

SOFTWARE RADIO LABORATORY LLC
QS1R Rev D Receiver



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SOFTWARE RADIO LABORATORY LLC**QS1R Rev D Receiver****QS1R RevD Receiver Technical Specifications**

Frequency Coverage ¹	10 kHz – 62 MHz (with LPF)
Modes	LSB, USB, DSB, CWU, CWL, AM, SAM, FMN, FMW, etc... (software defined)
Sensitivity ^{2,3}	0.63 uV SSB (S+N)/N = 10 dB
Selectivity ^{2,3}	Software defined (> 120 dB stop band attenuation)
Image Rejection	> 110 dB
Input IP3	+50 dBm
Dynamic Range (IMD3)	103 dB (SSB, 2.4 kHz BW) 107 dB (CW, 500 Hz BW)
SFDR (Spurious Free Dynamic Range)	112 dB
BDR (Blocking Dynamic Range)	125 dB (CW, 500 Hz BW)
MDS (Minimum Discernable Signal) ³	-111 dBm (CW, 500 Hz BW) -104 dBm (2.4 kHz BW)
Input ADC Clipping Level	+9 dBm
LPF	0 – 62 MHz
ADC	16 bit, 125 MSPS, Linear Technologies LTC2208
DDC	FPGA, Altera, Cyclone III, EP3C25-QFP240
PC Interface	USB 2.0, Cypress CY7C68013A
Frequency Accuracy	+/- 1 ppm after calibration
Output Sampling Rate	25 kSPS to 4 MSPS, software defined
Output Data	32 bits/sample I-Q (other bits/sample software programmable)
Power Supply Requirement	+5-6 VDC, 1000 mA, US DC wall adapter supplied
Board Size	100.0x160.00 mm (WxL), 3.940x6.300 inches
Enclosure	Aluminum, Black Anodized, 103.0x49.7x163.0 mm (WxHxL), 4.055x1.957x6.417 inches
Operating Temperature Range	0 to +40 °C
Storage Temperature Range	-20 to +90 °C
Weight	400 g

1 with other BPF – 62 – 124 MHz, 124 MHz – 186 MHz, 186 MHz – 248 MHz, etc... to 500 MHz

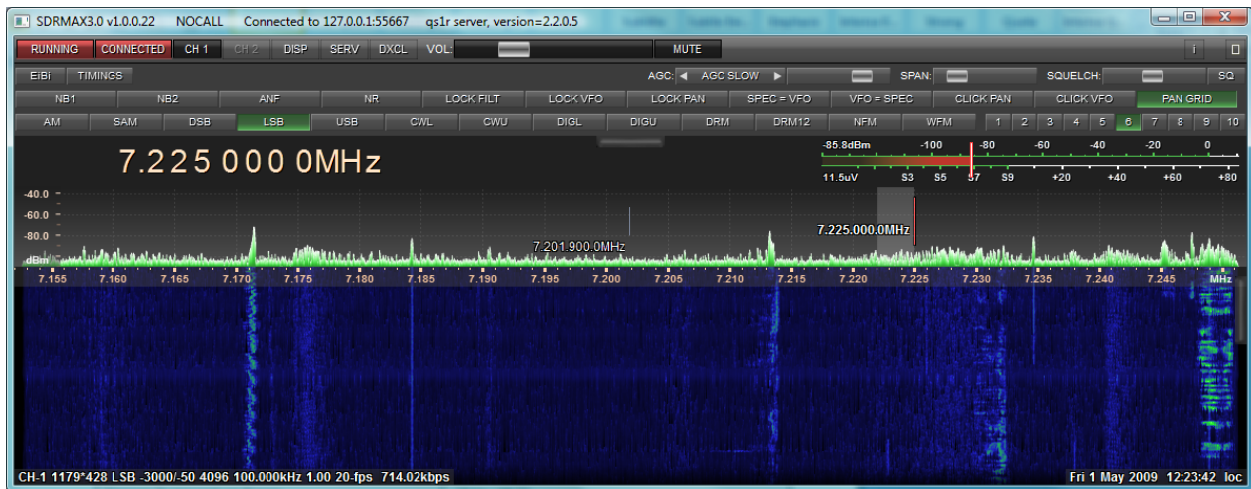
2 typical at 14.1 MHz

3 with RFFE1 RF Front End Board -138 dBm (500 Hz BW), -131 dBm (2.7 kHz BW)

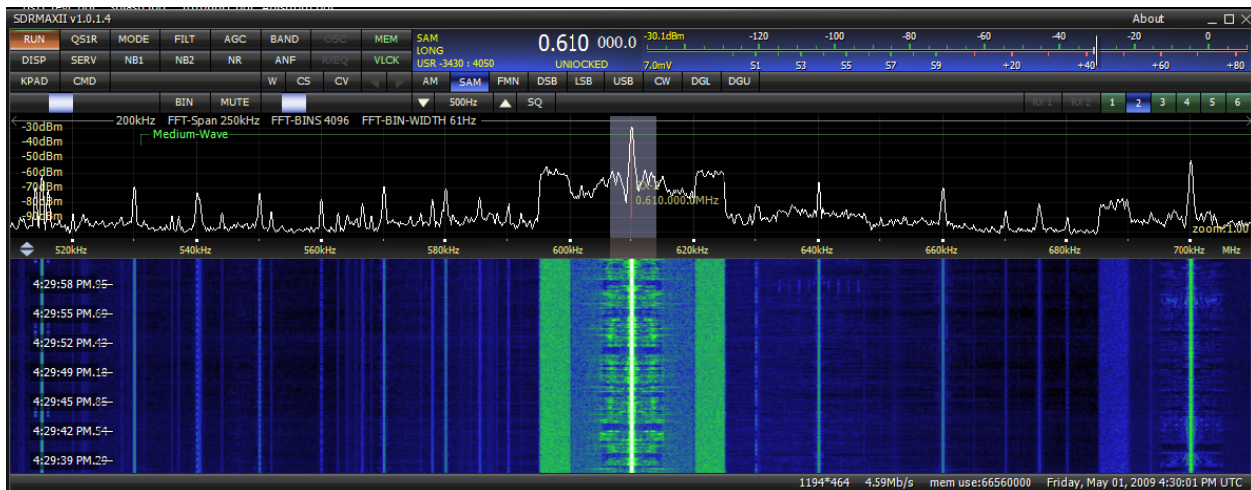
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QS1R Receiver Software

SDRMAX3 Software Screen Shot (Windows, Linux, MAC OSX):



SDRMAXII Software Screen Shot (Windows):



System Requirements:

- 1.6 GHz Intel Atom 330 CPU with 512 MB RAM (2.5 GHz Dual Core min recommended)
- USB 2.0 Port
- 800 x 600 minimum resolution monitor
- 2 button mouse with scroll wheel
- OS: Windows XP, Vista, Windows 7, Linux, MAX OSX