GSM1800 Split Band Selective Repeater
RD-1832

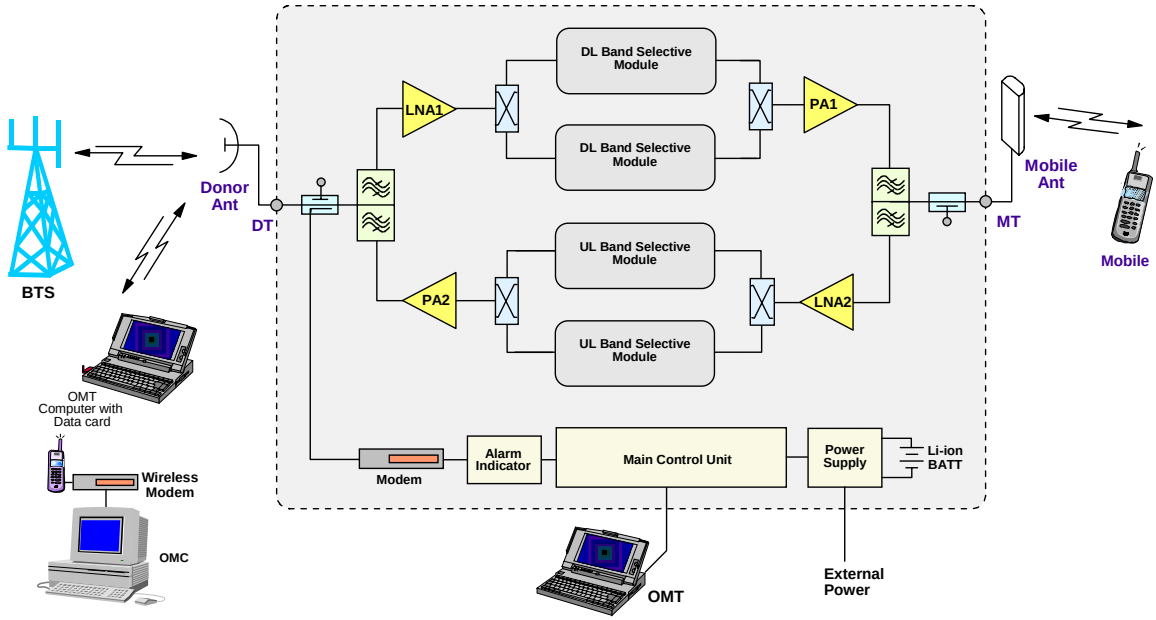
Features

- Two sub band-selective modules with adjustable bandwidth.
- Optional 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).
- Easy and convenience maintenance panel at bottom for commissioning, routine check, and power on/off.

Product Description

The RD-1832 split band-selective repeater is designed for GSM1800 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 15MHz 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			2W	5W	10W
Frequency Range, Uplink		MHz	1710 – 1785		
Frequency Range, Downlink		MHz	1805 – 1880		
Number of Band Selective Segment			2		
Total Output Power, Uplink		dBm	30 ± 1		
Total Output Power, Downlink		dBm	33 ± 1	37 ± 1	40 ± 1
Adjustable Operating Bandwidth per Band Selective Segment		MHz	2 – 15		
Maximum System Gain		dB	90 ± 2		
Gain Adjustment Range (1dB Step)		dB	0 – 30		
Downlink 3rd Order Intercept (OIP3)		dBm	≥ 50	≥ 54	≥ 57
Pass Band Ripple at FBW, p-p		dB	≤ 5.5		
System Noise Figure at Max. System Gain		dB	≤ 6		
System Group Delay		μsec	≤ 6		
Out-of-Band Gain at System Gain ≤ 80dB	Offset ≥ 400KHz	dB	≤ 50		
	Offset ≥ 600KHz	dB	≤ 40		
	Offset ≥ 1MHz	dB	≤ 35		
	Offset ≥ 5MHz	dB	≤ 25		
Spurious	9kHz to 1GHz	dBm	≤ -36		
	1GHz to 12.75GHz	dBm	≤ -30		
Input VSWR			≤ 1.5		
Absolute Maximum RF Input Power		dBm	+10		
Impedance		Ω	50		
Power, Mechanical & Environmental					
Dimensions, H x W x D		mm	420 x 330 x 182		
Weight (approx.)		kg	25		
Power Supply			85 – 264 / 47 – 63Hz		
Power Consumption (approx.)		W	140	160	180
Power Up Waiting Time (approx.)		sec	60		
MCU Battery Backup Time (approx.)		hr	2		
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

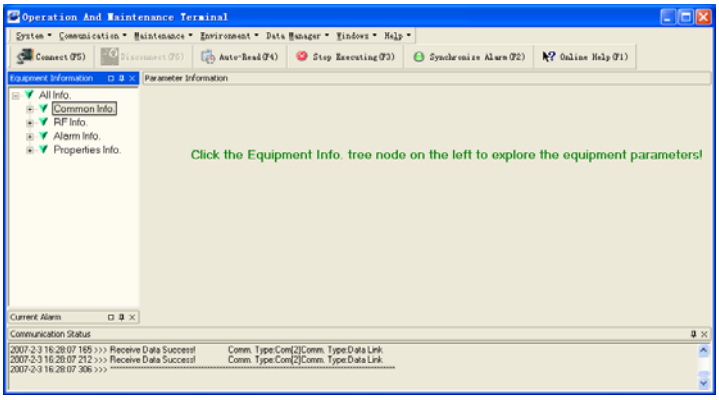
Operation and Maintenance

Using a direct serial connection to a PC, installation and commissioning of the RD-1832 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-1832 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