



User Guide

AC1900 Wireless Dual Band DOCSIS 3.0
Cable Modem Router
CR1900

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About This Guide

This guide is a complement to Quick Installation Guide. The Quick Installation Guide instructs you on quick Internet setup, and this guide provides details of each function and shows you the way to configure these functions appropriate to your needs.

When using this guide, please notice that features of the router may vary slightly depending on the model and software version you have, and on your location, language, and Internet service provider. All screenshots, images, parameters and descriptions documented in this guide are used for demonstration only.

Conventions

In this guide, the following conventions are used:

Convention	Description
<u>Teal Underlined</u>	Hyperlinks are in teal and underlined. You can click to redirect to a website or a specific section.
Teal	Contents to be emphasized and texts on the web page are in teal, including the menus, items, buttons, etc.
>	The menu structures to show the path to load the corresponding page. For example, Advanced > Wireless 2.4GHz > MAC Filtering means the MAC Filtering function page is under the Wireless 2.4GHz menu that is located in the Advanced tab.
 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.
Symbols on the web page	 click to edit the corresponding entry.  click to delete the corresponding entry.  click to enable or disable the corresponding entry.

More Info

- The latest software, management app and utility can be found at [Download Center](#) at <http://www.tp-link.com/support>.
- The Quick Installation Guide (QIG) can be found where you find this guide or inside the package of the router.
- Specifications can be found on the product page at <http://www.tp-link.com>.
- A Technical Support Forum is provided for you to discuss our products at <http://forum.tp-link.com>.
- Our Technical Support contact information can be found at the [Contact Technical Support](#) page at <http://www.tp-link.com/support>.

Chapter 1

Get to Know Your Modem Router

This chapter introduces the modem router and shows its appearance.

This chapter contains the following sections:

- [Product Overview](#)
- [Product Appearance](#)

1.1. Product Overview

TP-LINK's Cable Modem Router is a combined wired/wireless network connection device with integrated wireless router and DOCSIS 3.0 modem, reducing hassle of configuration and saving space.

With Ethernet ports and antennas, the modem router provides wired and wireless access for multiple computers and mobile devices.

With various features and functions, the modem router is the perfect hub of your home or business network.

1.2. Product Appearance

1.2.1. Front Panel



The front panel provides LEDs. You can check the modem router's working status by following the LED Explanation table.

LED	Status	Indication
 Power	On	Power is on.
	Off	Power is off. Please ensure that the power adapter is connected correctly.

LED	Status	Indication
 Downstream	Green	The modem router has synchronized more than one channel.
	White	The modem router has synchronized one channel.
	Flashing	The modem router is scanning for downstream channels.
	Off	The synchronization has not started or has failed. Please refer to Note 1 for troubleshooting.
 Upstream	Green	The modem router has synchronized more than one channel.
	White	The modem router has synchronized one channel.
	Flashing	The modem router is synchronizing upstream channels.
	Off	The initialization has not started or has failed. Please refer to Note 1 for troubleshooting.
 Internet	On	The modem router is connected to the internet.
	Off	There is no internet connection. Please refer to Note 2 for troubleshooting.
	Flashing	The modem router is starting up..
 LAN	On	At least one LAN port is connected to a powered-on device.
	Off	No LAN port is connected to a powered-on device.
 USB	On	The inserted USB device is ready to use.
	Off	No USB device is plugged into the USB port.
	Flashing	A USB device is being identified.
 Wireless	On	The Wireless function is enabled.
	Off	The Wireless function is disabled.
 WPS	On/Off	This light remains on for 5 minutes when a WPS connection is established, then turns off.
	Flashing	WPS connection is in progress. This may take up to 2 minutes.

Note:

1. If the Downstream LED or Upstream LED is off, check your internet connection first. Refer to [Connect Your Modem Router](#) for more information about how to make internet connection correctly. If you have already made a right connection, contact your ISP to make sure your internet service is available now.
2. If the Internet LED is off, check your Downstream LED and Upstream LED first. If they are also off, please refer to [Note 1](#). If the Downstream LED and Upstream LED are on, check your internet configuration. You may need to check this part of information with your ISP and make sure everything have been input correctly.

1. 2. 2. Back Panel



The back panel provides buttons and connection ports. Refer to the following for detailed instructions.

Item	Description
Reset Button	With the modem router powered on, use a pin to press and hold the Reset button for at least 8 seconds. And the modem router will restore to its factory default settings.
WPS Button	Press to start a WPS synchronization.
Wi-Fi ON/OFF Button	Press to turn the Wi-Fi on or off.
USB1 and USB2 Ports	For connecting to USB storage devices or USB printers.
LAN1, LAN2, LAN3, and LAN4 Ports	For connecting to your PCs or other Ethernet network devices.
Cable Port	For connecting to a coaxial cable.
DC Port	For connecting the modem router to power socket via the provided power adapter.
Power On/Off Button	Press to power on or off the modem router.

Chapter 2

Quick Start

This chapter contains the following sections:

- [Position Your Modem Router](#)
- [Connect Your Modem Router](#)
- [Activate Your Modem Router](#)

2.1. Position Your Modem Router

With the modem router, you can access your network from anywhere within the wireless network coverage. However, the wireless signal strength and coverage vary depending on the actual environment of your modem router. Many obstacles may limit the range of the wireless signal, for example, concrete structures or thick walls.

For your safety and best Wi-Fi performance, please:

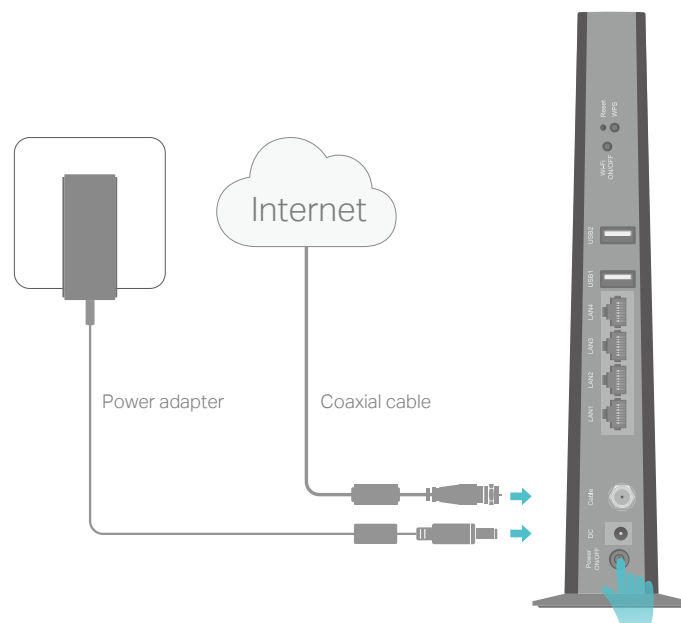
- Do Not locate the modem router in the place where it will be exposed to moisture or excessive heat.
- Keep away from the strong electromagnetic radiation and the device of electromagnetic sensitive.
- Place the modem router where it can be connected to the various devices as well as to a power source.
- Make sure the cables and power cord are safely placed out of the way to avoid a tripping hazard.

💡 Tips: The modem router can be placed on a shelf or desktop.

2.2. Connect Your Modem Router

Before connecting the device, please make sure your broadband cable service provided by your ISP is available. If there is any problem, please contact your ISP. Also, keep your hands dry during connection. Follow the steps below to connect your modem router.

1. Connect the coaxial cable and power adapter to the modem router, then power on your modem router.



2. Wait for about 1 minute until the following LEDs are solid on.



3. Connect your computer to the modem router.

Method 1: Wired

Connect your computer's Ethernet port to a LAN port on the modem router via an Ethernet cable.

Method 2: Wireless

Connect wirelessly by using the default SSID (Wireless Network Name) and Wireless Password printed on the Information Card or the product label of the modem router.

Method 3: Use the WPS button

Wireless devices that support WPS, including Android phones, tablets, most USB network cards, can be connected to your router through this method. (WPS is not supported by iOS devices.)

Note:

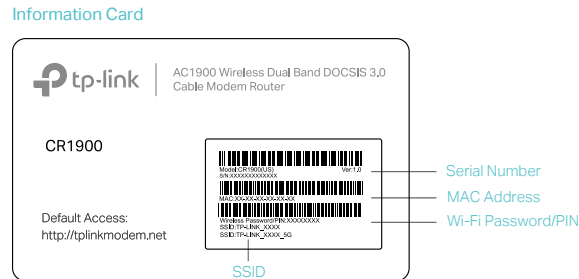
The WPS function cannot be configured if the wireless function of the modem router is disabled. Also, the WPS function will be disabled if your wireless encryption is WEP. Please make sure the wireless function is enabled and is configured with the appropriate encryption before configuring the WPS.

- 1) Tap the WPS icon on the device's screen.
- 2) Immediately press the WPS button on your modem router.
- 3) The WPS LED flashes for about two minutes during the WPS process.
- 4) When the WPS LED is on, the client device has successfully connected to the modem router.



2.3. Activate Your Modem Router

1. Get your internet service account information and the modem router's Information Card ready.



2. Make sure your computer is set to dynamically obtain an IP address. If not, refer to [Appendix: Troubleshooting](#) for instructions.
3. Launch a web browser, and visit any website. You will be automatically redirected to your service provider's self-activation page.
4. Follow the on-screen instruction to activate the modem router.

If you have any problem activating your modem router, please contact your Internet Service Provider (ISP).

Contact information of major cable ISPs:

Bright House: 1-855-222-0102

Charter: 1-888-438-2427

Cox: 1-888-556-1193

Time Warner Cable: 1-888-892-2253

The listed contact information may change. You can also find the contact information in your monthly internet service billing statement.

5. After activating your modem router successfully, wait for about 10 minutes till these LEDs  become solid on, then you can enjoy the internet.

Note:

1. If you are unable to access the internet, refer to [Appendix: Troubleshooting > T4](#) for instructions.
2. The product should be connected to cable distribution system that grounded (earthed) in accordance with ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93 - Grounding of Outer Conductive Shield of a Coaxial Cable.

Chapter 3

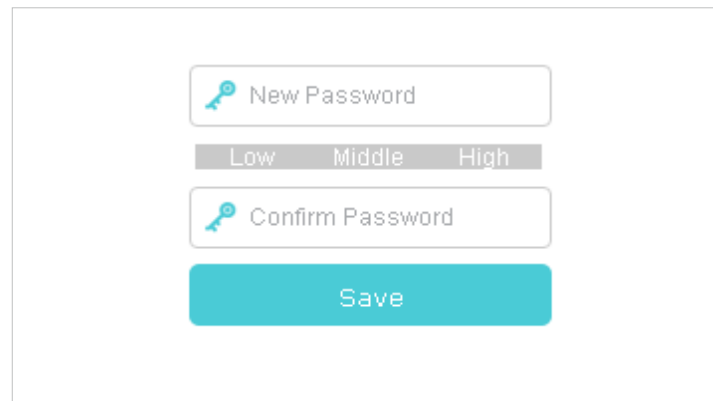
Log In to Your Modem Router

With a web management page, it is easy to configure and manage the modem router. The web management page can be used on any Windows, Macintosh or UNIX OS with a web browser, such as Microsoft Internet Explorer, Mozilla Firefox or Apple Safari.

Follow the steps below to log in to your modem router.

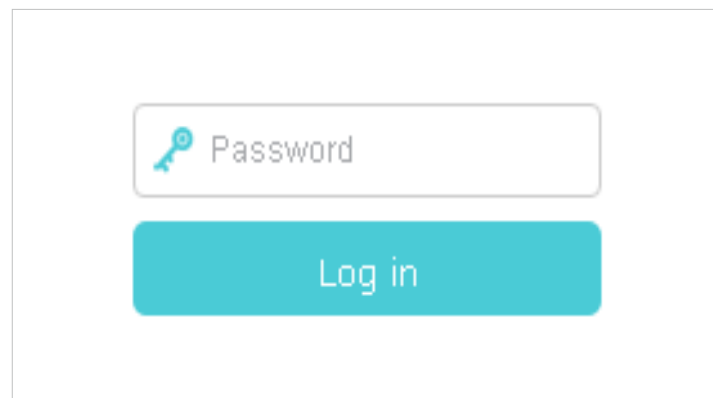
1. If the TCP/IP Protocol on your computer is set to the static (fixed) IP address, you need to change it to obtain an IP address automatically. Refer to [Appendix: Troubleshooting](#) > [T7](#) to configure your computer.
2. Launch a web browser and go to <http://tplinkmodem.net> or <http://192.168.1.1>. Set a strong password using 1-15 characters and click [Save](#).

■ Note: If the login page does not appear, please refer to [Appendix: Troubleshooting](#) > [T3](#).

A screenshot of a web browser's address bar. The text 'http://tplinkmodem.net' is entered. To the left of the text is the label 'Address'. To the right is a small blue downward-pointing arrow.A screenshot of a password creation interface. It features a 'New Password' input field with a key icon, a strength indicator with 'Low', 'Middle', and 'High' tabs, a 'Confirm Password' input field with a key icon, and a teal 'Save' button at the bottom.

3. Enter the password you set and click [Log in](#).

■ Note: For subsequent logins, use the password that you have created.

A screenshot of a login interface. It features a 'Password' input field with a key icon and a teal 'Log in' button below it.

Chapter 4

Configure Internet Connections

This chapter introduces how to manually configure your internet settings. Furthermore, you can also set up an IPv6 connection if your ISP provides IPv6 service.

This chapter includes the following sections:

- [Set Up an IPv6 Connection](#)
- [Test Internet Connectivity](#)
- [Operation Modes](#)

4.1. Set Up an IPv6 Connection

If your ISP has provided a line that supports IPv6 connection as well as some detailed IPv6 parameters, you can manually set up an IPv6 connection.

Follow the steps below to set up an IPv6 connection:

1. Make sure you have set up an IPv4 connection by referring to [Quick Start](#) before setting up an IPv6 connection.
2. Visit <http://tplinkmodem.net>, and log in with the password you set for the router.
3. Go to [Advanced](#) > [Network](#) > [IPv6 LAN Settings](#). In the [DHCPv6 Server Settings](#) section, configure the following parameters provided by your ISP.

DHCPv6 Server Settings

DHCPv6 Server: ☒ Enable

LAN Delegated Prefix: 2001:1:4:f800::/64

Start Address: 2001:1:4:f800::1/64

Number Of Addresses: 255

Lease Time: 3600

Rapid Commit: ☒ Enable

Unicast: ☐ Enable

Stateless Dhcppv6: ☒ Enable

Save Restore

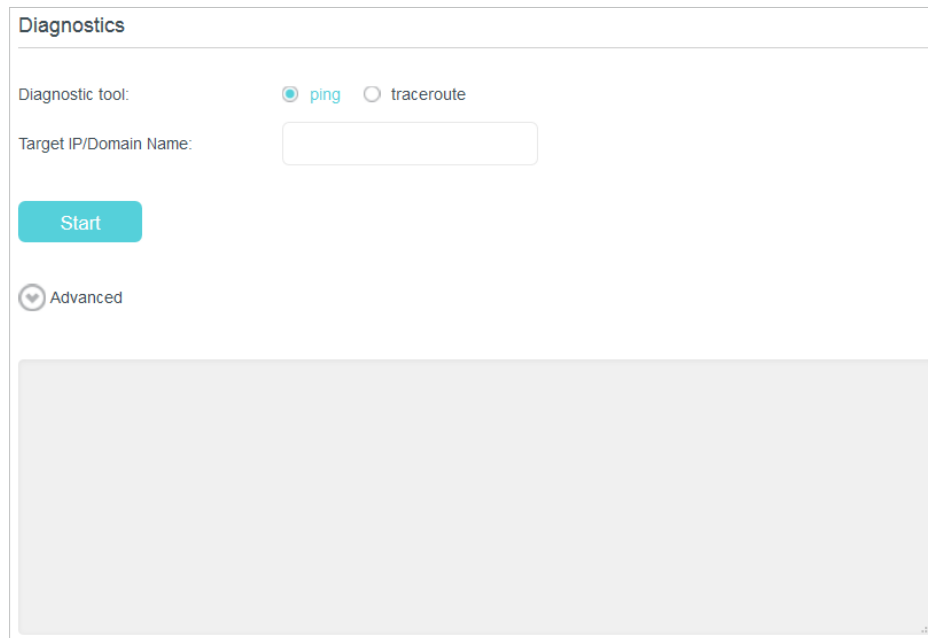
- **DHCPv6 Server:** Select the checkbox to enable DHCPv6 server.
- **Start Address:** Enter a value for the DHCPv6 server to start with when issuing IP addresses.
- **Number of Addresses:** Enter a value between 0-255 for DHCPv6 server preference. The default value is 255.
- **Lease Time:** The Lease Time is the amount of time in which a network user will be allowed connection to the modem router with their current dynamic IP address. Enter the amount of time, in seconds, then the user will be assigned this dynamic IP address. After the dynamic IP address has expired, the user will be automatically assigned a new dynamic IP address. The default is 3600 seconds.
- **Rapid Commit:** Select the checkbox to enable the prefix fast distribution function.
- **Unicast:** Select the checkbox to enable the unicast function. The default setting is disabled.

- **Stateless DHCPv6:** Stateless DHCPv6 is a combination of “stateless Address Autoconfiguration” and “Dynamic Host Configuration Protocol for IPv6” and is specified by RFC3736. Select the checkbox to enable this function.
4. Click **Save** to make the settings effective. Now IPv6 service is available for your network.

4.2. Test Internet Connectivity

After manually setting up an internet connection, you need to test the internet connectivity. The modem router provides two diagnostic tools to help you locate the malfunction.

1. Visit <http://tplinkmodem.net>, and log in with the password you set for the router.
2. Go to **Advanced** > **System Tools** > **Diagnostics**.



The screenshot shows the 'Diagnostics' page of a modem router. At the top, the title 'Diagnostics' is displayed. Below it, there are two radio buttons for 'Diagnostic tool': 'ping' (selected) and 'traceroute'. A text input field labeled 'Target IP/Domain Name:' is positioned below the radio buttons. A blue 'Start' button is located below the input field. At the bottom of the page, there is a section titled 'Advanced' with a downward arrow icon, which is currently collapsed. The main content area below the 'Start' button is a large, empty light gray rectangle.

3. Select **Ping** or **Traceroute** as the diagnostic tool and enter the parameter according to your needs.

- **Ping** is used to test the connectivity between the router and the tested host, and measure the round-trip time.

Target IP/Domain Name: Enter the IP address/domain name that you want to ping.

Ping Packet Size: Enter the size of the ping packet you want to use.

Ping Count: Enter the number of times you want to ping the target device.

Ping Interval: Enter the time period between each ping.

- **Traceroute** is used to display the route (path) your router has passed to reach the tested host, and measure transit delays of packets across an internet protocol network.

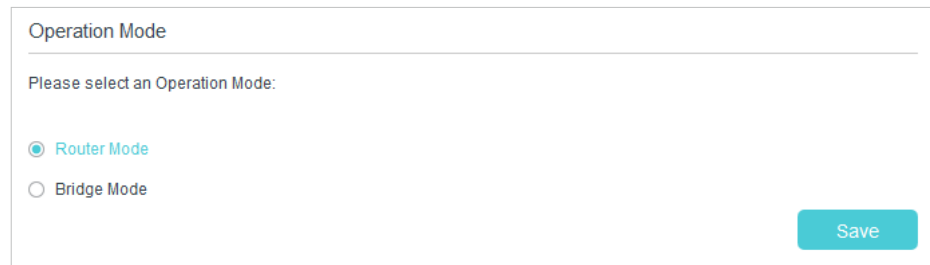
Target IP/Domain Name: Enter the IP Address/Domain Name you want to trace.

Max Hops: Enter the max number of hops.

4. Click **Start** to check the connectivity of the internet. The page will display the result of diagnosis.

4.3. Operation Modes

The modem router supports two operation modes: Router Mode and Bridge Mode. The modem router uses the Router Mode by default, and you can change the mode according to your needs.



Operation Mode

Please select an Operation Mode:

☒ Router Mode

☐ Bridge Mode

Save

4.3.1. Bridge Mode

In this mode, the modem router can be configured to act as a bridging device between your LAN and your ISP. Bridges are devices that enable two or more networks to communicate as if they are two segments of the same physical LAN. If you were in Bridge Mode, change the computer settings to obtain an IP address automatically. You could then log in to the web management page at 192.168.100.1.

Chapter 5

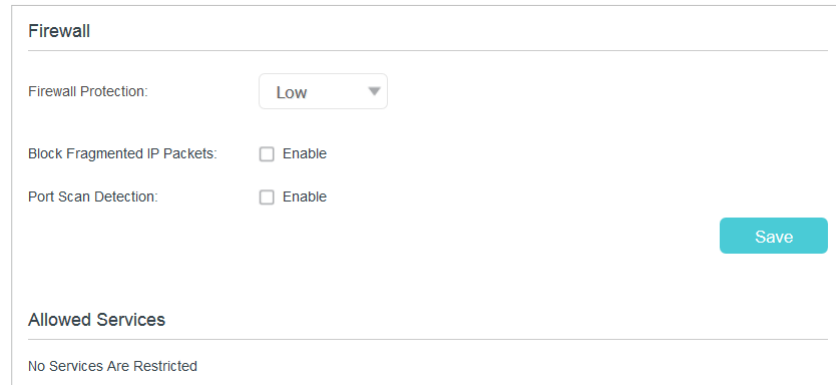
Network Security

This chapter guides you on how to protect your home network from unauthorized users by implementing the following network security functions. You can control certain client devices' access to the internet, block certain data from getting through your network, and get notified when a threat emerges or view log events.

- [Use Firewall](#)
- [Email Local Log](#)
- [Record Log in a Remote Server](#)

5.1. Use Firewall

1. Visit <http://tplinkmodem.net>, and log in with the password you set for the router.
2. Go to [Advanced](#) > [Firewall](#) > [Basic](#).
3. Configure the basic firewall settings according to the following explanations:



The screenshot shows the 'Firewall' configuration page. At the top, there's a title 'Firewall'. Below it, 'Firewall Protection' is set to 'Low' via a dropdown menu. There are two checkboxes: 'Block Fragmented IP Packets' and 'Port Scan Detection', both currently unchecked. A 'Save' button is located on the right side. At the bottom, there's a section titled 'Allowed Services' which currently displays 'No Services Are Restricted'.

- **Firewall Protection:** Select the firewall protection level appropriate to your needs. All the allowed services will be shown in the [Allowed Services](#) section according to the Firewall Protection level you select.
 - **Block Fragmented IP Packets:** This feature helps to protect your private local network from Internet based denial of service attacks. Select the checkbox to enable this feature.
 - **Port Scan Detection:** This feature can protect your private local network from Internet based hackers who attempt to gain unsolicited access to your network by detecting open IP ports on your gateway. Select the checkbox to enable this feature.
4. Click [Save](#).

5.2. Email Local Log

Local Log is used to send log to an email and you can analyze the logs as long as you have access to the email.

Follow the steps below to email local log:

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [Firewall](#) > [Local Log](#).

Local Log

Contact Email Address:

SMTP Server Name:

SMTP User Name:

SMTP Password:

E-mail Alerts:

☐ Enable

Save

Description	Count	Last Occurrence	Target	Source
--	--	--	--	--

Email LogClear Log

3. Enter your email address in the [Contact Email Address](#) field.
4. Enter the name of your SMTP sever in the [SMTP Server Name](#) field.
5. Enter the default admin/admin or specify new username and password in the [SMTP User Name](#) and [SMTP Password](#) fields.
6. If you want to get notified when your network is being attacked, enable [E-mail Alerts](#).
7. Click [Email Log](#) and the log will be immediately sent to the email you set.

💡 Tips:

1. The table displays details of the log.
2. Click [Clear Log](#) to delete all the log.

5.3. Record Log in a Remote Server

Remote Log allows you to record specific kinds of log in a remote server. The remote server must be in the local network.

Follow the steps below to record log in a remote server:

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [Firewall](#) > [Remote Log](#).

Log Events

Permitted Connections: ☐ Enable

Blocked Connections: ☐ Enable

Known Internet Attacks: ☐ Enable

Configuration Events: ☐ Enable

Syslog Server

Server Address:

[Save](#)

3. Select the checkbox to record the corresponding events in the remote server.
4. Enter the specified IP address of the remote system log server in the [Server Address](#) field.
5. Click [Save](#) to make the settings effective.

Chapter 6

USB Settings

This chapter describes how to share and access USB devices connected to the modem router among different clients.

The modem router supports USB external flash drives, hard drives and USB printers.

This chapter contains the following sections:

- [Local Storage Sharing](#)
- [Remote Access via FTP Server](#)
- [Media Sharing](#)
- [Printer Sharing](#)

6.1. Local Storage Sharing

Share your USB storage devices with different users on the network.

6.1.1. Access the USB Disk

1. Connect Your USB Disk

Insert your USB storage device into the modem router's USB port directly or using a USB cable. Wait several seconds until the USB LED becomes solid on.

Tips:

- If you use USB hubs, make sure no more than 4 devices are connected to the modem router.
- If the USB storage device requires using bundled external power, make sure the external power has been connected.
- If you use a USB hard drive, make sure its file system is FAT32 or NTFS.
- Before you physically disconnect a USB device from the modem router, safely remove it to avoid data damage: Go to [Advanced](#) > [USB Settings](#) > [Disk Settings](#) and click [Safely Remove](#).

2. Access Your USB Disk

By default, all the network clients can access all folders on your USB disk. Refer to the following table for access instructions. You can also customize your sharing content and set a sharing account by referring to [Customize Your Settings](#).

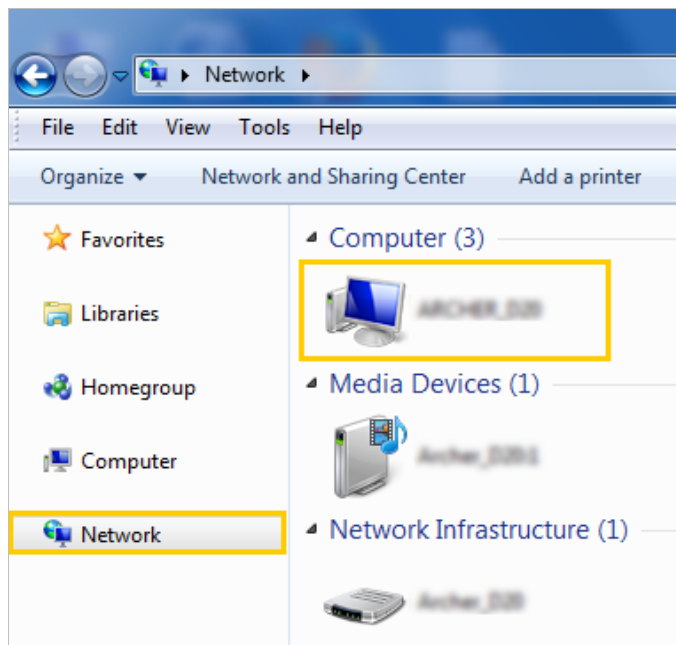
Windows computer

➤ Method 1:

Go to [Computer](#) > [Network](#), then click the Network Server Name ([model number](#) by default) in the [Computer](#) section.

Note:

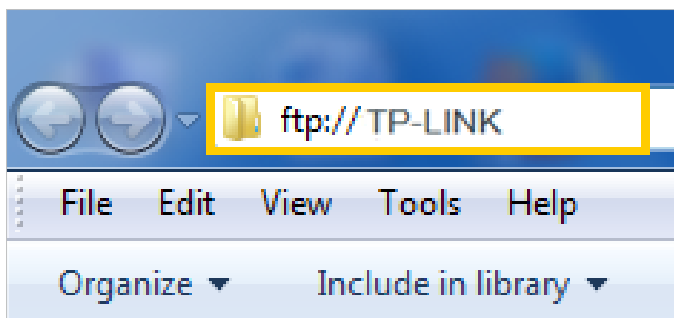
Operations in different systems are similar. Here we take Windows 7 as an example.



Windows
computer

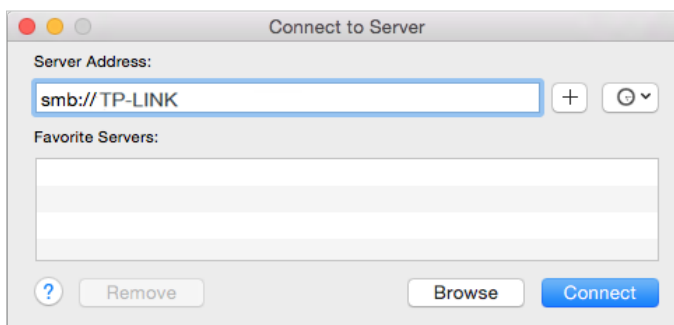
➤ Method 2:

Open a web browser (or go to [Computer](#)) and type the server address `\\TP-LINK` or `ftp://TP-LINK` in the address bar, then press [Enter](#).



Mac

- 1) Select [Go > Connect to Server](#)
- 2) Type the server address `smb://TP-LINK`
- 3) Click [Connect](#)



- 4) When prompted, select the [Guest](#) radio box. (If you have set up a username and a password to deny anonymous access to the USB disks, you should select the [Registered User](#) radio box. To learn how to set up an account for the access, refer to [To Set up Authentication for Data Security](#).)

pad

Use a third-party app for network files management.

💡 Tips:

You can also access your USB disk by using your Network/Media Server Name as the server address. Refer to [To Customize the Address of the USB Disk](#) to learn more.

6.1.2. Customize Your Settings

➤ To Only Share Specific Content

By default, [Share All](#) is enabled so all content on the USB disk is shared. If you want to only share specific folders, follow the steps below:

1. Visit <http://tplinkmodem.net>, then log in with the username (admin) and password (admin or the one customized by you).
2. Select [Basic](#) > [USB Settings](#) > [Folder Sharing](#). Focus on the [Sharing Folders](#) section. Click the button to disable [Sharing All](#), then click [Add](#) to add a new sharing folder.

3. Select the [Volume](#) and [Folder Path](#), then enter a [Share Name](#) as you like.
4. Decide the way you share the folder:
 - [Enable Authentication](#): Tick to enable authentication for this folder sharing, and you will be required to use a username and password to access the USB disk. Refer to [To Set up Authentication for Data Security](#) to learn more.
 - [Write Access](#): If you tick this checkbox, network clients can modify this folder.
 - [Enable Media Sharing](#): Tick to enable media sharing for this folder, and you can view photos, play music and watch movies stored on the USB disk directly from DLNA-supported devices. Click [Media Sharing](#) to learn more.
5. Click [OK](#).

💡 **Tips:**

The modem router can share eight volumes at most. You can click 💡 on the page to detach the corresponding volume you do not need to share.

Disk Settings

Scan

ADATA USB Flash Drive ➔ Safely Remove

ID	Volume	Capacity	Free Space	Enable
1	sda4	14.704 GB	12.5777 GB	💡

➤ **To Set up Authentication for Data Security**

If you enable **Authentication**, network clients will be required to enter the username and password you set when accessing the USB disk.

1. Visit <http://tplinkmodem.net>, then log in with the username (admin) and password (admin or the one customized by you).
2. Select **Advanced** > **USB Settings** > **Folder Sharing**.

Sharing Account

Set a sharing account for access to the sharing contents.

Account:

☒ Use Default Account
 ☐ Use Custom Account

Username:

admin

Password:

(Same as Login Password)

Save

3. Choose to use the default Account (admin) or use a new account and click **Save**.

📌 **Note:**

For Windows users, do not set the sharing username the same as the Windows username. Otherwise, Windows credential mechanism may cause the following problems:

- If the sharing password is also the same as the Windows password, authentication will not work since the Windows will automatically use its account information for USB access.
- If the sharing password is different from the Windows password, the Windows will be unable to remember your credentials and you will always be required to enter the sharing password for USB access.

4. Enable **Authentication** to apply the account you just set.
 - If you leave **Sharing All** enabled, click the button to enable **Authentication** for all folders.

Sharing Folders

Enable Sharing All: ☒

Enable Authentication: ☒

- If **Sharing All** is disabled, enable **Authentication** for specific folders.

Sharing Folders

Enable Sharing All: ☐

+ Add - Delete

☐	ID	Share Name	Folder Path	Media Sharing	Volume	Enable	Modify
☐	--	--	--	--	--	--	--

Volume:

Folder Path:

Share Name:

☒ Enable Authentication

☐ Write Access

☐ Enable Media Sharing

■ **Note:**

Due to Windows credential mechanism, you might be unable to access the USB disk after changing Authentication settings. Please log out from the Windows and try to access again. Or you can change the address of the USB disk by referring to [To Customize the Address of the USB Disk](#).

➤ **To Customize the Address of the USB Disk**

You can customize the server name and use the name to access your USB disk.

1. Visit <http://tplinkmodem.net>, then log in with the username (admin) and password (admin or the one customized by you).
2. Select **Advanced > USB Settings > Folder Sharing**.
3. Make sure **Network Neighborhood** is ticked, and enter a Network/Media Server Name as you like, such as **Myshare**, then click **Save**.

Sharing Setting

Network/Media Server Name:

Enable	Access Method	Link	Port
☒	Media Server	--	--
☒	Network Neighborhood	\\Myshare	--
☒	FTP	ftp://Myshare:21	21
☐	FTP(via Internet)	ftp://172.16.5.113:21	21

[Save](#)

4. Now you can access the USB disk by visiting [\\Myshare](#) (for Windows) or [smb://Myshare](#) (for Mac).

6.2. Remote Access via FTP Server

You can access your USB disk outside the local area network.

For example:

- Share photos and other large files with your friends without logging in to (and paying for) a photo-sharing site or email system.
- Get a safe backup for the materials for a presentation.
- Remove the files on your camera's memory card from time to time during the journey.

Note:

If your ISP assigns a private WAN IP address (such as 192.168.x.x or 10.x.x.x), you cannot use this feature because private addresses are not routed on the Internet.

6.2.1. Access the USB Disk

1. Connect Your USB Disk

Insert your USB storage device into the modem router's USB port directly or using a USB cable. Wait several seconds until the USB LED becomes solid on.

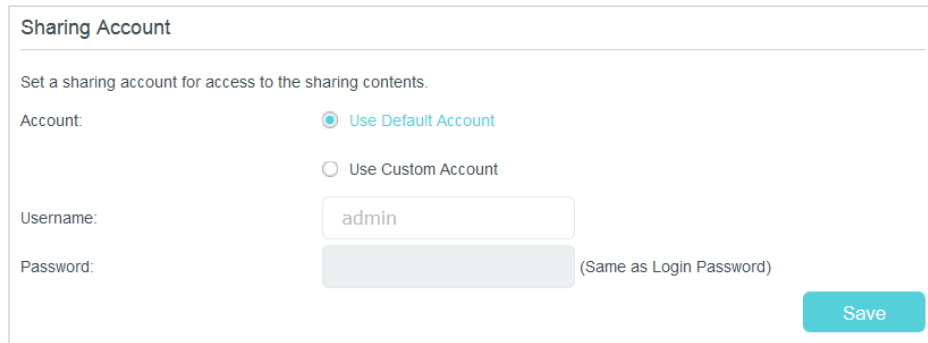
Tips:

- If you use USB hubs, make sure no more than 4 devices are connected to the modem router.
- If the USB storage device requires using bundled external power, make sure the external power has been connected.
- If you use a USB hard drive, make sure its file system is FAT32 or NTFS.
- Before you physically disconnect a USB device from the modem router, safely remove it to avoid data damage: Select [Advanced](#) > [USB Settings](#) > [Disk Settings](#) and click [Safely Remove](#).

2. Enable Authentication for Data Security

It is strongly recommended that you set and apply a sharing account for data security.

- 1) Visit <http://tplinkmodem.net>, then log in with the username (admin) and password (admin or the one customized by you).
- 2) Select [Advanced](#) > [USB Settings](#) > [Folder Sharing](#).
- 3) Choose to use the default Account (admin) or use a new account and click [Save](#).



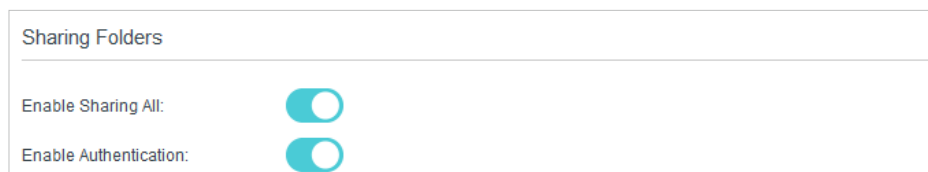
Note:

For Windows users, do not set the sharing username the same as the Windows username. Otherwise, Windows credential mechanism may cause the following problems:

- If the sharing password is also the same as the Windows password, authentication will not work since the Windows will automatically use its account information for USB access.
- If the sharing password is different from the Windows password, the Windows will be unable to remember your credentials and you will always be required to enter the sharing password for USB access.

4) Enable [Authentication](#) to apply the sharing account.

- If you leave [Sharing All](#) enabled, click the button to enable [Authentication](#) for all folders.



- If [Sharing All](#) is disabled, enable [Authentication](#) for specific folders.

Sharing Folders

Enable Sharing All: ☐

+ Add

- Delete

☐	ID	Share Name	Folder Path	Media Sharing	Volume	Enable	Modify
☐	--	--	--	--	--	--	--

Volume:

Select options.

Folder Path:

Browse

Share Name:

☒ Enable Authentication

☐ Write Access

☐ Enable Media Sharing

Cancel

OK

Note:
Due to Windows credential mechanism, you might be unable to access the USB disk after changing Authentication settings. Please log out from the Windows and try to access again.

3. Enable the FTP (via Internet)

Select the check box to enable [FTP\(via Internet\)](#), then click [Save](#).

Sharing Setting

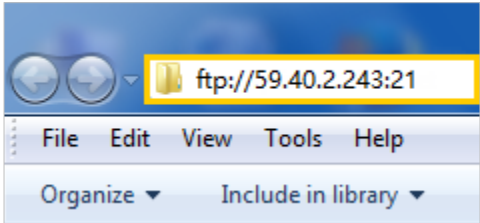
Network/Media Server Name:

Enable	Access Method	Link	Port
☒	Media Server	--	--
☒	Network Neighborhood		--
☒	FTP	ftp://TP-LINK:21	21
☒	FTP(via Internet)	ftp://59.40.2.243:21	21

Save

4. Access Your USB Disk via Internet

Now different clients with Internet connection can access the USB disk:

Computer	1) Open a web browser (or go to Computer, only for Windows users). 2) Type the server address in the address bar: Type in ftp://<WAN IP address of the modem router>:<port number> (such as ftp://59.40.2.243:21). If you have specified the domain name of the modem router, you can also type in ftp://<domain name>:<port number> (such as ftp://MyDomainName:21)  The Address Bar of the Windows Explorer (Windows 7) 3) Press Enter on the keyboard. 4) Access with the username and password you set in Step 2 Enable Authentication for Data Security. ◆ Tips: You can also access the USB disk via a third-party app for network files management, which can resume broken file transfers.
Pad	Use a third-party app for network files management.

◆ **Tips:**

Click [Set Up a Dynamic DNS Service Account](#) to learn how to set up a domain name for you modem router.

6.2.2. Customize Your Settings

➤ To Only Share Specific Content

By default, [Sharing All](#) is enabled so all content on the USB disk is shared. If you want to only share specific folders, follow the steps below:

1. Visit <http://tplinkmodem.net>, then log in with the username (admin) and password (admin or the one customized by you).
2. Select [Basic](#) > [USB Settings](#) > [Folder Sharing](#). Focus on the section of [Sharing Folders](#). Click the button to disable [Sharing All](#), then click [Add](#) to add a new sharing folder.

Sharing Folders

Enable Sharing All: ☐

+ Add - Delete

☐	ID	Share Name	Folder Path	Media Sharing	Volume	Enable	Modify
--	--	--	--	--	--	--	--

Volume:

Folder Path:

Share Name:

☒ Enable Authentication

☐ Write Access

☐ Enable Media Sharing

3. Select the **Volume** and **Folder Path**, then specify the **Share Name** as you like.
4. Tick **Enable Authentication**.
5. If you allow network clients to modify this folder, tick **Write Access**.
6. Click **OK**.

💡 Tips:

The modem router can share eight volumes at most. You can click  on the page to detach the corresponding volume you do not need to share.

Disk Settings

ADATA USB Flash Drive  Safely Remove

ID	Volume	Capacity	Free Space	Enable
1	sda4	14.704 GB	12.5777 GB	

6.3. Media Sharing

The feature of **Media Sharing** allows you to view photos, play music and watch movies stored on the USB disk directly from DLNA-supported devices, such as your computer, pad and PS2/3/4.

6.3.1. Access the USB Disk

1. Connect Your USB Disk

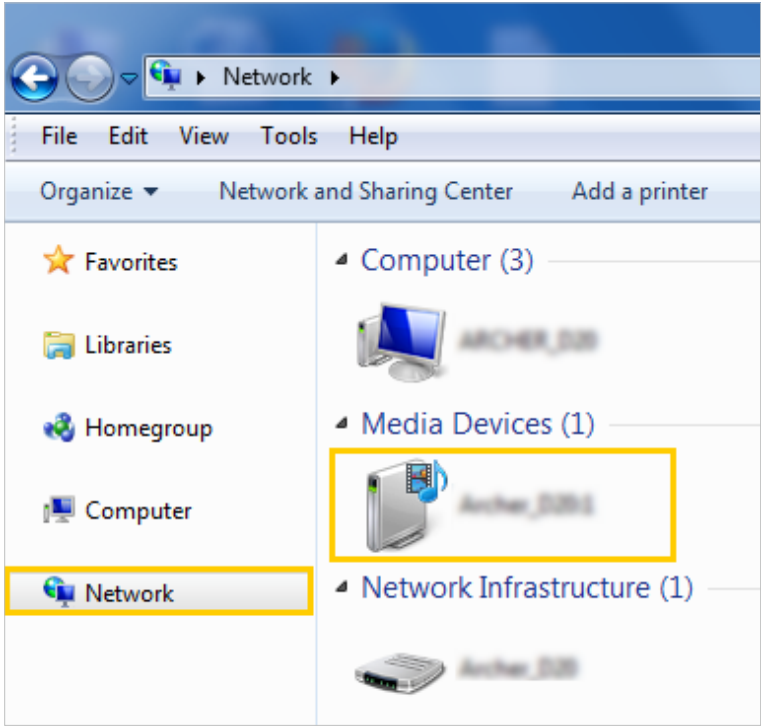
Insert your USB storage device into the modem router's USB port directly or using a USB cable. Wait several seconds until the USB LED becomes solid on.

◆ **Tips:**

- If you use USB hubs, make sure no more than 4 devices are connected to the modem router.
- If the USB storage device requires using bundled external power, make sure the external power has been connected.
- If you use a USB hard drive, make sure its file system is FAT32 or NTFS.
- Before you physically disconnect a USB device from the modem router, safely remove it to avoid data damage: Go to [Advanced > USB Settings > Disk Settings](#) and click [➔ Safely Remove](#).

2. Access the Media Files on Your USB Disk

Now the DLNA-supported devices (such as your computer and pad) connected to the modem router can detect and play the media files on the USB disks.

Windows computer	• Go to Computer > Network, then click the Media Server Name (model number by default) in the Media Devices section. ■ Note: Here we take Windows 7 as an example.  The screenshot shows the Windows 7 'Network' window. The left sidebar has 'Network' selected and highlighted with a yellow box. The main pane shows a list of network resources: 'Computer (3)', 'Media Devices (1)', and 'Network Infrastructure (1)'. Under 'Media Devices (1)', there is an icon of a server labeled 'Archer_D201', which is highlighted with a yellow rectangular box.
	Pad • Use a third-party DLNA-supported player.

6.3.2. Customize Your Settings

➤ To Only Share Specific Content

By default, **Sharing All** is enabled so all content on the USB disk is shared. If you want to only share specific folders, follow the steps below:

1. Visit <http://tplinkmodem.net>, then log in with the username (admin) and password (admin or the one customized by you).
2. Select **Basic > USB Settings > Folder Sharing**.
3. Focus on the section of **Sharing Folders**. Click the button to disable **Sharing All**, then click **Add** to add a new sharing folder.

4. Select the **Volume** and **Folder Path**, then enter a **Share Name** as you like.
5. Tick **Enable Media Sharing** and click **OK**.

💡 Tips:

The modem router can share eight volumes at most. You can click 💡 on the page to detach the corresponding volume you do not need to share.

Disk Settings

Scan

ADATA USB Flash Drive Safely Remove

ID	Volume	Capacity	Free Space	Enable
1	sda4	14.704 GB	12.5777 GB	

➤ To Specify the Media Server

You can also modify the media server name or disable the feature of Media Sharing as needed.

1. Visit <http://tplinkmodem.net>, then log in with the username (admin) and password (admin or the one customized by you).
2. Select **Advanced** > **USB Settings** > **Folder Sharing**.
3. Enter a **Network/Media Server Name** as you like, such as **Myshare**. You can deselect the checkbox of Media Server to disable the media server feature.

Sharing Setting

Network/Media Server Name:

Enable	Access Method	Link	Port
☒	Media Server	--	--

4. Click **Save**.

6.4. Printer Sharing

The feature of Printer Sharing helps you share a printer with different computers connected to the modem router.

■ Note:

Printers unlisted on this page may be incompatible with the modem router:

<http://www.tp-link.com/common/compatible/print-server/>.

1. Install the Driver of the Printer

Make sure you have installed the driver of the printer on each computer that needs printer service.

If you do not have the driver, contact the printer manufacturer.

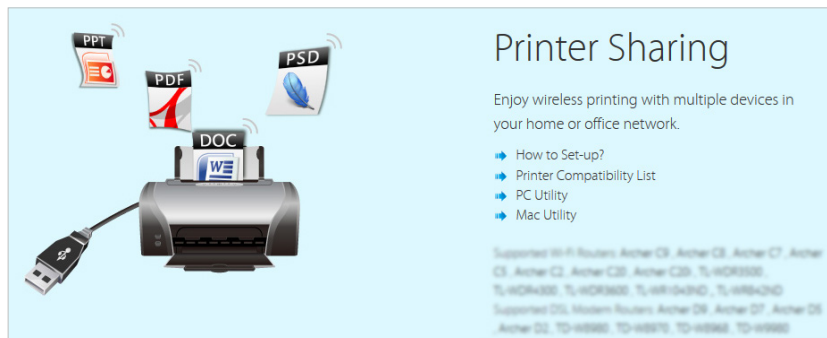
2. Connect the Printer

Cable a printer to the USB port with the USB cable. Wait several seconds until the USB LED becomes solid on.

3. Install the TP-LINK USB Printer Controller Utility

TP-LINK USB Printer Controller Utility helps you access the shared printer. Download and Install the utility on each computer that needs printer service.

- 1) Visit <http://www.tp-link.com/app/usb/>.
- 2) Click **PC Utility** (for Windows users) or **Mac Utility** to download the installation file and uncompress it.

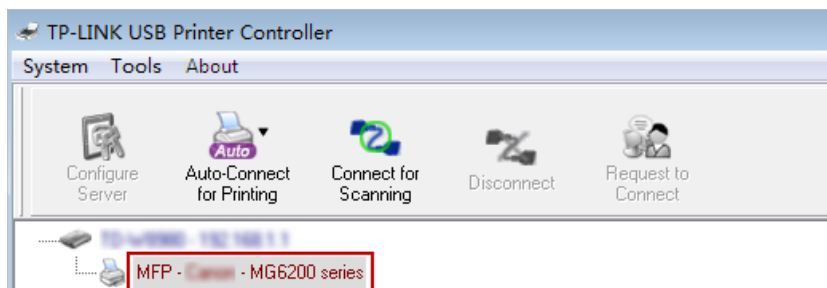


- 3) Open the uncompressed folder, then click **TP-LINK USB Printer Controller Setup** (for Windows users) or **TP-Link UDS Printer Controller Installer** (for Mac users) to install the utility.

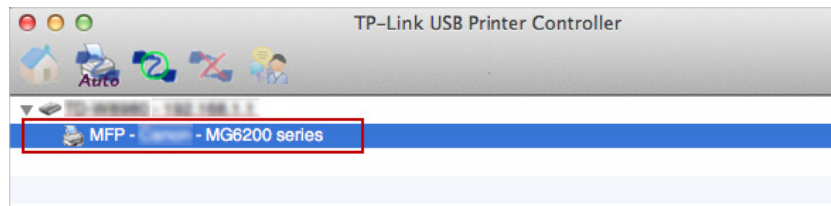
4. Access the Printer

You should set the shared printer as Auto-Connect Printer on every computer that needs printer service.

- 1) Double-click the icon  on your desktop to launch the USB Printer Controller.
- 2) Highlight the printer you share.

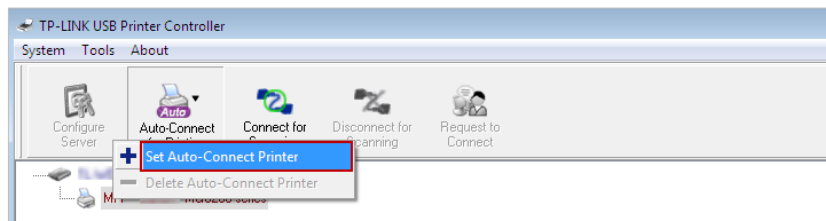


Windows

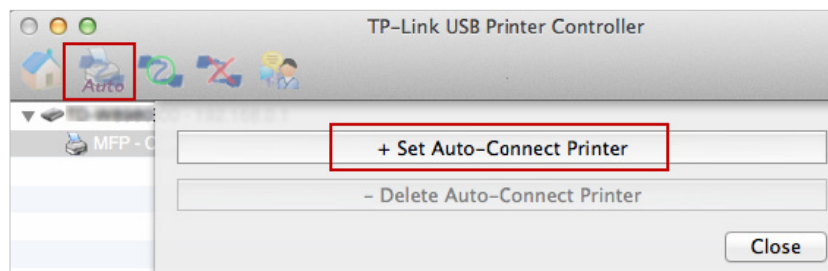


Mac

- 3) Click the [Auto-Connect for printing](#) tab to pull down a list, then select [Set Auto-Connect Printer](#).

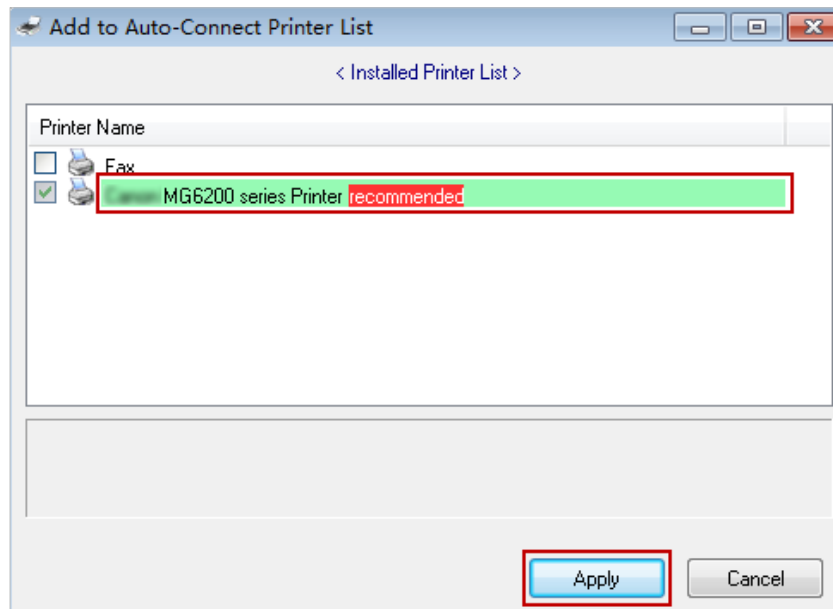


Windows

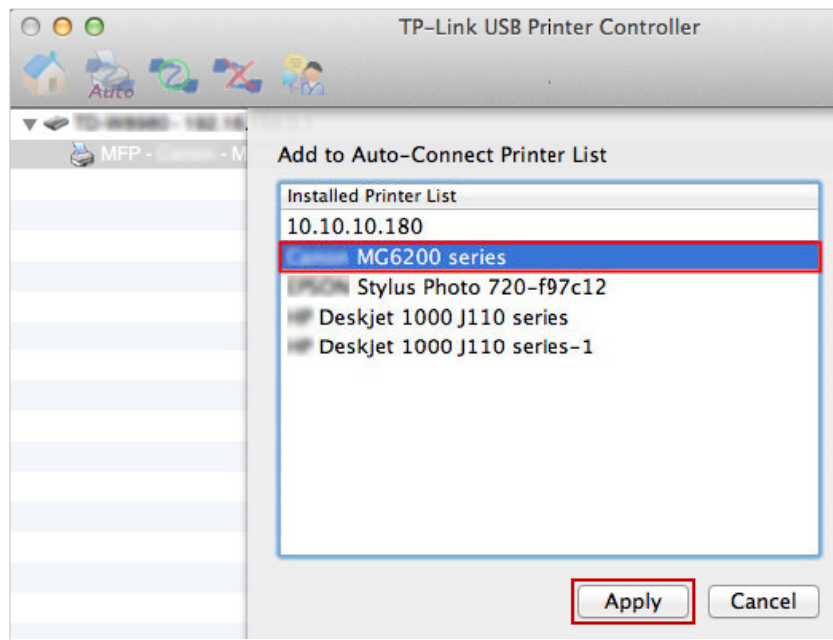


Mac

- 4) Select the printer you share, then click [Apply](#).

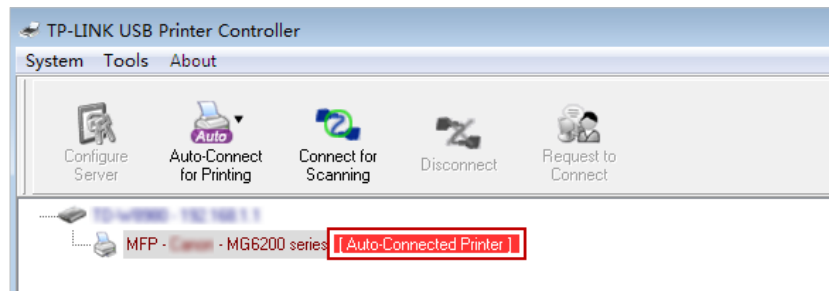


Windows



Mac

- 5) You will see the printer marked as **Auto-Connect Printer**. Now you can print with this printer.



Windows



Mac

◆ Tips:

The Print Server also allows different clients to share the scan feature of MFPs (Multi-Function Printers). To scan with [TP-LINK USB Printer Controller](#), right-click the printer and select [Network Scanner](#). Then, a scanning window will pop up. Finish the scanning process by following the on-screen instructions.

Chapter 7

Parental Control

This function allows you to block inappropriate, explicit and malicious websites, and control access to specified websites at specified time.

I want to:

Control what types of websites my children or other home network users can visit and even the time of day they are allowed to access the Internet.

For example, I want to allow my children's devices (e.g. a computer or a tablet) to access only www.tp-link.com and wikipedia.org from 18:00 (6PM) to 22:00 (10PM) on weekdays and not other time.

How can I do that?

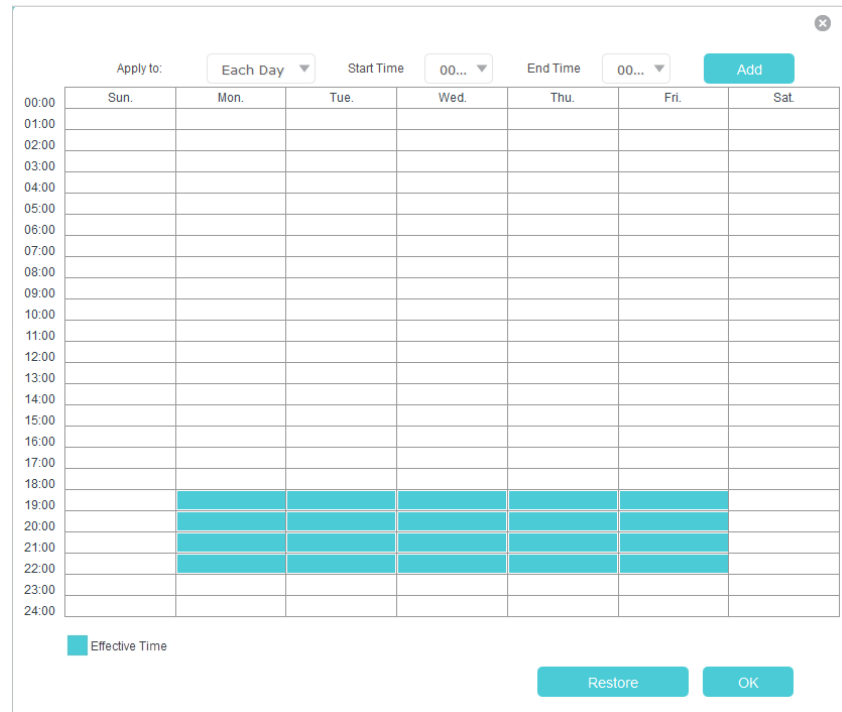
1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Basic](#) or [Advanced](#) > [Parental Control](#) and enable [Parental Control](#).

The screenshot shows the 'Parental Control' settings page. At the top, there is a toggle switch for 'Enable Parental Control' which is currently turned off. Below this, the section 'Devices Under Parental Control' contains a table with columns: ID, Device Name, MAC Address, Effective Time, Description, Enable, and Modify. Above the table, there is a note: 'The Effective Time Schedule is based on the time of the Router. The time can be set in "Advanced -> System Tools -> Time Settings"'. To the right of the table are '+ Add' and '- Delete' buttons. Below the table, the 'Content Restriction' section shows 'Content Restriction Mode' with 'Black List Mode' selected (radio button) and 'White List Mode' unselected. There is a '+ Add a new keyword' button and a text input field containing 'anonymizer' with a '- Delete' button next to it. A 'Save' button is located at the bottom right of the form.

3. Click [Add](#).

The screenshot shows the 'Add' modal window. It has a header with '+ Add' and '- Delete' buttons. Below the header is a table with columns: ID, Device Name, MAC Address, Effective Time, Description, Enable, and Modify. The table is currently empty. Below the table, there are input fields for 'Device Name:', 'MAC Address:', 'Effective Time:', and 'Description:'. There is a 'View Devices' button next to the 'Device Name' field. Below the 'Effective Time' field, there is a clock icon. Below the 'Description' field, there is a checkbox labeled 'Enable this Entry' which is checked. At the bottom right, there are 'Cancel' and 'OK' buttons.

4. Click [View Devices](#), and select the device to be controlled. Or, enter the [Device Name](#) and [MAC Address](#) manually.
5. Click the  icon to set the [Effective Time](#). Select the appropriate cell(s) and click [OK](#).



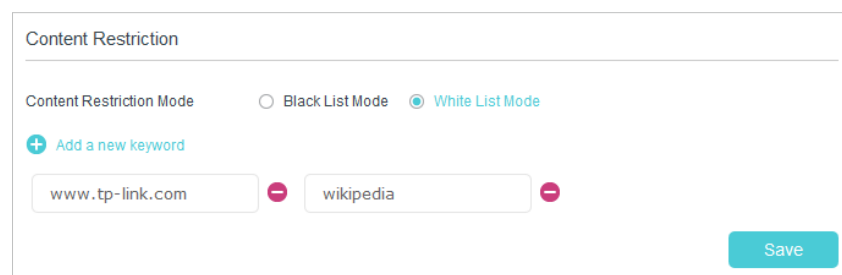
Apply to: Each Day Start Time: 00:00 End Time: 00:00 Add

	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
00:00							
01:00							
02:00							
03:00							
04:00							
05:00							
06:00							
07:00							
08:00							
09:00							
10:00							
11:00							
12:00							
13:00							
14:00							
15:00							
16:00							
17:00							
18:00							
19:00							
20:00							
21:00							
22:00							
23:00							
24:00							

Effective Time

Restore OK

6. Enter a [Description](#) for the entry.
7. Select the checkbox to enable this entry and click [OK](#).
8. Select the restriction mode.
 - 1) In [Black List Mode](#), the controlled devices cannot access any websites containing the specified keywords during the Effective Time period.
 - 2) In [White List Mode](#), the controlled devices can only access websites containing the specified keywords during the Effective Time period.



Content Restriction

Content Restriction Mode ☐ Black List Mode ☒ White List Mode

+ Add a new keyword

− −

Save

9. Click [Add a New Keyword](#). You can add up to 200 keywords for both Black List and White List. Below are some sample entries to allow access.
 - 1) Enter a web address (e.g. www.tp-link.com) or a web address keyword (e.g. wikipedia) to only allow or block access to the websites containing that keyword.
 - 2) If you wish to block all Internet browsing access, do not add any keyword to the White List.
10. Enter the keywords or websites you want to add and click [Save](#).

Done!

Now you can control your children's Internet access according to your needs.

Chapter 8

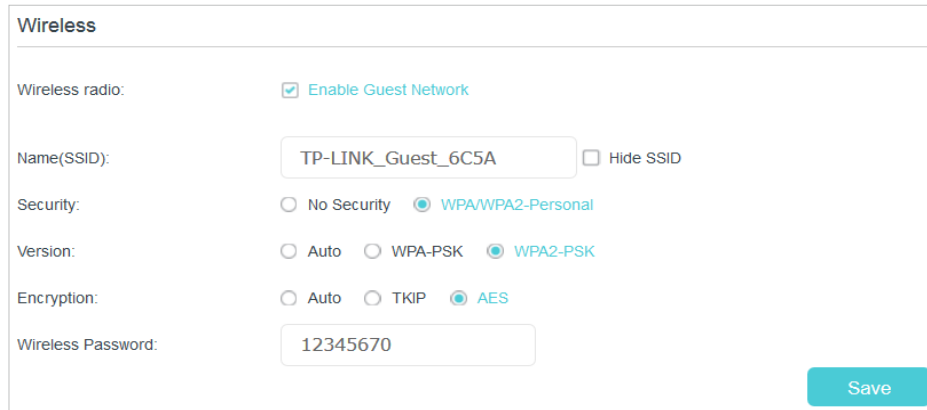
Guest Network

This function allows you to provide Wi-Fi access for guests without disclosing your main network. When you have guests in your house, apartment, or workplace, you can create a guest network for them. In addition, you can assign network authorities and bandwidth for guests to ensure network security, privacy, and fluency.

- [Create a Network for Guests](#)
- [Customize Guest Network Options](#)

8.1. Create a Network for Guests

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [Wireless 2.4G](#) or [Wireless 5G](#) > [Guest Network](#). Locate the [Wireless](#) section.
3. Create a 2.4GHz or 5GHz guest network according to your needs.



Wireless

Wireless radio: ☒ [Enable Guest Network](#)

Name(SSID): ☐ Hide SSID

Security: ☐ No Security ☒ [WPA/WPA2-Personal](#)

Version: ☐ Auto ☐ WPA-PSK ☒ [WPA2-PSK](#)

Encryption: ☐ Auto ☐ TKIP ☒ [AES](#)

Wireless Password:

[Save](#)

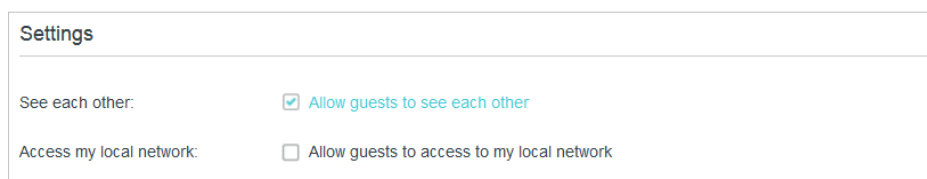
- 1) Select [Enable Guest Network](#).
- 2) Set an easy-to-identify SSID. Don't select [Hide SSID](#) unless you want your guests and other people to manually input this SSID for Wi-Fi access.
- 3) Set [Security](#) to [WPA/WPA2 Personal](#), keep the default [Version](#) and [Encryption](#) values, and set an easy-to-remember password.
4. Click [Save](#). Now your guests can access your guest network using the SSID and password you set!

💡 **Tips:**

To view guest network information, go to [Advanced](#) > [Status](#) and find the [Guest Network](#) section.

8.2. Customize Guest Network Options

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [Wireless 2.4G/5G](#) > [Guest Network](#). Locate the [Settings](#) section.



Settings

See each other: ☒ [Allow guests to see each other](#)

Access my local network: ☐ [Allow guests to access to my local network](#)

3. Assign network authorities according to your needs.

- [Allow guests to see each other](#)

Select this checkbox to allow the clients in your guest network to access each other.

- [Allow guests to access my local network](#)

Select this checkbox to allow the clients in your guest network to access your local network, not just Internet access.

4. Click [Save](#). Now users in your guest network can enjoy only the network authorities you assigned!

💡 **Tips:**

To view guest network information, go to [Advanced](#) > [Status](#) and find the [Guest Network](#) section.

Chapter 9

NAT Forwarding

Modem router's NAT (Network Address Translation) feature makes the devices in the LAN use the same public IP address to communicate in the Internet, which protects the local network by hiding IP addresses of the devices. However, it also brings about the problem that external host cannot initiatively communicate with the specified device in the local network.

With forwarding feature the modem router can penetrate the isolation of NAT and allows the external hosts in the Internet to initiatively communicate with the devices in the local network, thus to realize some special functions.

TP-LINK modem router includes three forwarding rules. If two or more rules are set, the priority of implementation from high to low is Port Forwarding, Port Triggers and DMZ.

This chapter contains the following sections:

- [Share Local Resources in the Internet by Port Forwarding](#)
- [Open Ports Dynamically by Port Triggers](#)
- [Free Applications from Port Restriction by DMZ](#)

9.1. Share Local Resources in the Internet by Port Forwarding

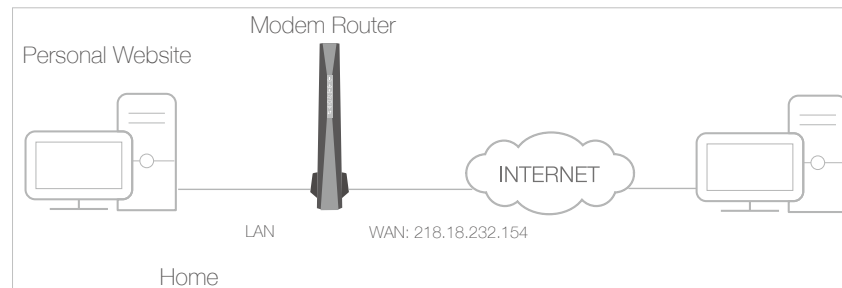
When you build up a server in the local network and want to share it on the Internet, Port Forwarding can realize the service and provide it to the Internet users. At the same time Port Forwarding can keep the local network safe as other services are still invisible from the Internet.

Port Forwarding can be used for setting up public services in your local network, such as HTTP, FTP, DNS, POP3/SMTP and Telnet. Different service uses different service port. Port 80 is used in HTTP service, port 21 in FTP service, port 25 in SMTP service and port 110 in POP3 service. Please verify the service port number before the configuration.

I want to:

Share my personal website I've built in local network with my friends through the Internet.

For example, the personal website has been built in my home PC (192.168.1.100). I hope that my friends in the Internet can visit my website in some way. The PC is connected to the modem router with the WAN IP address 218.18.232.154.



How can I do that?

1. Assign a static IP address to your PC, for example 192.168.1.100.
2. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
3. Go to **Advanced > NAT Forwarding > Port Forwarding**, click **Add**.

Forwarding

+ Add - Delete

ID	Service Name	External Port	Internal IP	Internal Port	Protocol	Enable	Modify
--	--	--	--	--	--	--	--

Service Name:

External Port:

Internal IP:

Internal Port:

Protocol:

Enable: ☒ Enable this Entry

Cancel OK

4. Enter the service you want to use in **Service Name** field. Here we take **HTTP** as an example.
5. Enter the **External Port**, **Internal Port** and select the corresponding **Protocol** as shown in the above picture.
6. Enter the PC's IP address 192.168.1.100 in the **Internal IP** field.
7. Select **Enable this Entry**.
8. Click **OK** to save the settings.

💡 **Tips:**

1. You should verify the port number that the service needs.
2. You can add multiple port forwarding rules if you want to provide several services in a modem router. Please note that the **External Port** cannot be overlapped.

Done!

Users in the Internet can enter [http:// WAN IP: External Port](http://WAN IP: External Port) (in this example: [http:// 218.18.232.154:80](http://218.18.232.154:80)) to visit your personal website.

💡 **Tips:**

1. WAN IP should be a public IP address. For the WAN IP is assigned dynamically by ISP, it is recommended to apply and register a domain name for the WAN by DDNS, go to [Set Up a Dynamic DNS Service Account](#) for more information. Then you can use [http:// domain name: External Port](http://domain name: External Port) to visit the website.

9.2. Open Ports Dynamically by Port Triggers

Port triggers can specify a trigger port and its corresponding external ports. When a host in the local network initiates a connection to the trigger port, all the external ports will be opened for subsequent connections. The modem router can record the IP address of the host. When the data from the Internet return to the external ports, the

modem router can forward them to the corresponding host. Port triggering is mainly applied to online games, VoIPs and video players. Common applications include MSN Gaming Zone, Dialpad and Quick Time 4 players, etc.

Follow the steps below to configure the port trigger rules:

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [NAT Forwarding](#) > [Port Triggers](#) and click [Add](#).

Port Triggers

+ Add - Delete

ID	Desc	Trigger Start Port	Trigger End Port	External Start Port	External End Port	Protocol	Enable	Modify
--	--	--	--	--	--	--	--	--

Application: MSN Gaming Zone

Trigger Start Port: 47624

Trigger End Port: 47624

External Start Port: 2300

External End Port: 2400

Protocol: TCP

☒ Enable this Entry

Cancel OK

3. Enter the name of the [Application](#). Here we take application [MSN Gaming Zone](#) as an example.
4. Enter the [Trigger Start Port](#) and [Trigger End Port](#) for outgoing traffic. An outgoing connection using this port will trigger this rule.
5. Enter the [External Start Port](#) and [External End Port](#) used by the remote system when it responds to the outgoing request. A response using one of these ports will be forwarded to the PC which triggered this rule.
6. Select the protocol used for the external ports, either TCP, UDP, or ALL (all protocols supported by the router).
7. Select [Enable this entry](#).
8. Click [OK](#) to save the settings.

■ Note:

1. When the trigger connection is released, the corresponding opened ports will be closed.
2. Each rule can only be used by one host on the LAN at a time. The trigger connection of other hosts on the LAN will be refused.

3. External Port ranges of different entries cannot overlap each other.

9.3. Free Applications from Port Restriction by DMZ

When a PC is set to be a DMZ (Demilitarized Zone) host in the local network, it is totally exposed to the Internet. This can realize the unlimited bidirectional communication between internal hosts and external hosts. The DMZ host becomes a virtual server with all ports opened. When you are not clear about which ports to open in some special applications, like IP camera and database software, you can set the PC to be a DMZ host.

■ **Note:**

DMZ is more applicable in the situation that users are not clear about which ports to open. When it is enabled, the DMZ host is totally exposed to the Internet, which may bring some potential safety hazard. If DMZ is not in use, please disable it in time.

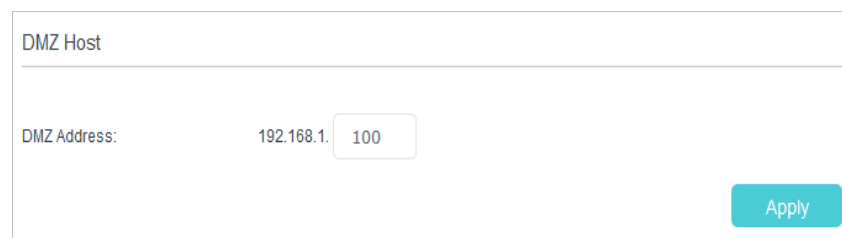
I want to:

Make the home PC join the Internet online game without port restriction.

For example, due to some port restriction, when playing the online games, you can log in normally but cannot join a team with other players. To solve this problem, set your PC as a DMZ with all ports opened.

How can I do that?

1. Assign a static IP address to your PC, for example 192.168.1.100.
2. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
3. Go to [Advanced](#) > [NAT Forwarding](#) > [DMZ](#).



4. Enter the IP address 192.168.1.100 in the [DMZ Address](#) field.
5. Click [Apply](#) to save the settings.

Done!

The configuration is completed. You've set your PC to a DMZ host and now you can make a team to game with other players.

💡 **Tips:**

DMZ Address 192.168.1.0 indicates that DMZ is disabled.

Chapter 10

Specify Your Network Settings

This chapter introduces how to change the default settings or adjust the basic configuration of the modem router using the web management page.

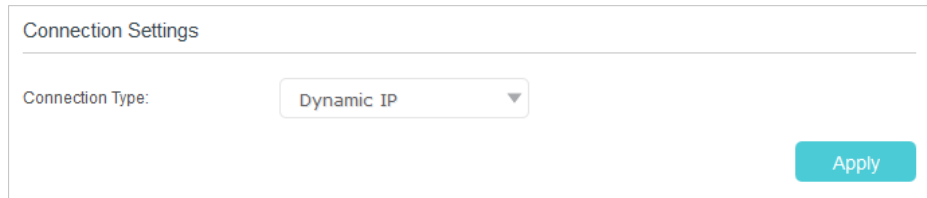
This chapter contains the following sections:

- [Internet Settings](#)
- [LAN Settings](#)
- [Wireless Settings](#)
- [Set Up a Dynamic DNS Service Account](#)

10.1. Internet Settings

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to **Basic** > **Internet** page. Select the Connection Type and enter the information provided by your ISP.

■ Note: Do not change the settings unless necessary.



The screenshot shows a web interface titled "Connection Settings". Below the title, there is a label "Connection Type:" followed by a dropdown menu. The dropdown menu is currently set to "Dynamic IP". To the right of the dropdown menu is a teal button labeled "Apply".

3. Click **Apply** to make the settings effective, and you can refer to [Test Internet Connectivity](#) to test the Internet connection.

10.2. LAN Settings

10.2.1. Change the LAN IP Address

The modem router is preset with a default LAN IP 192.168.1.1, which you can use to log in to its web management page. The LAN IP address together with the Subnet Mask (255.255.255.0) also defines the subnet that the connected devices are on. If the IP address conflicts with another device in your local network, you can change it.

Follow the steps below to change your IP address.

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin and the one customized by you).
2. Go to **Advanced** > **Network** > **LAN Settings** page and locate the **LAN Settings** section.

LAN Settings

IP Address: 192.168.1.1

MAC Address: A4:2B:B0:C2:6C:5A

DHCP Settings

DHCP Server: ☒ Enable DHCP Server

Start IP Address: 192.168.1.10

End IP Address: 192.168.1.254

Leased Time: 60 (1-2880 minutes)

Primary DNS: 0.0.0.0 (Optional)

Second DNS: 0.0.0.0 (Optional)

Save

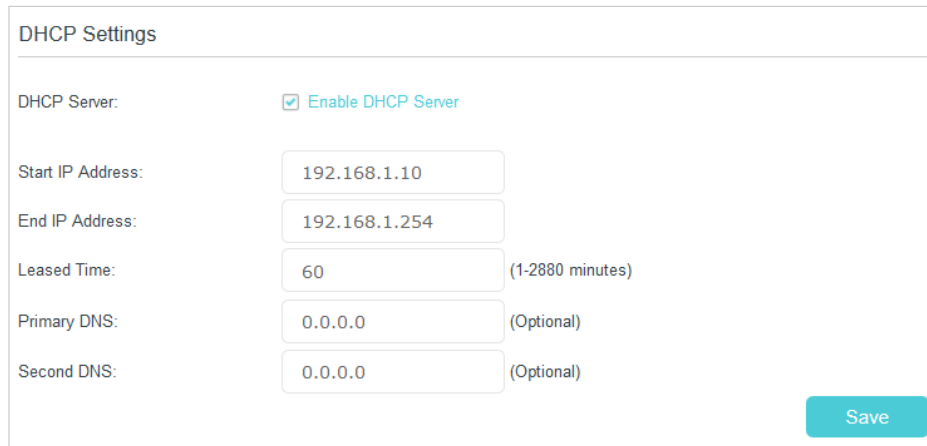
3. Type in a new **IP Address** appropriate to your needs.
4. Click **Save** in the **DHCP Settings** section to make the settings effective.

10.2.2. Use the Modem Router as a DHCP Server

You can configure the modem router to act as a DHCP server to assign IP addresses to its clients. To use the DHCP server function of the modem router, you must configure all computers on the LAN to obtain an IP Address automatically.

Follow the steps below to configure DHCP server.

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to **Advanced > Network > LAN Settings** page and locate the **DHCP Settings** section.



DHCP Settings

DHCP Server: ☒ Enable DHCP Server

Start IP Address: 192.168.1.10

End IP Address: 192.168.1.254

Leased Time: 60 (1-2880 minutes)

Primary DNS: 0.0.0.0 (Optional)

Second DNS: 0.0.0.0 (Optional)

Save

3. Select [Enable DHCP Server](#) to enable the DHCP function.
4. Specify the [Start IP Address](#) and [End IP Address](#) which must be on the same subnet with the LAN IP. The modem router will assign addresses within this specified range to its clients. It is from 192.168.1.10 to 192.168.1.254 by default.
5. Enter a value for the [Leased Time](#). The [Leased Time](#) is the amount of time in which a DHCP client can lease its current dynamic IP address assigned by the modem router. After the dynamic IP address expires, the user will be automatically assigned a new dynamic IP address. The default is 60 minutes.
6. Keep the rest of the settings as default and click [Save](#).

10.3. Wireless Settings

10.3.1. Specify Basic Wireless Settings

The modem router's wireless network name (SSID) and 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.

Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you). Go to [Basic > Wireless](#) page.

The image shows a 'Wireless Settings' configuration window. It is divided into two sections: '2.4GHz' and '5GHz'. Each section has a checkbox for 'Enable Wireless Radio', which is checked in both. Below each checkbox are input fields for 'Name(SSID)' and 'Password'. For 2.4GHz, the SSID is 'TP-LINK_6C5A' and the password is '12345670'. For 5GHz, the SSID is 'TP-LINK_6C59_5G' and the password is '12345670'. To the right of the SSID fields is a 'Hide SSID' checkbox, which is unchecked. A 'Save' button is located at the bottom right of the window.

➤ **To enable or disable the wireless function:**

Enable the 2.4 GHz or 5GHz Wireless Network. If you don't want to use the wireless function, just deselect the box. If you disable the wireless function, all the wireless settings won't be effective.

➤ **To change the wireless network name (SSID) and wireless password:**

Enter a new SSID using up to 32 characters. The value is case-sensitive.

■ **Note:**

If you use a wireless device to change the wireless settings, you will be disconnected after the new settings are effective. Please write down the new SSID and password for future use.

➤ **To hide SSID:**

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

➤ **To change the mode or channel:**

Go to [Advanced > Wireless 2.4G](#) or [Wireless 5G > Basic Settings](#) page.

Power: Select the transmit power of the modem router. You can select 25%, 50%, 75% and 100% as you like. 100% is the default setting and is recommended.

Mode: Select the desired mode.

- 802.11n only: Select only if all of your wireless clients are 802.11n devices.
- 802.11gn mixed: Select if you are using both 802.11g and 802.11n wireless clients.
- 802.11bgn 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 stations can connect to the modem router. It is strongly recommended that you select 802.11bgn mixed, and all of 802.11b, 802.11g, and 802.11n wireless stations can connect to the modem router.

- 802.11ac only (5GHz): Select only if all of your wireless clients are 802.11ac devices.

- 802.11ac/n mixed (5GHz): Select if you are using both 802.11ac and 802.11n wireless clients.
- 802.11a/n/ac mixed (5GHz): Select if you are using a mix of 802.11a, 802.11n and 802.11ac wireless clients. It is strongly recommended that you select 11a/n/ac mixed.

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.

Bandwidth: Select the channel width from the drop-down list. The default setting is **Auto** for 2.4GHz wireless network and **80MHz** for 5GHz wireless network, which can adjust the channel width for your clients automatically.

➤ **To change the security option:**

1. Go to [Wireless 2.4G](#) or [Wireless 5G > Primary Network](#) page.
2. Select an option from the **Security** drop-down list. The router provides four options, No Security, WPA/WPA2 Personal (Recommended), WPA/WPA2 Enterprise, WEP. WPA2 uses the newest standard and the security level is the highest. We don't recommend you to change the default settings unless necessary.

10.3.2. Use WPS for Wireless Connection

You can use WPS (Wi-Fi Protected Setup) feature to add a new wireless device to your existing network quickly.

Method 1 Use the WPS Button

Use this method if your client device has a WPS button.

1. Press the WPS button on the modem router for 1 second.
2. Press the WPS button of the client device directly.
3. The WPS LED flashes for about 2 minutes during the WPS process.
4. When the WPS LED is on, the client device has successfully connected to the modem router.

Method 2 Enter the client device's PIN on the modem router

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced > Wireless 2.4G](#) or [Wireless 5G > Primary Network](#) page. Locate the **WPS Wizard** section.

3. Keep the default WPS status as Enabled and select the **PIN Number** radio button.
4. Enter the client device's PIN in the field on the above WPS screen. Then click the **Connect** button.
5. **Device has been added successfully** will appear on the above screen, which means the client device has successfully connected to the modem router.

Method 3 Enter the modem router's PIN on your client device

Use this method if your client device asks for the modem router's PIN.

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to **Advanced > Wireless 2.4G** or **Wireless 5G > Primary Network** page. Locate the **Router's PIN** section.

3. Keep the Router's PIN status as enabled. Take a note of the Current PIN of the modem router. You can also click the **Generate** button to get a new PIN.
4. On the client device, enter the modem router's PIN. (The default PIN is also printed on the label of the modem router.)
5. The WPS LED flashes for about two minutes during the WPS process.
6. When the WPS LED is on, the client device has successfully connected to the modem router.

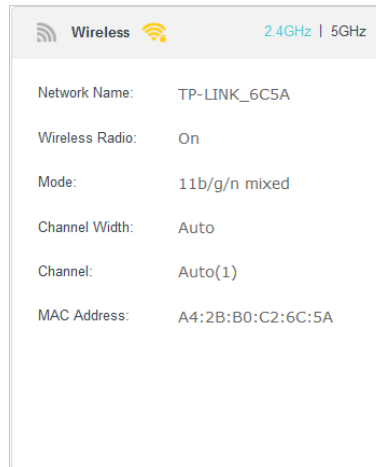
■ **Note:**

1. The WPS LED on the modem router will light on for five minutes if the device has been successfully added to the network.
2. The WPS function cannot be configured if the wireless function of the modem router is disabled. Please make sure the wireless function is enabled before configuring the WPS.

10.3.3. View Wireless Information

➤ **To view the detailed wireless network settings:**

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [Status](#) page. You can see the [Wireless](#) box.
3. Select [2.4GHz](#) or [5GHz](#) to view the wireless details.



💡 **Tips:** You can also see the wireless details by clicking the router icon on [Basic](#) > [Network Map](#).

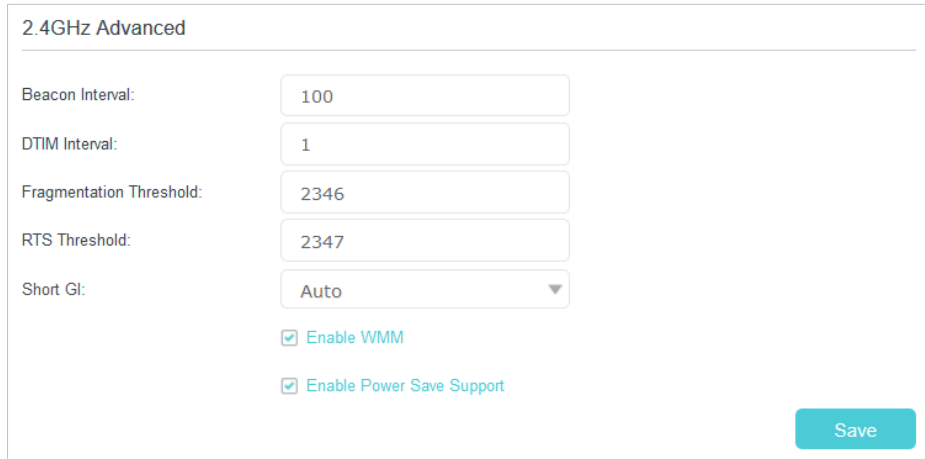
➤ **To view the detailed information of the connected wireless clients:**

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Basic](#) > [Network Map](#) page and click the [Wireless Clients](#) icon.
3. You can view the detailed information of the wireless clients, including its name, IP address and MAC address.

10.3.4. Advanced Wireless Settings

Advanced wireless settings are for those who have a network concept. If you are not familiar with the settings on this page, it's strongly recommended that you keep the provided default values; otherwise it may result in lower wireless network performance.

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [Wireless 2.4G](#) or [Wireless 5G](#) > [Wireless Advanced](#) page.



- **Beacon Interval:** Enter a value between 25 and 1000 in milliseconds to determine the duration between which beacon packets are broadcasted by the router to synchronize the wireless network. The default is 100 milliseconds.
 - **DTIM Interval:** Enter a value between 1 and 255 to determine the interval of the Delivery Traffic Indication Message (DTIM). 1 indicates the DTIM Interval is the same as **Beacon Interval**.
 - **Fragmentation Threshold:** This value is the maximum size determining whether packets will be fragmented. Setting the Fragmentation Threshold too low may result in poor network performance because of excessive packets. 2346 is the default setting and is recommended.
 - **RTS Threshold:** Enter a value between 1 and 2347 to determine the packet size of data transmission through the router. By default, the RTS (Request to Send) Threshold size is 2347. If the packet size is greater than the preset threshold, the router sends Request to Send frames to a particular receiving station and negotiates the sending of a data frame, or else the packet will be sent immediately.
 - **Short GI:** This feature is enabled by default and recommended to increase the data capacity by reducing the Guard Interval (GI) time.
 - **Enable WMM:** This feature guarantees the packets with high-priority messages being transmitted preferentially. WMM is enabled compulsively under 802.11n or 802.11ac mode. It is strongly recommended to enable WMM.
 - **Enable Power Save Support:** Select the checkbox to enable this function. This function allows the router to keep only one antenna in working condition while the remaining antennas dormant, so as to achieve the purpose of saving power.
3. Click **Save** to make the settings effective.

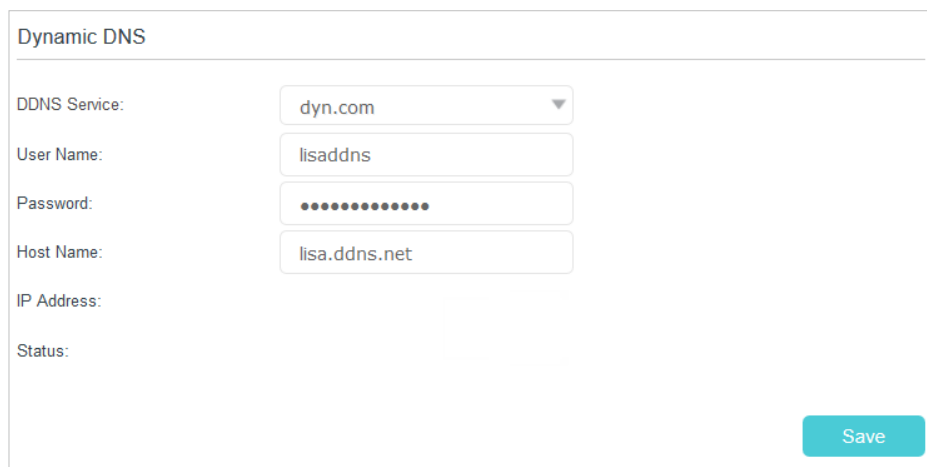
10.4. Set Up a Dynamic DNS Service Account

Most ISPs (Internet service providers) assign a dynamic IP address to the router and you can use this IP address to access your router remotely. However, the IP address can change any time and you don't know when it changes. In this case, you might need the DDNS (Dynamic Domain Name Server) feature on the router to allow you and your friends to access your router and local servers (FTP, HTTP, etc.) using domain name, in no need of checking and remembering the IP address.

■ Note: DDNS does not work if the ISP assigns a private WAN IP address (such as 192.168.1.x) to the modem router.

To set up DDNS, please follow the instructions below:

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [Network](#) > [Dynamic DNS](#).
3. Select the [DDNS Service](#) (Dyndns or NO-IP). If you don't have a DDNS account, you need to register an account on the provider's official website first.



The screenshot shows the 'Dynamic DNS' configuration page. It contains several input fields: 'DDNS Service' is a dropdown menu with 'dyn.com' selected; 'User Name' is a text box with 'lisaddns'; 'Password' is a text box with masked characters (dots); 'Host Name' is a text box with 'lisa.ddns.net'; 'IP Address' and 'Status' are empty text boxes. A 'Save' button is located at the bottom right of the form.

4. Enter the username, password and host name (domain name) of the account (such as lisa.ddns.net).
5. Click [Save](#).

Chapter 11

Administrate Your Network

This chapter introduces how to view basic information, change the system settings and administrate your modem router's network.

This chapter contains the following sections:

- [View Basic Information](#)
- [Set System Time](#)
- [Back up and Restore Configuration Settings](#)
- [Change the Administrator Account](#)
- [Remote Management](#)
- [System Log](#)

11.1. View Basic Information

11.1.1. View System Information

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to **Advanced** > **System Tools** > **System Information** page, then you can view the system information.

System Information	
System Up Time	0 days 00h:04m:08s
Network Access	Allowed
Cable Modem IP Address	2013::15e/64

11.1.2. View Device Information

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to **Advanced** > **System Tools** > **Device Information** page, then you can view the device information.

Device Information	
Standard Specification Compliant	DOCSIS 3.0
Hardware Version	V1.1
Software Version	v1.1.0 Build 20160804 Rel592170
Cable Modem MAC Address	A4:2B:B0:C2:6C:56
Cable Modem Serial Number	2160419000001
CM certificate	Installed

11.1.3. View Connection Status

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).

- Go to [Advanced](#) > [System Tools](#) > [Connection Status](#) page, then you can view the information of startup procedure, downstream bonded channels, upstream bonded channels, and time information.

Startup Procedure		
Procedure	Status	Comment
Acquire Downstream Channel	159000000 Hz	Locked
Connectivity State	OK	Operational
Boot State	OK	Operational
Configuration File	OK	cm_common_upgrade.cfg
Security	Enabled	BPI+

Downstream Bonded Channels						
Channel	Status	Modulation	Channel ID	Frequency	Power	SNR
1	Locked	QAM256	9	159000000 Hz	-5.1 dBmV	32.8 dB
2	Locked	QAM256	18	213000000 Hz	-5.9 dBmV	37.6 dB
3	Locked	QAM256	19	219000000 Hz	-6.0 dBmV	39.0 dB
4	Locked	QAM256	20	225000000 Hz	-6.2 dBmV	39.6 dB
5	Locked	QAM256	21	231000000 Hz	-6.2 dBmV	38.5 dB
6	Locked	QAM256	22	237000000 Hz	-6.2 dBmV	41.2 dB
7	Locked	QAM256	23	243000000 Hz	-6.4 dBmV	44.1 dB
8	Locked	QAM256	24	249000000 Hz	-6.7 dBmV	43.9 dB
9	Locked	QAM256	25	255000000 Hz	-6.8 dBmV	43.7 dB
10	Locked	QAM256	26	261000000 Hz	-6.9 dBmV	42.1 dB
11	Locked	QAM256	27	267000000 Hz	-6.9 dBmV	41.1 dB
12	Locked	QAM256	28	273000000 Hz	-6.9 dBmV	40.1 dB
13	Locked	QAM256	29	279000000 Hz	-6.9 dBmV	38.1 dB
14	Locked	QAM256	30	285000000 Hz	-6.9 dBmV	37.5 dB
15	Locked	QAM256	31	291000000 Hz	-6.9 dBmV	39.2 dB
16	Locked	QAM256	32	303000000 Hz	-7.0 dBmV	42.4 dB

Upstream Bonded Channels						
Channel	Status	Channel Type	Channel ID	Symbol Rate	Frequency	Power
1	Locked	ATDMA	6	5120 ksym/sec	40200000 Hz	40.0 dBmV
2	Locked	ATDMA	1	5120 ksym/sec	8200000 Hz	38.5 dBmV
3	Locked	ATDMA	2	5120 ksym/sec	14600000 Hz	39.0 dBmV
4	Locked	ATDMA	3	5120 ksym/sec	21000000 Hz	39.3 dBmV

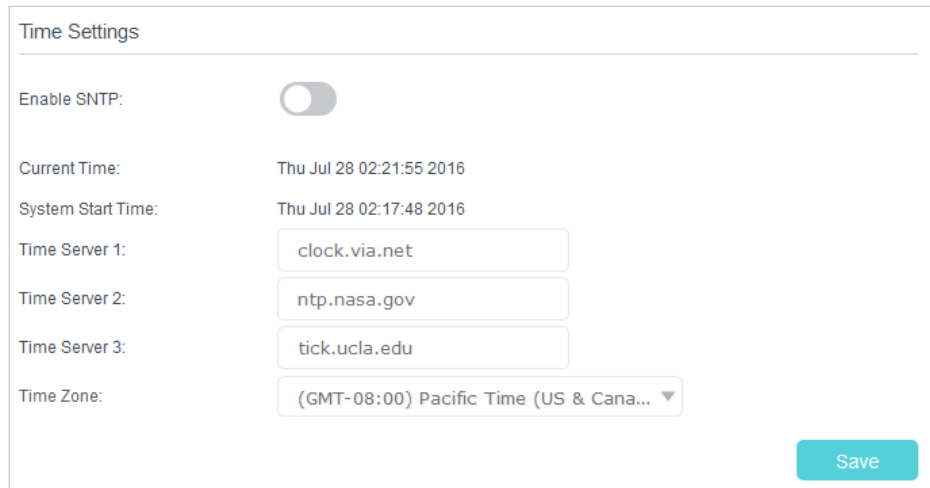
Time Information	
CM IP Address	2013::15e/64
Duration	D: 00 H: 01 M: 00 S: 00
Expires	Thu Jul 28 03:18:35 2016
Current System Time	Thu Jul 28 02:21:55 2016

11.2. Set System Time

System time is the time displayed while the modem router is running. The system time you configure here will be used for other time-based functions like Parental Control. You can manually set how to get the system time.

Follow the steps below to set your system time.

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [System Tools](#) > [Time Settings](#) page.



3. Select **Enable SNTP**.
4. Enter the IP address or domain name of **Time Server 1**, **Time Server 2** or **Time Server 3**, and the router will get the time from the NTP Server automatically. In addition, the router has some common built-in NTP Servers that will synchronize automatically once it connects to the Internet.
5. Select your local time zone from the **Time Zone** drop-down list.
6. Click **Save**.

11.3. Back up and Restore Configuration Settings

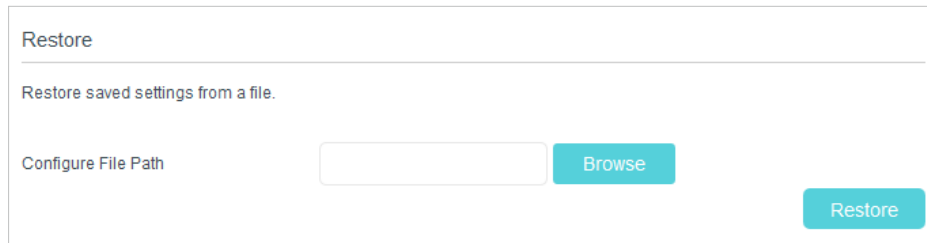
The configuration settings are stored as a configuration file in the router. You can back up the configuration file to your computer for future use and restore the modem router to a previous settings from the backup file when needed. Moreover, if needed you can erase the current settings and reset the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

To back up configuration settings

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Click **Advanced > System Tools > Backup & Restore** page.
3. Click **Backup** to save a copy of the current settings to your local computer. A conf. bin file will be stored to your computer.

To restore configuration settings

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Click **Advanced > System Tools > Backup & Restore** page.

A screenshot of a web interface titled "Restore". Below the title is a horizontal line. Underneath, the text "Restore saved settings from a file." is displayed. Below this text is a form with a label "Configure File Path" followed by a text input field. To the right of the input field is a blue button labeled "Browse". Further to the right, at the bottom of the form, is a blue button labeled "Restore".

Restore

Restore saved settings from a file.

Configure File Path [Browse](#)

[Restore](#)

3. Click [Browse](#) to locate the previous backup configuration file, and click [Restore](#).
4. Wait for the restoring and then the modem router will automatically reboot.

To reset the modem router to factory default settings

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Click [Advanced](#) > [System Tools](#) > [Backup & Restore](#) page.
3. Click [Reset](#) to reset the modem router.
4. Wait for the resetting and then the modem router will automatically reboot.

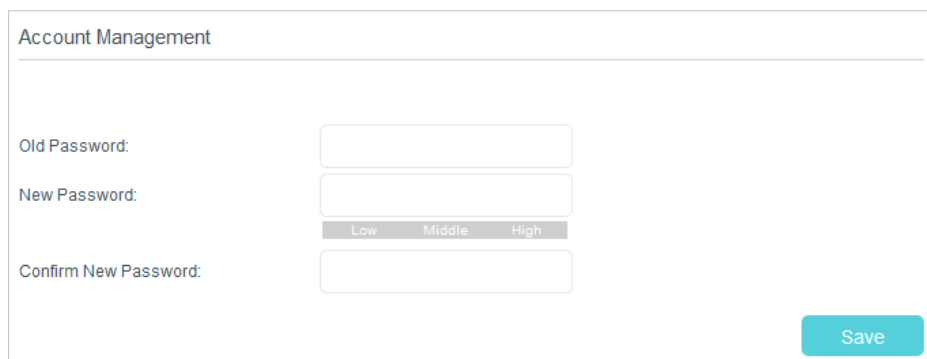
■ Note:

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

11.4. Change the Administrator Account

Admin account is used to log in to the modem router's web management page. You can change it on the web management page.

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [System Tools](#) > [Administrator](#) page. Locate the [Account Management](#) section.

A screenshot of a web interface titled "Account Management". Below the title is a horizontal line. The form contains three labels: "Old Password:", "New Password:", and "Confirm New Password:". Each label is followed by a text input field. The "New Password:" field has a strength indicator below it with three tabs: "Low", "Middle", and "High". At the bottom right of the form is a blue button labeled "Save".

Account Management

Old Password:

New Password:

Low Middle High

Confirm New Password:

[Save](#)

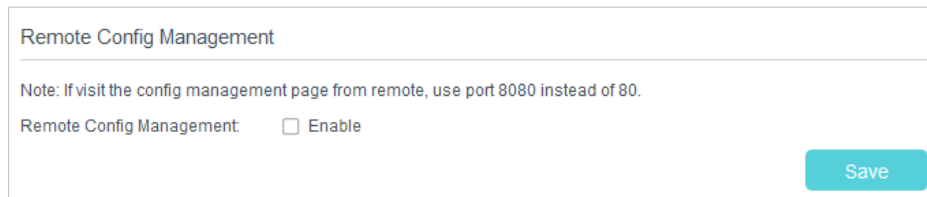
3. Enter the old password. Enter the new password and enter again to confirm.
4. Click [Save](#) to make the settings effective.

11.5. Remote Management

By default, the remote devices are not allowed to manage the modem router from the Internet.

Follow the steps below to allow remote devices to manage the modem router.

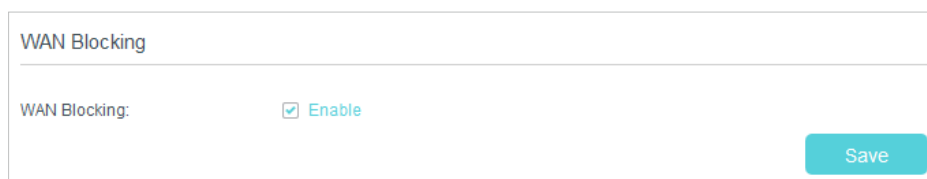
1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to **Advanced > System Tools > Administrator** page. Locate the **Remote Config Management** section.



3. Select the checkbox to enable **Remote Config Management**.
4. Click **Save** to make the settings effective. Now, all devices on the Internet can log in to <http://modem router's WAN IP address : 8080> (such as <http://113.116.60.229:8080>) to manage the modem router.

💡 Tips:

1. You can find the WAN IP address of the router on **Basic > Network Maps > Internet**.
2. The router's WAN IP is usually a dynamic IP. Please refer to [Set Up a Dynamic DNS Service Account](#) if you want to log in to the router through a domain name.
3. If you don't want devices on the public network to ping the WAN IP address of the router, enable **WAN Blocking** on this page.



11.6. System Log

System Log can help you know what happened to your modem router, facilitating you to locate the malfunctions. For example, when your modem router does not work properly, you will need to save the system log and send it to the technical support for troubleshooting.

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).

2. Click [Advanced](#) > [System Tools](#) > [Event Log](#) page, then you can view the system logs.

System Log		
Time	Priority	Description
Time Not Established	Critical (3)	SYNC Timing Synchronization failure - Failed to acquire QAM/QPSK symbol timing;;CM-MAC=a4:2b:b0:c2:6c:56;CMTS-MAC=00:00:00:00...
		Refresh Log Clear Log

Click [Refresh Log](#) to refresh the log list.

Click [Clear Log](#) to delete all the system logs.

Appendix: Troubleshooting

T1. How do I restore my modem router's configuration to its factory default settings?

There are two ways to reset the modem router:

- Method 1: Use the Reset button. For details, refer to the related button description.
- Method 2: Use the [Backup & Restore](#) page. For details, refer to the instructions in [To reset the modem router to factory default settings](#).

■ **Note:** Once the modem router is reset, the current configuration settings will be lost and you will need to re-configure the modem router.

T2. What can I do if I forgot my password?

Web management page password:

Restore the modem router to its factory default settings and use the default [admin](#) (all lowercase) for both username and password to log in.

Wireless network password:

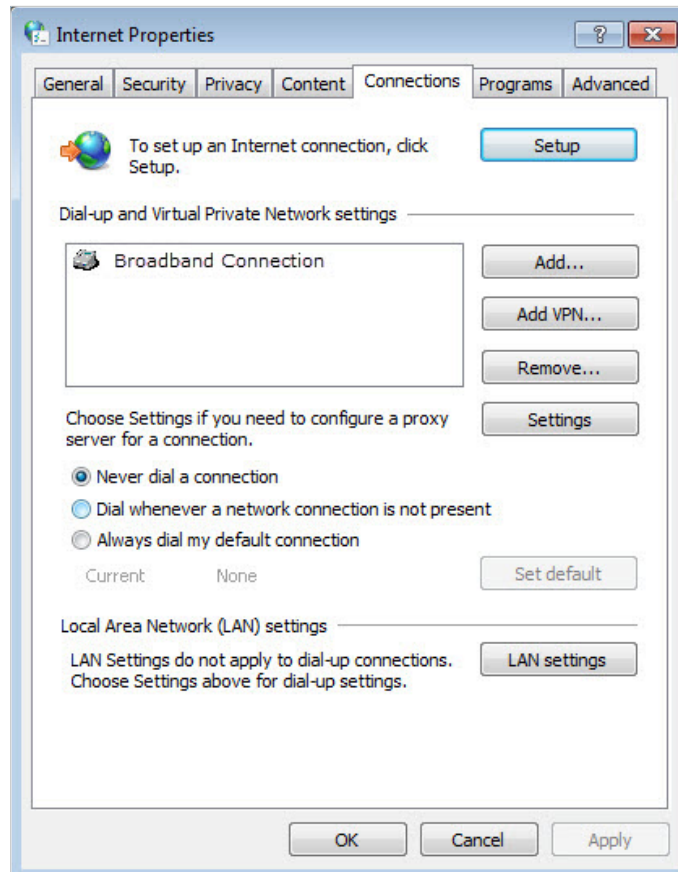
1. The default Wireless Password/PIN is printed on the product label of the modem router.
2. If the default wireless password has been changed, log into the modem router's web management page and go to [Basic](#) > [Wireless](#) to retrieve or reset your password.

Guest network password:

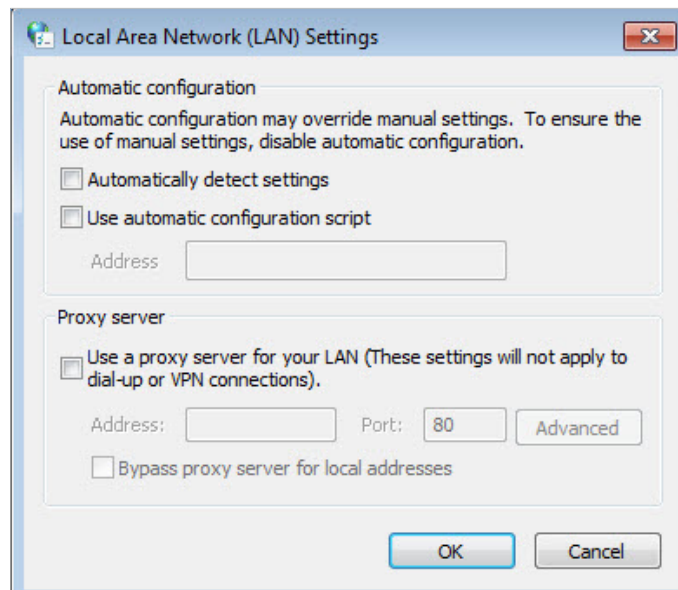
Log into the web management page and go to [Basic](#) > [Guest Network](#) to retrieve or reset the password.

T3. What can I do if I cannot login to the modem router's web management page?

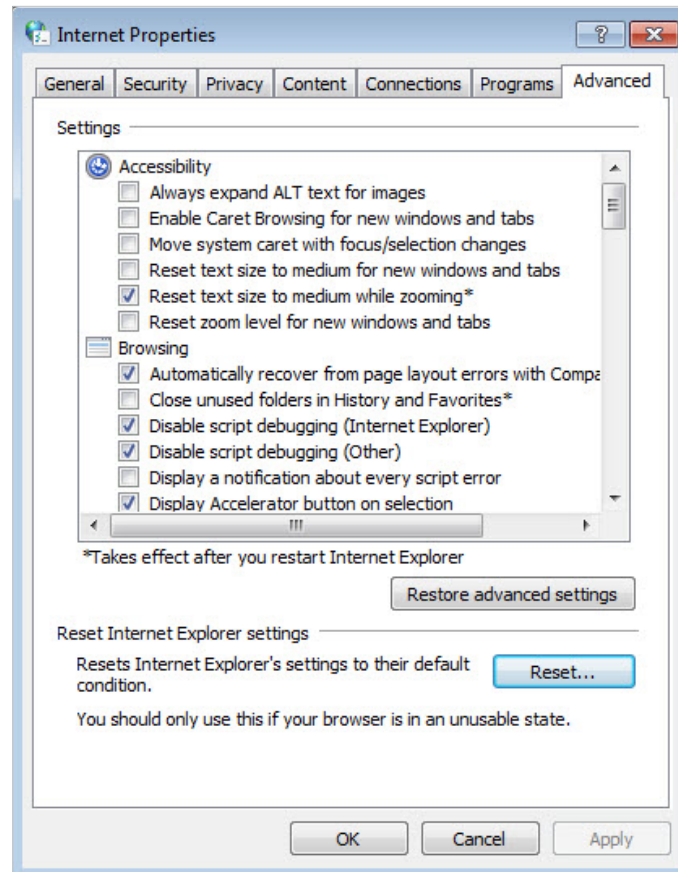
- Make sure the modem router connects to the computer correctly and the corresponding LED indicator(s) light up.
- Make sure the IP address of your computer is configured to obtain an IP address automatically and obtain DNS server address automatically.
- Make sure the default access <http://tplinkmodem.net> or <http://192.168.1.1> is correctly input.
- Check your computer's settings:
 - 1) Go to [Start](#) > [Control Panel](#) > [Network and Internet](#), and click [View network status and tasks](#);
 - 2) Click [Internet Options](#) on the bottom left;
 - 3) Click [Connections](#), select [Never dial a connection](#);



4) Click [LAN settings](#), deselect the following three options and click [OK](#);



5) Go to [Advanced](#) > [Restore advanced settings](#), click [OK](#) to save the settings.



- Change a web browser or computer and log in again.
- Reset the modem router to factory default settings.

■ Note: You'll need to reconfigure the modem router to surf the Internet once the modem router is reset.

Open a web browser and log in again. If login fails, please contact the technical support.

T4. What can I do if I cannot access the Internet?

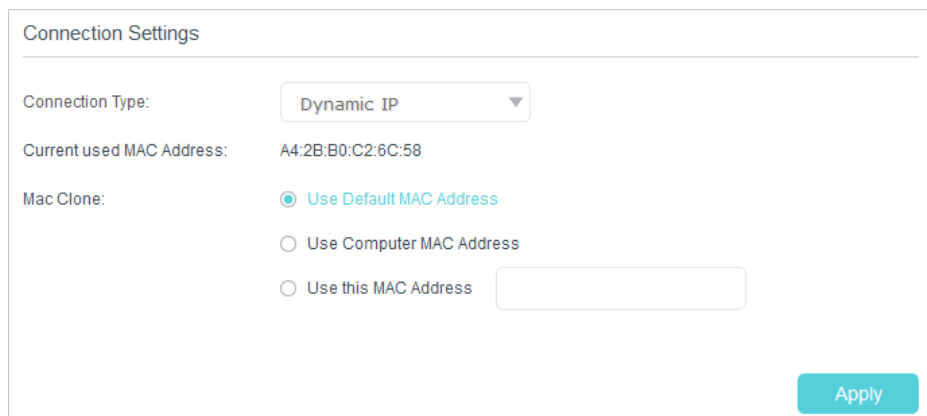
1. Check to see if all the connectors are connected well, including the coaxial cable, Ethernet cables and power adapter.
2. Check to see if you can log in to the web management page of the modem router. If you can, try the following steps. If you cannot, please set your computer by referring to T3 and then try to see if you can access the Internet. If the problem persists, please go to the next step.
3. Consult your ISP and make sure the modem router is activated.
4. Refer to T5 to clone the MAC address.
5. If you still cannot access the Internet, please restore your modem router to its factory default settings and reconfigure your modem router by following the instructions in [Quick Start](#).

6. Please contact our Technical Support if the problem still exists.

T5. How to configure MAC Clone?

You can manually change the MAC address of the modem router. It is helpful when your Internet access account provided by your ISP is bound to one specific MAC address, in other words, your ISP just permits only one computer with the authenticated MAC address to access the Internet. In this case, you can use MAC Clone to allow more computers to access the Internet via the same account.

1. Visit <http://tplinkmodem.net>, and log in with the username (admin) and password (admin or the one customized by you).
2. Go to [Advanced](#) > [Network](#) > [WAN](#) page. Locate the [Connection Settings](#) section.



Connection Settings

Connection Type: Dynamic IP

Current used MAC Address: A4:2B:B0:C2:6C:58

Mac Clone:

☒ Use Default MAC Address

☐ Use Computer MAC Address

☐ Use this MAC Address

[Apply](#)

- If you are using the computer with the authenticated MAC address to access the modem router, please select [Use Computer MAC Address](#).
 - If you know the authenticated MAC address, please select [Use this MAC Address](#) and then enter the address.
3. Click [Apply](#) to make the settings effective.

T6. What can I do if I cannot find my wireless network or I cannot connect the wireless network?

- If you fail to find any wireless network, follow the steps below:
1. Make sure the wireless function is enabled if you're using a laptop with built-in wireless adapter. You can refer to the relevant document or contact the laptop manufacturer.
 2. Make sure the wireless adapter driver is installed successfully and the wireless adapter is enabled. You can refer to the relevant document or contact the wireless adapter manufacturer.
- If you can find other wireless network except your own, follow the steps below:

1. Check the Wi-Fi LED indicator on your wireless router/modem;
2. Make sure your computer/device is still in the range of your router/modem, move closer if it is currently too far away;
3. Go to [Basic](#) > [Wireless](#) page, and check the wireless settings, double check your Wireless Name and the SSID is not hidden.
4. Connect to wireless network.

➤ If you can find your wireless network but fail to connect, follow the steps below:

1. Authenticating problem, password mismatch.
 - 1) Sometimes it will ask you to type in a PIN number when you connect to the wireless network for the first time. This PIN number is different from the Wireless Password/Network Security Key, usually you can only find it on the label of your modem router.



- 2) If you cannot find the PIN or PIN failed, you may choose "[Connecting using a security key instead](#)", and then type in the Network Security Key/Wireless Password;



- 3) If it continues to saying network security key mismatch, it is suggested to confirm the wireless password on your modem router.

■ Note: Wireless password/Network Security Key is case sensitive.



- 4) Connect to wireless network.
2. Windows was unable to connect to XXXX /Cannot join this network/Taking longer than usual to connect to this network.
 - 1) Check the wireless signal strength of your network, if it is weak (1~3 bars), please move the router closer and try again;
 - 2) Change the wireless Channel of the router to 1,6,or 11 to reduce interference from other networks;
 - 3) Re-install or update the driver for your wireless adapter of the computer;
 - 4) Connect to wireless network.

T7.How can I change my computer's setting to obtain an IP address automatically?

To change the computer's network settings, follow the steps below.

- For MAC OS X:
 - 1) Click the Apple icon, and select [System Preferences](#) from the drop-down list.
 - 2) Click the Network icon.
 - 3) Select [Ethernet](#) (for wired connection) or [Wi-Fi](#) (for wireless connection) in the left panel, then click [Advanced](#).
 - 4) Click [TCP/IP](#).
 - 5) From the [Configure IPv4](#) drop-down list, select [Using DHCP](#).
 - 6) Click [OK](#).
- For Windows 7/8/8.1/10:
 - 1) Right-click the Network icon on the system tray and select [Open Network and Sharing Center](#) > [Change adapter settings](#).
 - 2) Right-click your network connection (wired or wireless) and select [Properties](#).
 - 3) Double-click [Internet Protocol Version 4 \(TCP/IPv4\)](#).

- 4) Select both [Obtain an IP address automatically](#) and [Obtain DNS server address automatically](#), then click [OK](#).
- 5) Click [OK](#) again to save your configuration.
- For Windows XP:
 - 1) Right-click the Network icon on the system tray and select [Open Network Connections](#).
 - 2) Right-click your network connection (wired or wireless) and select [Properties](#).
 - 3) Double-click [Internet Protocol \(TCP/IP\)](#).
 - 4) Select both [Obtain an IP address automatically](#) and [Obtain DNS server address automatically](#), then click [OK](#).
 - 5) Click [OK](#) again to save your configuration.

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FCC STATEMENT



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 28 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

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.
- Adapter shall be installed near the equipment and shall be easily accessible.
- The plug considered as disconnect device of adapter.
- The product should be connected to cable distribution system that grounded (earthed) in accordance with ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93 - Grounding of Outer Conductive Shield of a Coaxial Cable.

Explanation of the symbols on the product label

Symbol	Explanation
	DC 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.