Unication Signal Booster

Booster for Public Safety

Please contact us with our Toll Free phone number : 888-657-2963
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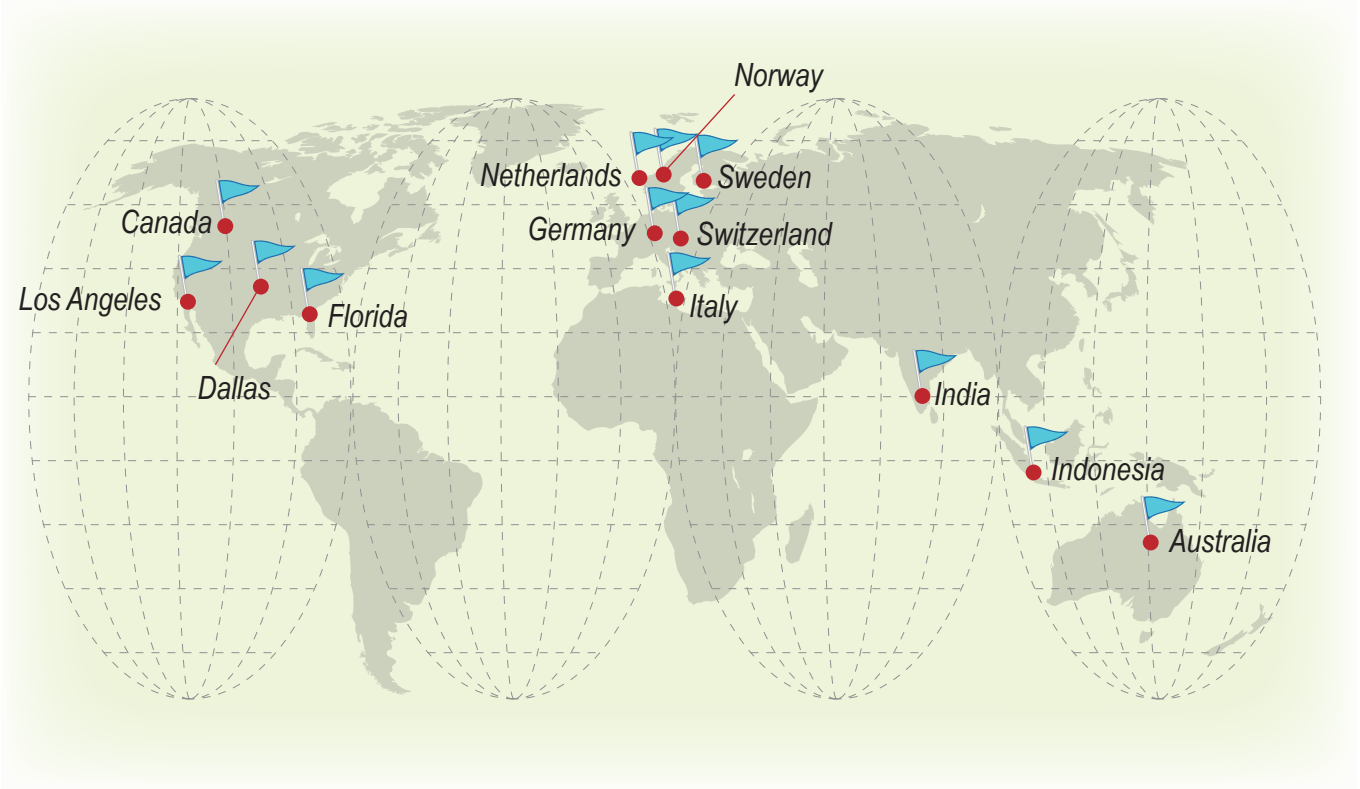
What is Unication ?

- Unication Co., Ltd was originally founded in 1992 and has 27 years' experience with designing and manufacturing advanced critical communication solutions and systems. The innovation and advancement of Unction's professional radio communications products is the main spindle of the brand's development.
- Unication currently has independent design centers or sales companies in Los Angeles, Dallas, Florida, Poca Reyton, Canada, Australia, and Germany.
- As of now, Unication radio products have been sold to the United States / Canada, the Netherlands, Norway, Sweden, Switzerland, Australia, Italy, India, Indonesia and Middle East countries

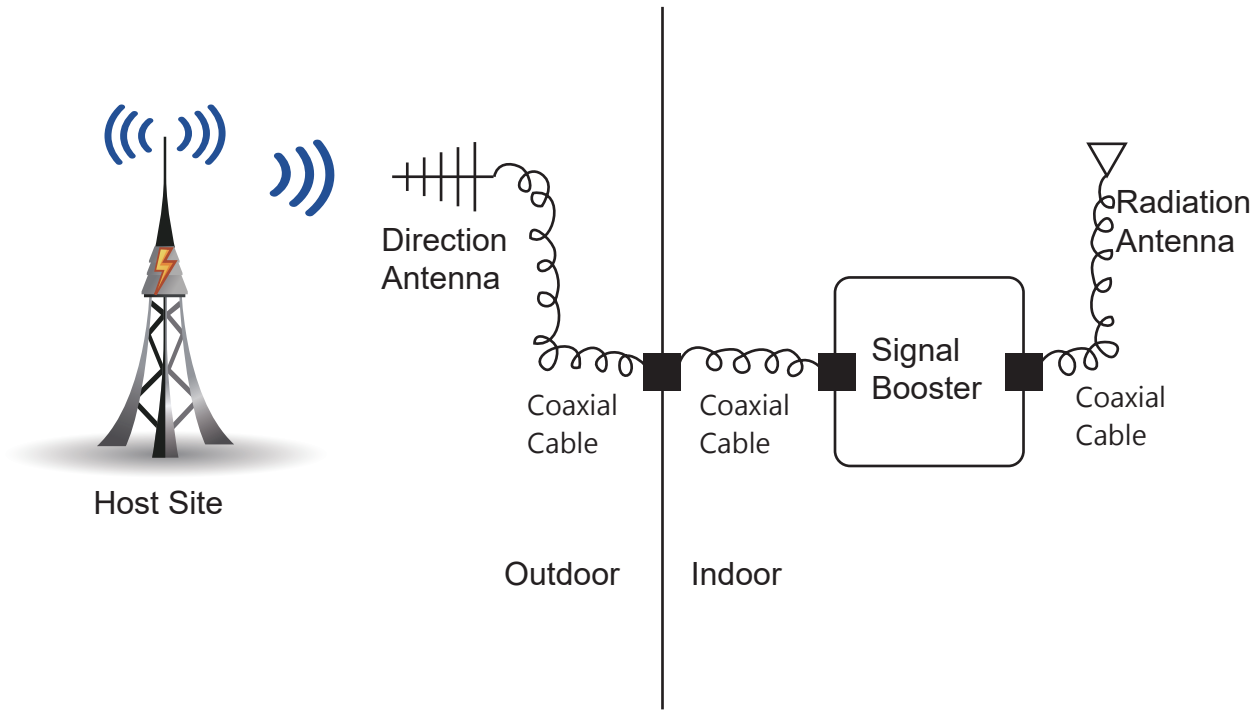


Design Concept of Unication One Way Signal Booster :

- The signal of the current 700/800 MHz Trunk System faces in-building coverage issues, and will decrease 20-30 dB intensity when going through a building. This can cause G4/G5 users to not receive the signal while in building.

- Since many G4/G5 users require 24 hour standby, it is imperative that they can receive the signal of the Trunk System at all times. When in building coverage issues cause a weak signal zone in a user' s house, work or other locations they cannot receive the signal. Unication has developed the Booster product as a solution to this problem. The Booster uses an outdoor antenna to receive the signal and amplifies it, then the indoor antenna transmits the signal to the users' G4/G5 device in order to allow users' to receive the signal like normal, even when in a house or building with weak signal strength.

• The System Block Diagrom Concept



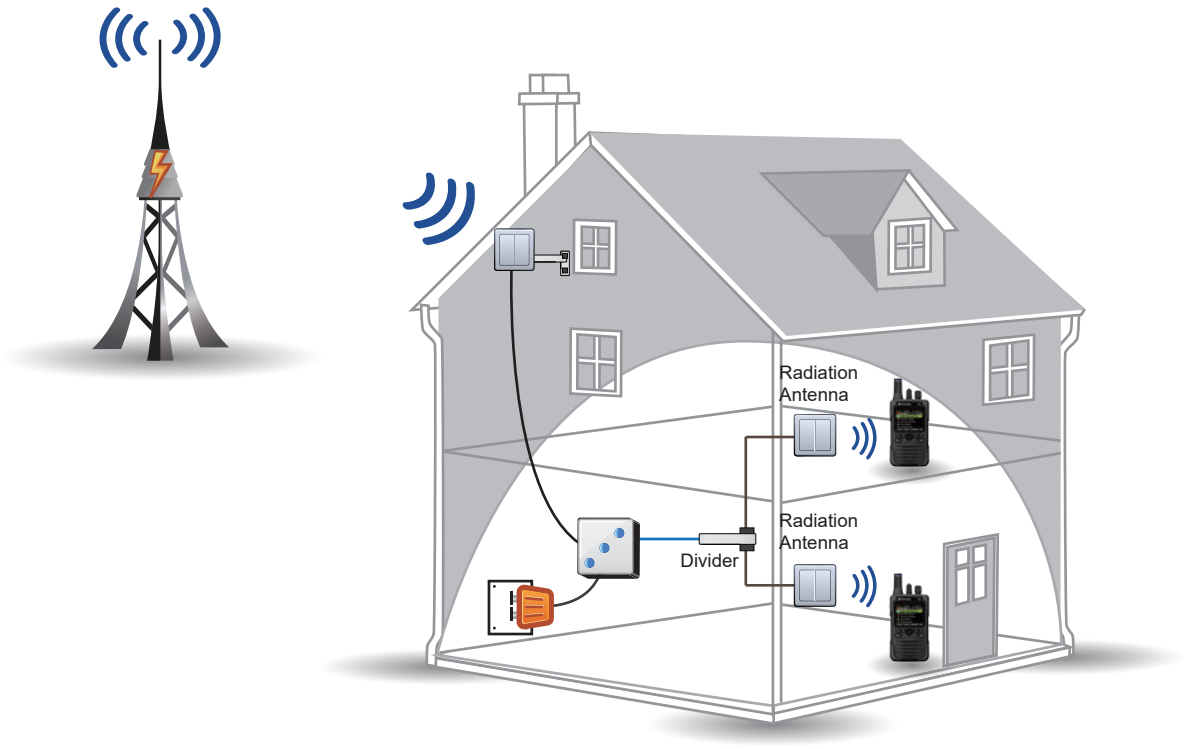
figa : The System Block Diagram

Feature of Unication One Way Signal Booster：

- **Convenient for installation, Users can install in their house by themselves：**
  The product contains the materials needed. Users can install the indoor and outdoor antennas, and the Booster host.

- **The gain can be adjusted, and the user can adjust the signal amplification gain according to the required coverage range：**
  Users can adjust the Booster signal amplification gain according to the indoor coverage range required by the user. When the users can not receive the signal in their home or office and need a larger coverage area, they can reach it by just turning the power switch from low to high power.

- **The coverage area can be enlarged. Customers can purchase the divider and antenna to connect with the booster for exporting the signal in order to increase the coverage area in the house：**
  Once the user's indoor space is large, the needed area cannot be covered even if turning the amplification gain of the Booster signal to high power. Customers can purchase the divider, cable and another antenna. Users can set the antenna at the position needed to reach the purpose that enlarging the coverage area.

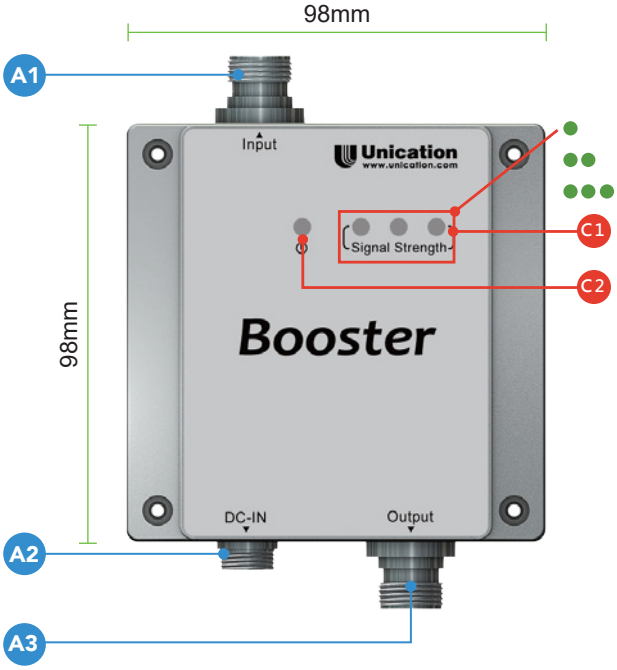


Specification and Function of Unication One Way Signal Booster :

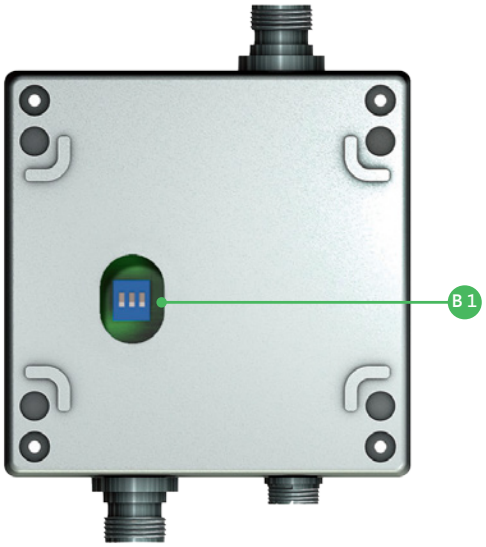
● Appearance Introduction of Unication Booster :

● Back View

● TOP View



● Bottom View



● Front View

A : Interface					
A1	Output after the signal amplified	A2	Power Input	A3	Input prior to the signal amplified

B : Gain Switching	
B1	Gain switch

C : LED Indicator	
C1	Signal indicator
C2	Power Indicator

■ Specification and Function of Unication One Way Signal Booster :

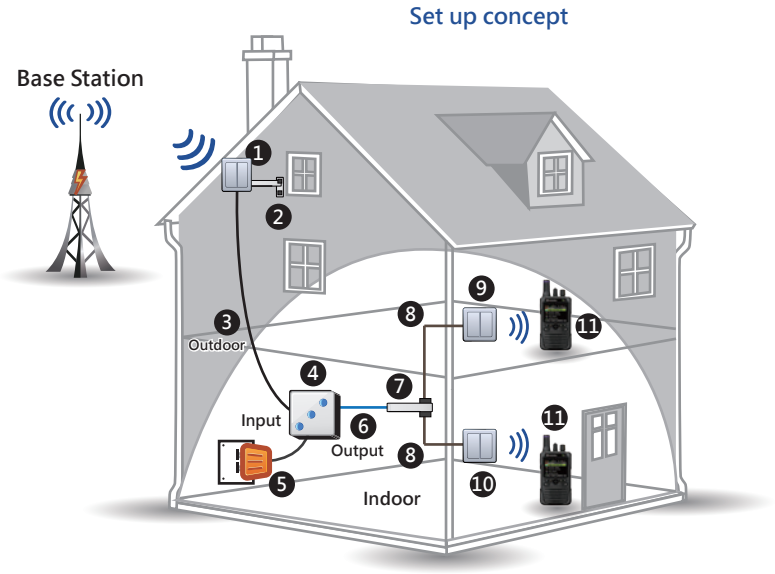
● Unication Signal Booster Accessory Introduction

A : Accessory					
A1	Omni Antenna	A4	Yagi Antenna	A7	Power Divider
A2	Plane Antenna	A5	RF Coaxial Cable		
A3	Log-periodic Antenna	A6	Antenna Bracket		

■ Product number			One Way Signal Booster
■ Model number supported by this product			700/800 MHz
A	The frequency and mode supported by this product when compatible with the G series.		
A1	Frequency range for this model (Unit: MHz)	• 700/800 : DL : 763-776 UL : 794-806 DL : 851-870 UL : 806-824 700 : DL : 763-776 UL : 794-806 800 : DL : 851-870 UL : 806-824	●
A2	The largest gain of this model	78 dB	●
B	Environment and temperature for the device		
B1	Environment for the device	temperature for the device	-30°C ~ +70°C
C	Hardware Specification for the device		
C1	Appearance of the device		Please see page 4
C2	Dimensions (With cable connector)	Height (Unit: mm)	135mm
		Width (Unit: mm)	98mm
		Thickness (Unit: mm)	60mm
C3	Shell Material		Aluminum alloy
C4	Weight (without an antenna and a cable)		≦ 580 g
C5	Accessory	Omni Antenna	+2 dBi
		Plane Antenna	+4 dBi
		Log-periodic Antenna	+7 dBi
		Cable 5m	Cable Loss ≦ 1.5dB
		Cable 10m	Cable Loss ≦ 3dB
		Antenna Holder	243mm * 60.30 mm * 25.14 mm
		Divider	97mm * 110mm * 51mm
C6	Hardware device of user interference	Gain Switching	●
		Frequency Band Switch	●
D	characteristic and specifications		
D1	Gain	Users can set the gain manually, and the gain can be set as the high Gain or the low Gain.	High Gain: 78 dB Low Gain: 60 dB
D2	Automatic Gain Control (AGC)		30dB
D3	Noise Figure		<4dB
D4	RF Connectors： N Type Male 50 Ohm		N Type Male 50 Ohm
E	Feature		
E1	Gain -adjustable	Users can set the gain manually depends on the user's requirement.	●
E2	frequency -select	Users can select the frequency band manually as needed.	●
E3	Signal coverage expanding	Users can purchase the distributors and antennas to expand the signal coverage.	●

■ Installation and Operation Flow of Unication One Way Signal Booster :

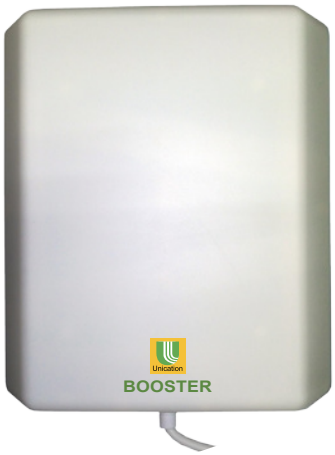
● Booster System Integration Diagram :



1. Antenna#1 (210mm*180mm*44mm) face to the signal source direction.
2. Supporting ARM
3. RF Coaxial Cable (to input connector)
4. Booster (99.1mm*99.1mm*60.68mm)
5. Booster power adapter
6. RF Coaxial Cable (from outdoor antenna#1 to indoor input connector)
7. Power Divider
8. RF Coaxial Cable (from power divider output)
9. Antenna#2 (210mm*180mm*44mm) face to indoor direction.
10. Antenna#3 (210mm*180mm*44mm) face to indoor direction.
11. G-Series Pager

● Outdoor and indoor antenna installation steps :

Antenna front view



Antenna rear view

● The way of installing the antenna mounting bracket：

1

If the users want to get the best effectiveness of the antenna, users can adjust the antenna to find the best angle before installing and drilling the holes on the wall.

2

Antenna Bracket Installed.

3

Lock the panel to the antenna bracket.

4

Mount the antenna on the panel.

5

Antenna installation complete.

6

Users can move the antenna bracket to get the best angle of the signal reception.

● The procedure of installing the antenna outdoors：

1

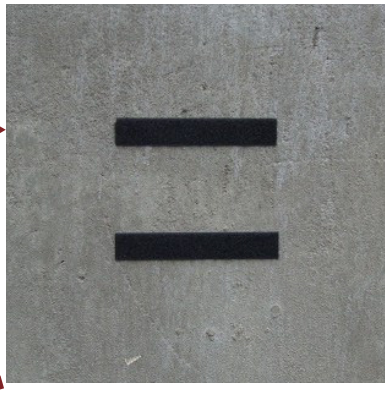
Cut the hook and loop fastener (rough side) into the appropriate size and stick on the back side of the antenna.

2

Clean up the surface of the wall and make sure the wall is smooth before the hook and loop fastener (soft side) is stuck on the wall.

3

Need to be attached to a flat wall. If the wall is dirty, please clean it and then attach the devil's felt (matte) to the wall.



4

Combine the hook and loop fastener (rough side) which is on the antenna with the other hook and loop fastener (soft side) on the wall together.

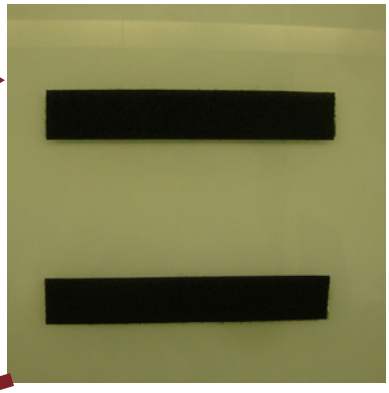
● The procedure of installing the antenna indoors：

1

Cut the hook and loop fastener (rough side) into the appropriate size and stick on the back side of the antenna.

2

Cut the hook and loop fastener (soft side) into the appropriate size and stick on the indoor glass wall.



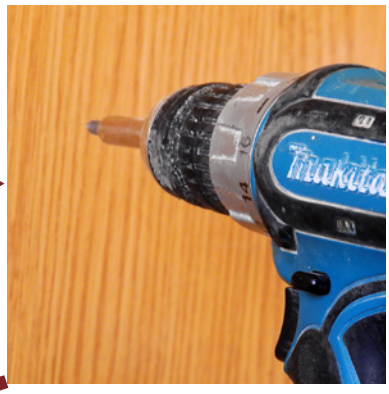
3

Combine the hook and loop fastener (rough side) on the antenna with the other hook and loop fastener on the indoor glass wall together.

● Drill the holes to install the antenna：

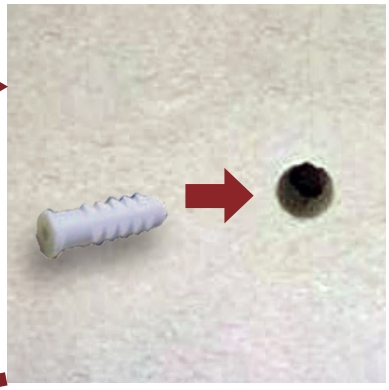
1

Apart from using the hook and loop fastener to set the antenna, users also can drill the holes to install the antenna on the wall outdoors.
Confirm the size of the nylon wall plug and based on the size of the nylon wall plug, drill the holes on the wall.



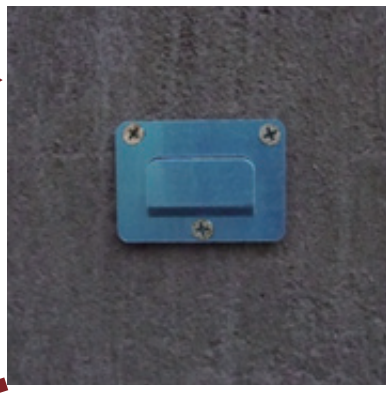
2

Put the nylon wall plugs into the holes.



3

Use the screw to fix the panel on the wall.



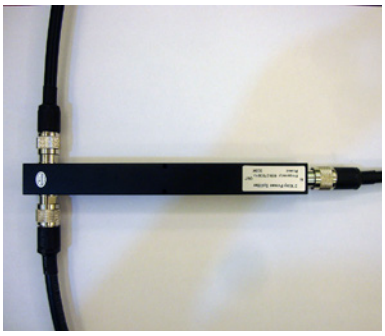
4

Install the antenna on the panel.

● Power divider installation steps

1

If users find that the signal coverage of the indoor antenna is insufficient or users want to use the antenna in the different floor, user can connect another antenna to expand the signal coverage via the Power divider.
Take one RF coaxial cable; connect one side to the booster output and connect the other side to the power divider input.



2

Take the second RF coaxial cable; connect one side to the output (Choose Output 1 or Output 2 in the picture above), and connect the other side to the indoor Antenna 1.

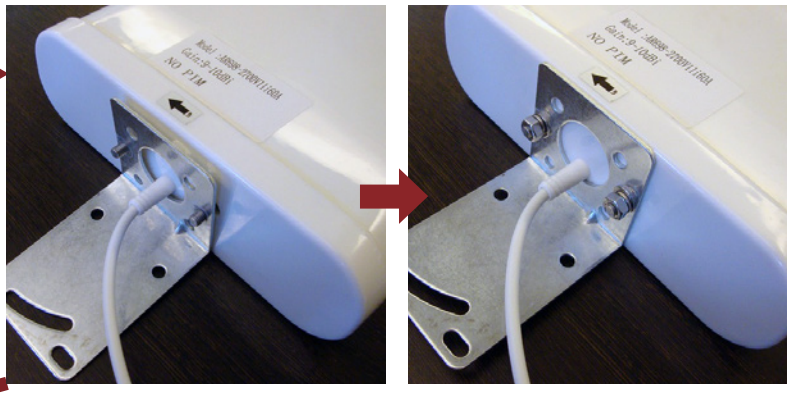
3

Take the third RF coaxial cable; connect one side to the Power divider Output (if the users connect the second RF coaxial cable to the Output 1 in the procedure 2, user has to connect the third RF coaxial cable to the Output2 in this procedure, and vice versa.), and connect the other side to the Antenna 2.

● Directional Antenna Installation Guide：

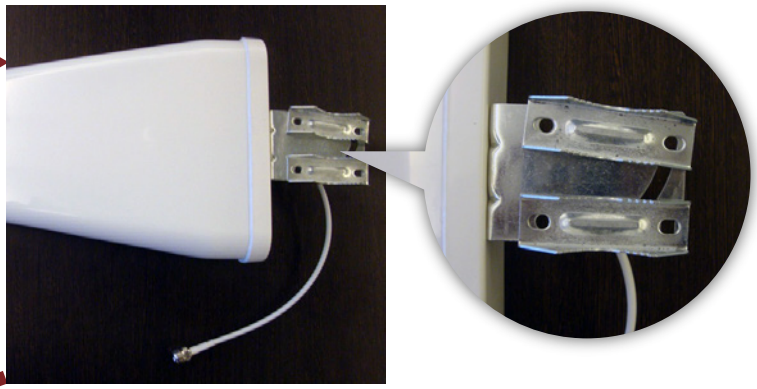
1

Unscrew the nut and washer on the antenna. Install the L shaped bracket on the antenna and then put the nut and washer back.



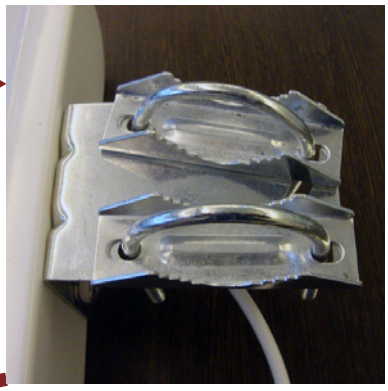
2

Put the two iron pieces on the L shaped bracket (back side).



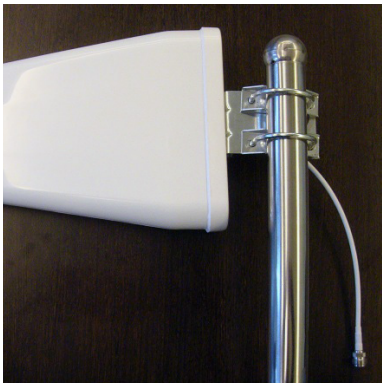
3

Add the U shaped iron rings on the iron pieces.

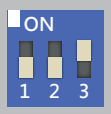
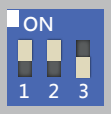
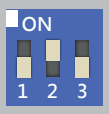
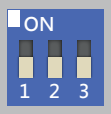


4

Confirm the diameter of the pole is proper to make the U shaped iron rings fixed.



● Booster High / Low Gain Mode Switch Setting :

	VHF / UHF	700 MHz	800 MHz	700/800 MHz
Low Gain Mode				
High Gain Mode				

1. Once the installation of the Booster is completed, please switch the Gain Switch to the Low Power side (Low gain.)
2. If user wants to increase the indoor signal receiving coverage, please switch the Gain Switch to the High Power side (High gain.)
3. If the receiving range of the Booster doesn't increase but decrease when users switch the gain switch to the High Power side (High gain), it means there is the strong signal interference in this area. In this case, Booster can't be switched to the High Power Mode, please turn the gain switch to the Low Power side (Low gain.)

Unication One Way Signal Booster

Booster-EN-brochure-0-V0.02