HUWOMOBILITY
HL3210
USER MANUAL

V 1.8

12/23/2019

FCC COMPLIANCE STATEMENT

CAUTION: Changes or modifications not expressly approved could void your authority to use this equipment

This device complies with Part 15 of the FCC Rules. Operation 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.

FCC §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.

FCC §15.706 Information to the user.

This equipment has been tested and found to comply with the rules for white space devices, pursuant to part 15 of the FCC rules. These rules are designed to provide reasonable protection against harmful interference. 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. 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:

(1) Reorient or relocate the receiving antenna.

(2) Increase the separation between the equipment and receiver.

(3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

(4) Consult the manufacturer, dealer or an experienced radio/TV technician for help.

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Caution: Exposure to Radio Frequency Radiation

To comply with FCC RF exposure compliance requirements, for fixed configurations, a separation distance of at least **41cm** must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Supplier's Declaration of Conformity

Unique Identifier: HL 3210

Responsible Party – U.S. Contact Information

HuWoMobility, Inc.
920 Hillview Court, Suite 230
Milpitas, CA
95035
Tel: 408-609-3888 www.huwomo.com

FCC Compliance Statement

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.

Professional Installer

To comply with FCC interference protection requirements for TV Band Devices, this equipment should only be installed by a professional installer.

Table of Contents

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com

1. INSTALLATION METHOD

Please select the installation method shown below. (Fig. 1)

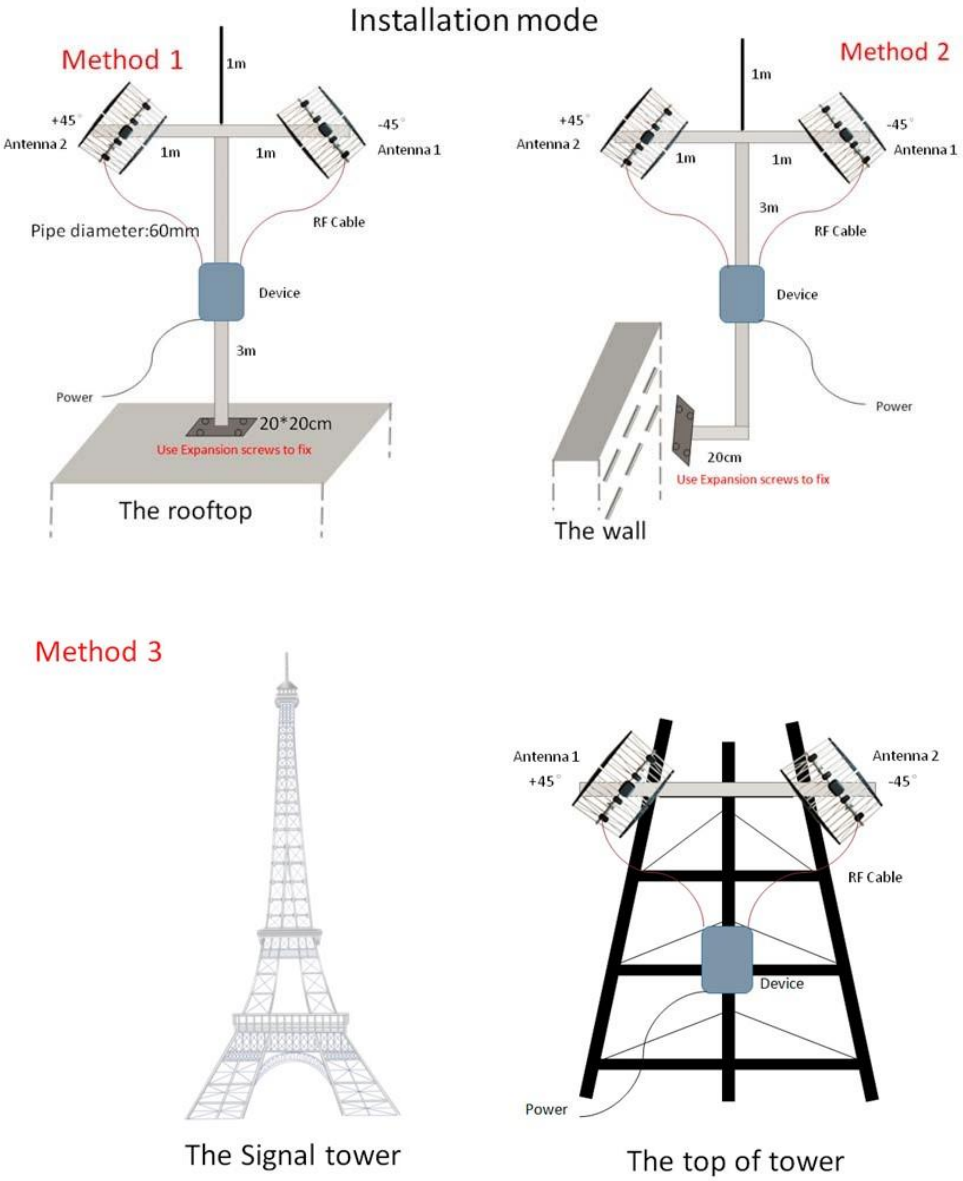

Fig. 1. Different Installation Methods

- Connect the antenna connectors to the SMA type connectors of HL3210 unit (there are 2 SMA connectors on the unit).
- Connect Ethernet cable to the “LAN” port of HL3210, and connect the other end of the cable to the “PoE” port of the PoE unit.

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com

2. “fail-safe” IP ADDRESS

Default “hidden” fail-safe IP addresses for HL3210 BTS/AP is 192.168.100.16, and for HL3210 CPE/Client is 192.168.100.15. To access the unit using the default IP, connect Ethernet port of your PC with the unit’s Ethernet port (right most port); and manually configure IP address of your PC to static segment 192.168.100.0/24 (i.e. 192.168.100.22).

3. LANGUAGE SELECTION

Default user name and password of HL3210 is (admin, admin). You can change the language selection setting after login by selecting “system” menu and “language” tab. Click “SAVE & APPLY” button to apply the changes. (Fig. 3)

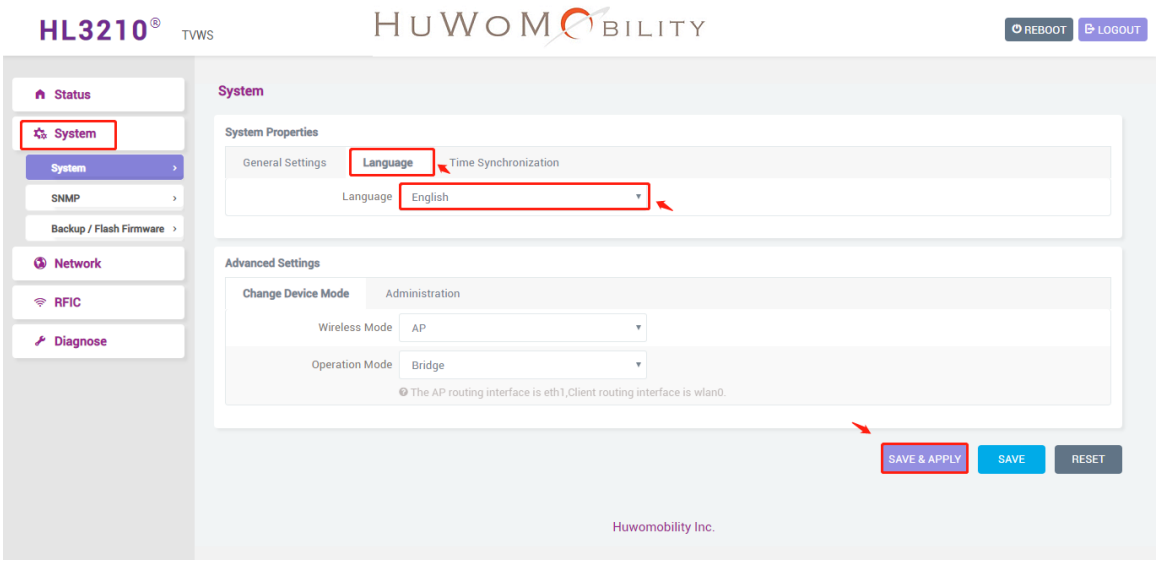

Fig. 3. Language Selection page

4. NETWORK CONFIGURATION

A. In the “Network” menu, select "Interface" sub-menu. (Fig. 4)

B. In the “General Setup” tab, you can configure the unit to use either static IP or DHCP. To configure the unit with static IP address, please enter configuration information from your static IP network. To use DHCP, simply select the DHCP option from “Protocol” selection box. Please make sure to click on “SWITCH

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com

PROTOCOL" button to confirm the protocol switch. Then, click on "SAVE & APPLY" button to save the configuration.

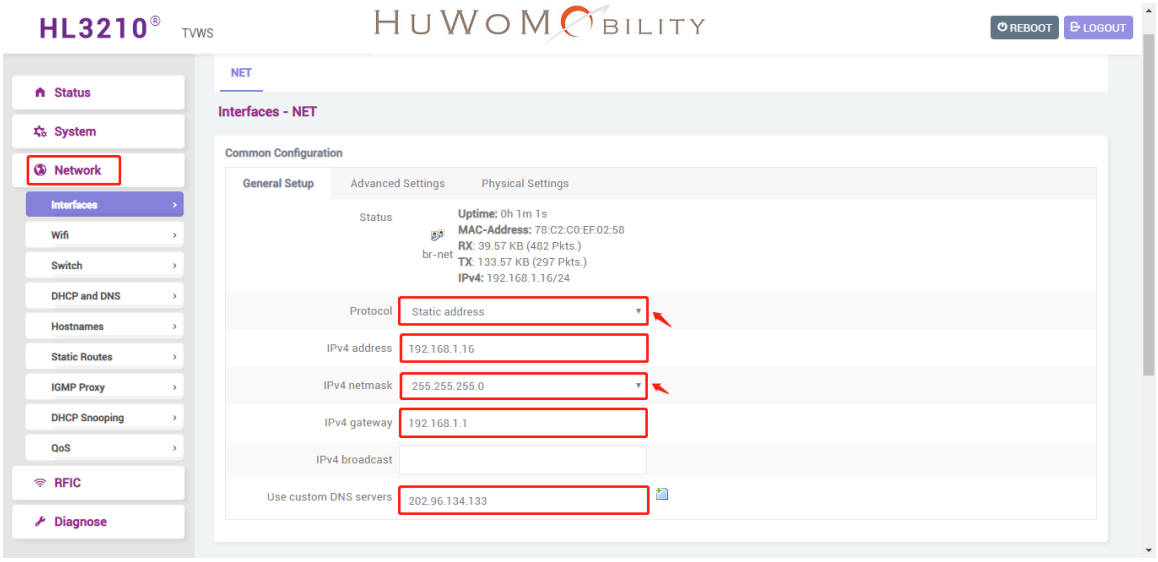

Fig. 4. Network Configuration

5. WIRELESS CONFIGURATION

Select the Country, Channel Bandwidth, Rx Gain (Receiver Gain), and Distance Optimization (the distance in meters between this BTS/AP and the farthest CPE) based on your actual deployment requirements. (Fig. 5)

Fig. 5. Wi-Fi Adjustment

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com

6. SSID

Select the “Wireless Security” tab, and set up SSID and encryption mode as well as Maximum number of clients are allowed to connect to this AP. Select “SAVE & APPLY” to confirm the settings. (Fig. 6)

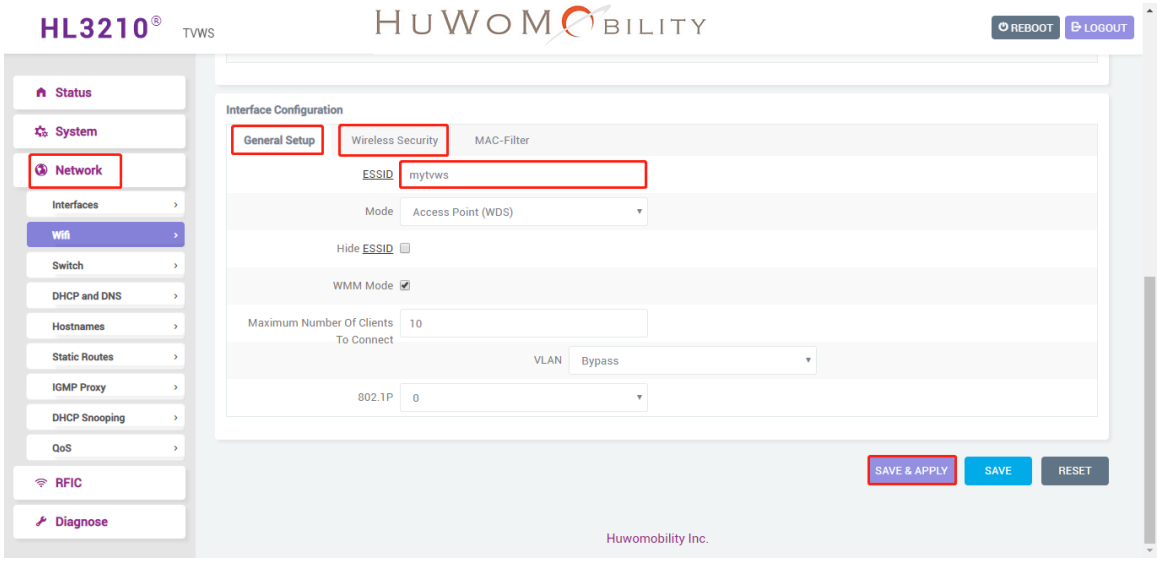

Fig. 6. Wireless Security Setup

7. BTS/AP -- GDB SETTING

A. Select/Click "RFIC" option of the menu, and open the "GDB" sub-menu.

B. From “General Settings” tab (Fig. 7.1)

- Select “Country Code”.
- Enter assigned token, Serial No..
- Check the “Enable” box.
- Select “SAVE & APPLY” to confirm the settings.

C. From “Radio” tab (Fig 7.2)

The GPS longitude and latitude, and antenna height will be set up by professional installation engineer on backend console during first installation, and view only for users.

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com

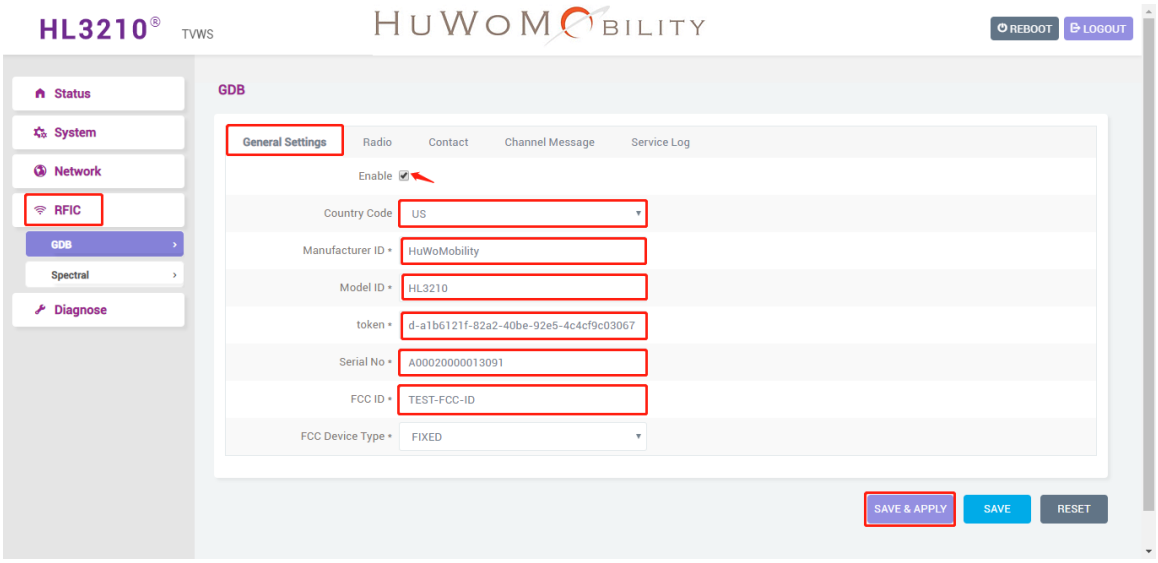

Fig. 7.1. GDB General Settings

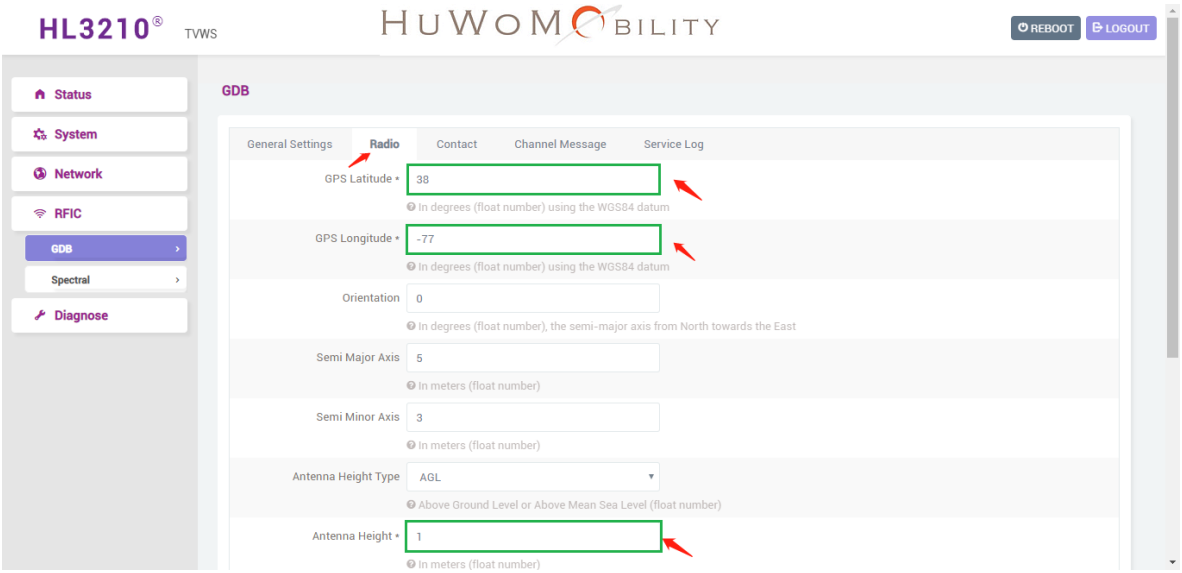

Fig. 7.2. GDB Radio Settings

After completed above steps, we are ready to connect the BTS/AP to the network. Reboot the Device.

8. BTS/AP WIFI SETUP

Select the "WiFi" option under the "Network" menu. Under the "General Setup" page, you will see a globe icon. The globe icon will change to green color once the device has obtained all channels information successfully. Select a clean and available channel (channel WITHOUT "*") (Fig. 8)

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com

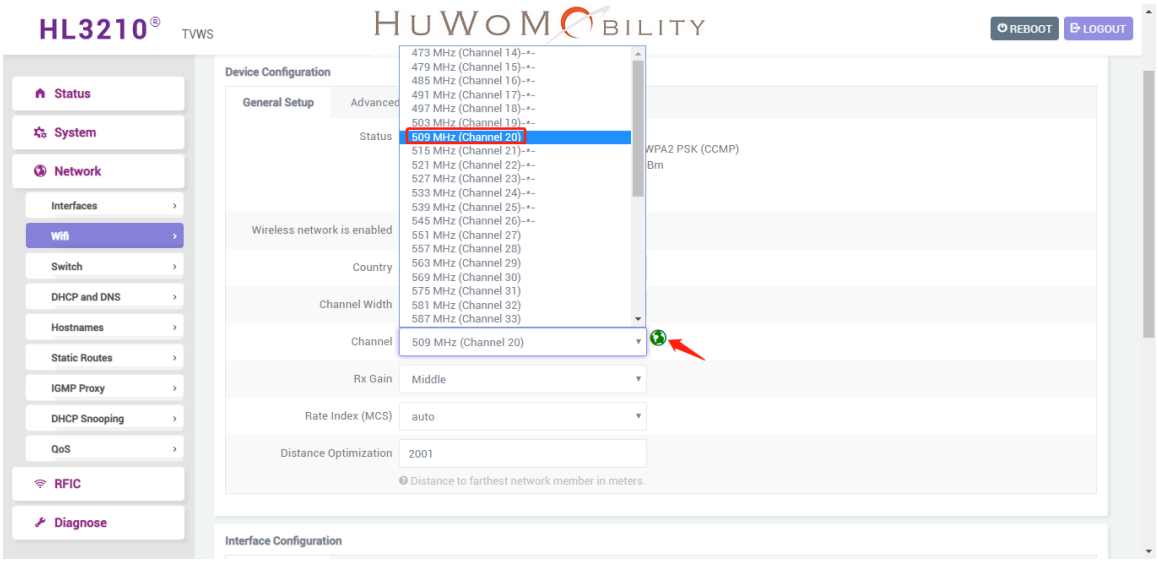

Fig. 8. Channel Selection

9. CPE/CLIENT SETUP

Select “WiFi” option under “Network” menu, and click on the “Edit” button to display the “General Setup” page. Select the Country and Bandwidth which should match to the values selected in AP. Make sure the frequency selected is the same frequency as the one selected in AP.

Remember to click "SAVE & APPLY" button. (Fig. 9)

Repeat step 4 to setup CPE/Client’s IP address (Fig. 4)

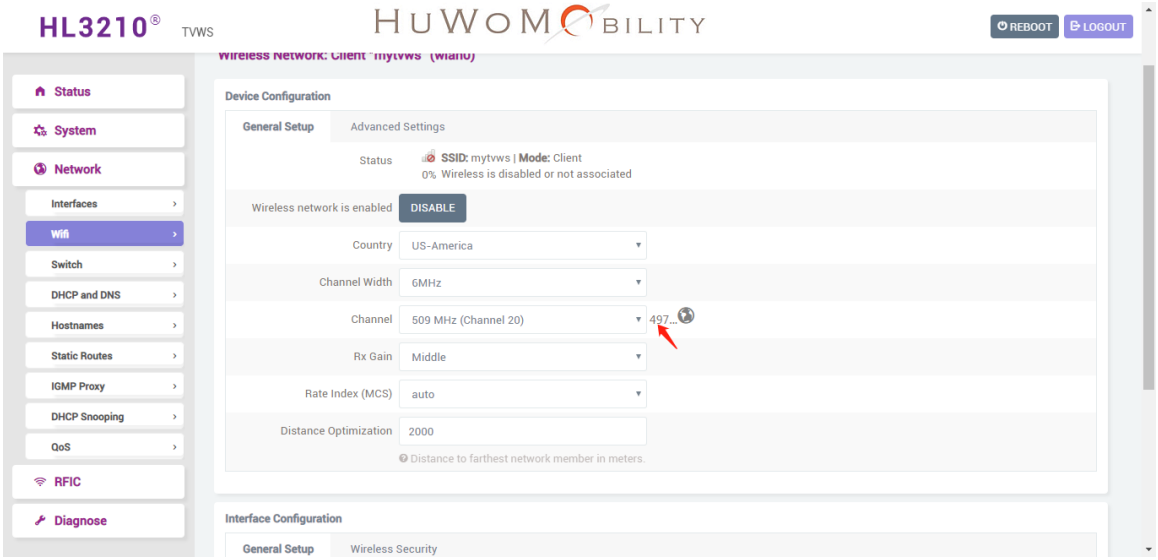

Fig. 9. CPE Setup

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com

10. CPE/CLIENT CONNECTION TO BTS/AP

If you are NOT using GDB, please uncheck "Enable" box and skip to the next step. Select/Click "RFIC" option of the menu, and open the "GDB" sub-menu, and check the "Enable" box if you are using GDB (Geolocation database). .

When a Client device is scanning, the globe icon is greyed, and the number next to the globe icon represents currently scanned channel (Fig. 10.1). Client will connect to AP automatically after about 6 minutes, and the globe icon will turn to green and the number next to the globe icon will identify the channel used in the connection. (Fig. 10.2)

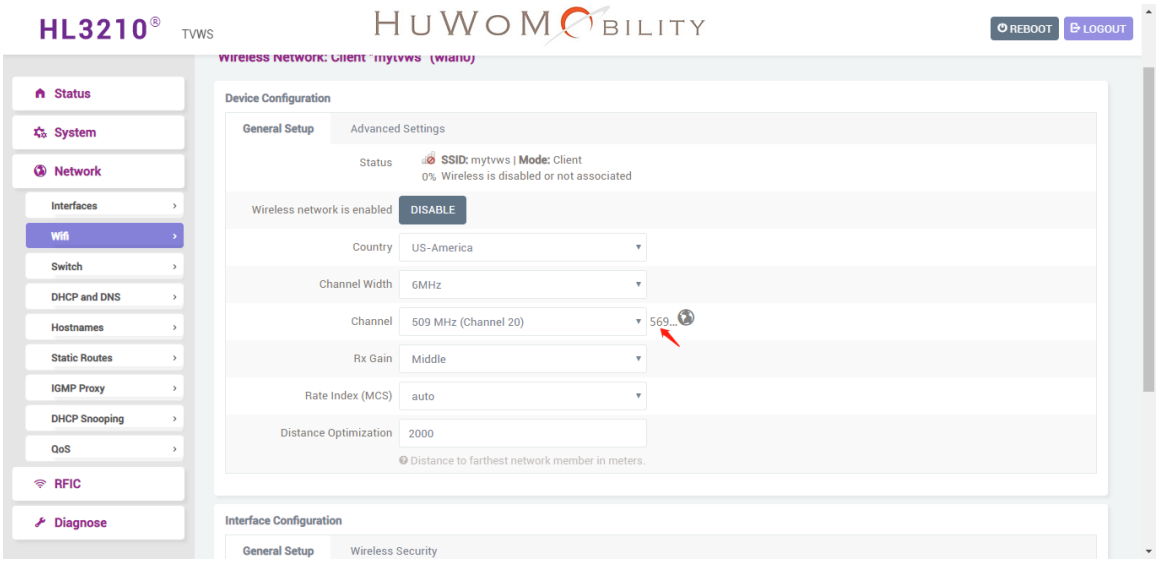

Fig. 10.1. Connecting Client to AP

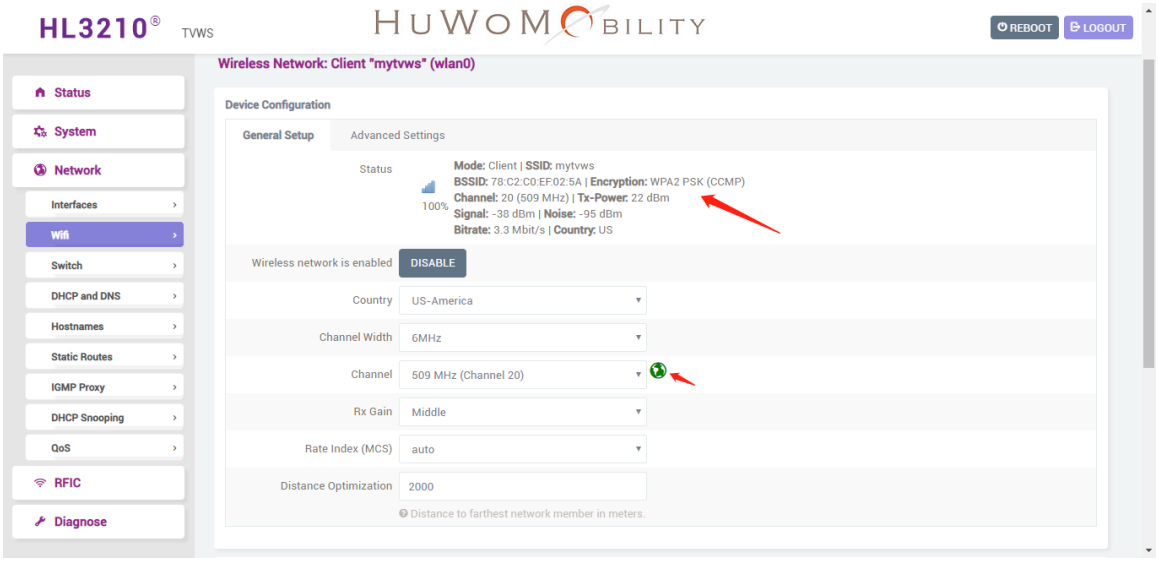

Fig. 10.2. Client has connected to AP

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com

11. CPE/CLIENT WIRELESS INFORMATION

Select the "Network" option of the menu, and the "WiFi" sub-menu to see the information after a Client has successfully connected to an AP, and fine-tune the Rx Gain values based on connection information by clicking on the "Edit" button. (Fig. 11)

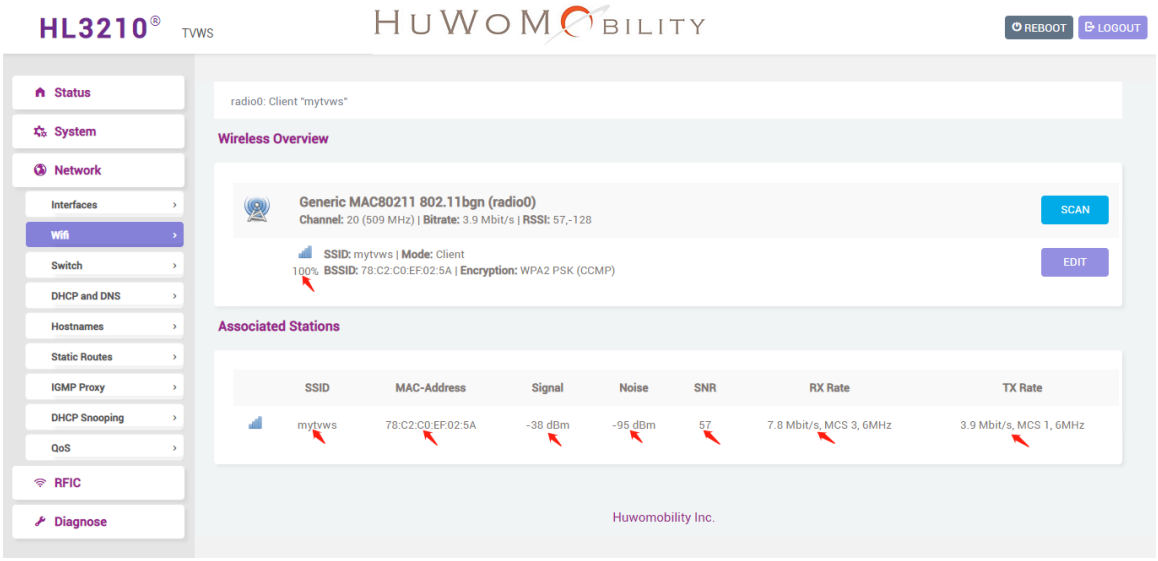

Fig. 11. Wireless Overview page

12. SYSTEM SETUP COMPLETION

Once your setup is completed, your system should be running with high throughput.

920 Hillview Court, Suite 230, Milpitas, CA 95035 Tel: (408)609-3888 Fax: (408)609-3899 www.huwomo.com