# HiBOOST

# Installation Guide
# Mini Series———————

# Hero

# Package Contents

| | | | |
|---|---|---|---|
| Booster | Outside Antenna | 1X32.8ft SMAM-NM Outdoor Cable<br>1X16.4ft SMAF-SMAM Outdoor Cable<br>1X30ft SMAM-NM indoor cable | Indoor Whip Antenna |
| Indoor Antenna | Power Supply | Other accessories | Waterproof tape<br>to protect connections |

**Through-Window-Cable**
SMA-Male to SMA-Female
No drilled hole

## Notes for LCD Display

Power light   Bluetooth light   Wifi light

2100   MHZ

Outdoor   Gain:60dB   Alarm   Indoor
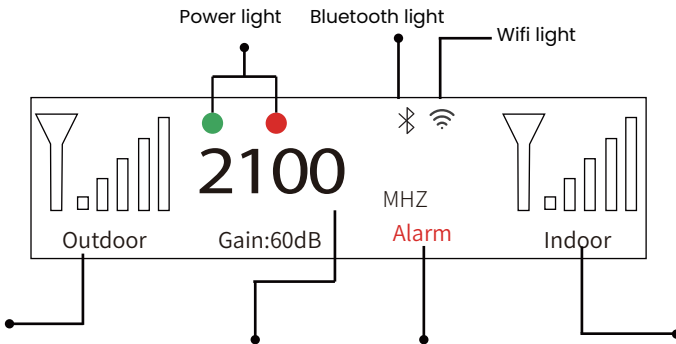
The number of bars indicates the performance of the device. If it shows zero bar, you can change the installation position and direction of the outdoor antenna to gain better signal.

It shows the frequency bands' real-time working performance.

When it flashes, it indicates that the device is not working correctly due to loopback or overload. You can refer to "4 regualr problems and 1 normal status" in the latter part of this guide to solve corresponding problems.

It shows the boosted signal strength. The number of bars indicates the performance of the device.

# Booster Light Patterns

| LED Type | LED condition | Remark |
|----------|---------------|--------|
| Bluetooth | On | Successfully connected to Bluetooth |
| | OFF | Bluetooth is not connected |
| Wi-Fi | On | Successfully connected to Wi-Fi |
| | OFF | Wi-Fi is not connected |
| Power | Solid Green | Normal operating condition |
| | Solid Red | Booster is working abnormally |
| | OFF | Booster is not receving power from DC power supply |
| Alarm | OFF | Booster is working normally |
| | Flashing | Booster is working abnormally |

# 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 to the Booster*

Power Supply    Signal 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
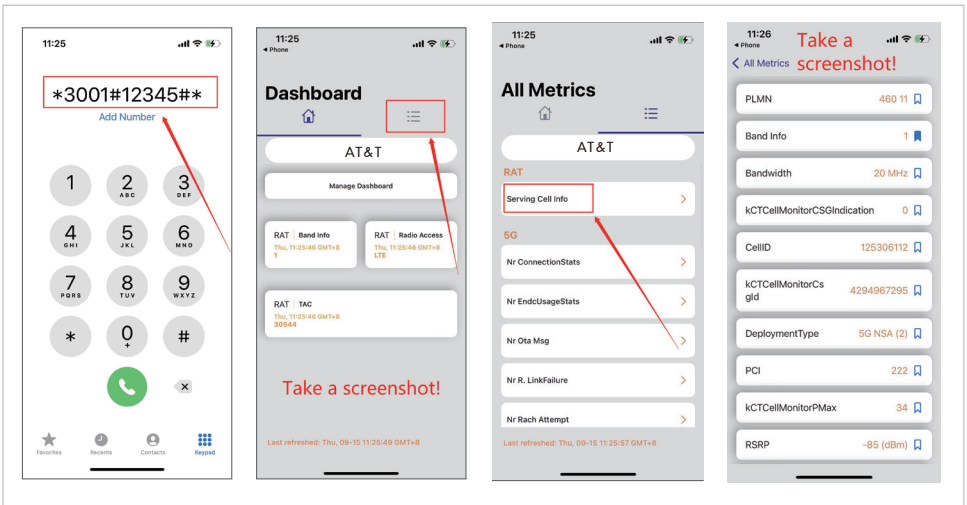
(1)Dial *3001#12345#*

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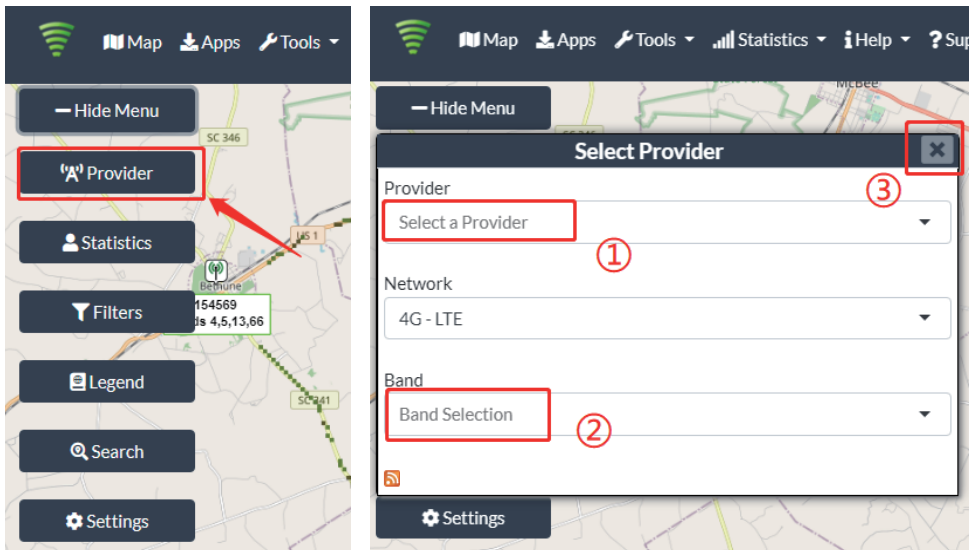
(3) Then enter the coordinate of where you are trying to install the signal booster, and press Enter key.

(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.)
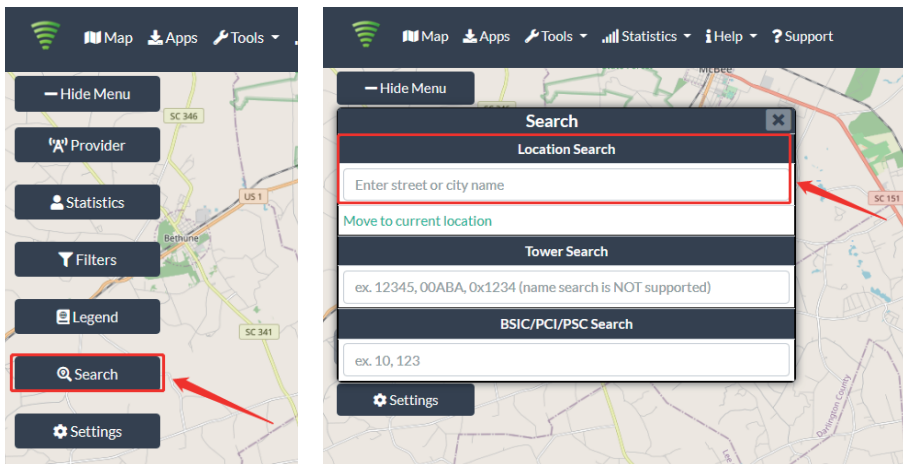


(4) After the map jumps to the location, you can scroll the mouse pulley and zoom it out, then you will see the tower near the location. It would be better to take a screenshot of this page to guide the following installing steps. Should you have any questions, please contact our tech support.
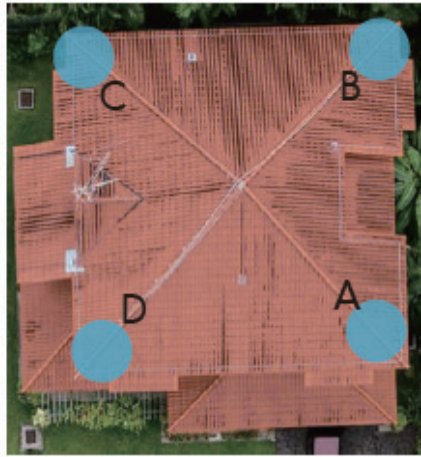
Note: If you need help finding the tower, please contact our tech support and provide your carrier, band and screenshots taken in the last steps.
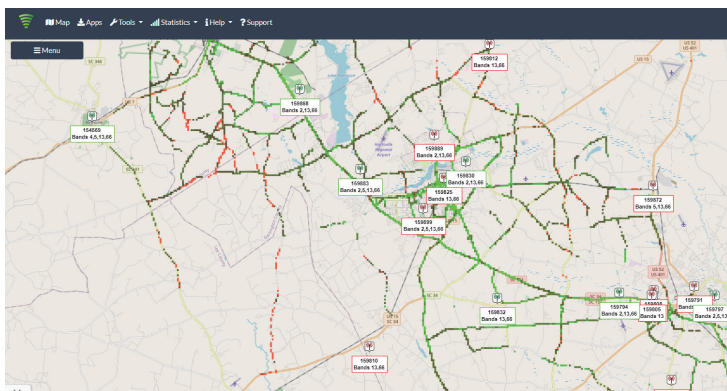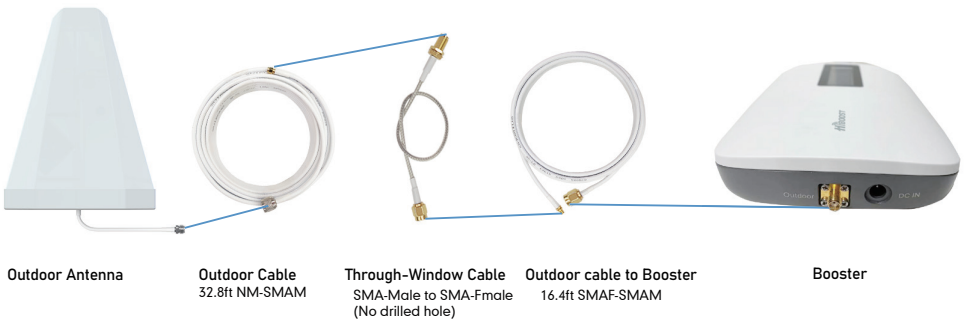
### 3.3 Determine the outdoor antenna's position

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.
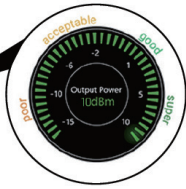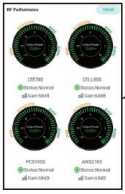


*Step 4 Connect the outdoor antenna with the booster*



| Outdoor Antenna | Outdoor Cable<br>32.8ft NM-SMAM | Through-Window Cable<br>SMA-Male to SMA-Fmale<br>(No drilled hole) | Outdoor cable to Booster<br>16.4ft SMAF-SMAM | Booster |

Note：At this stage, don't connect the indoor antenna to the booster.
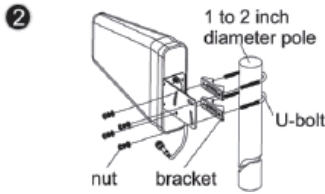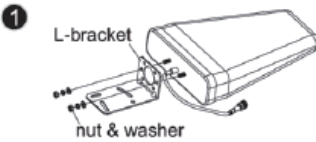
## Step 5   *Adjust and fix the Outdoor Antenna*



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

Notes:

(1) The output power should be the higher the better.
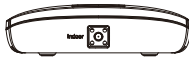(2) The full output power for Hero is 12dBm. And the full gain is 65dB.



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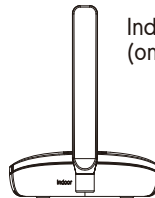## Step 6   *Install the indoor antenna*

There are 2 types of indoor antennas in kit Hero---whip antenna and panel antenna. You can choose either one to install.

### Option 1  Desktop Mounted

### 6.1  Connect the indoor antenna with the booster



Indoor port

Indoor Whip Antenna (omnidirectional)

### 6.2  Adjust the indoor antenna



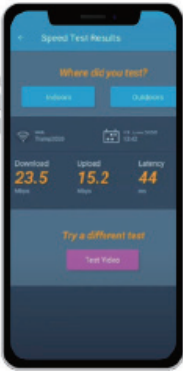Place the signal booster on a dry and cool desktop, make sure the booster is within the coverage area, and it shall be easily accessible for maintenance. (As the whip antenna is a kind of omni antenna, it is suggested that the booster should be placed on a desk in the center of a room, rather than on a wall)
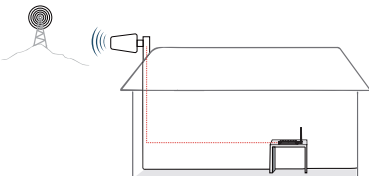
Notes:
Make sure the gain reaches about 60dB. If not, please increase the vertical and horizontal distance between the two antennas or add some barriers.

## 6.3 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.

## 6.1 Connect the indoor antenna with the booster

## 6.2 Adjust indoor antenna

Panel antenna

30ft

30ft

13ft vertical

30ft horizontal

The radiation pattern is 80º horizontal and 70ºvertical. So try to make sure your indoor antenna pointed to the area you would like to cover with signal.

Notes:

(1)It would be best if you could make the two antennas face opposite directions.

(2)Make sure the gain approaches 60dB.

If not, please adjust the direction of the indoor antenna/increase the vertical and horizontal distance between the two antennas/add some barriers.
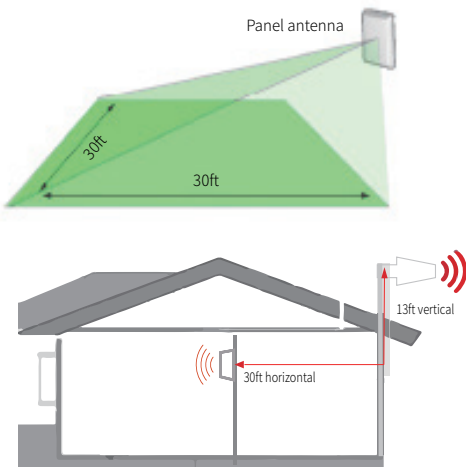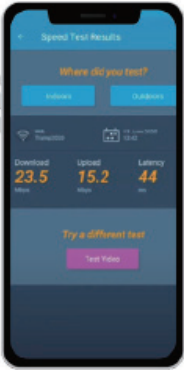
## 6.3  Signal quality test

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 7   Fix the Booster and Cables
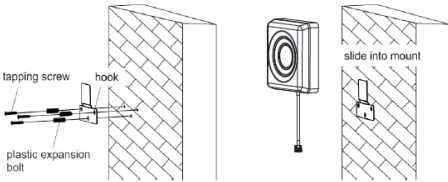


Fix the indoor antenna with the provided expansion bolt and hook.
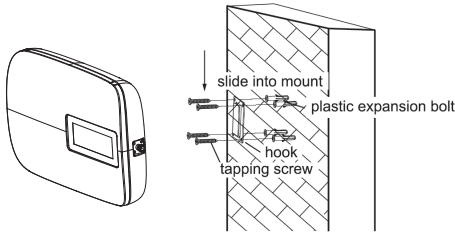


As the panel antenna is used, the booster needs to be fixed on the wall with provided expansion bolt and hook.

## 4 Regular Problems and 1 normal status

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

| OVERLOAD | | | | | |
|---|---|---|---|---|---|
| | DL GAIN | OUTPUT POWER | LED LIGHT PATTERN | REASON | SOLUTION |
| LTE700 | <60dB | >=8dBm | Alarm light flashing and Power light solid 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 | Alarm light flashing and Power light solid red(strong loop back) or green(slight loop back) | Inadequate separation of the indoor and outdoor antennas | 1、Increase vertical and horizontal distance. 2、Add barriers(e.g. walls) Please try these solutions until the gain reaches or is over 60dB. |
| 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 OFF and power 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 OFF and power 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 OFF and power light solid green | | |
| CELL800 | >=60dB | >=-5dBm | | | |
| PCS1900 | >=60dB | >=-5dBm | | | |
| AWS2100 | >=60dB | >=-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**

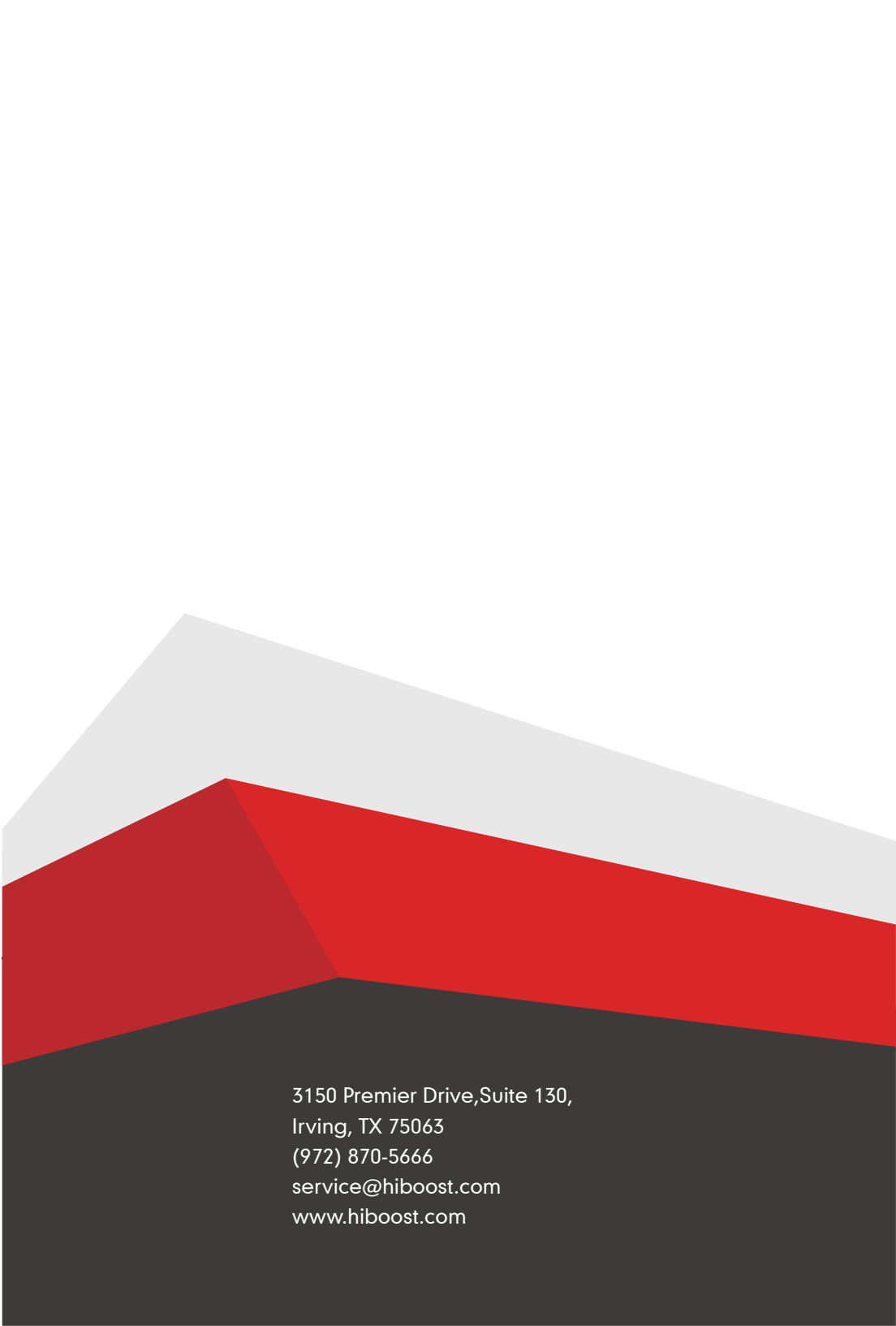| Model No. | Sidekick | Hero |
|---|---|---|
| Working Band | Band 12-17 / Band 13 / Band 5 / Band 25-2 / Band 4 | |
| UL Frequency Range(MHz) | 698-716 / 776 – 787 / 824-849 / 1850-1915 / 1710-1755 | |
| DL Frequency Range(MHz) | 728-746 / 746 – 757 / 869-894 / 1930-1995 / 2110-2155 | |
| Supported Standards | CDMA, WCDMA, GSM, EDGE, HSPA+, EVDO, LTE ,5G and all cellular standards | |
| Max. Gain | 62 dB | 65 dB |
| Max. output power | DL 10 dBm | DL 10 dBm |
| MGC (Step Attenuation ) | ≥ 25 dB / 1 dB step | |
| I/O Port | SMA-Female | |
| Impedance | 50 ohm | |
| Environment Conditions | IP40 | |
| Dimensions | 7.6*5*1.3 in / 192*126*33mm | |
| Weight | ≤ 1.68 lbs / 0.76 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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