A6
Cell Phone Signal Booster Manual

Manufactured and Warranted by
Amazboost Technology Inc.
www.amazboost.com

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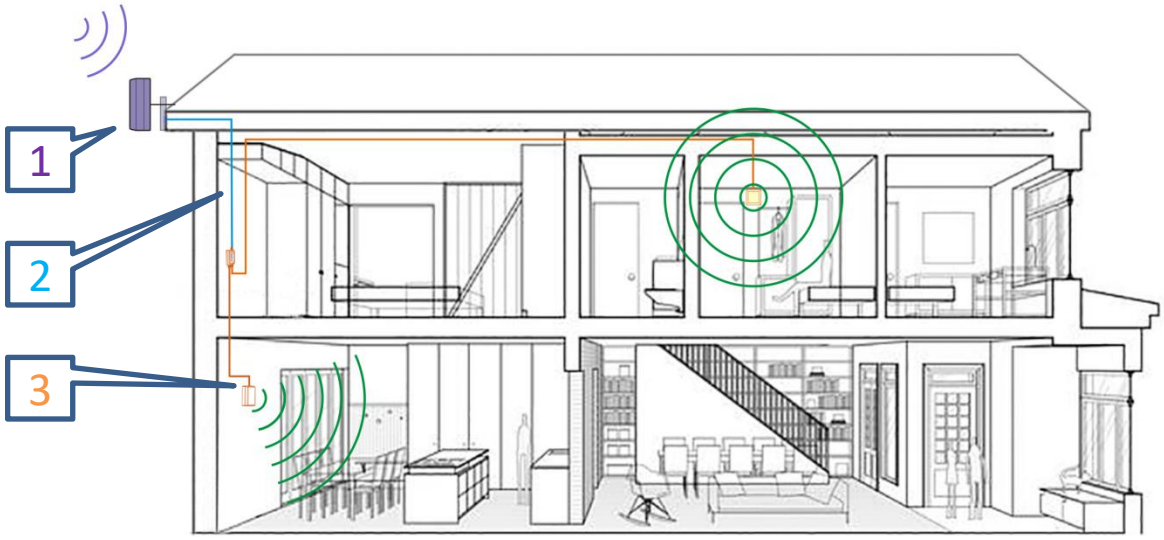
Toll Free (877) 579-7878
US: **Support@SolidRFINC.com**
Canada: **Support@SolidRF.ca**

Working Diagram (How It Works)



1. The outdoor unit catches the signal from the tower and then amplifies it.
2. Sends outside amplified signal to the splitter.
3. The splitter split the signal into two cables then send them to panel antennas to rebroadcasts the signal indoors to all mobile devices within range.
4. The system also works in reverse,amplifying outgoing signal back to the tower.

⚠ The **size** and the coverage area and the **strength** of the boosted signal are directly related to two key factors:

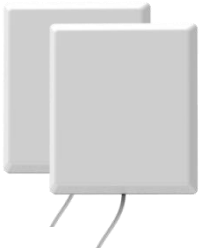
1. Signal strength received by the outdoor unit. So, setting up the outside unit where the signal is the strongest will provide the best results.
2. Distance of **separation** between the outdoor unit and the indoor unit.

Package Contents

The kit includes the following items:

1. Outdoor units(amplifier is intergreted together with the antenna), mount pole；
2. Indoor panel antenna；
3. Power supply；
4. Splitter
5. 2*30 ft of RG6 cable, 1*45 ft of RG6 cable；


Outdoor unit

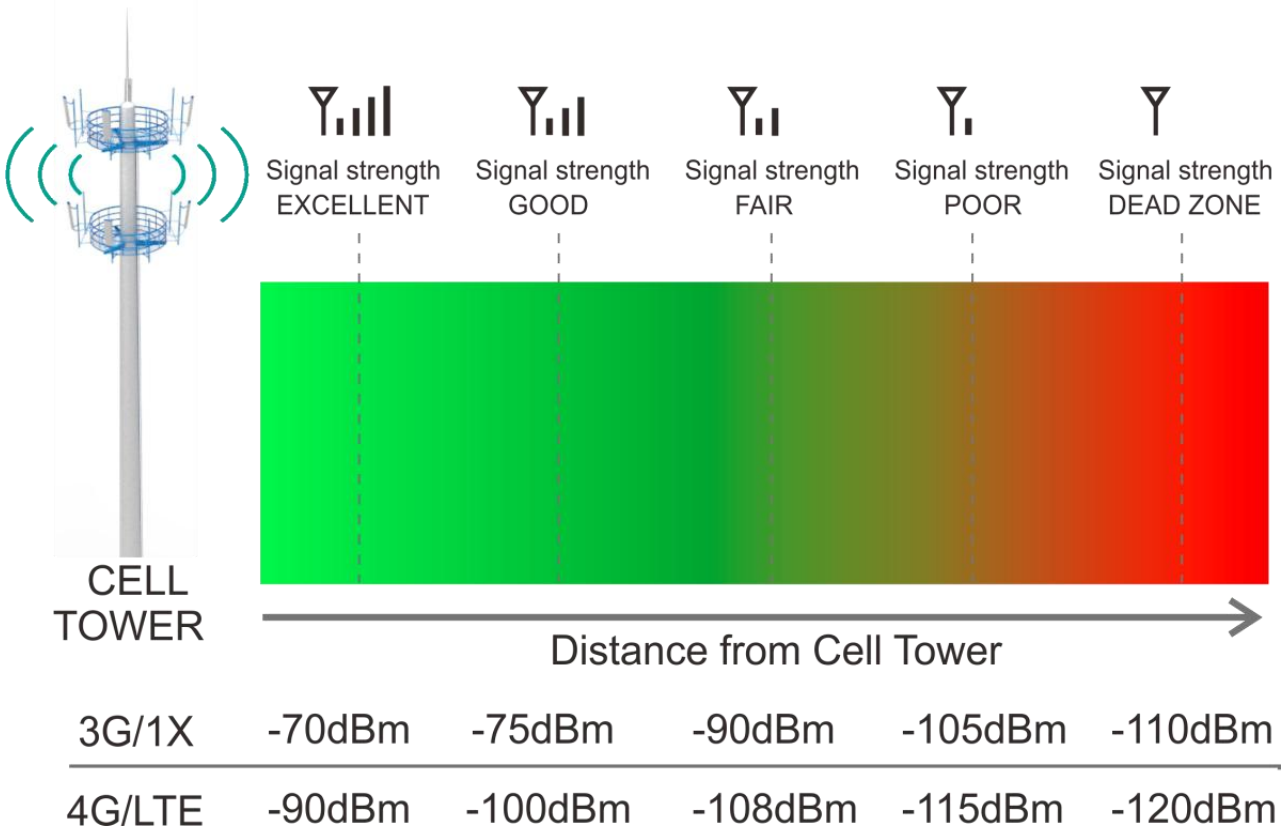

2*Indoor Antenna


Power supply

Splitter


RG6 cable

Signal transmission loss and power level



3G/1X	-70dBm	-75dBm	-90dBm	-105dBm	-110dBm
4G/LTE	-90dBm	-100dBm	-108dBm	-115dBm	-120dBm

Coverage area ability

Note: FCC regulations limit the amplification of all cell phone boosters in order to prevent damage to the telecommunications infrastructure. Therefore, the maximum coverage area of a booster depends on the original power level of the signal captured by the outdoor unit.

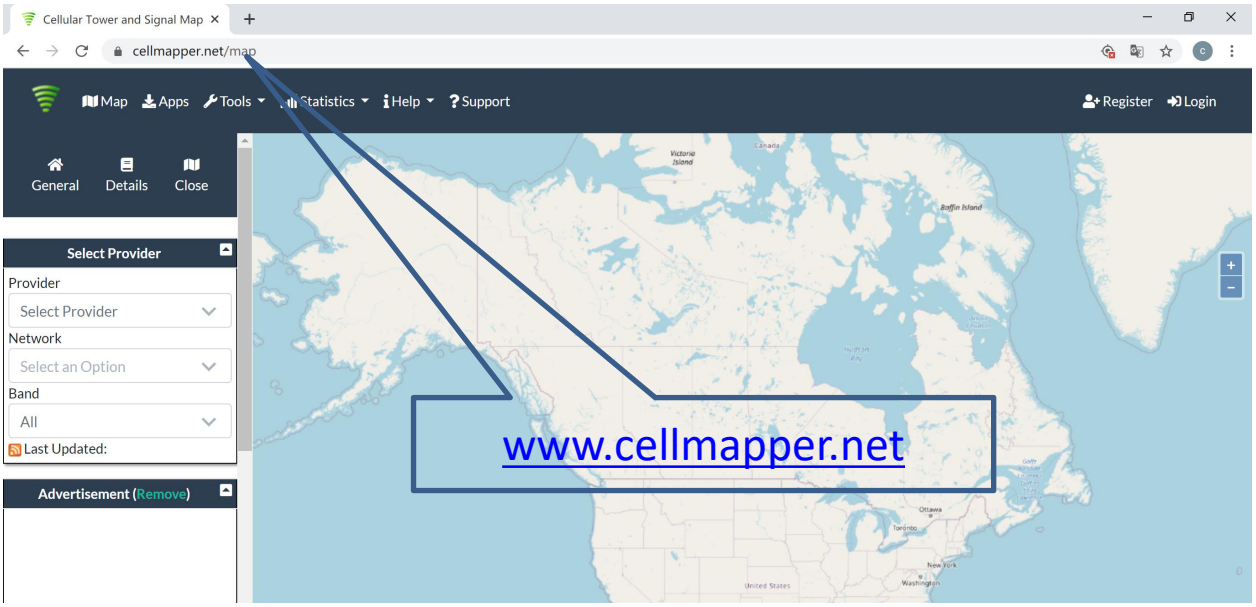
⚠**Notice**: Not recommended when outdoor signal strength is less than -110dbm(3G/1x) or -120dBm(4G/LTE). The resulting coverage area of the boosted signal will be prohibitively small.

Power level at the outdoor antenna location	Coverage Area @ One Antenna (sq. ft.)	Coverage Area @ Two Antenna (sq. ft.)
Strong (5 bars on the cellphone)	5,000	8,000
Medium (3~4 bars on the cellphone)	2,500	4,000
Weak (1~2 bars on the cellphone)	600	1,000

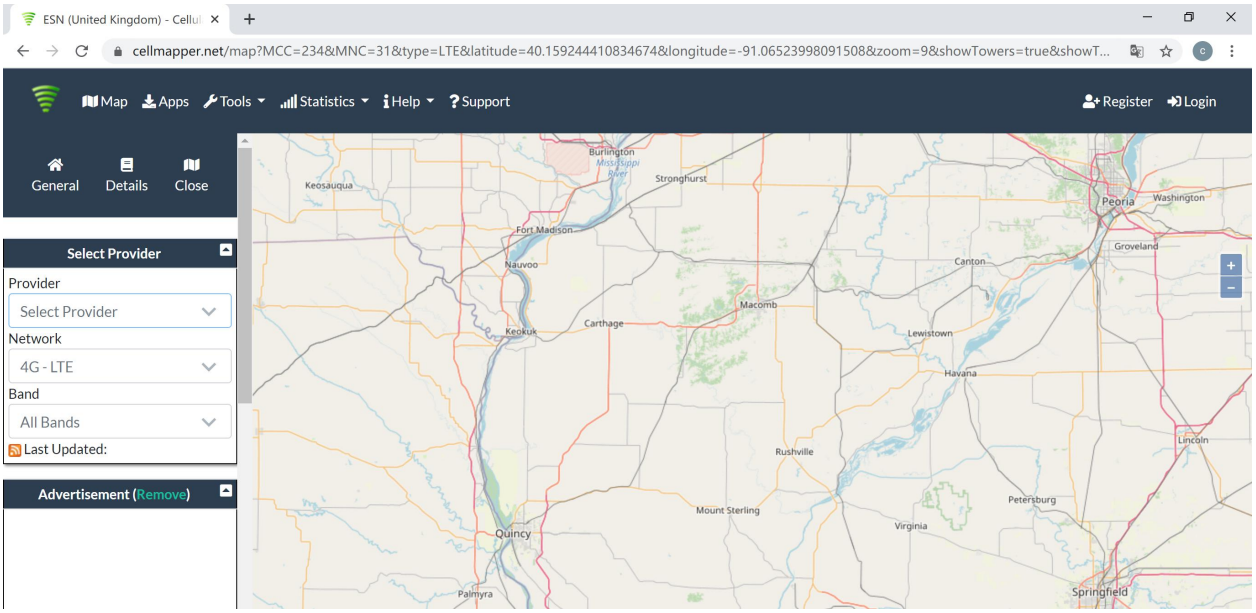
Find your cell tower nearby!
There are a variety of resources available online, here is a third party website recommended. Use it to locate your nearest cell tower: www.cellmapper.net

Note: This is very important step. If we use the wrong direction, we won't have good result.

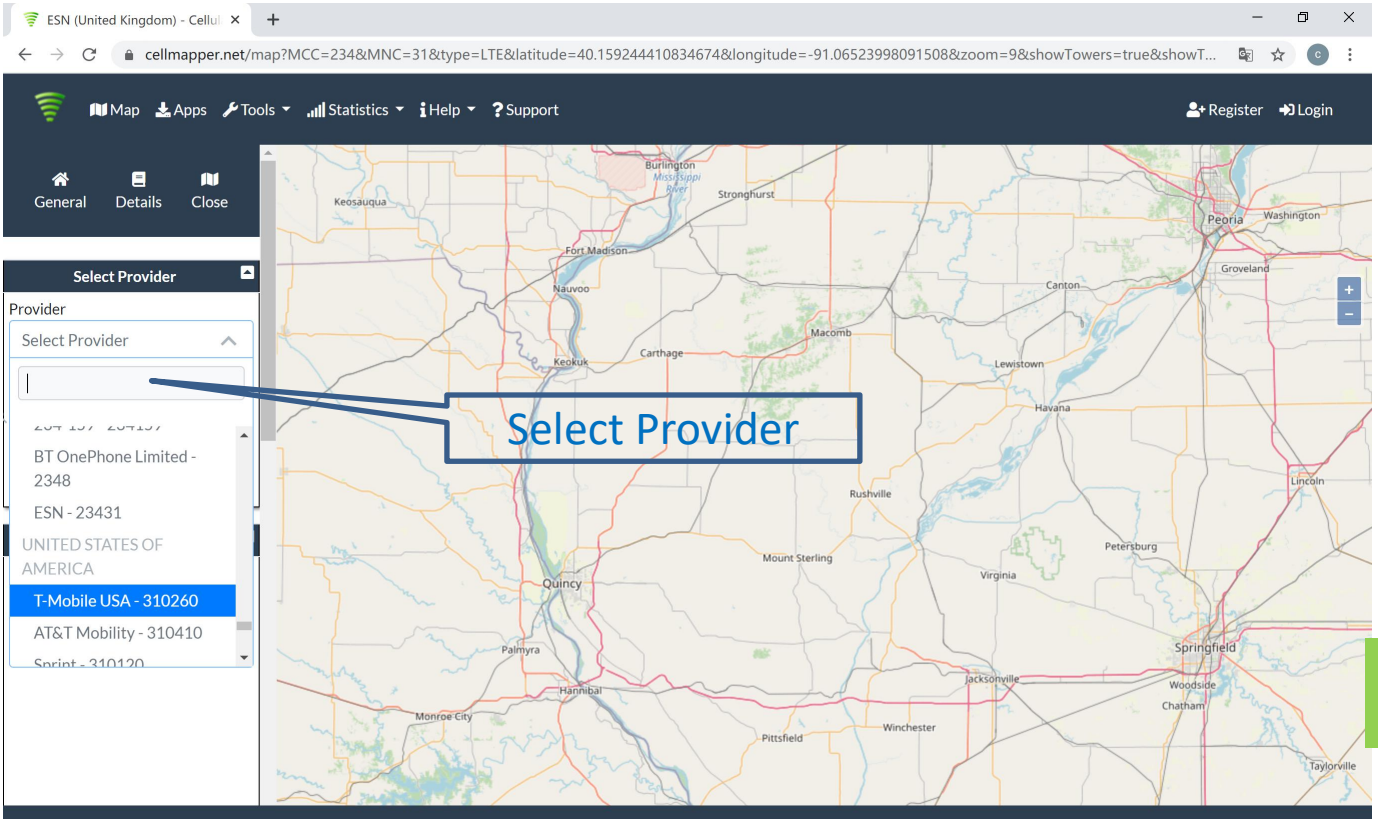
Step 1: Visit website www.cellmapper.net

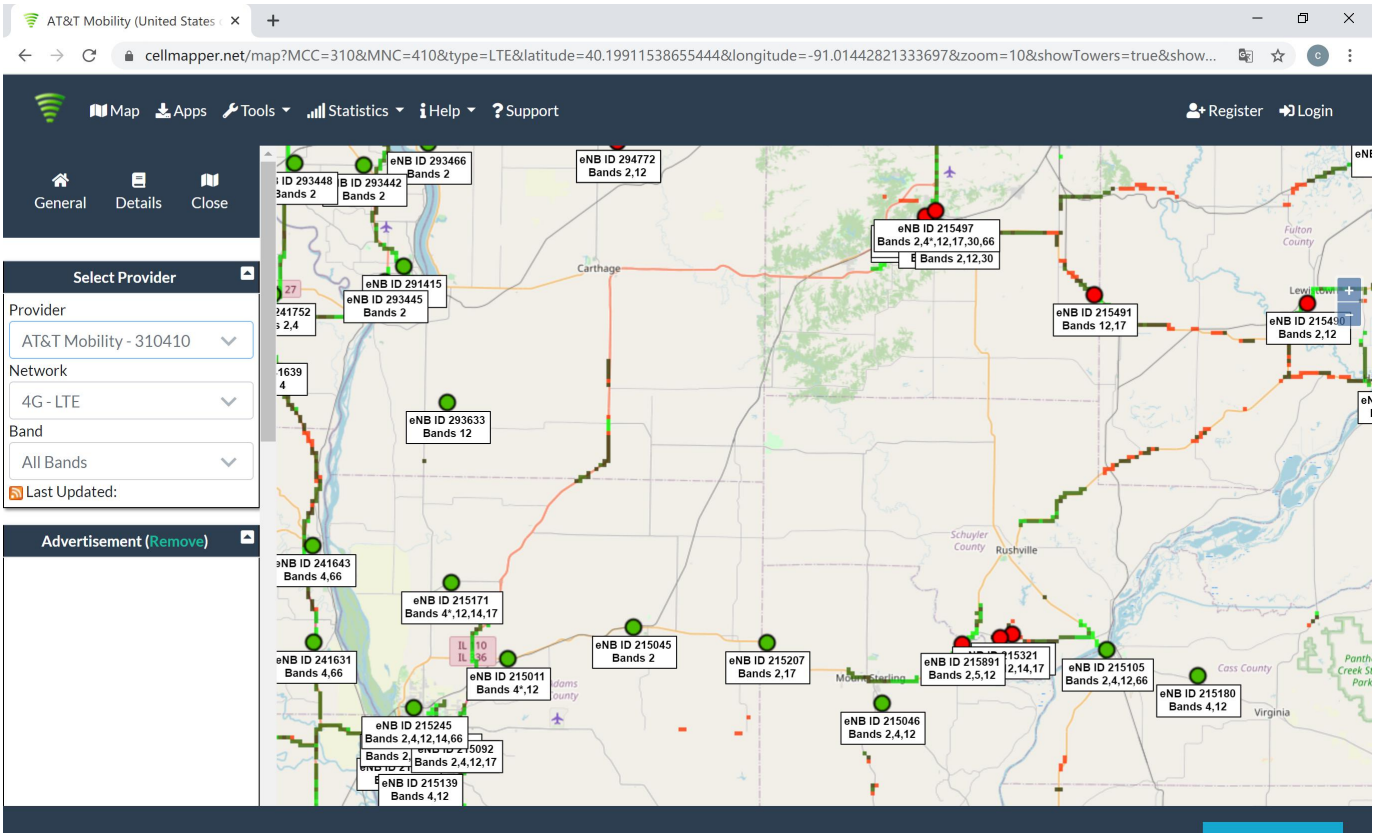


Step 2: Find your location on the map and zoom in on your area

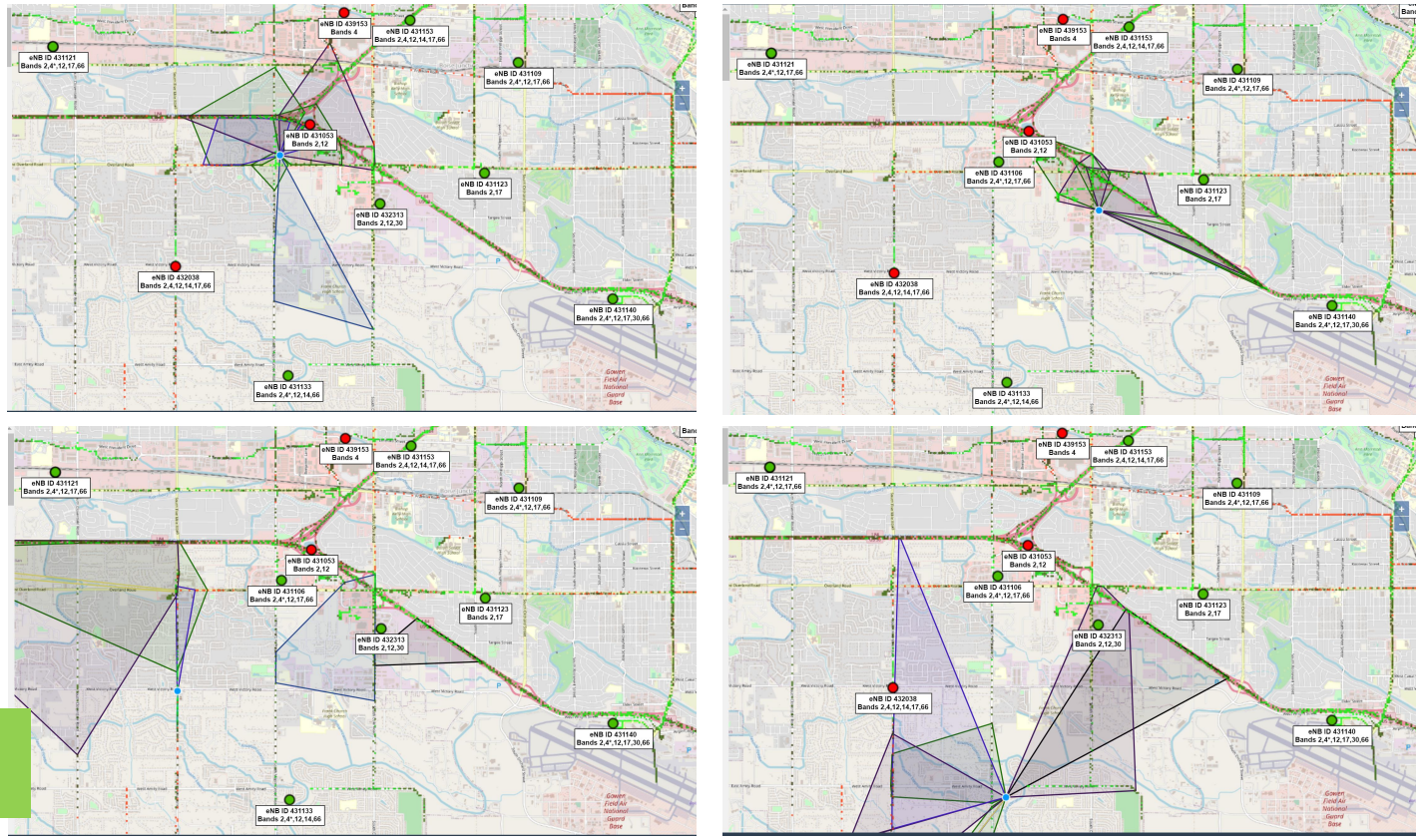


Step 3:. Select Provider. You will find the cell tower around your house.



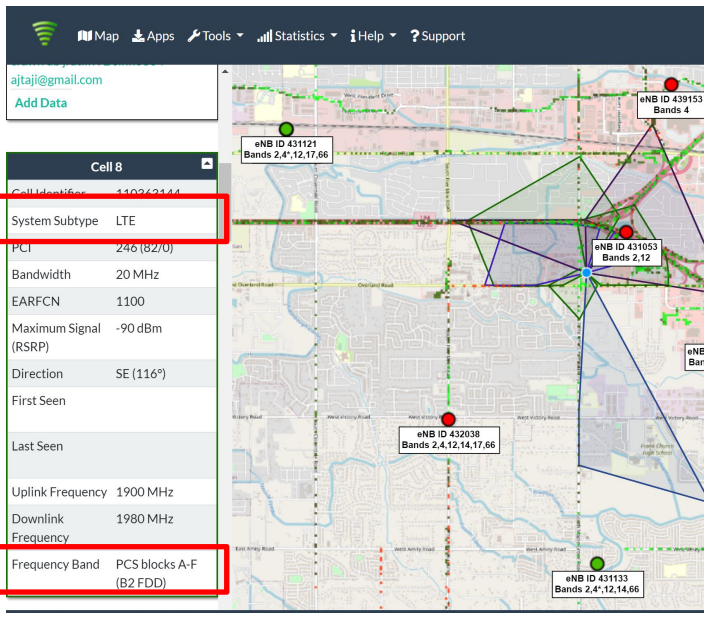


Step 4: Find your cell tower



Click the red or green dot on the map that represents the base station, and the detailed information of the base station will be displayed.

- The first important information, you can see from the above four pictures, the coverage area (shaded part) of each base station is different. You have to find a base station with signal coverage to your house, or the coverage direction is facing you, and the coverage area is closest to you.



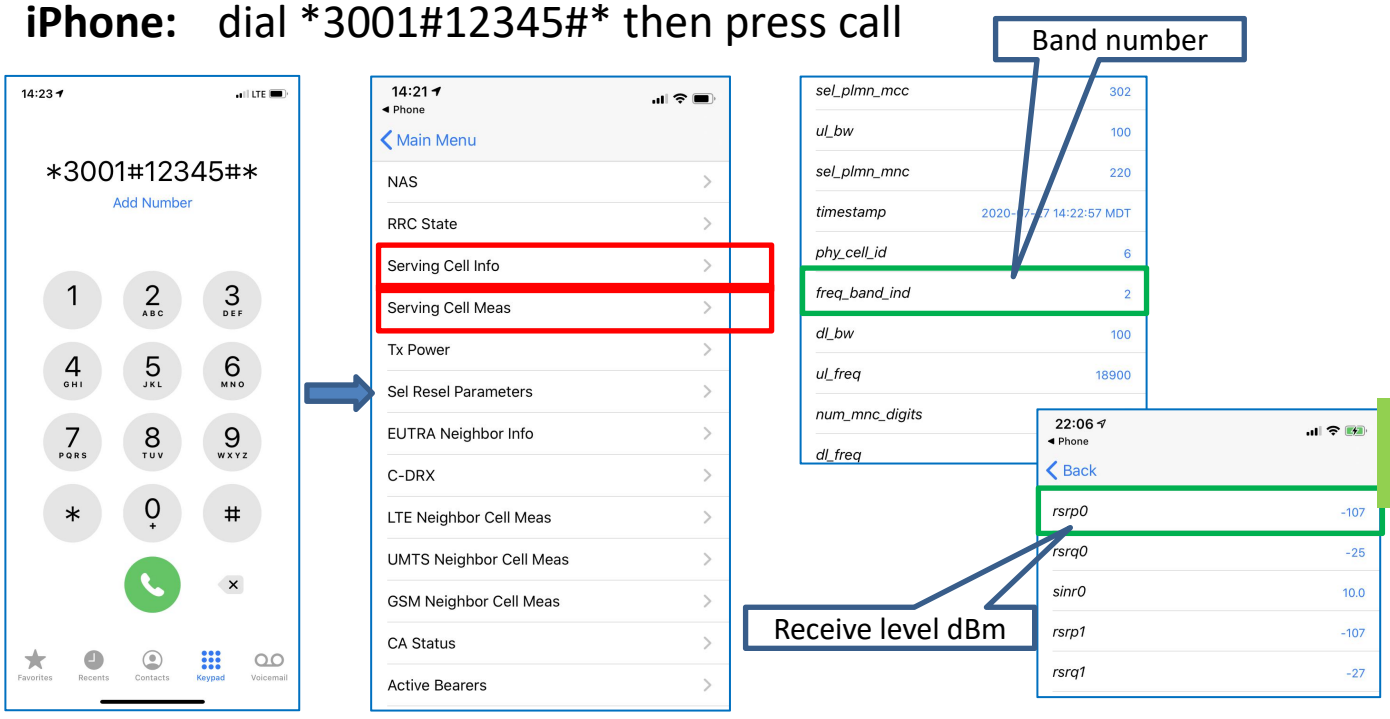
- The second important information, you can scroll the information content on the left to find the specific carrier information of this base station, including the communication standard and frequency band. Please reference the left picture, “LTE” and “B2 FDD”(Band 2, FDD).

Find The dBm Reading On Your Phone

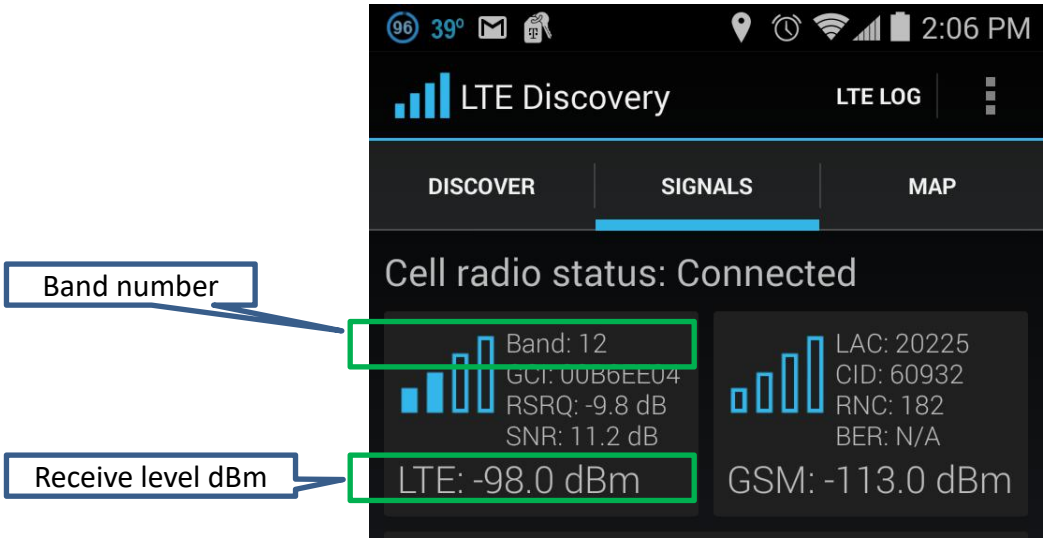
Having an accurate measurement of signal strength in decibels (dBm) is crucial when installing your system. Decibels accurately measure the signal strength you are receiving.

Note: Turn off your cell phone's WiFi to ensure you are checking the cellular connection. The dBm reading will be refreshed every 30-60 seconds. Want faster results? Once you have a reading, turn on airplane mode. Wait 15 seconds. Turn off airplane mode. The signal strength reading is refreshed.

iPhone: dial *3001#12345#* then press call



Android: download third part APP-LTE Discovery



Test Installation

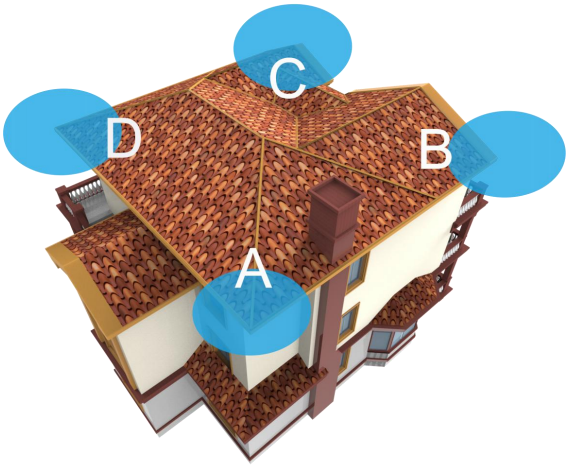
We **STRONGLY** recommend doing a test installation before finalizing the installation. Doing a test installation of your cell phone booster ensures that you will get the optimal performance from your system.

Step1: Select the Location for the Outside Unit

Note: This is the most critical step and will determine the overall performance of the booster system.

1. Generally, the strongest signal will be located on the side of your home facing the nearest cell tower. Keep in mind, the signal strength at ground level may be different from the signal strength at or above the roofline due to obstructions (trees, other buildings, etc.) that block the incoming signal. In most situations, the strongest signal is found about 25 feet above the ground on the side of your home facing the nearest cell tower.
2. The most ideal installation position is the corner of the building, choose the one facing your cell tower.

Four corner of the building are the most ideal position



Choose the one facing your cell tower

Step 2: Temporarily Mount the Outside Antenna

In addition to the four corners of the building, the chimney and the pole above the roof can also be selected. As long as the installation distance between indoor and outdoor antennas is maintained enough, satisfactory results can also be achieved.

Use one of the three options to mount the outside antenna on your roof on the side of the house with the strongest signal.

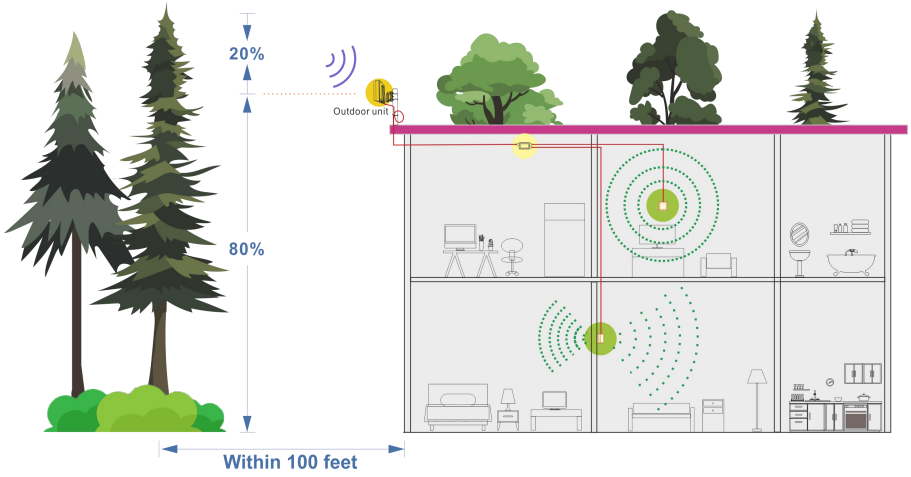
The height of the outside antenna should never exceed the highest point of your house. This is a precaution against damage and safety concerns caused by lightning strikes to the outside unit.

Caution

Trees will greatly attenuate wireless signals. If there are tall trees within 100 feet of the house. At the same time you can't find a stable signal above 3 bars, the outdoor antenna needs to be erected 60%(at least) to 80%(best) of the tree height. Never exceed the trees!

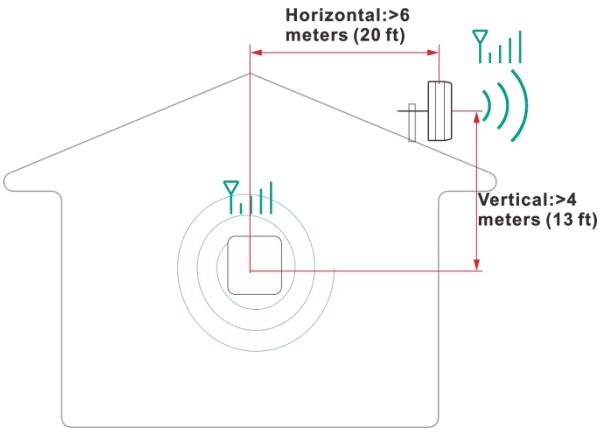
But according to FCC regulations, outdoor antenna height cannot exceed 30 feet.

At the same time, if the antenna exceeds the roof, please pay attention to lightning protection measures.



Step3: Select the Location for the Inside Antenna

In order to achieve the best signal coverage effect, there is a certain distance requirement between the indoor and outdoor units. Make sure the inside and outside units are facing away from each other.



Minimum Required Separation Distance Between Indoor and Outdoor Antenna：
Straight line distance over 30 feet(10 meters)
or
20 ft (6 meters) horizontal distance
13 ft (4 meters) vertical distance(As far as possible)

Measure the Signal Strength Inside your Home

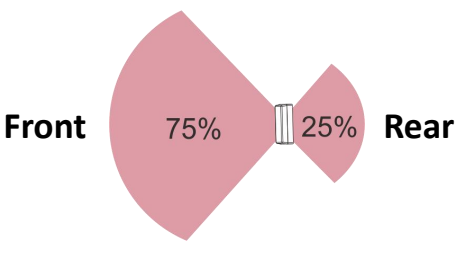
- Test your current signal strength in multiple locations throughout the home
- Record the current signal strength in the table provided for reference

Test → Record

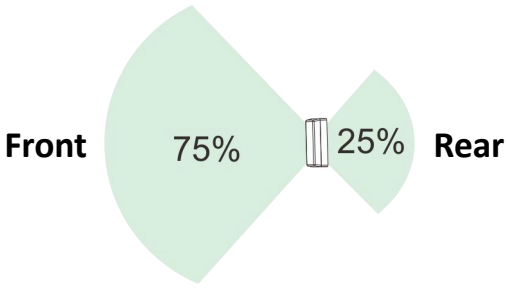
No	Location	Record(dBm)
1		
2		
3		
4		

Top view of antenna beam shape and energy distribution

- The radiation beam angle of indoor and outdoor antennas is about 90 degrees;
- In addition to signal radiation in front of the antenna, there is also energy radiation behind the antenna;



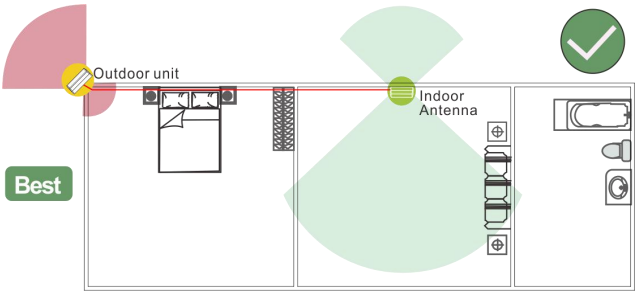
Outdoor antenna



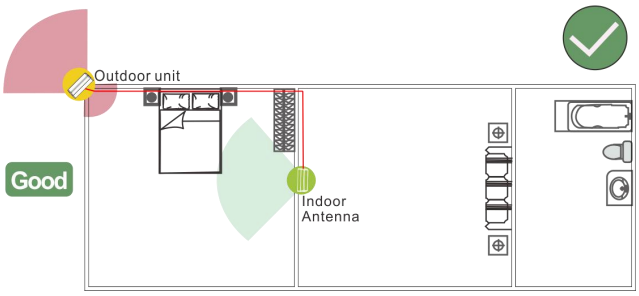
Indoor antenna

Antenna mutual position(top view)

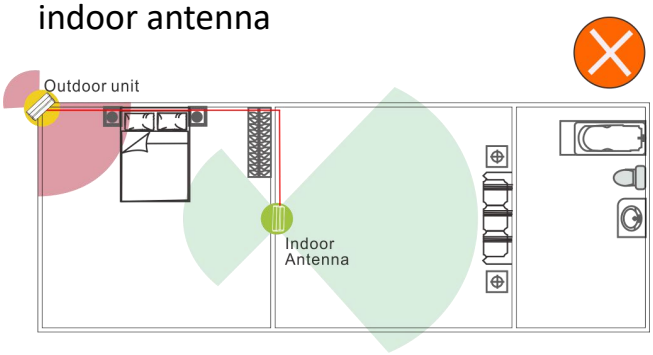
Avoid cross antenna beams(the best solution)



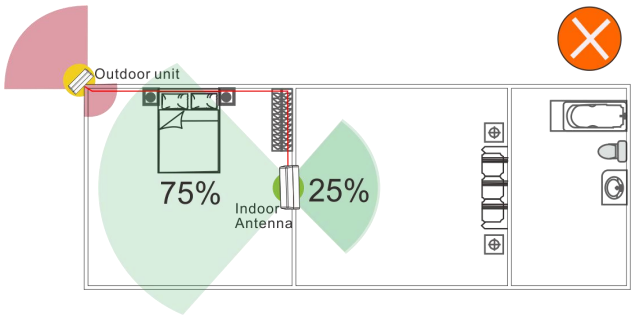
Ensure the distance, allow the antenna to cross the rear beam(good solution)



Do not face the outdoor antenna to the indoor antenna



Do not face the indoor antenna to the outdoor antenna



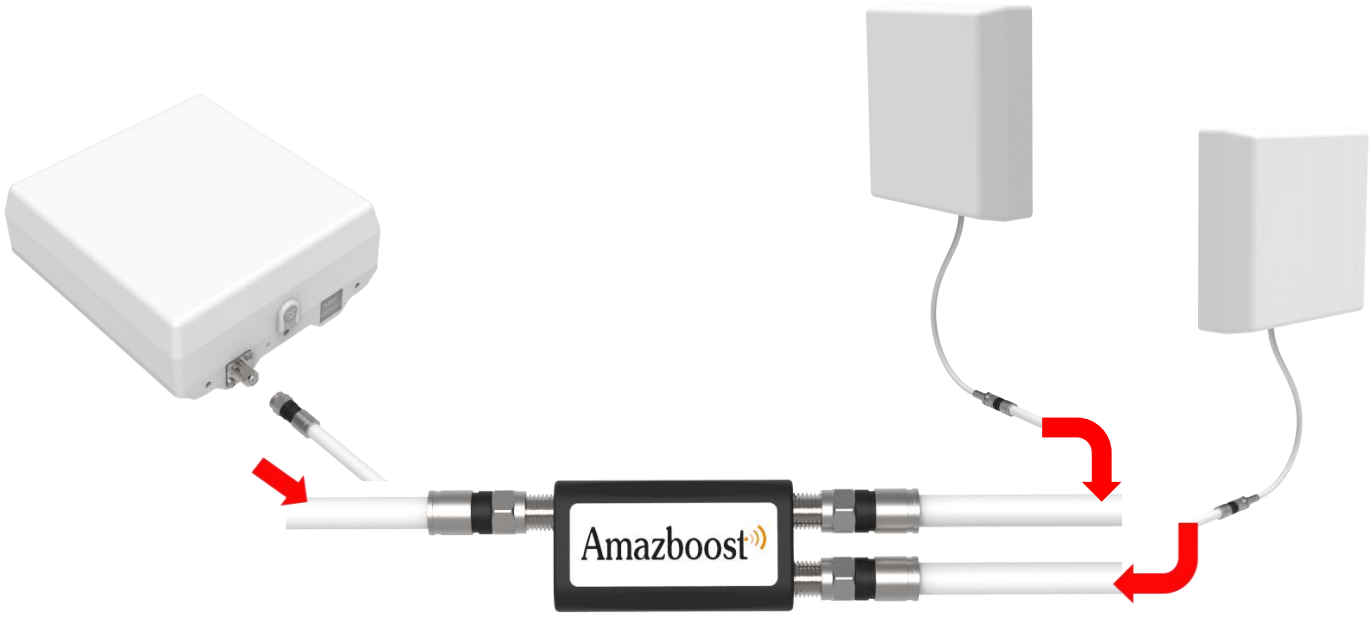
The indoor antenna is a panel directional antenna. Choosing a location faceing all over your home will help to maximize your coverage area.

Step4: Connect the System

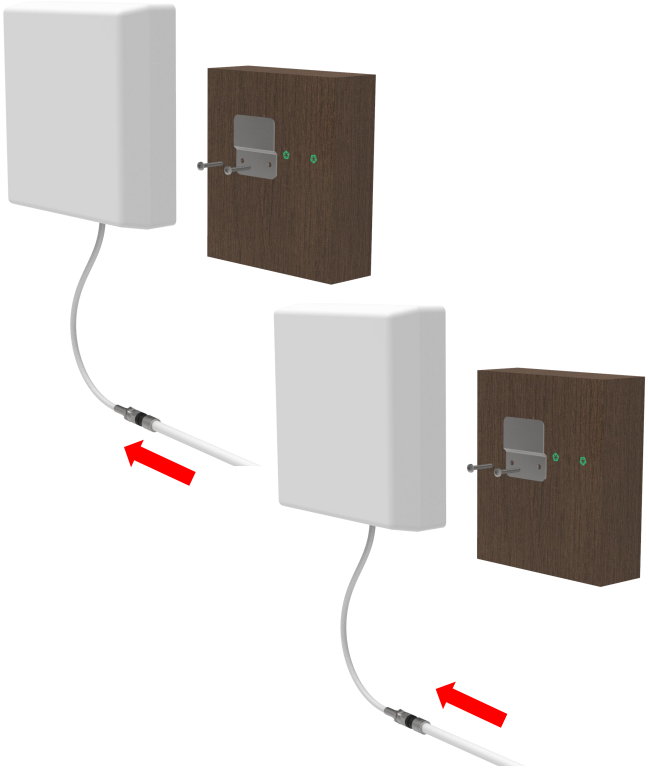
1. Connect the outside antenna to the 30 feet RG6 cable, fix the connector(In order to avoid internal damage of the antenna connector due to gravity or pulling the cable)

Secure the cable near the antenna to prevent cable damage caused by wind shaking

2.Connect the other end of the coax cable to splitter at the “INPUT” port, and two inside antennas' cables connect to the other side port.



3.Connect the other end of the coax cables to the panel antennas.



4.Plug in the power adaptor and connect it to the nearest power outlet (surge protector recommended).

Step5: Evaluate the Effects

- Now that the booster is up-and-running, re-test the signal strength inside your home at the same locations from Step 1. If the number is higher (dBm reading is closer to zero) than the original reading, your booster is working.
- If your signal is not stronger, check the LED lights on the booster and refer to the "Quick Troubleshooting" section at the end of the manual.

No	Location	Record(dBm)
1		
2		
3		
4		

Decibel Gain vs. Power Amplification/Distance/Coverage area

Decibel Gain	Power Amplification (times)	Distance Enhance (times)	Coverage Enhance (times)
6	4	2	4
10	10	3	9
20	100	8	64
30	1000	32	900

Note: Decibel Gain and Power Amplification may vary depending on the specifics of your situation. Different building materials and other obstructions in your home will result in different outcomes.

Step6: Finalizing Outdoor Antenna Installation

Once you have tested the performance of the signal booster and made all necessary adjustments, it's time to finalize the installation.

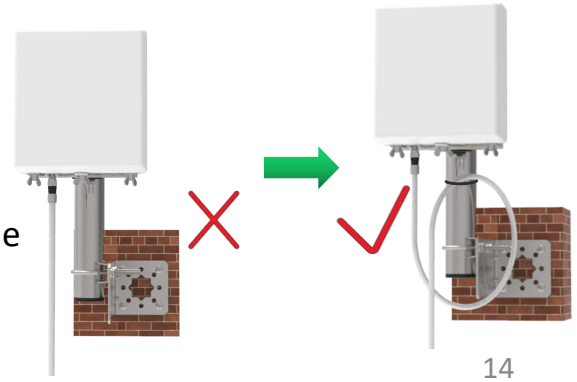
Outdoor Unit Installation

Make sure that the outside unit is mounted at least 3 feet away from any windows.
Option A/C : Outside Roof Pole Mount (Best Choice) Use an existing pole or the pole provided to mount the outdoor unit in the optimal signal location. Use the picture for reference.
Option B : Mounting on Side of Wall (Second Choice)

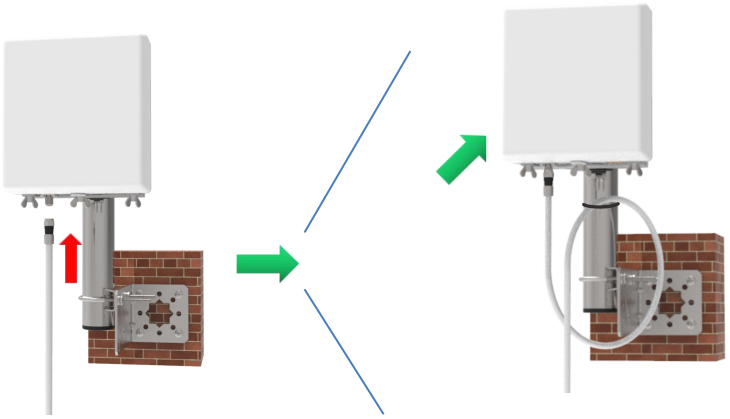
Caution

In particular, cables for outdoor locations must be fixed. Otherwise, the internal wires of the cable will be pulled off after the wind has been shaken for a long time. The system will fail completely.

⚠ As shown in the figure, it is best to have the cable around a single turn shape and then fix it.



Long-term rain or moisture erosion can damage the electrical characteristics of outdoor antenna connectors. Make sure connectors are well screwed in and seal the connectors with glued tape.

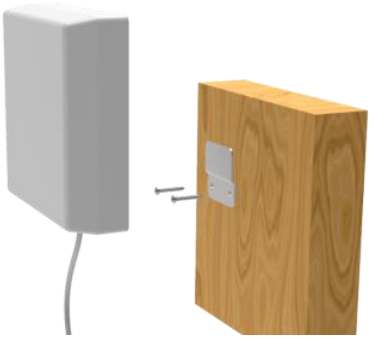


Step8: Finalizing Indoor Installation

a. Choose right position for the indoor antenna

- 10 inch away from facing any other metallic objects
- 20 inch away from any windows
- The inside antenna should be facing the location of the signal dead zone/weak signal area inside the building

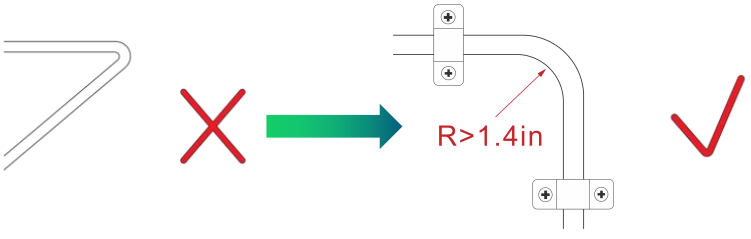
b. Mount the inside antenna



Step9: Finalizing and Securing Cable Route

- Find the best route for the cable. Follow the lines of your home to hide the cable in eaves or between the soffit and the exterior wall.
- If needed, cable clips can be purchased at most hardware stores.

- Whether the cable is properly secured is very important for the entire system. In most cases, the customer found that the booster did not work after working for a period of time because the cable was not installed securely.
- Carefully arrange the cable along the outside of the building and ensure that there are no folds or kinks. Fix the cable at each corner.



Caution

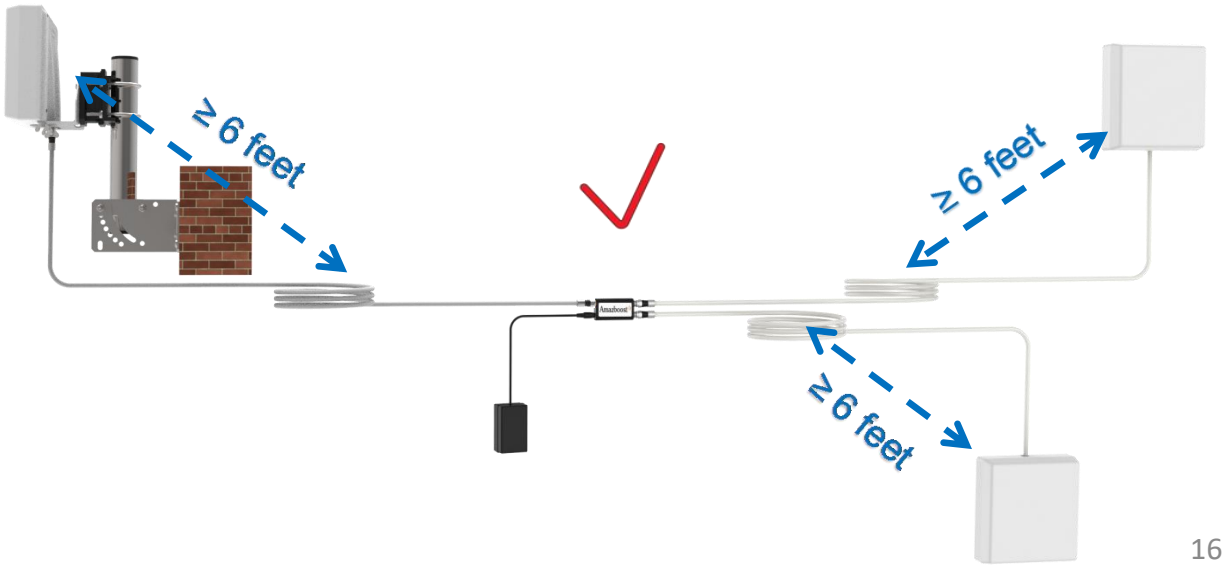
Seal and Fix the Connector

Secure the cable near the antenna to prevent cable damage caused by wind shaking

Properly Handle Excess Cables

If the coiled cable is too close to the antenna or booster, the system will be unstable. Make sure these coiled cables are more than 6 feet(2 meters) from the antenna or booster.

Make sure these excess coiled cables are more than 6 feet(2 meters) from the antennas or booster can make your system work more stable.



Quick Trouble shooting

Correct functioning:

- Power Light should be solid green

Power Light

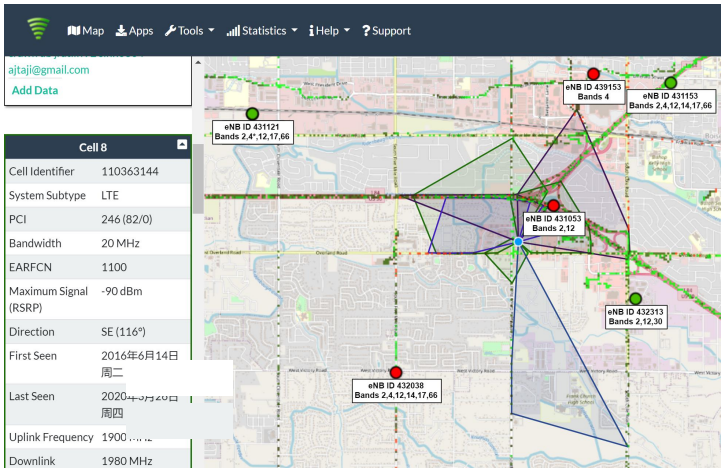
Trouble Shooting: No Signal Improvement

Step 1. Check power. Power Light is off. Please call our technical support number: **877-579-7878**

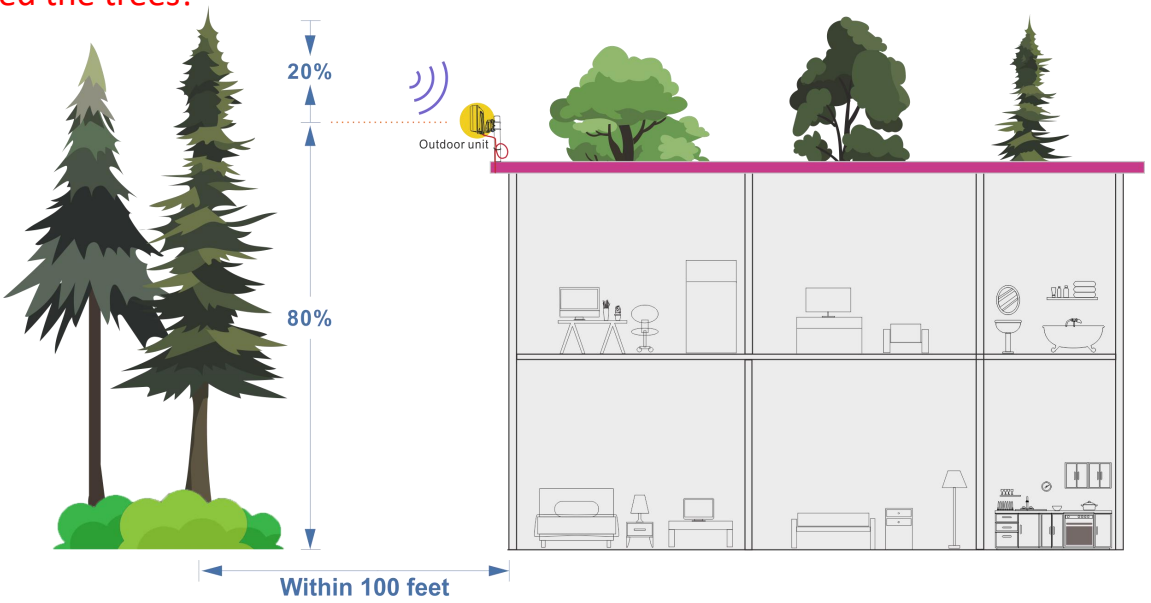
Step 2. Solid Red: the cable from the feeder to the outside unit is not connected properly. Ensure a secure connection on both ends, with no obvious kinks in the cable, and try again.

Step 3. Check incoming signal level at outdoor unit position. Usage of a booster is not recommend when the outdoor signal is less than -110dbm(3G/1x) or -120dBm(4G/LTE).

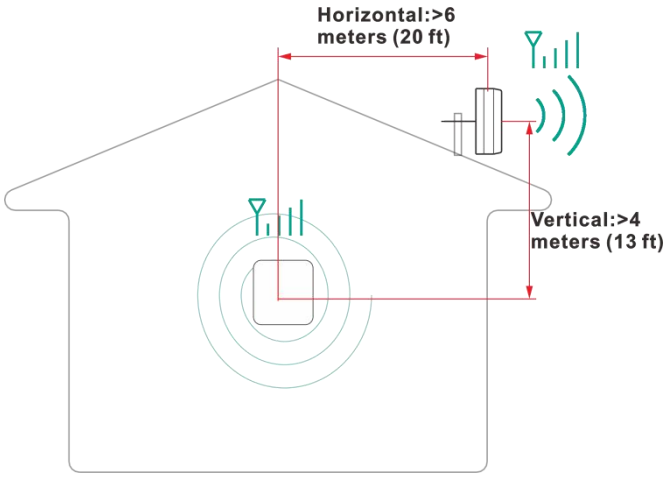
Step 4. Check your outdoor antenna direction is faceing the tower which coverage your house



Step 5. Trees will greatly attenuate wireless signals. If there are tall trees within 100 feet of the house. At the same time you can't find a stable signal above 3 bars, the outdoor antenna needs to be erected 60%(at least) to 80%(best) of the tree height. Never exceed the trees!



Step 6. Check distance between outdoor unit and indoor antenna. Make sure that the Minimum Separation Requirements have been met. Make sure that the outside antenna is not pointed towards the inside antenna.



Minimum Required Separation Distance Between Indoor and Outdoor Antenna:
Straight line distance over 30 feet(10 meters)
or
20 ft (6 meters) horizontal distance
13 ft (4 meters) vertical distance(As far as possible)

Technical Specification

Frequency (MHz)		LTE (band 12)	LTE (band 13)	Cellular (band5)	PCS (band 25/2)	AWS (band 4)
	Uplink	698-716	776-787	824-849	1850-1915	1710-1755
	Downlink	728-746	746-757	869-894	1930-1995	2110-2155
Gain	Uplink	62	62	62	65	65
	Downlink	65	65	65	68	68
Output power	23dBm(Uplink)/6dBm(Downlink)					
Noise figure	<5dB					
In-band Flatness	<9dB					
Weight	0.65Kg					
EIRP	1W					
Impedance	50 ohm					
Operating temperature	5℉ to 140℉ (-15℃~60 ℃)					
Current	≦1.5A(12V DC)					
Dimension(mm/in)	158*125*25/6.2*4.87*0.98					

WARRANTY

The Booster is covered under a three-year product warranty for failures or defects that result from craftsmanship and/or materials. Dated proof of purchase should be retained for use in warranty cases. Contact the retailer/reseller directly with any warranty issues, or alternatively contact the manufacturer in cases where the reseller is no longer available to handle warranty claims. In cases where the reseller is unavailable, the product may be returned to the manufacturer at the consumer's expense, with a dated proof of purchase and a return authorization letter which can be attained by contacting Amazboost.

This warranty does not apply to any signal booster components determined by Amazboost to have been subjected to misuse, abuse, neglect, tampering, or mishandling that result in damages to the physical or electronic properties of the product. Refurbished products that have been recertified to conform to product specifications may be used for product replacements.

DISCLAIMER: The information provided by Amazboost is believed to be complete and accurate, to the best of our knowledge. However, no responsibility is assumed by Amazboost for any business or personal losses arising from the use of the information herein contained, or for any infringements of patents or other rights of third parties that may result from its use.

To uphold network protection standards and ensure compliance, all active cellular devices must maintain a separation distance of at least six feet between the inside unit antenna and outside unit antenna and at least four feet of separation distance from the inside unit. Use only the power supply provided in this package. Use of a non-SolidRF product or accessory may result in damage to the equipment or components of the equipment. The inside unit is designed for use in an indoor, temperature-controlled environment (less than 100 degrees Fahrenheit). It is not intended for use in attics or similar locations where temperatures may be in excess of that range.

RF Safety Warning: Any antenna used with this device must be located at least 8 inches from all persons.

This is a CONSUMER device

BEFORE USE, you **MUST REGISTER THIS DEVICE** with your wireless provider and have your provider's consent. Most wireless providers consent to the use of signal boosters. Some providers may not consent to the use of this device on their network. If you are unsure, contact your provider.

In Canada, **BEFORE USE** you must meet all requirements set out in ISED CPC-2-1-05. You **MUST** operate this device with approved antennas and cables as specified by the manufacturer. Antennas **MUST** be installed at least 20 cm (8 inches) from (i.e., **MUST NOT** be installed within 20 cm of) any person.

You **MUST** cease operating this device immediately if requested by the FCC (or ISED in Canada) or licensed wireless service provider.

WARNING. E911 location information may not be provided or may be inaccurate for calls served by using this device.

This device complies with Part 15 of FCC rules. Operation is subject to 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. Changes or modifications not expressly approved by SolidRF could void the authority to operate this equipment.

FOR MORE INFORMATION ON REGISTERING YOUR SIGNAL BOOSTER WITH YOUR WIRELESS PROVIDER, PLEASE SEE BELOW:

Sprint https://www.t-mobile.com/support/coverage/register-a-signal-booster
T-Mobile/MetroPCS: https://www.t-mobile.com/support/coverage/register-a-signal-booster
Verizon Wireless: https://www.verizon.com/solutions-and-services/accessories/register-signal-booster/
AT&T: https://securec45.securewebsession.com/attsignalbooster.com/
U.S. Cellular: https://www.uscellular.com/support/fcc-booster-registration

If you have any questions or concerns when installing or operating your cell phone booster, please email us at

US: **Support@SolidRFINC.com**
Canada: **Support@SolidRF.ca**
Or call our customer service number
Office **(435) 319-6858**
Toll Free **(877) 579-7878**