

1 Milestone Specification_ B125

Function	Specification
Frequency Range GSM850	<p>TX: 824.2 – 848.8 MHz Frequency (MHz) = $824.2 + (0.2 \times (n-128))$ where: $128 \leq n \leq 251$</p> <p>RX: 869.2 – 893.8 MHz Frequency (MHz) = $869.2 + (0.2 \times (n-128))$ where: $128 \leq n \leq 251$</p>
Frequency Range GSM900	<p>TX: 880.2 – 914.8 MHz Frequency (MHz) = $890 + (0.2 \times n)$ where: $0 \leq n \leq 124$ Frequency (MHz) = $890 + (0.2 \times (n - 1024))$ where: $975 \leq n \leq 1023$</p> <p>RX: 925.2 – 959.8 MHz Frequency (MHz) = $935 + (0.2 \times n)$ where: $0 \leq n \leq 124$ Frequency (MHz) = $935 + (0.2 \times (n - 1024))$ where: $975 \leq n \leq 1023$</p>
Frequency Range GSM1800	<p>TX: 1710.2 to 1784.8 MHz Frequency (MHz) = $1710.2 + (0.2 \times (n - 512))$ where: $512 \leq n \leq 885$</p> <p>RX: 1805.2 to 1879.8 MHz Frequency (MHz) = $1805.2 + (0.2 \times (n - 512))$ where: $512 \leq n \leq 885$</p>
Frequency Range GSM1900	<p>TX: 1850.2 to 1909.8 MHz Frequency (MHz) = $1850.2 + (0.2 \times (n - 512))$ where: $512 \leq n \leq 810$</p> <p>RX: 1930.2 to 1989.8 MHz Frequency (MHz) = $1930.2 + (0.2 \times (n - 512))$ where: $512 \leq n \leq 810$</p>
Frequency Range UMTS Band 1	<p>TX: 1922.4 to 1977.6 MHz Frequency (MHz) = $UARFCN1 \div 5$, where: $9612 \leq UARFCN \leq 9888$</p> <p>RX: 2112.4 to 2167.6 MHz Frequency (MHz) = $UARFCN1 \div 5$, where: $10562 \leq UARFCN \leq 10838$</p>
Frequency Range UMTS Band 2	<p>TX: 1852.4 to 1907.6 MHz Frequency (MHz) = $UARFCN1 \div 5$, where: $9262 \leq UARFCN \leq 9538$</p> <p>RX: 1932.4 to 1987.6 MHz Frequency (MHz) = $UARFCN1 \div 5$, where: $9662 \leq UARFCN \leq 9938$</p>
Frequency Range UMTS Band 5	<p>TX: 826.4 to 846.6 MHz Frequency (MHz) = $UARFCN1 \div 5$, where: $4132 \leq UARFCN \leq 4233$</p> <p>RX: 871.4 to 891.6 MHz Frequency (MHz) = $UARFCN1 \div 5$, where: $4357 \leq UARFCN \leq 4458$</p>
Channel Spacing	200 kHz (GSM), 5 MHz (WCDMA)
Channels	124 (GSM850), 174 (GSM900), 374 (GSM1800), 299 (GSM1900), 277 (UMTS Band1), 277 (UMTS Band 2), 152 (UMTS Band 8)
Duplex Spacing	45 MHz (GSM850), 45MHz (GSM900), 95 MHz (DCS1800), 80 MHz (PCS1900), 190 MHz (UMTS Band 1), 80MHz (UMTS Band 2), 45MHz (UMTS Band 5)
Modulation	GMSK/8PSK (GSM850, GSM900, GSM1800, GSM1900), QPSK

	(UMTS)
Transmitter Phase Accuracy	5 degrees RMS, 20 Degrees peak
Frequency Error	+ 0.1ppm
Input/Output Impedance	50 ohms (nominal)
Nominal Operating Voltage	+3.7 Vdc (battery) +5.0 Vdc (externally powered)
Dimensions (xyz)	115.8 mm, 60mm, 13.7mm
Size	79.7 cc
Weight	165 g
Display	16M color TFT, 854 x 480, 3.7"
Battery Life (1390mAh)	GSM talk time: up to 390 min GSM standby time: up 350 hrs WCDMA talk time: up to 290 min WCDMA standby time: up to 380hrs
Nominal Operating Temperature Range	-10° C to +55° C

GSM System Functions	Specification
Speech Coding Type	Regular Pulse excitation / linear predictive coding with long term prediction (RPE LPC with LTP)
Bit Rate	13.0 kbps
RF Power Output	32 dBm nominal GSM, 29 dBm nominal DCS / PCS
Spurious Emissions	-36 dBm from 0.1 to 1 GHz, -30 dBm from 1 to 4 GHz
Receive Sensitivity	-102 dBm GSM, -102 dBm DCS / PCS
RX Bit Error Rate	< 2%

UMTS System Functions	Specification
Speech Coding Type	Adaptive Multirate (AMR)
RF Power Output	24dBm - Power Class 3
Spurious Emissions	-36 dBm from 0.1 to 1 GHz, -30 dBm from 1 to 4 GHz
Error Vector Magnitude	< 17.5%
PN9 Bit Error Rate (VER)	0.1% @12.2K, -106.7 dBm
ACLR	-33 dBm @+5 MHz, -43 dBm @+10 MHz