GL·iNet



Collie
(GL-X300B)
USER MANUAL

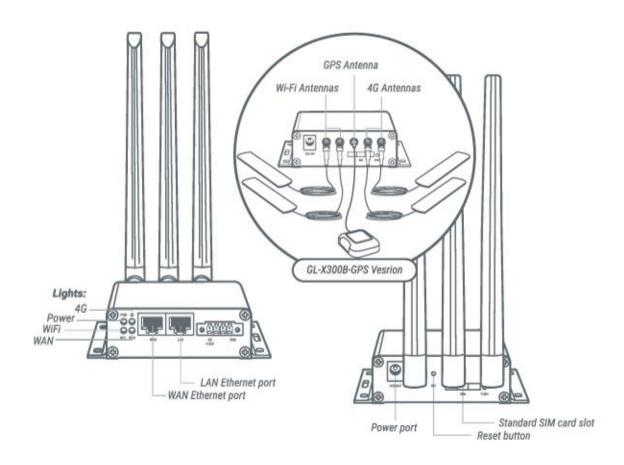
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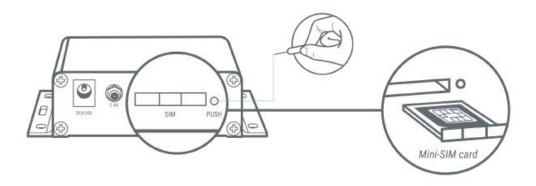
1. Getting Started with GL-iNet Collie

Model: GL-X300B



Tips on How to Insert the SIM Card

Please use a paper clip or a SIM-eject tool to insert and push into the "Push" hole, the SIM tray will slide out. The SIM card's cut mark should be pointing to the lower left corner.

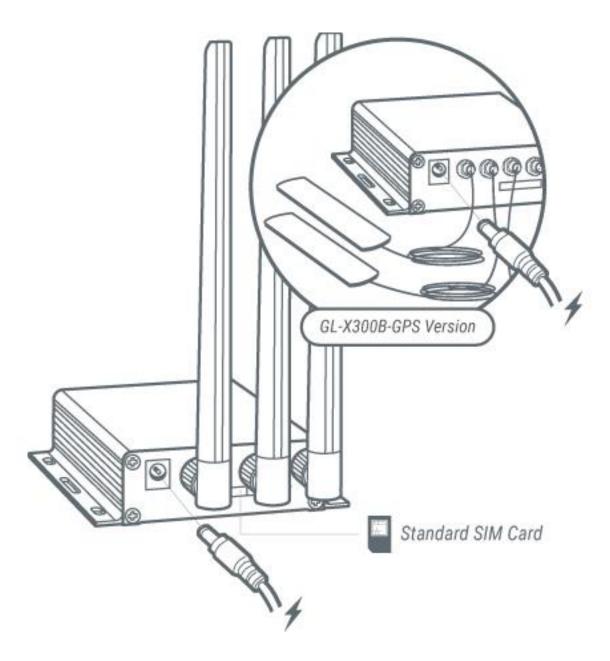


Correct SIM: Mini SIM-2FF

1.1. Power on

Plug the power cable into the power port of the router. It supports 9-35V wide voltage input, 5.5 mm DC power connector or power supply via terminal block.

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Note: Hot plug for SIM card is **not** supported. If you want to use it, please insert the SIM card before powering on the router.

1.2. Connect

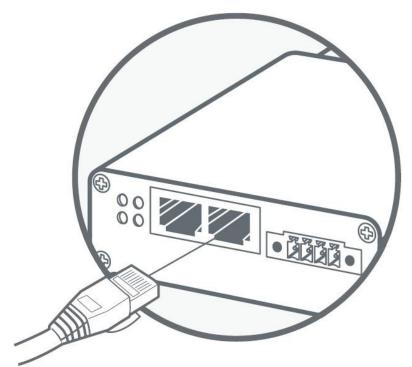
You can connect to the router via Ethernet cable or Wi-Fi.

Note: This step only connects your devices to the local area network (LAN) of the router. You cannot access the internet at this point. To connect to the Internet,

please finish the setup procedures below and follow the steps listed under Internet to set up internet connection.

1) Connect via LAN

Connect your device to the LAN port of the router via Ethernet cable.



Plug the cable connecting to your computer into LAN port

2) Connect via Wi-Fi

Search for the SSID of the router in the admin panel and input the default password:

goodlife.

Note: The SSID is printed on the bottom label of the router under the following format:

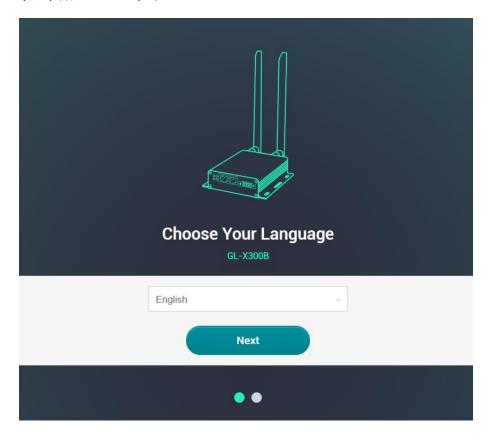
GL-X300B-XXX

1.3. Access the Web Admin Panel

Open a web browser (we recommend Chrome, Firefox) and visit http://192.168.8.1. You will be directed to the initial setup of the web Admin Panel.

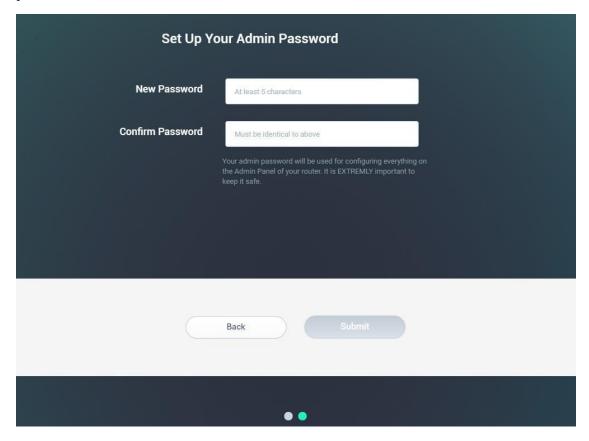
1) Language Setting

You need to choose the display language of the Admin Panel. Currently, our routers support **English**, 简体中文, 繁體中文, **Deutsch**, **Français, Español, Italiano**,日本語 and 한국어.



2) Admin Password Setting

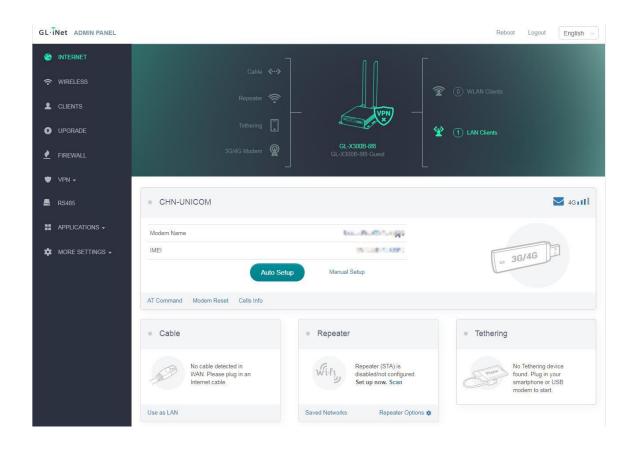
There is no default password for the Admin Panel. You can set your own password, which must be at least 5 characters long. Then, click Submit to proceed.



Note: This password is for this web Admin Panel and the embedded Linux system. It will not change your Wi-Fi password.

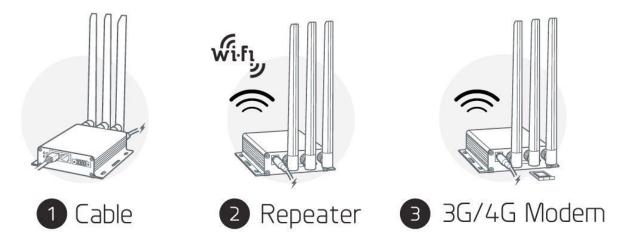
2) Admin Panel

After the initial setup, you will enter the web Admin Panel of the router. It allows you to check the status and manage the settings of the router.

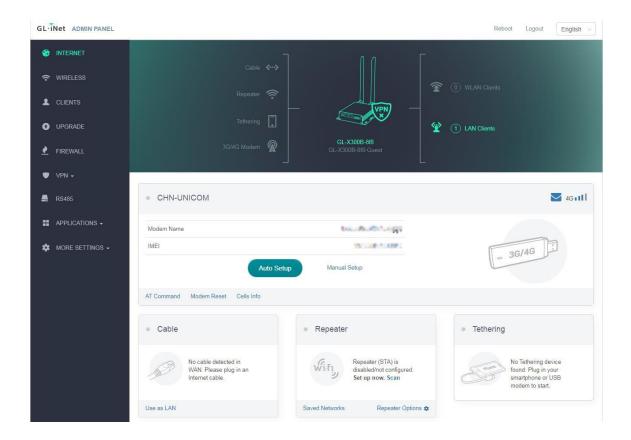


2. INTERNET

There are 3 types of connection method that you can use to access the Internet: **Cable, Repeater, 3G/4G Modem.**



Click INTERNET to create an Internet connection.



2.1. Cable

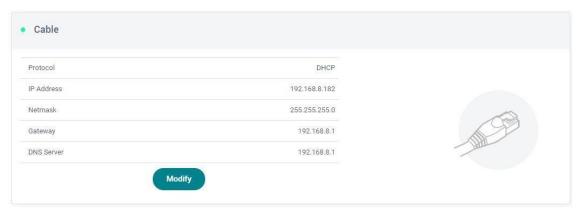
Connect the router to the modem or main router via Ethernet cable to access the Internet.

Before plugging the Ethernet cable into the WAN port of the router, you can click Use as LAN to set the WAN port as a LAN port. That is useful when you are using the router as a repeater. As a result, you can have one more LAN port.



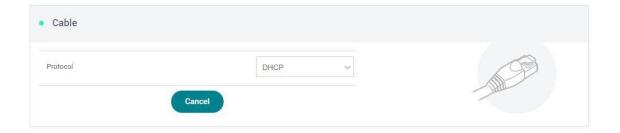
Plug the Ethernet cable into the WAN port of the router. The information of your connection will be shown on the Cable section. DHCP is the default protocol.

You can click Modify to change the protocol.



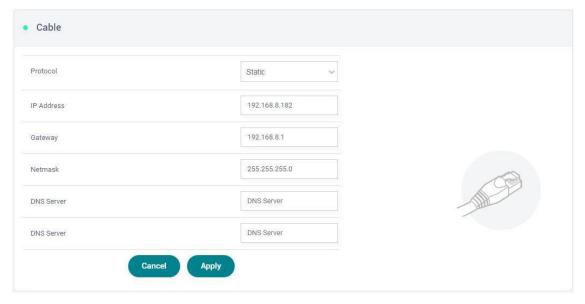
1) DHCP

DHCP is the default and most common protocol. It does not require any manual configuration.



2) Static

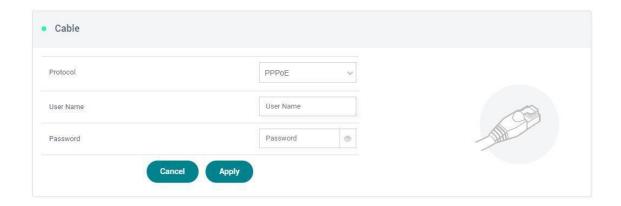
Static is required if your Internet Service Provider (ISP) has provided a fixed IP address for you or if you want to configure the network information such as IP address, Gateway, Netmask manually. Change it according to your needs and then click Apply.



3) PPPoE

PPPoE is required by many Internet Service Providers (ISP). Generally, your ISP will provide you with a modem along with a username and password.

Under PPPoE protocol, enter your username and password, then click Apply.

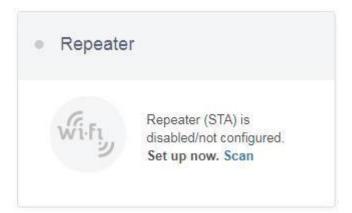


2.2. Repeater

Using Repeater means connecting the router to another existing wireless network, e.g. when you are using free Wi-Fi in a hotel or cafe.

It works in WISP (Wireless Internet Service Provider) mode by default, which means that the router will create its own subnet and act as a firewall to protect you from the public network.

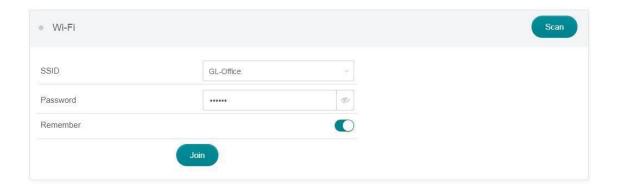
In the Repeater section, click Scan to search for available wireless networks nearby.



Choose an SSID from the drop-down list and enter its password. You can also enable the Remember button to save the current chose wireless network.

Finally, click Join.

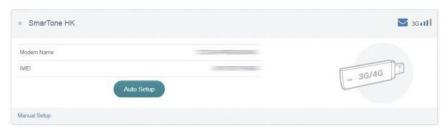
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2.3. **3G/4G Modem**

Collie has a built-in 3G/4G modem which you can insert your SIM card directly. Please insert the SIM card before powering on the router. Then, you should find the name of your carrier, click Auto Setup to create the connection.

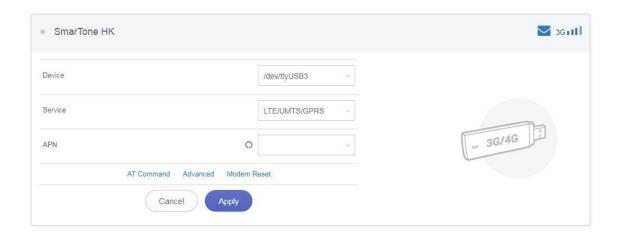
Note: Some 3G/4G modems will be recognized as Tethering connection.



You can also click Manual Setup to set up manually.

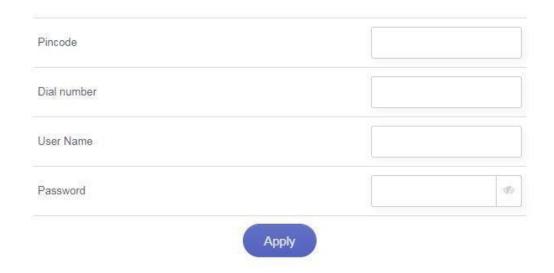
In General, you can set up by the three basic parameters below. Click Apply to connect.

- Device: Please choose /dev/cdc-wdm0 (qmi) or /dev/ttyUSB3.
- **Service Type**: Indicate the service of your SIM card.
- APN: Confirm with your SIM card carrier.

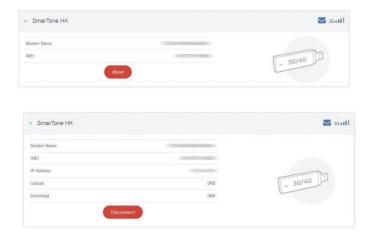


Advanced Settings:

- **Dial Number**: Generally, it is a default value and you don't need to set it manually. However, if you have this info, please input it.
- **Pincode, Username and Password:** Generally, these are not necessary for an unlocked SIM card. However, if you have a locked SIM card, please consult your service provider.

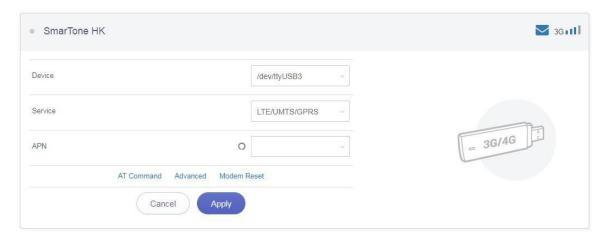


It is connected when the IP address of your SIM card shows up.

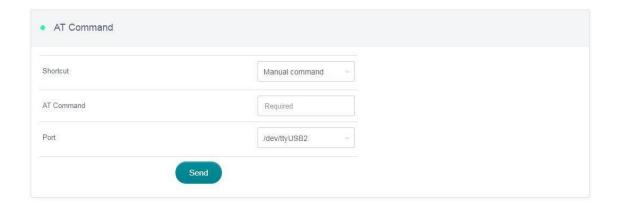


AT Command

The built-in modem supports AT command for managing and configuration of the modem. In 3G/4G Modem section, Click AT Command.



- **Shortcut:** There are several pre-configured AT commands that you can use directly. If you want to run your own AT command, choose **Manual command**.
- AT Command: The place where you can input AT command. For the list of AT command, please refer to the AT command manual of the built-in modem.
- Port: The default port for AT command is /dev/ttyUSB2.



3. WIRELESS

In WIRELESS, you can check the current status and change the settings of the wireless network created by the router. The wireless network can be turned on or off by switching the **ON/OFF** button.

Wi-Fi Name (SSID): The name of the Wi-Fi. It is not suggested to use unicode characters such as **Chinese**.

Wi-Fi Security: The encryption method of the Wi-Fi.

Wi-Fi Key: The password of the Wi-Fi, which must be at least 8 characters long. We suggest you change it when you receive the router.

SSID Visibility: Show or hide the SSID.

Wi-Fi Mode: Wi-Fi protocol standards. It supports 802.11/b/g/n. It is suggested to use the default 802.11b/g/n or select a Wi-Fi mode based on your demand.

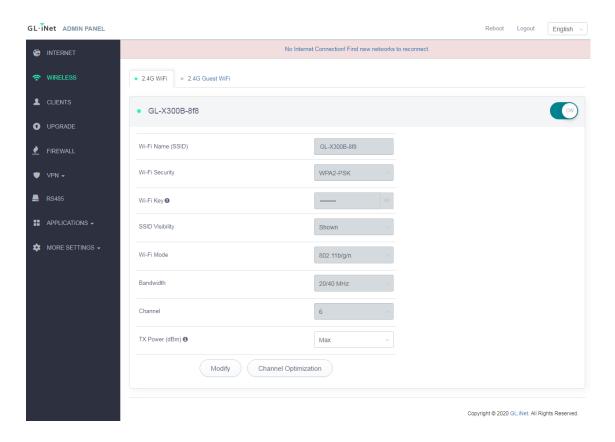
Bandwidth: The bandwidth is the Wi-Fi channel frequency coverage range. Select 20/40MHz or 40MHz or 20MHz based on your demand.

Channel: The router will not choose the best channel by default. You will need to select a channel manually. If your router is used as a Wi-Fi repeater, the channel will be fixed according to the connected wireless network.

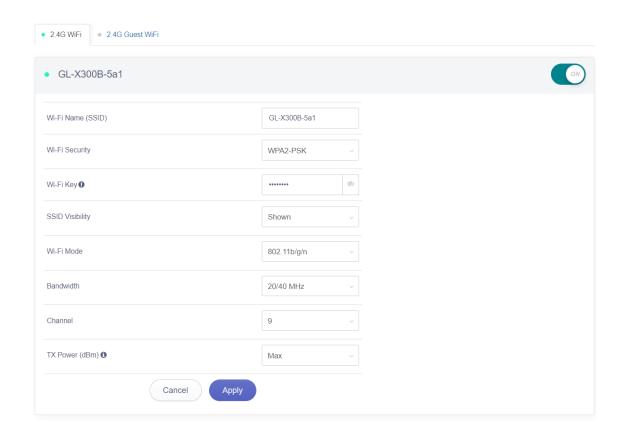
TX Power (dBm): It specifies the signal strength. It has 4 levels, Max, High, Medium, Low. Default setting is Max.

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Channel Optimization: It will optimize your Wi-Fi signal and channel according to the Wi-Fi environment.



Click Modify to change the settings of the wireless network.



4. CLIENTS

You can manage all connected clients on this page.

You can see the device name, IP, and MAC address.

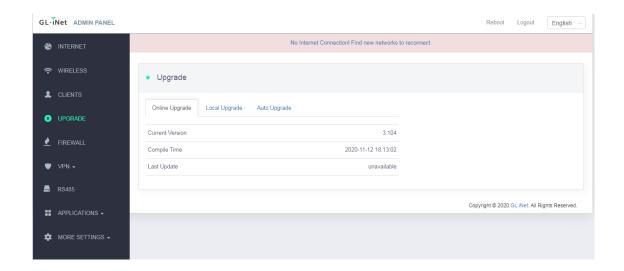
Click the button on the right to block any unwanted client.

Click the button on the right corner to enable real-time speed and traffic statistics, this feature requires higher CPU load.



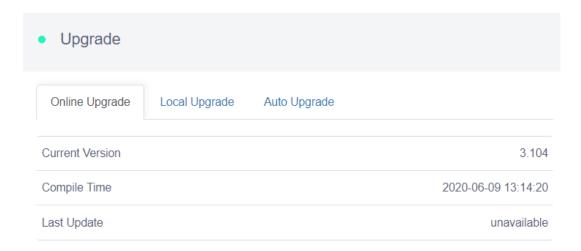
5. UPGRADE

Click UPGRADE to check any available update and upgrade the firmware.



5.1. Online Upgrade

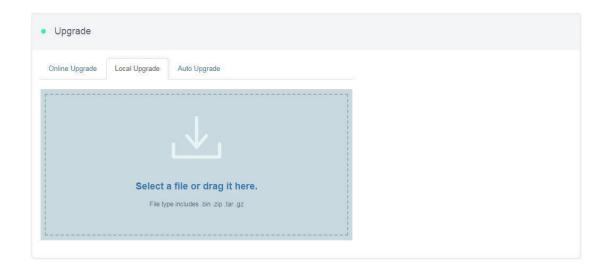
You can find the current firmware version here. If your router is connected to the Internet, it will check for the latest available firmware version for download.



Note: We suggest unchecking **Keep setting** after the firmware upgrade. If you keep the settings and encounter problems after the upgrade, please reset the router.

5.2. Upload Firmware

Click Local Upgrade to upload a firmware file to the router. Simply drag and drop your firmware file to the indicated area.



1) Official OpenWrt/LEDE firmware

You can download the official firmware from our website.

• Collie: http://download.gl-inet.com/firmware/x300b/

Find the available firmware from the folder according to your device model, they are in different sub-folders:

release: Official GL.iNet OpenWrt/LEDE firmware.

clean: Clean versions of OpenWrt/LEDE firmware with Luci admin page only.

testing: Beta version of GL.iNet OpenWrt/LEDE firmware.

Note: Please upload the .tar file, the .img file can only be used in Uboot.

2) Compile your own firmware

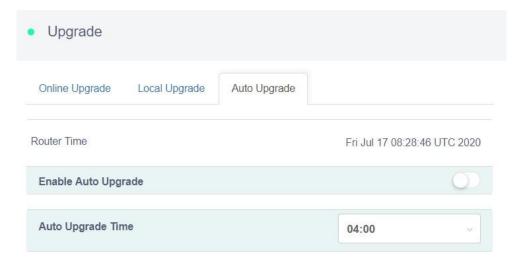
You can compile your own firmware and flash to the router. Please refer to https://github.com/gl-inet/imagebuilder

Note: If you uploaded an incompatible firmware thus bricked the router, please use Uboot to re-install the correct firmware.

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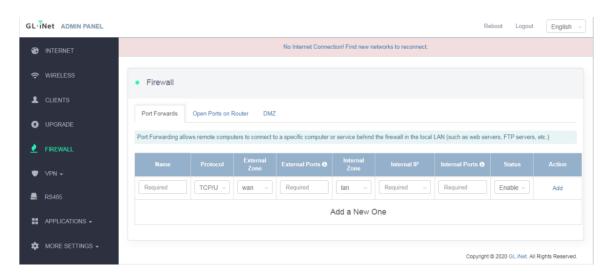
5.3. Auto Upgrade

You can enable auto upgrade. The router will search for available update and upgrade automatically according to the time that you set.



6. FIREWALL

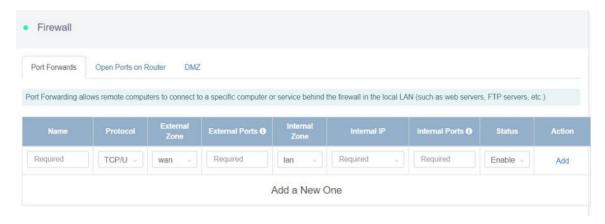
In FIREWALL, you can set up firewall rules like **port forwarding**, **open port** and **DMZ**.



6.1. Port Forwards

Port Forwarding allows remote computers to connect to a specific computer or service behind the firewall in the local LAN (such as web servers, FTP servers, etc.)

To set up port forwarding, click Port Forwards and input the required parameters or click Add a New One.



Name: The name of the rule which can be specified by the user.

Protocol: The protocol used, you can choose TCP, UDP, or both TCP and UDP.

External Zone: The zone to which hosts will be connecting.

External Ports: The numbers of external ports. You can enter a specific port number or a range of service ports (E.g. **100-300**).

Internal Zone: The zone to which the incoming connection will be redirected.

Internal IP: The IP address assigned by the router to the device which needs to be accessed remotely.

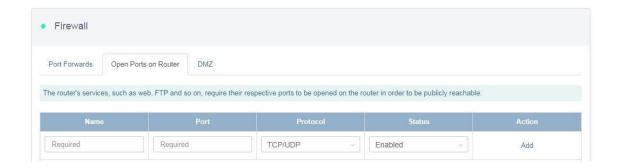
Internal Ports: The internal port number of the device. You can enter a specific port number. Leave it blank if it is same as the external port.

Status: Activate or Deactivate the rule.

6.2. Open Ports on Router

The router's services, such as web, FTP and so on, require their respective ports to be opened on the router to be publicly reachable.

To open a port, click Open Ports on Router and input the required parameters or click Add a New One.



Name: The name of the rule which can be specified by the user.

Port: The port number that you want to open.

Protocol: The protocol used, you can choose TCP, UDP, or both TCP and UDP.

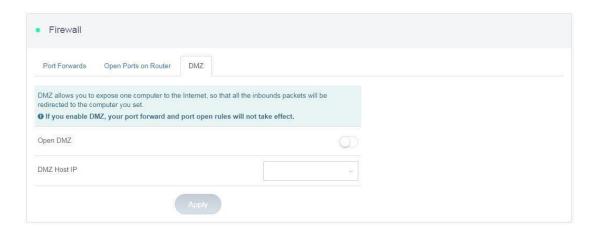
Status: Activate or Deactivate the rule.

6.3. DMZ

DMZ allows you to expose one computer to the Internet, so that all the inbounds packets will be redirected to the computer you set.

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Click DMZ and enable Open DMZ. Input the internal IP address (E.g. 192.168.8.100) of your device which is going to receive all the inbound packets.



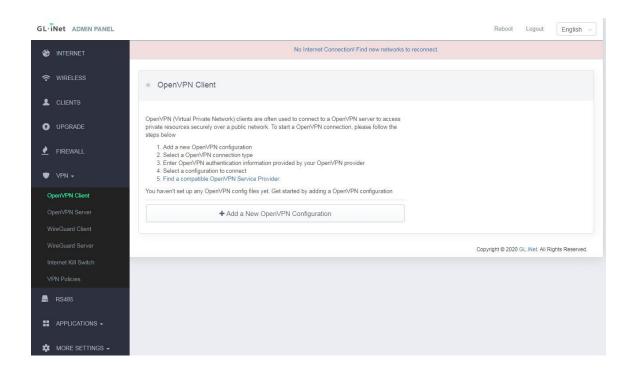
7. VPN

GL.iNet routers have pre-installed VPN server and client in **OpenVPN** and WireGuard.

Shadowsocks is not a default function and you need to install packages in Plug- ins.

Please refer to the links below for the detailed setup instruction:

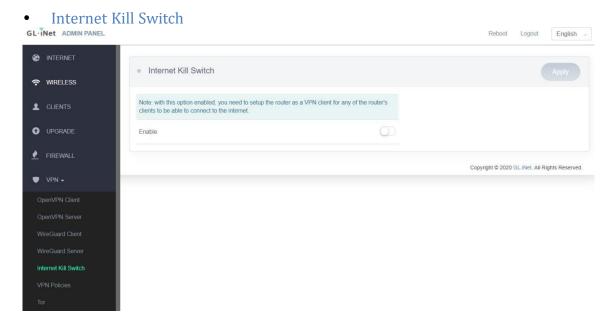
- OpenVPN
- WireGuard



Internet Kill Switch

Starting from firmware version 3.100.

Please refer to the links below for the detailed setup instruction:



Starting from firmware version 3.022, users can define **VPN routing policies**.

Please refer to the links below for the detailed setup instruction:



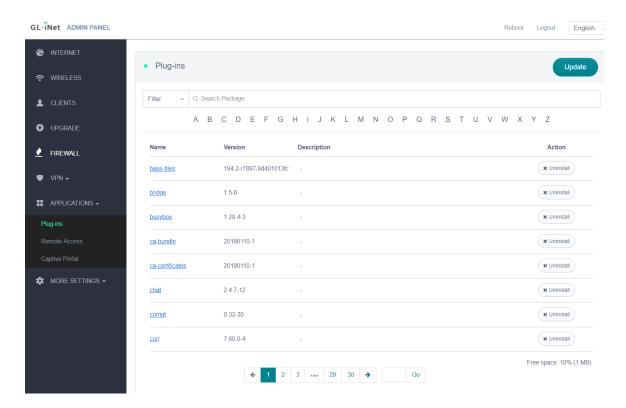
VPN Policies

8. APPLICATIONS

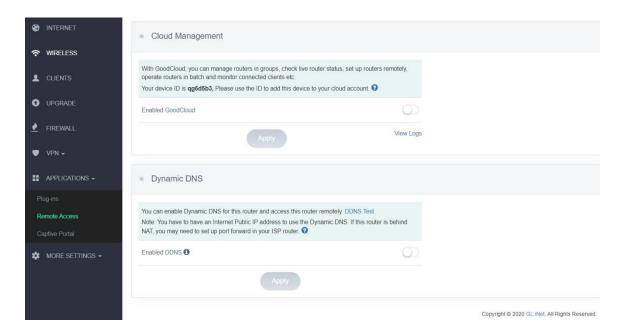
8.1. Plug-ins

Plug-ins allows you to manage OpenWrt packages. You can install or remove any package.

Remember to click Update whenever you access this packages repository.



8.2. Remote Access

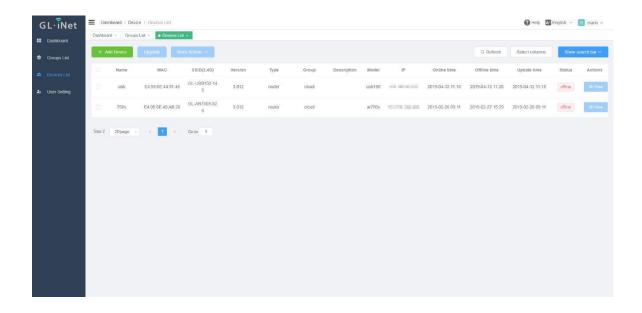


1) GoodCloud Management

GL.iNet GoodCloud cloud management service provides an easy and simple way to remotely manage routers.

On our website, you can remotely check your router status, change the password, control clients, even set email alarm when a device is online or offline.

In 3.021 version or above, this is a default function, other 3.0 version need to install packages in Plug-ins.



For the details, please refer to Cloud.

2) DDNS

DDNS (Dynamic Domain Name Service) is a service used to map a domain name to the dynamic IP address of a network device.

You can remotely access your router by url though this function.

In 3.021 version or above this is a default function, other 3.0 version need to install packages in Plug-ins.

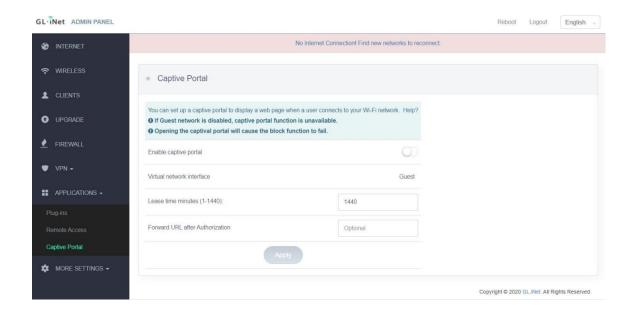
For the guidance on how to set DDNS and access, please refer to DDNS.

8.3. Captive Portal

You can set a **captive portal** in our routers, when newly users connect to Wi-Fi, they need to access a web page before access the internet.

Only supported in version 3.022 or above.

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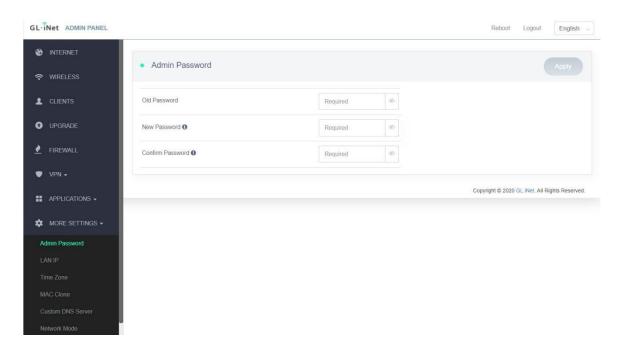


For the setup guidance, please refer to Set a Captive portal.

9. MORE SETTINGS

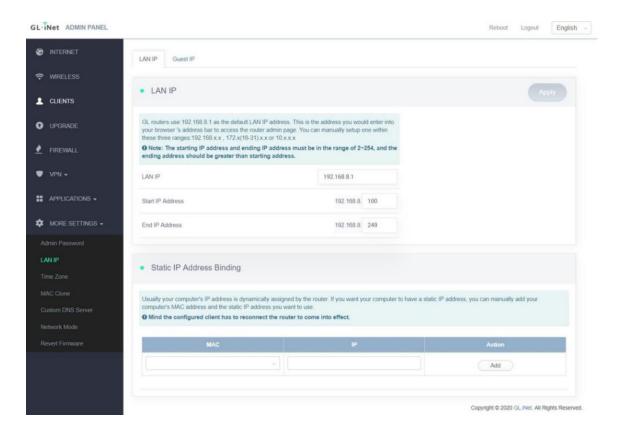
9.1. Admin Password

Change the password of the web Admin Panel, which must be at least 5 characters long. You can input your current password to change it.



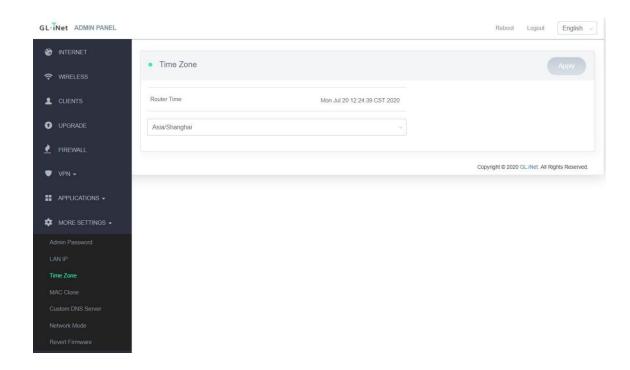
9.2. LAN IP

LAN IP is the IP address that you use to connect to this router. The default IP address of GL.iNet router is 192.168.8.1. If it conflicts with the IP address of your main router, you can change it.



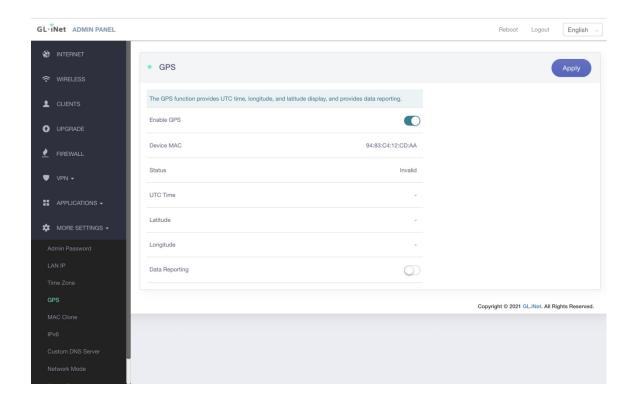
9.3. Time Zone

The time of the router's activities will be recorded according to the router time. Therefore, choosing the time zone of your location is recommended.



9.4. **GPS**

Click the MORE SETTINGS menu, and then click GPS to enter the following interface:





Device MAC: The WAN MAC Address of the Device.

Status: Check if the current location is valid.

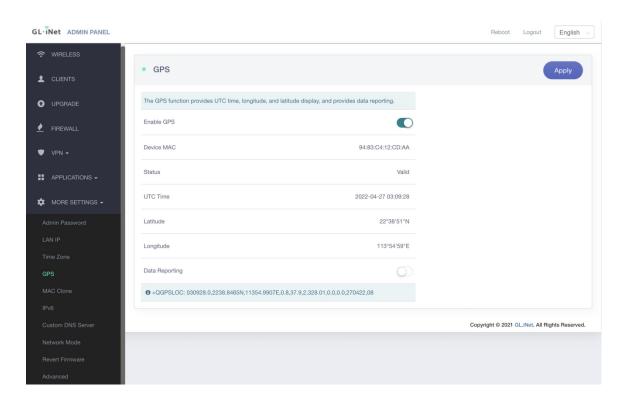
UTC Time: UTC Time

Latitude: Latitude

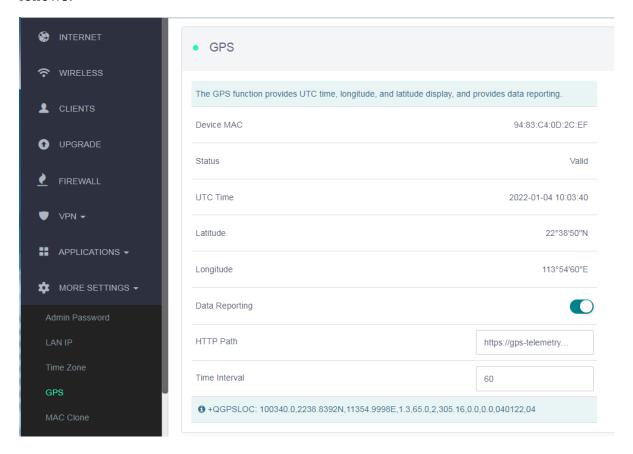
Longitude: Longitude

Data Reporting: GPS Data Reporting Switch, the default status is OFF.

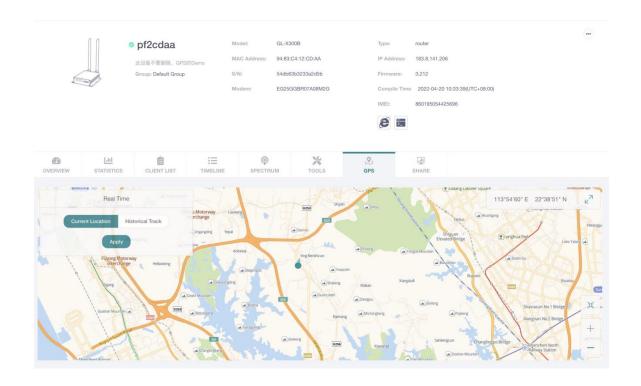
The GPS location data details are shown as follows:



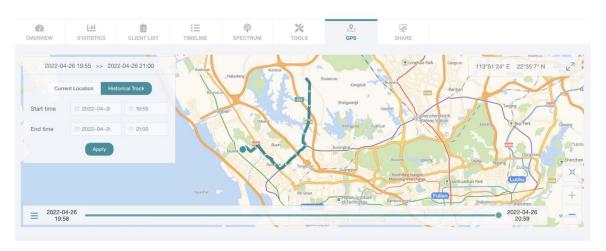
When you turn on the **Data Reporting** Function, the interface is displayed as follows:



After the data is reported successfully, you can track the GPS information on the cloud.

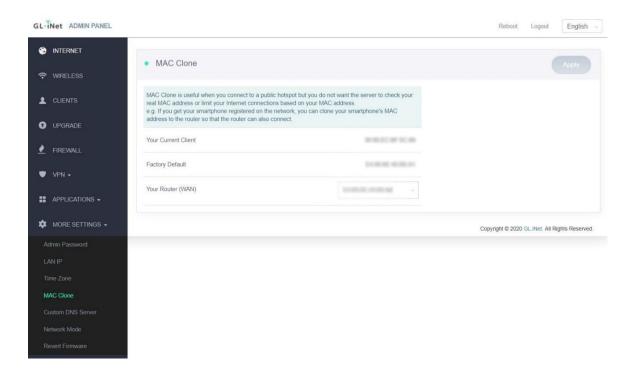


The historical route is as shown on the map below:



9.5. MAC Clone

Clone the MAC address of your current client to the router. It is used especially in hotels when the network checks your MAC address. For example, if you got your smartphone registered on the network, you can clone the MAC address of your smartphone to the router so that the router can also connect to the network.



9.6. Custom DNS Server

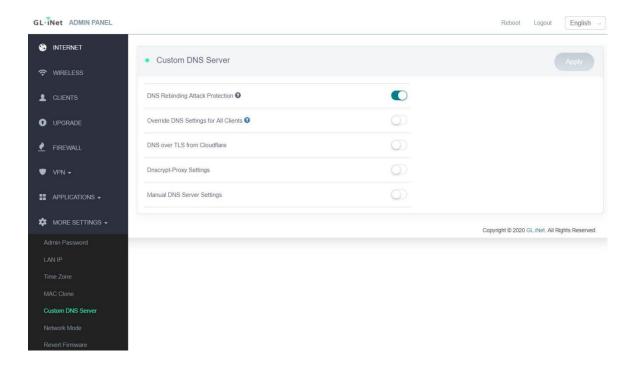
You can configure the DNS server of the router to prevent DNS leak or other purposes.

DNS Rebinding Attack Protection: Some network may require authentication in captive portal. Disable this option if the captive portal of your network cannot be resolved.

Override DNS Settings for All Clients: Enabling this option will capture DNS request from all connected clients.

DNS over TLS from Cloudflare: Cloudflare DNS over TLS uses the TLS security protocol for encrypting DNS queries, which helps protect your privacy and prevent eavesdropping.

Manual DNS Server Settings: Input a custom DNS server manually.



9.7. Network Mode

Change the network mode to cater your usage scenario. You may need to reconnect your client device whenever you change the network mode of the router.

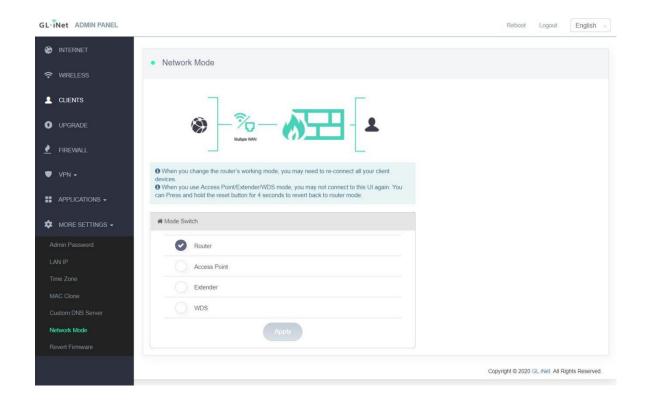
Be aware that you may not be able to access the web Admin Panel with the default IP 192.168.8.1 if you use the router in **Access Point**, **Extender** or **WDS** mode. If you want to access the web Admin Panel in this case, you have to use the IP address assigned by the main router to the GL.iNet router.

Router: Create your own private network. The router will act as NAT, firewall and DHCP server.

Access Point: Connect to a wired network and broadcast a wireless network.

Extender: Extend the Wi-Fi coverage of an existing wireless network.

WDS: You can choose WDS if your main router supports WDS mode.



9.8. Revert Firmware

Revert the router to factory default settings. All your settings, applications and data will be erased.

