

# Smart Coverage Solution System 2100MHz WCDMA ICS Repeater

## System advantages

Bravo Tech's ICS Repeater is RF repeater system with interference cancellation function which cancels the feedback interference automatically using DSP (Digital Signal Processing) between donor and service antenna. In the rapidly changing circumstance, including construction of buildings, moving cars, change of temperature, climate and seasons, ICS repeaters can adjust automatically to achieve maximum optimize performance, so as to enhance signal strength and better expansion of WCDMA network coverage.

It is remarkable innovation improvement and advance innovation of a RF repeater system that can be easily set up outdoor coverage extension without any interruptions.

Our new ICS 3G repeater enable effective improvement on operator's WCDMA wireless networks economically.

### Economical network deployment

- Various network deployment and greater efficiency
- Flexible to any environment
- Low management cost

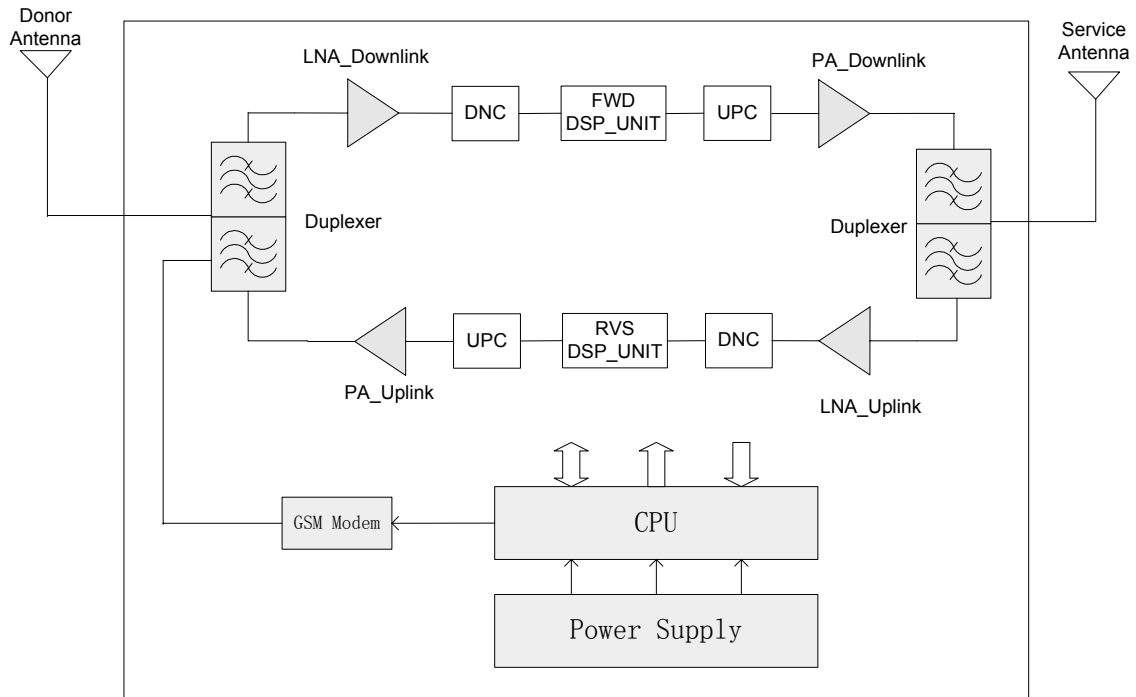
### Automatic installation & Operation

- Easy installation with automatic initial set up
- Stable operation
- performance improvement by parameter calculation automatically in any wireless environment

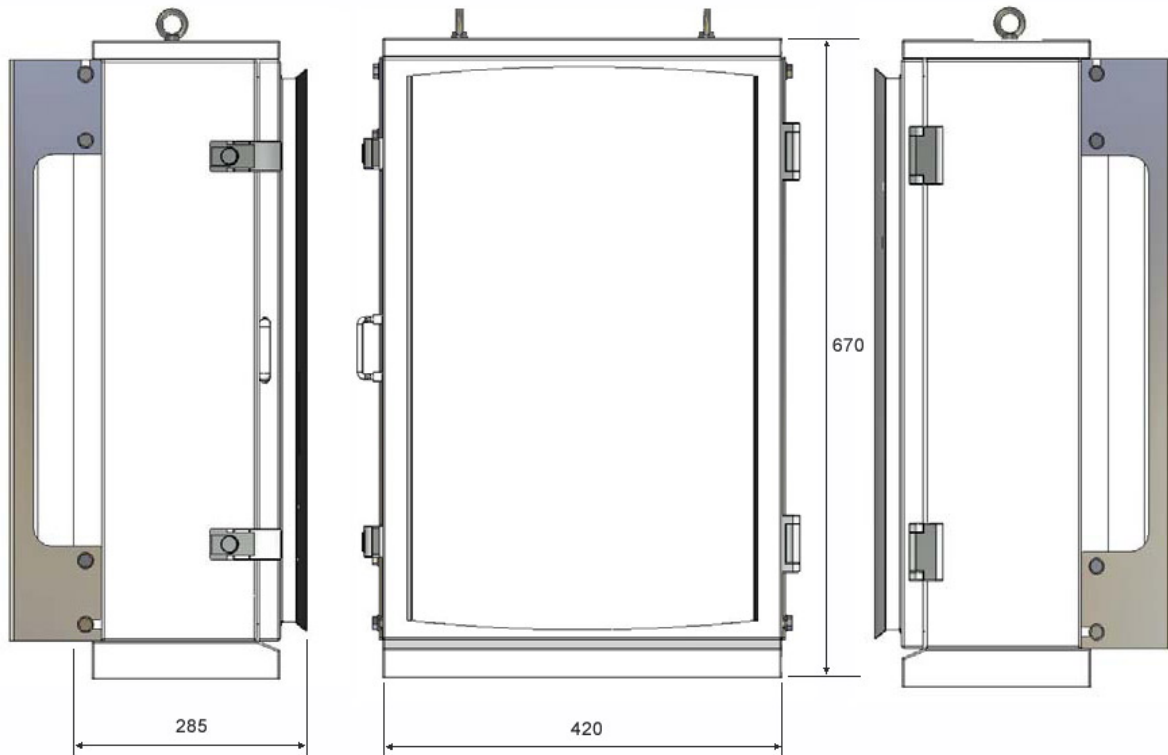
### Maintenance

- Easy operation and maintenance due to module integration
- Extensive product monitoring and control (local and remote)
- Centralized system control/display/alarms

**System Block Diagram**



**Outline Drawing**



## Specifications

### Electrical Specification

Frequency Range Uplink	1960MHz ~ 1980MHz
Frequency Range Downlink	2150MHz ~ 2170MHz
Maximum Gain	105dB(DL)/100dB(UL)
Manual Gain Control	30dB@1dB/step
Output Power	Downlink: +43dBm ±1.5dB Uplink: +27dBm ±1.5dB
RF Input Range	Downlink: -25 ~ -80dBm Uplink: -45 dBm (Max)
Shutdown Level	Downlink: +44dBm / Total Power Uplink: +28dBm / Total Power
Noise Figure	7dB
2 <sup>nd</sup> harmonic Rejection	> 80dBc
VSWR	≤ 1.5
System Delay	≤ 7 μsec
Frequency Stability	0.01ppm
Feedback Signal Perception Range	0 ~ 6 μsec
Feedback Signal Cancellation Capability	25dB (Gain±Isolation+10dB)
Tx/Rx Isolation	110dB over
Spurious	To meet 3GPP TS 25.106
Input/output Impedance	50Ω
Power Supply	AC 184 ~ 264V, 45 ~ 65Hz
Power Consumption	<400W @ 20W Output Power

### Environmental Characteristics

Operating Temperature Range	-25°C to +55°C
Storage Temperature Range	-40 ~ +80°C
Waterproof	IP56
Humidity	5 ~ 95%
MTBF	> 57,000 hours

### Mechanical Characteristics

Weight	55Kg (max)
Dimensions (H x W x D)	670mm *420mm * 285mm
RF Connector	7/16 DIN(Female)
Monitoring Port	N (Female)
Monitoring and control Port	9 Pin D-Sub Female
Cooling	Natural convection
Mounting	Pole & Wall mounting