

Features

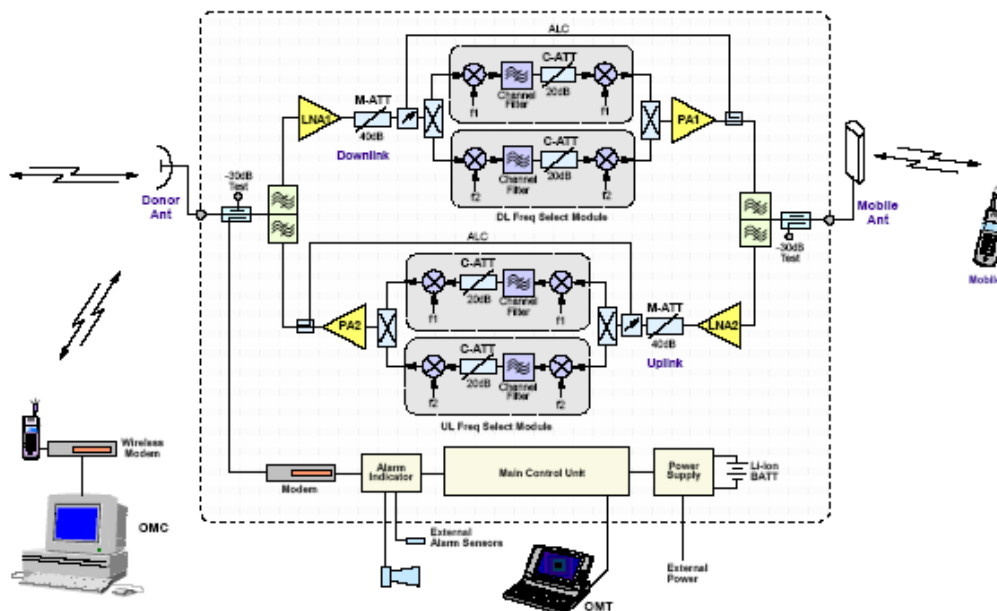
- Permits rapid selection of frequency when operating in a tightly spaced channel environment.
- Up to 4 channels using high selectivity channel modules with a common linear power amplifier.
- Integrated GSM/CDMA radio modem for remote configuration, monitor and control.
- Wireless remote alarm with optional BTS relay contacts.
- 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-8110AC is a high power, CDMA800 channel-selective repeater designed for outdoor operation. Channel-specific filtering and linear amplification effectively amplifies the desired BTS carrier and provides superior out-of-band rejection. It can incorporate up to 4 pairs (uplink and downlink) of channel modules with frequencies programmed to specific requirements of the network. Complete local and remote control and monitoring function is possible via laptop or wireless modem to the OMT or OMC. Li-ion standby battery for MC board ensures alarm signals are sent out in the event of power failure, and optional full battery backup ensures repeater operation in unstable mains supply. The unit comes in a completely sealed, well-ventilated cast aluminum chassis, suitable for all weather conditions (IP65).

System Block Diagram (2-Ch)



Technical Specifications

Electrical

Frequency Range, Uplink – [MHz]	825 – 835
Frequency Range, Downlink – [MHz]	870 – 880
No. of Channels	2– 4
Max. System Gain – [dB]	95 ± 2 (2 ch) 92 ± 2 (4 ch)
Gain Adjustable Range (1dB step) – [dB]	0–30 ± 1.5
Max. Output Power (with ALC) – [dBm]	
- Downlink (Option)	40 or 37
- Uplink	23
Pass Band Ripple, p-p – [dB]	≤ 3 (typ. 2)
System Noise Figure – [dB]	≤ 5 (typ. 4)
Group Delay – [μsec]	≤ 5
In-band Spurious – [dBm]	≤ -22 / 30kHz
Out-of-Carrier Spurious, UL – [dBc]	
- Δf ≥ 900kHz	-42 / 30kHz
- Δf ≥ 1.98MHz	-54 / 30kHz
Out-of-Carrier Spurious, DL – [dBc]	
- Δf ≥ 750kHz	-45 / 30kHz
- Δf ≥ 1.98MHz	-60 / 30kHz
Out-of-band Spurious, Δf ≥ 1MHz – [dBm]	
- 9kHz to 150kHz	≤ -36/1kHz
- 150kHz to 30MHz	≤ -36/10kHz
- 30MHz to 1GHz (excluding *)	≤ -36/100kHz
- 1GHz to 12.75GHz (excluding **)	≤ -36/1MHz
- 805MHz to 821MHz *	≤ -67/100kHz
- 885MHz to 915MHz *	≤ -67/100kHz
- 930MHz to 960MHz *	≤ -47/100kHz
- 1.71GHz to 1.92GHz **	≤ -47/100kHz
- 3.4GHz to 3.53GHz **	≤ -47/100kHz
In-band Intermodulation – [dBm]	-15 / 30kHz
Out-of-band Intermodulation – [dBm]	
- Δf ≥ 1MHz (9 kHz – 1 GHz)	-36/100kHz
- Δf ≥ 1MHz (1 – 12.75 GHz)	-36/1MHz
Out-of-carrier Suppression – [dBc]	
- Δf ≥ 1.98MHz	≤ -44
Out-of-band Suppression – [dBc]	
- Δf ≥ 2.5MHz	≤ -60
- Δf ≥ 10MHz	≤ -70
Max. RF Input Power, DL – [dBm]	13
Input VSWR	≤ 1.4 (typ. 1.3)
Frequency Error – [Hz]	≤ ±5 × 10 ⁴
Quality of Waveform	> 0.960
Impedance – [Ω]	50

Power, Mechanical & Environmental

Power Supply – [VAC]	155–285 / 45–55Hz
Power Consumption – [W]	
- 40dBm (10W) Model	180
- 37dBm (5W) Model	120
MCU Battery Backup Time – [hr]	6 (approx.)
Power Up Waiting Time – [sec]	60 (approx.)
Dimensions, L x W x H – [mm]	
- 2 ch	600 × 450 × 195
- 3 to 4 ch	600 × 450 × 295
Housing Material	Aluminum
Housing Colour	Grey Anodised, RAL877U
Weight – [kg]	
- 1 to 2 ch	37 (approx.)
- 3 to 4 ch	51 (approx.)
Connector Type	N-Female or 7/16 DIN Female
Operating 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, or build-in wireless CDMA/GSM modem (data or SMS), OMC (option)
Local and Remote Controlled Parameters	Channel No., ATT, Over-Temp Thresholds (System, PA), UL/DL Output Power Threshold, UL/DL VSWR Threshold, Alarm Report Enable.
Local and Remote Monitored Parameters	Alarms (LNA, PA, PLL unlock, Power Down, PSU Fault, Door Open, Self oscillation, PA Over-Temp, PA Overload, PA VSWR, System Over-Temp), UL/DL Output Power, DL Input Power, UL/DL Gain

Mechanical Outline Drawing

