TCL

# LINKHUB

## User Manual




HH42CV2

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# Read this first

- Before using this documentation and the device it supports, ensure you read and understand the "Important safety information" on page 18.
- Illustrations in this documentation might look different from your device.
- Instructions in this documentation may vary depending on your device model and software version.
- Some apps and features are not available in all countries or regions. App and feature availability is subject to change.
- Documentation content is subject to change without notice. We make constant improvements on the documentation of your device, including this user manual.
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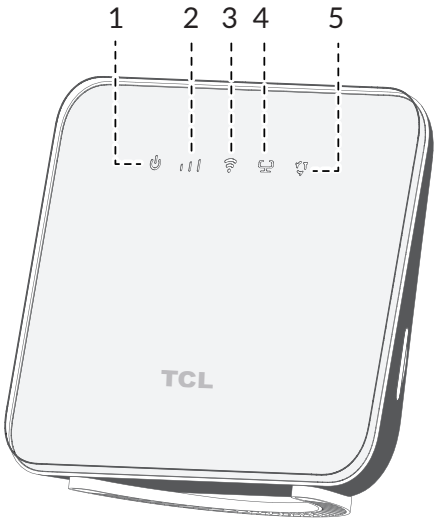
# Chapter 1. Meet your CPE

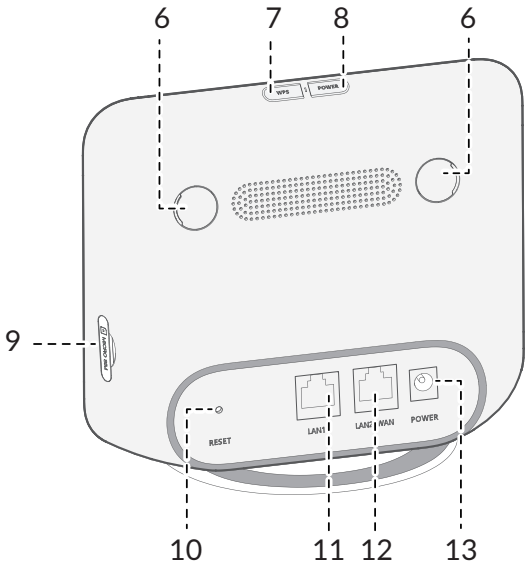
This Cat4 LTE CPE provides wired and wireless access for multiple computers and mobile devices. With various features and functions, the CPE is a good hub of your home or business network.

## 1.1 System requirements

Your CPE is compatible with Wi-Fi-enabled devices which support 2.4 GHz (802.11 b/g/n). It also works with these browsers, for example Firefox, Safari, Internet Explorer, Opera, and Google Chrome.

## 1.2 Overview




| | |
|---|---|
| 1. Power indicator | • On: the device is on.<br>• Off: the device is off. |
| 2. Signal indicator | • The more signal bars are on in blue, the stronger the signal.<br>• Off: no signal. |
| 3. Wi-Fi/WPS indicator | • Blinking blue: WPS connection is available.<br>• Solid blue: Wi-Fi is enabled.<br>• Off: WiFi is disabled. |
| 4. LAN indicator | • On: the LAN port is connected.<br>• Off: the LAN port is not connected. |

| | |
|---|---|
| 5. Network indicator | • Blinking blue: the device is registered to the network.<br>• Solid blue: the device is connected to the network.<br>• Solid red: micro SIM card is not available or the device is not registered to the network. |
| 6. External antenna port | Install an external antenna to improve signal reception. |
| 7. WPS button | Press the button for 3 seconds to enable the WPS function. The WPS function will be automatically disabled if a WPS connection is not established within 2 minutes. |
| 8. Power button | • Press for 3 seconds to power off your device.<br>• Press for 1 second to power on your device. |
| 9. Micro SIM card slot | Insert a micro SIM card in the slot. |
| 10. Reset button | Use a paperclip to press the button for 3 seconds to reset the device. |
| 11. LAN port | Used to connect to wired devices such as computers or switches. |
| 12. LAN/WAN port | Used to connect to an internet source or wired devices such as computers or switches. |
| 13. Power connector | Used to connect to the power adapter. |

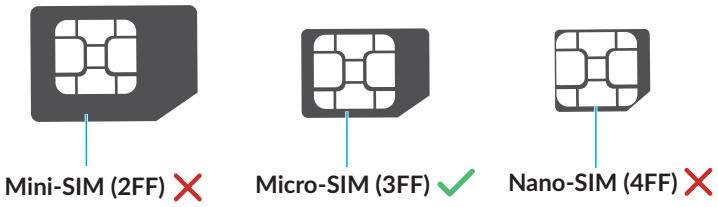
When the CPE downloads and installs software updates, you will see the indicators flash on and off in a sequence. Do not power off your CPE during this process as it may cause device malfunction.

# Chapter 2. Get started with your CPE

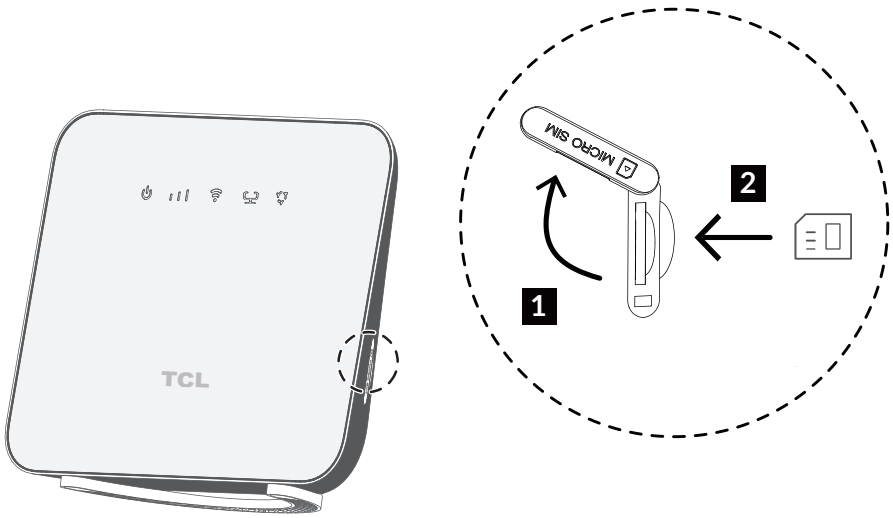
This chapter introduces the basic instructions on how to set up your CPE and make connections. The instructions may vary depending on your CPE model.

## 2.1 Insert a micro SIM card

**Prerequisite**: Select the right size of SIM card for your CPE.



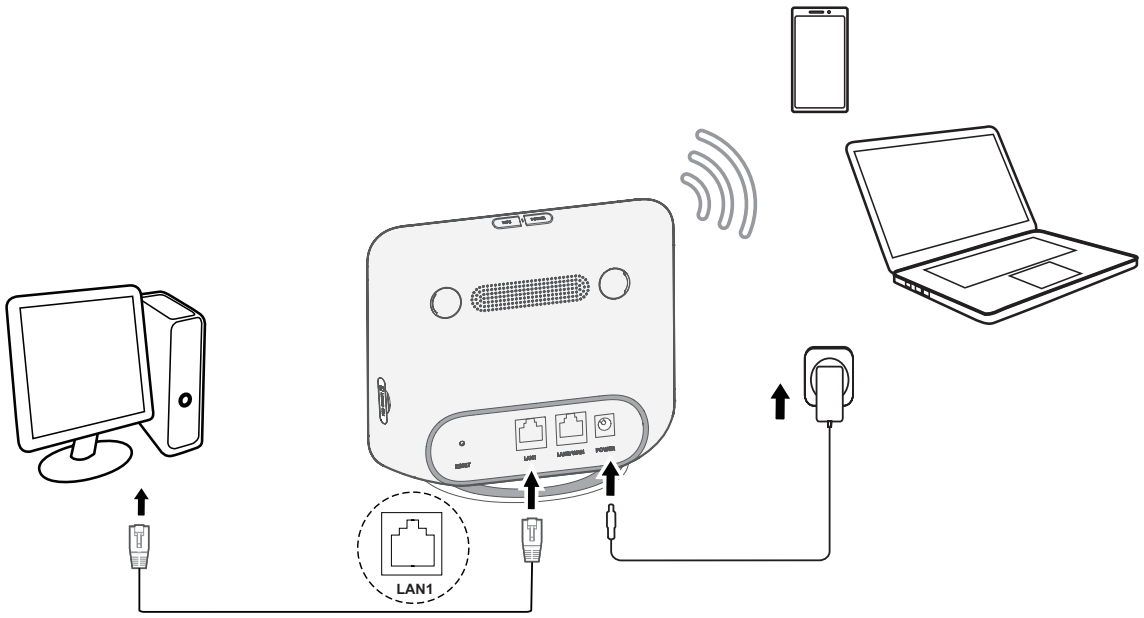

Locate the micro SIM card slot and insert a micro SIM card as illustrated below. Close the micro SIM card slot cover after the insertion of the card.




- Note the orientation of the SIM card. If the SIM card is inserted incorrectly, it may get jammed.
- Do not remove the SIM card when your CPE is in use. Otherwise, it may cause malfunction to your CPE or data loss of your SIM card.

## 2.2 Access CPE network

You can connect your devices to the CPE network wiredly or wirelessly as illustrated below.




## Access wired network

To establish a wired network connection, connect the wired device to the LAN port of your CPE using an Ethernet cable.

## Access wireless network

To establish a wireless network connection, select the Wi-Fi name (or the SSID) of the CPE on your wireless devices, and enter the Wi-Fi password.

**Note**: The Wi-Fi name and the Wi-Fi password can be found on the bottom label of your CPE.

If your wireless device is WPS-enabled, you can also access the CPE Wi-Fi network through a WPS connection. Select one of the following options to make a WPS connection.

### Option 1: WPS button

1) Press the WPS button on your CPE for 3 seconds. The WPS function is enabled for 2 minutes.
2) Enable the WPS function of your wireless device to make a WPS connection.

### Option 2: WPS PIN code

1) Log in to the web user interface (UI) of your CPE, and go to **Settings > Wi-Fi > WPS > WPS PIN**. (For how to log in to the web UI, see "Chapter 3. Access the web UI" on page 9.)
2) Set a WPS PIN code, and click **Apply**.
3) Enable the WPS function of your wireless device, and enter the WPS PIN code within 2 minutes to make a WPS connection.

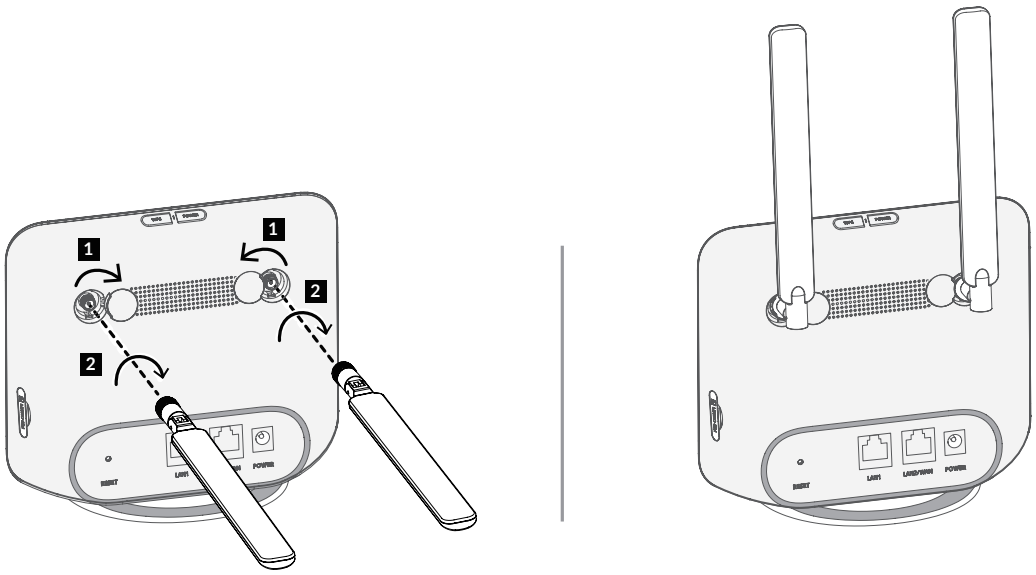
### Option 3: PBC

1) Log in to the web UI of your CPE, and go to **Settings > Wi-Fi > WPS > PBC**. (For how to log in to the web UI, see "Chapter 3. Access the web UI" on page 9.)
2) Click **Apply**. The WPS function is enabled for 2 minutes.
3) Enable the WPS function of your wireless device to make a WPS connection.

## 2.3 Install external antennas (optional)

In areas with weak signal, you can install external antennas to enhance signal reception. Install external antennas to your CPE as illustrated below.

**Important**: Before installing the external antennas, ensure your CPE is powered off and disconnected from the power supply.




Use only antennas that are compatible with your CPE. Contact your CPE supplier before purchasing external antennas.

# Chapter 3. Access the web UI

This chapter introduces how to get access to the web UI of your CPE, and gives you a glimpse of the web UI.

## 3.1 Log in to the web UI

To log in to the web UI, follow these steps:

1. Open a web browser on the device connected to the CPE network wiredly or wirelessly.
2. Go to http://192.168.1.1, and follow the on-screen instructions to finish the login process.

**Note:** For the default login information, refer to the bottom label of your CPE.

## 3.2 Explore web UI features

The web UI is mainly comprised of the following sections: **Status**, **Home**, **Services**, **Settings**, and **System**. You can click on each section to display more information about your CPE.

Besides, commonly-used status icons are displayed in the web UI. Status icons give you information about your CPE.

| Status icon | What it means |
|---|---|
| 3G or 4G | The network your CPE connects to. |
|  | The number of the signal bar indicates the signal strength. The more signal bars it shows, the stronger the signal. |
|  | The CPE connects to SIM card network. |
|  | The CPE connects to WAN network. |
|  | The CPE disconnects from WAN network. |
|  | New messages or unread messages. |
|  | The SMS inbox is full. |
|  | Wi-Fi is enabled. |
|  | Wi-Fi is disabled. |

# Chapter 4. Configure your CPE

In this chapter, we will show you how to get the most out of your CPE using the web UI. In the web UI, you can customize settings, like Wi-Fi name, Wi-Fi password, and more.

## 4.1 Status

This section allows you to view your device information, such as Wi-Fi name, upload speed, download speed, software version, profile name, and monthly plan.

## 4.2 Home

This section allows you to quickly access commonly used settings. It mainly contains the following tabs: **Status**, **Statistics**, **Device access**, and **Setup wizard**.

### Status

You can have a quick check on your device information, such as mobile data, LAN, WAN and Wi-Fi. In this tab, you can connect or disconnect the CPE to or from the internet, and change the SSID of the CPE network.

### Statistics

You can access approximate mobile data, and reset internet statistics in this tab.

### Device access

This tab allows you to manage internet access for connected devices, and block or unblock devices.

### Setup wizard

In this tab, you can configure basic connection settings, enable or disable data roaming, enable or disable 2.4 GHz, change SSID and Wi-Fi password, and more.

## 4.3 Services

Navigate to **Services,** and click the tab to display the information you want or change SMS settings as desired.

### SMS

Refer to the following table for the description of each folder under this tab.

| | |
|---|---|
| Inbox | Incoming messages are stored in this folder. |
| Outbox | Outgoing messages are stored in this folder. |
| Draft | Unsent messages are stored in this folder. |
| New message | Write a new message in this folder. |
| SMS Settings | Configure SMS settings in this folder. |

Refer to the following table for commonly used operations of SMS messages.

| | |
|---|---|
| Read an message | Click the message you want to read. |
| Send an message | 1. Click **SMS > New message**.<br>2. Input the recipient's number and message content.<br>3. Click **Send**.<br>**Note**: Click **Save** to store messages in the **Draft** folder. An message cannot be sent to multiple recipients simultaneously. |
| Forward an message | 1. Click the message you want to forward.<br>2. Click **Forward**.<br>3. Input the recipient's number, then click **Send**. |
| Reply to an message | 1. Click the message you want to reply to.<br>2. Click **Reply**.<br>3. Input the message content, then click **Send**. |
| Delete an message | 1. Locate the message you want to delete in the **Inbox**, **Sent** or **Draft** folder.<br>2. Tick the checkbox beside the message you want to delete.<br>3. Click **Delete**. |
| Delete all messages | 1. Click at the top of the checkbox column to select all messages.<br>2. Click **Delete**. |
| Enable SMS delivery reports | Click **SMS Setting**, then enable **SMS report**. |
| Disable SMS delivery reports | Click **SMS Settings**, then disable **SMS report**. |

## 4.4 Settings

This section allows you to prioritize the network connection, configure connection mode, manage WAN, LAN and Wi-Fi settings, and more.

### Connection priority

In this tab you can prioritize the network you want to connect first. After prioritizing the network connection according to your preferences, the CPE will follow an order of priority when detecting available connections.

**Mobile Data** represents SIM card data, while **WAN** represents Ethernet data.

## Mobile data

### Network connection

In this option, you can configure connection mode, data roaming and IP mode.

### Profile management

In this option, you can set up a new APN profile, and edit or delete existing profiles.

| | |
|---|---|
| Add a new profile | 1. Click **New**.<br>2. Input the correct parameters (like profile name, dial number, and APN) for your network operator.<br>3. Click **Save**. |
| Edit a profile | 1. Select the profile from the profile management list.<br>2. Click **Edit** to set the parameters.<br>3. Click **Save**. |
| Delete a profile | 1. Select the profile from the profile management list.<br>2. Click **Delete**.<br>**Note**: The default profile cannot be deleted. |
| Set as default | 1. Select the profile from the profile management list.<br>2. Click **Set default**. |

### Network settings

You can set the network search mode to **Auto** or **Manual**, and change the network mode to **Auto**, **3G only** or **4G only**.

Make sure you click **Apply** after making desired changes.

## WAN

### Configure WAN

Set up the WAN connection mode and modify related parameters under this option. You can set the connection mode to **DHCP**, **PPPoE** or **Static IP**.

| | |
|---|---|
| DHCP | Dynamic Host Configuration Protocol (DHCP) is a client or server protocol that automatically provides you with an Internet Protocol (IP) host. The IP address and related configuration settings such as subnet mask and default gateway are all automatically assigned. |

| | |
|---|---|
| PPPoE | Point-to-Point Protocol over Ethernet (PPPoE) is a network protocol that is mainly used for DSL services whereby individual users connect to a modem using an Ethernet connection.<br>Enter the username and password provided by your network service provider, and click **Apply**. |
| Static IP | Access the internet using a fixed IP address, subnet mask, gateway IP address and Primary DNS server. These information should be provided by your network service provider. |

### MAC Clone

When the MAC Clone function is enabled, multiple client devices can connect to the CPE and access the internet.

Your current MAC address is displayed in this option. Click **Reset** to set a new MAC address. Click **Clone** to copy your host MAC address.

## LAN

The default gateway address is 192.168.1.1, and the default subnet mask is 255.255.255.0.

With the DHCP Server function enabled, IP addresses will be assigned automatically to client devices in the network. If the DHCP Server function is disabled, the CPE will not assign IP addresses to the connected client devices. The IP address must be entered on each client device.

## Wi-Fi

### Basic

Configure basic Wi-Fi settings in this option.

| | |
|---|---|
| SSID | SSID is the name of the Wi-Fi network, and is 1 to 32 characters long. |
| SSID Broadcast | This function is enabled by default.<br>When this function is disabled, other users cannot detect the SSID or the Wi-Fi name. They need to manually enter SSID to connect to your CPE network. |
| Security | The available security modes include **Disable**, **WEP**, **WPA**, **WPA2**, and **WPA/WPA2**. |
| Encryption | The available options inclue **TKIP**, **AES**, and **Auto**. |
| Password | Check the Wi-Fi password in this item. |

### Advanced

Configure advanced Wi-Fi settings in this option.

| | |
|---|---|
| Country/Region | Select country or region in this item. |
| Channel | Different regions use different channels: Channel 1-11 in FCC (US) / IC (Canada), Channel 1-13 in ETSI (Europe), and Channel 1-13 in MKK (Japan). |
| 802.11 Mode | The mode is set to **802.11b/g/n** by default. |
| AP isolation | The AP isolation function enables you to create a separate virtual network for each wireless client that is connected to your CPE network. When this function is enabled, all wireless devices in the network will not be able to communicate with each other. |
| Bandwidth | Select the available options from the drop-down menu. |

### WPS

Wi-Fi Protected Setup (WPS) is a wireless network security standard that tries to make connections between your CPE and wireless devices faster and easier.

If your wireless device is WPS-supported, you can access the CPE Wi-Fi network through a WPS connection. In this option, there are two WPS modes available.

| | |
|---|---|
| WPS PIN | 1. Set a WPS PIN code, and click **Apply**.<br>2. Enable the WPS function of your wireless device, and enter the WPS PIN code within 2 minutes to make a WPS connection. |
| PBC | 1. Click **Apply**. The WPS function is enabled for 2 minutes.<br>2. Enable the WPS function of your wireless device to make a WPS connection. |

## Security

### PIN management

| | |
|---|---|
| Enable SIM PIN | 1. When the SIM PIN feature is disabled, click .<br>2. Set an SIM PIN code that is 4 to 8 digits long.<br>3. Click **Apply**. |
| Disable SIM PIN | 1. When the SIM PIN feature is enabled, click .<br>2. Enter the current SIM PIN code.<br>3. Click **Apply**. |

| | |
|---|---|
| Change SIM PIN | 1. When the SIM PIN feature is enabled, click **Change SIM PIN**.<br>2. Enter the original SIM PIN code and confirm the new SIM PIN code.<br>3. Click **Apply.**<br>**Note**: When the SIM PIN code is entered incorrectly 3 times, a PUK code is required. You can obtain the PUK code by calling customer services on 150 using your SIM card. |

### WAN ping

For better network security, your device will not respond to ping commands when this function is disabled.

### LAN IP filter

By default, any device connected to your CPE network is allowed to access the internet. You can specify which device can or cannot access the internet by adding the device to the blacklist or whitelist.

| | |
|---|---|
| Disable | All connected devices can access the internet. |
| Whitelist | Only devices with an IP address in this list can access the internet. |
| Blacklist | Devices with an IP address in this list cannot access the internet. |

### MAC filter

By default, any device connected to your CPE network is allowed to access the internet. You can specify which device can or cannot access the internet by adding the device to the blacklist or whitelist.

| | |
|---|---|
| Disable | All connected devices can access the internet. |
| Whitelist | Only devices with a MAC address in this list can access the internet. |
| Blacklist | Devices with a MAC address in this list cannot access the internet. |

### URL filter

In this feature, you can set internet access schedule for the devices on the CPE network, and define which websites the devices can and cannot visit.

### DDNS

WAN IP address is needed when some functions of your CPE are enabled. If the WAN IP address of your CPE changes, these functions may not work properly.

The Dynamic Domain Name Server (DDNS) function allows you to map a dynamic WAN IP address (public IP address) to a static domain name, helping internet users (WAN side) access the CPE network by static domain name.

### DMZ

If external users cannot access certain network services within the LAN, you can enable the DMZ function and set a new host IP address.

### UPnP

Universal Plug and Play (UPnP) is a set of networking protocols that allows connected devices to discover each other and establish functional network services for data sharing, communications, and entertainment. This function is disabled by default.

### Port Forwarding

This function enables external users to access FTP and other service within the LAN.

## QoS

Quality of Service (QoS) is an advanced feature that prioritizes internet traffic for applications, online gaming, Ethernet LAN ports, or specified MAC addresses to minimize the impact of busy bandwidth.

To access this function, navigate to **QoS** and enable this function, then set upload and download speed limits, and click **Apply**.

---

# 4.5 System

In this section, you can quickly view the device information, reboot or reset your device, modify login password, and more.

## Device information

You can view device information in this tab, including IMEI, software version, and MAC address.

## Reboot & reset

This function enables you to reboot the CPE or restore the CPE to factory settings.

If the CPE does not work properly, you can try rebooting the CPE to solve the problem.

If you can't access the internet for unknown reasons, or forget the login password, you can restore the CPE to factory settings. To reset the CPE, you can also press the reset button on the CPE for 3 seconds.

## Update

### Online updates

Click **Check for updates**, and the CPE will detect software version. If a new version is available, you can click **Download** and **Update** to upgrade the software.

Do not power off the device during the upgrade process. Otherwise, it may be damaged.

## Device management

### Login password

Enter your current password, and set a new one. The new password must be 4 to 16 characters long.

### System settings

In this option, you can set the system language and the time zone.

### NTP server

Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over packet-switched data networks. You can specify a NTP server with which your device will synchronize the time.

### Backup & restore

This feature allows you to back up the current device configuration, or restore the device to a previous configuration by importing the backup configuration file.

### TR069

It is a protocol for communication between CPE and an Auto Configuration Server (ACS) that provides secure auto-configuration as well as other CPE management functions within a common framework.

# Important safety information

Read all the safety information before using your product. Failure to follow these safety instructions could result in injury, or damage to your product or other property.

## Important safety instructions

- Observe signs and notices that prohibit or restrict the use of wireless devices.
- Always handle your device with care. It contains sensitive electronic components inside. The device can be damaged if dropped, burned, punctured, or crushed, or if it comes in contact with liquid.
- Do not disassemble or attempt to repair your device yourself. Disassembling the device may damage it, or cause injury to you.
- The device and its accessories may present a choking hazard to small children. Do not let children use the device and its accessories without supervision.

## Medical device interference

Your router contains components which may interfere with medical devices such as pacemakers, defibrillators, or other medical devices. Maintain a safe distance of separation between your medical device and your router. Consult your physician and medical device manufacturer for information specific to your medical device.

## Power adapter

Use only the supplied power adapter or adapters that are compliant with the applicable international and regional safety standards. Using other adapters could cause damage to the device or pose a risk of injury or death. It is important to keep the power adapter in a well-ventilated area when the power adapter is plugged into an electrical outlet. Don't use damaged power adapters.

## Operating temperature

Your device is designed to work best in ambient temperatures between 0°C and 45°C (32°F and 113°F), and should be stored between ambient temperatures of –10°C and 70°C (14°F and 158°F). Your device may malfunction if operated or stored outside of these temperature ranges. Avoid exposing the device to dramatic changes in temperature or humidity.

# Regulatory compliance information

This section introduces regulatory information, certification, and compliance information specific to your product.

## Eelectromagnetic fields (EMF)

This product complies with all applicable standards and regulations regarding exposure to electromagnetic fields.

## Declaration of conformity

Hereby, TCL Communication Ltd. declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. You can find the Declaration of Conformity at https://www.tcl.com/global/en/service-support-mobile/eu-doc.html.

## Disposal and recycling information

At TCL, we continually strive to improve our operations and products, and minimize our impact on the environment.



Your product is designed and manufactured with high quality materials and components, which can be recycled and reused. Please observe the local regulations regarding the disposal of packaging materials, exhausted batteries and old equipment. For recycling information, please visit www.tcl.com.



This symbol on your device and/or its accessories indicates that this device should not be disposed of with household waste. When this device reaches its end of life, take it to a collection point designated by local authorities. For more detailed information about device recycling, contact your local authorities, household waste disposal centers, or retail stores.

The separate collection and recycling of your device and/or its accessories at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

# Troubleshooting

If you encounter problems while using the product, use the troubleshooting information to help determine the problem and find possible solutions.

### General problems

| Problem | Solution |
|---|---|
| I forget the Wi-Fi password. | • Log in the web UI, then go to **Settings** > **Wi-Fi** > **Basic**. Click **Show password** to obtain the current Wi-Fi password.<br>• Or reset the device to its factory settings. |
| How to change the Wi-Fi name and password. | 1. Log in to the web UI.<br>2. Go to **Settings** > **Wi-Fi** > **Basic**. |
| The network indicator is in solid red. | When the micro SIM card or network service is not available, or the device is not registered to the network, the network indicator is in solid red.<br>• If you are using a micro SIM card, make sure the micro SIM card is valid and inserted correctly, or place the CPE in an area with better signal (for example near a window), and try again.<br>• If you are using an Ethernet connection, check if the network is working properly. |
| I can't find the Wi-Fi name of the CPE on my wireless device. | • Make sure the Wi-Fi indicator of your CPE is solid blue.<br>• Refresh the available network list on your wireless device. |
| How to set a new PIN code for my micro SIM card? | 1. Log in to the web UI.<br>2. Go to **Settings** > **Security** > **PIN management**.<br>3. Enable PIN operation, and enter a new PIN code.<br>4. Click **Apply**. |
| Where to find the device's model number and firmware version? | 1. Log in to the web UI.<br>2. Go to **System** > **Device information**. |

### Web UI problems

| Problem | Solution |
|---|---|
| How can I access the web UI? | 1. Open the web browser, and go to http://192.168.1.1.<br>2. Enter the login information as required. Find the default login information on the bottom label of the CPE. |

| | |
|---|---|
| I can’t log in to the web UI. | • Make sure 192.168.1.1 is entered correctly in the web browser.<br>• Make sure the CPE is powered on.<br>• Check whether the device is connected to the CPE network properly. |
| How to change the login password? | 1. Log in to the web UI.<br>2. Go to **System > Device management > Login password**. |
| "**No SIM card**" or "**Invalid SIM card**" is displayed on the web UI. | • Make sure there is a micro SIM card in your CPE.<br>• Reinstall the micro SIM card, and log in to the web UI again.<br>**Note**: Power off your device before removing the SIM card. |

**Connection problems**

| Problem | Solution |
|---|---|
| I can't access the internet. | • Make sure the SIM card is a 4G or 3G micro SIM card.<br>• If no micro SIM card is detected, power off your CPE, and reinsert the micro SIM card, then try again.<br>• If a PIN code is required, enter the PIN code, and try again.<br>• If no network is available, place the CPE in an area with better signal (for example near a window), and try again.<br>• Reboot your CPE, and try again.<br>• If the MAC filter function is enabled, make sure your device MAC address is on the whitelist. |
| How to access the CPE network wirelessly? | Select the Wi-Fi name (or the SSID) of the CPE on your wireless devices, and enter the Wi-Fi password.<br>**Note**: The default Wi-Fi name and the Wi-Fi password can be found on the bottom label of your CPE. |
| "**PIN lock**" or "**PUK lock**" is displayed on the screen of the device connected to the CPE network. | This indicates that the micro SIM card is locked.<br>To unlock the SIM card, log in to the web UI and enter the PIN code or PUK code. To obtain the PUK code, contact your internet service provider.<br>**Note**: If the PIN code is entered incorrectly 3 times, you will be required to enter the PUK code. If the PUK code is entered incorrectly 10 times, the micro SIM card will be locked permanently. |

| | |
|---|---|
| How to connect to 4G network? | 1. Log in to the web UI.<br>2. Go to **Settings > Mobile Data > Network settings**.<br>3. Select **4G only**. |

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