

## WCDMA smart repeater 20dBm

### Overview:

The smart repeater WCDMA system series are designed for business places indoor coverage solution. Such as the bookstore, the restaurant, the coffee shop, the KTV, the bar, the parking pot, the super market, big office....

Using a revolutionary technology that protects the carrier network, the dual system repeater improves indoor cellphone coverage by capturing and repeating the outside signal, bringing it into the building and enhancing it.

This process creates a "Cell Zone" in blind signal area.

### Features:

1. Elegant and Compact design
2. High system gain due to active antenna, Indoor unit build-in antenna.
3.  $\Phi$ 3mm cable 20 meter, easy to install.
4. With external antenna (Optional), for more big coverage area.
5. Built-in AGC and ALC circuits, which can automatically control the gain of the repeater depending upon the strength of input signals.
6. Auto shut off function available for both uplink and downlink to avoid deep self-oscillations from jamming the towers, saving your trouble from operators.
7. Ultra-low power consumption.

### Coverage:

100 - 500sq.m coverage.



**Specification:**

Electrical specification	Uplink	Downlink	
Frequency Range	1920-1980 MHz	2110-2170 MHz	
Max. System Gain	≥ 65dB	≥ 70dB	
Max. Output Power	≥ 15dBm	≥ 20dBm	
Gain Flatness	≤ 2dB/ 3.84MHz		
AGC (Auto Gain Control)	≥ 31dB		
Automatic Level Control	≥ 20dB		
Noise Figure	≤ 7dB		
VSWR	≤ 2.5		
Group Delay	≤ 5μs		
Frequency stability	≤ 0.01ppm		
LTE Out of Band Gain	≥200kHz offset	≤ 60dB	≤ 60dB
	≥1MHz offset	≤ 45dB	≤ 45dB
	≥5MHz offset	≤ 45dB	≤ 45dB
	≥10MHz offset	≤ 35dB	≤ 35dB
Out of Band Gain WCDMA	2.7≤f_offset<3.5MHz	≤ 60dB	≤ 60dB
	3.5≤f_offset<7.5MHz	≤ 45dB	≤ 45dB
	7.5≤f_offset<12.5MHz	≤ 45dB	≤ 45dB
	12.5≤f_offset	≤ 35dB	≤ 35dB
Spurious Emission	9KHz~1GHz	≤-36dBm	≤-36dBm
	1GHz~12.75GHz	≤-30dBm	≤-30dBm
WCDMA System (20dBm)	Spurious Emission Mask	Meet 3GPP TS 25.143 ( V 6.2.0 )	
	Modulation Accuracy	≤ 12.5%	
	Peak Code Domain Error	≤ -35dB@Spreading Factor 256	
	ACRR	≥ 20dB/30KHz @ ± 5MHz	
≥ 20dB/30KHz @ ± 10MHz			
LED Alarm	Standard		
Power LED	Power Indicator		
ALC LED	Orange @ ALC 1~5dB, Red @ ALC 20dB~25dB		
Mechanical Specifications	Standard		
I/O Port	N-Female		
Impedance	50 ohm		
Operating Temperature	-25 ~+55°C		
Environment Conditions	IP40		
Dimensions	Outdoor unit: 130*92*20mm; Indoor unit: 160*106*26mm		
Standard Package Weight	≤ 2.0Kg		
Power Supply	Input AC90~264V, output DC24V / 0.5A		
Power consumption	3 Watt (Average)		

## System Introduction:

Product photos:

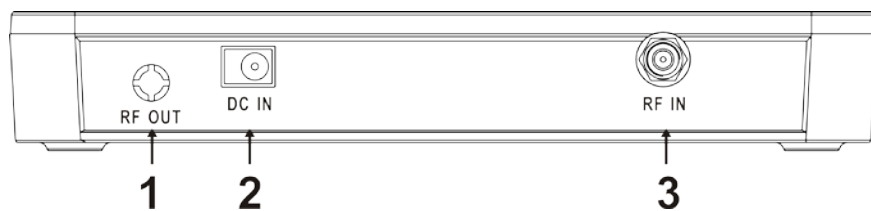


Outdoor unit (Active antenna):



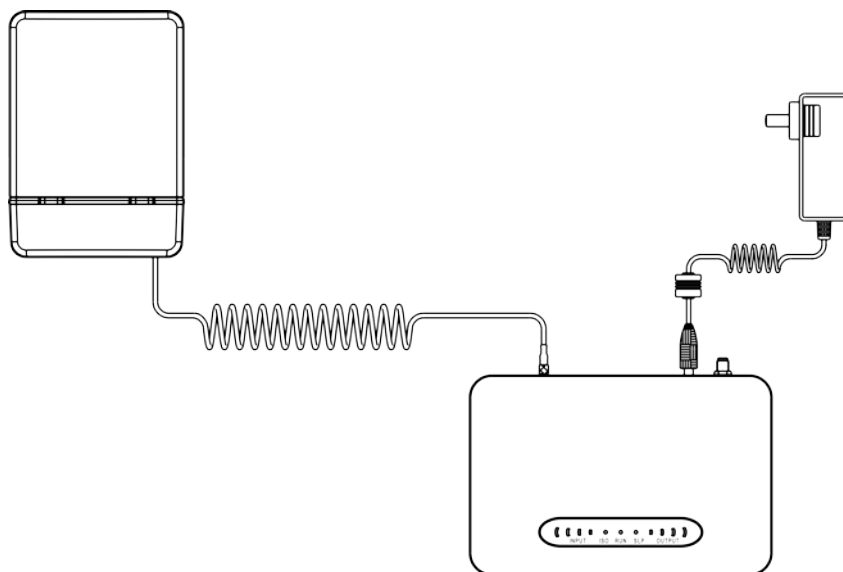
1. Expansion donor antenna;
2. LED;
3.  $\Phi 3$  cable 20 meter

Indoor unit:



1. RF OUT, external service antenna;
2. DC IN, DC24V power supply;
3. RF IN, connect to outdoor unit;

System diagram (normal connection), coverage area <math><100\text{m}^2</math>:



System diagram (Enhanced connection), coverage area >math>>100\text{m}^2</math>:

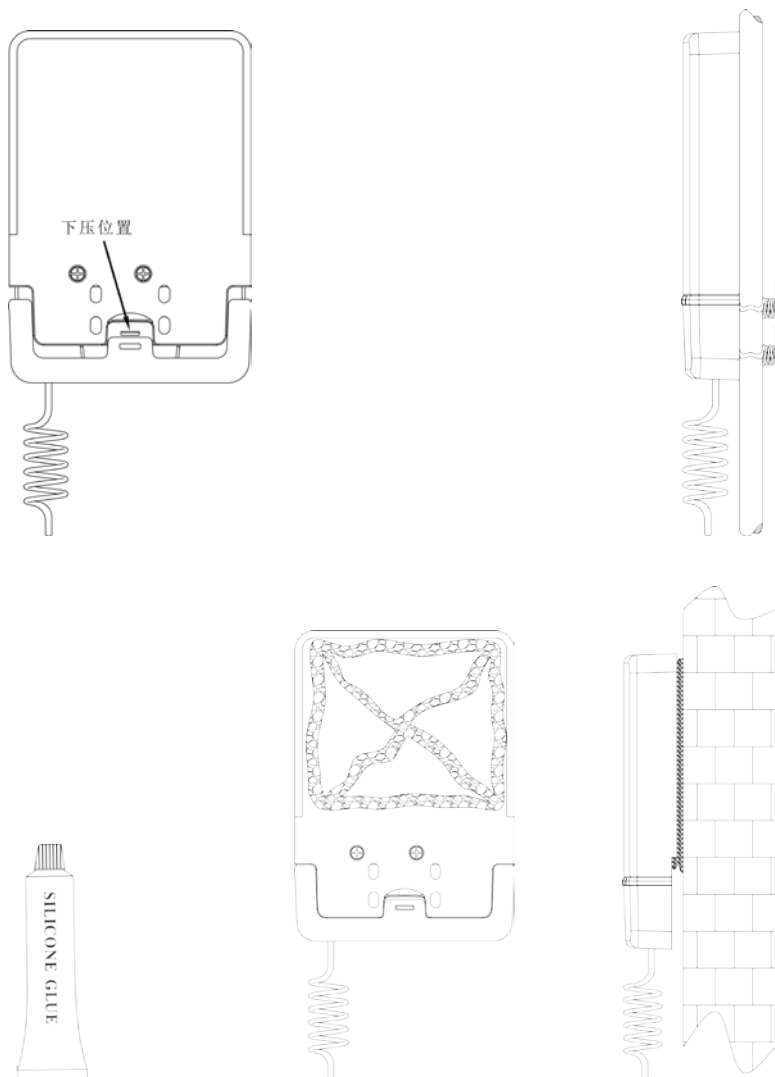
Remark:

If outdoor unit Rx\_Level low, outdoor unit connect to additional high gain donor Yagi antenna;

If cover more rooms, indoor unit connect to external service Whip antenna;

**Installation Guide:**

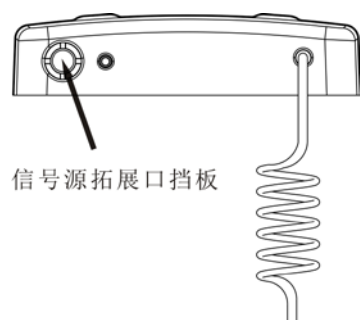
Outdoor unit installation (normal connection):



Remark:

Silicone glue is in the standard package, waterproof outdoor unit can stick on wall or pole.

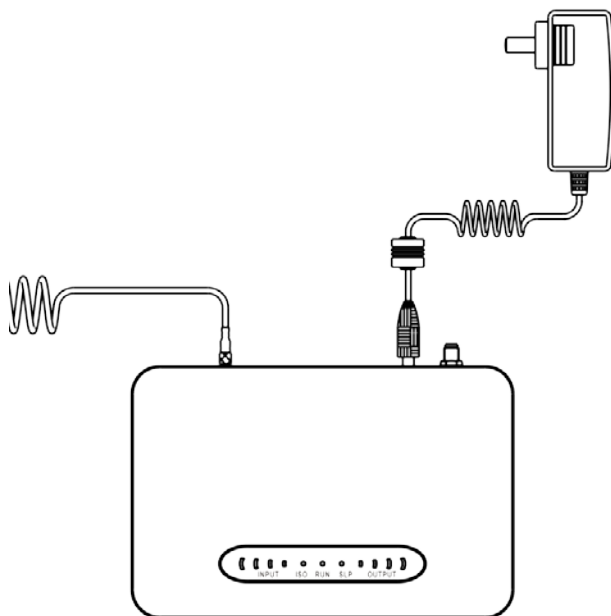
Outdoor unit installation (Enhanced connection):



Remark:

If outdoor unit Rx\_Level low, outdoor unit connect to additional high gain donor Yagi antenna;

Indoor unit installation (normal connection):



Remark:

Indoor unit build-in service antenna, Max output power 15dBm.

Indoor unit installation (Enhanced connection), coverage area >100m<sup>2</sup>:

Remark:

If cover more rooms, indoor unit connect to external service Whip antenna;

External service Whip antenna, additional cable 15 meter is in the standard package;

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## Package list:

Items	Product Description	Quantity	Unit	Remark
1	Outdoor unit (donor active antenna)	1	Unit	Standard
2	Indoor unit (Smart Repeater)	1	Unit	Standard
3	Power Supply DC24V 1A	1	Pcs	Standard
4	Silicone glue	1	tube	Standard
5	Fixing screws	2	Pcs	Standard
6	Cable ties (white)	1	Pcs	Standard
7	Patch Antenna and 10 meter cable (for external service antenna)	1	Pcs	Optional
8	Whip antenna and 10 meter cable (for external service antenna)	1	Pcs	Optional
9	High gain Yagi antenna	1	Pcs	Optional