## CPE-0001 user manual

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# **Chapter 1. Introduction**

## 1.1 ProductDescription

CPE-0001 Wireless Broadband Router supports IEEE 802.11b/g/n/ac standard, dual band, and Gigabit LAN and WAN, thus providing the wireless speed of 867Mbps in the 5GHz frequency band and 300Mbps in the 2.4GHz frequency bandat the same time, which is 16 times faster than that of the traditional 11gaccess point. With its outstanding stability of high-speed wireless transmission and enhanced reliability, the CPE-0001can provide users with excellent multimedia streaming through their mobile devices anywhere, anytime in the home and office.

#### 1.2 Product Features

#### ► IEEE Compliant Wireless LAN and WiredLAN

- Compliant with IEEE 802.11a/b/g/n/ac dual band [2.4G (300Mbps) and 5G (867Mbps)] wireless
- Equipped with 4x 10/100/1000Mbps Fast Ethernet ports and 1x 10/100/1000Mbps WAN ethernet port which supports auto MDI/MDI-X

#### Fixed Network BroadbandRouter

- Supports WAN connection types: DHCP, static IP, PPPoE
- Supports DDNS and DHCP Servers

#### Mobile network

- Supports 2G/3G and LTE technology
- Supports auto APN settings

#### Comprehensive Wireless Advanced Features

- Supports AP /client / repeater mode
- Supports WMM(Wi-Fi Multimedia) and wireless QoS to enhance the efficiency of multimedia application
- Supports multiple SSID
- Supports TX and RX restrict

#### Secure Network Connection

- Supports Wi-Fi Protected Setup(WPS)
- Support WEP/WPA/WPA2 wireless security encryption
- Supports NAT firewall, IP / URL-based access control and MAC address filtering

#### Advanced Networking Function for Specific Application

- Supports Bandwidth Control (QoS) based on different local IP addresses
- Supports NTP, Port Forwarding, UPnP and DMZ for various networking applications
- Supports USB storage(Samba)

#### Easy Installation and Management

- Web-based UI and Quick Setup Wizard for easy configuration
- Remote Management allows configuration from a remote site
- System status monitoring includes DHCP Client List and System Log

## 1.3 Product Specifications

Model	CPE-0001 1200Mbps 802.11ac Dual Band Wireless Gigabit Router		
Hardware Specifications			
	WAN Port:	1 x 10/100/1000 Mbps auto MDI/MDI-X RJ45 port	
Interface	LAN Port:	4 x 10/100/1000 Mbps auto MDI/MDI-X RJ45 port (LAN1~4)	
		2x3dBi 2.4g/5G external antenna	
Antenna	Gain: 2x3dBi LTE external antenna		
Button	1 x reset but	ton	
	POWR x 1		
LED Indicators	WAN x 1		
	LAN x 4		
	WLAN x 2		
	LTE Signal x	3	
	vSIM x 1		
Material	LTE x 1 Plastic		
		33 mm (W x D x H)	
Dimensions (W x D x H)		33 Hilli (W X D X H)	
Weight	322g		
Power Requirement	12V DC, 1.5A		
Power Consumption	10.6W		
Wireless Interface Specifications			
Standard IEEE 802.11ac 5GHz IEEE 802.11a/n 5GHz			
		b/g/n 2.4GHz	
Frequency Band	Simultaneous 2.4GHz and 5GHz		
Modulation Type	802.11ac: Of	FDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)	
wodulation Type	802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)		
	802.11b: DSSS (DBPSK / DQPSK / CCK)		
Data Rates	2.4GHz up to	300Mbps	
	5GHz up to 867Mbps		
Channel	2.4GHz		
Channel	FCC (America): 2.412~2.462GHz (11 Channels)		
	ETSI (Europe): 2.412~2.472GHz (13 Channels)		
	5GHz 2412~2472N	МН	
	5150~5250N	ИНz	
	5250~5350N		
	54/U~5/ <i>/</i> 5!	5725~5850MHz	
	5470~5725N 5725~5850N		
	5725~5850N *The actual cl		

### **User Manual of CPE-0001**

Channel Width	802.11ac: 20/40/80MHz 802.11n: 20/40MHz
Max. RF Power / EIRP	2.4GHz: <30dBm 5GHz: <30dBm
	2.4GHz
Receive Sensitivity	11b (11Mbps): -79dBm
	11g (54Mbps): -68dBm
	11n (20M) mode: -67dBm
	11n (40M) mode: -64dBm
	5GHz
	11a: -74dBm
	11n (20M) mode: -70dBm
	11n (40M) mode: -67dBm
	11ac (20M) mode: -67dBm
	11ac (40M) mode: -61dBm
	11ac (80M) mode: -57dBm
SSID	2.4GHz: 1 Root SSID and 4 Guest SSID
	5GHz: 1 Root SSID and 4 Guest SSID
Wireless Management Feat	tures
Encryption Security	WEP
Eneryption occurry	
	WPA/WPA2 personal mixed mode
Wireless Security	Wireless ACL MAC address filtering
	Supports WPS (Wi-Fi Protected Setup )
Max. Supported Clients	2.4GHz wireless: 32
Wireless Extender	5GHz wireless: 32
THIOIGGO EXTORIGO	Supports repeater
Router Features	
	Shares data and Internet access for users, supporting the following Internet
	accesses:
	■ 2G/3G/LTE Mobile network
Internet Connection Type	■ ETH Router mode ->DHCP
Internet Connection Type	->Static IP
	->PPPoE
	->FFF0L
	NAT firewall, SPI firewall
Firewall	Built-in NAT server which supports Port Forwarding and DMZ
. nonan	Built-in firewall with URL filtering, and MAC address filtering
	Built-in DHCP server supporting static IP address distribution
LAN	Supports packet statistics
	Samba
USB Sharing	Запра
3G&LTE	Supports 3G or LTE technology
	Comparts outs and proposal ADN actions
	Supports auto and manual APN settings
	Supports Fail-Over backup  Web-based (HTTP) management interface

### **User Manual of CPE-0001**

	Remote management (WAN Access Control)
System Management	Supports UPnP, DDNS
	SNTP synchronization
	System log
Standards Conformance	
IEEE Standards	IEEE 802.11n (2T2R, up to 300Mbps)
	IEEE 802.11g
	IEEE 802.11b
	IEEE 802.11i
	IEEE 802.3 10BASE-T
	IEEE 802.3u 100BASE-TX
Other Protocols and Standards	TCP/IP, DHCP, ICMP, NAT, PPPoE, SNTP
Regulatory	CE, RoHS, WEEE
Environment	
Tomporoturo	Operating: 0 ~ 40 degrees C
Temperature	Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-condensing)
Humidity	Storage: 5 ~ 95% (non-condensing)

# **Chapter 2. HardwareInstallation**

Please follow the instructions below to connect the CPE-0001 to the existing network devices and your computers.

## 2.1 HardwareDescription

**Dimensions**: 200 x 128 x 33 mm (W x D xH)

Diagram:



Figure 2-1



Figure 2-2

#### 2.1.1 Front LED

The front LED provides a simple interface monitoring the router. Figure 2-1-1 shows the front LED of the CPE-

#### Front LED



Figure 2-1-1 CPE-0001 Top View

#### 2.1.2 LEDIndications

The LEDs on the front panel indicate instant status of port links, wireless data activity, system power, LTE, USB and WPS, and help monitor and troubleshoot when needed. Figure 2-1-1and Table 2-1 show the LED indications of the Wireless Router.

LED	STATE	FUNCTION
POWER	On	Device power on
POWER	Off	Device power off
	On	The 2.4GHz Wi-Fi is activated.
2.4G	Flash	Device is transmitting data wirelessly over 2.4GHz.
	Off	The 2.4GHz Wi-Fi is disabled.
	On	The 5.8GHz Wi-Fi is activated.
5.8G	Flash	Device is transmitting data wirelessly over 5.8GHz.
	Off	The 5.8GHz Wi-Fi is disabled.
LTE	On	LTE is connected
LIE	Flash	LTE is connecting to the internet
	Off	Both SIM not working
	On	Link is established.
LAN1-4	Flash	Packets are transmitting or receiving.
	Off	LAN port is not connected.
	On	Link is established.
WAN	Flash	Packets are transmitting or receiving.
	Off	WAN port is not connected.
	1 LED	LTE signal is weak
Signal LED	2 LED	LTE signal is fine
	3 LED	LTE signal is good
<b>VSIM</b> Indicator	On	VSIM works fine
	Off	VSIM doesn't work(out of service)
WPS LED	Flash	WPS is triggered
	Off	WPS is connected or disable

Table 2-1 LED Indications

### 2.1.3 RearPanel

The rear panel provides the physical connectors connected to the power adapter and any other network device. Figure 2-1-3shows the rear panel of the CPE-0001.

## Rear Panel

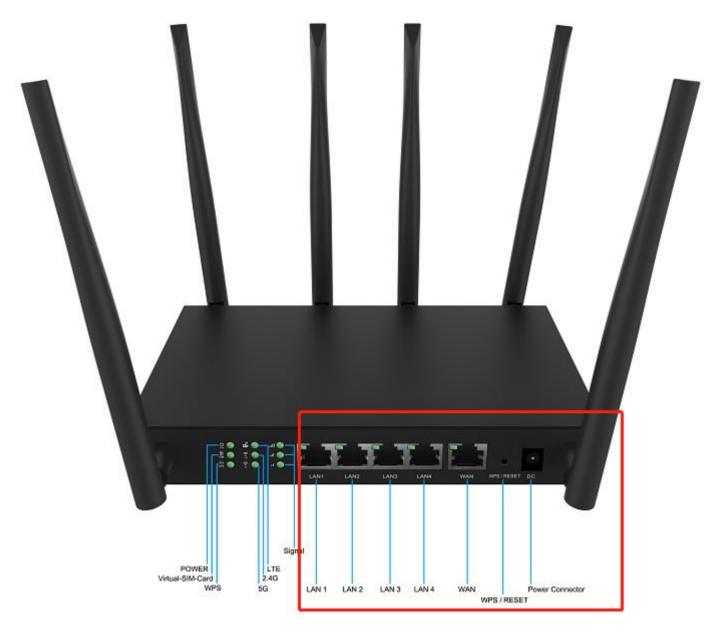


Figure 2-1-3 Rear Panel of the CPE-0001

Interface	Description	
Reset/WPS  Press it gently for 5 seconds and then release it. The system rest factory default settings. Press it will enable WPS functiont		
WAN Connect to the Cable/xDSL Modem or the Ethernet		
LAN1-4 Connect to the user's PC or network devices		
Power	Connect to the power adapter provided in the package	

Table 2-2 Interface Indications

## **Chapter 3. Connecting to the Router**

### 3.1 System Requirements

- Broadband Internet Access Service (Cable/xDSL/Ethernetconnection)
- One Cable/xDSL Modem that has an RJ45 connector (not necessary if the Router is connected directly to theEthernet.)
- PCs with a working Ethernet Adapter and an Ethernet cable with RJ45connectors
- PCsubscribersuseWindowsXP,WindowsVista,Windows7/8/10,MACOS9orlater,orLinux,UNIX or other platforms compatible with TCP/IPprotocols
- The above PC is installed with a Webbrowser



- 1. The Router in the following instructions means CPE-0001.
- 2. It is recommended to use Internet Explorer 7.0 or above to access the Router.

### 3.2 Installing theRouter

Before installing the Router, make sure your PC is connected to the Internet through the broadband service successfully at this moment. If there is any problem, please contact your local ISP. After that, please install the Router according to the following steps. Don't forget to pull out the power plug and keep your hands dry.

Step 1. Power off your PC, Cable/xDSL Modem and theRouter.

**Step 2.** Locate an optimum location for the Router. The best place is usually at the center of your wireless network.

Step 3. Connect the PC or Switch/Hub in your LAN to the LAN Ports of the Router with Ethernet cable

**Step 4.** Connect the power adapter to the power socket on the Router, and the other end into an electrical outlet. Then power on the Router.

Step 5. Power on your PC and Cable/xDSLModem.

## Chapter 4. Quick Installation Guide

This chapter will show you how to configure the basic functions of your Wireless Router using **Quick Setup** within minutes.



A computer with wired Ethernet connection to the Wireless Router is required for the first-time configuration.

## 4.1 Manual Network Setup - TCP/IPConfiguration

The default IP address of the Wireless Router is 192.168.0.1 and the default Subnet Mask is 255.255.255.0. These values can be changed as you desire in the web UI of the Wireless Router. In this section, we use all the default values for description.

Whether the Wireless Router is configured via wired or wireless connection, the PC needs to be assigned an IP address first. Before you connect the local PC to the Wireless Router via wired or wireless connection, please configure the IP address for your PC in the following two ways first.

- Obtaining an IP addressautomatically
- Configuring the IP addressmanually

Inthefollowing sections, we'll introduce how to install and configure the TCP/IP correctly in **Windows7**. And the procedures in other operating systems are similar. First, make sure your Ethernet Adapter is working, and refer to the Ethernet adapter's manual if needed.

#### 4.1.1 Obtaining an IP AddressAutomatically

#### Summary:

- 1. Set up the TCP/IP Protocol in "Obtain an IP address automatically" mode on yourPC.
- 2. Then the Wireless Router built-in DHCP server will assign IP address to the PCautomatically.

If you are sure the DHCP server of Wireless Router is enabled, you can set up the TCP/IP Protocol in "**Obtain anlPaddressautomatically**"modeonyourPC.AndthentheWirelessRouterbuilt-inDHCPserverwillassign an IP address to the PCautomatically.

#### 1. Installing TCP/IPComponent

1) On the Windows taskbar, click the Start button, point to Control Panel, and then clickit.

2) Under the **Network and Internet** icon, click on the **View network status and tasks.** And then click **Change adapter settings**.

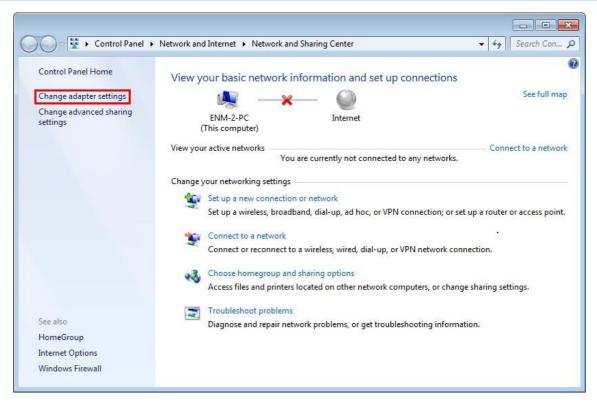


Figure 4-1 Change Adapter Settings

3) Right-click on the Wireless Network Connection, and select Properties in the appearingwindow.

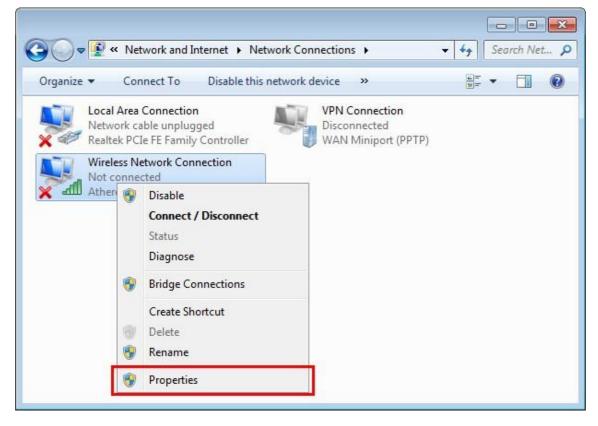
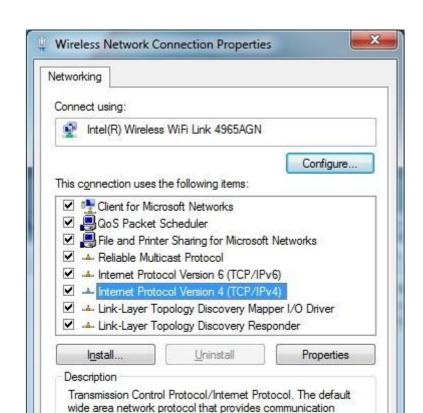


Figure 4-2 Network Connection Properties



4) In the prompt window shown below, double-click on the Internet Protocol Version 4(TCP/IPv4).

Figure 4-3 TCP/IP Setting

OK

Cancel

across diverse interconnected networks.

5) Choose **Obtain an IP address automatically**, and **Obtain DNS server address automatically** as shown in the figure below. Then click **OK** to save your settings.



Figure 4-4 Obtain an IP Address Automatically

### 4.1.2 Configuring the IP AddressManually

#### Summary:

- Set up the TCP/IP Protocol for yourPC.
- Configure the network parameters. The IP address is **192.168.0.xxx** ("xxx" is any number from 2 to 254), Subnet Mask is **255.255.255.0**, and Gateway is **192.168.0.1**(The Router's default IPaddress)

If you are sure the DHCP server of Wireless Router is disabled, you can configure the IP address manually. The IP address of your PC should be 192.168.0.xxx (the same subnet of the IP address of the Wireless Router, and "xxx"isanynumberfrom2to254),SubnetMaskis255.255.255.0,andtheGatewayis192.168.0.1(Thedefault IP address of the WirelessRouter)

- 1) Continue the settings from the last figure. Select **Use the following IP address** radiobutton.
- 2)If the LAN IP address of the Wireless Router is 192.168.0.1, enter IP address 192.168.0.x (x is from 2 to 254), and Subnet mask 255.255.255.0
- 3)Enter the LAN IP address of the Wireless Router (the default IP is 192.168.0.1) into the default gateway field.
- 4) Select **Use the following DNS server addresses** radio button. In the preferred DNS Server field, you can enter the DNS server IP address provided by your local ISP. Then click OK to save your settings.

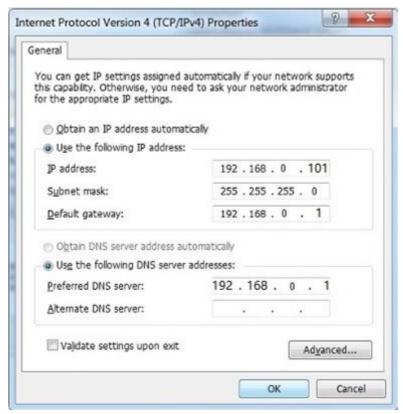


Figure 4-5 IP and DNS Server Addresses

Now, you can run the Ping command in the **command prompt** to verify the network connection between your PC and the Router. The following example is in **Windows 7** OS. Please follow the steps below:

- 1. Click onStart
- 2. Type "**cmd**" in the Searchbox.

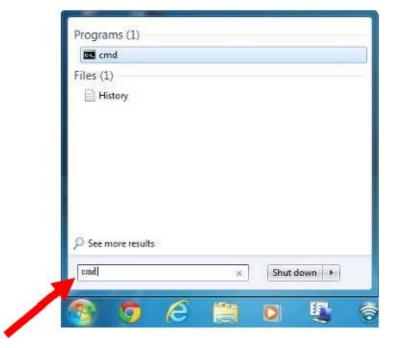


Figure 4-6

- 3. Open a command prompt, and type ping **192.168.0.1**, and then press**Enter**.
  - If the result displayed is similar to Figure 4-7, it means the connection between your PC and the Router has been establishedwell.

```
C:\Users\lenovo>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\lenovo>_
```

Figure 4-7 Successful Ping Command

■ If the result displayed is similar to Figure 4-8, it means the connection between your PC and the Router hasfailed.

Figure 4-8 Failed Ping Command

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.



If the Router's IP address is 192.168.0.1, your PC's IP address must be within the range of 192.168.0.2 ~ 192.168.0.254.

## 4.2 Starting Setup in the Web UI

It is easy to configure and manage the CPE-0001 with the web browser.

**Step1.** To access the configuration utility, open a web-browser and enter thedefault IP address <a href="http://192.168.0.1">http://192.168.0.1</a>in the web address field of the browser.



Figure 4-9 Login the Router

After a moment, a login window will appear. Enter **admin** for the User Name and Password, both in lower case letters. Then click the **Log In** button or press the **Enter** key.

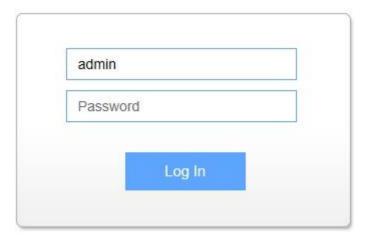


Figure 4-10 Login Window

Default IP Address: 192.168.0.1

Default User Name: admin

Default Password: admin

After entering the user name and password, click the red "X", the Wizard Setup page screen appears as Figure 4-11.

Setup Wizard

The setup wizard will guide you to configure access point for first time. Please follow the setup wizard step by step.

Welcome to Setup Wizard.

The Wizard will guide you the through following steps. Begin by clicking on Next.

1. Setup Operation Mode
2. Choose your Time Zone
3. Setup LAN Interface
4. Setup WAN Interface
5. Select Wireless Band
6. Wireless LAN Setting
7. Wireless Security Setting

Figure 4-11 CPE-0001 Web UI Screenshot

Next>>

#### Step2. Choose "Next" and you can configure the router Operation Mode byyourself.

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point.

Operation Mode

You can setup different modes to LAN and WLAN interface for NAT and bridging function.

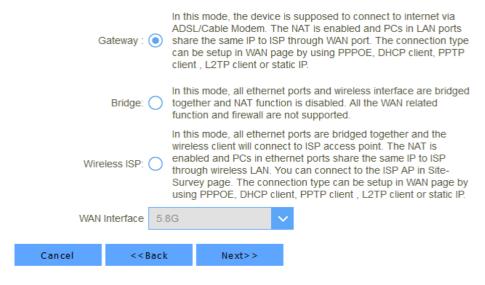


Figure 4-12 Configure the Operation Mode.

#### Step3. Choose "Next" and you can configure the Time Zone Setting.

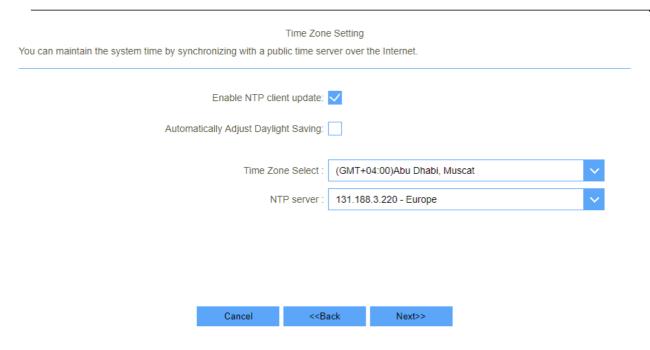


Figure 4-13 Configure the Time Zone Setting.

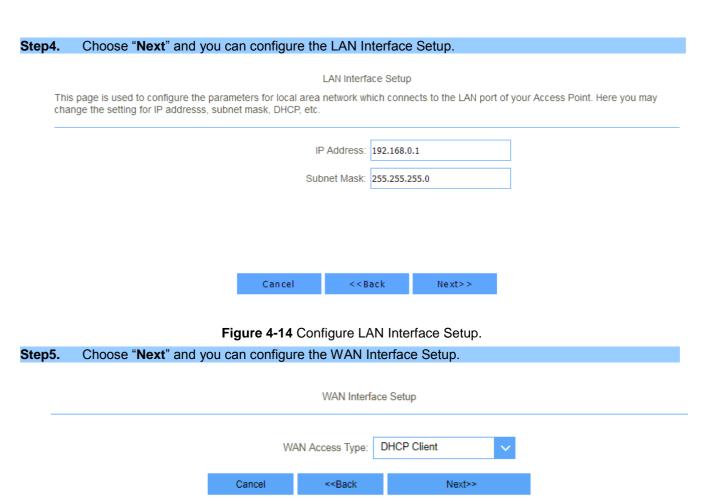


Figure 4-15 Configure WAN Interface setup.

**Step6.** Choose "**Next**" and you can configure the Wi-Fi Interface Setup.



Figure 4-16 Configure Wi-Fi Interface setup.

Step 7. Please enter the Wi-Fi Settings. Then click Nextbutton for Wi-Fi security setup and finished.

Wireless 5GHz Basic Settings

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.

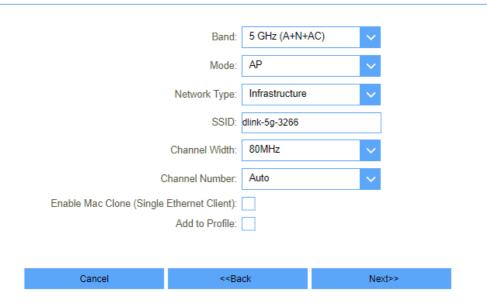


Figure 4-17 Wi-Fi Settings

Wireless 5GHz Security Setup

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

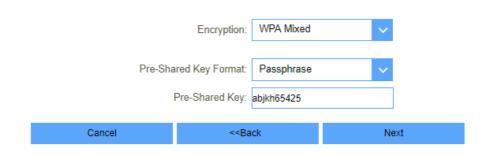


Figure 4-18 Wi-Fi Security Settings

# Chapter5. Configuring theRouter

This chapter delivers a detailed presentation of router's functions and features under 4 main menus shown below, allowing you to manage the router with ease.

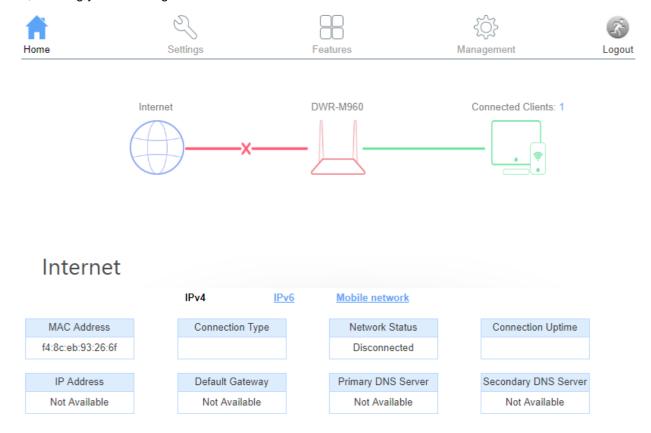


Figure 5-1 Router's Functions

#### **5.1** Home

#### 5.1.1 Internet

Internet



Figure 5-1-1 Router IPv4 Status

Mobile network

IPv6

IPv4

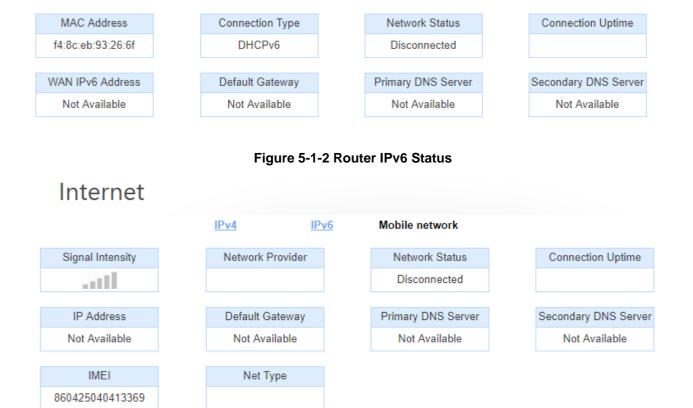


Figure 5-1-3 Router Mobile network Status

#### 5.1.2 CPE-0001

On this page, you can view information about the current LAN and Wi-Fi status of the CPE-0001.

## DWR-M960

	IPv4 Network	II	Pv6 Network
MAC Address: f4:8c:eb:99:32:66		Link-Local Address:	fe80::1
Router IP Address:	192.168.0.1	Router IPv6 Address:	Not Availab
Subnet Mask:	255.255.255.0		
	System		CPU
Uptime:	Uptime: 0 Day 0:10:52		16.29%
Build Time:	Sun Feb 24 14:41:01 CST 2019	Memory (Free/Total):	76768/10334
	Wi-Fi 2.4GHz	,	Wi-Fi 5GHz
Status:	Up	Status:	Up
Wi-Fi Name (SSID):	dlink-2g-3266	Wi-Fi Name (SSID):	dlink-5g-326
Encryption:	WPA2 Mixed	Encryption:	WPA2 Mixe
BSSID:	f4:8c:eh:93:26:68	BSSID:	f4:8c:eb:93:26

Figure 5-1-4CPE-0001 Info

## 5.1.3 ConnectedClients

This page shows the IP addresses and host names of all the PCs in your network

## **Connected Clients**

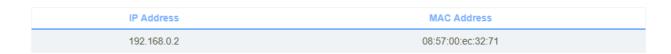


Figure 5-1-5 Connected Clients

## 5.2 Settings

#### 5.2.1 WAN

On this page, you can configure the parameters of the WAN interface.

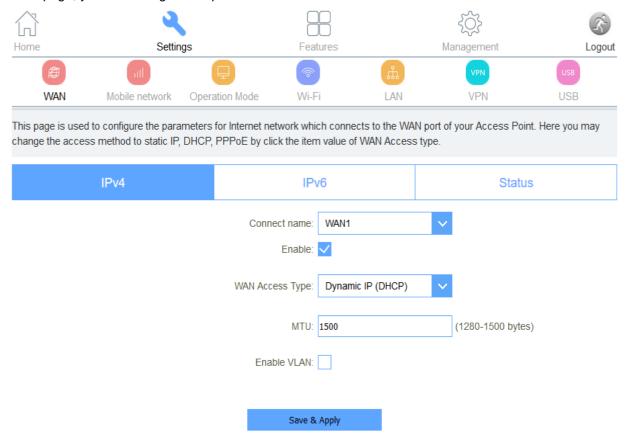


Figure 5-2-1 WAN

#### 5.2.1.1. IPv4

There are four wan connection can be use, each wan connection can be configured as difference mode, such as DHCP router mode, PPPoE router mode, Static router mode, and each wan connection can be configured to have VLAN tag, this will more helpful for user to meet different environment usage.

#### **DHCP**

Choose "**DHCP**" and the router will automatically obtain IP addresses, subnet masks and gateway addresses from your ISP.

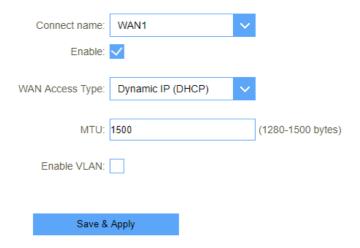


Figure 5-2-2 DHCP

Object	Description
MTU	You can keep the maximum transmission unit (MTU) as default.
VLAN ID	Enter the VLAN ID value provided by your ISP.
WAN Type	From this feature, user can distinguish different services.

#### **StaticIP**

If your ISP offers you static IP Internet connection type, select "Static IP" and then enter IP address, subnet mask, primary DNS and secondary DNS information provided by your ISP in the corresponding fields.

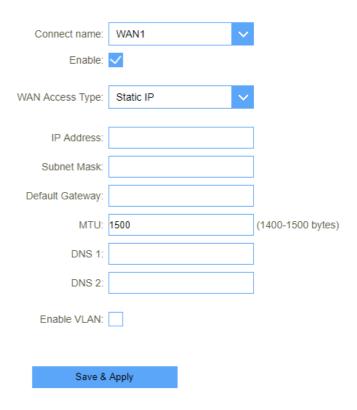


Figure 5-2-3 Static IP

Object	Description
IP Address	Enter the WAN IP address provided by your ISP. Inquire your ISP if
	you are not clear.
Subnet Mask	Enter WAN Subnet Mask provided by your ISP.
Default Gateway	Enter the WAN Gateway address provided by your ISP.
DNS 1	Enter the necessary DNS address provided by your ISP.
DNS 2	Enter the other DNS address if your ISP provides you with 2 such
DNO 2	addresses, and it is optional.
мти	You can keep the maximum transmission unit (MTU) as default.
VLAN ID	Enter the VLAN ID value provided by your ISP.
WAN Type	From this feature, user can distinguish different services.

#### **PPPoE**

Select PPPoE, if your ISP is using a PPPoE connection and provide you with PPPoE user name and password information.

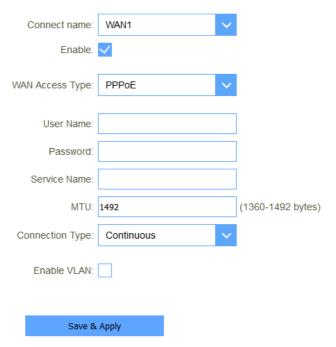


Figure 5-2-4 PPPoE

Object	Description	
Username Enter the User Name provided by your ISP.		
Password	Enter the password provided by your ISP.	
VLAN ID	Enter the VLAN ID value provided by your ISP.	
WAN Type	From this feature, user can distinguish different services.	
Service Name	Type the name of this router.	
MTU	You can keep the maximum transmission unit (MTU) as default.	
Connection Type	Select "Continuous", "Connect on Demand" or "Manual".	

#### 5.2.1.2. IPv6

You can config IPv6 in this page. It's support 3 kinds of IPv6 origin types.



Figure 5-2-5 IPv6 Static

Object	Description
Origin Type	Current origin type STATIC.
IP Address	WAN IPv6 address.
Default Gateway	WAN IPv6 default gateway.
DNS	WAN IPv6 DNS.
Enable MLD Proxy	Enable or disable MLD.



Figure 5-2-6 IPv6 auto

Object	Description
Origin Type	Current origin type AUTO.
Address Mode	WAN IPv6 address mode, including stateless and stateful address mode.
PD Enable	WAN IPv6 prefix delegation.
Rapid-commit Enable	Rapid commit switch.
DNS	WAN IPv6 DNS.
Enable MLD Proxy	Enable or disable MLD.

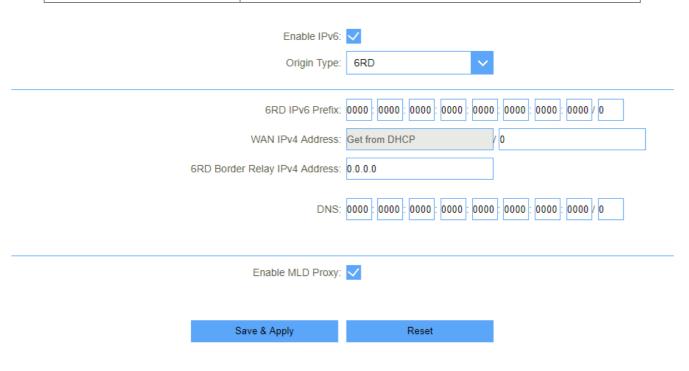


Figure 5-2-7 IPv6 6RD

Object	Description
Origin Type	Current origin type 6RD.
6RD IPv6 Prefix	WAN IPv6 prefix delegation
WAN IPv4 Address	WAN IPv4 address.
6RD Border Relay IPv4 Address	Border Relay IPv4 Address.
DNS	WAN IPv6 DNS.
Enable MLD Proxy	Enable or disable MLD.

#### 5.2.1.3. Status

This page will show all the status of the wan connections.

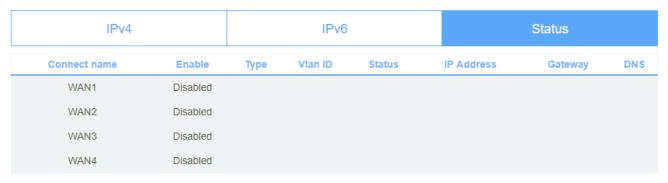


Figure 5-2-8 Status

### 5.2.2 Mobile network

#### 5.2.2.1. Basic Settings

This page is used to configure the parameters for Internet network which 3G or LTE.

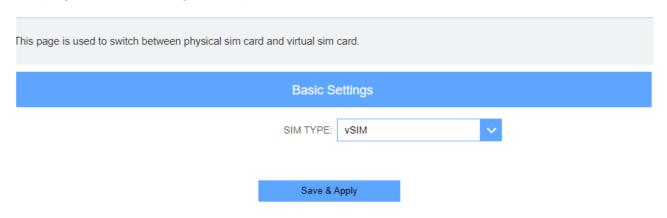


Figure 5-2-9 Mobile network

Object	Description	
SIM TYPE	Switch sim type between physical sim and virtual sim	

#### 5.2.3 Operation Mode

You can setup different modes to LAN and WLAN interface for NAT and bridging function.

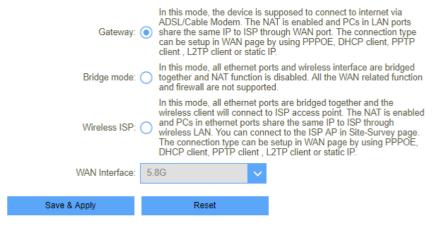


Figure 5-2-16 Operation Mode

## 5.2.4 Wi-Fi 5.2.4.1. Wi-Fi

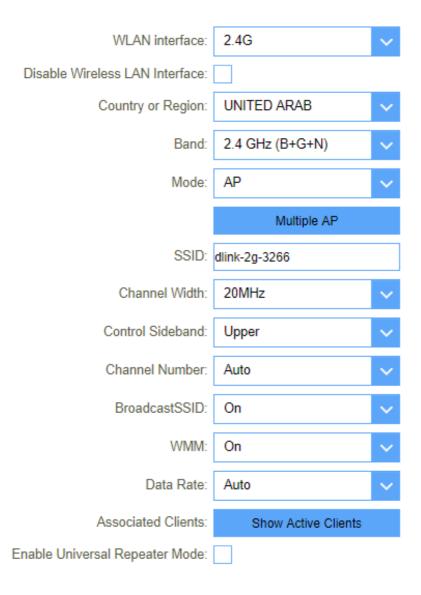


Figure 5-2-17 2.4GHz Wi-Fi

Object Description
--------------------

WLAN interface	You may choose which interface to config, for example 2.4G or 5G interface (some model support 5G).
Disable Wireless LAN Interface	You may choose to enable or disable Wireless function.
Band	Set the wireless mode to which you need. Default is " <b>Mixed 802.11b/g/n</b> ". It is strongly recommended that you set the Band to "802.11b/g/n", and al I of 802.11b, 802.11g, and 802.11n wireless stations can connect to the CPE-0001
Mode	WLAN working mode, such AP, client, WDS and AP+WDS.
MultipleAP	You can set guest SSID from this button.
Network Type	You can config WLAN network type with this parameter.
SSID	Set a name (SSID) for your wireless network. The ID of the wireless network. User can access the wireless network through it only. However, if you switch to Client Mode, this fieldbecomes the SSID of the AP you want to connectwith.
Channel Width	Select a proper channel bandwidth to enhance wireless performance. When there are 11b/g and 11n wireless clients, please select the 802.11n mode of 20/40MHz frequency band.
	Control channels are only applicable if your gateway is operating at 40 MHz bandwidth and the 802.11n mode is configured as Automatic.
Channel Number	For an optimal wireless performance, you may select the least interferential channel. It is advisable that you select an unused channel or "Auto" to let device detect and select the bestpossible channelforyourwirelessnetworktooperateonfromthe drop-down list.
BroadcastSSID	You may choose to visible or invisible SSID broadcast. When it is enabled, the router SSID will be broadcast in the wireless network, so that it can be scanned by wireless clients and they can join the wireless network with this SSID.
WMM	WMM provides basic Quality of service (QoS) features to IEEE 802.11 networks. WMM prioritizes traffic according to four Access Categories: voice, video, best effort, and background.
Associated Clients	This option shows you all the clients which connected to this SSID.
Enable Universal Repeater Mode	Repeater mode

### 5.2.4.2. Security



Save & Apply Reset

Figure 5-2-18 Wi-Fi security

Object	Description
	Set a name (SSID) for your wireless network. User can access
Select SSID	the wireless network through the ID only. However, if you switch
	to client mode, this field becomes the SSID of the AP you want
	to connect with.
	Select the security mode from the <b>Encryption</b> dropdown list.
Encryption	There are 4 options in the Security Mode dropdown list:
	<ul><li>Disable</li><li>WEP</li><li>WPA2</li><li>WPA-Mixed</li></ul>
Pre-Shared Key	Enter the Wi-Fi password

#### 5.2.4.3. ACL

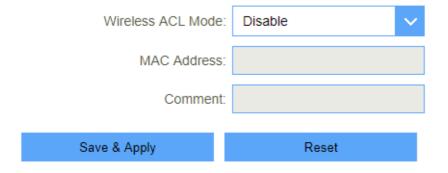


Figure 5-2-19 Wi-Fi security

Object	Description	
	If you choose 'Allowed Listed', only those clients whose wireless	
Wireless ACL Mode	MAC addresses are in the access control list will be able to	
	connect to your Access Point. When 'Deny Listed' is selected,	
	these wireless clients on the list will not be able to connect the	
	Access Point.	
MAC Address	The MAC address of the client.	
Comment	Comment	

# 5.2.4.4. Site Survey

This page provides tool to scan the wireless network. If any Access Point or IBSS is found, you could choose to connect it manually when client mode is enabled.



Figure 5-2-20 Site Survey

# 5.2.4.5. WPS



**Figure 5-2-21 WPS** 

Object	Description	
WPS	This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless	
	client automatically synchronize its setting and connect to the Access Point in a minute without any hassle.	
Disable WPS	Enable or disable WPS function.	

# 5.2.5 LAN 5.2.5.1. IPv4

This page is used to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP address, subnet, DHCP, etc.

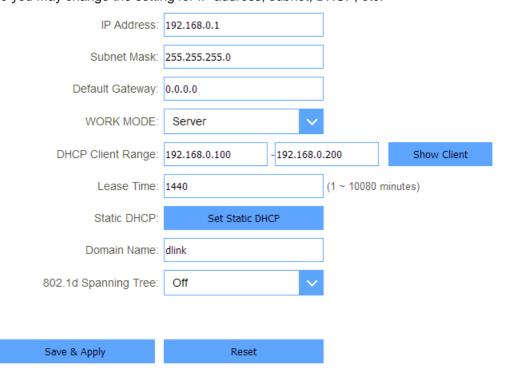


Figure 5-2-22 LAN IPv4

Object	Description	
	Router's LAN IP.	
LAN IP Address	The default is <b>192.168.0.1</b> . You can change it according to your	
	needs.	
Subnet Mask	Router's LAN subnet mask.	
WORK MODE	If it is selected, the router serves as the DHCP server and	
WORKIMODE	automatically assigns IP addresses to all computers in the LAN.	
DHCP Client Range	Enter the start and end IP address of all the available successive	
	IPs.	
	Select the time for using one assigned IP from the dropdown list.	
Lease Time	After the lease time, the AP automatically assigns new IP	
	addresses to all connected computers.	
	This page allows you reserve IP addresses, and assign the same	
	IP address to the network device with the specified MAC address	
Static DHCP	any time it requests an IP address. This is almost the same as	
	when a device has a static IP address except that the device must	
	still request an IP address from the DHCP server.	
Domain Name	Set the domain name of the server.	
Domain Name	Set the domain name of the server.	
802.1d Spanning Tree	Enable or disable spanning tree function.	

# 5.2.5.2. Static DHCP

If user want to reserve specific IP for some device, you can bind the mac and the IP in this page.

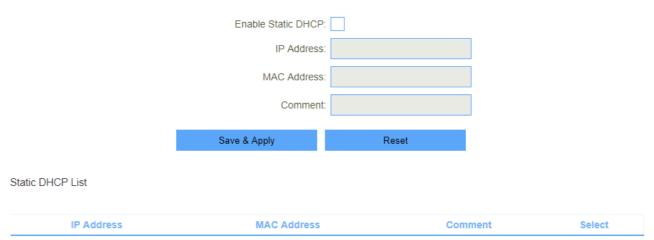
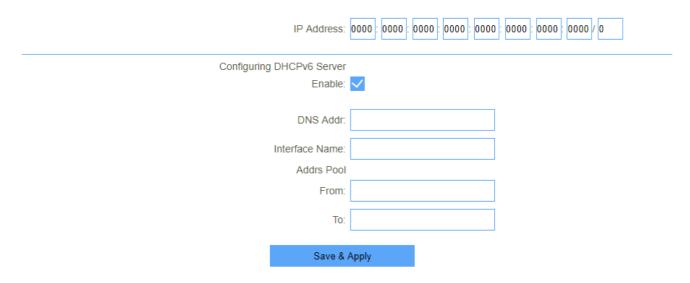


Figure 5-2-23 Static DHCP

# 5.2.5.3. IPv6

This page shows the information of IPv6.



**Figure 5-2-24 IPv6** 

Object	Description	
IP Address	Router's LAN IPv6 address.	
DNS Addr	Router's LAN DNS server.	
Interface Name	If it is selected, the router serves as the DHCP server and	
	automatically assigns IPv6 addresses to all computers in the LAN.	
Addrs Pool	Enter the start and end IPv6 address of all the available	
	successive IPv6 address.	

# 5.2.5.4. RADVD

Enable:	
radvdinterfacename:	
MaxRtrAdvInterval:	0
MinRtrAdvInterval:	0
MinDelayBetweenRAs:	0
AdvManagedFlag:	
AdvOtherConfigFlag:	
AdvLinkMTU:	0
AdvReachableTime:	0
AdvRetransTimer:	0
AdvCurHopLimit:	0
AdvDefaultLifetime:	0
AdvDefaultPreference:	high
AdvSourceLLAddress:	
UnicastOnly:	
Prefix1	
Enabled:	
prefix:	0000 : 0000 : 0000 : 0000 : 0000 : 0000 : 0000 / 0
AdvOnLinkFlag:	
AdvAutonomousFlag:	
AdvValidLifetime:	0
AdvPreferredLifetime:	0
AdvRouterAddr:	
if6to4:	

This page shows the information of IPv6 RADVD.

Figure 5-2-25 RADVD

Object	Description
radvdinterfacename	Enter the interface name.
MaxRtrAdvInterval	Enter the max retry advertisement interval.
MinRtrAdvInterval	Enter the min retry advertisement interval.
MinDelayBetweenRAs	Enter the min delay between router advertisement.
AdvManagedFlag	Enable or disable the advertisement managed flag.
AdvOtherConfigFlag	Enable or disable the advertisement other config flag.
AdvLinkMTU	Enter the advertisement link MTU.
AdvReachableTime	Enter the advertisement reachable time.

AdvRetransTimer	Enter the advertisement retrains timer.	
AdvCurHopLimit	Enter the advertisement current hop limit	
AdvDefaultLifetime	Enter the advertisement default life time.	
AdvDefaultPreference	Select from "high", "medium" or "low" for the advertisement default preference.	
AdvSourceLLAddress	Enable or disable advertisement source link local address.	
UnicastOnly	Enable or disable unicast only.	
Prefix1 Enabled	Enable or disable prefix.	
prefix	Enter the prefix and prefix length.	
AdvOnLinkFlag	Enable or disable advertisement on link flag.	
AdvAutonomousFlag	Enable or disable advertisement autonomous flag.	
AdvValidLifetime	Enter advertisement valid life time.	
AdvPreferredLifetime	Enter advertisement preferred life time.	
AdvRouterAddr	Enable or disable advertisement router address.	
If6to4	Enter the interface 6to4.	

# 5.2.5.5. TUNNEL 6 over 4

This page used for Tunnel 6 over 4.



Figure 5-2-26 TUNNEL 6 over 4

Object	Description
Enable	Enable or disable tunnel 6 over 4.

# 5.2.6 VPN5.2.6.1. PPTP

This page is used to configure the parameters for Internet network which connects to the PPTP server.



Figure 5-2-27 PPTP

Object Description	
Server	Type the name of PPTP Server.
Username	Enter the user name provided by your ISP.
Password	Enter the password provided by your ISP.
MTU	You can keep the maximum transmission unit (MTU) as default.

# 5.2.6.2. L2TPv2

This page is used to configure the parameters for Internet network which connects to the L2TPv2 server.



Figure 5-2-28LT2P

Object	Description	
Server	Type the name of L2TP Server.	
Username	Enter the user name provided by your ISP.	
Password	Enter the password provided by your ISP.	
MTU	You can keep the maximum transmission unit (MTU) as default.	

# 5.2.6.3. L2TPv3

This page is used to configure the parameters for Internet network which connects to peer by L2TPv3.

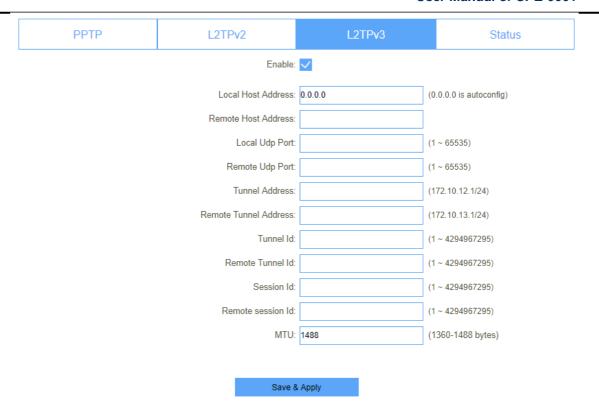


Figure 5-2-29L2TPv3

Object Description	
Local Host Address	The address of the LAN side device of local, eg:192.168.0.2
Remote Host Address	The address of the LAN side device of remote host, eg:192.168.8.2
Local Udp Port Lan side device udp port.	
Remote Udp Port	Remote device udp port
Tunnel Address	Wan interface ip address
Remote Tunnel Address Remote device wan interface ip address	
Tunnel Id	Local device tunnel id
Remote Tunnel Id	Remote device tunnel id
Session Id	Local device session id
Remote session Id	Remote device session id
MTU	You can keep the maximum transmission unit (MTU) as default.

# 5.2.6.4. Status

This page shows the status information for PPTP , L2TPv2 and L2TPv3



Figure 5-2-30VPN status

# 5.3 Features

# 5.3.1 QoS

Enable QoS:	<b>✓</b>	
Automatic Uplink Speed:	<b>✓</b>	
Automatic Downlink Speed:	<b>✓</b>	
Name:		
QoS Type:	IPv4	
protocol:	Both	
Local IP Address:		-
Local Port:		-
Remot IP Address:		-
Remote Port:		-
Mode:	Guaranteed minimum	
Uplink Bandwidth (Kbps):		
Downlink Bandwidth (Kbps):		
Remark DSCP:		(0-63)
Comment:		
Save & Apply	Reset	

Figure 5-3-1 QoS

Object	Description
Automatic Uplink Speed	Automatic uplink speed.
Manual Uplink Speed (Kbps)	Set the download speed of your Internet access
Automatic Downlink Speed	Automatic downlink speed.
Manual Downlink Speed (Kbps)	Set the upload speed of your Internet access
Name	QoS rule name.

# 5.3.2 Firewall 5.3.2.1. Advanced

Enable DMZ:		
Enable UPNP:	<b>✓</b>	
Enable IGMP Proxy:		
Enable Telnet Access on LAN:	<b>✓</b>	
Enable Telnet Access on WAN:		
Enable Ping Access on WAN:		
Enable Web Server Access on WAN:		
Enable IPsec pass through on VPN connection: 🗸		
nable PPTP pass through on VPN connection: 🗸		
Enable L2TP pass through on VPN connection:	<b>✓</b>	
Save & Apply	Reset	

Figure 5-3-2 Advanced

Object	Description
Enable DMZ	Enable or disable DMZ function
Enable UPnP	Enable or disable UPnP function
Enable IGMP Proxy	Enable or disable IGMP Proxy function
Enable Telnet Access on LAN	Enable or disable Telnet by lan access
Enable Telnet Access on WAN	Enable or disable Telnet by wan access
Enable Ping Access on WAN	Enable or disable Enable Ping Access on WAN function
Enable Web Server Access on WAN	Enable or disable Enable Web Server Access on WAN function.
Enable IPSec pass through on VPN connection	Enable or disable IPSEC to pass through IPSEC communication data.
Enable PPTP pass through on VPN connection	Enable or disable PPTP to pass through PPTP communication data.
Enable L2TP pass through on VPN connection	Enable or disable L2TP to pass through L2TP communication data.

# 5.3.2.2. Dos

A denial-of-service (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.

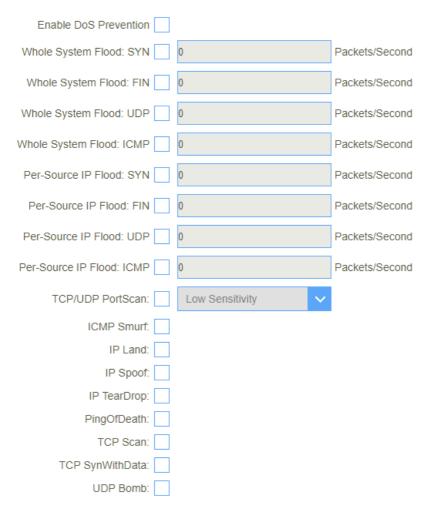
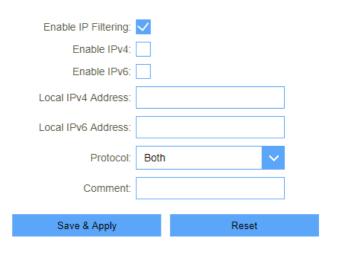


Figure 5-3-3 DoS

# 5.3.2.3. IP Filtering



ip Filter Table



Figure 5-3-4 IP Filtering

Object	Description
Enable IP Filtering	Enable or disable IP Filtering function.
Enable IPv4	Enable or disable IPv4 Filtering feature.
Enable IPv6	Enable or disable IPv6 Filtering feature.
Local IPv4 Address	Set LAN side source IPv4 address
Local IPv6 Address	Set LAN side source IPv6 address
Protocol	Select "TCP", "UDP" or" Both"
Comment	Comment for the rule.

# 5.3.2.4. PortFiltering



Figure 5-3-5 Port Filtering

Object	Description
Enable Port Filtering	Enable or disable IP Filtering function.
Enable IPv4	Enable or disable IPv4 Port Filtering feature.
Enable IPv6	Enable or disable IPv6 Port Filtering feature.
Port Range	Set the port range for port filtering
Protocol	Select "TCP", "UDP" or" Both"
Comment	Comment for the rule.

# 5.3.2.5. MAC Filtering

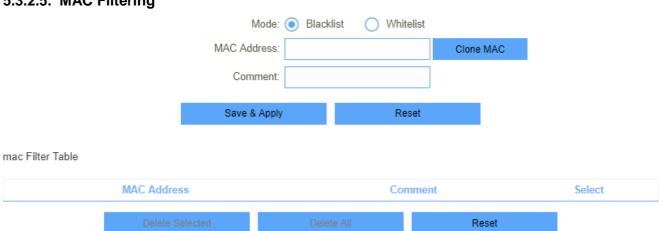


Figure 5-3-6 MAC Filtering

Object	Description
Model	You can set working model here, Black and White.
MAC Address	Enter a MAC address
Comment	Comment info.

# 5.3.3 Port Forwarding



Figure 5-3-7 Port Forwarding

Object	Description
Enable Port Forwarding	Enable or disable Port Forwarding function.

Local IP Address	Enter a LAN IP address
Local Port Start	Enter LAN side start port.
Local Port End	Enter LAN side end port.
Protocol	Select "TCP", "UDP" or "Both".
Remote IP Address	Enter a WAN IP address
Remote Port Start	Enter the external start port
Remote Port End	Enter the external end port
Comment	Enter the port number

# 5.3.4 URLFilter

URL filter is used to deny LAN users from accessing the internet. Block those URLs which contain keywords listed below. Please note: URL Filter can not filter the HTTPS encrypted domain name.



Figure 5-3-8 URL Filter

Object	Description
Enable URL Filtering	Enable or disable URL Filtering function.
Deny URL address (black list)	Blocking access to the URL list.
Allow URL address (white list)	Allowing access to the URL list.
URL Address	Block or allow access URL.

#### 5.3.5 Route

This menu shows you the current default route and static route. Static Route reduces route selection problems and corresponding data overload and accelerates data packet forwarding.

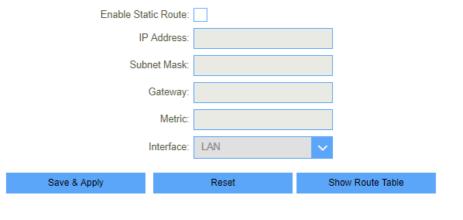
#### 5.3.5.1. Default Route

You can select which wan connection as default gateway route.if not ,system will auto select a connect up wan as default gateway route.



Figure 5-3-9 Default Route

# 5.3.5.2. Static Route



Static Route Table



Figure 5-3-10 Static Route

Object	Description
Enable Static Route	Enable or disable Static route.
IP Address	Enter the destination network
Subnet Mask	Enter the network mask
Gateway	Enter the network gateway
Metric	Enter the routing metric
Interface	Select the interface

# 5.3.6 DynamicDNS

The Wireless Router supports **Dynamic Domain Name Service** (**DDNS**). The dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, and allows access to a specified host from various locations on the Internet. Click a hyperlinked URL in the form of hostname.dyndns.org and allow remote access to a host. Many ISPs assign public IP addresses using DHCP, so locating a specific host on the LAN using the standard DNS is difficult. For example, if you are running a public web server or VPN server on your LAN, DDNS ensures that the host can be located from the Internet even if the public IP address changes. DDNS requires that an account be set up w ith one of the supported DDNS service providers

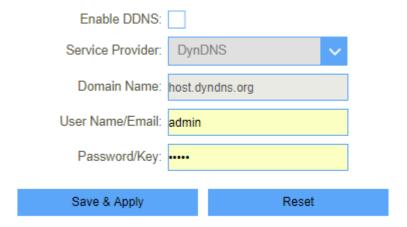


Figure 5-3-11 DDNS

Object	Description
	Select server from the drop-down list
Server Provider	■ DynDNS
	■ TZO
Domain Name	Enter the host name
User Name/Email	Enter the user name
Password/Key	Enter the password

# 5.4 Management

# 5.4.1 Time

# 5.4.1.1. NTP Server

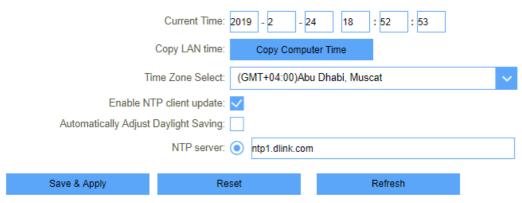


Figure 5-4-1 NTP Server

Object	Description
Current Time	Select the time zone in your area
Copy LAN time	Copy time from computer.
Time Zone Select	Select time zone from the drop box.
Enable NTP client update	Enable or disable NTP client update.
Automatically Adjust Daylight Saving	Enable or disable daylight saving if you need this function
NTP Server	Select the well know NTP Server.
Manual IP Setting	Enter the server manually.

# 5.4.1.2. Auto Reboot

This feature can do the Reboot automatically at a specified time. Please note: "Auto Reboot" depend on the "NTP Server", you have to enable the 'NTP Server' when use this feature.

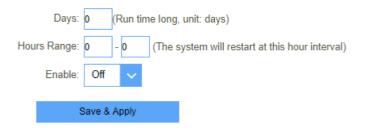


Figure 5-4-3 Auto Reboot

# 5.4.2 SystemLog



Figure 5-4-4 System Log

Object	Description
Enable Log	Enable or disable Log function.
System All	Print all log information.
Wireless	Print wireless log information.
DoS	Print DoS log information.
Enable Remote Log	Enable or disable "Logging to Syslog Server"
Log Server IP Address	Enter the Syslog server IP address

# 5.4.3 SystemSettings5.4.3.1. Administrator

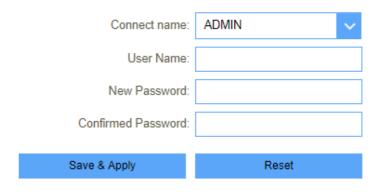


Figure 5-4-5 Administrator

Object	Description	
Connect name	Modify admin or user account.	
Username	Enter the new username.	
Password	Enter the new password.	
Confirmed Password	Enter the new password again.	

# 5.4.3.2. System

This screen allows you to back up, restore, and erase the router's current settings. Once you have the router working correctly, you should back up the information to have it available if something goes wrong. When you back up the settings, they are saved as a file on your computer. You can restore the router's settings from this file.



Figure 5-4-6 System

Object	Description
Save settings to file	Save the setting to local PC
Load settings from File	Load the settings from local PC
Reset Settings to Default	Restore the device to factory default
Reboot the device	Press the button to reboot the device



When you load new configuration, the original configuration will be lost. Please back up the current configuration before loading a new one. In this way, if the new configuration file has an error, you can load the backup file.



**DO NOT** shut down your router when loading a configuration file. Otherwise, the router may be damaged.

# 5.4.4 Statistics

# 5.4.4.1. User Statistics

This page shows each user's total traffic statistics and LTE traffic statistics.

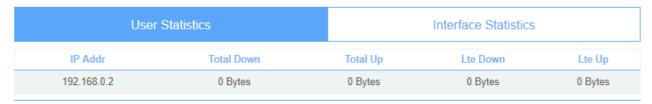


Figure 5-4-7 User Statistics

# 5.4.4.2. Interface Statistics

This page shows the packet counters for transmission and reception regarding to wireless and Ethernet networks.

User Statistics		Interface Statistics	
Wireless 1 LAN	Sent Bytes	8	33300
	Received Bytes	0	)
Wireless 2 LAN	Sent Bytes	1	82284
	Received Bytes	7	76
Ethernet LAN1	Sent Bytes	1	2157147
Luiemet LANT	Received Bytes	1	600333
Ethernet LAN2	Sent Bytes	1	5598833
Luiemet LANZ	Received Bytes	1	121566
Ethernet LAN3	Sent Bytes	0	)
Luiemet LANS	Received Bytes	0	)
Ethernet LAN4	Sent Bytes	0	)
Luiemet LAN4	Received Bytes	0	
WAN	Sent Bytes	0	
AAVIA	Received Bytes	0	
LTE	Sent Bytes	0	
LIL	Received Bytes	0	

Refresh

Figure 5-4-8 Interface Statistics

# 5.4.5 TR069

This page is used to configure the TR069. Here you may change the setting for the ACS's parameters.

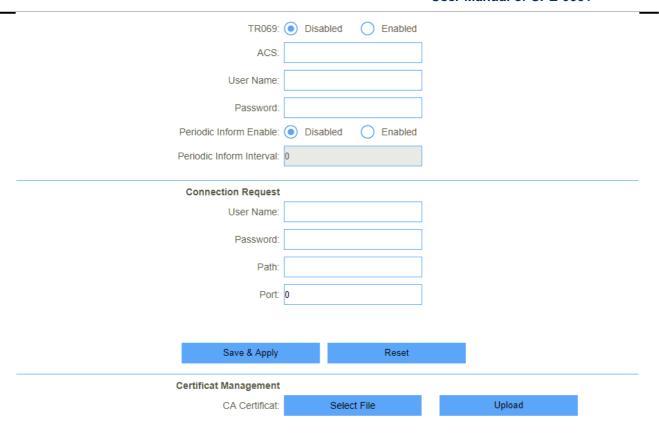


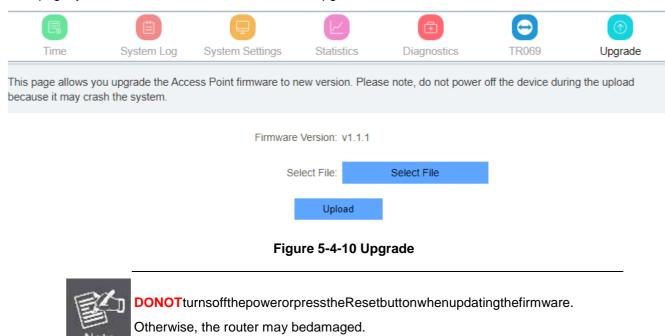
Figure 5-4-9 TR069

Object	Description		
TR069	Enable or disable TR069.		
ACS	ACS server domain or IP Address.		
User Name	User name for connection to ACS.		
Password	Password for connection to ACS.		
Periodic Inform Enable	Enable or disable periodic inform.		
Periodic Inform Interval	Periodic inform interval.		
Connection Request	User Name used form ACS connection to TR069.		
User Name			
Connection Request	Password used form ACS connection to TR069.		
Password			
Path	Connection request path.		
Port	Connection port.		

# 5.4.6 Upgrade

# 5.4.6.1. Firmware Upgrade

You install new version of the router's software using this page. From time to time, we may release new versions of the Router's firmware. Firmware updates contain improvements and fixes the current problems. On this page, you can check the firmware version and upgrade firmware.

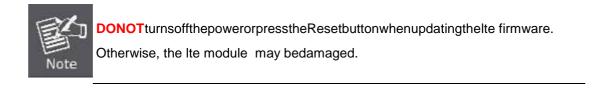


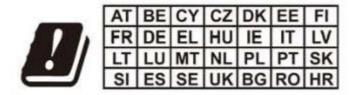
# 5.4.6.2. LTE Fota Upgrade

This page allows you upgrade the Mobile module firmware to new version. Please note, do not power off the device during the upload because it may crash the system.



Figure 5-4-11Fota Upgrade





# **FCC Statement**

# 15.19 Labeling requirements.

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### 15.21 Information to user.

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

#### 15.105 Information to the user.

Note: 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.

#### **RF Exposure information:**

- This radio is designed for and classified as "General population/uncontrolled Use"
- During operation, the separation distance between user and the antenna shall be at least 20cm, this separation distance will ensure that there is sufficient distance from a properly installed

