

Features

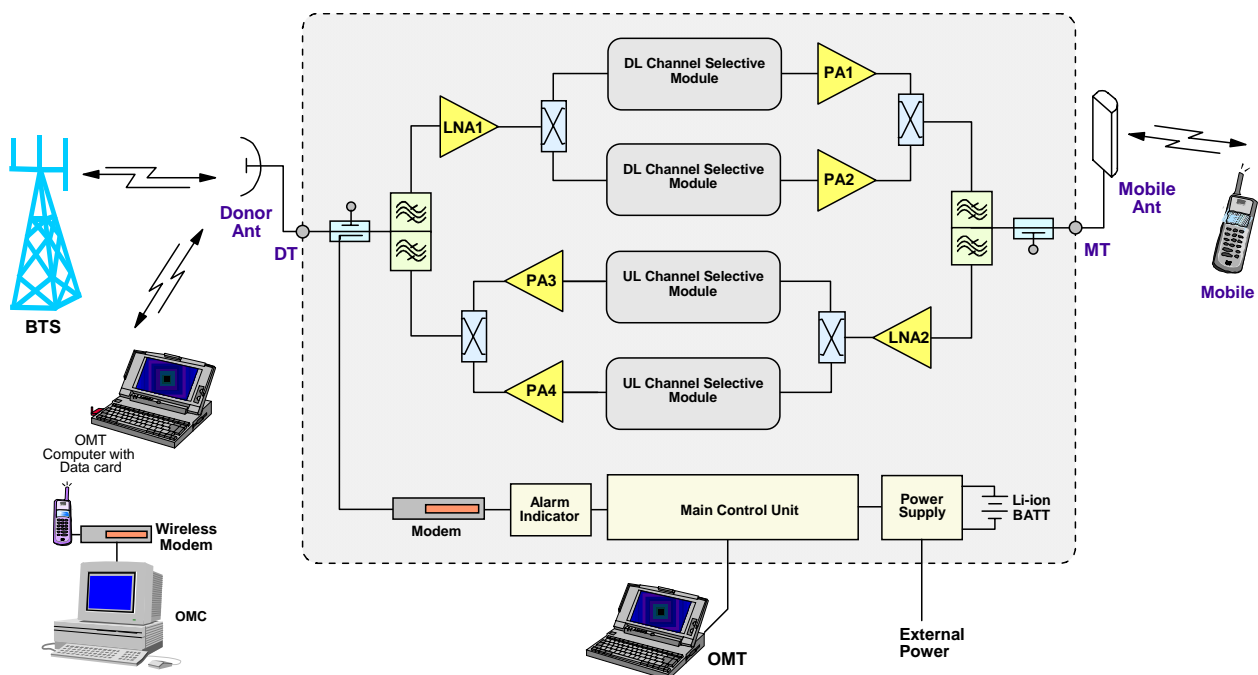
- Permits rapid selection of frequency when operating in a tightly spaced channel environment.
- Integrated wireless modem for remote configuration, monitoring and control.
- Internal backup battery keeps the alarm unit running for up to three hours after power failure.
- Optional OMC is available for remote operation and maintenance of a group of repeaters.
- Designed for all outdoor application – waterproof, damp-proof and omni-sealed (IP65).
- ETS 300 609-4 Compliant.



Product Description

The RD-9122 channel-selective repeater is designed for operation in GSM900 band. Channel-specific linear amplifier and filtering effectively amplifies the desired BTS carriers and provides superior out-of-band rejection. Typical units incorporate up to 4 pairs (uplink and downlink) of channel 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 OMT/OMC. Internal Li-ion backup battery ensures alarm signals are sent out during power failure. The RD-9122 comes in a completely sealed, cast aluminum enclosure, suitable for all weather conditions.

Functional Block Diagram



Technical Specifications

Electrical			
Frequency Range, Uplink		MHz	880 – 915 or 890 – 912
Frequency Range, Downlink		MHz	925 – 960 or 935 – 960
Number of Channels			2 4
Output Power per Channel, Uplink		dBm	33 ± 1 30 ± 1
Output Power per Channel, Downlink		dBm	33 ± 1 30 ± 1
Maximum System Gain		dB	95 ± 2 92 ± 2
Gain Adjustment Range (1dB Step)		dB	0 – 30
Channel Selectivity	at ±100KHz	dB	> -2
	at ±400KHz	dB	≤ -45
	at ±600KHz	dB	≤ -55
	at ±1MHz	dB	≤ -60
Spurious and Intermodulation	9KHz to 1GHz	dBm	≤ -36
	1GHz to 12.75GHz	dBm	≤ -30
Pass Band Ripple, 200KHz Channel, p-p		dB	≤ 2
System Noise Figure at Maximum Gain		dB	≤ 5
System Group Delay		μsec	≤ 8
Input VSWR			≤ 1.5
Absolute Maximum RF Input Power		dBm	+10
Impedance		Ω	50
Power, Mechanical & Environmental			
Dimensions, H x W x D		mm	600 x 450 x 195
Weight (approx.)		kg	35 37
Power Supply		VAC	100 – 240 / 47 – 63Hz
Power Consumption (approx.)		W	180 220
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 specification at room temperature

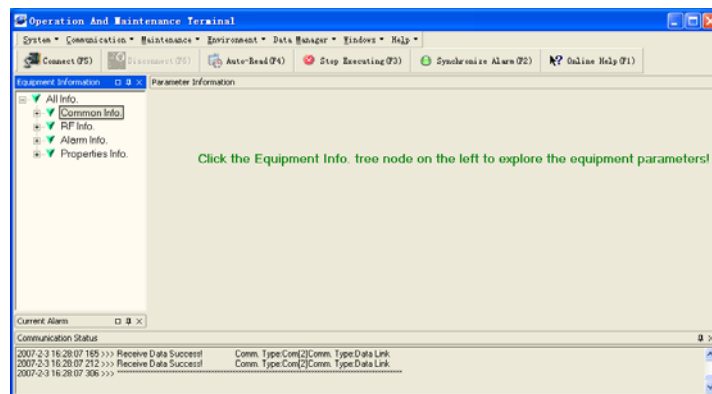
Operation and Maintenance

Using a direct serial connection to a PC, installation and commissioning of the RD-9122 is accomplished by the OMT. Using the integrated wireless modem (data or SMS mode), equipment parameters can be monitored and controlled remotely.

Controlled equipment parameters include: Channel No. Range, ATT, Carrier Switch, RF Switch, Over-Temp Threshold, DL Input Power Overload Threshold, DL Output Power Low 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-9122 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

