

**Features**

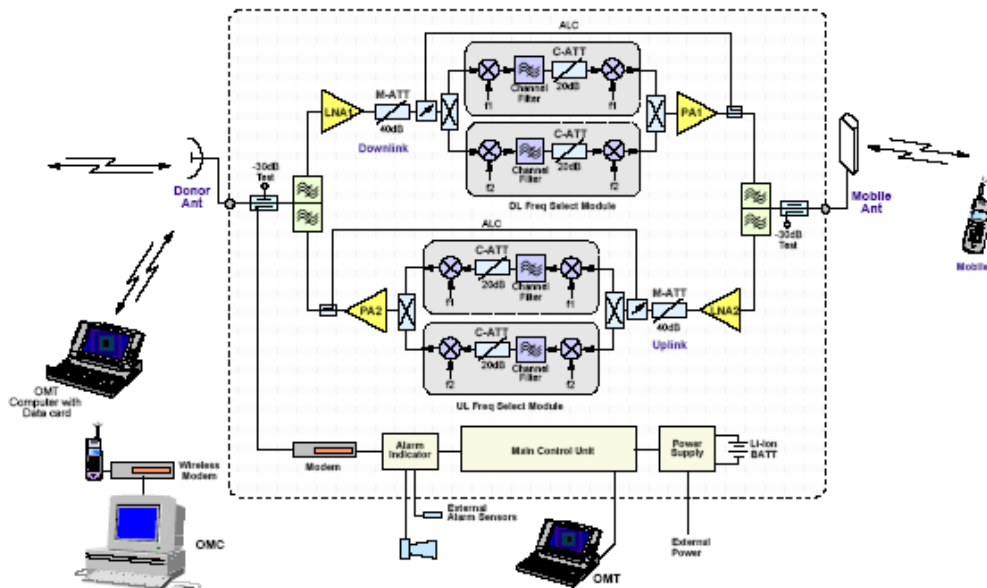
- Permits rapid selection of frequency when operating in a tightly spaced channel environment.
- Integrated GSM/CDMA radio modem for remote configuration, monitor and control.
- Automatic gain stabilization prevents self oscillation caused by a low isolation between DT and MT antennas.
- Internal backup battery keeps the alarm unit running for up to 6 hours after power loss.
- Optional OMC is available for remote operation and maintenance of repeaters.
- Designed for all weather outdoor - waterproof, damp-proof and omni-sealed (IP65).



**Product Description**

The R-3122 channel-selective repeater is designed for outdoor operation in the WCDMA band. Channel-specific linear amplifier and filtering effectively amplifies the desired BTS carrier and provides superior out-of-band rejection. Typical units incorporate up to 2 pairs (uplink and downlink) of channel modules with frequencies programmed to specific requirements of the network. Remote configuration and surveillance is possible through Comba's remote control and monitoring system, via laptop or wireless modem to the OMC. Li-ion battery backup ensures alarm signals are sent out in the event of power failure, and full battery backup ensures operation in unstable mains supply. The R-3122 comes in a completely sealed, well-ventilated cast aluminum chassis, suitable for all weather conditions (IP65).

**System Block Diagram**



### Technical Specifications

#### Electrical, Power

Frequency Range, Uplink - [MHz]	1920 - 1980
Frequency Range, Downlink - [MHz]	2110 - 2170
No. of Channels	1 - 2
Max. System Gain - [dB]	90 ± 2 (1 ch) 87 ± 2 (2 ch)
Gain Adjustable Range (1dB step) - [dB]	0-40 ± 1.5
Output Power / Channel, UL - [dBm]	
- 1 channel	23
- 2 channel	18
Output Power / Channel, DL - [dBm]	
- 1 channel	33
- 2 channel	28
Pass Band Ripple, p-p - [dB]	≤ 3
System Noise Figure - [dB]	≤ 4
Group Delay - [μsec]	≤ 5
Out-Of-Band Radiation	See Note 1
Out-Of-Band Gain	See Note 1
Spurious and Intermodulation	See Note 1
Modulation Accuracy	See Note 1
Max. RF Input Power - [dBm]	+10
Input VSWR	≤ 1.4
Impedance - [Ω]	50
Power Supply - [VAC]	155-285 /45-55Hz
Power Consumption - [W]	160 (2 ch)
MCU Battery Backup Time - [hr]	6 (approx.)
Power Up Waiting Time - [sec]	60 (approx.)

#### Mechanical, Environmental

Dimensions, L x W x H - [mm]	600 x 450 x 195
Housing Material	Aluminum
Housing Colour	Grey Anodised, RAL877U
Weight - [kg]	37 (approx.)
Connector Type	N-Female or 7/16 DIN Female
Operation Temperature - [°C]	-40 to +55
Operating Humidity - [%]	≤ 95
Cooling	Convection
MTBF - [hrs]	> 50,000
Environmental Class	IP65

#### Operation & Maintenance

Local Monitoring Feature	PC via RS232
Remote Data Transfer	via Line modem, build-in wireless GSM modem (data or SMS)
Local and Remote Controlled Parameters	Operating Frequency, Gain, Channel ON/OFF
Local and Remote Monitored Parameters	LNA, PA, PLL, Power Supply, Output Power, Overheating, BTS Signal Level (local only), Self oscillation, VSWR, Door alarm

Note 1: Compliance with 3GPP TS 25.106 V5.3.0 Standards.

### Mechanical Outline Drawing

