MERCUSYS®

Easy Wi-Fi Extension

Flexible Placement

MW300RE

300 Mbps Wi-Fi Range Extender

1910080032   REV1.0.0

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CE Mark Warning

CE

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.

RF Exposure Information

This device meets the EU requirements (1999/5/EC 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.

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

Safety Information

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.

- Don't disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.

- Avoid water and wet locations.

Explanation of the symbols on the product label

Symbol	Explanation
▣	Class II equipment
∼	AC voltage
⌂	Indoor use only

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.

MERCUSYS

MERCUSYS TECHNOLOGIES CO., LTD.

DECLARATION OF CONFORMITY

For the following equipment:

Product Description: **300Mbps Wi-Fi Range Extender**

Model No.: **MW300RE**

Trademark: **MERCUSYS**

We declare under our own responsibility that the above products satisfy all the technical regulations applicable to the product within the scope of Council Directives:

Directive 1999/5/EC, Directive 2014/30/EU, Directive 2014/35/EU, Directive 2011/65/EU, Directive 2009/125/EC

The above product is in conformity with the following standards or other normative documents

EN 300328 V1.9.1

EN 301489-1 V1.9.2 & EN 301489-17 V2.2.1

EN 55022: 2010+AC: 2011

EN 55024: 2010

EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 +A2: 2013

EN 50385: 2002

EN 50581: 2012

(EC) No 278/2009

(EC) No 1275/2008

(EU) No 801/2013

The product carries the CE Mark:

$C\epsilon$

Person responsible for marking this declaration:

Huang Jing
Regulatory Compliance Manager

Date of issue: 2016-08-12

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Contents

1

Introduction

This chapter covers the following topics:

- **Appearance**
- **Position the Extender**

Appearance

LED Explanation

Name	Status	Indication
Signal	Blinking red	The extender is connecting to the router.
	Solid red	The extender is not connected to the router.
	Solid green	The extender is connected to the router, and is in a good location.
	Solid orange	The extender is connected to the router, but is too close to or far away from the router.

## Button Explanation

The buttons are located on the bottom panel.

- **WPS Button:** If your wireless router supports WPS or QSS function, you can press the WPS or QSS button on your router and then press the WPS button on your extender to establish a secure connection between the wireless router and the extender.

- **Reset Button:** This button is used to restore the extender to its factory default settings.

    To reset the extender:

    With the extender powered on, use a pin to press and hold the **Reset** button for more than 5 seconds until the Signal LED starts blinking quickly, then release the button and wait the extender to reboot to its factory default settings.

Position the Extender

For safety and best performance, we suggest that you position the extender vertically as shown below.
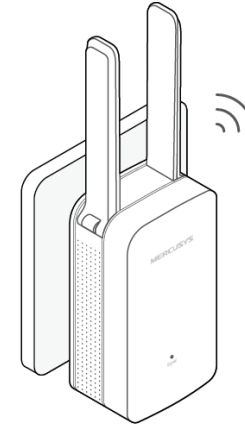
2

Connect the Extender to the Internet

This chapter covers the following topics:

- **Before You Begin**
- **Basic Requirements**
- **Quick Setup**

Before You Begin

Please read this guide carefully before installing and using the range extender. The operating range of your wireless network may vary significantly depending on the physical position of the wireless devices. Obstructions, such as metal appliances and walls, may weaken signals by getting in the way of your network's radio waves.

In order to optimize the performance of the extender, please follow the instructions below (please make sure the extender is always within the wireless coverage of the wireless router).

- **Half-way Between** - Generally, the ideal location for the range extender is half-way between the wireless router and the wireless client. If the wireless signal is not satisfactory, you may place the extender closer to the wireless router.

- **Less Obstructions** - Limit obstructions between the extender and wireless router. It's better to locate the extender in a spacious place, such as near the corridors.

- **No Interference** - Choose a location away from Bluetooth devices and other household electronics, such as cordless phone, microwave, and baby monitor, etc., to minimize signal interference.

Basic Requirements

- Place your extender in a well-ventilated place far from direct sunlight, any heater or heating vent.
- Leave at least 2 inches (5cm) space around the device for heat dissipation.
- Turn off your extender and unplug the power adapter in a lighting storm to avoid damage.
- Operating temperature of the extender should be 0℃~40℃ (32℉ ~104℉).
- Operating humidity of the extender should be 10%~90%RH (Non-condensing).

Quick Setup

Using Your Web Browser (Mobile UI)

1 Power On

Plug the extender into a power outlet near your router, and the Signal LED turns solid red.
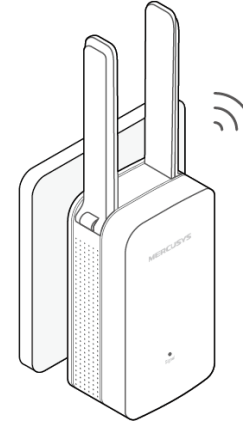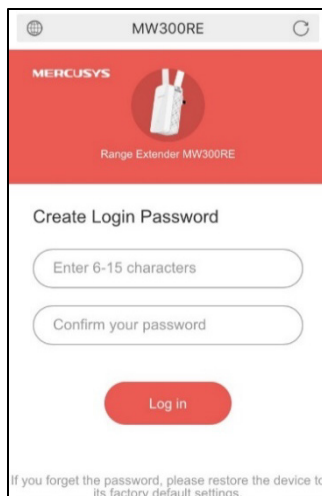
2 Configure

1) Connect your smart device to the extender's wireless network MERCUSYS_RE_XXXX.

> The default SSID (network name) can be found on the product label at the back of the extender.

2) Launch a web browser and type **mwlogin.net** in the address bar. Create a login password, then tap **Log in**.

3) Select your host network (the router's network) and enter the password when prompted. Here we use MERCUSYS_1234 for demonstration.
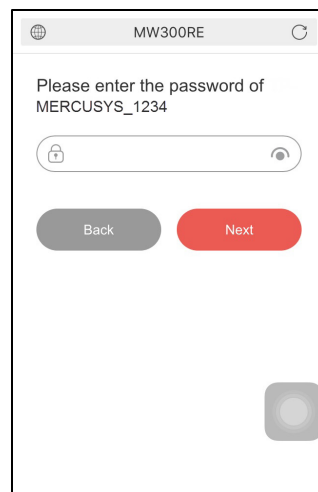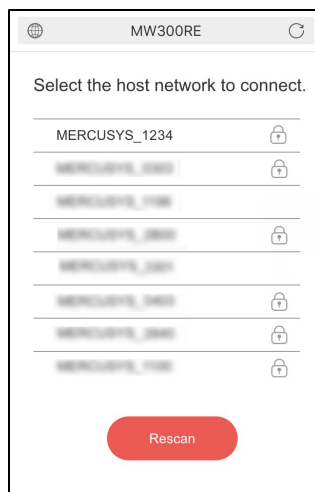
4) When your extender is connected to your router successfully, you will see the management page and the Signal LED on your extender turns solid green or orange.

3 Relocate

Plug the extender into a power outlet about halfway between your router (Host Network) and the Wi-Fi "dead" zone. The location you choose must be within the range of your existing host network.

Wait until the Signal LED is lit and solid green. If it is orange, relocate the extender closer to or farther away from the router to achieve a better signal quality.

Enjoy!

The extender uses the same wireless network name (SSID) and password as your host network.
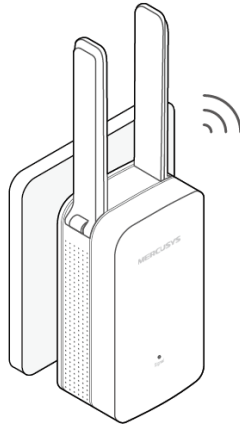
- ◆ If you want to change the extended network name, go to **Settings > Extended Network Name** to modify the name.

- ◆ If you want to extend another network, tap **Wireless Scanner**, and follow the onscreen instructions to complete the setup.

Using Your Web Browser (PC UI)

1 Power On

Plug the extender into a power outlet near your router, and the Signal LED turns solid red.

2 Configure

1) Connect your wireless device to the extender's wireless network MERCUSYS_RE_XXXX.

> The default SSID (network name) can be found on the product label at the back of the extender.

2) Launch a web browser and type **http://mwlogin.net** in the address bar. Create a login password, then click **Log in**.

Password

Enter 6-15 characters. It is recommended to set a strong password using a combination of numbers, letters and symbols (space excluded), for example 83$a56Dfc2%9c. The field is case-sensitive.

Confirm Password

Note: Please note down and keep the password carefully. For subsequent logins, use the password you have set. If you forget the password, restore the device to its factory default. Factory default restore: with the device powered on, press and hold the Reset button for at least 5 seconds.
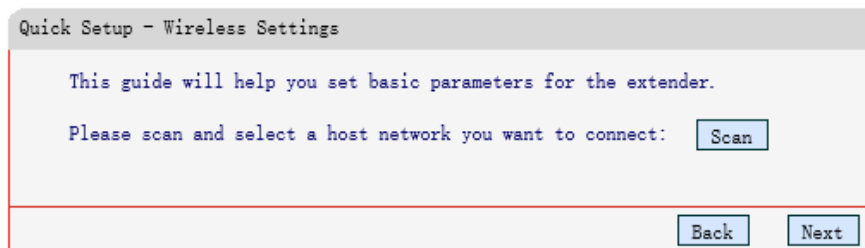
Log in

3) Click **Next** to start **Quick Setup.**

Quick Setup

This guide will help you set basic parameters for Internet connection. Please click Next to continue. If you want to configure other functions, please select the corresponding menu options on the left.

Next

4) Click **Scan** and select your host network (the router's network), and enter the password when prompted. Then click **Next**.
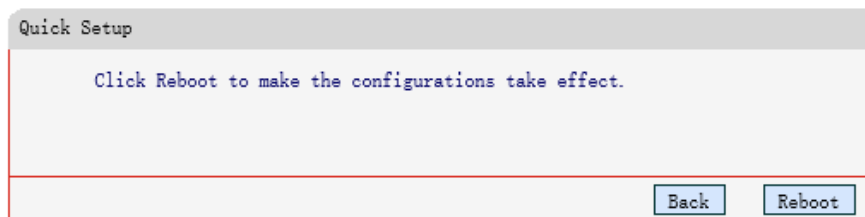
```
Quick Setup - Wireless Settings

    This guide will help you set basic parameters for the extender.

    Please scan and select a host network you want to connect:    [ Scan ]


                                                      [ Back ]   [ Next ]
```

> By default, the extended network uses the same SSID (network name) as the host network. You can change SSID according to your need on this page.

5) Click **Reboot** to make the settings effective.

```
Quick Setup

    Click Reboot to make the configurations take effect.


                                                      [ Back ]   [ Reboot ]
```

Relocate

Plug the extender into a power outlet about halfway between your router (Host Network) and the Wi-Fi dead zone. The location you choose must be within the range of your existing host network.

Wait until the Signal LED is lit and solid green. If it is orange, relocate the extender closer to or farther away from the router to achieve a better signal quality.

Enjoy!

The extended network use the same Wi-Fi password as your main network, but may have different wireless network name if you customize the SSID during the configuration.

> ◆ If you want to change the extended network name, go to **Wireless > Wireless Settings** to modify the name.
>
> ◆ If you want to extend another network, go to **Wireless > Wireless Settings**, click **Scan,** and follow the onscreen instructions to complete the setup.
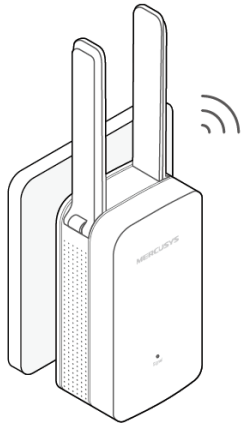
Using WPS (Wi-Fi Protected Setup)

> Your router should support WPS. Otherwise, please refer to Using Your Web Browser (Mobile UI) or Using Your Web Browser (PC UI)

1 Power On

Plug the extender into a power outlet near your router, and the Signal LED turns solid red.

2 Connect

1) Press the **WPS** button on your router.

2) Within two minutes, press the **WPS** button on your extender. The Signal LED should change from flashing to a solid state, indicating a successful WPS connection.

> - If the Signal LED does not change from flashing to solid, please refer to Using Your Web Browser (Mobile UI) or Using Your Web Browser (PC UI).
> - Some ISP gateways disable the WPS function by default. If the WPS method fails, please refer to Using Your Web Browser (Mobile UI) or Using Your Web Browser (PC UI).

3 Relocate

Plug the extender into a power outlet about halfway between your router (Host Network) and the Wi-Fi dead zone. The location you choose must be within the range of your existing host network

Wait until the Signal LED is lit and solid green. If it is orange, relocate the extender closer to or farther away from the router to achieve a better signal quality.

Enjoy!

The extender uses the same wireless network name (SSID) and password as your host network.

3

Manage the Extended Network and Security Settings

This chapter covers the following topics on the **PC interface**:

- **Wireless MAC Filtering**
- **Wireless Advanced**
- **Profile**
- **Change the Extender's IP Address**
- **DHCP Server**

Wireless MAC Filtering

Wireless MAC Filtering allows you to control the wireless devices accessing the network based on the devices' MAC addresses.

1) Launch a web browser and type in **http://mwlogin.net**, then go to **Wireless > Wireless MAC Filtering** webpage.

2) Select a Filtering Rule.
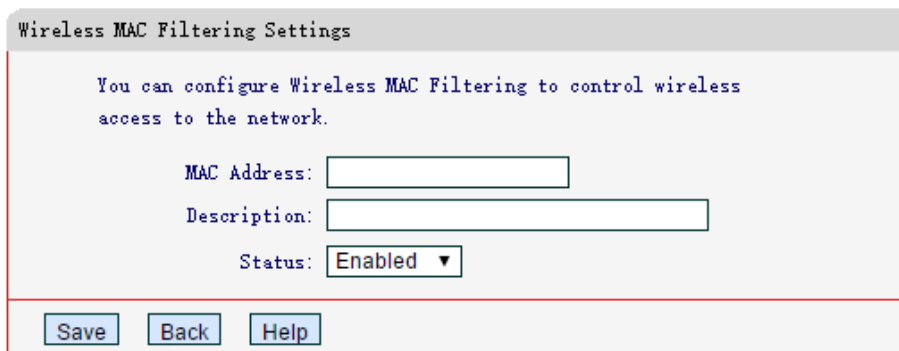
3) Click **Add** and configure a MAC filtering entry as shown in the figure below, then click **Save**.

- ◆ **MAC Address:** Enter an MAC address in the format of XX-XX-XX-XX-XX-XX (X is any hexadecimal digit).

- ◆ **Description:** Enter a simple description for the wireless device.

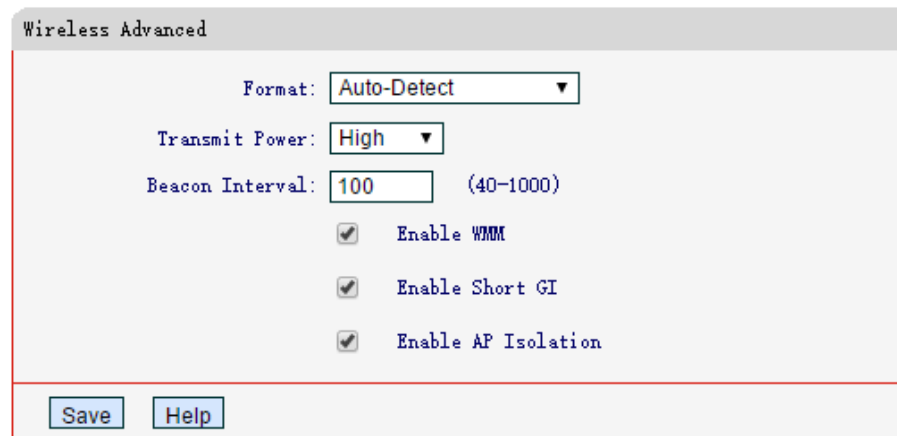- ◆ **Status:** Select Enabled or Disabled for this entry from the drop-down list.

4) Click **Enable** to enable the Wireless MAC Filtering feature.

Wireless Advanced

On the Wireless Advanced page, you can configure the advanced settings of your wireless network.

1) Launch a web browser and type in **http://mwlogin.net**, then go to **Wireless > Wireless Advanced** webpage.

2) Configure the settings according to your needs, then click **Save**.

- ◆ **Format** - The wireless packet address format supported by the AP you will connect to. The default settings is Auto-Detect. It is recommended to keep it as default.

- ◆ **Transmit Power** - You can specify the transmit power of router. Select High, Middle or Low according to your needs. The default and recommended setting is High.

- ◆ **Beacon Interval** - Enter a value between 40-1000 milliseconds for Beacon Interval here. The beacons are the packets sent by the router to synchronize a wireless network. Beacon Interval value determines the time interval of the beacons. The default value is 100.

- ◆ **Enable WMM** - WMM function can guarantee that the packets with high- priority messages will be transmitted preferentially. It is recommended to enable WMM.

- ◆ **Enable Short GI** - With Short GI enabled, the device can work at a

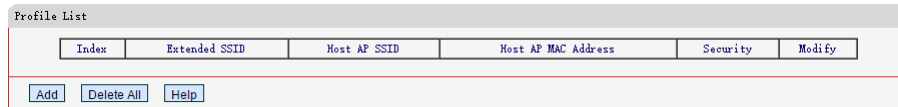higher transfer rate. It is recommended to enable Short GI.

◆ **AP Isolation** - AP Isolation feature that allows you to confine and restrict all wireless devices on your network from interacting with each other, but still able to access the Internet. AP isolation is disabled by default.

Profile

Profile is used to manage the information of connected host APs. You can add, delete, edit the profiles or connect to a host AP.
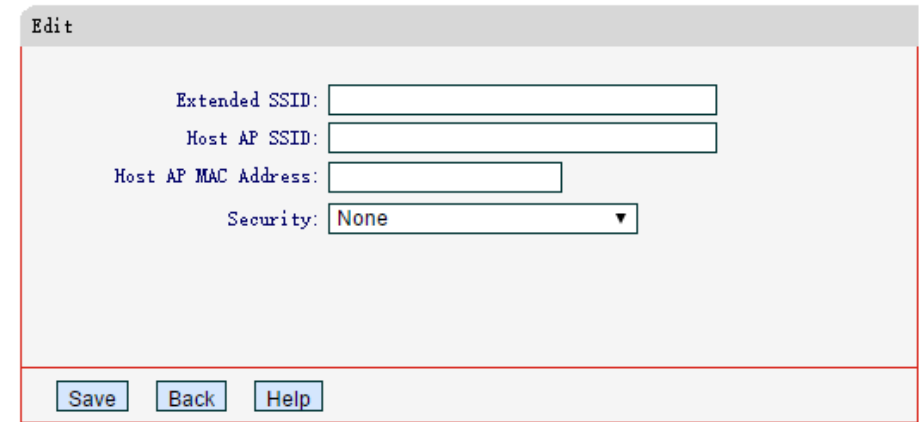
To add a new profile

1) Launch a web browser and type in **http://mwlogin.net**, then go to **Profile** webpage.

2) Click **Add**, and complete the settings as shown below, and click Save.

◆ **Extended SSID** - Enter the extended network name.

◆ **Host AP SSID** - Enter the host network name.

◆ **Host AP MAC Address** - Enter The MAC address of the host AP.

◆ **Security** – Select the security type of the host AP.

To connect to a host network

If you want to connect to a host network that is listed in the profile screen, just find the profile and then click Connect.

To manage an existing profile

If you want to change the settings of an existing profile, find the profile and click Edit, then you can edit the settings of this profile.

If you want to delete a profile that you no longer use, find the profile and click Delete.

Change the Extender's IP Address

By default, the extender is set to obtain an IP address automatically from the front router. If you want to use a specific IP address appropriate to your network demand, please refer to the steps below.

> We do NOT recommend you change the IP address unless you are quite sure about the IP setting for special network demand, random changes may lead to Internet disconnection.

1) Launch a web browser and type in **http://mwlogin.net**, then go to **Network > Network Settings** webpage.

2) Select **Static IP**, then enter the IP address manually, then click **Save**.

```
Network Settings

You can configure basic network settings on this page. Changing
network settings may reboot the extender.

        MAC Address: 00-00-00-29-28-29

    Connection Type: [ Static IP          ▼ ]

         IP Address: [ 192.168.1.253      ]

        Subnet Mask: [ 255.255.255.0 ▼ ]

    [ Save ]  [ Help ]
```

◆ **IP Address:** Enter the IP address in dotted-decimal notation (192.168.1.253 by default).

◆ **Subnet Mask:** Select a subnet mask that determines the size of the network (255.255.255.0 by default).

DHCP Server

DHCP stands for Dynamic Host Configuration Protocol. The DHCP Server will automatically assign dynamic IP addresses to the devices on the network. This protocol simplifies network management and allows new wireless devices to be set to IP addresses automatically.

> To use the DHCP server function of the device, you should configure all computers in the LAN as "Obtain an IP Address automatically" mode.

DHCP Settings

By default, the DHCP Server is Auto, the extender automatically detects to find the devices enabling the DHCP Server. If the DHCP Server of the device is enabled, the extender's DHCP Server is disabled. Otherwise, the extender's DHCP Server is enabled. The default is Auto.

When the DHCP Server is On, please make sure that the Start and End IP Address, Gateway for the DHCP server and LAN IP address are in the same segment as the router. Otherwise, the extender cannot access the Internet.

1) Launch a web browser and type in **http://mwlogin.net**, then go to **DHCP Server > DHCP Settings** webpage.

2) Configure it as shown in the figure bleow, then click Save.

DHCP Settings

The built-in DHCP server can provide TCP/IP configuration for all clients connected to the extender in the LAN.

DHCP Server: ○ Off ○ On ● Auto
Start IP Address: 192.168.1.100
End IP Address: 192.168.1.199
Gateway: 192.168.1.253 (Optional)
Default Domain: (Optional)
Primary DNS: 0.0.0.0 (Optional)
Secondary DNS: 0.0.0.0 (Optional)

Save Help

- **DHCP Server** – Select Off, On or Auto. The default settings is Auto.

- **Start IP Address/End IP Address：** Enter a range of IP address that can be leased to the clients. By default, the starting IP address is 192.168.0.100 and the ending IP address is 192.168.0.199.

- **Gateway (Optional):** Enter the LAN IP address of your host network.

- **Default Domain (Optional):** Enter the domain name of your network.

- **Primary DNS (Optional):** Enter the DNS IP address provided by your ISP.

- **Secondary DNS (Optional):** Enter the second DNS IP address provided by your ISP.

DHCP Client List

The DHCP Client List displays the Client Name, MAC Address, Assigned IP and Lease Time for each DHCP Client attached to the device.

1) Launch a web browser and type in **http://mwlogin.net**, then log in to **DHCP Server > DHCP Client List** webpage.

2) You can view the information of the DHCP clients connected to the extender in the list.

DHCP Client List

ID	Client Name	MAC Address	Assigned IP Address	Lease Time
1	DESKTOP-T174ADR	30-B5-C2-DB-6B-C0	192.168.1.100	00:00:28

Refresh

- **Client Name:** The name of the DHCP client.

- **MAC Address:** The MAC address of the DHCP client.

- **Assigned IP Address:** The IP address that is allocated to the client by the DHCP server.

- **Lease Time:** The time duration that the IP address is leased to the DHCP client.
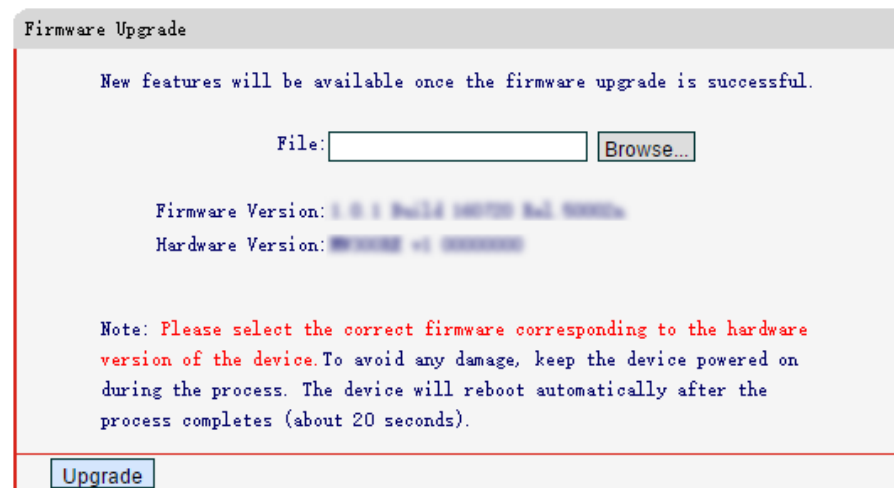
Click **Refresh** to refresh the DHCP Client List.

4

Manage the Extender

This chapter covers the following topics on the **PC interface**:

- **Firmware Upgrade**
- **Factory Defaults**
- **Backup & Restore**
- **Reboot**
- **Login Password**
- **System Log**

Firmware Upgrade

1) On your PC, Launch a web browser and type in **http://mwlogin.net**，then go to **System Tools > Firmware Upgrade** webpage.

2) You can view the current firmware version and the hardware version. Find the latest firmware of your extender from the product's Support page at **www.mercusys.com**. Then download the latest firmware upgrade file to your computer.

3) Click **Browse…** to locate and select the downloaded file.

Firmware Upgrade

New features will be available once the firmware upgrade is successful.

File: [   ] [Browse...]

Firmware Version: █.█.█ Build █████ Rel. █████s

Hardware Version: ██████ v1 ████████

Note: Please select the correct firmware corresponding to the hardware version of the device. To avoid any damage, keep the device powered on during the process. The device will reboot automatically after the process completes (about 20 seconds).

[Upgrade]

4) Click **Upgrade**. The upgrade takes a few minutes to complete and the extender will automatically reboot itself when finished.

Please DO NOT power off the extender during the upgrade process.

Factory Defaults

1) Launch a web browser and type in **http://mwlogin.net**, then go to **System Tools > Factory Defaults** webpage.

2) Click **Restore** to reset your extender to its factory default settings.
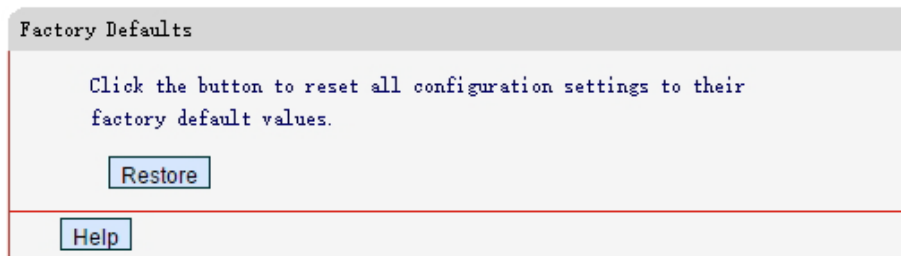

All current settings that you have configured for the extender will be lost once the extender is restored to its factory default settings.

Backup & Restore

It is highly recommended to back up your current configurations, in case a recovery is needed to restore the system to a previous state or from the factory defaults.

1) Launch a web browser and type in **http://mwlogin.net,** then go to **System Tools > Backup & Restore** webpage.

2) Backup and restore the configuration on the **Backup & Restore** page.
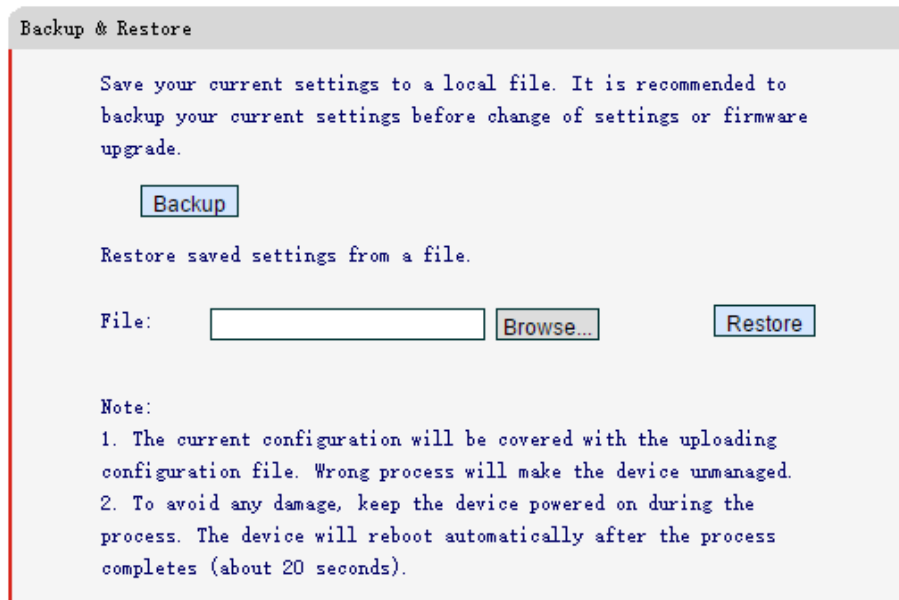
● Configuration Backup

Click **Backup** to save your current configurations to a local file on your computer. Make sure to save it in a safe location where you can retrieve it when needed.
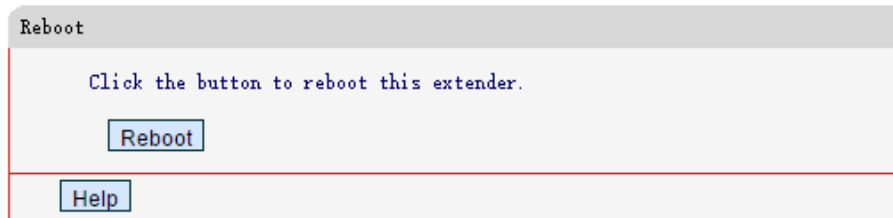
● Configuration Restore

Click **Browse…** to locate and select your backup file, then click **Restore**. The restore process may take a few minutes to complete and the extender will automatically reboot itself when finished.

Please DO NOT power off the extender during the backup or restore process.

Reboot

1) Launch a web browser and type in **http://mwlogin.net**, then go to **System Tools> Reboot** webpage.
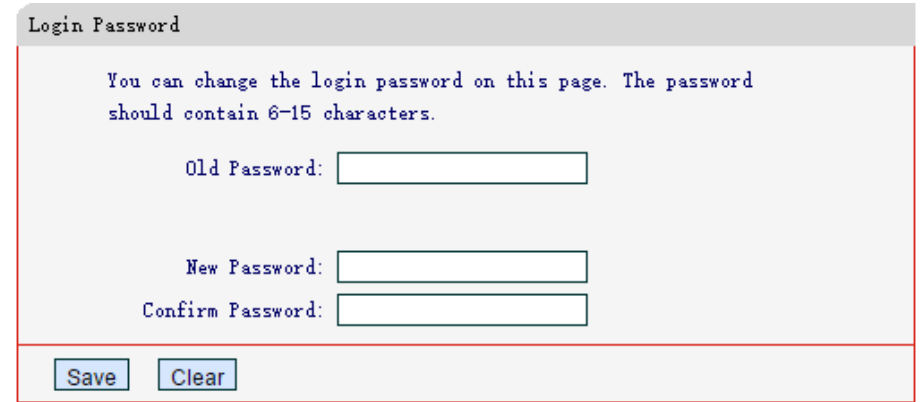
2) Click **Reboot** to reboot the extender.

Please DO NOT power off the extender during the reboot process.

Login Password

1) Launch a web browser and type in **http://mwlogin.net**, then go to **System Tools > Login Password** webpage.

2) Create a new password as shown in the figure below.

- ◆ **Old Password:** Enter your current password.
- ◆ **New Password:** Enter your new password.
- ◆ **Confirm Password:** Re-enter your new password.

3) Click **Save**.

For subsequent logins, use the new password you have set.

System Log

1) Launch a web browser and type in **http://mwlogin.net**，then go to **System Tools > System Log** webpage.

2) You can select the Log Type and Log Level from the drop-down list. Here you can quickly trace the logs which you want to view.

Click **Mail Settings** to set the parameters for Auto Mail Feature.

◆ **Refresh** - Click to update the system log.

◆ **Save All** - Click to save the system log as a .txt file on your computer.

◆ **Mail Log** - Click to send an email of current logs manually according to your Mail settings.

◆ **Clear All** - Click to permanently remove all logs.

◆ **From** - Your mail box address. The extender would connect it to send logs.

◆ **To** - Recipient's address. The destination mailbox where the logs would be received.

◆ **SMTP Server** - Your smtp server. It corresponds with the mailbox filled in the From field. You can log on the relevant mail website for Help if you are not clear with the address.

◆ **Authentication** - Most SMTP Server requires Authentication. It is

required by most mailboxes that need User Name and Password to log in. When selected, enter the mail account name and password.

◆ **Enable Auto Mail Feature** - Select to mail logs automatically. You could mail the current logs either at a specified time every day or by intervals, but only one could be the current effective rule. Enter the desired time or intervals in the corresponding field.

5

Appendix

This chapter covers the following topics:

- **Factory Defaults**
- **FAQ (Frequently Asked Questions)**

Factory Defaults

Name	Status
Common Default Settings	
IP Address	192.168.1.253
Subnet Mask	255.255.255.0
Domain	http://mwlogin.net
Wireless	
SSID	MERCUSYS_RE_XXXX
Wireless Security	Disabled

FAQ (Frequently Asked Questions)

Q1. How do I restore my extender's configuration to its factory default settings?

There are three ways to reset the extender:

- Option One: With the extender powered on, use a pin to press and hold the Reset button for more than 5 seconds until the Signal LED starts blinking quickly, then release the button.
- Option Two: Log in to the extender's web management page via a smart device, go to **Settings,** and tap **Factory Restore.**
- Option Three: Log in to the extender's web management page via a computer, go to **System Tools > Factory Defaults**, and click **Factory Defaults.**

> Once the extender is reset, the current configuration settings will be lost and you will need to reconfigure it.

Q2. What can I do if I forgot my login password?

- Restore the extender's configuration to its factory default settings referring to **Q1**, then create a new password when prompted.

Q3. What can I do if I forgot my wireless password?

- The extended network uses the same password as the host network (the router's network).
- If you have modified the password of the extended network, log in to the PC interface of the web management page, go to **Wireless > Wireless Settings** to retrieve or reset your wireless password.

Q4. What can I do if I cannot access the web management page?

- Make sure your wireless device has connected to the extended network.
- If your computer is set to a static IP address, change the computer's settings to Obtain an IP address automatically and Obtain DNS server address automatically.
- Change another browser or device, and try again.
- Use the IP address to access the extender. The default IP is 192.168.1.253. If the extender is connected to the router, you should go to your router's DHCP client list to obtain the extender's IP address.
- Feel free to contact our technical support, if the problem persists.