GSM850 Split Band Selective Repeater

RD-8132

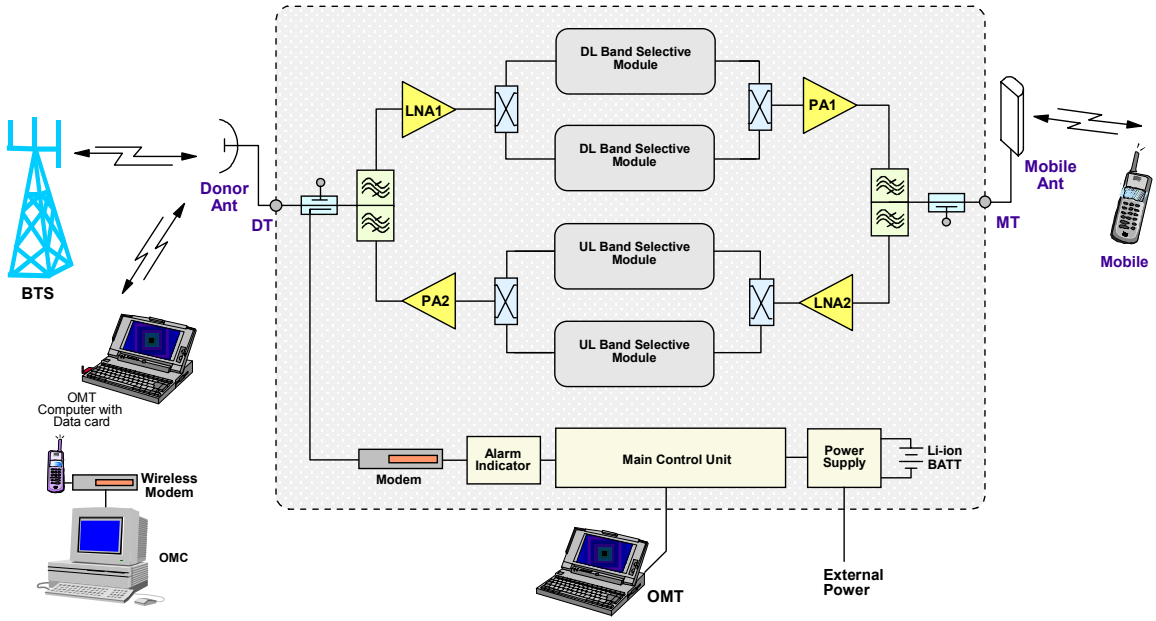
Features

- Two sub band-selective modules with adjustable bandwidth.
- Output power can be adjusted via OMT software.
- Integrated wireless modem for remote configuration, monitoring and control.
- Internal backup battery keeps the alarm unit running for up to three hours after power failure.
- Optional OMC is available for remote operation and maintenance of a group of repeaters.
- Designed for all weather outdoor installation – waterproof, damp-proof and omni-sealed (IP65).

Product Description

The RD-8132 split band-selective repeater is designed for GSM850 networks. Band-specific linear amplifier and filtering effectively amplifies the desired BTS carriers and provides superior out-of-band rejection. The unit can incorporate two adjustable bandwidth segments. Remote configuration and surveillance is possible through Comba's remote control and monitoring system via PC or wireless modem to the OMT/OMC. Internal Li-ion backup battery ensures alarm signals are sent out during power failure. The unit comes in a sealed, cast aluminum enclosure, suitable for operation in all weather conditions.

Functional Block Diagram



Technical Specifications

Electrical			5W	10W
Frequency Range, Uplink		MHz	824 – 849	
Frequency Range, Downlink		MHz	869 – 894	
Number of Band Selective Segment			2	
Total Output Power, Uplink		dBm	33 ± 1	
Total Output Power, Downlink		dBm	37 ± 1	40 ± 1
Operating Bandwidth		MHz	2 - 15 , 1 - 6	
Maximum System Gain		dB	90 ± 2	
Gain Adjustment Range (1dB step)		dB	0 – 30	
Pass Band Ripple at FBW, p-p		dB	≤ 5	
System Noise Figure at Max. System Gain		dB	≤ 6	
System Group Delay		μsec	≤ 6	
Bandwidth Selectivity *	± 400KHz	dB	≥ 30	
	± 600KHz	dB	≥ 45	
	± 1MHz	dB	≥ 60	
Spurious	9kHz to 1GHz	dBm	≤ -36	
	1GHz to 12.75GHz	dBm	≤ -30	
Intermodulation		dBm	≤ -13	
Output 3rd Order Intercept (OIP3), Downlink		dBm		≥ 57
Absolute Maximum RF Input Power		dBm	+10	
Input VSWR			≤ 1.5	
Impedance		Ω	50	
Power, Mechanical & Environmental				
Dimensions, H x W x D		mm	600 x 450 x 195	
Weight (approx.)		kg	37	
Power Supply		VAC	85 – 135 / 47 – 63Hz	
			176 – 264 / 47 – 63Hz	
Power Consumption (approx.)		W	200	250
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
*: For Each Band Selective Module

Operation and Maintenance

Using a direct serial connection to a PC, installation and commissioning of the RD-8132 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: Carrier Switch, Channel No. Range, ATT, RF Switch, Over-Temp Threshold, DL Input Power Threshold, DL Output Power Threshold, VSWR 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-8132 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