LTE-Turbo BS Configuration Guide for BS6430E

Document Version: 01

About This Document

This document describes the configuration of the LteTurbo BaseStation for software version BaiAP_LT_1.2.x. It is a guide that how to configure the device after its installation completes.

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Revision Record

Date	Version	Description
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Menu

1. Configuration Overview

The Baicells LteTurbo BS is loaded with its own GUI for configuring its operating parameters. You can log in to the GUI either locally through the Local Maintenance Terminal (LMT), which is an Ethernet port, or remotely via IP address. You can also use the Baicells Operations Management Console (OMC) to configure the eNB; this document, however, focuses only on using the eNB GUI.

After the LteTurbo base station is powered on, it is necessary to configure the base station to access the user and provide data service.

NOTE: Before configuring the BS's data, data planning needs to be done first. The data to configure includes local parameters and connecting parameters. These parameters are either provided by the user or determined after negotiation with the customers. The data to prepare include IP address, wifi parameters, ngmwan parameters, software version, and so on.

The LteTurbo base station needs to configure at least the wifi name, password, and working frequency.

2. Installation

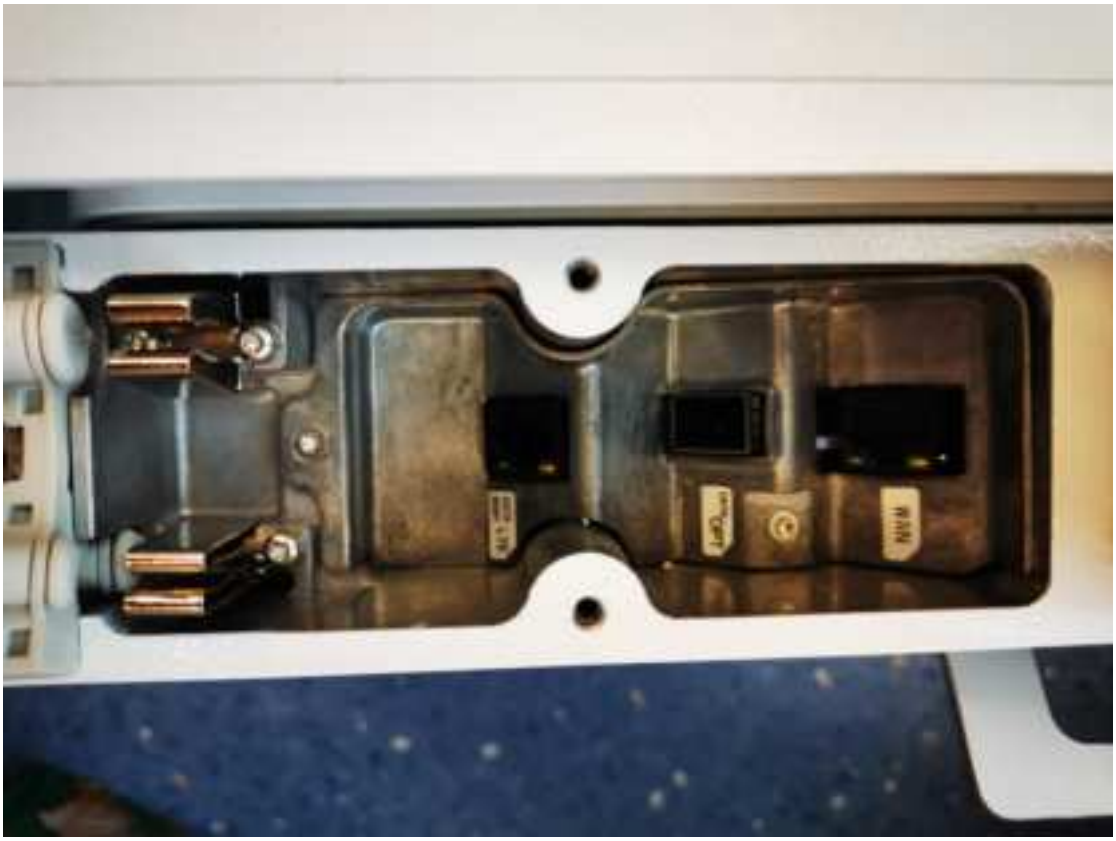
2.1 Part & Materials

Item	Qty	Picture
Nova430T unit	1	

Power Cable	1	
PoE Power Adaptor	1	

You will need standard tools, Ethernet cable, ground wire, and RJ-45 connectors for installing and connecting the outdoor unit.

The Port with lable “WAN” is the PoE port,Picture as follows:



2.2 Led

The LED lamp indicated the current base station status with 4 lights: PWR, RUN, ACT, BHL (see figure below)

- PWR

  Green light on Power Supply is normal

  Green light off Power Supply is wrong

- RUN

  Red light flashes,Green light off Upgrading…

  Red light on,Green light off wifi not work

  Red light off,Green light on wifi work,no station connected

  Red light off,Green light flashes wifi work,some stations connected

- ACT

  Green light off enodeb is abnormal

  Green light flashes enodeb is normal

- BHL

  Green light off WAN port(Fiber or Copper) has no IP

Green light on is good.	WAN port(Fiber or Copper) has IP and Communication	

Note: The status of the lamp is meaningless during the start-on process, and wait for the start-on (5 minutes) before checking the LED status.

3. Login Web Client

3.1 Web Client Environmental Requirements

Table 3-1 describes the requirements on computer of the client.

Table 3-1 Environmental Requirements of the Client

Item	Description
CPU	Above Intel Core 1GHz
Memory	Above 2G RAM
Hard disk	No less than 100 MB space available
Operating system	• Microsoft: Windows XP, Windows Vista or Windows7 • Mac: MacOSX10.5 or above
Screen resolution	Above 1024 x 768
Browser	Chrome 6 or higher

3.2 Connect Web Client to Base Station

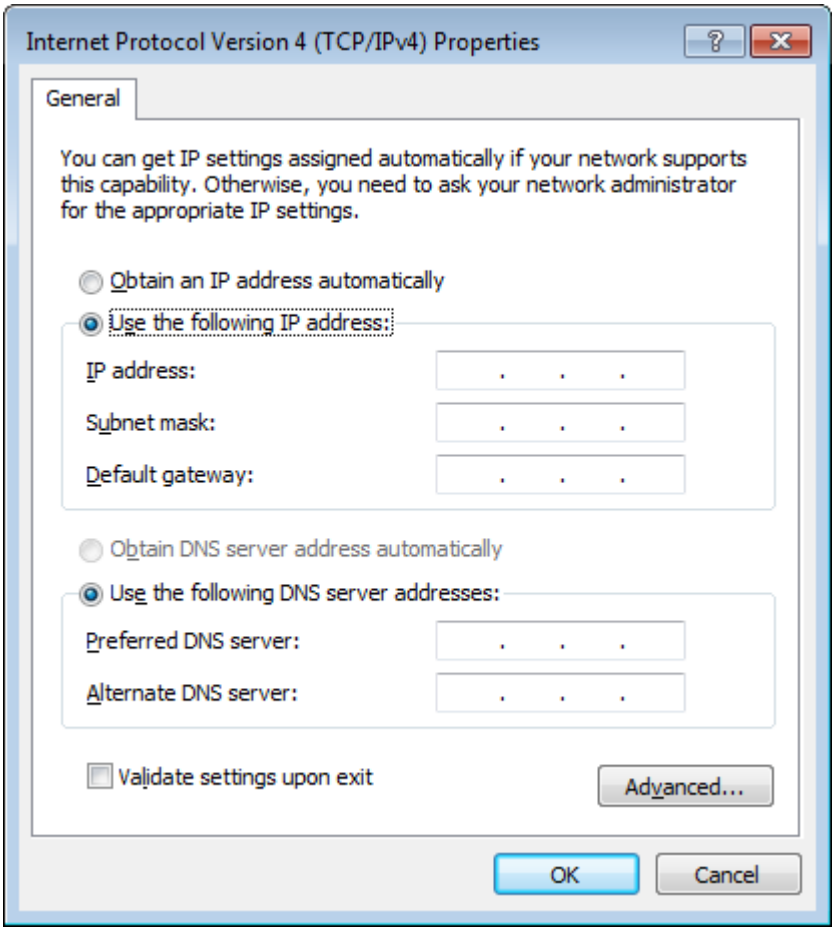
Connect the Ethernet interface of the computer to the LAN interface of the base station through the Ethernet cable.

3.3 Set Up Client Computer

Before logging into the Web client, the client computer's IP address needs to be set up first so that the connection between the client and the server is possible. Take Windows 7 as an example:

1. Click "**Start>Control Panel**" and later "**Network and Internet**" in the window that pops up.
2. Click "**View network status and tasks**" and later "**Local Connectivity**" in the window that pops up.
3. In "**Status of Local Connectivity**", click "**Properties**" to see the "**Properties of Local Connectivity**" pop-up window.
4. Select "**Internet Protocol Version (TCP/IPV4)**" and click "**Properties**" to see the pop-up window as Figure 3-.

Figure 3-1 Internet Protocol Version (TCP/IPV4)



Select either "**Obtain an IP address automatically**" or "**Use the following IP address**":

- If "**Obtain an IP address automatically**" selected, go directly to step 7
- If "**Use the following IP address**" selected, follow step 5 ~ step 7

NOTE: In general, if the auto obtaining fails, one needs to set up the IP address manually.

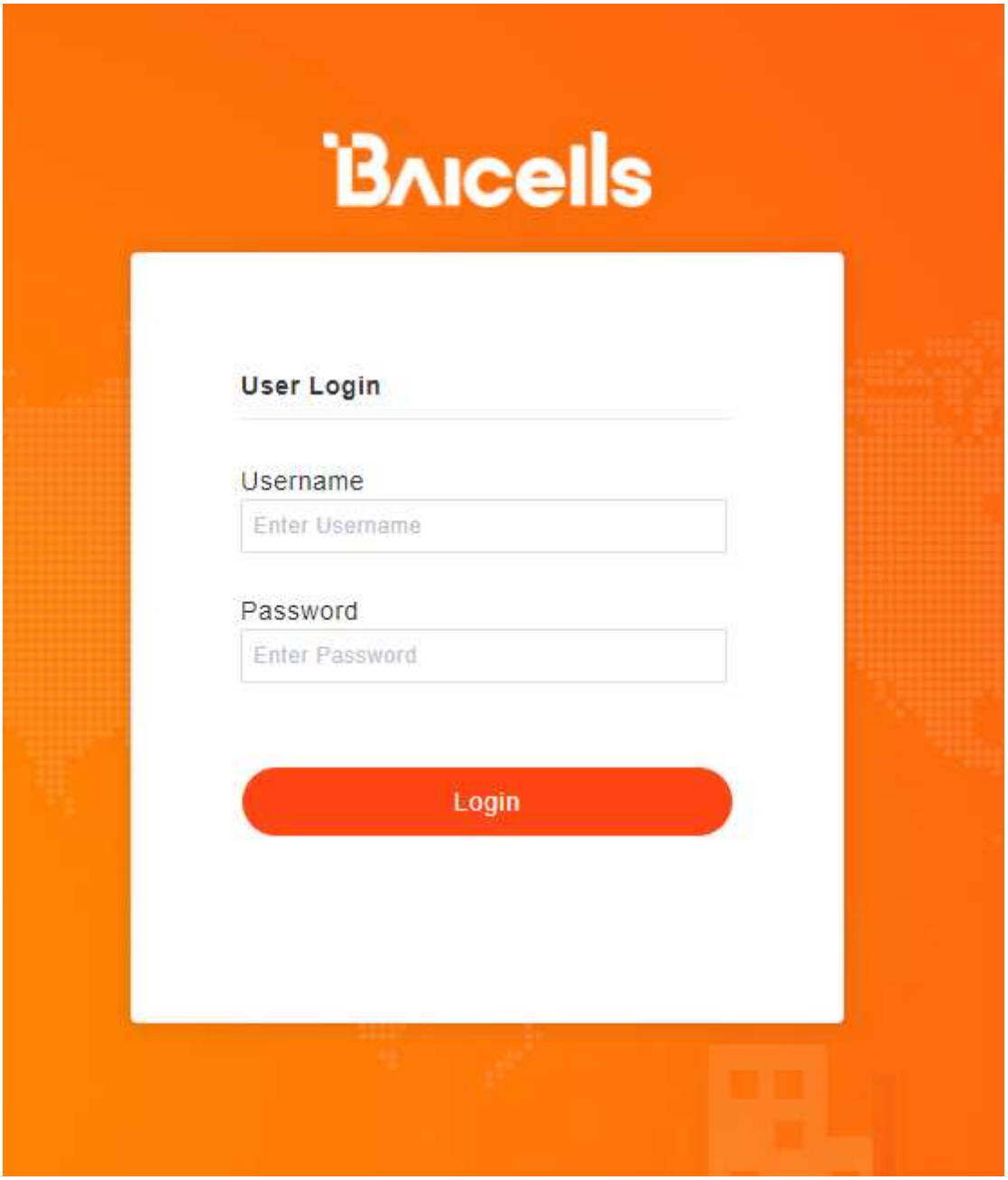
5. Select "**Use the following IP address**".
6. Input IP address, subnet mask, and default gateway, and then click "**OK**".
   - IP address: 192.168.150. XXX: (recommended XXX: 100~254)

     Because the LAN interface of the base station uses the IP address of 192.168.150.1, others should avoid using this address.
   - Subnet mask: 255.255.255.0
   - Default gateway: 192.168.150.1
7. In the command window, execute ping 192.168.150.1 and check whether the connection between the client computer and the server works or not.

3.4 Log In

1. Open a web browser, and enter http://192.168.150.1, as shown in Figure 3-1.

Figure 3-1 GUI Login



2. Input user name, password, and click "**Login**". The homepage is given in Figure 3-2.

Figure 3-2 GUI Homepage

NOTE: The information may vary by product type or software version.

The front page shows the information as the basic information and status information of the LteTurbo base station.The status information is dynamically refreshed, refreshed every 3 seconds.

On the left side of the home page is the navigation pane, showing the information as Status-> Overview.On the top of home page,showing the Basic information of the base station, such as device model, hardware version, software version, SN model.

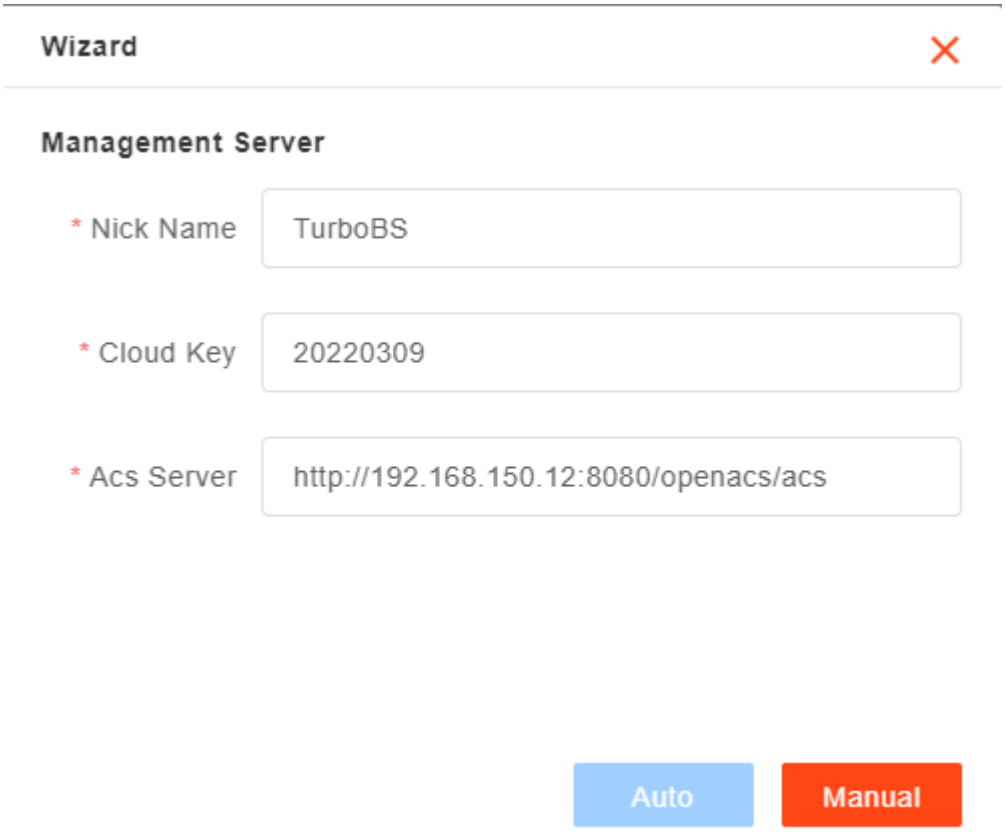
The status information area displays the WLAN connection status, rate statistics, LAN port connection status, and a list of connection devices.

4. Wizard

The first login will automatically pop up the wizard page, and you can also manually click the "Basic Settings" -> "Wizard" menu to pop up the wizard page.The wizard contains two parts:

4.1 First Page

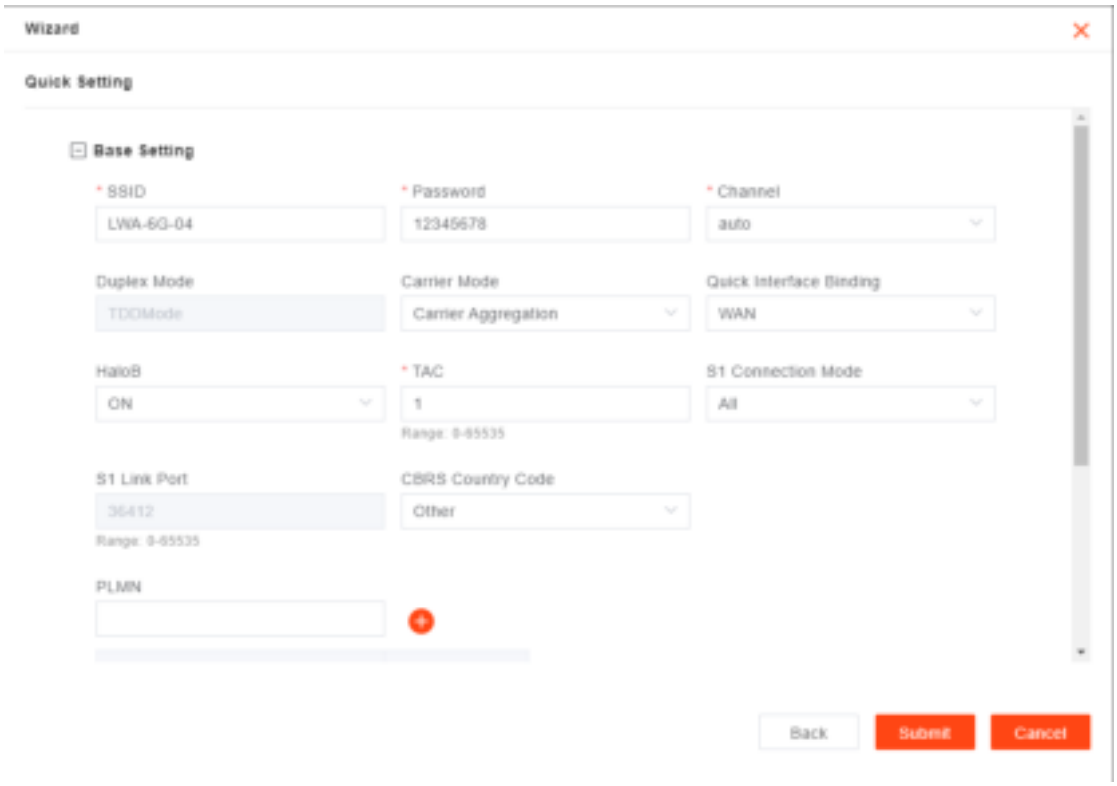
In this page, you can set the network management address and other information, and then you can choose the auto or manual button, as shown in the figure below:



4.2 Second Page

Auto setting is not supported by current version.

Manual setting page is show as follows:


Wizard
Quick Setting
Base Setting
* SSID
LWA-6G-04
* Password
12345678
* Channel
auto
Duplex Mode
TDDMode
Carrier Mode
Carrier Aggregation
Quick Interface Binding
WAN
HaloB
ON
* TAC
1
Range: 0-65535
S1 Connection Mode
All
S1 Link Port
36412
Range: 0-65535
CBRS Country Code
Other
PLMN
Back
Submit
Cancel

5. Overview Info

The overview page include such information:

1. Basic Information -- Include SW/HW Version, SN
2. Lte PRB Usage
3. Turbo Rate Curve
4. Device Status:

Turbo switch,OMC Status,Cell Status,CA Status,Halob Status,Turbo Connection,Turbo Setting

Numbers of online devices of various types

LTE Turbo UE: support Turbo and LTE

LTE UE: only support LTE

Virtual Networks: virtual devices, not support now

Public Services: only support WiFi

Status of services

Gray line: not open

Blue tape fork: opened but not connected

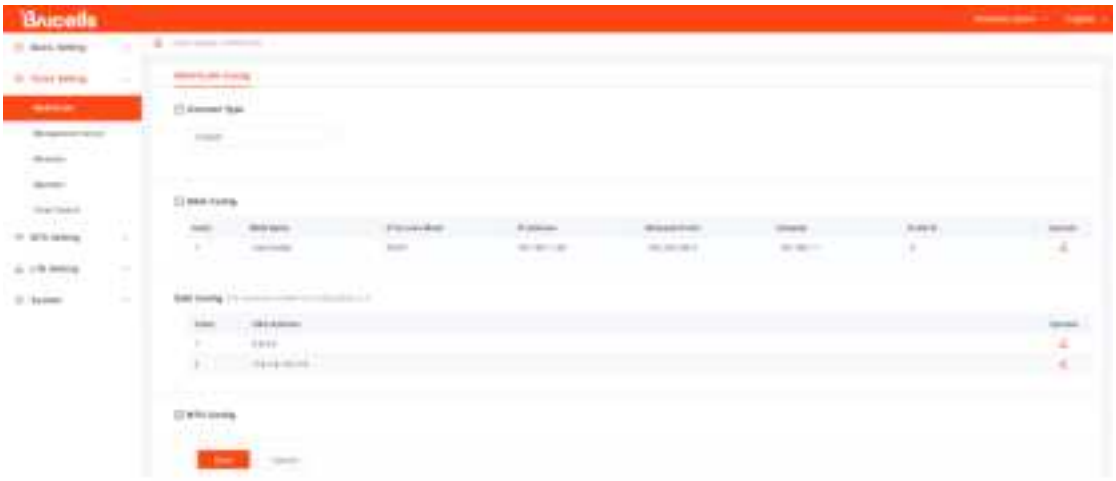
Blue line: opened and connected

5. Device Health

   Contains four parts: equipment health, network health, business health, interference detection

   Device health includes running time, CPU load and other information is not supported

6. WAN/VLAN Setting



Support for dynamic / static IP configuration, VLAN configuration, dns configuration, mtu configuration

7. Network Management Setting

Support Config Network Management URL

8. Turbo Wireless Setting

9. Ngmwan Setting

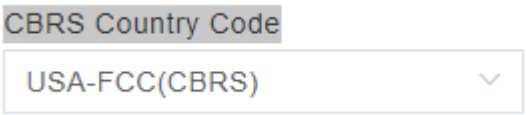
ngmwan setting items:

select nw ifnames	select ngmwan interface
ip addr	config server ip
net mask	subnet mask
mode	server
one client	only support one client
bind port	bind port
log	enable/disable log

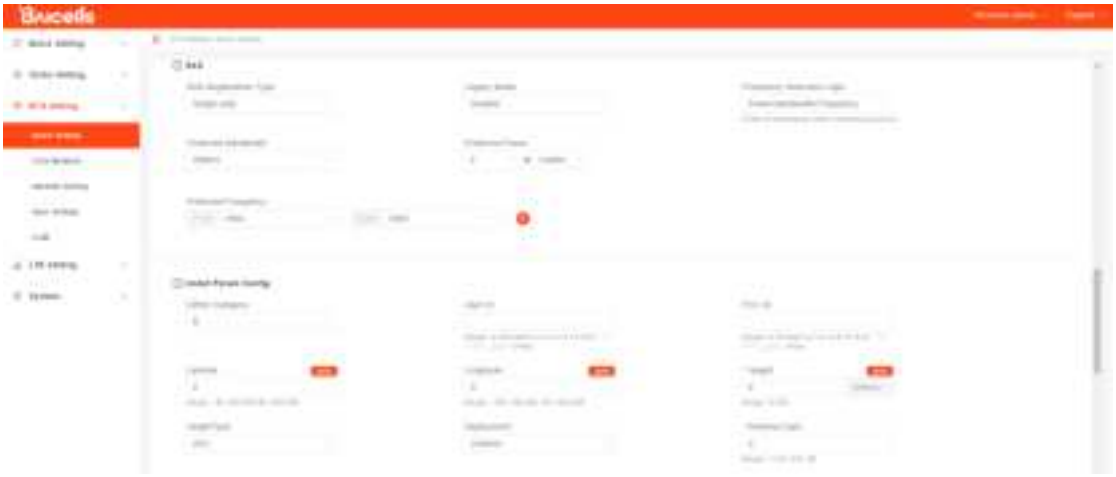
auto peer	auto setting peer
dhcp	enable dhcp server
dhcp startip	dhcp start ip
dhcp endip	dhcp end ip
dhcp mask	dhcp mask

10. Lte Basic Setting

10.1 SAS Setting

Select “USA-FCC(CBRS)” in box 

, SAS Setting will be shown below.

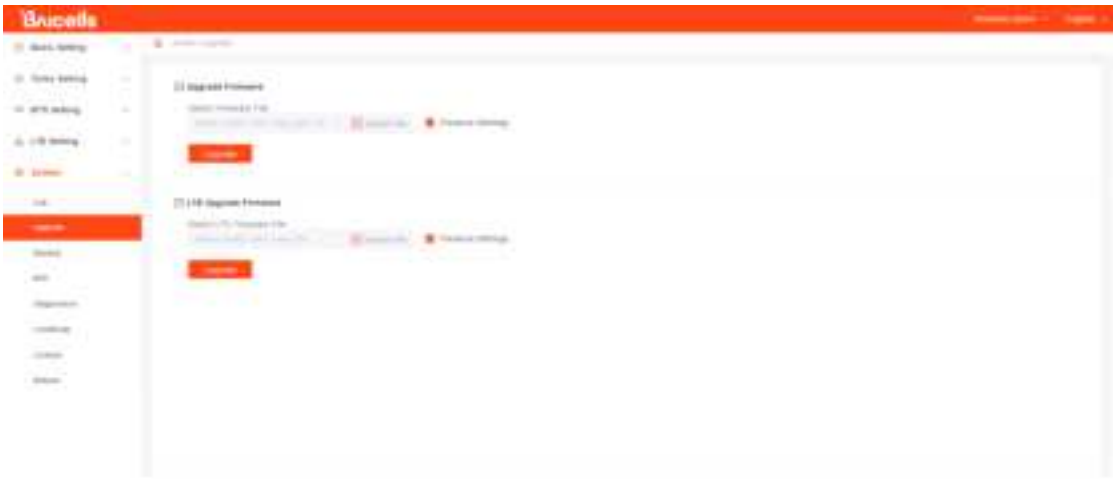


11. Lte Core Network Setting

12. Lte Sync Setting

13. Log Setting

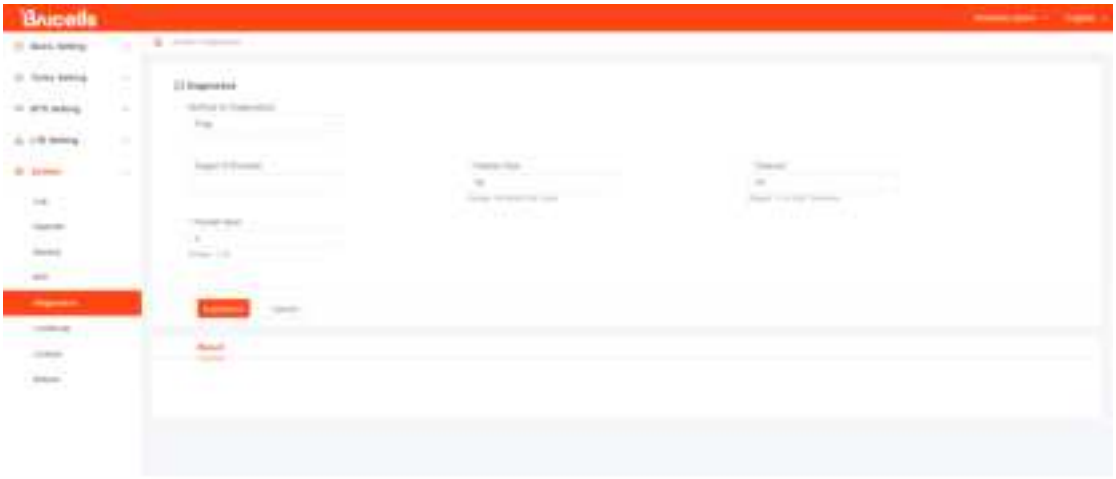
14. Upgrade



15. Restore Factory Setting

16. NTP Config

17. Diagnostics



18. Certificate

19. License

20. Reboot

21. Regulatory Compliance

21.1 FCC Compliance

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.

Any Changes or modifications not expressly approved by the party responsible for

compliance could void the user's authority to operate the equipment.

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.

Warning:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 70cm between the radiator & your body.

21.2 ISEDC Compliance

This device complies with Innovation, Science, and Economic Development Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2) This device must accept any interference, including interference that may cause u ndesired operation of the device.

Le présent appareil est conforme aux CNR d' Innovation, Science et Développement

économique Canada applicables aux appareils radio exempts de licence.
L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est

susceptible d'en compromettre le fonctionnement.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 80cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter, End-Users must be provided with transmitter operation conditions for satisfying RF exposure compliance.

Les antennes utilisées pour cet émetteur doivent être installées de façon à offrir une distance de séparation d'au moins 80cm entre toutes les personnes et ne doivent pas être colocalisées ou fonctionner conjointement avec d'autres antennes ou transmetteurs. pour satisfaire la conformité à l'exposition RF.