900MHz GSM and UMTS Dual Mode Compact Repeater
SR-9124

Features

- Total 3 pass band segments, 2 bands for GSM, 1 channel for UMTS with independent ON/OFF.
- 500mW total output power.
- 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.
- Compatible to Comba generic OMT and OMC platform.

Preliminary Technical Specifications

Electrical		GSM	UMTS
Frequency Range, Uplink	MHz	890.1~897.5MHz, 904.1~904.9MHz	
Frequency Range, Downlink	MHz	935.1~942.5MHz, 949.1~949.9MHz	
Operating Bandwidth	MHz	0.8~2.4 and 0.8	1 UMTS carrier
Output Power, Uplink	dBm	14 ± 1.5	
Total Output Power, Downlink	dBm	27 ± 1.5	
Maximum System Gain	dB	80 ± 2	
Gain Adjustment Range (1dB step)	dB	0 – 30	
Pass Band Ripple, p-p	dB	≤ 4	≤ 2 over UMTS carrier
Uplink Noise Figure	dB	≤ 6	
System Group Delay	μsec	≤ 7	≤ 5
Out-of-Band Gain @ maximum bandwidth	dB	Compliance with ETSI EN 609-4 and 3GPP TS 05.05	Compliance with 3GPP TS 25 106
Intermodulation	dBm		
Spurious Emission	dBm		
EVM	/		
ACRR	dB	N/A	
PCDE	dB		
Spurious Emission Mask	/		
Input VSWR		≤ 1.5	
Frequency Error	ppm	≤ ± 0.05	
Absolute Maximum RF Input Power, Downlink	dBm	+10	
Impedance	Ω	50	
Power, Mechanical & Environmental			
Dimensions, H x W x D	mm	418 x 328 x 240	
Weight (approx.)	kg	30	
Power Supply	VAC	176 – 264 / 47 – 63Hz	
Power Consumption (approx.)	W	200	
Power Up Waiting Time (approx.)	sec	60	
MCU Battery Backup Time (approx.)	hr	2	
Enclosure Color		White	
Enclosure Material		Aluminum	
Enclosure Cooling		Convection	
RF Connectors		Din-Female	
Operating Temperature	°C	0 to +55	
Operating Humidity		≤ 95%	
Environmental Class		IP40	
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 SR-9124 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, DL/UL ALC Threshold, Sampling Time, Operating Band Switch, Channel No. Range, ATT, PA Switch, Over-Temp Threshold, low-Temp Threshold, DL/UL Input Power Threshold, DL/UL Output Power Threshold and Alarm Report Enable, VSWR Threshold.

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

The SR-9124 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.