WCDMA Band Adjustable Repeater
SR-2110

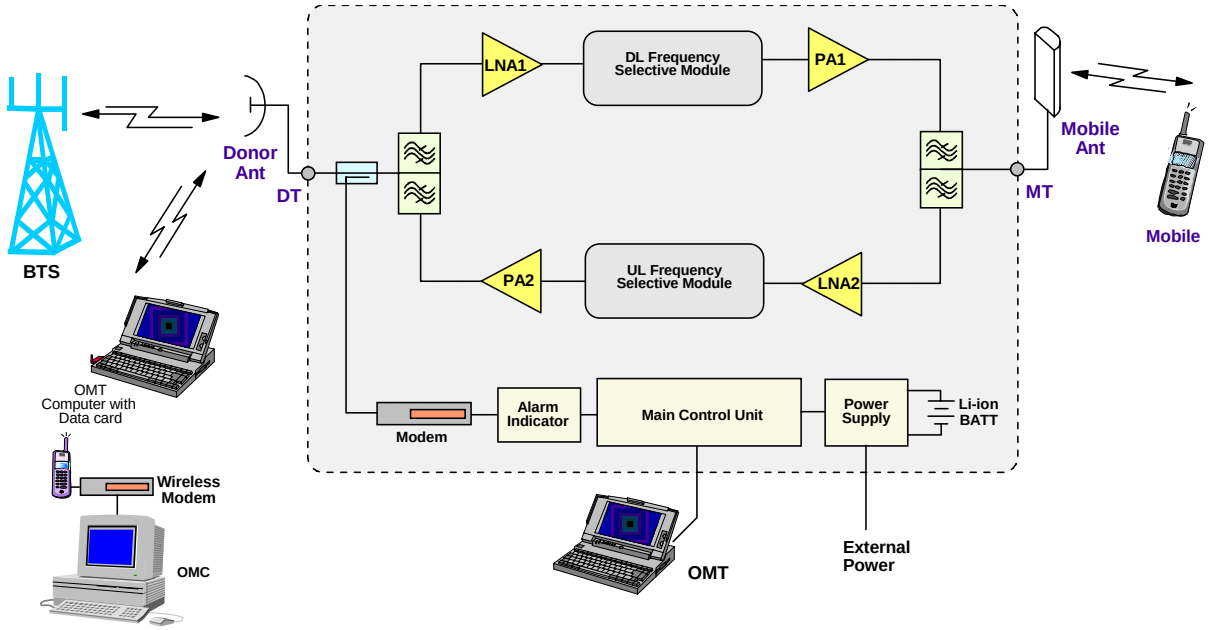
Features

- Band adjustable with 1, 2 or 3 carriers bandwidth. Customized fixed bandwidth and adjustable bandwidth within 60MHz.
- Adjustable centre frequency within 60MHz of the WCDMA band.
- Filtering and amplification of both uplink and downlink signals with good system gain.
- Low noise amplifier improves uplink system noise figure for better voice quality and reduced dropped call.
- Can be configured as Master Unit (MU) or Slave Unit (SU) in a centralized monitoring system.
- Local control and monitoring function: operating status and parameters can be set or monitored by OMT.
- OMC is available for remote operation and maintenance via an integrated wireless modem. (Optional)
- Back-up Li-ion battery keeps the equipment running in case of power failure.
- The enclosure is designed for all weather environment - waterproof, damp-proof and omni-sealed (IP55).

Product Description

The SR-2110 WCDMA Band Adjustable Repeater is designed for indoor operation in the WCDMA band. It is designed primarily for network coverage within residential apartments, offices, lifts and small tunnels. Band-specific linear amplifier and IF filtering effectively amplify the desired BTS carriers and provide superior out-of-band rejection. Automatic temperature compensating for gain and working frequency, which ensures the working temperature for equipment to work normally. Complete local and remote control & monitoring function is possible via PC or wireless modem with the OMT or OMC. Back-up Li-ion battery keeps the equipment running in case of power failure The SR-2110 comes in a sealed, well-ventilated cast aluminum enclosure and is suitable for indoor and sheltered outdoor environment.

Functional Block Diagram



Technical Specifications

Electrical			
Frequency Range	Downlink	MHz	2110 – 2170
	Uplink	MHz	1920 – 1980
Maximum System Gain		dB	75 ± 2
Gain Adjustment Range (1dB step)		dB	0 – 20 ± 1.5
Operating Bandwidth		MHz	1, 2 or 3 carriers
Output Power	Downlink	dBm	27 ± 1
	Uplink		17 ± 1
Downlink 3rd Order Intercept, OIP3		dBm	≥ 41.5
Pass Band Ripple, p-p		dB	≤ 2
System Group Delay		μsec	≤ 5
System Noise Figure, at Maximum Gain		dB	≤ 5
Spurious			3GPP TS 25.106 V5.3.0
Intermodulation			
Error Vector Magnitude (EVM)			
Peak Code Domain Error (PCDE)			
Out-of-band Gain			
Input VSWR			≤ 1.5
Absolute Maximum RF Input Power		dBm	+ 10
Impedance		Ω	50
Power, Mechanical & Environmental			
Dimensions, H x W x D		mm	430 x 300 x 152
Weight (approx.)		kg	13
Power Supply		VAC	85 – 264 / 47 – 63Hz
Power Consumption (approx.)	MU	W	55
	SU	W	68
Power Up Waiting Time (approx.)	MU	sec	60
	SU	sec	120
MCU Battery Backup Time (approx.)		hr	2
Enclosure Cooling			Convection
RF Connectors			N – Female
Operating Temperature		°C	-20 to +40
Operating Humidity		%	≤ 85
Environmental Class			IP55
MTBF		hr	> 50,000

Note: Typical specification at room temperature

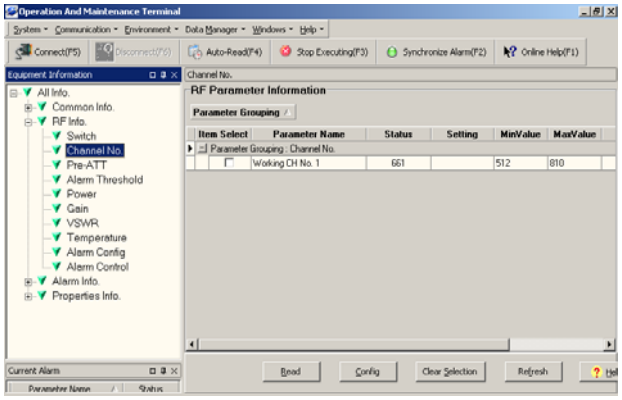
Operation and Maintenance

By using a direct serial connection to PC, the installation and commissioning of the SR-2110 is accomplished by the OMT. With the integrated wireless modem (data or SMS mode), equipment parameters can be monitored and controlled remotely.

Controlled equipment parameters include: Operating Frequency, Gain, ON/OFF Switch, Downlink Input Power Threshold, Output Power Threshold, temp Threshold.

Monitored equipment parameters include: Alarms (LNA, PA, Power Fault, Over-temp, VSWR, DL Output Power, Over-temp Threshold, self-excitation).

The SR-2110 has been developed to take advantage of advanced network operation, where the OMC (optional) provides an effective solution for central monitoring a group of Comba products.



Outline Drawing