User Manuals

Tutorial on Installing the Cell-Fi Booster.

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2. Introduction

The function of the cellular booster is to receive and boost the signals from the cellular tower and provide the boosted signal to the sensors through the internal antenna.

[Additional info on cellular booster working principal](#)

3. Booster Installation Instructions

3.1. Booster Preparation

- Power up the booster through the power cord.
- Install internal antenna on the internal antenna port (The side with a cellphone symbol)
- Install external antenna on the external antenna port (The side with a tower symbol)

3.2. Antenna Positioning

- The internal antenna should be placed in sight of the sensors.
- The external antenna should be positioned out in the open so it can receive signals from the tower.

3.3. Various Booster Parts

1) The booster itself:

Figure 1: Cel-Fi Booster.

2) The power cord

Figure 2: The booster power cord.

3) Internal Antenna Port

Figure 3: Location of the port in which to install the internal antenna.

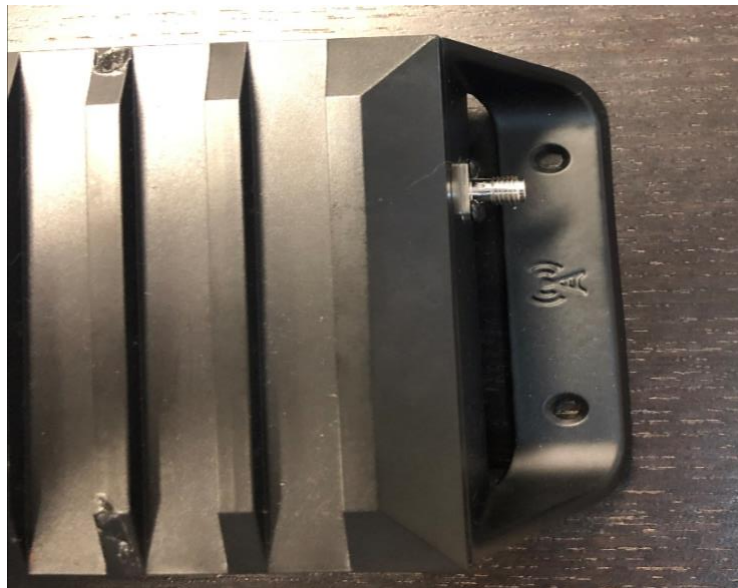Figure 4: An image of the internal antenna.

4) External Antenna Port

Figure 5: Location of the port in which to install the external antenna.

Figure 6: An image of the external antenna.

4. Checking the Connection Status

The connection status of the booster can be checked using the Cel-Fi WAVE App, which is available on smartphones and tablets via the apple app store or the google play store. Instructions on how to check the connectivity are detailed below. The link to download the Cel-Fi Wave app is : https://www.cel-fi.com/software/

4.1. Instructions

1) Have your network testing sensor ready and running.
   Example: MCC and MNC is for Canada – Rogers AT&T Wireless Band 12.

Figure 7: An image detailing connectivity information obtained from the network test sensor via the Nanoprecise provided link.

2) Start the Cel-Fi app.
3) The app will automatically start looking for the booster using Bluetooth.

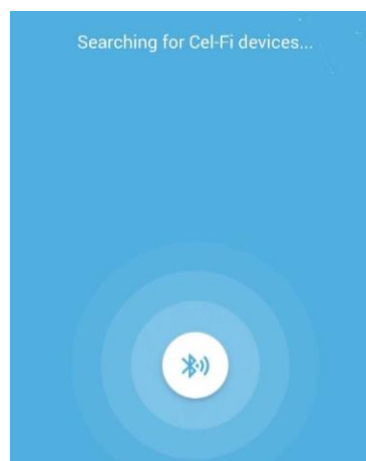Figure 8: A screenshot of the Cel-Fi app when searching for the booster.

4) Once the app is connected to the cellular booster. It will show the booster information.

Figure 9: A screenshot of the Cel-Fi app showing the booster information.

5) Confirm with the Nanoprecise team the network that the sensors are connected to and the Band or use the information provided by the network testing sensor. Look for MCC-MNC to get the operator's name and check the band.
6) Click on "settings" and choose the operator.
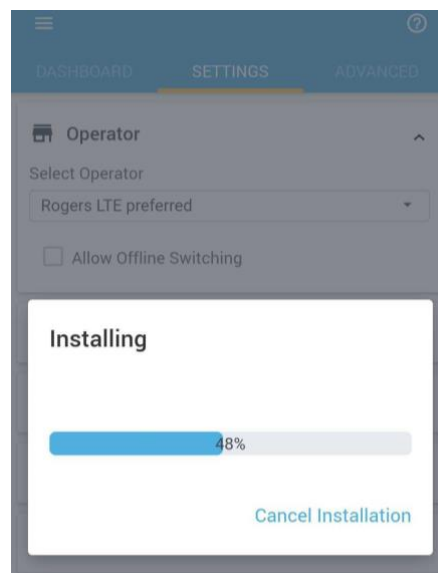7) Allow the booster to download the new update. This process should take 1-3 minutes.

Figure 10: A screenshot of the Cel-Fi app showing the update installation.

8) Go to Band settings. And unselect all bands and only keep the band provided by Nanoprecise Team or from the network testing sensor:
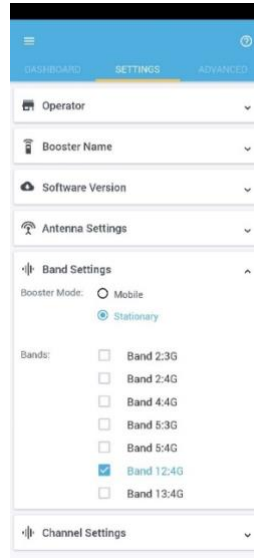Note: for North America LTE-M is on Band 12:4G. [most of the time]

Figure 11: A screenshot of the Cel-fi app showing band selection options.

9) Go to Advance and check the band boosted along with signal quality, Signal strength, and antenna separation.
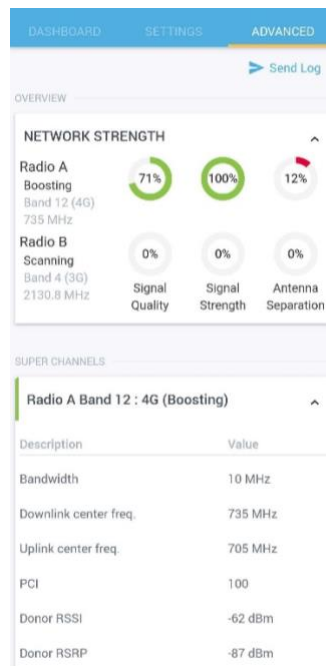
Figure 12: A screenshot of the Cel-Fi app showing connection information.

10) Check the network testing sensor again. The signal should increase by at least 10 dBm for RSSI and RSRP.
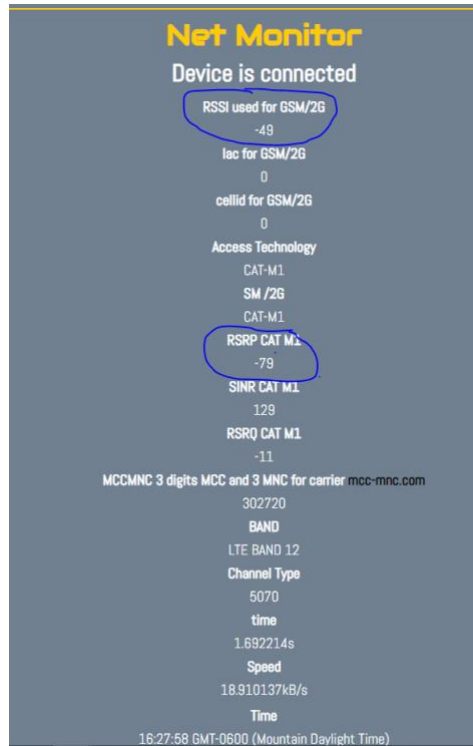
Figure 13: A screenshot of the net monitor web page showing signal gain post booster installation and configuration.