

GSM900+GSM1800 Dual Bandwidth Adjustable Repeater RD-7520



Features

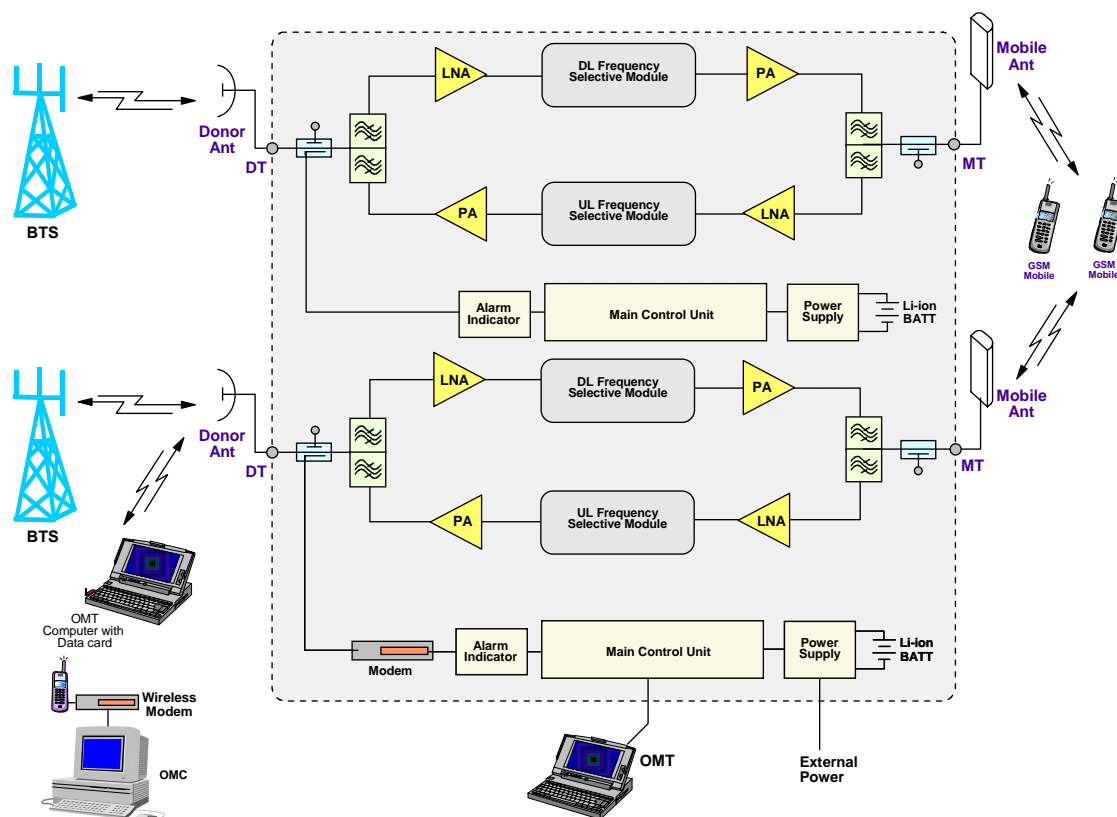
- Dual band configuration consists of GSM900 and GSM1800 in a single unit minimized installation footprint.
- Adjustable bandwidth from 2 to 25MHz (GSM) and 2 to 25MHz (DCS).
- Integrated wireless modem for remote configuration, monitoring and control.
- Internal backup battery keeps the alarm unit running 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

RD-7520 outdoor bandwidth adjustable repeater is designed for dualband GSM900/1800 application. Independent Band-specific linear amplifier and filtering effectively amplifies the desired BTS carriers and provides superior out-of-band rejection. 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 RD-7520 comes in a completely sealed, cast aluminum enclosure, suitable for all weather conditions.

Functional Block Diagram



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Technical Specifications

Model		GSM			DCS			
Electrical								
Uplink Frequency Range		MHz	880 – 915			1710 – 1785		
Downlink Frequency Range		MHz	925 – 960			1805 – 1880		
Maximum System Gain		dB	90 ± 2			90 ± 2		
Gain Adjustment Range (1dB step)		dB	0 - 30					
Operating Bandwidth		MHz	2 – 25			2 – 25		
Uplink Total Output Power		dBm	33 ± 1			33 ± 1		
Downlink Total Output Power		dBm	33 ± 1	37 ± 1	40 ± 1	33 ± 1	37 ± 1	40 ± 1
Downlink 3 rd Order Intercept, OIP3		dBm	≥ 52	≥ 56	≥ 56	≥ 52	≥ 56	≥ 56
Pass Band Ripple, Continuous 25MHz		dB	≤ 5					
System Noise Figure at Maximum Gain		dB	≤ 5					
Group Delay		μsec	≤ 6					
Out-of-band Gain	Offset ≥ 600KHz	dBm	≤ 40			≤ 40		
	Offset ≥ 1MHz	dBm	≤ 35			≤ 35		
	Offset ≥ 5MHz	dBm	≤ 25			≤ 25		
Spurious	9 kHz – 1GHz	dBm	≤ -36					
	1GHz – 12.75 GHz	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	606 x 390 x 336					
Weight (approx.)		kg	46					
Power Consumption		W	350					
Power Supply		VAC	85 – 264 / 47 – 63Hz					
MCU Battery Backup Time (approx.)		hr	3					
Power Up Waiting Time (approx.)		sec	60					
Enclosure Color			Grey					
Enclosure Material			Aluminum					
Enclosure Cooling			Convection					
Connectors			N-Female					
Operating Temperature		°C	-33 to +55					
Operating Humidity		%	≤ 95					
Environmental Class			IP65					
MTBF		hr	≥ 50,000					

Note: Typical specification at room temperature

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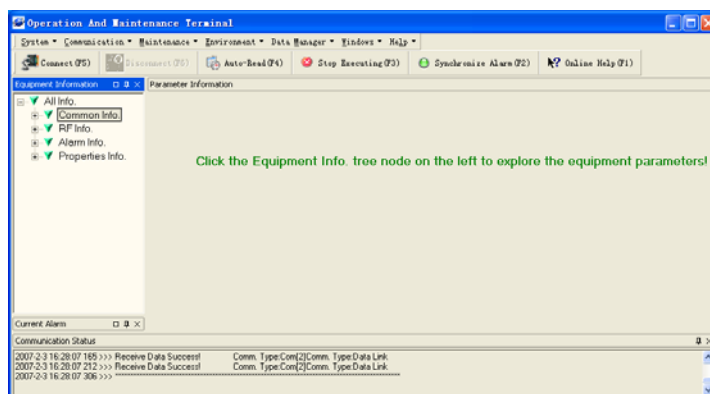
Operation and Maintenance

Using only a direct serial connection to a PC, installation and commissioning of the RD-7520 is accomplished with OMT, and using the integrated wireless modem (data or SMS), equipment parameters can be monitored remotely.

Controlled equipment parameters include: Channel No. Range, ATT, RF Switch, Over-Temp Threshold, DL Output Power Threshold, DL Input Power Threshold and Alarm Report Enable.

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

RD-7520 has been developed to take advantage of advanced network operation, with the OMC (optional) being an effective solution to monitoring a group of Comba products centrally.



Outline Drawing

