

WCDMA Channel Selective Repeater – Expansion

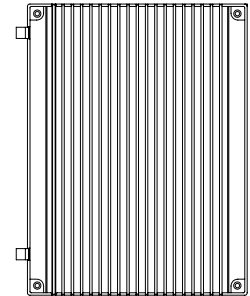
Version

RD-2122E



Features

- RD-2122E WCDMA Channel Selective Repeater in expansion configuration designed specifically to retrofit to existing Comba Repeater to minimize foot print
- Same RF performance as the 3GPP Compliant RD-2122E available in 2W or 5W.
- Permits frequency selection when operating in a tightly spaced channel environment.
- Internal backup battery keeps the alarm unit running for up to three hours after power failure.
- Supports Independent Modem or Share Modem mode for remote control
- Designed for all outdoor application - waterproof, damp-proof and omni-sealed (IP65).

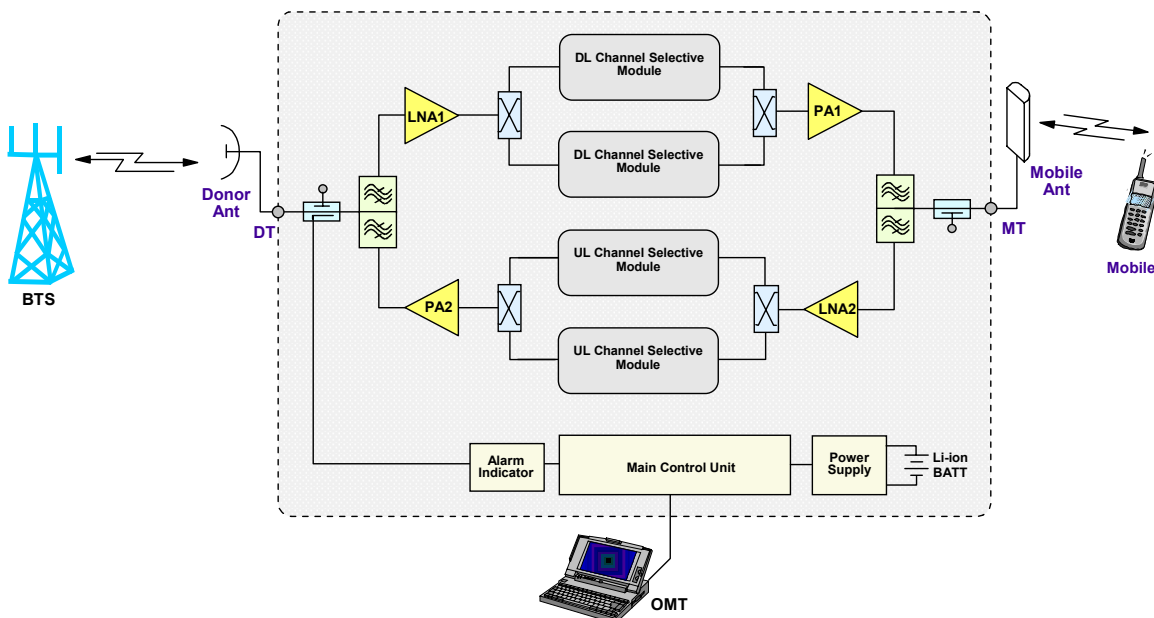


Product Description

The RD-2122E channel selective repeater is designed for 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 two pairs (uplink and downlink) of channel selective 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 PC or wireless modem to the OMC. Internal Li-ion battery backup ensures alarm signals are sent out in the event of power failure. The RD-2122E comes in a sealed, well-ventilated cast aluminum enclosure, suitable for all weather conditions.

RD-2122E is specified designed for retrofitting to existing Comba Repeater to minimize footprint e.g., RD1822 GSM1800 Repeater + RD2122E = GSM1800 + WCDMA dualband repeater

Functional Block Diagram



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Technical Specifications

Model (Total Output Power)		2W		5W	
Electrical					
Frequency Range, Uplink		MHz	1920 – 1980		
Frequency Range, Downlink		MHz	2110 – 2170		
Number of Channels			2		
Output Power per Channel, Uplink	1 Channel	dBm	23 ± 1		
	2 Channels	dBm	19 ± 1		
Output Power per Channel, Downlink	1 Channel	dBm	33 ± 1		37 ± 1
	2 Channels	dBm	29 ± 1		33 ± 1
Maximum System Gain		dB	95 ± 2		
Gain Adjustment Range (1dB Step)		dB	0 – 30		
Pass Band Ripple within 3.84MHz, p-p		dB	≤ 2		
System Noise Figure at Maximum Gain		dB	≤ 4		
System Group Delay		μsec	≤ 5		
Out-of-Band Emission			3GPP TS 25.106 and 3GPP TS 25.143 compliant		
Out-of-Band Gain					
Spurious and Intermodulation					
Modulation Accuracy					
Input VSWR			≤ 1.5		
Absolute Maximum RF Input Power		dBm	+13		
Impedance		Ω	50		
Power, Mechanical & Environmental					
Dimensions, HxWxD		mm	600x450x146		
Weight (approx.)		kg	25		
Power Supply		VAC	85 – 135 / 47 – 63Hz		
			176 – 264 / 47 – 63Hz		
Power Consumption (approx.)		W	150	180	
Power Up Waiting Time (approx.)		sec	60		
MCU Battery Backup Time (approx.)		hr	3		
Enclosure Cooling			Convection		
RF Connectors			N-Female		
Operating Temperature		°C	-33 to +55		
Operating Humidity		%	≤ 95		
Environmental Class			IP65		
MTBF		hr	≥ 50,000		

Note: Typical specifications at room temperature

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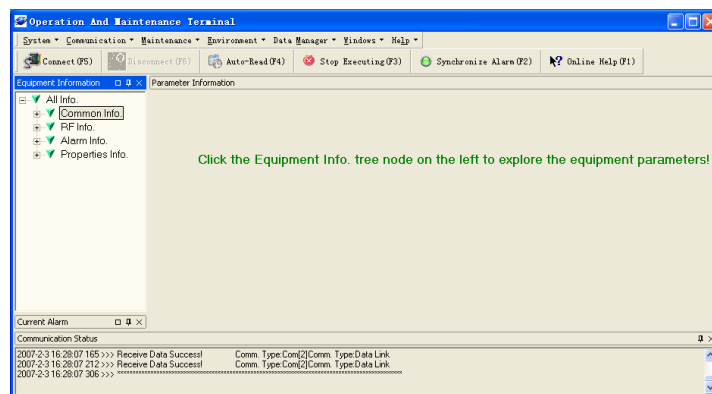
Operation and Maintenance

Using a direct serial connection to a PC, installation and commissioning of the RD-2122E is accomplished by the OMT. Using the integrated wireless modem (data or SMS mode), the equipment parameters can be monitored and controlled remotely.

Controlled equipment parameters include: RF Switch, Carrier Switch, ATT, Gain, Over-Temp Threshold, DL Input Power Threshold, DL Output Power Threshold and Alarm Report Enable.

Monitored equipment parameters include: Alarms (LNA, PA, PLL unlock, Power Down, PSU Fault, Chassis Lock, Self-Oscillation, DL Output Power Low, DL Input power Overload, Over Temp, VSWR), DL Output Power and DL Input Power

The RD-2122E has been developed to take advantage of advanced network operation, where the OMC (optional) provides an effective solution for central monitoring of a group of Comba products.



Outline Drawing

