Installation Guide
Mate Plus Series----

4K/10K Mate Plus

Package Contents

Signal Booster

Outside Antenna

Outdoor Cable
49.2 ft NM-SMAM

Outdoor Cable
16.4ft SMAF-SMAM

Power Supply

Accessories for main parts
are all provided

waterproof tape
to protect connections

Through-Window Cable
SMA-Male to SMA-Female
(No drilled hole)

Booster Light Patterns

LIGHT	INDICATION	
Blue	Band works correctly with maximum allowable gain	
Yellow	Band gain reduction because of a slight loopback condition	
Red	1. Band has been shut down because of a strong loopback condition	
	2. Band has been shut down because of an overload condition	
Gray	Band has been disabled	
Bluetooth	Slow Flashing Green	Bluetooth Disconnected
	Quick Flashing Green	Bluetooth Connected
Wi-Fi	Solid Green	Wi-Fi Disconnected
	Slow Flashing Green	Wi-Fi Connected

Bands contained in the Gauges

Gauge	Band	Uplink	Downlink
LTE700	12/17	698-716MHz	728-746MHz
	13	776-787MHz	746-757MHz
CELL800	5	824-849MHz	869-894MHz
PCS1900	25/2	1850-1915MHz	1930-1995MHz
AWS2100	4	1710-1755MHz	2110-2155MHz

Please focus on the gauge that contains the band you are using.

Getting Started

Step 1 Connect the Power Supply and the Booster

Step 2 Connect the Booster with the App

Register an ID first and log in.

Add the booster to the device list.

Step 3 Find the cell tower & Determine the outdoor antenna's position

3.1 Find the band you are using

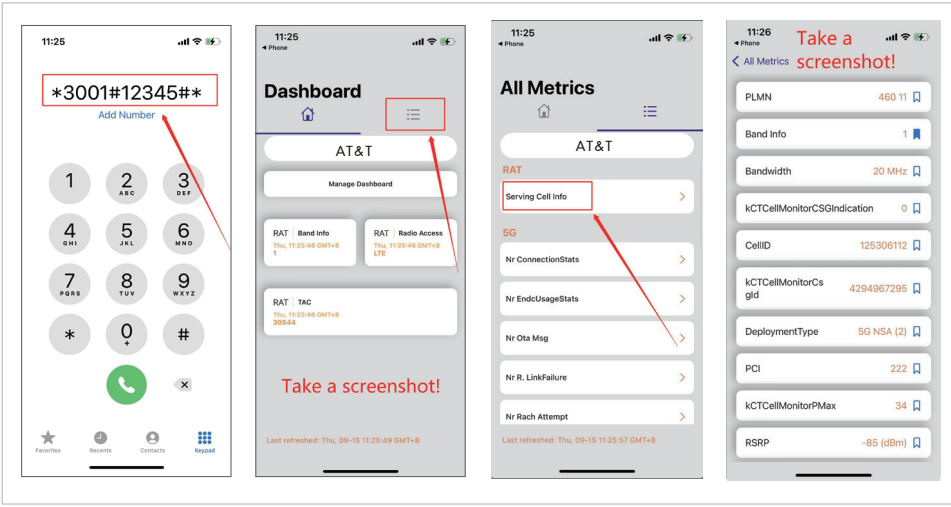
For Android

Download NetWork Cell Info Lite in the Google store and open it.
It can be seen from the example picture that the frequency band is band 13.
(According to the form before, you need to pay attention to Gauge LTE700)

Then click MAP. You can see your phone connecting to a tower, and you can try aiming your outdoor antenna at it. But sometimes this is not accurate. You could also move to Step 3.2 to find the tower.

Note: Please take screenshots at this stage.

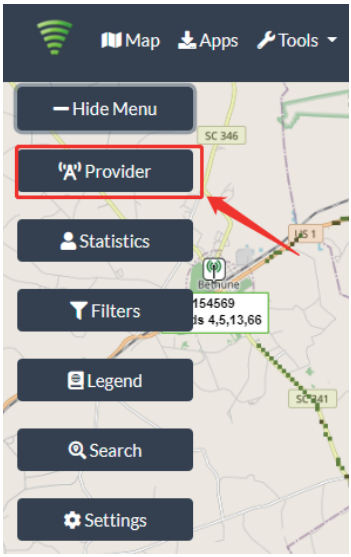
For ios

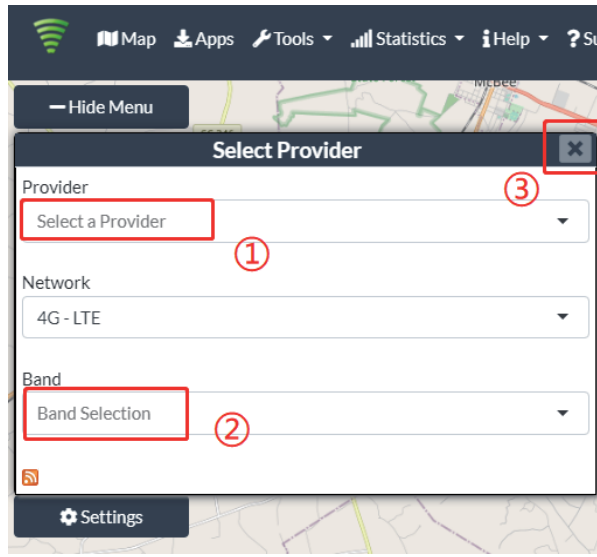


(1)Dial *3001#12345#*
(2)Follow the instructions, take the screenshots as required.

3.2 Find the cell tower

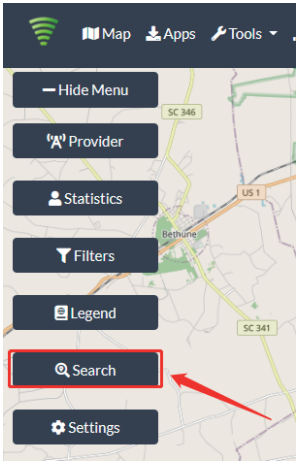
(1) Enter cellmapper.net
(2) Choose your own carrier and band here.

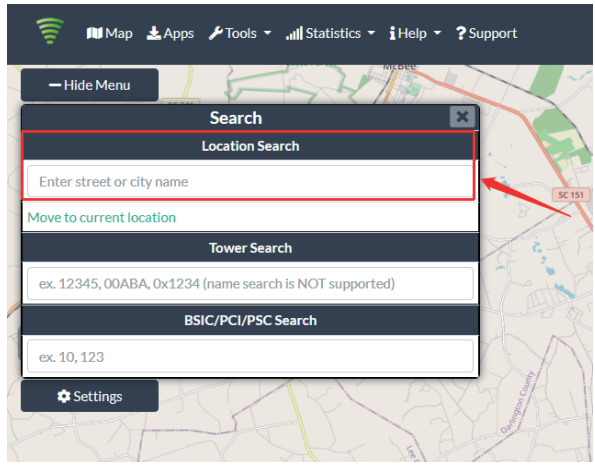




(3) Then enter the coordinate of where you are trying to install the signal booster, and press Enter key.

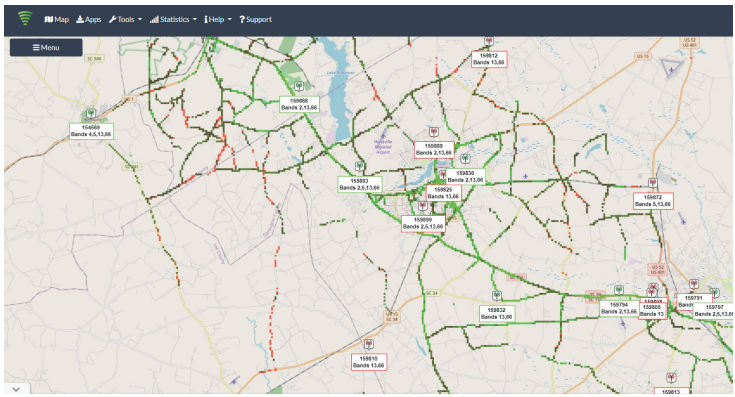
(In fact when you open Cellmapper, the map on the right will automatically locate your area if you've given the site permission to access your location. If you found tower sites not even displayed on the map, it might because the app intercepts the locations for security reasons.)





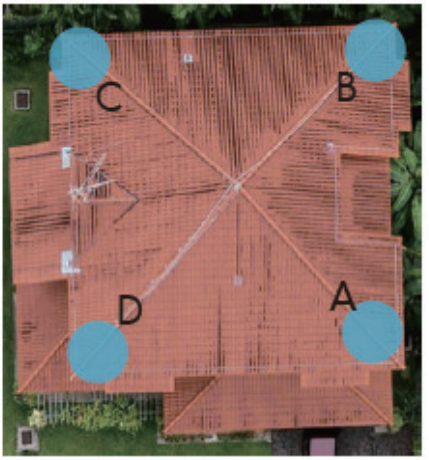
(4) The map on the right will jump to the location, then you can scroll the mouse pulley, zoom it out, you will see the tower near the location. It would be better to take a screenshot of this page to guide the following installing steps. Should you have any questions, please contact our tech support.

Note:If you need help finding the tower, please contact our tech support and provide your carrier, band and screenshots taken in the last steps.

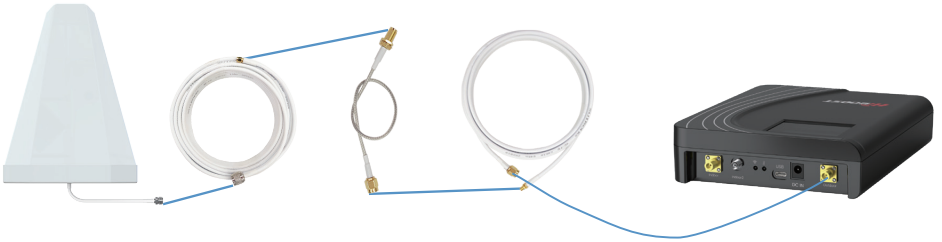


3.3 Determine the outdoor antenna’ s position

The outdoor antenna is usually placed at one of the 4 ends of the roof.
Please choose the position according to the tower’ s location. Make sure there are no barriers between the antenna and the tower.



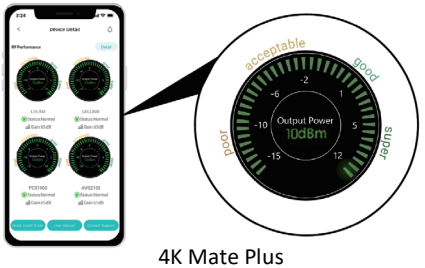
Step 4 Connect the outdoor antenna with the booster



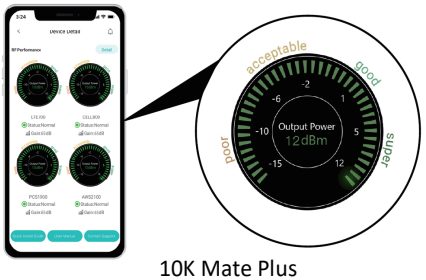
Outdoor Antenna	Outdoor Cable	Through-Window Cable	Outdoor cable to Booster	Booster
	49.2ft NM-SMAM	SMA-Male to SMA-Female (No drilled hole)	16.4ft SMAF-SMAM	

Note：At this stage, don’ t connect the indoor antenna to the booster.

Step 5 Adjust the outdoor antenna



4K Mate Plus



10K Mate Plus

Notes:

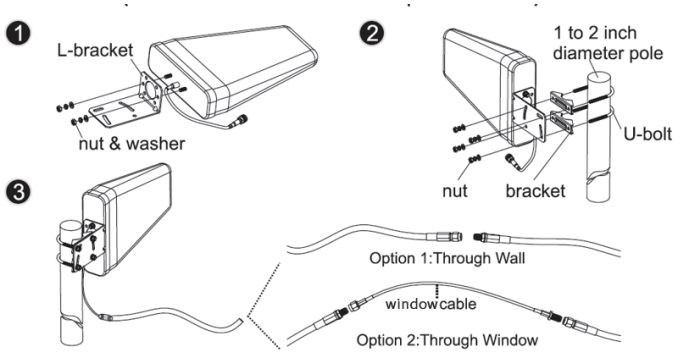
1) Have your outdoor antenna pointed to the cell tower you found before and observe the reading on the app. Adjust the outdoor antenna accordingly.

2) Try to get the highest possible output power for each band and try to make 2-3 gauges turn green.

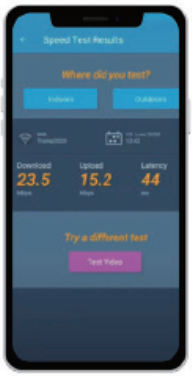
3) You can either observe the signal meter value (full output power is the best) or the signal description (Super is the best).

4) The full output power for 4k Mate Plus is 10dbm.
And the full gain is 65dB.
The full output power for 10k Mate Plus is 12dbm.
And the full gain is 68dB.

Step 6 Fix the outdoor antenna direction when you get the best output power



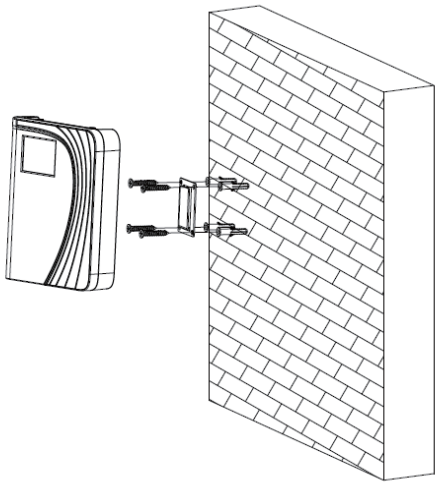
Step 7 Signal quality test



You could do the following:

(1)First make sure the signal gauge value is unchanged from that during the outdoor antenna installation.
(2)Do speed tests with the booster on and off, and make a comparison.
(3)Check if the number of signal bars increases.
(4)Make a phone call or send messages and check if the voice and streaming are better.

Step 8 Install the booster and the cables



Since there's a built-in indoor antenna in 4K/10K Plus, the booster shall be installed as a panel antenna. Please have your booster pointed to the area you would like to cover with signal.

4 Regular Problems and 1 normal status

If the booster is working normally, no further adjustment is required

4K Mate Plus

OVERLOAD					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	<60dB	>=8dBm	Alarm light quick blinking green or red	Outdoor signal is too strong	Have your outdoor antenna pointed slightly away from the cell tower
CELL800	<60dB	>=8dBm			
PCS1900	<60dB	>=8dBm			
AWS2100	<60dB	>=8dBm			

LOOP BACK					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	<60dB	<8dBm	ISO light blinking green or red	Inadequate separation of the indoor and outdoor antennas	1、Increase vertical and horizontal distance. 2、Make the indoor and outdoor antennas face opposite directions. 3、Add barriers(e.g. walls)
CELL800	<60dB	<8dBm			
PCS1900	<60dB	<8dBm			
AWS2100	<60dB	<8dBm			

POOR SIGNAL					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	>=60dB	--/NEGATIVE	Alarm light and ISO light solid green	Input signal is too weak	1、Try adjusting the outdoor antenna to the best direction 2、Try adjusting the outdoor antenna to another cell tower 3、Try increasing the height of the outdoor antenna and make sure there are no barriers between the tower and the outdoor antenna Please try these solutions until the output power reaches or is over -5dBm.
CELL800	>=60dB	--/NEGATIVE			
PCS1900	>=60dB	--/NEGATIVE			
AWS2100	>=60dB	--/NEGATIVE			

Normal but No Boosted Signal					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	>=60dB	>=-5dBm	Alarm light and ISO light solid green	1、The band is not supported 2、The Signal is from other carriers	Check the band you are using again. If it stays at band66,get into the 'Detail' / 'Setting' of gagues on Signal Supervisor and switch off RF switch of AWS2100, then adjust the outdoor antenna again. It would be better if there are two persons and one can stay near the indoor antenna to check if the signal is boosted.
CELL800	>=60dB	>=-5dBm			
PCS1900	>=60dB	>=-5dBm			
AWS2100	>=60dB	>=-5dBm			

NORMAL					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	>=60dB	>=-5dBm	Alarm light and ISO light solid green		
CELL800	>=60dB	>=-5dBm			
PCS1900	>=60dB	>=-5dBm			
AWS2100	>=60dB	>=-5dBm			

10K Mate Plus

OVERLOAD					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	<60dB	>=10dBm	Alarm light quick blinking green or red	Outdoor signal is too strong	Have your outdoor antenna pointed slightly away from the cell tower
CELL800	<60dB	>=10dBm			
PCS1900	<65dB	>=10dBm			
AWS2100	<65dB	>=10dBm			

LOOP BACK					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	<60dB	<10dBm	ISO light blinking green or red	Inadequate separation of the indoor and outdoor antennas	1、Increase vertical and horizontal distance. 2、Make the indoor and outdoor antennas face opposite directions. 3、Add barriers(e.g. walls)
CELL800	<60dB	<10dBm			
PCS1900	<65dB	<10dBm			
AWS2100	<65dB	<10dBm			

POOR SIGNAL					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	>=60dB	--/NEGATIVE	Alarm light and ISO light solid green	Input signal is too weak	1、Try adjusting the outdoor antenna to the best direction 2、Try adjusting the outdoor antenna to another cell tower 3、Try increasing the height of the outdoor antenna and make sure there are no barriers between the tower and the outdoor antenna Please try these solutions until the output power reaches or is over -5dBm.
CELL800	>=60dB	--/NEGATIVE			
PCS1900	>=65dB	--/NEGATIVE			
AWS2100	>=65dB	--/NEGATIVE			

Normal but No Boosted Signal					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	>=60dB	>=-5dBm	Alarm light and ISO light solid green	1、The band is not supported 2、The Signal is from Other Carriers	Check the band you are using again. If it stays at band66,get into the 'Detail' / 'Setting' of gagues on Signal Supervisor and switch off RF switch of AWS2100, then adjust the outdoor antenna again. It would be better if there are two persons and one can stay near the indoor antenna to check if the signal is boosted.
CELL800	>=60dB	>=-5dBm			
PCS1900	>=65dB	>=-5dBm			
AWS2100	>=65dB	>=-5dBm			

NORMAL					
	DL GAIN	OUTPUT POWER	LED LIGHT PATTERN	REASON	SOLUTION
LTE700	>=60dB	>=-5dBm	Alarm light and ISO light solid green		
CELL800	>=60dB	>=-5dBm			
PCS1900	>=65tdB	>=-5dBm			
AWS2100	>=65 dB	>=-5dBm			

Note:
Some customers have some misunderstandings about boosters, and we would like to clarify it here:
If you can't even get a stable 1 bar outside the house or on the roof, then we suggest you return it as it won't work in areas with very weak signal, the same is true of all boosters on the market.

Technical Specifications

Model No.	4K Mate Plus	10K Mate Plus
Working Band	Band 12-17 / Band 13 / Band 5 / Band 25-2 / Band 4	
UL Frequency Range(MHz)	698-716 / 776 – 787 / 824-849 / 1850-1915 / 1710-1755	
DL Frequency Range(MHz)	728-746 / 746 – 757 / 869-894 / 1930-1995 / 2110-2155	
Supported Standards	CDMA, WCDMA, GSM, EDGE, HSPA+, EVDO, LTE ,5G and all cellular standards	
Max. Gain	65 dB	68 dB
Max. output power	DL 10 dBm	DL 12 dBm
MGC (Step Attenuation)	≥ 25 dB / 1 dB step	
I/O Port	SMA-Female	
Impedance	50 ohm	
Environment Conditions	IP40	
Dimensions	6*9.7*1.4 in / 152*246*36mm	
Weight	≤ 5.0 lbs / 2 kg	
Power Supply	Input AC100~240 V, 50/60 Hz, Output DC 12 V / 3 A	

For more information

Download Signal Supervisor or enter our website.

www.hiboost.com.

a. You can download the specific user manual.
b. You can reach our technical support for help.

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