GSM1900 Split Bandwidth Adjustable Repeater
RD-1932

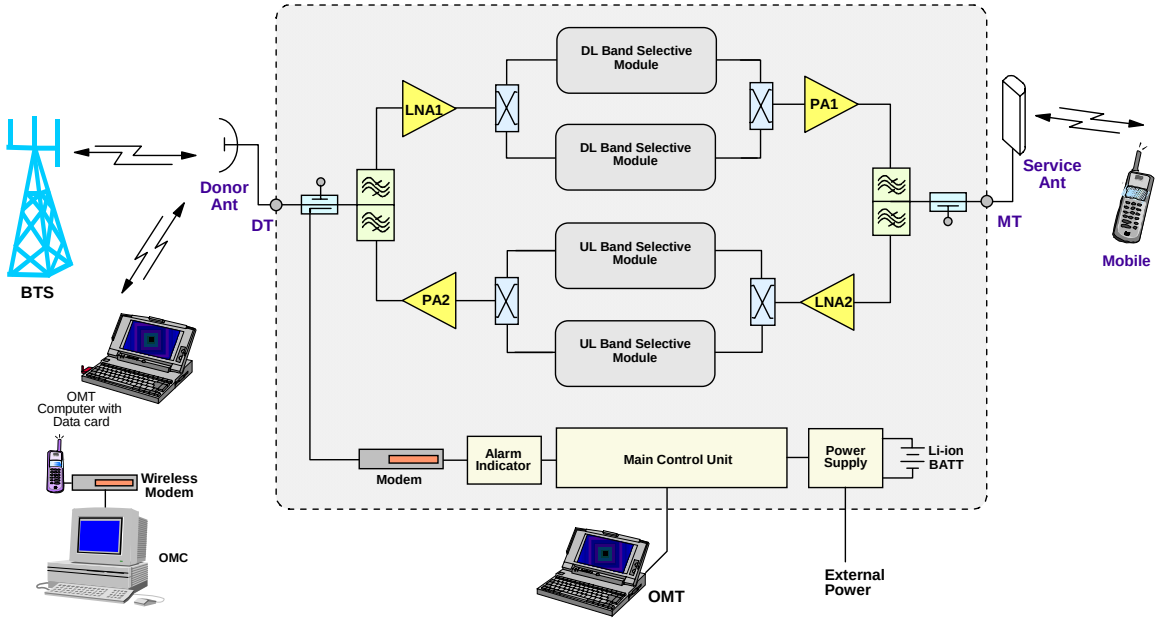
Features

- Two sub band-selective modules with adjustable bandwidth.
- Output power can be adjusted via OMT software.
- Software adjustable single/multi carrier mode allows flexible configuration
- 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 installation – waterproof, damp-proof and omni-sealed (IP65).

Product Description

The RD-1932 split bandwidth adjustable repeater is designed for outdoor operation in the GSM1900 band. Band-specific linear amplifier and filter effectively amplifies the desired BTS carrier and provides superior out-of-band rejection. Typical units incorporate up to two adjustable 15MHz or 25MHz bandwidth segments 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 backup battery built in enclosure ensures alarm signals are sent out while power is down. The RD-1932 comes in a completely sealed, well-ventilated cast aluminum enclosure, suitable for all weather conditions.

Functional Block Diagram



Technical Specifications

Electrical			
Frequency Range, Uplink		MHz	1850 – 1910
Frequency Range, Downlink		MHz	1930 – 1990
Number of Band Selective Modules, On/Off Independently			2
Operating Frequency for Each Band Selective Module		MHz	2 – 15 or 2 – 25
Total Output Power	Uplink	dBm	33 ± 1
	Downlink	dBm	36 ± 1
Maximum System Gain		dB	90 ± 2
Gain Adjustment Range (1dB Step)		dB	0 – 30
Pass Band Ripple in Operating Band, p-p		dB	≤ 5
System Noise Figure at Maximum Gain		dB	≤ 6
System Group Delay		μsec	≤ 6
Spurious	9KHz to 1GHz	dBm	≤ -36
	1GHz to 12.75GHz	dBm	≤ -30
Intermodulation	9KHz to 1GHz	dBm	≤ -13
	1GHz to 12.75GHz	dBm	≤ -13
Bandwidth Selectivity*	at ± 400KHz	dB	≥ 30
	at ± 600KHz	dB	≥ 40
	at ± 1MHz	dB	≥ 55
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	37
Power Supply		VAC	85 – 264 / 47 – 63Hz
Power Consumption (approx.)		W	220
MCU Battery Backup Time (approx.)		hr	3
Power Up Waiting Time (approx.)		sec	60
Enclosure Cooling			Convection
RF Connectors			N-Female
Operating Temperature		°C	-20 to +55
Operating Humidity		%	≤ 95
Environmental Class			IP65
MTBF		hr	50,000

Note: Typical specifications at room temperature
*: For Each Band Selective Module

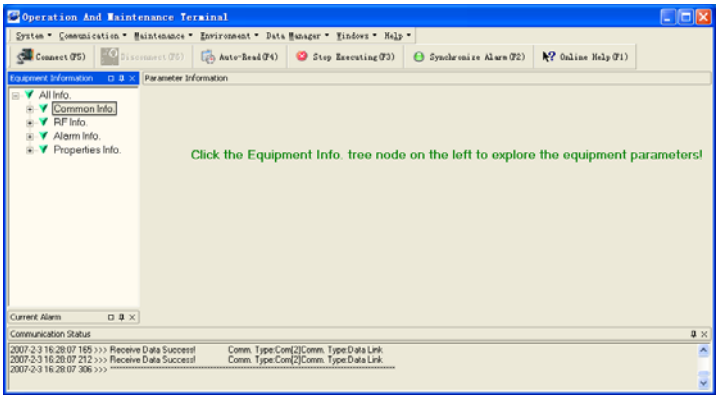
Operation and Maintenance

Using a direct serial connection to a PC, installation and commissioning of the RD-1932 is accomplished by the OMT. Using the integrated wireless modem (data or SMS), the equipment parameters can be monitored and controlled remotely.

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

The RD-1932 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