



E2M Cell Phone Signal Booster Manual



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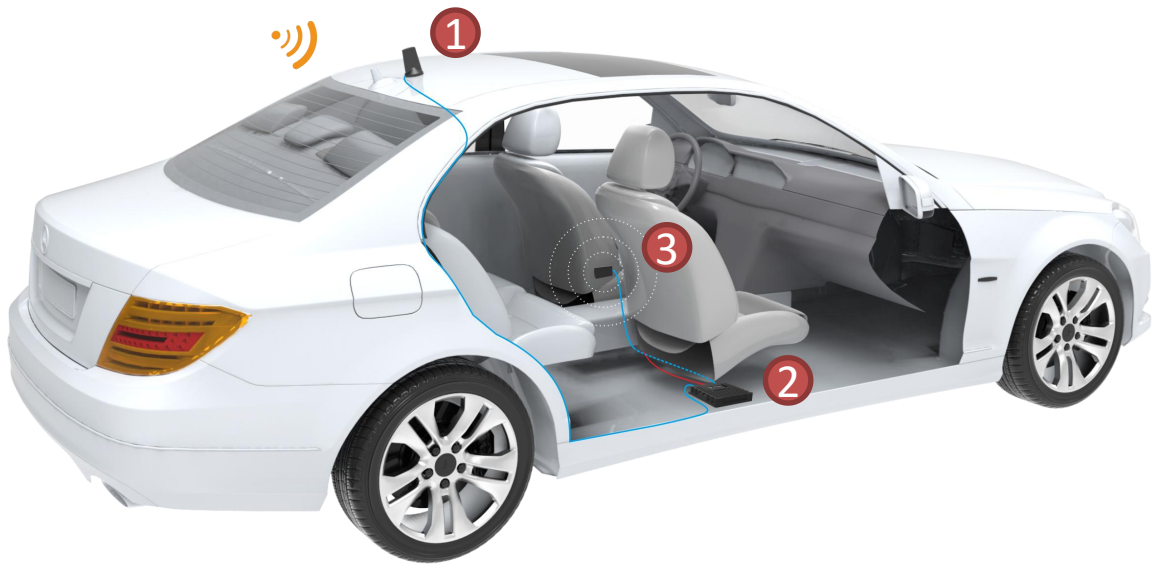
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1. The outside antenna catches the signal from the tower, transmit it through a coax cable into the booster.
2. Booster amplifies the signal and then transmit it through a coax cable to the inside antenna.
3. The inside antenna rebroadcasts the signal inside 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 outside antenna.
2. Distance of **separation** between the outside antenna and the inside antenna.

Package Contents

The kit includes the following items:

1. Booster;
2. Inside Antenna;
3. Power Adaptor;
4. Outside Antenna;



Booster



Inside Antenna

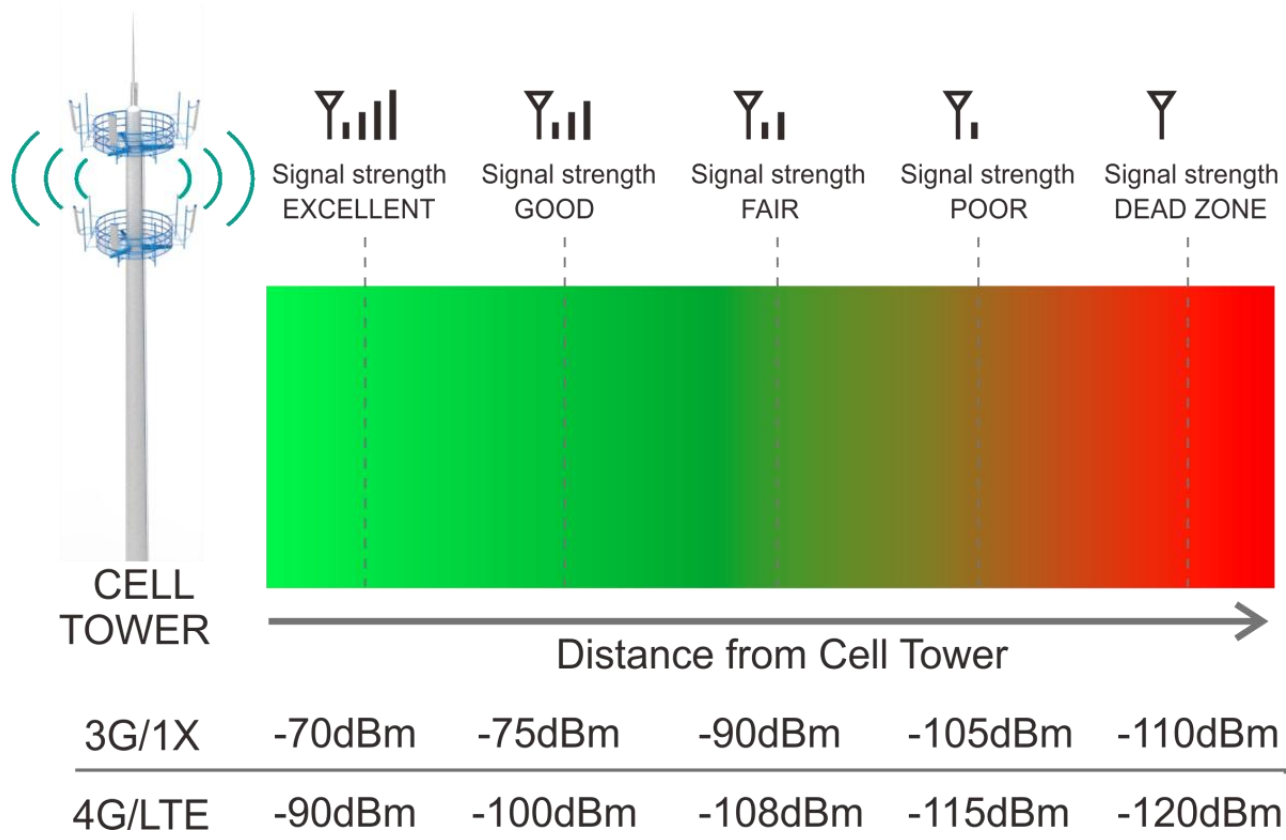


Power adaptor



Outside Antenna

Signal transmission loss and power level



Coverage area ability

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

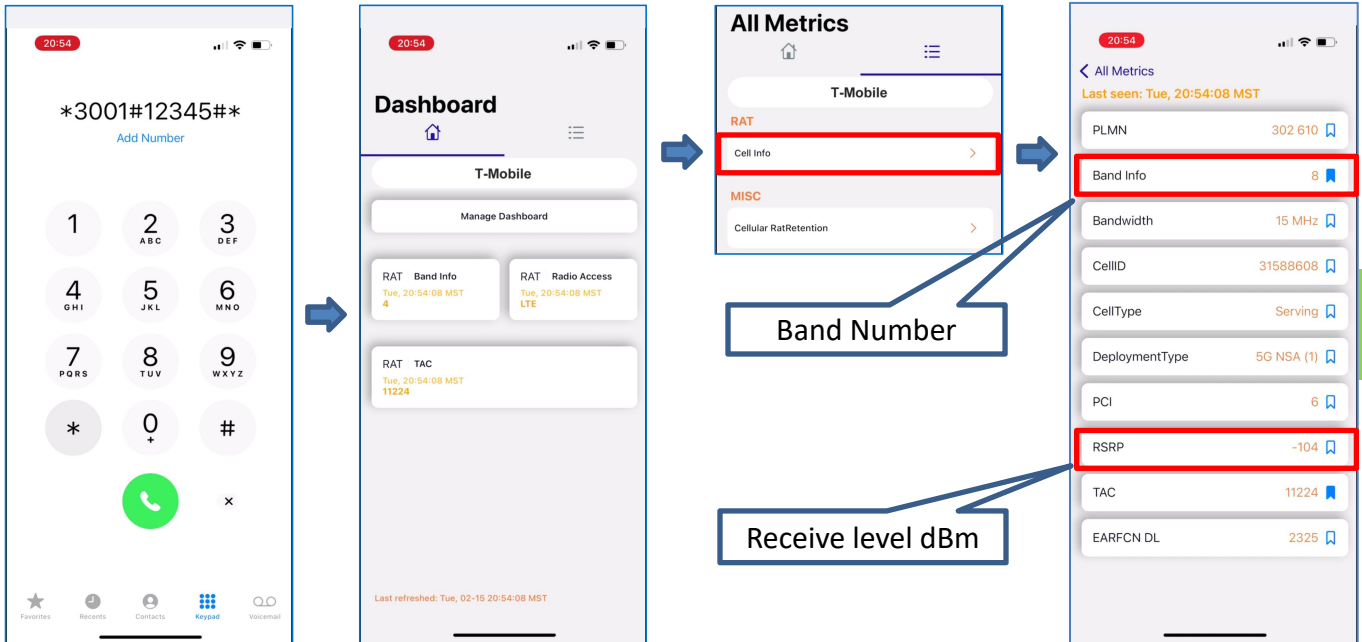
Power Level at the outside Antenna Location	Main Antenna Coverage Area (radius around antenna)
Strong (5 bars on the cellphone)	8 ft
Medium (3~4 bars on the cellphone)	4 ft
Weak (1~2 bars on the cellphone)	2 ft

Find The dBm Reading And Band Number On Your Phone

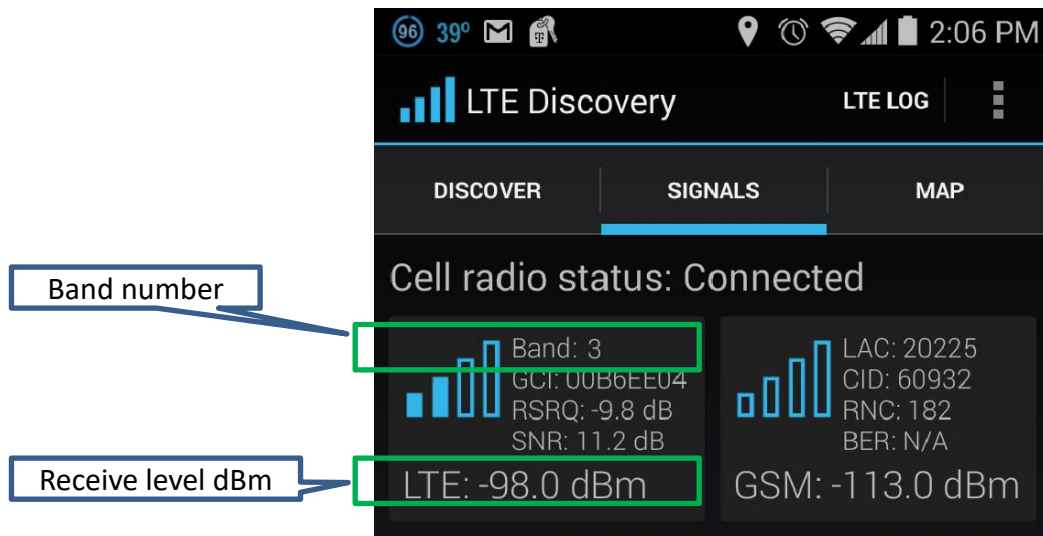
Having an accurate measurement of signal strength in decibels (dBm) is crucial when installing your system. Decibels accurately measure the signal strength you are receiving.

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.

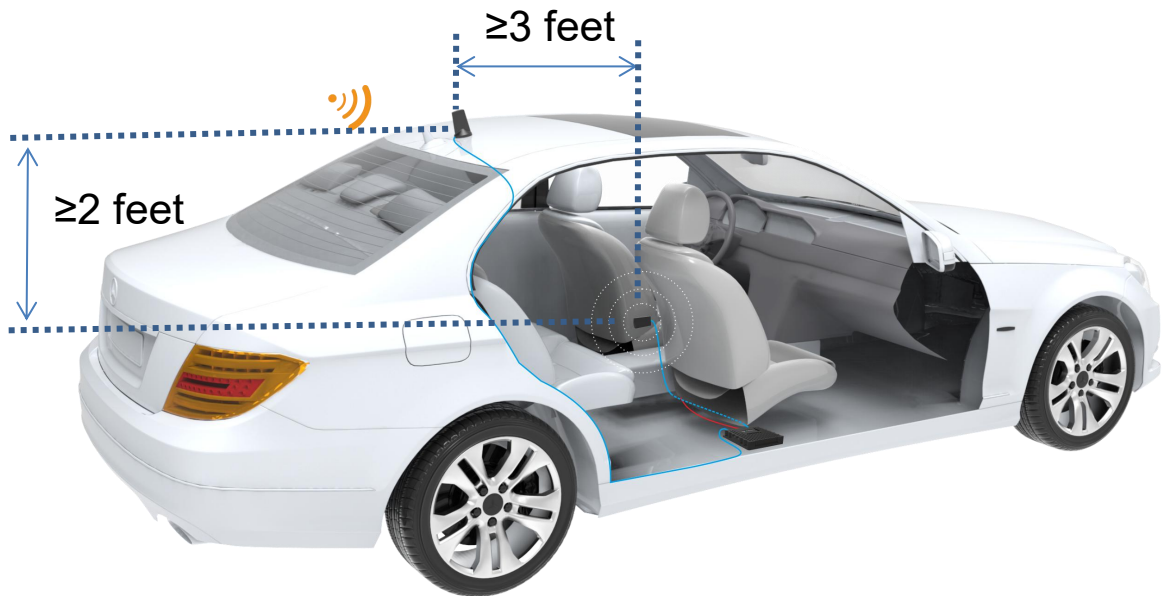
iPhone: dial *3001#12345#* then press call



Android: download third part APP-LTE Discovery



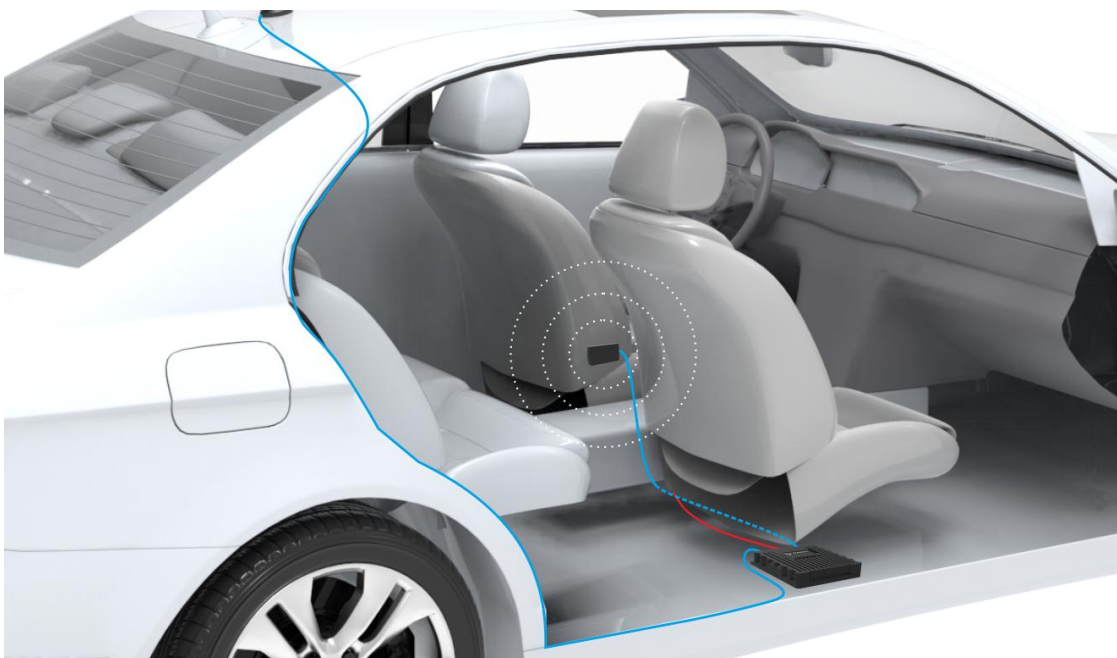
Step1: Study your vehicle and make a installation planning



In order to achieve the best signal coverage effect, there is a certain distance requirement between the inside antenna and outside antenna. Make sure that the outside antenna is horizontally attached to the roof and the inside antenna is parallel to the horizontal plane.

First determine the location of the inside antenna. It should be the place you use your cell phone signal most of the time.

NOTE: It is suggested that the inside antenna should be placed at the lower side of the driver's seat, so as to maximize the distance from the outside antenna. Be sure it's in a location that the cable can reach.



Step 2: Find position for outside antenna

Then choose the location of the outside antenna. It should be rear on the roof, has the most distance from the inside antenna location. Also need consider how the route the cable inside. We suggest the installation location with green identification, please refer to

Car



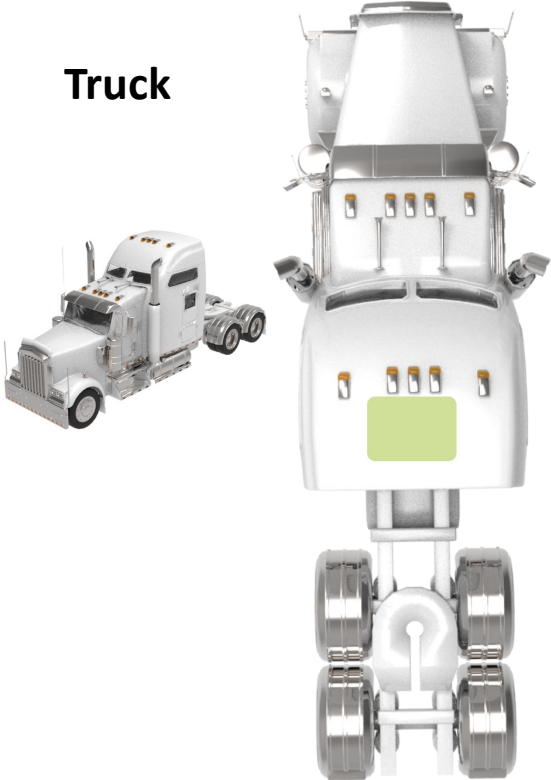
SUV



VAN



Truck



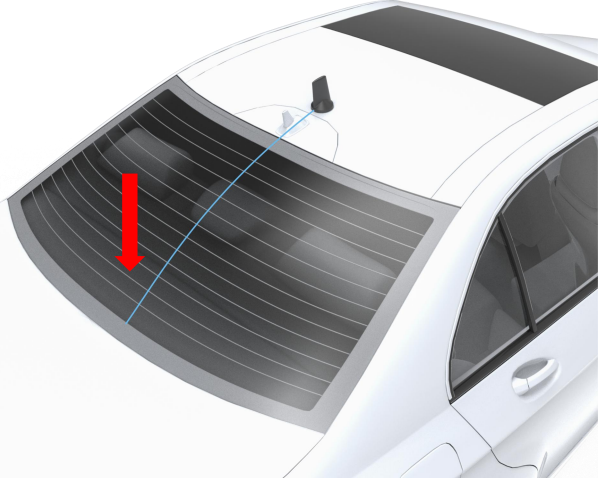
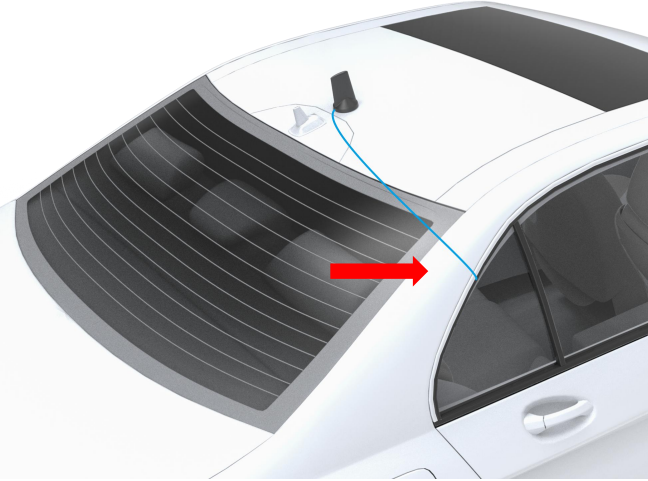
Step3: Outside Antenna Installation

Determine where you want to have the outside antenna on your vehicle. Same time you need determine where you want the cable to enter the vehicle.

NOTE: With two options

Option A: Enter the car through the back door

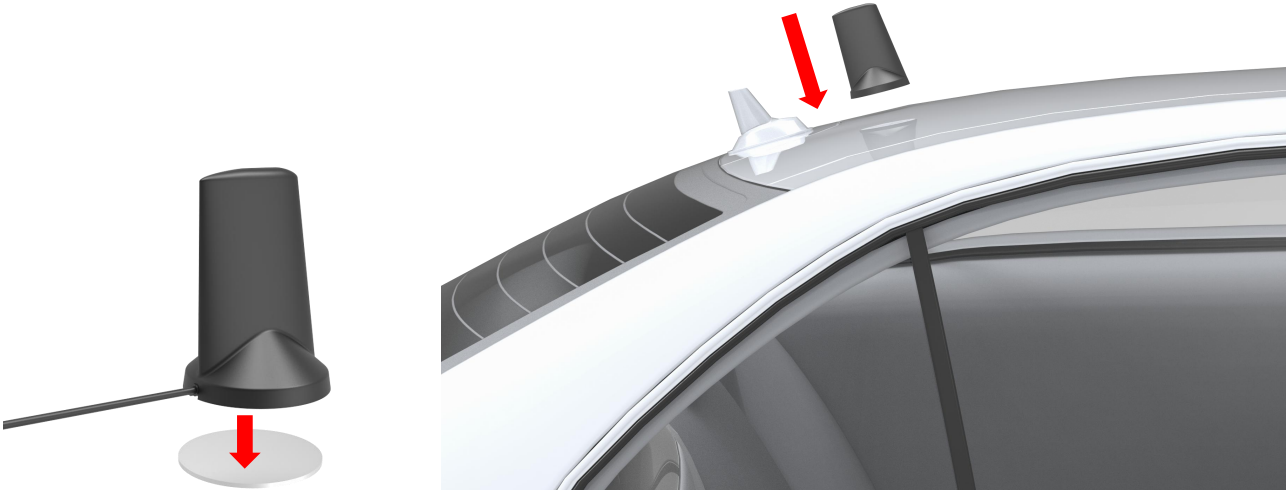
Option B: Enter the car through the trunk and pass through the rear seats



There is a powerful magnet at the bottom of the outside antenna, which can attract the device to the surface of ferrous materials.

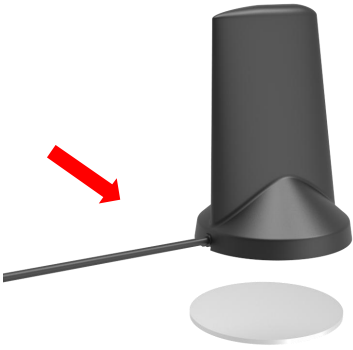
Make sure that the outside antenna is horizontally attached to the roof.

If the roof is not made of iron, please stick the iron sticker supplied by us on the roof.



Step4: Inside Antenna Installation

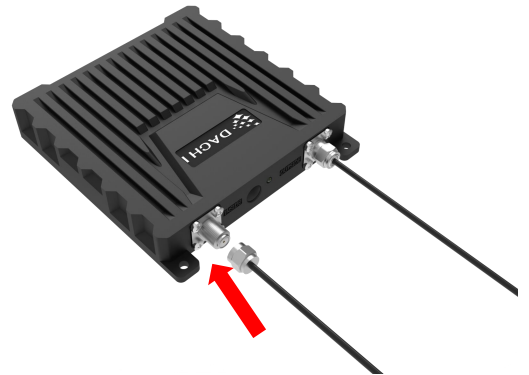
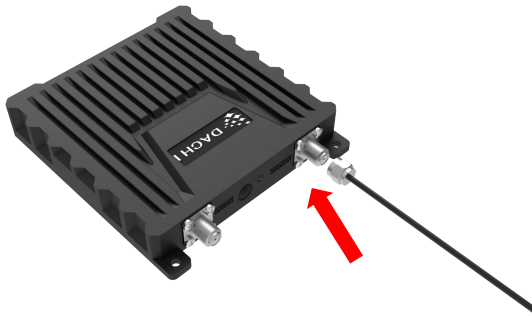
There are 2 powerful velcro at the bottom of the inside antenna, which can attract the antenna to the side of seat.



Note: Make sure that the inside antenna is parallel to the horizontal plane

Step5: Connect the System

1. Connect the outside antenna cable to the booster at the "OUTSIDE" port.
2. Connect the inside antenna cable to the booster at the "INSIDE" port.



3. Plug in the power adaptor and connect it to the nearest power outlet.



Step6: Evaluate the Effects

- Now that all of the components of the booster are in place, and the booster is powered on, it's time to check the performance. If everything checks out, return to steps 2 and 3 to finalize installation. Here's what you should look for:
 - 1.) Run a signal strength/speed check. Test the signal strength with the booster off, then re-test the signal in the same location after you plug-in the power supply. You should have a stronger signal. You can access the signal strength through the settings menu of your phone (a negative number in dBm) or download a speed test App. Remember that a stronger signal means the dBm is closer to zero.
 - 2.) When you plug-in the power adaptor, the booster runs a self-diagnostic as it powers on. Use the LED light on the panel to interpret the results. If everything is connected properly, and there is an adequate power supply, the LED light should flash 1 second and then go off.
- If something is wrong, refer to the "Quick Troubleshooting" section at the end of the manual. Otherwise, finalize the installation. Happy boosting, happy trails!

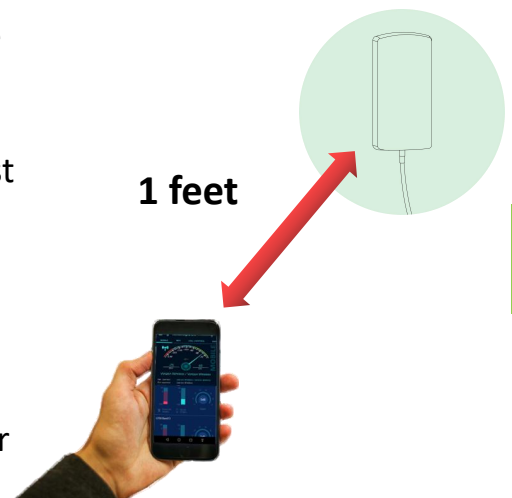
How to visually confirm that your installation is effective and correct?

At a distance of 1 feet from the indoor antenna, test the signal strength without obstruction. If this test result is 15~20db higher than your test result at the outdoor antenna position, then your system has reached the best effect.

For example, you test a signal of -90dbm at 1 feet away from the indoor antenna. Your outside antenna position record is -105dbm. So the improvement is:

$$-90\text{dbm} - (-105\text{dbm}) = 15\text{db}$$

If your results do not reach this range, please check your installation or contact us.

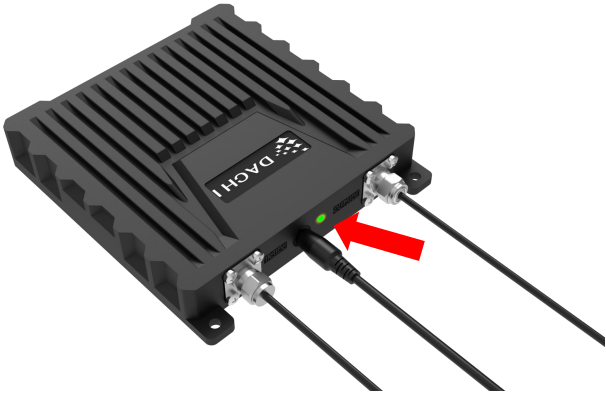


Note1: In daily life, the signal dbm readings of our mobile phones range from -70dbm to -120dbm. Because it is a negative number, the smaller the number, the greater the signal strength.

Note2: In the case of no problems with the installation, the strength of the indoor signal depends entirely on the strength of the outdoor signal.

Trouble Shooting: No Signal Improvement

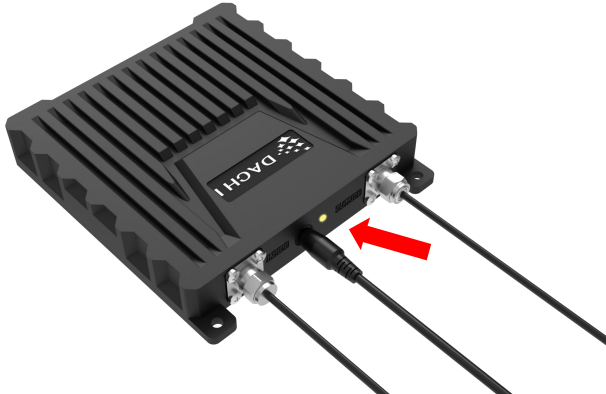
Step 1. Check power. Ensure the indoor unit is plugged in and the LED Power Light is green.



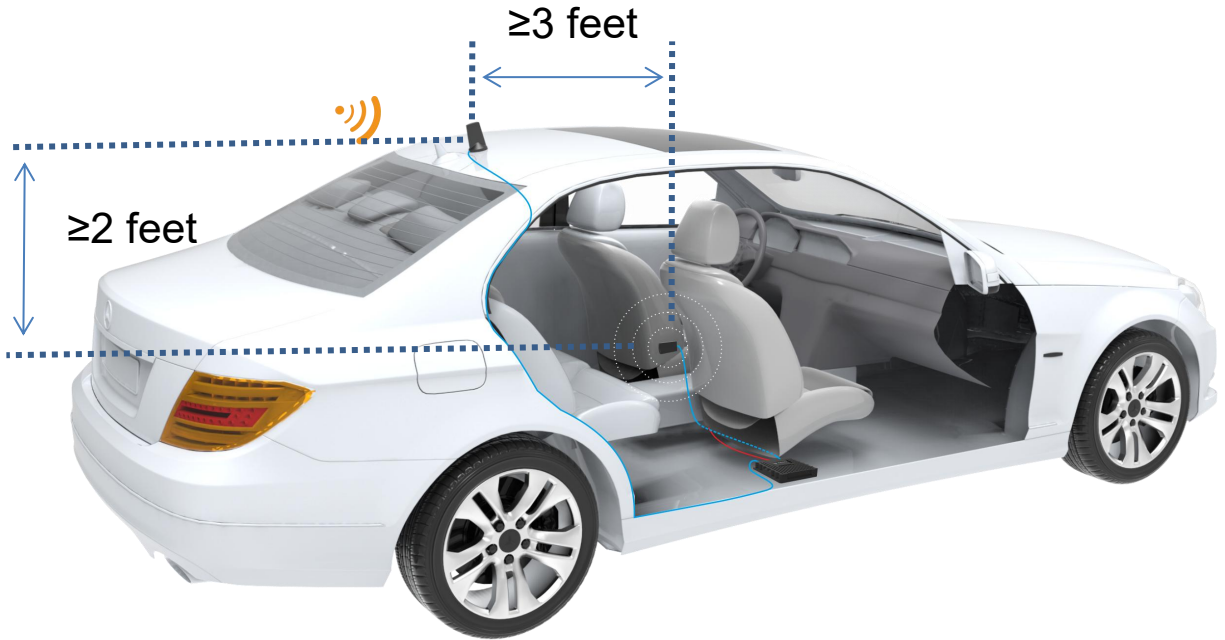
Step 2. Check incoming signal level at outdoor antenna position. Usage of a booster is not recommend when the outside signal is less than -110dbm(3G/1x) or -120dBm(4G/LTE).



Step 3. If any of the lights on the front panel are flashing in orange then off/continue flashing/solid orange, it means that self oscillation is occurring. You must switch off the booster and check the outside and inside antennas' seperation immediately. Make sure that the Minimum Separation Requirements have been met.



Horizontal distance: 3 ft (1 meters), Vertical distance: 2 ft (0.6 meters)



Technical Specification

Frequency (MHz)		GSM/4G/LTE (band 8)900	DCS/4G/LTE (band 3)1800	WCDMA (band1)2100
	Uplink		880-915	1710-1785
Downlink		925-960	1805-1880	2110-2170
Maximum Gain	50dB			
Output power	20dBm(Uplink)/10±2dBm(Downlink)			
Impedance	50 ohm			
In-band Flatness	<9dB			
Weight	0.42Kg			
EIRP	1W Max			
Operating temperature	5°F to 140°F (-15°C~60 °C)			
Current	≤3A(5V DC)			
Dimension(mm/in)	121*121*22/4.76*4.76*0.87			



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 Dach.

This warranty does not apply to any signal booster components determined by Dach 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.

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

Contact: dachiservice@outlook.com

Or call our customer service number

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