **SAVE**.

Add ×

WiFi Off Time: From
 To (next day)

Repeat: ☒ S ☒ M ☒ T ☒ W ☒ T ☒ F ☒ S

Done!

3.8 Parental Controls

If you want to control when the children's wireless devices can access the internet., please follow steps as below.

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Advanced > Parental Controls**.

Parental Controls

Note: Make sure **Time Settings** are correct before using this function.

Parental Controls: ☒

Devices Under Parental Controls

[+ Add](#)

ID	MAC Address	Internet Access Time	Description	Status	Modify
1	B0-E5-ED-F1-C5-80	09:00 AM - 09:00 PM Wed	Test	☒	✎ ✖

3. Enable **Parental Controls**.
4. Click **Add** to add an entry.
5. Click **View Existing Devices**, and select the device to be controlled. Or enter the **MAC Address** manually.
6. Choose **Internet Access Time**, and check the boxes from Sunday to Saturday you prefer.
7. Give a **Description** to the device to be controlled.
8. Click **SAVE**.

Note: Please make sure that the system time is correct before using this function.

Add
✕

☒ Select From Device List

☐ Add Manually

Internet_10-888a-1188a22a5...

192.168.0.101 B0-E5-ED-F1-C5-80

Internet Access Time: From 09:00 AM

To 09:00 PM

Repeat: S M T W T F S

Description:

CANCEL
SAVE

Done!

3.9 Guest Network

If you want to create a network for the guests, providing internet access for them while at the same time limit the network authorities for guests to ensure network security and privacy, please follow steps as below.

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Advanced > Guest Network**.

Guest Network

☐ Allow guests to see each other

☐ Do not allow guests to manage my network

☐ Automatic disable after 30 minutes ▼

3. Check the box of relative entry to limit network authorities.
4. Configure the following settings.

Guest Network Settings

2.4GHz: ☐ Enable

Network Name (SSID): MERCUSYS_Guest_2287 ☐ Hide SSID

Security: ☒ No Security

☐ WPA/WPA2-Personal

To enable or disable the guest network function:

Select the box **2.4GHZ** to enable the guest network function. Deselect the box to disable guest network function. If disabled, all guest network settings of the corresponding band will be ineffective.

To change the guest network name (SSID) and password:

The default SSID is MERCUSYS_Guest_XXXX, and the default password is printed on the product label. You can change the default ones by directly entering new ones in the field. SSID is up to 32 characters, and the value in both SSID and password is case-sensitive.

Done!

3.10 MAC Filter

This function exploits the uniqueness of the MAC (Medium Access Control) address, a unique 12-digit hexadecimal address (for example, D8-5D-4C-B4-46-EA) of every network device, to determine if the device can or cannot access your wireless network.

If you want to prevent unauthorized users from accessing my wireless network by utilizing the network device's MAC address, please follow steps as below.

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Advanced > WirelessGuest > Network**.
3. Toggle on **MAC Filter**.
4. Select either of the filtering rules (here we select **Black List**).

Mac Filter

Mac Filter: ☒

Select the filtering rule: ☒ Blacklist
Configure a blacklist to only block access to your network from the specified devices.

☐ Whitelist

 Add

Device Type	Device Name	MAC Address
No Entries in this table.		

5. Click **Add** to add devices to the list.

Add Devices

☒ Select From Device List

☐ Add Manually

Home_10-100-1-1001... 192.168.0.101 B0-E5-ED-F1-C5-80

CANCEL ADD

6. Select **Select From Device List** to see how many devices are now connected to the network. Select a device and click **ADD** to finish the settings.

7. You can also add devices manually. Select **Add Manually**, enter device name and the MAC address and click **ADD** to finish the settings.

Done!

3.11 Administration

3.11.1. LAN IP Address

Follow the steps below to configure LAN settings of the extender.

Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.

Go to **Device Settings > LAN Settings**.

LAN Settings

View and configure LAN settings.

☒ Obtain an IP address automatically (Recommended)

☐ Use the following IP address

IP Address: 192.168.0.254

Subnet Mask: 255.255.255.0

Gateway: 0.0.0.0

Primary DNS: 0.0.0.0

Secondary DNS: 0.0.0.0 (Optional)

LAN Type: Select Obtain an IP address automatically to have your extender automatically obtain IP Address from the main router. Select Use the following IP

address to manually configure the LAN parameters.

IP Address: The IP address of the powerline extender.

Subnet Mask: The subnet mask associated with IP address.

Gateway: The IP address of the gateway device.

Primary DNS: Input the DNS IP address provided by your ISP.

Secondary DNS: Input the IP address of another DNS server if your ISP provides two DNS servers.

3. 11. 2. Set Up System Time

System time is the time displayed while the extender is running. The system time you configure here will be used for other time-based functions like Parental Controls and Wi-Fi Schedules. You can manually set how to get the system time.

Connect to the powerline extender wirelessly. Visit <http://mwlogin.net>, and log in with the password you set for the extender.

Go to **Settings > Time Settings** page.

The screenshot shows the 'System Time' configuration page. At the top, it says 'System Time' and 'Set the extender's system time.' Below this, the 'Current Time' is displayed as '01/01/2020 4:34:37 PM'. There is a '24-Hour Time' toggle switch which is currently turned off. The 'Set Time' dropdown menu is set to 'Get from Internet'. The 'Time Zone' dropdown menu is set to '(GMT) Greenwich Mean Time, Dublin, London'. There are two input fields for 'NTP Server I' and 'NTP Server II (Optional)', both of which are currently empty.

To automatically synchronize the time:

1. Select **Get from the Internet**.
2. Select your local **Time Zone** from the drop-down menu.
3. In the **NTP Server I** field, enter the IP address or domain name of your desired NTP Server. (Optional)
4. In the **NTP Server II** field, enter the IP address or domain name of the second NTP Server. (Optional)
5. Click **SAVE**.

To manually set the date and time:

1. Select **Manually**.
2. Enter the current **Date**.
3. Set the current **Time** (In 24-hour clock format, e.g. 16:00:00 is 04:00PM).
4. Click **SAVE**.

To set up Daylight Saving time:

Daylight Saving Time
Automatically synchronize the system time with daylight saving time.

Daylight Saving Time: ☐ Enable

Start:2020 Mar First
Sunday 12:00 AM

End:2020 Oct First
Sunday 12:00 AM

Running Status: Daylight Saving Time is off.

1. Check the box of **Daylight Saving Time**.
2. Select the correct **Start** date and time when daylight saving time starts at your local time zone.
3. Select the correct **End** date and time when daylight saving time ends at your local time zone.
4. Click **SAVE**.

3. 11. 3. Upgrade the Firmware

Mercusys is dedicated to improving and enriching the product features, giving you a better network experience. We will release the latest firmware at our official website, you can download the latest firmware file from our website: **www.mercusys.com** and upgrade the firmware to the latest version.

1. Connect to the powerline extender wirelessly. Visit **http://mwlogin.net**, and log in with the password you set for the extender.
2. Go to **Settings > Firmware Upgrade** page and confirm the **Hardware Version**.

Firmware Upgrade

Upgrade firmware from a local file.

Select your upgrade file, then click Upgrade.

Hardware Version: MP510 1.0

Firmware Version: 1.0.0 Build 200803 Rel.58271n (6985/8575)

New Firmware File:

BROWSE

UPGRADE

3. Go to **www.mercusys.com**. Download the latest firmware file for the extender.

Note: The upgraded firmware version must correspond to the hardware.

4. Click **BROWSE** to locate the downloaded new firmware file, and click **UPGRADE**.

5. Wait a few minutes for the upgrading and rebooting.

Note:

1. Before upgrading the firmware, it's better to back up your current settings.
2. During the upgrading process, do not turn off or reset the extender.
3. If the upgrade is interrupted, it's possible your extender may stop working and its LEDs blink once a second. In this case, please connect your computer to the extender via an Ethernet cable, and set your computer to static IP 192.168.0.X and subnet mask 255.255.255.0. Then visit **http://192.168.0.254** to complete the upgrade.

3. 11. 4. Back Up and Restore Configuration Settings

The configuration settings are stored as a configuration file in the extender. You can back up the configuration file to your computer for future use and restore the extender to a previous settings from the backup file when needed. Moreover, if needed, you can erase the current settings and reset the extender to the default factory settings.

To backup configuration settings:

1. Connect to the powerline extender wirelessly. Visit **http://mwlogin.net**, and log in with the password you set for the extender.
2. Go to **Settings > Backup & Restore** page.

Backup

Save current range extender settings to a file.

BACK UP

3. Click **BACK UP** to save a copy of the current settings to your local computer. A **config.bin** file will be stored to your computer.

To restore configuration settings:

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Settings > Backup & Restore** page.

Restore
Restore settings from a backup file.

File:

BROWSE

RESTORE

3. Click **BROWSE** to locate the backup configuration file stored on your computer, and click **RESTORE**. The configuration file is config.bin.

4. Wait a few minutes for the restoring and rebooting.

Note: During the restoring process, do not turn off or reset the extender.

To reset the extender to factory default settings:

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Settings > Factory Default Restore** page.

Factory Default Restore
Restore all settings to default values.

FACTORY RESTORE

3. Click **FACTORY RESTORE** to reset the extender.

4. Wait a few minutes for the resetting and rebooting.

Note:

1. During the resetting process, do not turn off the extender.
2. We strongly recommend you back up the current configuration settings before resetting the extender.

3. 11. 5. Change Login Password

Go to **Settings > Change Login Password**, and you can change the login password of the extender.

Change Login Password

Change the extender's local management password.

Old Password:

New Password:

Confirm New Password:

Note:

1. The new password must contain no space(s).
2. The new password must be 6-32 characters long.
3. The new password must contain at least two types of the following characters: letters, numbers and symbols.

3. 11. 6. System Log

When the extender does not work properly, you can save the system log and send it to the technical support for troubleshooting.

Follow the steps below to save the system log:

1. Connect to the powerline extender wirelessly. Visit **<http://mwlogin.net>**, and log in with the password you set for the extender.
2. Go to **Settings > System Log** page.

System Log

View a detailed record of system activities.

Current Time: 01/01/2020 5:20:57 PM

Log Type:

Search

 Refresh  Clear All

```

1 INFO 0days, 16:07:12, DHCP: Send ACK to 192.168.0.100.
2 INFO 0days, 16:07:42, DHCP: Recv REQUEST from 50:7B:9D:5C:1A:2F.
3 INFO 0days, 16:07:42, DHCP: Send ACK to 192.168.0.100.
4 INFO 0days, 16:08:12, DHCP: Recv REQUEST from 50:7B:9D:5C:1A:2F.
5 INFO 0days, 16:08:12, DHCP: Send ACK to 192.168.0.100.
6 INFO 0days, 16:08:42, DHCP: Recv REQUEST from 50:7B:9D:5C:1A:2F.
7 INFO 0days, 16:08:42, DHCP: Send ACK to 192.168.0.100.
8 INFO 0days, 16:09:12, DHCP: Recv REQUEST from 50:7B:9D:5C:1A:2F.
9 INFO 0days, 16:09:12, DHCP: Send ACK to 192.168.0.100.
10 INFO 0days, 16:09:42, DHCP: Recv REQUEST from 50:7B:9D:5C:1A:2F.
11 INFO 0days, 16:09:42, DHCP: Send ACK to 192.168.0.100.
12 INFO 0days, 16:10:12, DHCP: Recv REQUEST from 50:7B:9D:5C:1A:2F.

```

SAVE LOG

3. Choose the type and level of the system log according to your need.
4. Click **SAVE LOG** to save the system log to local.

FAQ (Frequently Asked Questions)

Q1. How do I reset my powerline device?

With the powerline device plugged into to the electrical outlet, press and hold the Pair button for at least 6 seconds. Release the button and the LED turn off. When the LED turn back on, the reset process is complete.

Q2. How to troubleshoot if there is no internet connection in my powerline network?

- Make sure all powerline devices are on the same electrical circuit.
- Make sure all Power LEDs are solid on. If not, pair your adapters and extenders again.
- Make sure all hardware connections are correctly and securely connected.
- Check if you have an internet connection by connecting the computer directly to the modem or router.
- Make sure your computer's IP address is in the same segment as your router's.

Q3. What can I do if a successfully-paired powerline device does not reconnect after it has been moved to a new location?

- Try another socket and make sure it is on the same electrical circuit.
- Try to pair it again, and make sure the Power LED is solid on.
- Check for possible interference, such as a washer, air conditioner or other household appliances that may be too close to one of the powerline devices. Plug the appliance into the integrated electrical socket (if the powerline device has one) to remove some electrical noise.