Gemtek
Wireless Broadband Anywhere

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GIoT IDU User Guide

GIoT IDU User Guide

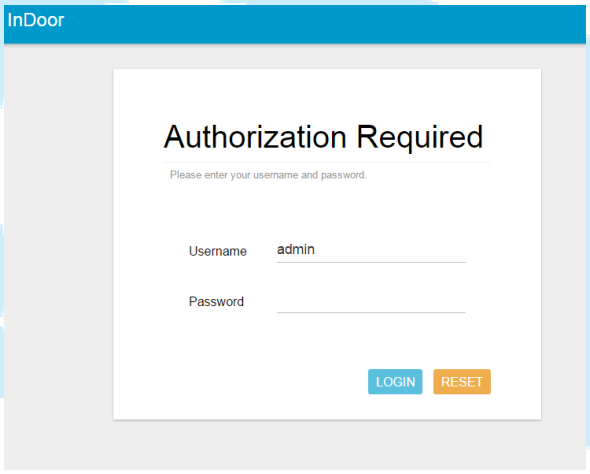
This GIoT IDU User Guide will assist you in navigating the system with the following comprehensive guidelines.

1. Open Admin GUI

Default UI : *192.168.88.1*

Default username is “*admin*” and password is "*admin*“

Figure 1



2. Status

The Status menu consists of the following categories: Overview, Routes, System Log, Kernel Log, Processes, Realtime Graphs and GIoT. An introduction of each category will be distinctly stated in individual paragraphs.

2.1 Status - Overview

The purpose of this category is to view the following contents: system status, memory usage, network settings, DHCP lease status, and wireless settings.

The contents are exhibited in one single page. Please scroll down the Status page to obtain an overall view. (figure2.A & figure 2.B & figure 2.C)

An “AUTO REFRESH ON/OFF” button is lodged on the top right of the panel. This function enables the status data to be refreshed every 5 seconds. (figure3.A & figure3.B)

Figure 2.A - System Status

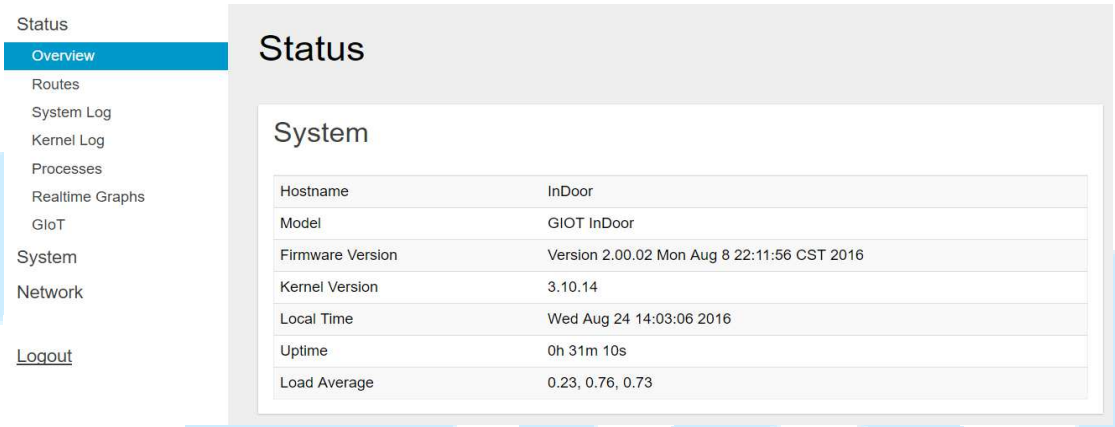


Figure 2.B - Memory Usage and Network Settings

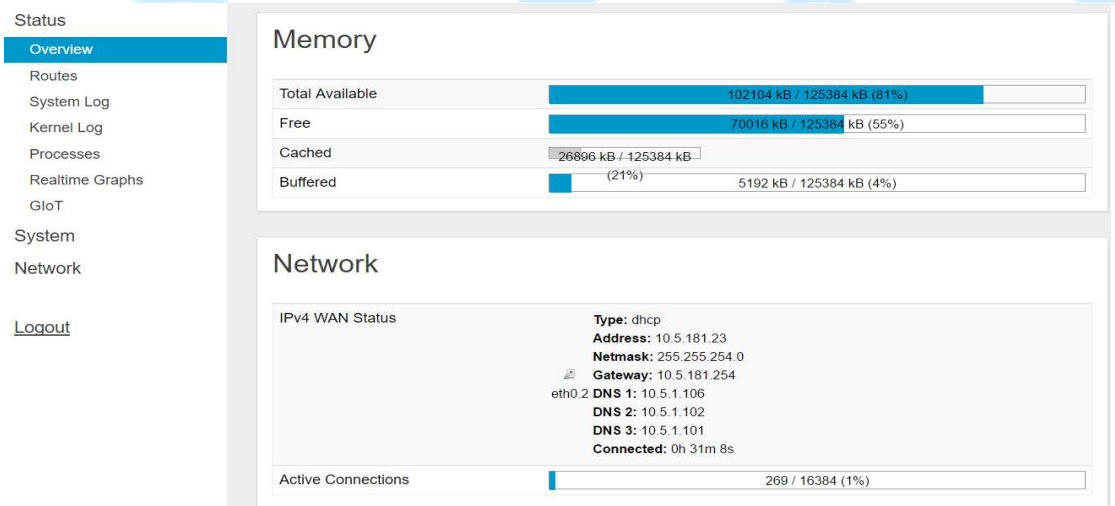


Figure 2.C – DHCP Leases and Wireless Settings

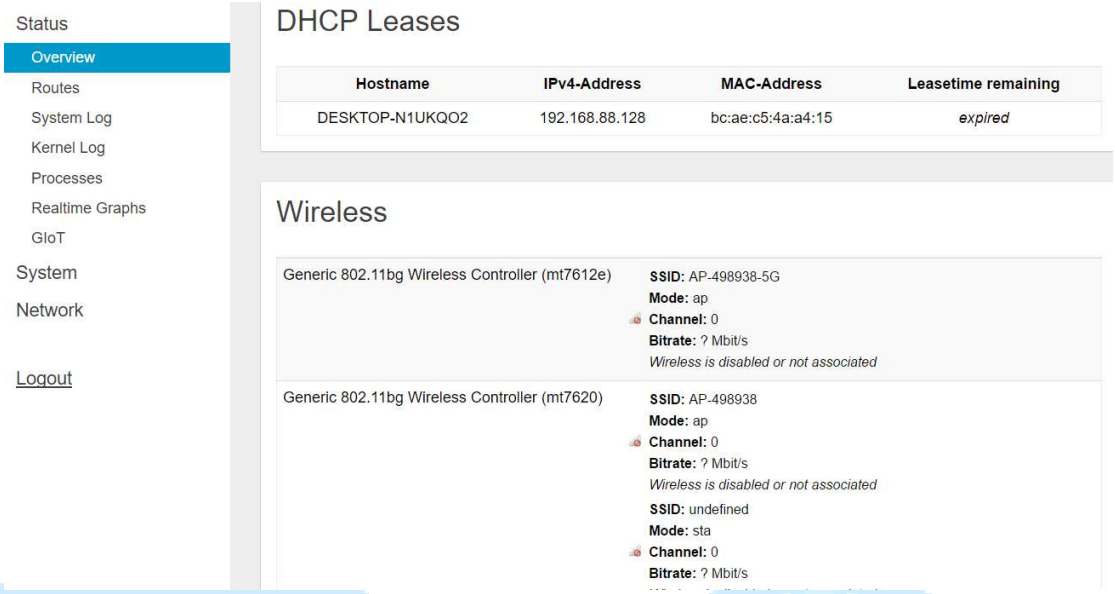


Figure 3.A - Status will auto refresh in 5secs if "Auto Refresh ON" button is on

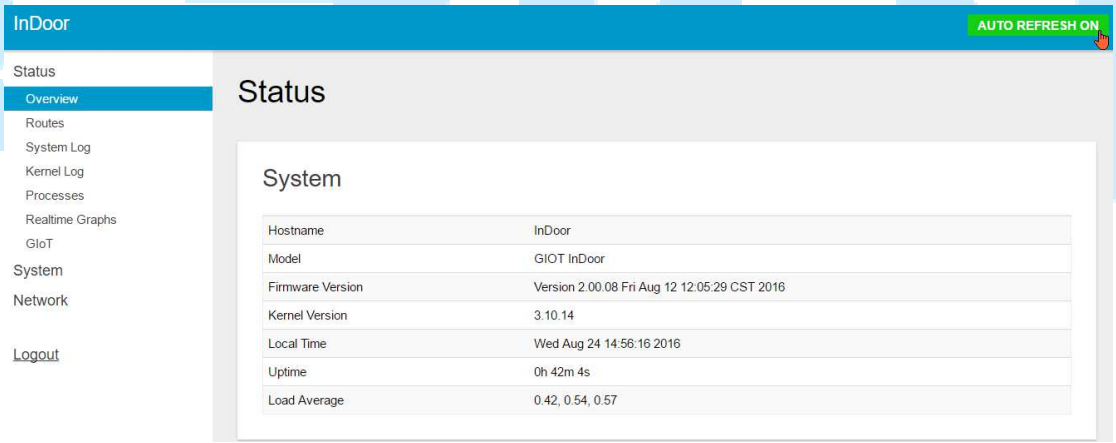
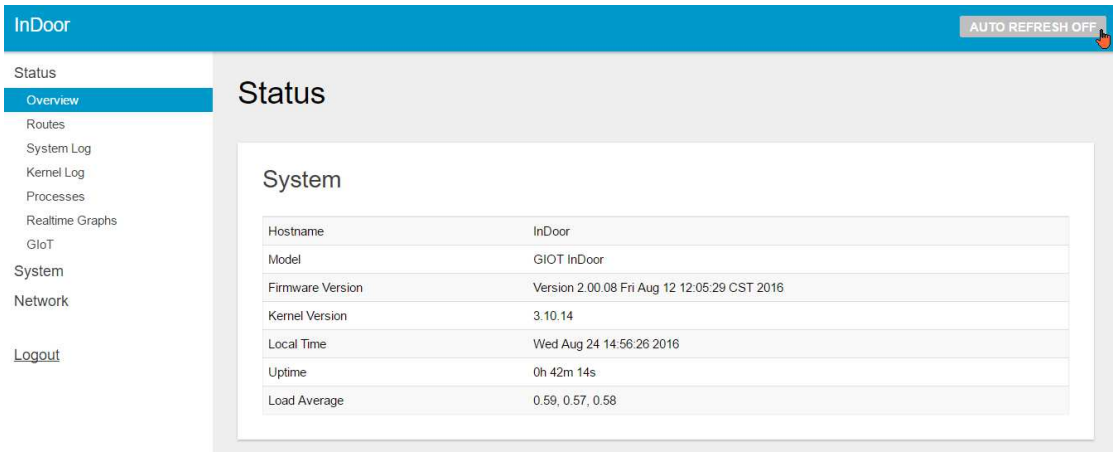


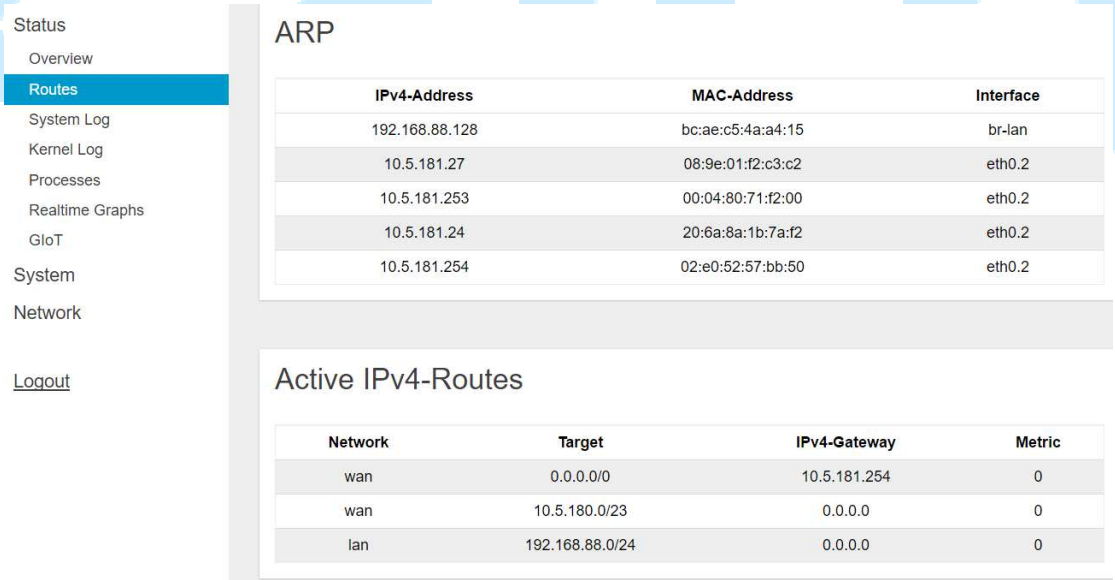
Figure 3.B - Click "AUTO REFRESH ON/OFF" button to enable/ disable auto refresh.



2.2 Status - Routes

The purpose of this category is to view the ARP table and active IPv4 routes information.

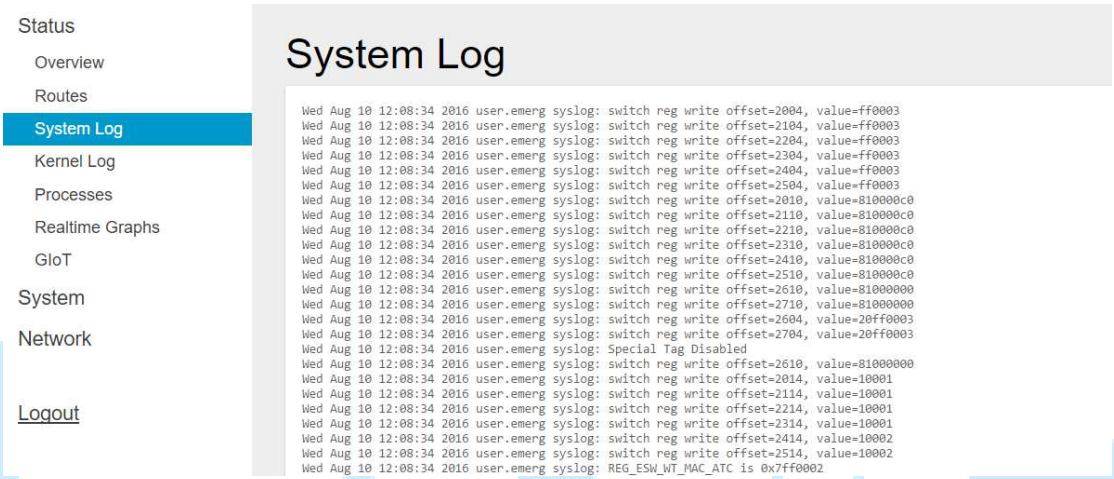
Figure 4 - ARP table and Active IPv4 Routes



2.3 Status - System Log

This category is to view system log information.

Figure 5– System Log



2.4 Status - Kernel log

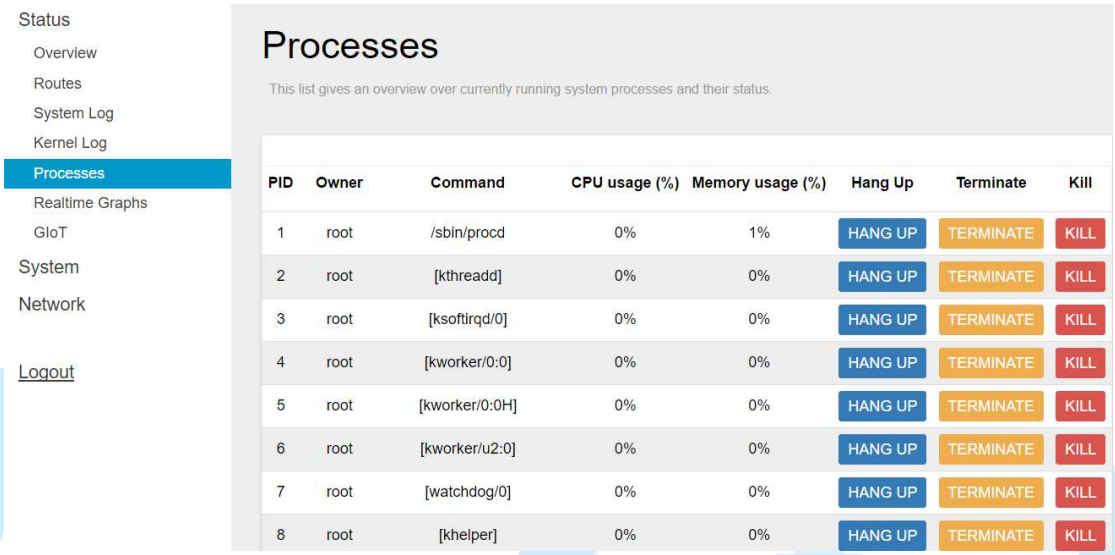
This category is to view kernel log.

Figure 6 – Kernel Log

2.5 Status - Processes

The purpose of this category is to view the system processes that are in progress. Processes can be hung up, terminated, and killed for each individual item.

Figure 7 – Processes



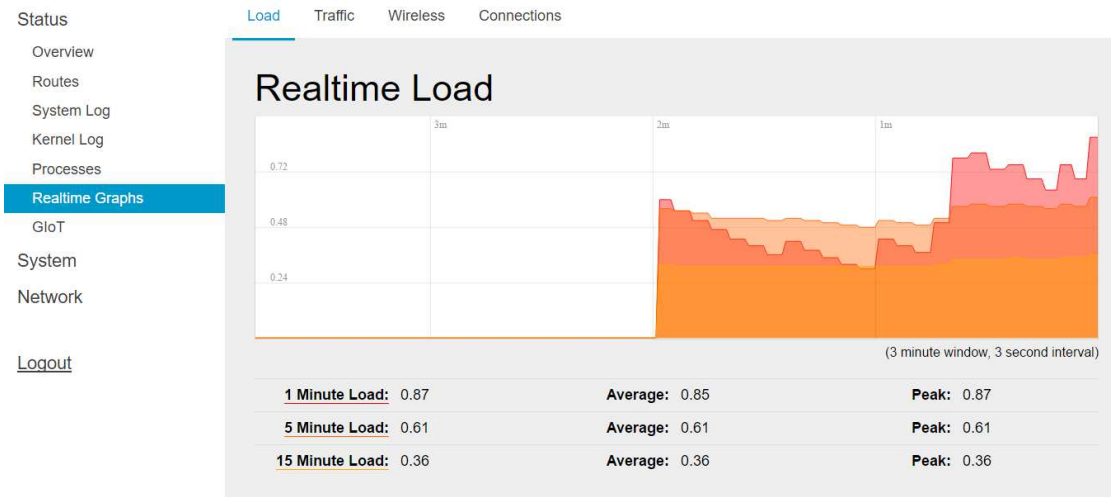
2.6 Status - Realtime Graphs

This category is further divided into four sectors: Load, Traffic, Wireless and Connections. Individual options are lodged above the graph.

2.6.1 Load

To view current load value and the average of different time intervals.

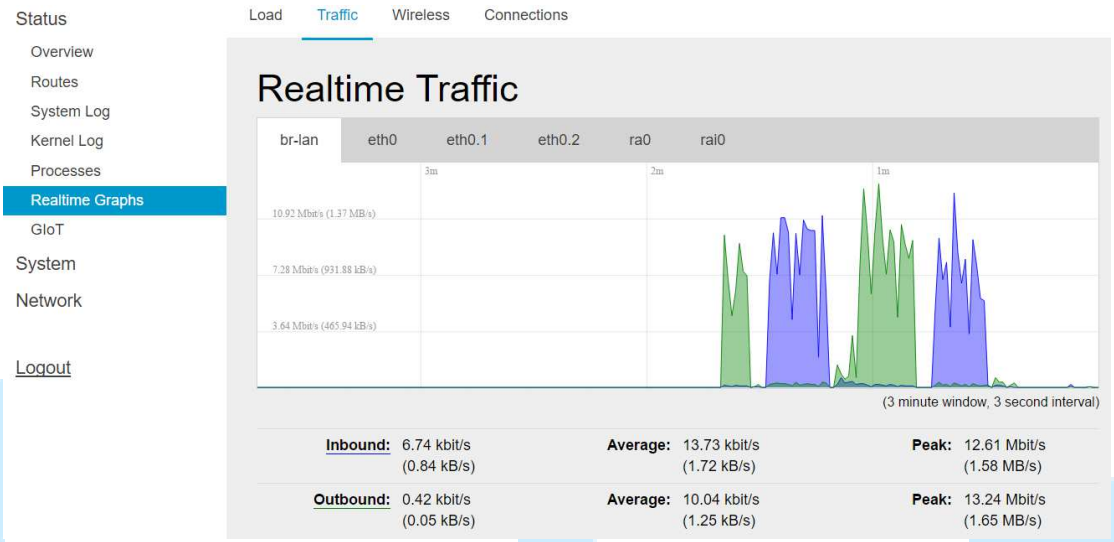
Figure 8 – Realtime Load



2.6.2 Traffic

To view the network traffic of each interface.

Figure 9 – Realtime Traffic



2.6.3 Wireless

To view signal strength and speed.

Figure 10.A – Realtime Wireless

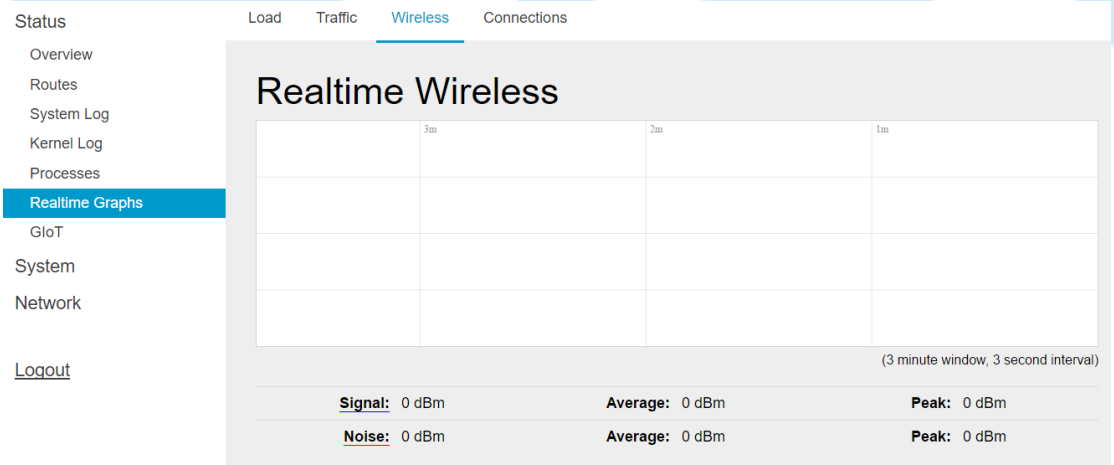
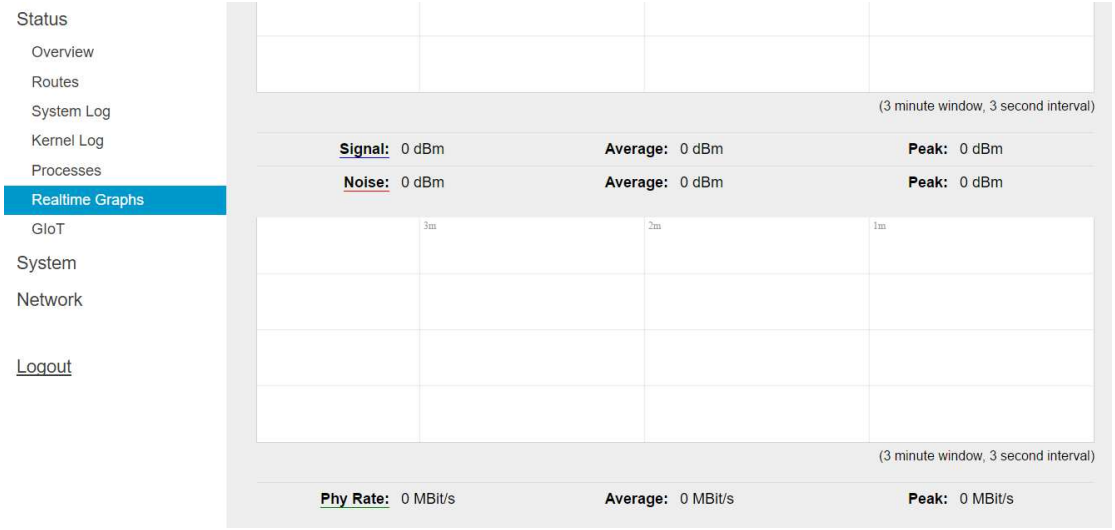


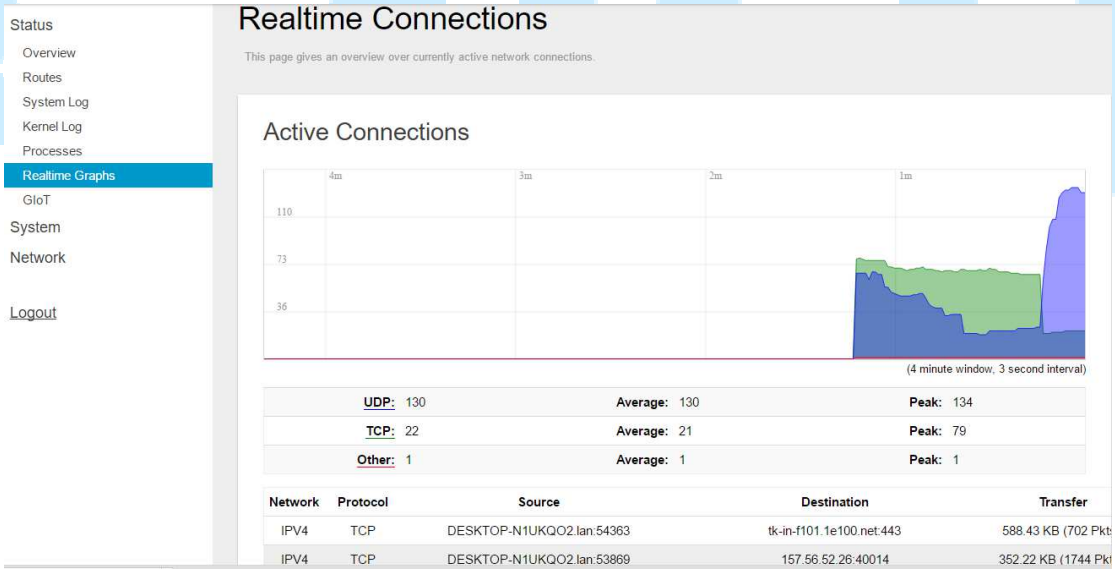
Figure 10.B – Realtime Wireless (continued)



2.6.4 Connections

To view current active network connections.

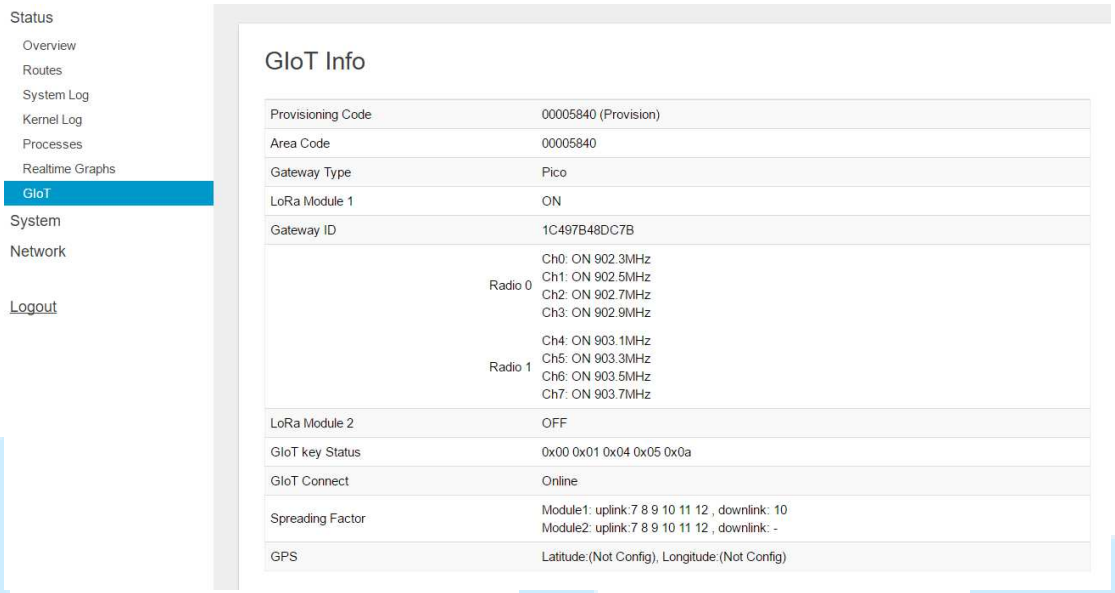
Figure 11– Realtime Connections



2.7 Status - GIoT

The purpose of this category is to view GIoT information as in provision code, gateway type, gateway ID or LoRa modules, channels, spreading factor, and GPS status.

Figure 12 – GIoT Info



3. System

The System menu consists of the following categories: System, Administration, Provision, GPS Setting, GIot, Backup, System Firmware, Reboot and LoRaWAN. Introduction and input procedures for each category are described in the following paragraphs.

3.1 System - System

Hostname and Timezone can be customized in system properties.

Click "*Sync with Browser*" button (figure13.A) to adjust the local time.

Place a checkmark next to "*Enable NTP Client*" (figure13.B) to synchronize the time with NTP server.

If you want to use another NTP server, please place a checkmark next to "*Provide NTP server*" and fill out the "NTP server candidates" text field.

Figure 13.A – System: System Properties

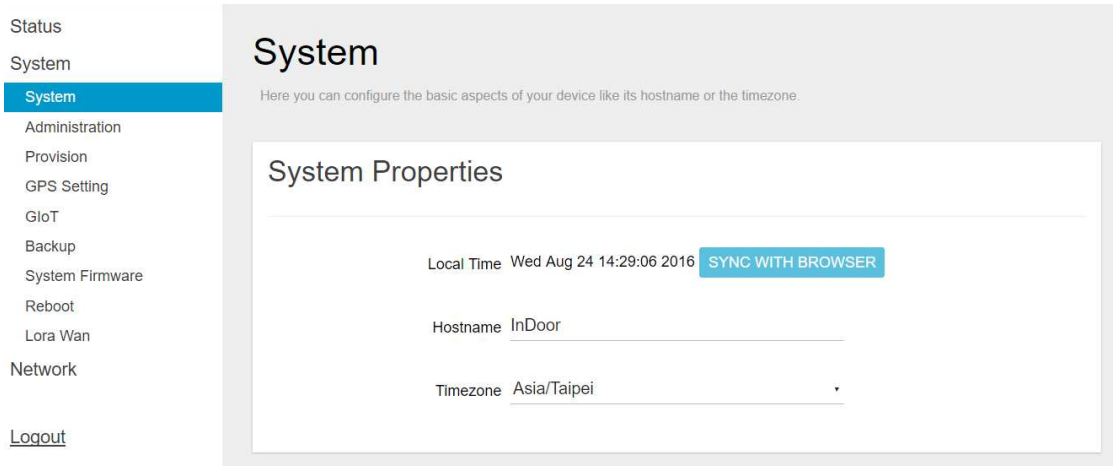
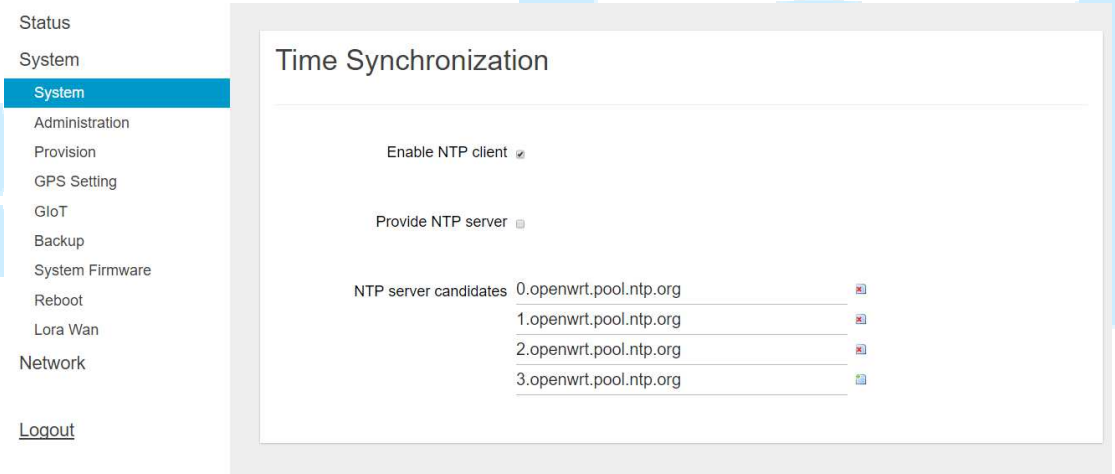


Figure 13.B – System: Time Sychronization



3.2 System - Administration

Gateway login password and SSH accessibility can be configured in this page.

Figure 14.A – Administration: Router Password

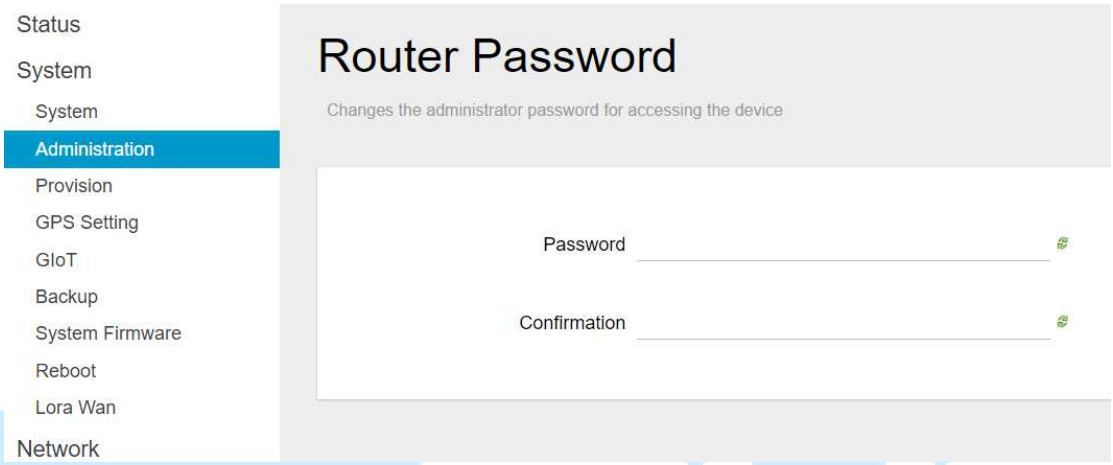
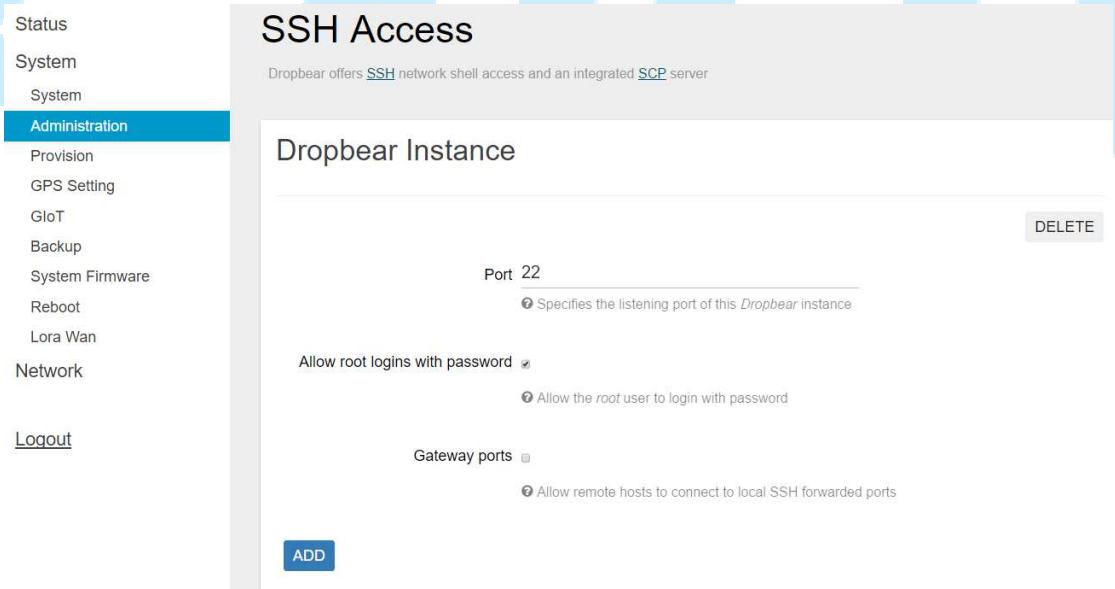


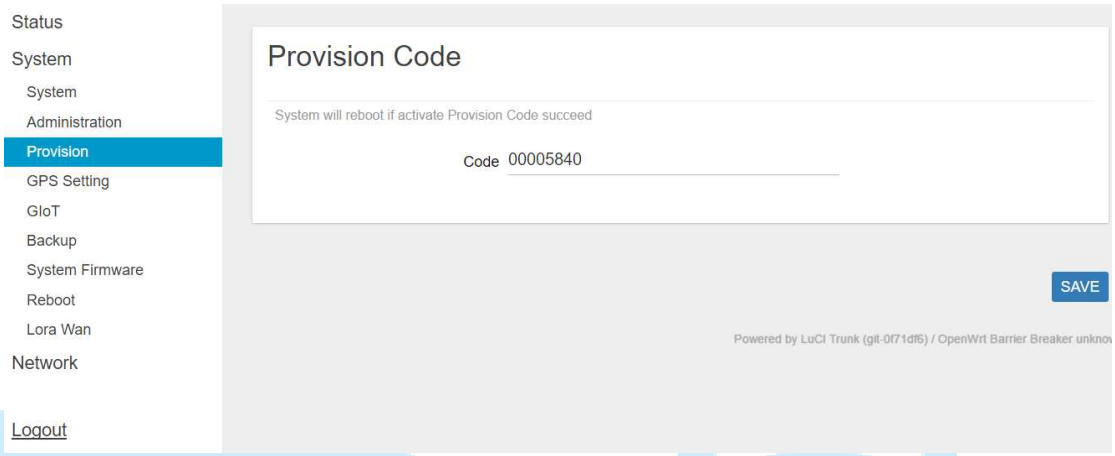
Figure 14.B – Administration: SSH Access



3.3 System - Provision

GIoT provision code can be setup in this page.

Figure 15 – Provision Code

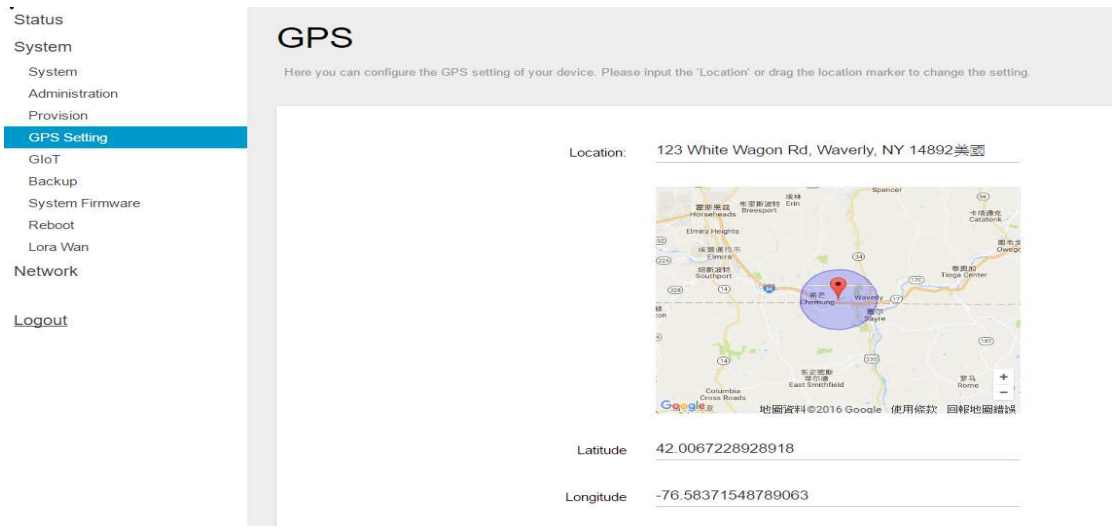


3.4 System - GPS Setting

To setup GPS location, simply input your location in the “Location” text field above the map or pinpoint your location on the map by dragging the red marker.

Once the location is confirmed, the system will verify and apply the new Latitude/Longitude coordinates into its GPS setting.

Figure 16 – GPS Setting



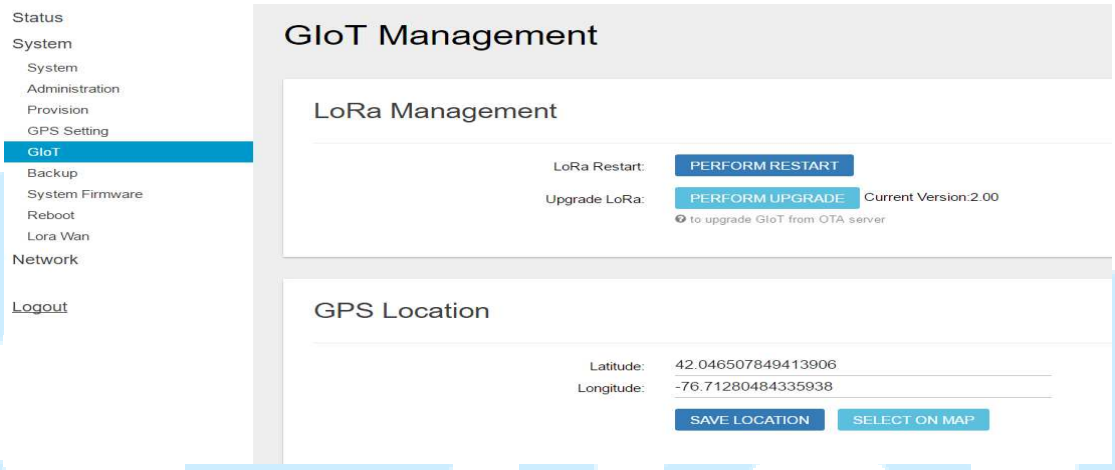
3.5 System - GIoT

Click "*PERFORM RESTART*" button to restart LoRa server.

Click "*PERFORM UPGRADE*" button to search the OTA server for the latest version of the LoRa firmware. Once a new LoRa firmware version is detected, LoRa firmware will be automatically upgraded to the newest version.

Latitude and longitude can be manually embedded in this page. Click "*SAVE LOCATION*" button after inserting the coordinates or click "*SELECT ON MAP"* button to be redirected to the map in GPS Settings.

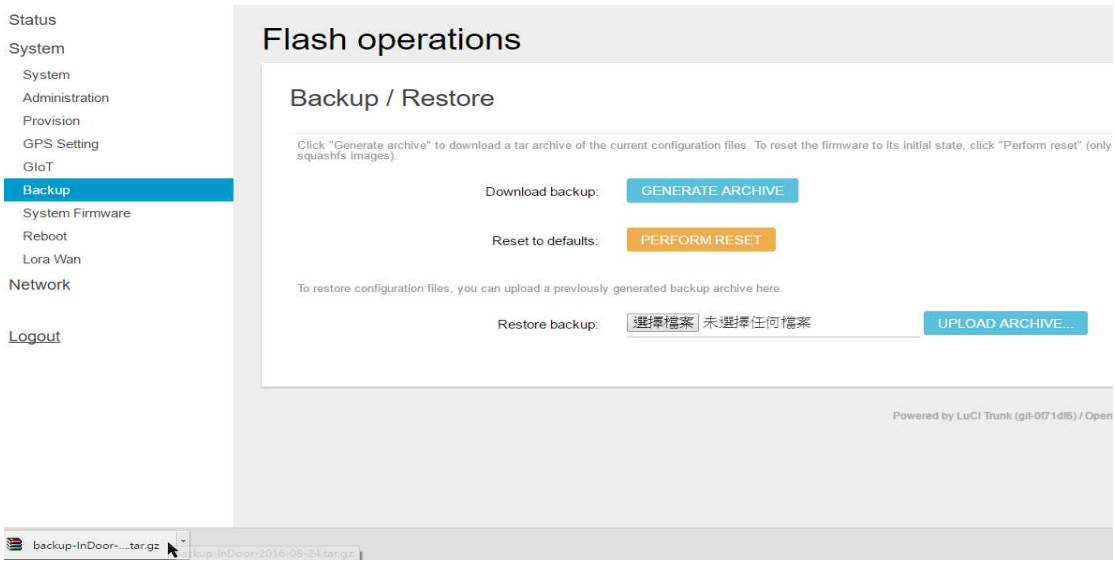
Figure 17 – GIoT Management



3.6 System - Backup

Click "*GENERATE ARCHIVE*" button to download configuration file with the current gateway settings.

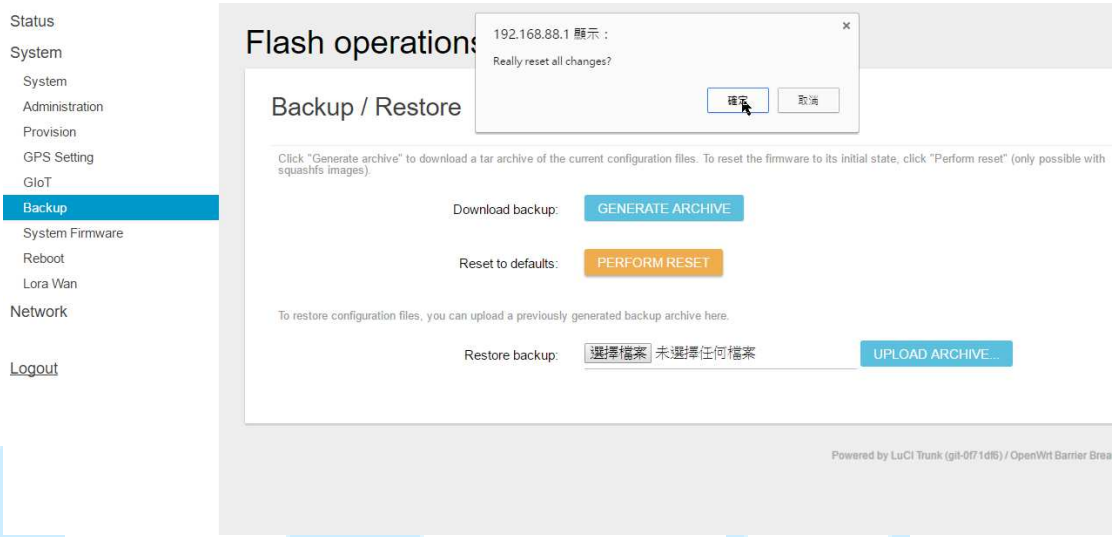
Figure 18.A – Backup/Restore



Click “*PERFORM RESET*” button to reset the firmware to its initial state.

Please note that the LoRa provision settings will NOT be reset by this action.

Figure 18.B – Backup/Restore



Choose previously generated backup file and click “*UPLOAD ARCHIVE*” to restore the configuration file. (figure 18.C & figure 18.D)

Figure 18.C – Backup/Restore

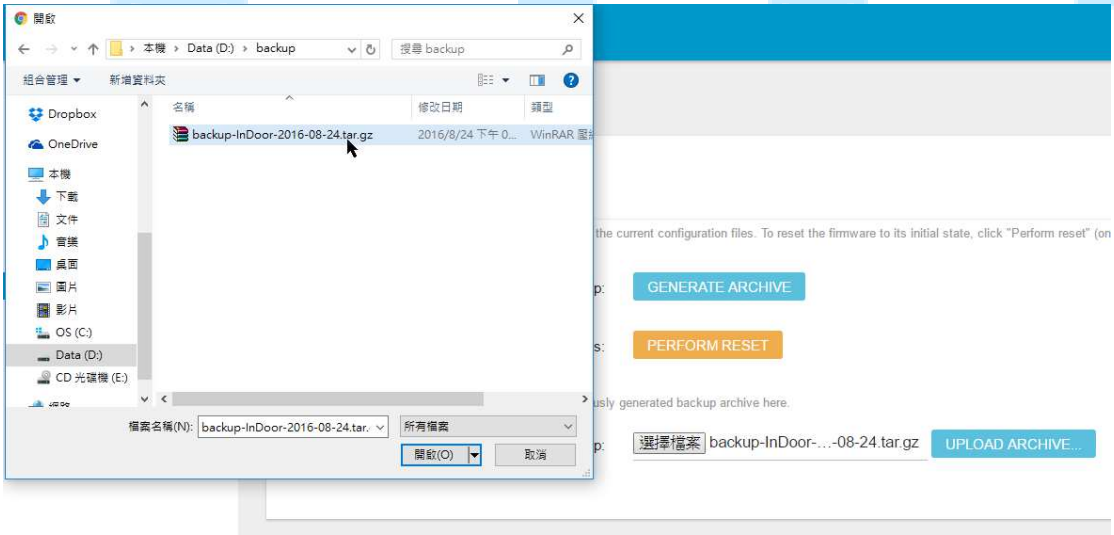
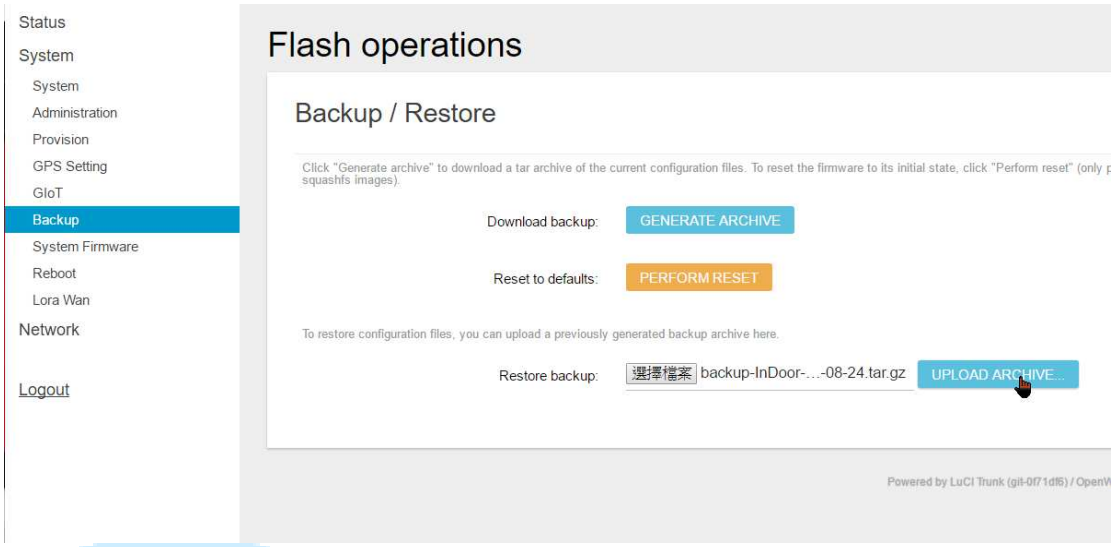


Figure 18.D – Backup/Restore



3.7 System - System Firmware

Click "*CHECK NEW FIRMWARE*" button to search the OTA server for the latest version of the new system firmware. Once a new system firmware version is detected on the OTA server, click "*UPGRADE NOW*" button to upgrade the newest system firmware from OTA server.

Figure 19.A – System Firmware

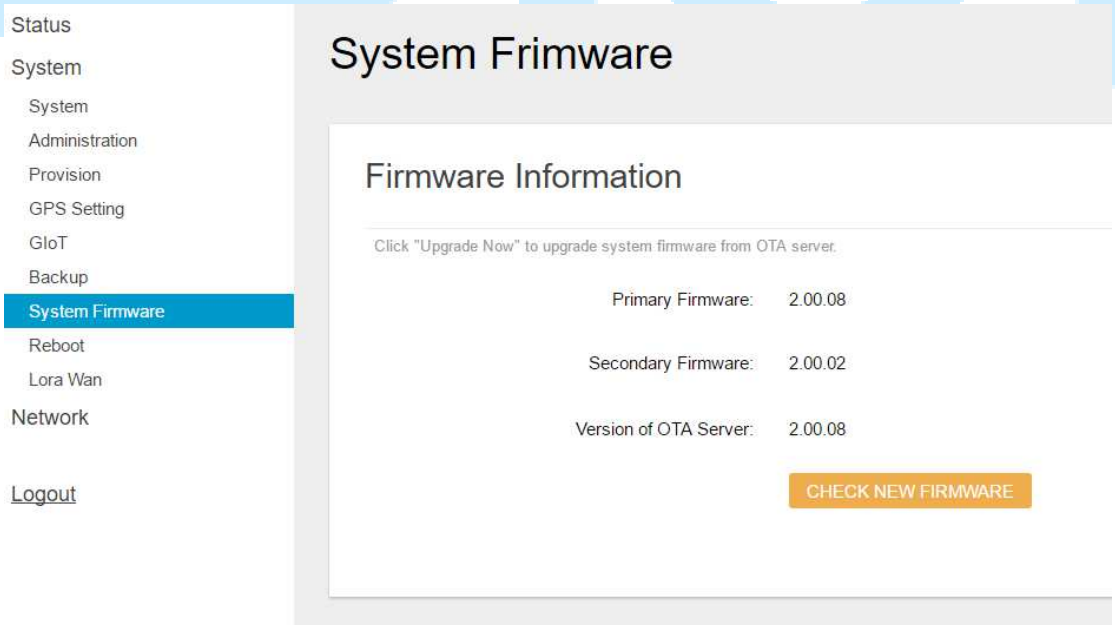
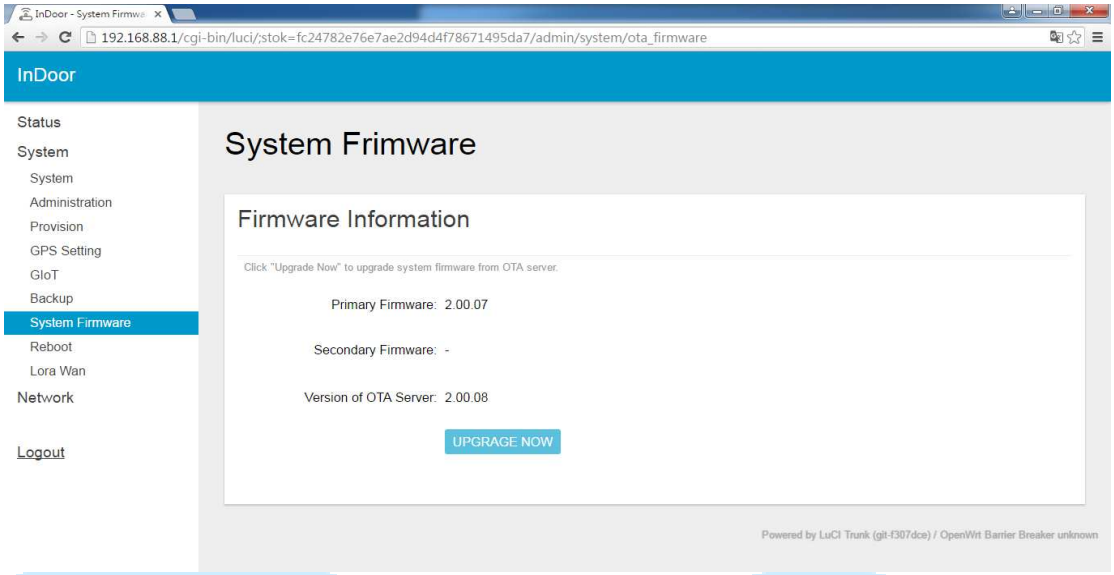


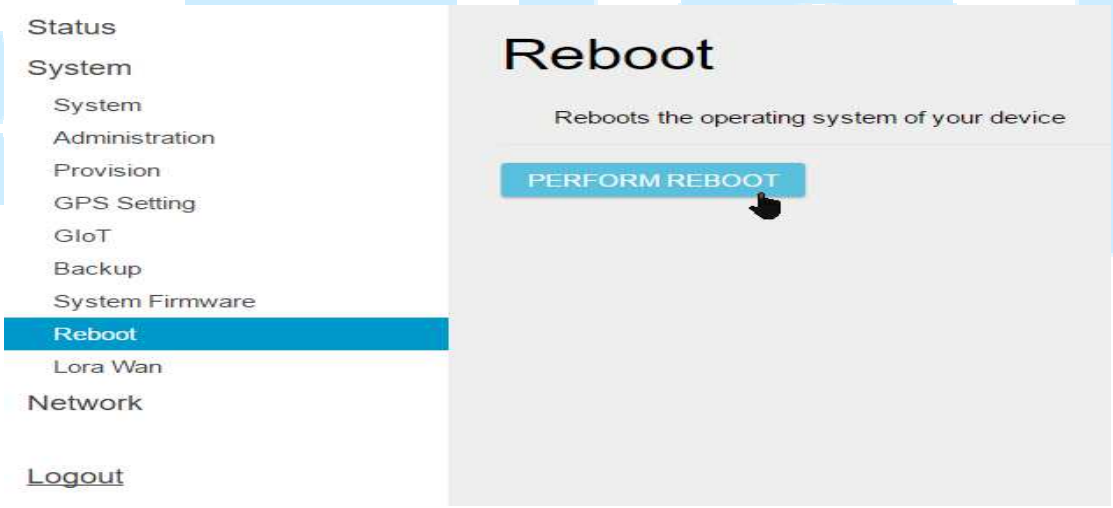
Figure 19.B – System Firmware



3.8 System - Reboot

Click "*PERFORM REBOOT*" to reboot your gateway.

Figure 20 – System Firmware



3.9 System - LoRaWAN

Please view a separate document for the LoRaWAN ABP/OTAA User Guide.

4. Network

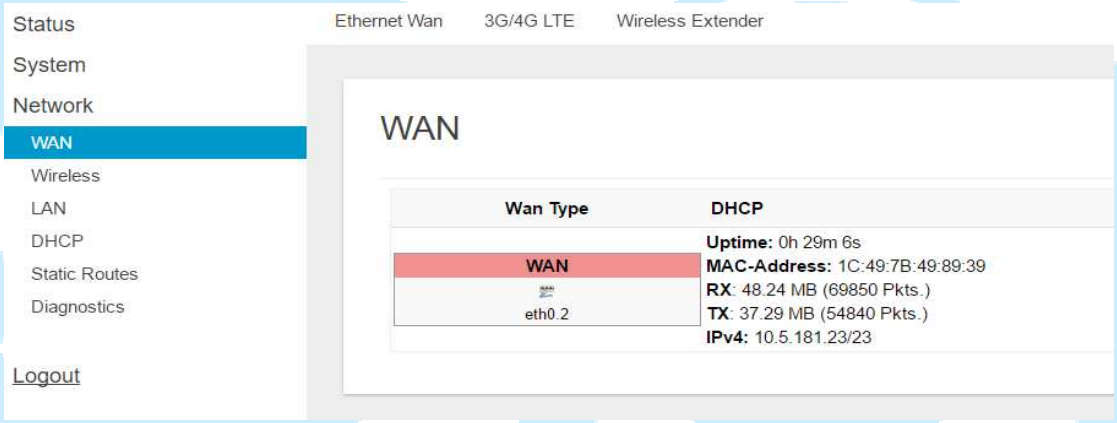
The System menu consists of the following categories: WAN, Wireless, LAN, DHCP, Static Routes and Diagnostics. Introduction and input procedures for each category are described in the following paragraphs.

4.1 Network - WAN

The purpose of this category is to view current WAN settings.

This category is further divided into three sectors: Ethernet Wan, 3G/4G LTE and Wireless Extender. Individual options are lodged above the main content panel.

Figure 21 – WAN



4.1.1 Ethernet WAN

This page is to setup the connection type in terms of Static IP, DHCP client or PPPoE. The three different options can be selected in the drop-down menu in “wantype”. Please fill in the respective fields exhibited under each selection. Please make sure the Ethernet cable is connected to a WAN port.

Figure 22.A – WAN: Static IP

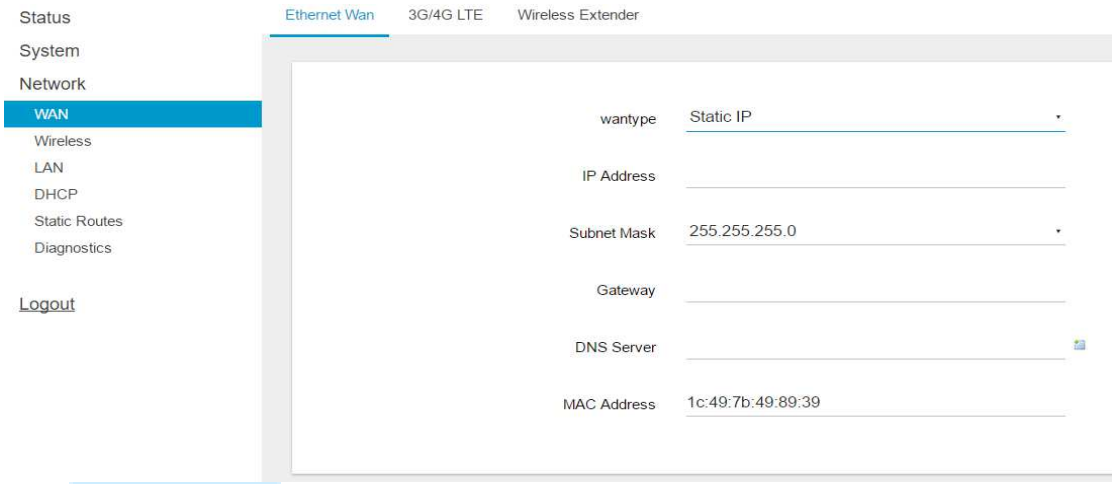


Figure 22.B – WAN: DHCP Client

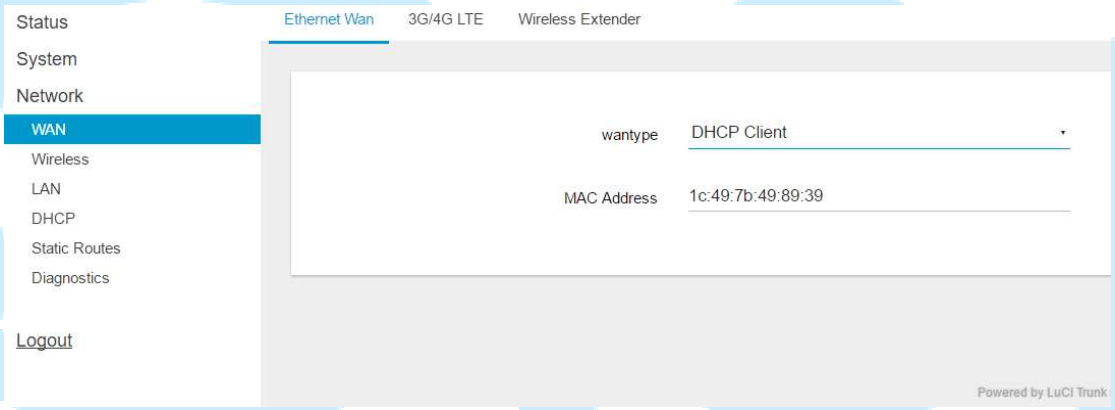
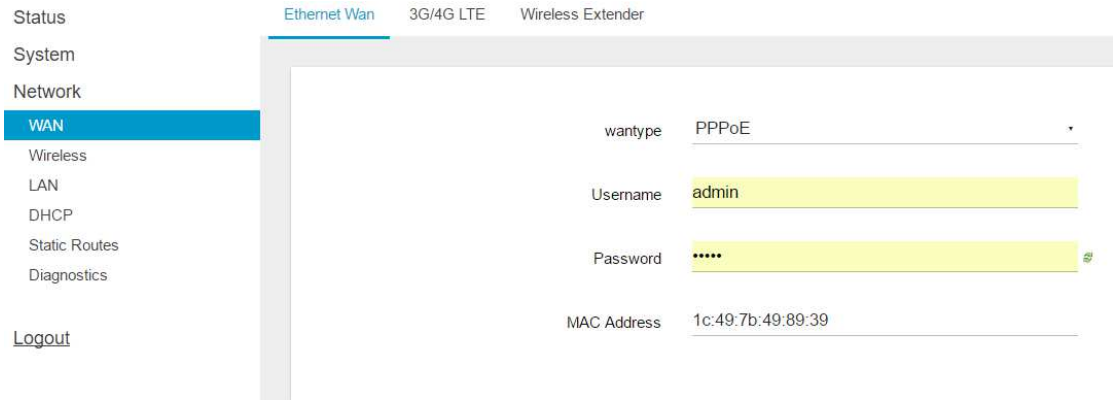


Figure 22.C – WAN: PPPoE

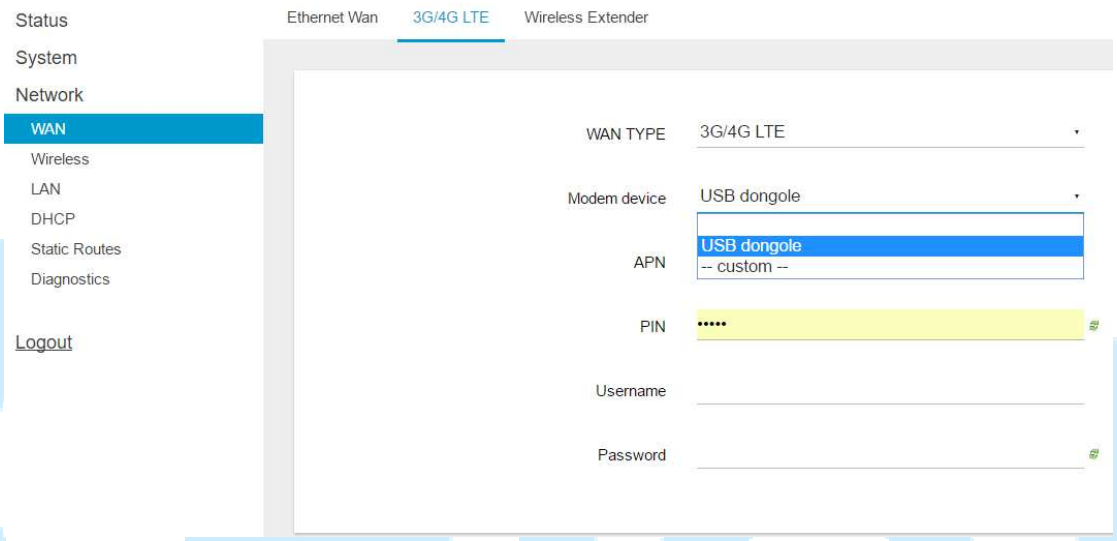


4.1.2 3G/4G LTE

This page is to setup required information.

Make sure the proper USB device is installed on USB connector.

Figure 23 – WAN: 3G/4G LTE



4.1.2 Wireless Extender

This page is to setup the Wireless Extender Mode for WAN connection.

To activate the extended wireless connection, please select "*Enable*" from the Extender mode drop-down menu (figure 24.A). Click the "*SCAN*" button to obtain the list of available Access Points within your surrounding location (figure 24.B).

Figure 24.A – WAN: Wireless Extender

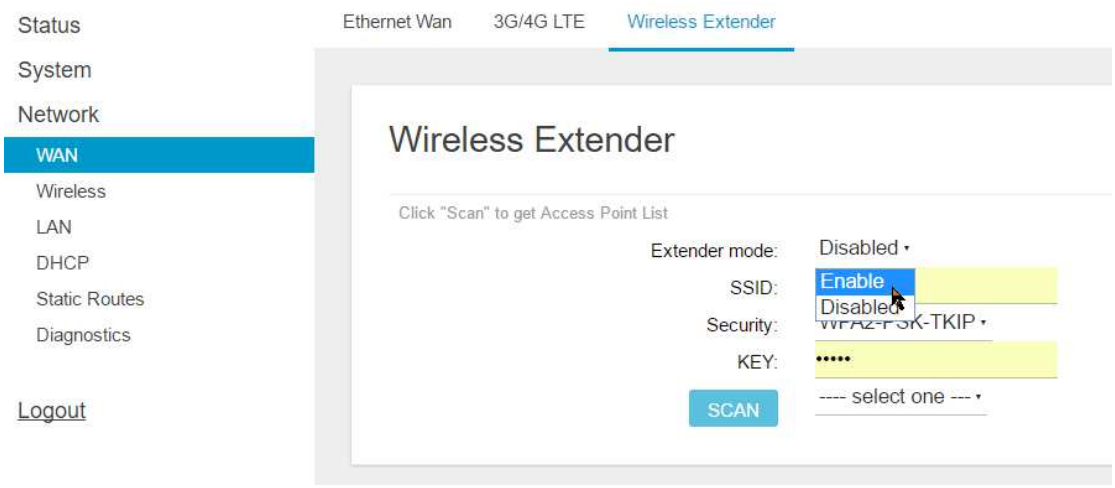
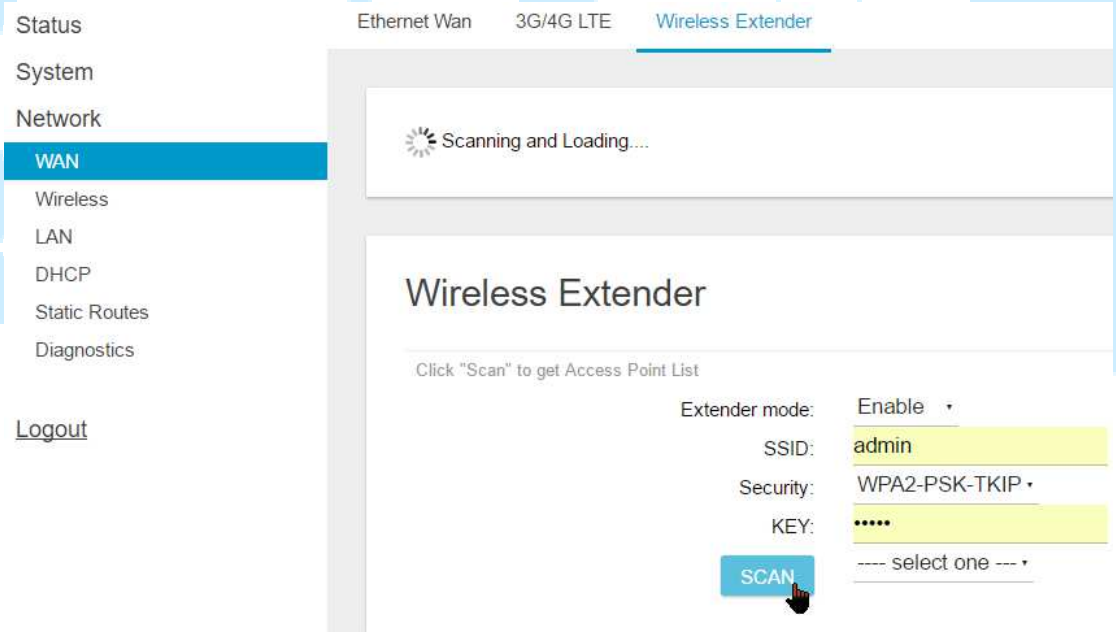


Figure 24.B – WAN: Wireless Extender



4.2 Network - Wireless

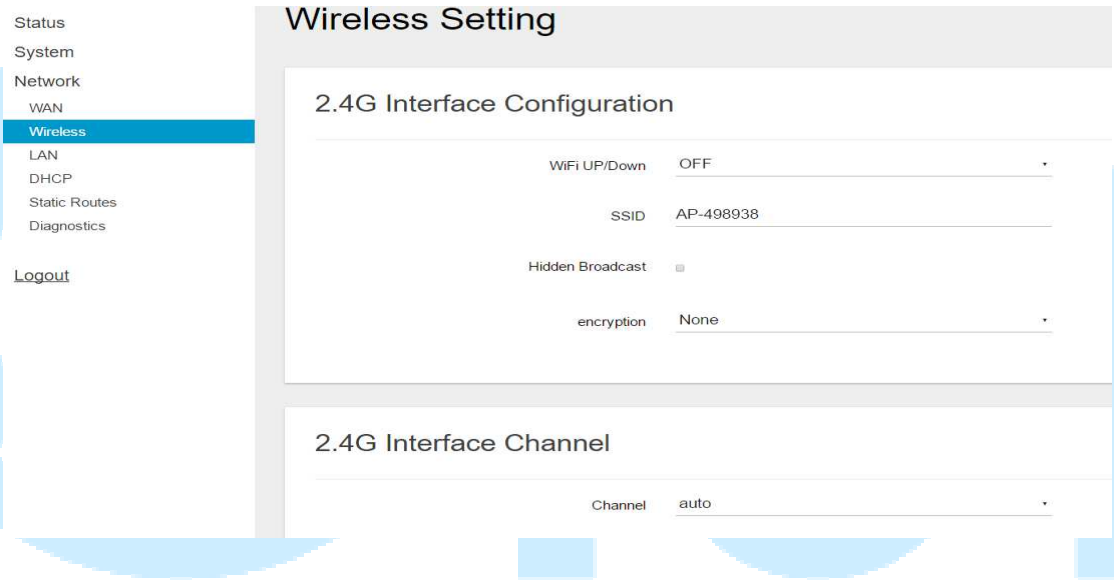
The Wireless Setting is divided into two sectors in the same page: 2.4G and 5G.

4.2.1 2.4G

2.4G Interface Configuration to setup 2.4G wireless.

SSID, encryption type, and channels can be lodged within this sector.

Figure 25.A – Wireless Setting: 2.4G

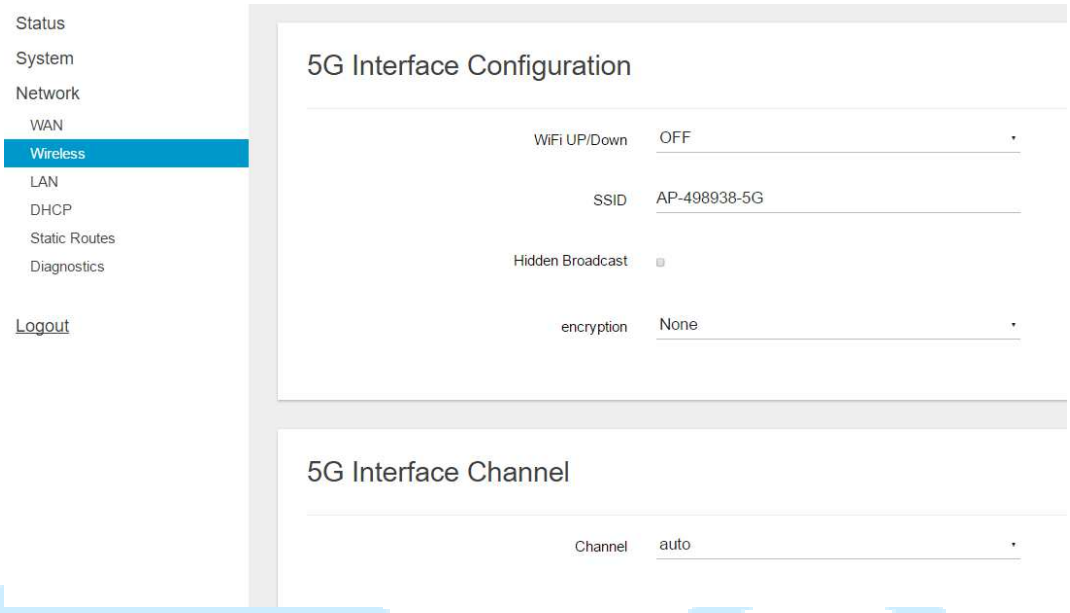


4.2.2 5G

5G Interface Configuration to setup 5G wireless.

SSID, encryption type, and channels can be lodged within this sector.

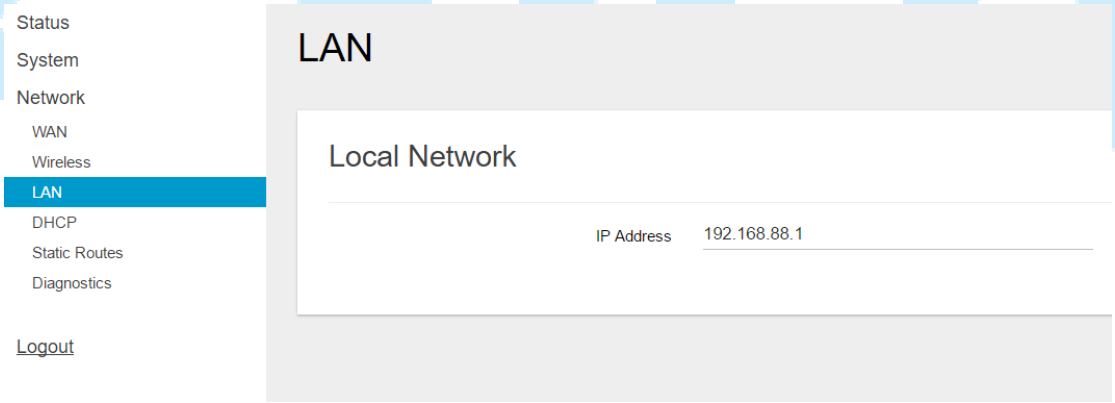
Figure 25.B – Wireless Setting: 5G



4.3 Network - LAN

LAN IP can be setup in this page.

Figure 26 – LAN

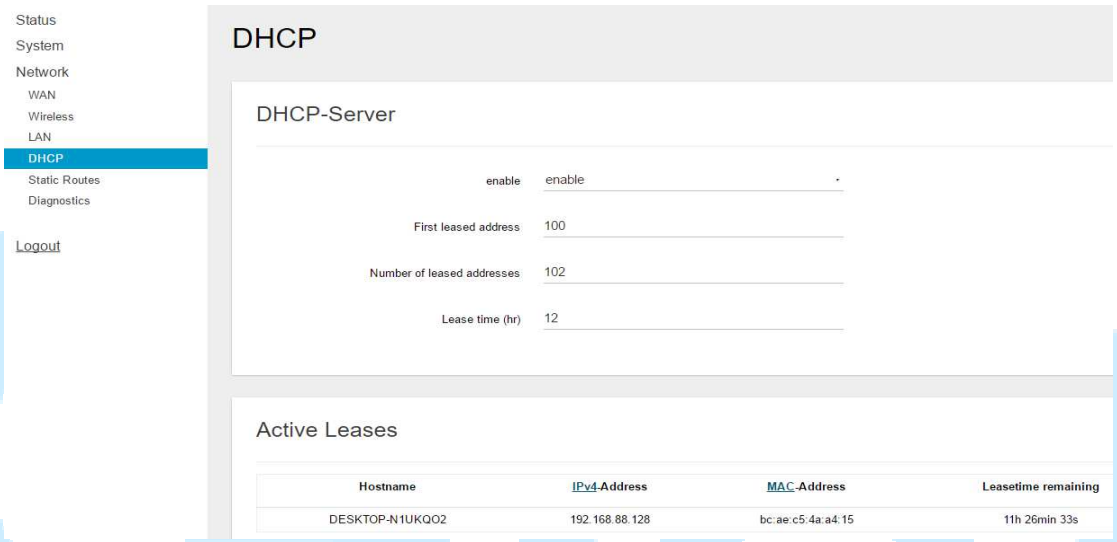


4.4 Network - DHCP

You can manage detailed DHCP server setting, which includes First leased address, allowed Number of leased addresses and allowed Lease time.

Information in regards to Active Leases can be viewed at the bottom of this page.

Figure 27 – DHCP

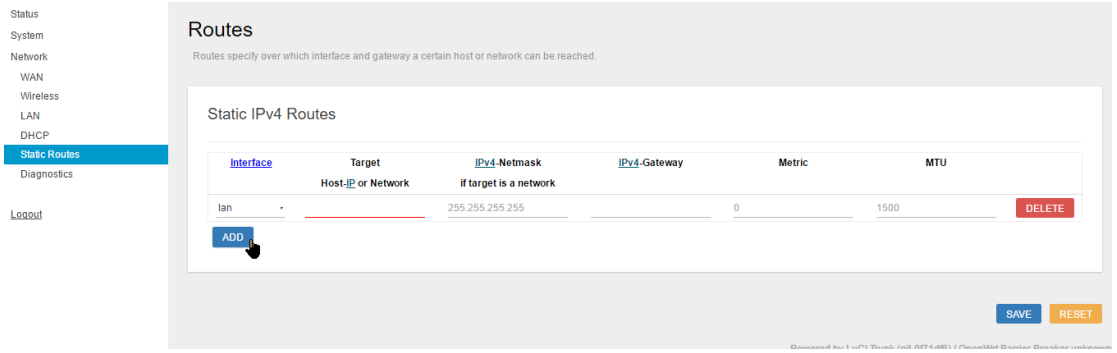


4.5 Network - Static Routes

Static routes can be established by clicking the "*ADD*" button to enter proper settings. Click "*Delete*" to erase the entry.

Always click the "*SAVE*" button to apply your settings.

Figure 28– Static Routes



4.6 Network - Diagnostic

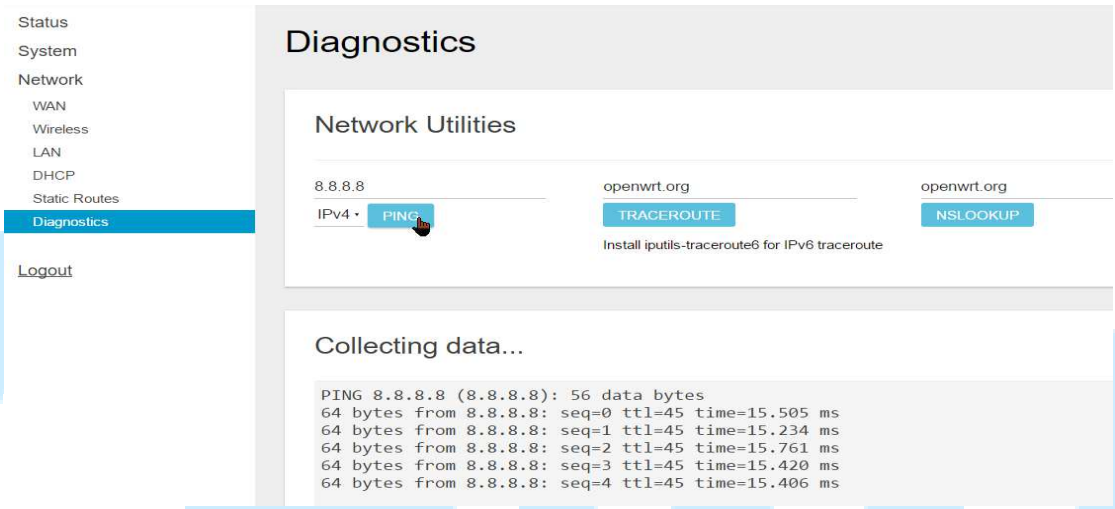
Diagnostics is divided into three parts on the same page: PING, TRACEROUTE and NSLOOKUP. Please see the following for input guidelines.

4.6.1 PING

Input a specific IP address in the text field above "*PING*".

Click the "*PING*" button to ping the IP you have specified.

Figure 29.A– Diagnostics

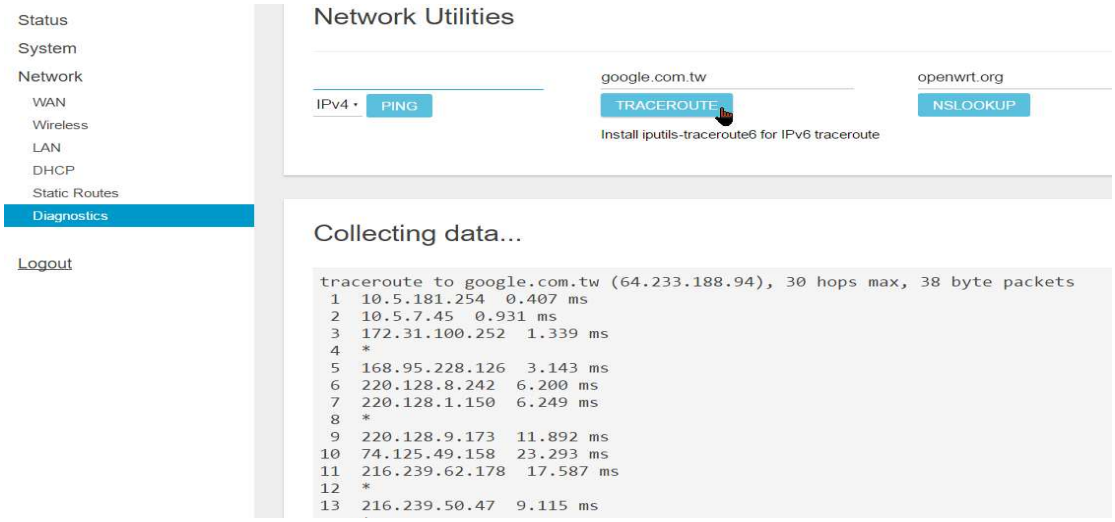


4.6.2 TRACEROUTE

Input a specific URL or IP address above "*TRACEROUTE*".

Click the "*TRACEROUTE*" button to trace the URL or IP address you have specified.

Figure 29.B– Diagnostics



4.6.3 NSLOOKUP

Input a specific URL or IP address above “*NSLOOKUP*”.

Click the “*NSLOOKUP*” button to view the DNS server of the URL or IP address you have specified.

Figure 29.C– Diagnostics