

LINKHUB 5G<sup>+</sup>

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## Read this first

- Before using this document and the device it supports, ensure you read and understand the “Chapter Important safety information” on page 25
- Illustrations in this document might look different from your device.
- Instructions in this document 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.
- Document content is subject to change without notice. We make constant improvements on the document of your device, including this user manual.
- TCL Communication Ltd. does not assume any liability that may occur due to the use or application of the product described herein. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information and recommendations in this document do not constitute the warranty of any kind, express or implied.

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# Chapter 1. Meet your CPE

The 5G CPE is a dual-band wireless networking device that operates at both 2.4 GHz and 5 GHz, delivering high-speed connectivity for both legacy devices and bandwidth-intensive devices. It provides wired and wireless access for multiple computers and mobile devices. With its advanced networking features, the CPE can serve as the central hub of your home or business network.

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## 1.1 What is in the box

Package contents include:

- 5G CPE (HH515L)
- Power adapter
- Quick Start Guide
- Product Safety Information
- An Ethernet cable (Optional)
- Braille Card

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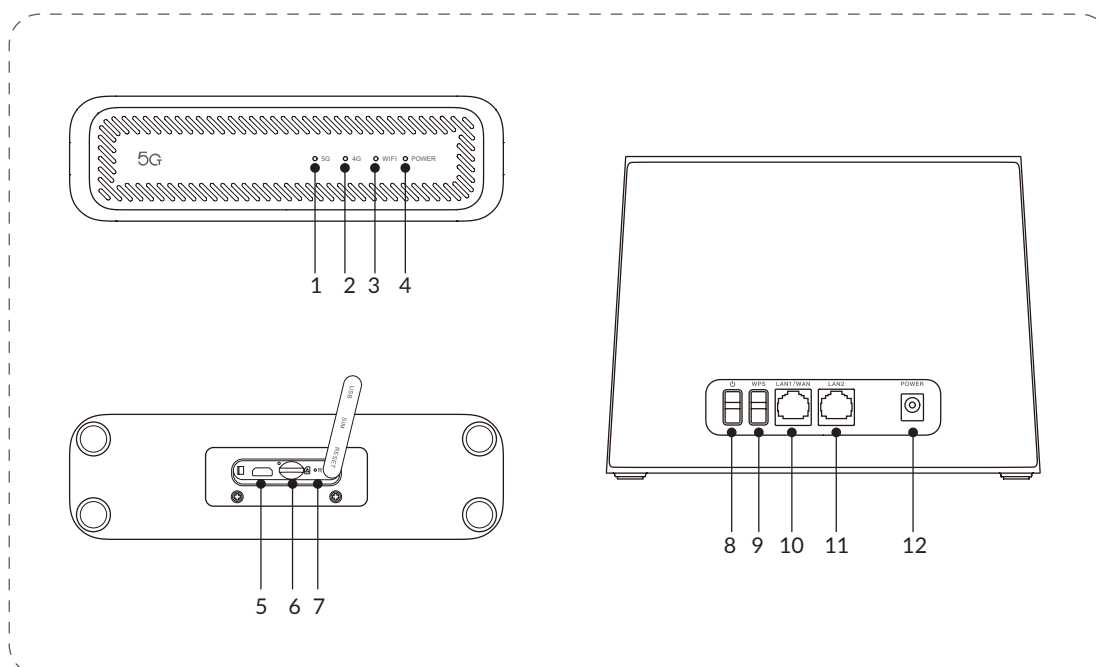
## 1.2 System requirements

Your CPE is compatible with Wi-Fi-enabled devices which support 2.4 GHz (802.11b/g/n/ax) or 5 GHz (802.11a/n/ac/ax), and works with these browsers, including the latest Microsoft Edge, Firefox, Safari, Mozilla, and Google Chrome.

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## 1.3 Overview

This section provides an overview of your CPE, including LED indicator behavior, ports and buttons.



## Top view

There are four LED indicators on the top of the CPE. Each indicator's behavior represents a different state.

### 1. 5G network indicator

Solid blue: The signal is good.

Solid yellow: The signal is weak.

Off: The 5G network is not working.

### 2. 4G network indicator

Solid blue: The signal is good.

Solid yellow: The signal is weak.

Off: The 4G network is not working.

### 3. Wi-Fi/WPS indicator

Solid blue: Wi-Fi is enabled.

Blinking blue: WPS connection is available.

Off: Wi-Fi is disabled.

### 4. Power indicator

Solid blue: The device is powered on.

Blinking blue: The device is performing firmware update via FOTA.

Off: The device is powered off.

## Bottom view

There is a cover on the bottom. You will find a USB port, a Nano SIM card slot, and a reset slot inside when you open the bottom cover.

### 5. Micro USB port

Dedicated port for debugging.

### 6. Nano SIM card slot

Insert a nano SIM card in the slot.

### 7. Reset button

Use a paperclip to press the button for 3 seconds to reset the device.

## Rear view

The CPE's buttons and ports (total five items) are concentrated at the lower side of the rear panel.

### 8. Power button

From left to right, the first item is a power button.

- Press for 3 seconds to power off your device.
- Press for 1 second to power on your device.

## 9. WPS button

From left to right, the second item is a 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.

## 10. WAN/LAN port

From left to right, the third item is a WAN/LAN port.

This port is used to connect to an internet source such as modem or ONT or wired devices such as computers or switches.

Plug one end of an Ethernet cable into the LAN/WAN port, and the other into a LAN port on a computer, a modem, or a switch.

## 11. LAN port

From left to right, the fourth item is a LAN port.

It can be used to connect to wired devices such as computers or switches.

Plug one end of an Ethernet cable into the LAN port, and the other into a LAN port on a computer or switch.

## 12. Power connector

From left to right, the last item is a power connector.

Connect your CPE to the power adapter via this port. Then your CPE is powered on.

Please note that when the CPE downloads and installs software updates, the power indicator will blink with a blue light. Do not power off your CPE during this process as it may cause the device to malfunction.

## Customer Service hotline:

Please contact the customer service if any problem.

Country	Hotline
Austria	+43 720884481
Belgium	+32 28962999
Croatia	+385 13309300
Czech Republic	+420 225341059
Denmark	+4578788072
Ecuador	800-000-635
Finland	+358985653327
France	+33 187161399
Germany	+49 21133995966
Greece	+30 2111991796
Hungary	+36 19989619

Country	Hotline
India	9311226140
Ireland	+353 15712605
Italy	+39 0683464628
Netherlands	+31 207971748
New Zealand	0800 527 548
Norway	+47 21939700
Poland	+48 222112430
Portugal	+351 211451747
Romania	+40 318220100
Serbia	+381 113216845
Slovakia	+421 233329176
Spain	+34 910389663
Sweden	+46852503824
Switzerland	+41 215458250
United Kingdom	+44 2037953308
United States	1-855-224-4228

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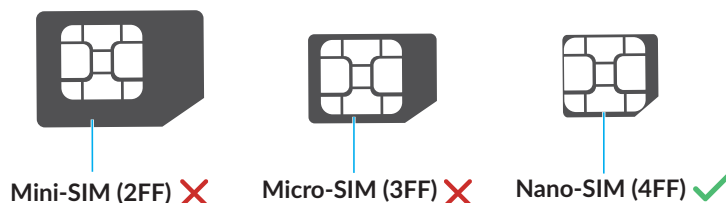
## Chapter 2. Get started with your CPE

This chapter introduces the basic instructions on how to get your CPE up and running. The instructions may vary depending on your CPE model.

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### 2.1 Insert a SIM card

**PREREQUISITE:** Select the right size of SIM card for your CPE. We need to prepare a Nano-SIM (4FF) card.



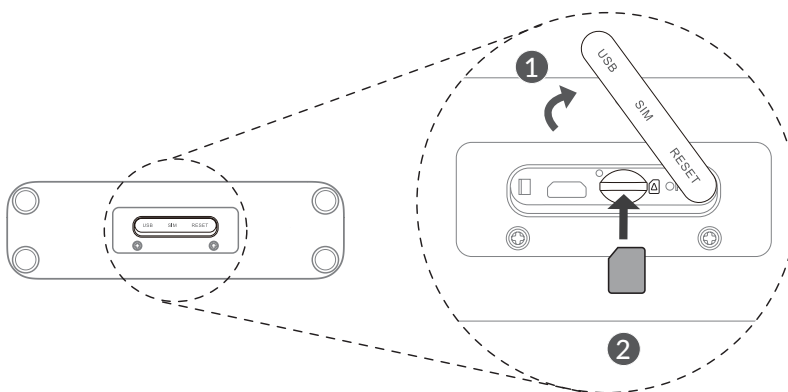
Locate the SIM card slot and insert a SIM card as illustrated below. Close the SIM card slot cover after inserting the card in the CPE.

There are 3 steps to insert a Nano SIM card:

Step 1. Open the bottom cover and locate the Nano SIM card slot.

Step 2. Match the SIM notch and insert the Nano SIM card into the Nano SIM card slot with gold contacts facing down.

Step 3. Close the Nano SIM card slot cover after inserting the card.



#### NOTES

- Note the orientation of the SIM card. If the SIM card is inserted incorrectly, it may get jammed.
- You may ask people nearby for help if there is any problem with inserting the SIM card.
- Do not remove the SIM card when your CPE is in use. Otherwise, it may cause your CPE to malfunction or data from the SIM card to be lost.



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## 2.2 Identify an ideal location

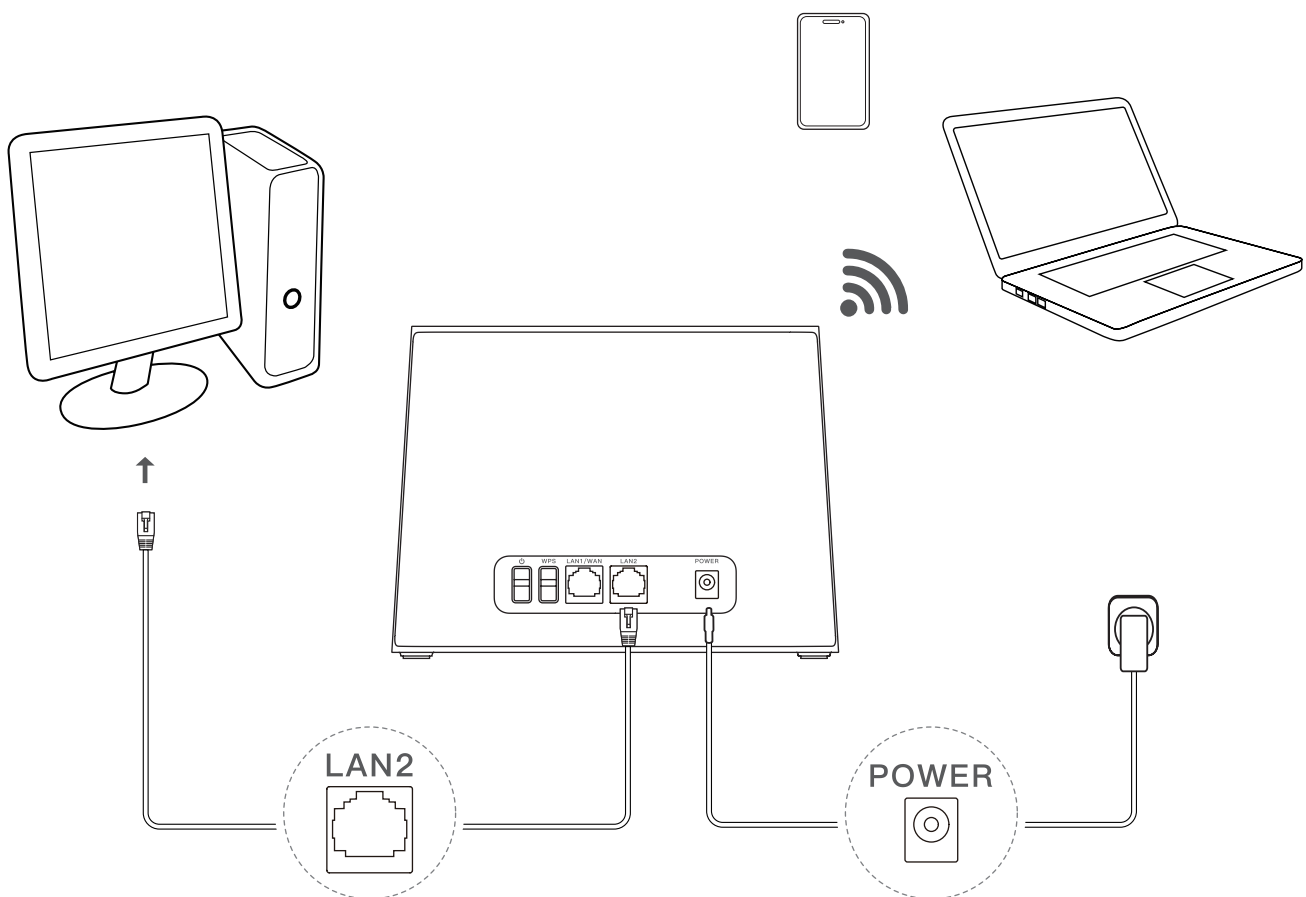
Identify an ideal location for your 5G CPE. To make the most of your CPE, make sure the location meets the following criteria:

- Near a window
- A cool, dry and well-ventilated area away from objects such as walls and electrical appliances
- Near a power outlet
- On a sturdy and flat surface

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## 2.3 Access CPE network

You can link your devices to the CPE network using wired or wireless connections 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. Ensure the CPE's WiFi Security mode is set on WPA2-Personal, WPA/WPA2-Personal or WPA2/WPA3-Personal and enabled the WiFi network and SSID broadcast. 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.
2. Enable the WPS function of your wireless device within 2 minutes to make a WPS connection.

**Option 2: Web UI**

1. Log in to the web user interface (UI) of your CPE, and go to **Settings > Wi-Fi > WPS**. (For more information on how to log in to the web UI, see “Chapter 3. Access the web UI” on page 8.)
2. Click **Start WPS**.
3. Enable the WPS function of your wireless device within 2 minutes to make a WPS connection.

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## Chapter 3. Access the web UI

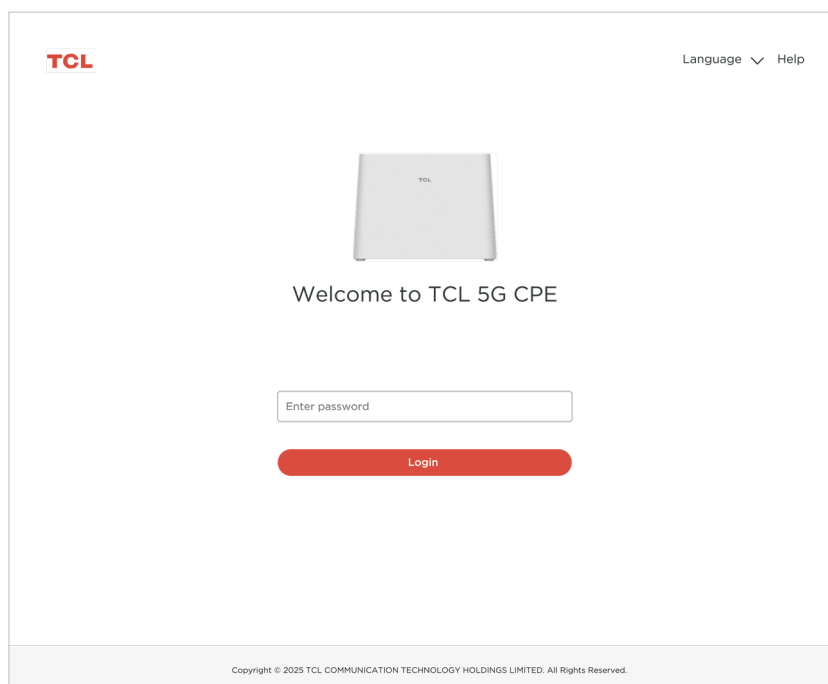
This chapter provides information on how to get access to the web UI of your CPE, and gives you a glimpse of the web UI.

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### 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.
2. Log into the website, then follow the on-screen instructions to finish the login process.  
For the website and the default login information, refer to the bottom label of your CPE.



#### NOTES

- Click **Language** at the upper right of the screen to change the language setting.
- Click **Help** at the upper right of the screen to access the user manual.

#### Device Open Ports (LAN Only):

The device has specific ports open to ensure proper functionality and user access. All open ports serve critical functions to enhance the usability and performance of the device while ensuring secure and efficient operations.

TCP: 80 (HTTP access to the web UI), 53 (DNS proxy service), 443 (HTTPS access to the web UI), 5000 (UPnP for NAT rule configuration), 3517 (Wi-Fi functionality for 802.11r).









UDP: 67 (IPv4 DHCP service), 53 (DNS proxy service), 1900 (UPnP SSDP service discovery), 5351 (UPnP for NAT rule configuration).

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## 3.2 Explore web UI features

The web UI is mainly comprised of the following sections: [Home](#), [Status](#), [Services](#), [Settings](#), and [System](#). Click on each section to display more information about your CPE.

Commonly-used status icons are displayed in the web UI, which provide information about your CPE.

Status icon	What it means
<b>4G or 5G</b>	This is the network your CPE connects to. <b>No Service</b> will be displayed when there is no network available.
	The number of signal bars indicates the signal strength. The more signal bars are shown, the stronger the signal is.
	The CPE is connected to the WAN network.
	The CPE is disconnected from the WAN network.
	New messages or unread messages.
	The SMS inbox is full.
	Wi-Fi is enabled.
	Wi-Fi is disabled.
	Click to log out of the web UI.

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## 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. With the web UI, you can configure Wi-Fi settings, view connected devices, set up a guest network, and more.

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### 4.1 Home

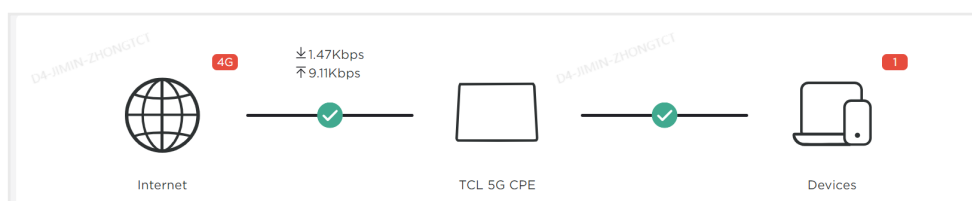
This section allows you to quickly check connection status, network information, device information, and connected devices.

#### Network overview

The network overview panel shows the current network connection status, download and upload speeds, and the number of connected devices.

Click **Disconnect** to disconnect your CPE from the WAN network.

Click **Connect** to connect your CPE to the WAN network.



#### Network

The **Network** panel displays the network name, network type, connection status, and the diagnostics data.

Click **Network** to access the internet setting page.

#### Device information

The **Device information** panel shows the device model, software version, and running time.

Click **Device information** to get more information on your device.

#### Connected devices

The **Connected devices** panel displays the number of wired and wireless devices currently connected to your CPE.

Click **Connected devices** to get more detailed information on the connected devices.

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### 4.2 Status

This section allows you to view your network information, connection status, device information, and more.

## Status

This allows you to quickly check on your device information, such as Internet, LAN, WAN, Wi-Fi, and diagnostics.

## Connected devices

This tab allows you to edit the names of connected devices, and manage their Internet access.

## Usage

This tab allows you to view the monthly data usage and customise your monthly plan.

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## 4.3 Services

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

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

Inbox	Incoming messages are stored in this folder.
Outbox	Outgoing messages are stored in this folder.
Draft	Draft 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 SMS message operations.

Read a message	Click the message you want to read.
Send a message	<ol style="list-style-type: none"><li>1. Click <b>SMS &gt; New message</b>.</li><li>2. Input the recipient's number and message content.</li><li>3. Click <b>Send</b>.</li></ol> <p><b>NOTE:</b> A message can be sent to up to five recipients simultaneously.</p>
Reply to a message	<ol style="list-style-type: none"><li>1. Click the message you want to reply to.</li><li>2. Click <b>Reply</b>.</li><li>3. Input the message content, then click <b>Send</b>.</li></ol>

Delete a message	<ol style="list-style-type: none"> <li>1. Locate the message you want to delete in the <b>Inbox</b> or <b>Outbox</b> folder.</li> <li>2. Tick the checkbox beside the message you want to delete.</li> <li>3. Click <b>Delete</b>.</li> </ol>
Delete all messages	<ol style="list-style-type: none"> <li>1. Click at the top of the checkbox column to select all messages.</li> <li>2. Click <b>Delete</b>.</li> </ol>
Forward all messages	<ol style="list-style-type: none"> <li>1. Click <b>SMS settings</b>.</li> <li>2. Enable <b>SMS forwarding to mobile phone</b>.</li> <li>3. Input the recipient's number.</li> <li>4. Click <b>Apply</b>.</li> </ol>
Enable SMS delivery reports	Click <b>SMS settings</b> , then enable SMS report.
Disable SMS delivery reports	Click <b>SMS settings</b> , then disable SMS report.

## 4.4 Settings

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

### Quick setup

In this tab, you can configure basic connection settings, enable or disable data roaming, enable or disable 2.4 GHz and 5 GHz networks, change SSID and Wi-Fi passwords, and more.

### Mobile network

#### Network connection

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

Mobile data	Click enable/disable to connect/disconnect the network via mobile data. Only changes the current mobile data status and does not save it when restarting.
Connection mode	<p>Select the connection mode from the drop-down list, you can set to <b>Auto</b>, <b>On demand</b> or <b>Manual</b>. Click <b>Apply</b> to save.</p> <p>Auto mode connects to network automatically when network available.</p> <p>On Demand mode connects to network when required by application or service, you can configure timeout for connection deactivation.</p> <p>Manual mode connects to network by manual intervention.</p>
Data roaming	Click the switch icon to enable/disable the date roaming.

## Profile management



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

Add a new profile	<ol style="list-style-type: none"><li>1. Click <b>New</b>.</li><li>2. Input the correct parameters (like profile name, APN, authentication, and IP type) for your network operator.</li><li>3. Click <b>Save</b>.</li></ol>
Edit a profile	<ol style="list-style-type: none"><li>1. Select the profile from the profile management list.</li><li>2. Click <b>Edit</b> to set the parameters.</li><li>3. Click <b>Save</b>.</li></ol>
Delete a profile	<ol style="list-style-type: none"><li>1. Select the profile from the profile management list.</li><li>2. Click <b>Delete</b>.</li></ol> <p><b>NOTE:</b> The default profile cannot be deleted.</p>
Set as default	<ol style="list-style-type: none"><li>1. Select the profile from the profile management list.</li><li>2. Click <b>Set as default</b>.</li></ol>

## Mobile network settings

You can set the network search mode to **Auto** or **Manual**, and change the network mode. Make sure you click **Apply** after making the desired changes.

## SIM PIN management

Enable SIM PIN	<ol style="list-style-type: none"><li>1. When the SIM PIN feature is disabled, click .</li><li>2. Set a SIM PIN code.</li><li>3. Click <b>Apply</b>.</li></ol>
Disable SIM PIN	<ol style="list-style-type: none"><li>1. When the SIM PIN feature is enabled, click .</li><li>2. Enter the current SIM PIN code.</li><li>3. Click <b>Apply</b>.</li></ol>
Change SIM PIN	<ol style="list-style-type: none"><li>1. Click <b>Change SIM PIN</b>.</li><li>2. Enter the old and new SIM PIN, and then confirm.</li></ol> <p>Note: When only one attempt remains, a PUK code needs to be entered. Follow the on-screen instructions to complete the process.</p>

## Band Selection

This function provides more debugging alternatives when device failure occurs. Modifying the band may disconnect your device from the network.

## Wi-Fi

### Basic

Configure basic Wi-Fi settings in this option. When the option is set to **5GHz preferred**, your CPE will use only one SSID and connect to 5 GHz automatically if 5 GHz throughput is better



than that of 2.4 GHz. When **5GHz preferred** is disabled, 2.4 GHz option is displayed.

Wireless network name (SSID)	SSID is the name of the Wi-Fi network.
SSID Broadcast	This function is enabled by default. When this function is disabled, other users cannot detect the SSID or the Wi-Fi name. They need to manually enter the SSID to connect to your CPE network.
Security	Select the security mode from the drop-down menu, it's <b>WPA2/WPA3-Personal</b> by default. If you set security mode to <b>WPA2-Enterprise</b> , <b>WPA3-Enterprise</b> or <b>WPA1/WPA2-Enterprise</b> , please configure the following information in the following input box: Radius server, IP radius server port and Shared secret.
Encryption	The <b>AES</b> encryption is set by default.
WiFi password	Check the Wi-Fi password in this item.

## Advanced

Configure advanced Wi-Fi settings in this option.

Max. connected devices	The maximum number of client devices that can connect to your CPE network at a time is set to 128.
Wi-Fi mode	The mode is set to <b>Auto</b> 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.
Channel bandwidth	Select the available options from the drop-down menu.
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). When the channel option is set to <b>Auto</b> , the CPE will select the best channel automatically.

## Guest network

In this tab, you can enable or disable the **Guest network** feature, and configure the guest network Wi-Fi name, Wi-Fi password, and validity duration. Devices connected to the guest network can access the Internet, but cannot access the CPE web UI or the master network.

## 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. Select one of the following options to make a WPS connection.

Option 1	<ol style="list-style-type: none"> <li>1. Press the WPS button on your CPE for 3 seconds.</li> <li>2. Enable the WPS function of your wireless device within 2 minutes to make a WPS connection.</li> </ol>
Option 2	<ol style="list-style-type: none"> <li>1. Log in to the web UI of your CPE, and go to <b>Settings &gt; Wi-Fi &gt; WPS</b>. (For how to log in to the web UI, see “Chapter 3. Access the web UI” on page 8.)</li> <li>2. Click <b>Start WPS</b>.</li> <li>3. Enable the WPS function of your wireless device within 2 minutes to make a WPS connection.</li> </ol>

## Router

### 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 address are all automatically assigned.

### 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.

### Manual DNS

DNS (Domain Name Server) is a server that converts domain names and corresponding IP addresses. The choice of DNS server will not affect the user's Internet speed or the content of the websites they visit, but it may affect the speed and stability of domain name resolution. Therefore, if users encounter resolution problems or slow speeds when using the default DNS server, you can try to change other DNS servers to solve the problem. Fill in the preferred DNS address and backup DNS address, if manual DNS is turned on.

### DHCP Reservation

The IP addresses for clients connecting to this device are listed in the table. Click "+" to add an IP address.

### VPN

Virtual Private Network (VPN) is a dedicated network across the shared or public network (usually the internet). The VPN technology allows employees at a branch of an enterprise and employees at the headquarters to exchange resources conveniently without exposing these resources to other internet users.

Select the connection type from the drop-down menu and the options available are PPTP, L2TP, and L2TP/IPsec.

### VPN Passthrough

VPN passthrough allows you to establish outbound connections between an internal VPN client and a VPN server on the external network using L2TP protocols. Literally, it routes VPN

traffic through the router, bypassing NAT in the process.

## ALG

Enable SIP ALG, and Server port. Click Apply. The ALG is established.

It is recommended to keep the default value of the ALG (Application Layer Gateway).

## Security

### IP filter

By default, any device connected to your CPE network is allowed to access the internet. Specify which device cannot access the internet by adding the device IP addresses to the blacklist.

### 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 whitelist or blacklist.

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

### URL filter

By default, any device connected to your CPE network is allowed to access any URL. You can specify prohibited URLs and adding them to the blacklist.

### Port Forwarding

This function enables computers on the internet to access FTP and other specific services within the Local Area Network (LAN).

### Port triggering

Specify ports to allow devices on your local network to dynamically open specific external ports and forward packets (from the internet) to the device that triggered it.

Make sure that a wan port is set uniquely in the port trigger and port forward functions.

A maximum of 32 rules can be created.

### 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. Then external users will have access to all services in the DMZ.

### Firewall

In auto mode, you can manage the features by selecting preset protection level; in manual mode, you can manage these features directly.

You can only set MAC filter, IP filter, URL filter and parental controls when firewall is enabled.

## UI management

This feature allows users to enable/disable the availability of the management interface (web UI/app) via WiFi connection.

If the feature is disabled, the Web UI can only be accessed via wired connection.

## Advanced settings

### 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	<p>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.</p> <p>Enter the username and password provided by your network service provider, and click Apply.</p>
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.

### Bandwidth control

This feature allows you to view information about online devices, and set upload bandwidth limits or download limits for devices if needed.

### 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.

### Bridge mode

The bridge mode hands off the WAN IP to the Ethernet tethering client.

### Ethernet bridge

Ethernet bridge allows two routers together. When it enabled, it essentially turns the respective router into a switch. The bridge-enabled router will still transfer data, but it won't perform traditional Network Access Translation (NAT) processes. Instead, the bridge-enabled router will extend its port access to the connected devices.

### Parental control

Set an Internet access schedule for the client devices on the CPE network, and define which websites the client devices can and cannot visit.

To manage parental control, click **Set**, then set an Internet access schedule and specify the website blacklist.

## Ping/Traceroute

Ping and traceroute can help you check the network connection status quickly. Click **Diagnosis** to check the network connection status.

## Dual WAN setting

This option enables you to choose from two networks. Choose one network and the other one serves as a backup network. Once a connection fails, that connection will automatically switch to another connection.

To enable Dual WAN settings:

1. When Dual WAN Setting is disabled, click .
2. Select one connection option as connection priority from a dropdown list.
3. Click **Apply** to save settings. Your device will be connected via the selected network.

Note: This function takes effect when the SIM card is installed in your CPE and the WAN port is connected to the network cable at the same time.

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## 4.5 System

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

### Device information

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

### Login password

Enter your current password, and set a new one. The new password must be 8 to 32 characters long.

### System time

Manage the time zone in this tab.

By default, **Automatically adjust time zone** is enabled. Your Internet Box can automatically adjust its time zone settings according to the geographical location of the device, and automatically adjust the displayed time and date after identifying the device's time zone.

### NTP server

The NTP server (Network Time Protocol) provides accurate time UTC (Universal Time Coordinated). The time source for NTP to obtain UTC can be an atomic clock, an observatory, a satellite, or it can be obtained from the Internet. You can select your preferred and alternative NTP servers via the drop-down menu.

## Periodic reboot

Set the period you want the system reboots.

## One click diagnosis

Click **Diagnosis** to check SIM, network registration and connection status, firmware status, and more.

## Backup & restore

Backup and restore function will backup and restore device settings including private data and private settings such as WiFi passwords, Login password, APN settings and SMS forwarding rules.

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.

## Restart & reset

This function enables you to restart or factory reset the CPE.

If the CPE does not work properly, you can try restarting 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 use a paperclip to press the reset button on the CPE for 3 seconds.

## Firmware update

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



### NOTE

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

## System Log

Click **System log**, your device will show a list of important events that have occurred since your device was last powered on or restarted.

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## Chapter 5. Configure your CPE with the TCL connect app

Before using your 5G CPE, please place the 5G CPE in a location enjoying optimal signal strength. (We suggest you place the device near the window, avoid walls and metal objects, and keep it away from microwave ovens, telephones, radios and other devices likely to create radio interference.)

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### 5.1 Download the TCL Connect app

#### Download the TCL Connect app as follows:

- ↳ Search for “TCL Connect” in the Google Play store or App store.
- ↳ Scan the following QR code.



#### Pairing your phone with the 5G CPE

Open the TCL Connect app, touch +, and select your 5G CPE model.

#### Enter the password to connect to your 5G CPE

1. Touch **Connect**.
2. Enter the SSID and password, then touch **Connect**.








When configuring for the first time, please follow the instructions in the app for wired broadband network settings. If you do not want to use a wired broadband network, you can skip this step.

To ensure the security of your account, when you log in for the first time, please follow the guidelines to set a new password.

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### 5.2 App status icon

Status icon	What it means
<b>4G</b> or <b>5G</b>	Indicates the network your CPE connects to. <b>No Service</b> will be displayed when there is no network available.

	The number of signal bars indicates the signal strength. The more signal bars it shows, the stronger the signal is.
	Data roaming is enabled. The number of signal bars indicates the signal strength. The more signal bars it shows, the stronger the signal is.
	The CPE is connected to the Internet.
	The CPE is disconnected from the internet.
	No SIM card/ Invalid SIM card
	Upload speed Show the real-time upload speed of your CPE.
	Download speed Show the real-time download speed of your CPE.

## 5.3 Connected devices

You can configure access to the internet for any connected devices. Connected devices are shown in the **Connected** list, any devices which have been forbidden to connect to the internet are shown in the **Blocked** list. It is possible to enable or disable internet access for each device. You may also rename each connected device.

## 5.4 WiFi settings

Intelligent connection	When this option is enabled, the fastest Wi-Fi network will automatically be selected using the same SSID for both 2.4GHz and 5GHz bands. Disabled by default.
SSID	SSID is the name of the WiFi network.
Password	The Wi-Fi password can be checked here.
Hide WiFi	When this option is enabled, the SSID will not appear in the list of WiFi network stations.

## 5.5 Guest network

When the Guest network feature is enabled, you can configure the name, Wi-Fi password



and time duration of a guest network. From this page you can also generate a Wi-Fi QR code for a visitor which will allow them to access the Guest Wi-Fi.

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## 5.6 Parental Control

This function enables the administrator to block specific devices from accessing specified URL(s) during set time periods.



Blocking a URL may not block the associated app. For example, adding [www.facebook.com](http://www.facebook.com) may not block the specified device from using the Facebook app.

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## 5.7 More

### 5.7.1 Mobile network settings


You can enable/disable the mobile data and data roaming options, and set the network mode to either Auto(5G/4G), 5G or 4G. Make sure you click **Apply** after making any desired changes.

#### PIN management

##### Enabling SIM PIN:

1. When SIM PIN is disabled, touch  .
2. Enter a SIM PIN that is 4-8 digits long.
3. Touch **Apply**.

##### Disabling SIM PIN:

1. When SIM PIN is enabled, touch  .
2. Enter the current SIM PIN.
3. Touch **Apply**.

##### Changing SIM PIN:

1. When SIM PIN is enabled, touch **Change SIM PIN**.
2. Enter the old SIM PIN and confirm the new SIM PIN.
3. Touch **Apply**.

**Note:** When a SIM PIN is entered incorrectly 3 times, a PUK code is required. You can obtain the PUK code by calling customer services from your operator.

### 5.7.2 Wired network settings

You can 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.  Enter the username and password provided by your network service provider, and touch <b>Apply</b> .
Static IP	Access the internet using a fixed IP address, subnet mask, gateway IP address and Primary DNS server. This information should be provided by your network service provider.

### 5.7.3 Password settings

Enter your current password, and set a new one.

### 5.7.4 Recommended locations

This function is designed to detect the network signal quality of the current location of the router. Adjust the location of the router to improve the signal quality.

There is a 30-second detection of signals and corresponding measurement results for each potential location. It is suggested to determine the location of your router based on the measurement results.

### 5.7.5 Firmware update

By touching **Firmware update**, the CPE will identify its current software version. If a new version is available, you can click Update to upgrade the software.

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

### 5.7.6 Restore to factory settings

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 use a paperclip to press the reset button on the CPE for 3 seconds.

### 5.7.7 Reboot the device

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

### 5.7.8 User manual

The user manual for the app user.

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## 5.8 Unbind

1. Touch the home page and go to **More > Unbind**.
2. Touch **Unbind**.

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## 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.

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## 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.

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## 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.

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## 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.

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## 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.

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## Regulatory compliance information

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

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## Electromagnetic fields (EMF)

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

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## European Union (EU) compliance



Hereby, TCL Communication Ltd. declares that the radio equipment type TCL HH515L 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/EC\\_DOC](https://www.tcl.com/global/en/EC_DOC).

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## 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](http://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've forgotten the Wi-Fi password.	<ul style="list-style-type: none"><li>• Log in to the web UI, then go to <b>Settings &gt; Wi-Fi &gt; Basic</b>, and find the current Wi-Fi password.</li><li>• Or use a paperclip to press the reset button for 3 seconds to restore the device to its factory settings.</li></ul>
How do I change the Wi-Fi name and password?	<ol style="list-style-type: none"><li>1. Log in to the web UI.</li><li>2. Go to <b>Settings &gt; Wi-Fi &gt; Basic</b>.</li></ol>
The network indicator is off.	<p>When the SIM card or network service is not available, or the device is not registered to the network, the network indicator will be off.</p> <ul style="list-style-type: none"><li>• If you are using a SIM card, make sure the SIM card is valid and inserted correctly, or place the CPE in an area with a better signal (for example near a window), and try again.</li><li>• If you are using an Ethernet connection, check if the network is working properly.</li></ul>
I can't find the Wi-Fi name of the CPE on my wireless device.	<ul style="list-style-type: none"><li>• Make sure the Wi-Fi indicator of your CPE is solid blue.</li><li>• Refresh the available network list on your wireless device.</li></ul>
How do I set a new PIN code for my SIM card?	<ol style="list-style-type: none"><li>1. Log in to the web UI.</li><li>2. Go to <b>Settings &gt; Security &gt; SIM PIN management</b>.</li><li>3. Enable PIN operation, and enter a new PIN code.</li><li>4. Click <b>Apply</b>.</li></ol>
Where can I find the device's model number and firmware version?	<ol style="list-style-type: none"><li>1. Log in to the web UI.</li><li>2. Go to <b>System &gt; Device information</b>.</li></ol>

## Web UI problems

Problem	Solution
How can I access the web UI?	<ol style="list-style-type: none"><li>1. Open the web browser, and log into the website. Find the website on the bottom label of the CPE.</li><li>2. Enter the login information as required. Find the default login information on the bottom label of the CPE.</li></ol>

I can't log in to the web UI.	<ul style="list-style-type: none"> <li>• Make sure the website is entered correctly in the web browser.</li> <li>• Make sure the CPE is powered on.</li> <li>• Check whether the device is connected to the CPE network properly.</li> </ul>
How do I change the login password?	<ol style="list-style-type: none"> <li>1. Log in to the web UI.</li> <li>2. Go to <b>System &gt; Login password</b>.</li> </ol>
"No SIM card" or "Invalid SIM card" is displayed on the web UI.	<ul style="list-style-type: none"> <li>• Make sure there is a SIM card in your CPE.</li> <li>• Reinstall the SIM card, and log in to the web UI again. <b>NOTE:</b> Power off your device before removing the SIM card.</li> </ul>

## Connection problems

Problem	Solution
I can't access the Internet.	<ul style="list-style-type: none"> <li>• If no SIM card is detected, power off your CPE, and reinsert the SIM card, then try again.</li> <li>• If a PIN code is required, enter the PIN code, and try again.</li> <li>• If no network is available, place the CPE in an area with a better signal (for example near a window), and try again.</li> <li>• Reboot your CPE, and try again.</li> <li>• If the MAC filter function is enabled, make sure your device's MAC address is on the whitelist.</li> </ul>
How can I access the CPE network wirelessly?	<p>Select the Wi-Fi name (or the SSID) of the CPE on your wireless devices, and enter the Wi-Fi password.</p> <p><b>NOTE:</b> The default Wi-Fi name and the Wi-Fi password can be found on the bottom label of your CPE.</p>
"PIN lock" or "PUK lock" is displayed on the screen of the device connected to the CPE network.	<p>This indicates that the SIM card is locked.</p> <p>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.</p> <p><b>NOTE:</b> 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 SIM card will be locked permanently.</p>