

Cell Phone Signal Booster

User Manual

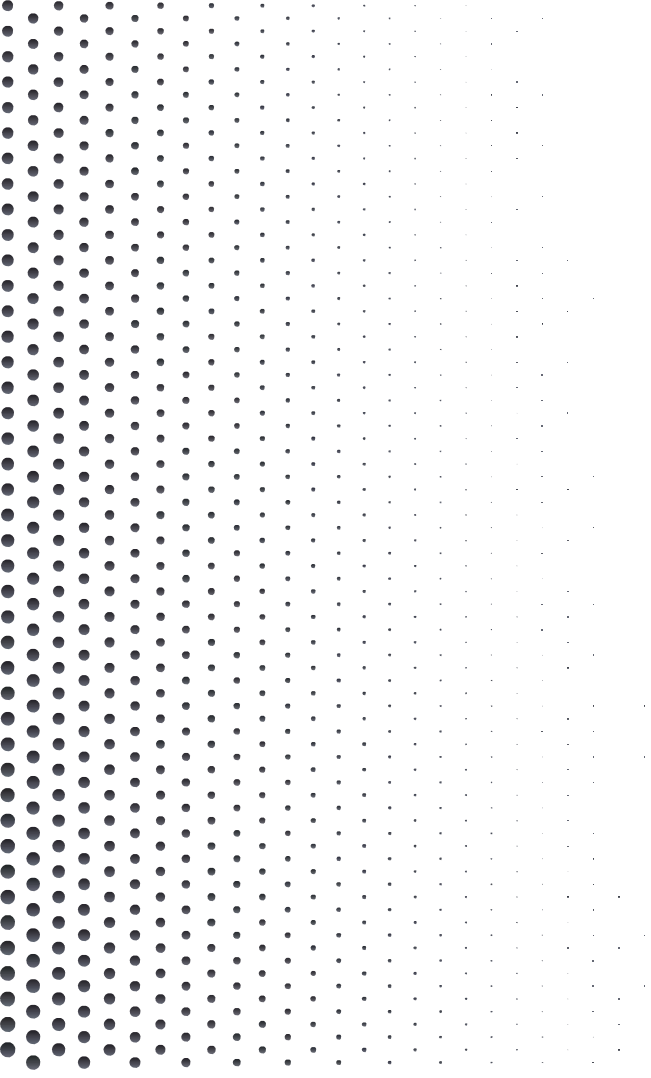


Solve signal problems and improve quality of life

Email: support@tecmad.com

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CATALOG



● INTRODUCTION	1
● WHAT IS INCLUDED FOR THE KIT	2
● SPECIFICATIONS	3
● HOW IT WORKS	4
● LCD FEATURES	5
● HOW TO INSTALL YOUR SIGNAL BOOSTER	6
● INSTALLATION PREPARATION	7
● INSTALL OUTDOOR ANTENNA	8
● INSTALL INDOOR ANTENNA	9
● INSTALL SIGNAL BOOSTER	10
● FCC /IC STATEMENT	11
● PRODUCT WARRANTY	12

INTRODUCTION



This series booster is a newly designed signal boosters with intelligent functions, And it has been sold offline for a very long time and has won unanimous praise from customers. It can enhance indoor signal, such as voice, data in home and office etc, so as to reduce the problem of call interruption, poor signal, can help improve voice quality, faster internet speed and wider coverage.

It also has an advanced set of technical features, will give you the ultimate control over your signal quality. With Good Looking and high quality LCD touch screen, Wireless connects multiple devices, Automatic gain control, this booster has strong anti-interference, low noise characteristic, it can cover up to 4000sq.ft coverage, Works on bands 12/13/5/ 2/4, Support all US and Canadian carriers of AT&T, Verizon, T-Mobile, Sprint, Straight Talk, U.S. Cellular, etc. Cover 2G, 3G, 4G LTE, and 5G compatible.

The booster introduces the features from the consumer electronic device, which could support the operation via LCD touch screen in the front panel. Also it has many intelligent function, such as antenna isolation detection, input&output signal strength indication, central frequency display and setting, smart functions.

See the Signal Booster
Kit detailed introduction listed below:



Booster



Outside antenna



Outside cable



Indoor antenna

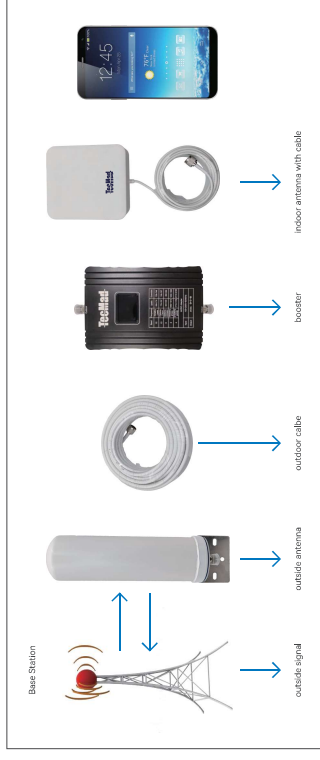


Accessories



Adapter

HOW IT WORKS



Working Principle:

Outside Signal: Receive the signal from the outdoor base station signal tower

Outdoor Antenna Gain: The gain of outdoor antenna

Outdoor Cable Loss: The loss of the outdoor cable

Booster Gain: The actual working gain of the booster

Indoor Cable Loss: The loss of the indoor cable

Indoor Antenna Gain: The gain of indoor antenna

For example:

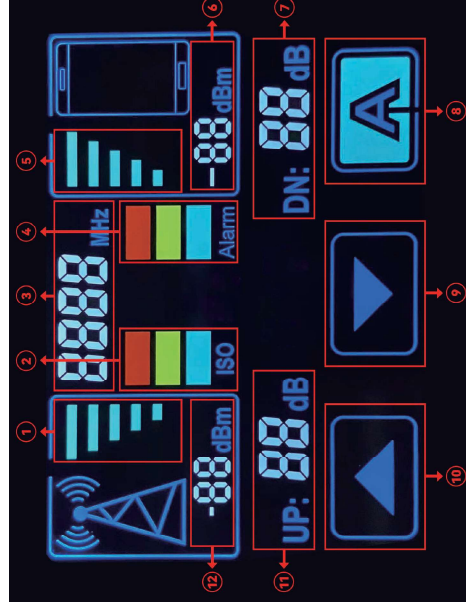
-65dBm + 6dBi - 5dB + 70dB - 3dB + 6dBi = 9dBm (System Output Power)

Tips: The user guide is focused on:

1. Getting the best outside signal.
2. Keeping the maximum booster gain.

Electrical specification		Uplink	Downlink
Frequency Range (700~850+1900+ 1700/2100Mhz)	LTE(A&B)	698~ 716 MHz	728 ~746 MHz
	LTE (C)	777~ 787MHz	746 ~756 MHz
	CDMA	824~849 MHz	869~894MHz
	PCS	1850 ~ 1910 MHz	1930 ~ 1990MHz
	AWS	1710~ 1755 MHz	2110 ~ 2155 MHz
Max Output Power		≥17dBm	≤17dBm
Band width		Wide Band	
Automatic Level Control		≥ 30dB	
MGC function		≥ 31dB/1dB step	
	9KHz~1GHz	≤ -19dBm	≤ -19dBm
Intermodulation Products	1GHz~12.75GHz	≤ -19dBm	≤ -19dBm
	9KHz~1GHz		≤ -36dBm
Spurious Emission	1GHz~12.75GHz		≤ -30dBm
Gain Flatness		≤8dB	
Noise Figure		≤6dB	
VSWR		≤2	
Group Delay		≤ 1.0μs	
Frequency stability		≤ 0.01ppm	
LED Alarm		Standard	
Power LED		Power Indicator	
ALC LED		Orange @ ALC 1~5dB, Red @ ALC15dB~20dB,	
Mechanical Specifications		Standard	
I/O Port		N-Female	
Impedance		50 ohm	
Operating Temperature		-25°C~+55°C	
Environment Conditions		IP40	
Dimensions		240*140*35mm/9.5*5.5*1.4inch	
Weight		≤2.26kg/5.0Lbs	
Power Supply		Input AC100~240V,output DC9V/3A	
Kit Including:			
Cell Phone Signal Booster*1			
5G Indoor Panel Antenna with 32ft cable*1			
Outdoor omnidirectional antenna*1			
50ft Cable 4DB*1			

LCD FEATURES:



- ① signal intensity
- ② isolation condition:
Green color: normal
Orange: weak self-excitation
Red: strict self-excitation
- ③ work frequency band, this position can be touched to switch the frequency.
- ④ overpower alarm status display:
Green: AGC normal
Orange: AGC works in the range of 1-15dB
Red: AGC works alarm overpower 15dB.
- ⑤ Outdoor output signal
- ⑥ the booster output signal strength.
- ⑦ downlink gain
- ⑧ Touch function(Smart Mode)
- ⑨ Press the inverted triangle to set up and decrease the gain
- ⑩ Press the triangle button to set up and increase the gain
- ⑪ uplink gain
- ⑫ the booster input signal strength.

HOW TO INSTALL YOUR SIGNAL BOOSTER



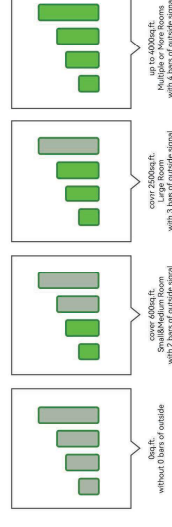
This user manual will help you properly install your signal booster kit.

It is important to read through all of the installation steps before installing your equipment.

Thoroughly read through the instructions, visualize where all the equipment will need to be installed and do a soft installation by placing the devices where they need to be before mounting any equipment.



Note: The booster requires 1-2bars reliable signal outdoor, we recommend you to test your signals outdoor on your mobile phone before purchasing.
Here are the effects of different signals for your reference.



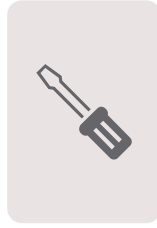
Installation Overview



- Step 1.** Find the outside area with the strongest signal.
- Step 2.** Install the outside antenna on the roof to obtain the strongest downlink signal from the local cellular towers. It should also be as far away as possible from where you plan to place the indoor antenna.
- Step 3.** Install the indoor antennas where you want to improve the signal level.
- Step 4.** Mount the boost; connect the cables from the outdoor antenna and indoor antenna at the designated ports, or place the Flare on a table or desktop, center of the area where signal is needed.
- Step 5.** Connect the booster to an AC power source.
(make sure all the cables are connected tightly before applying power)

There are **tools required before installation as follows FYI:**

Tools Required



Phillips Screwdriver



Drill



Mobile Phone

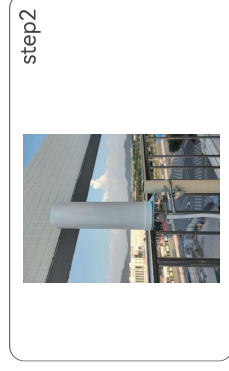
1.1 Install Outdoor Antenna

IMPORTANT: Testing the signal 3 times in the desired location before installing the outdoor antenna will help ensure the clearest and most stable signal for phone calls and data transmission.

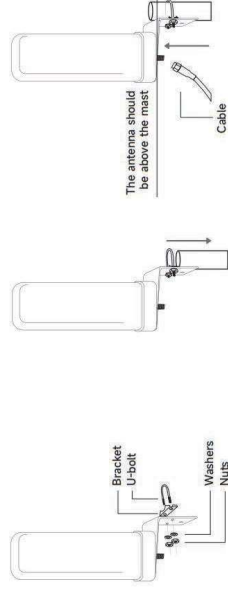
Installation Method 1:



step1



step2



Using the hardware provided, mount the outside antenna as high as possible, allowing for a minimum 25 feet from the planned location of the booster.

The Omni Antenna receives and sends signals in a 360-degree radius.

Mount the antenna at the highest possible elevation and in an upright position.

This Supplied hardware allows for surface or pole mounting.

Mount antenna to a vertical surface:

1. Find a position where could receive great signal, mostly a higher position, like at rooftop.
2. Place the antenna base and clip to the pole
3. The U-bolt passes through the pole clamp and the antenna and is inserted into the hole
4. Flat piece through screw
5. Reed through screw
6. Thread the nut through the screw and tighten
7. Connect antenna to one end of the provided cable and tighten the connection.
Run the cable along route to planned location of your booster.

Installation Method 2:



step1



step2



step3

After identifying the areas with the strongest signal, select the surface on which to mount the outside antenna.

1. Find a good location and drive the expansion pipe into the wall
2. Then align the antenna L-bracket with the expansion tube, screw in the screws and fix it
3. Connect antenna to one end of the provided cable and tighten the connection. Run the cable along route to planned location of your booster.

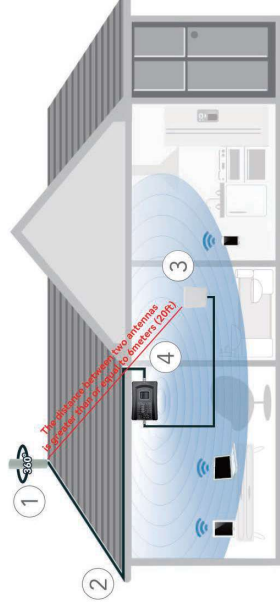
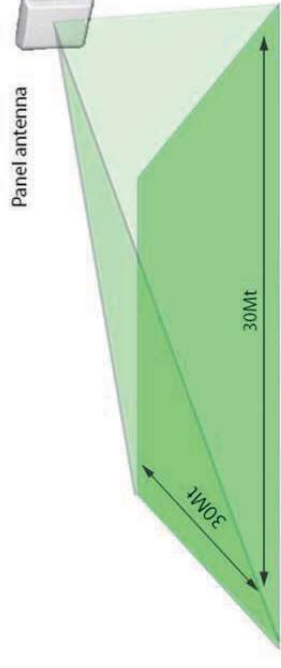
1.2 Install Indoor Antenna

Select a place on a wall in the area where you need better reception. Mount the indoor antenna with the included screws as shown in the figure below.

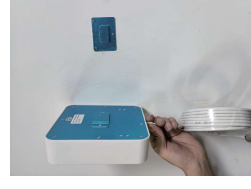
1. Find the proper location for indoor antenna
2. Fix the indoor wall-mounted pinch plate to the wall with screws
3. Then install the support bracket on the back of the antenna directly on the buckle plate
4. And then connect the booster

Tips:

- A. The Inside Panel Antenna should be facing the area signal is needed and away from the outdoor antenna
- B. Radiation shall be good enough to cover whole space
- C. Loop back shall be avoided



step1



step2



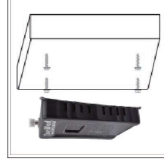
step3

1.2 Install your signal booster

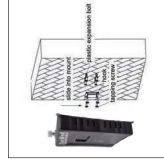
Place the booster in a central location where signal is needed and at least 50ft. from the outdoor antenna location. And the signal booster should be mounted in an easily accessible area so it's easy to perform general maintenance. The optimal area would be on a wall located near a power outlet. Mount the booster with the included screws as shown in the figure below.

The booster will be installed in two ways

1. Fix the four corners with screws and install it on the wall



2. Hang it on the wall with the back buckle



3. Connect the cable of the indoor antenna to the port on the side of the booster silk-printed INDOOR

4. Route the cable from the outside antenna inside and connect it to the port on the booster silk-printed OUTDOOR

5. Connect the power adapter cord to the signal booster and plug into the power outlet. The LCD Screen will light and functioning properly

Note:

1. Do NOT connect the power adapter to the Signal Booster until you have connected both the Inside and Outside Antennas.

2. The booster case may become warm during operation, this is normal, please don't worry.

FCC Certification:

Power listed is conducted at antenna terminals. The antennas used with the signal booster must be installed to provide a separation distance of at least 20cm from all persons. Users and installers must be provided with the antenna kitting and installation and operating instructions and conditions for satisfying RF exposure and Section 20.21(a) compliance.

This Wideband Consumer Signal Booster is authorized only for operation by and marketing to members of the general public for their personal use in accordance with the requirements of Sections 20.21(a)(7) and 20.21(g). This device is a Wideband Fixed Consumer Signal Booster approved for operating with the coverage/server antenna installed at a fixed location inside a building. The installation height of the antenna for AWS band (1700/2100 MHz) operations is limited to 10 meters above ground for compliance with Section 27.50.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Warning

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.

You **MUST** operate this device with approved antenna and cables as specified by the manufacturer. Antennas **MUST** be installed at least 20cm (8 inches) from any person. You **MUST** cease operating this device immediately if requested by the FCC or a licensed wireless service provider.

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

This device may be operated **ONLY** in a fixed location for in-building use.

Warning: The Inside Antennas for fixed installations must have 6 feet of separation distance from all active users. Warning: The Outdoor Antennas for fixed installations must be installed to comply with the 10 meter above ground maximum antenna height limitation.

End users must use the authorized antennas, cables, and/or coupling devices specified in the manual for satisfying FCC compliance.

FURTHER INFORMATION ON SIGNAL BOOSTER END-USE REGISTRATION .

A subscriber must have the consent of a wireless-services provider to operate a Consumer Signal Booster. Subscribers may obtain provider consent in a variety of ways. For example, AT&T, Sprint, T-Mobile, and Verizon Wireless have voluntarily committed to allow their subscribers to use properly certificated Consumer Signal Boosters (i.e., boosters that meet the new rules) on their networks. Also, a signal booster manufacturer could seek authorization for use of a particular booster model on behalf of all subscribers of specific providers. Alternatively, a provider may specify a testing protocol that if satisfied would result in licensee consent to specific booster models. A subscriber may also seek a licensee's express consent to operate a signal booster, e.g., by phone call or e-mail.[R11]

Public Notice DA 16-137 [R28] gives listings of Consumer Boosters that have received FCC certification as of February 2, 2016.

The following selected information about wireless providers' Consumer Booster registration mechanisms supplements the requirements and information given in Sections 20.21, 22.9, 24.9, 27.9, and the FCC Signal Boosters website (<http://wireless.fcc.gov/signal-boosters/>).

- 1.Sprint Nextel will allow consumers to register their signal boosters by calling their toll-free number. They have already trained their calling center and have designated an engineer to handle inquiries. They may eventually allow consumers to register on their website but they want to gauge how the process works via phone first.
- 2.T-Mobile online registration link: (www.T-Mobile.com/BoosterRegistration); (<https://sagat.t-mobile.com/sites/SignalBooster#>).
- 3.Verizon's online registration link: (<http://www.verizonwireless.com/wcms/consumer/register-signal-booster.html>).
- 4.AT&T will allow online registration and will inform OET Lab with the weblink when it is ready.
- 5.U.S.Cellular(<http://www.uscellular.com/uscellular/support/fcc-booster-registration.jsp>).



PRODUCT WARRANTY

30-Day Money-Back: All boosters are protected by a 30-day money-back guarantee. If for any reason the performance of any product is not acceptable, the product may be returned to the reseller with a dated proof of purchase.

3-Year Warranty boosters and kits are warranted for 3 years. Products returned by customers must be in their original, un-modified condition, shipped in the original or protective packaging with proof-of-purchase documentation enclosed, and a Return Merchandise Authorization (RMA) number printed clearly on the outside of the shipping container.