

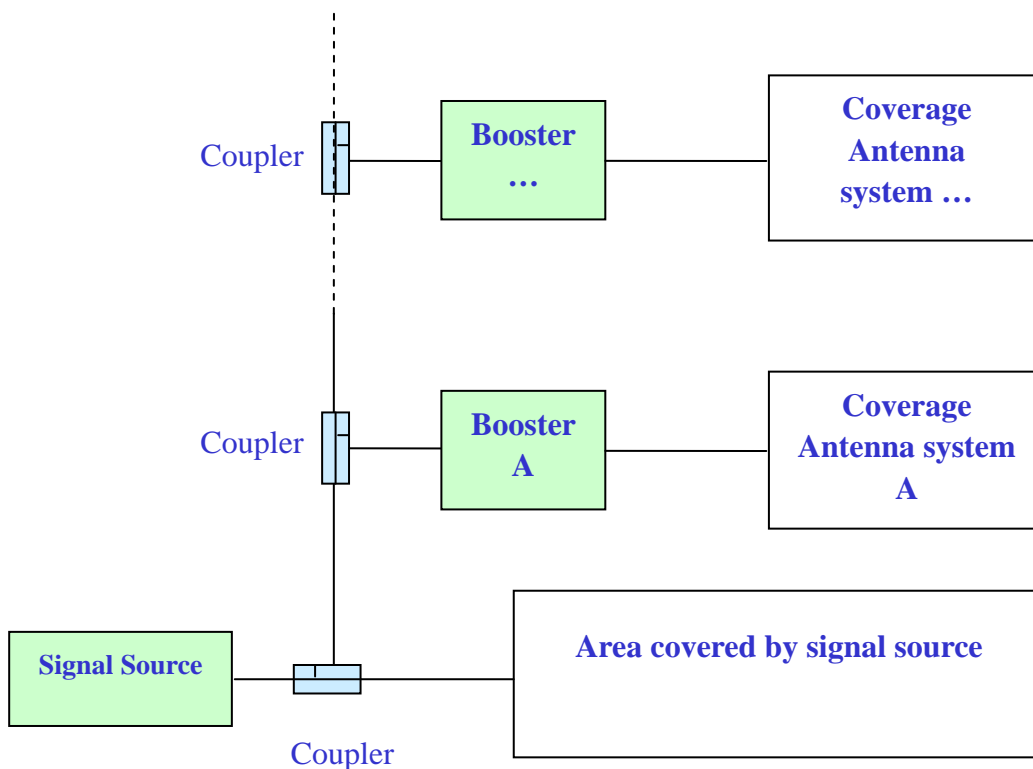
CenRF Coverage Solution Product

WCDMA Inline Booster 10W

System advantages

CenRF WCDMA (3G) inline boosters are used in combinations with base stations or repeaters to amplify and distribute the uplink and downlink signals in-buildings. It effectively enhances the signals in shadow areas in urban high rises like hotel, office buildings, shopping centers, apartment complexes as well as basements.

See application diagram in figure, Booster takes signal source input from feeder cable via coupler or splitters, amplifies and distributes the signal to coverage antenna sub-systems.



CenRF Booster features full remote control and monitoring functionalities. In large in-building systems one master unit can support multiple slave boosters for remote control and monitoring. It is capable of self-diagnosis. In case of an external power outage, it can keep sending alarm message to network management center for six hours, facilitating monitoring, configuring and maintenance.

CenRF GSM boosters are modularly designed, users can deploy diversified RF output rate and power supply options for various projects, that provide a low-cost and highly-capable solution of mobile communication network optimization.

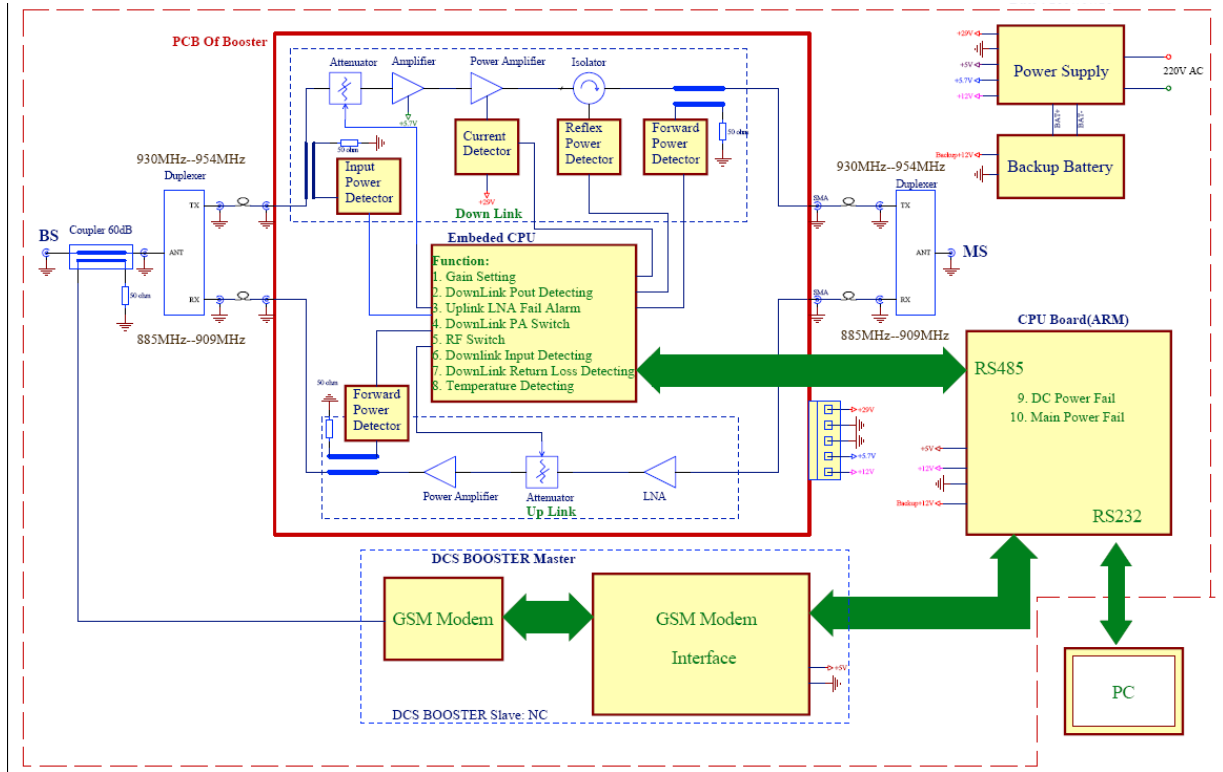
Product Features

- Support Multi-Carriers, Ideal for In-building solution.
- Use of wideband high linearity and low intermodulation amplifier, to ensure strong signal input of the linear output.
- Very low system noise can be connected multiple inline boosters in parallel.
- ACL, Output power detection and self-oscillation protection.
- Integrated GSM900/1800 modem with OMT software. Support optional OMC remote management system (NMS).
- IP65 Aluminum cast casing designed for all kinds of tough outdoor and indoor environments.
- Optional backup battery and multiple power supply choices available (AC/DC/Solar Power).
- Highest standard industrial standards applied, with MTBF over 60,000hrs.

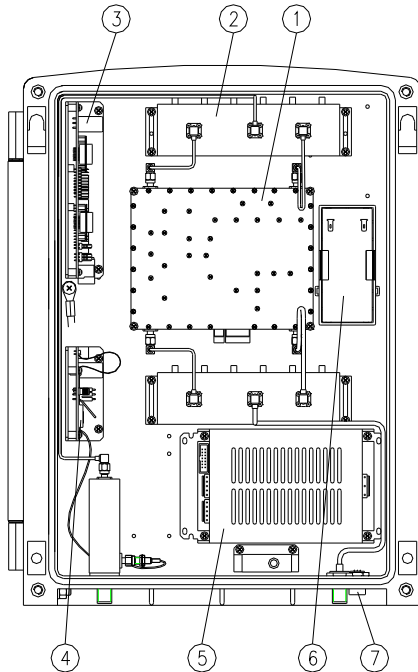
Specification

Parameter	Uplink		Downlink
Operating Frequency	60MHz	1920 - 1980MHz	2110 - 2170MHz
Max. Gain	55dB		55dB
Output Power	5dBm		40dBm
Gain Adjustment Range	≥20dB		≥20dB
Gain steps	1dB		1dB
Gain Adjustment Steps Error	±1dB/(1-10dB); ±1dB/(10-20dB)		
ALC	5dBm±2dB (or turn off PA)		40dBm±2dB (or turn off PA)
Max nondestructive Input power	+13dBm		
In Band Ripple	≤2dB		≤2dB
Noise Figure	≤4dB		≤4dB
VSWR	≤1.5		≤1.5
Delay	≤1.5μs		≤1.5μs
ACLR(Downlink)	±5MHz≤-45dBc; ±10MHz ≤-50dBc		
ACRR(Downlink)	≥33dBc ±5MHz; ≥33dBc ±10MHz		
ACRR(Uplink)	≥20dBc ±5MHz; ≥20dBc ±10MHz		
EVM	≤5.5%		
Out off Band Gain	2,7 ≤ f_offset < 3,5 MHz <60dB 3,5 ≤ f_offset < 7,5 MHz <45dB 7,5 ≤ f_offset < 12,5 MHz <45dB 12,5 MHz ≤ f_offset <35dB		
RF Connector	N-Female		
Impedance	50Ω		
Power Supply	AC: 220V±20% 45-55Hz; or DC: -48V±10%, 24V±10%		
Power Consumption	≤90W		
Operating environment	Temperature -25°C to +55°C, Relative humidity ≤ 95%		
Dimensions (width*Height*Length)	460*350*150mm		
Weight	≤15Kg		
Monitoring Interface	Local: DB-9 RS-232; Remote: Data & SMS		
MTBF	>60,000 hours		

II. Repeater System Block Diagram



III. Repeater Module Layout Plan



- ①RF Amplifier (UL LNA & DL PA); ② Duplexer; ③ CPU; ④ GSM MODEM;
 ⑤ Switching Power Supply; ⑥ Storage Battery; ⑦ Electrical Outlet