

# GSM900 Split Band Selective Repeater

RD-9132 II2

Comba

## Features

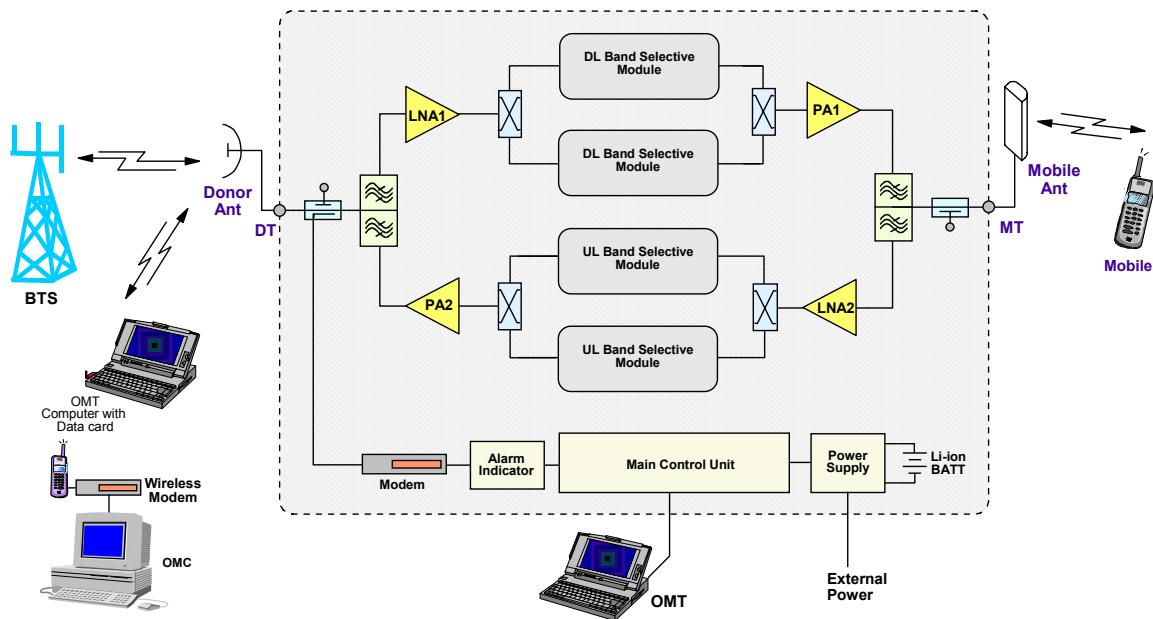
- Two sub band-selective modules with adjustable bandwidth.
- Output power can be adjusted via OMT software.
- Software adjustable single/multi carrier mode allows flexible configuration.
- Integrated wireless modem for remote configuration, monitoring and control.
- Internal backup battery keeps the 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 weather outdoor installation – waterproof, damp-proof and omni-sealed (IP65).



## Product Description

The RD-9132 split band-selective repeater is designed for EGSM900 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                                     |                  |      |                       |
|------------------------------------------------|------------------|------|-----------------------|
| Frequency Range, Uplink                        |                  | MHz  | 880 – 915             |
| Frequency Range, Downlink                      |                  | MHz  | 925 – 960             |
| Number of Band Selective Segment               |                  |      | 2                     |
| Operating Bandwidth per band selective segment |                  | MHz  | 1.8 – 15              |
| Uplink Total Output Power                      |                  | dBm  | 33 ± 1                |
| Downlink Total Output Power                    |                  | dBm  | 40 ± 1                |
| Maximum System Gain                            |                  | dB   | 90 ± 2                |
| Gain Adjustment Range (1dB step)               |                  | dB   | 0 – 30                |
| Downlink 3 <sup>rd</sup> Order Intercept, OIP3 |                  | dBm  | ≥ 57                  |
| Pass Band Ripple at FBW, p-p                   |                  | dB   | ≤ 5                   |
| System Noise Figure at Max. System Gain        |                  | dB   | ≤ 6                   |
| System Group Delay                             |                  | μsec | ≤ 6                   |
| Out-of-Band Gain                               | Offset ≥ 600KHz  | dB   | ≤ 40                  |
|                                                | Offset ≥ 1MHz    | dB   | ≤ 35                  |
|                                                | Offset ≥ 5MHz    | dB   | ≤ 25                  |
| Spurious                                       | 9KHz to 1GHz     | dBm  | ≤ -36                 |
|                                                | 1GHz to 12.75GHz | dBm  | ≤ -30                 |
| 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 Consumption (approx.)                    |                  | W    | 200                   |
| Power Supply                                   |                  | VAC  | 85 – 135 / 47 – 63Hz  |
|                                                |                  |      | 176 – 264 / 47 – 63Hz |
| 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.

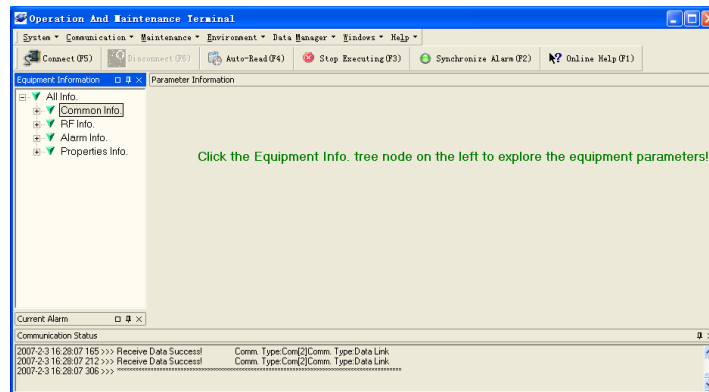
### Operation and Maintenance

Using a direct serial connection to a PC, installation and commissioning of the RD-9132 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, 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-9132 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

