

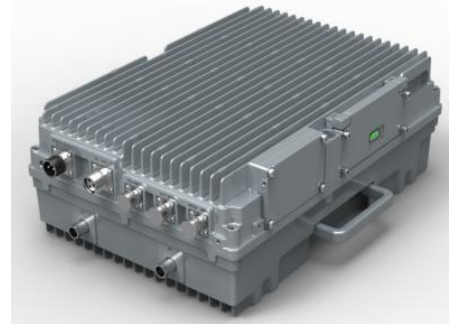
GSM900MHz Digital Band Selective Repeater

RX-9139

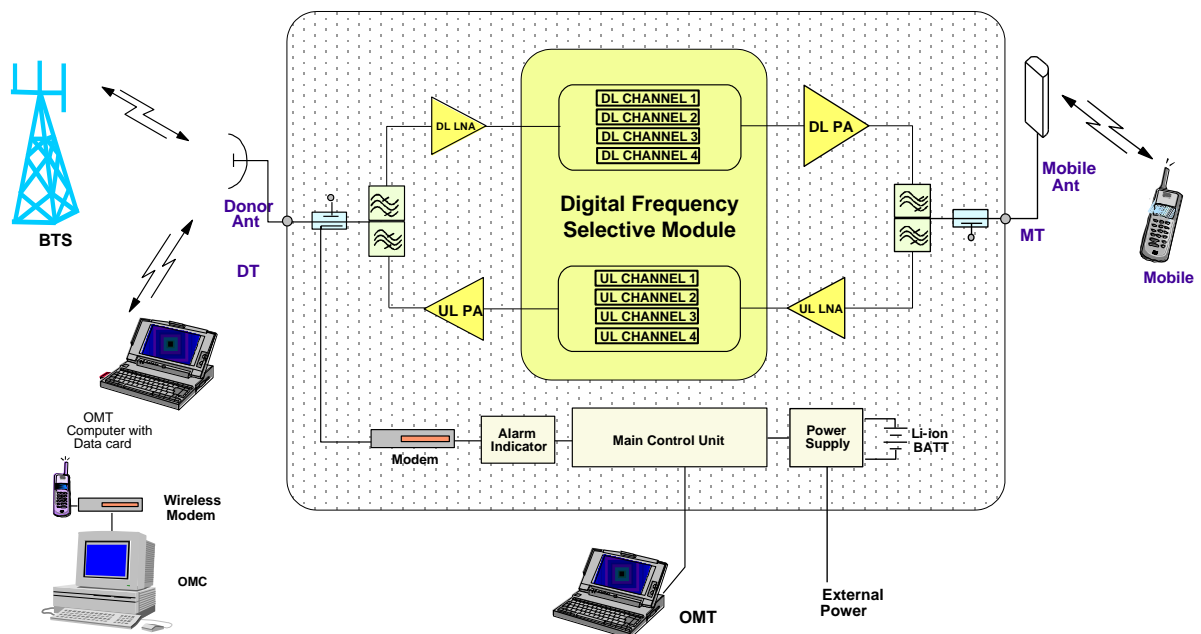
Comba

Features

- Total 4 pass band segments with independent ON/OFF for maximum flexibility.
- 2W/5W/10W/20W total output power.
- Integrated GSM wireless modem for remote configuration, monitoring and control.
- Internal backup battery keeps the alarm unit running for up to two hours after power failure.
- Compatible to Comba generic OMT and OMC platform.
- Designed for all weather outdoor installation – waterproof, damp-proof and omni-sealed (IP65).



Functional Block Diagram



Preliminary Technical Specifications

Electrical			2W	5W	10W	20W
Operating Frequency, Uplink		MHz	890 – 915			
Operation Frequency, Downlink		MHz	935 - 960			
Operating Bandwidth Per Sub-band		MHz	0.2-25 adjustable			
Sub-bands			4			
Output Power, Uplink		dBm	30			
Total Output Power, Downlink		dBm	33±1.5	37±1.5	40±1.5	43±1.5
System Gain Downlink		dB	90			
System Gain Uplink		dB	90			
Gain Adjustment Range (1dB step)		dB	0 – 30			
Pass Band Ripple, p-p		dB	≤ 5			
Uplink Noise Figure		dB	≤ 5			
System Group Delay		μsec	≤ 6.5			
Out-of-Band gain*	Offset ≥ 400KHz	dB	≤ 50			
	Offset ≥ 600KHz		≤ 40			
	Offset ≥ 1MHz		≤ 35			
	Offset ≥ 5MHz		≤ 25			
Spurious and Intermodulation**	9kHz-1GHz	dBm	-36dBm			
	1GHz-12.75GHz		-30dBm			
Input VSWR			≤ 1.5			
Absolute Maximum RF Input Power, Downlink		dBm	+10			
Impedance		Ω	50			
Power, Mechanical & Environmental						
Dimensions, H x W x D		mm	430 x 300 x 164			
Weight (approx.)		kg	18			
Power Supply		VAC	100-240 / 47-63Hz			
Power Consumption (approx.)		W	150	160	170	180
Power Up Waiting Time (approx.)		sec	180			
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 specification at room temperature

*: Test at 65dB system gain

** : Intermodulation test at 23dBm output _Downlink and at 15dBm output _Uplink.

Operation and Maintenance

Using a direct connection to a PC by RJ45, installation and commissioning of the RX-9139 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: Equipment ID, Phone Number, Sampling Time, Operating Band Switch, Channel No. Range, ATT, PA Switch, Over-Temp Threshold, DL Input Power Threshold, DL Output Power Threshold and Alarm Report Enable.

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

The RX-9139 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

