

WR-G305i Specifications - preliminary information

Receiver type	DDS-based dual-conversion superheterodyne with software-defined last IF stage and demodulator		
Frequency range	9 kHz - 1800 MHz (3500 MHz with optional downconverter) (except cellular radiotelephone frequencies where required by law)		
Tuning resolution	1 Hz		
Mode	AM, AMN, AMS, LSB, USB, CW, FMN Optional: ISB, DSB (See Note 1.) FMW (See Note 2.)		
Image/Spurious Rejection	60 dB		
IP3	0 dBm @ 20kHz		
MDS	-135 dBm		
Spurious-free Dynamic Range	90 dB		
Phase noise	-148 dBc/Hz @ 100 kHz		
RSSI accuracy	5 dB		
RSSI sensitivity	1 µV		
Selectivity (-6dB) (See Note 3.)	AM	6 kHz	
	AMN	4 kHz	
	AMS	4 kHz	
	LSB, USB	2.5 kHz	
	CW	500 Hz	
	FM3	3 kHz	
	FM6	6 kHz	
	FMN	12 kHz	
	FMW (optional)	230 kHz	
Scanning speed	60 channels/s max		
Sensitivity (AM/SSB/CW 10dB S/N) (FM 12dB SINAD) (See Note 4.)	Mode	0.15-500 MHz	500-1800 MHz
	AM, AMS	1.7µV	1.85µV
	LSB, USB	0.35µV	0.37µV
	CW	0.2µV	0.25µV
	FM3, FM6, FMN	0.7µV	0.8µV
FMW (optional)	2.0µV	2.0µV	
Intermediate frequencies	IF1: 109.65 MHz IF2: 12 kHz		
Roofing filter	2 x 4-pole 15 kHz BW crystal filter		
Frequency stability	10 ppm (0 to 60°C)		
Antenna input	50 ohm (SMA connector)		
Output	12 kHz IF2 output (sound card Line Input compatible)		
Form factor	2/3 length PCI card		
Interface	PCI 2.2 compliant		
Dimensions	Length: 195 mm (7.68") (excluding mounting bracket)		

Notes:

- The [Professional Demodulator](#) offers two additional demodulation modes, DSB and ISB.
- The [Wide-FM Option](#) provides a separate wide-FM demodulator. The wide-FM demodulation is performed in hardware, using conventional hardware-based demodulation techniques, in order to ease the requirement of PC processing power which would otherwise be required for a signal of this bandwidth. In other words, the [Wide-FM Option](#) is an entirely separate receiver on its own right.
- The [Professional Demodulator](#) offers continuously adjustable IF bandwidth from 100 to 15000 Hz in all narrow-band modes. The optional Wide-FM demodulator has a fixed bandwidth of 230 kHz.
- The AM sensitivity is specified at 30% modulation for 10 dB S/N ratio. For 80% modulation, typical AM sensitivity of WR-G305i is 0.60 µV in 0.15-500 MHz range. The [Professional Demodulator](#) improves sensitivity further by making it possible to extend filter lengths, and adjust the IF bandwidth for optimum reception of the received signal: This results in a typical improvement by 2-3 dB on AM/SSB/FM and up to 10 dB on CW.

The WR-G305i receiver is truly one of the most sensitive receivers available, yet with an excellent dynamic range.

The following table illustrates the effect of the AM modulation depth and the Professional Demodulator on typical sensitivity figures:

	AM Sensitivity (10 MHz, 10 dB S/N)	
Demodulator	30% modulation	80% modulation
Standard	1.7 µV	0.6 µV
Professional	1.5 µV	0.45 µV

Specifications are subject to change without notice due to continuous product development and improvement.

	Height: 99 mm (3.90") <i>(excluding edge connector)</i> Thickness: 19 mm (0.75") <i>(incl. components on either side)</i>
Weight	310 g (10.9 oz)

Click on the card image to enlarge the view:



Click on the screen image to see the virtual front panel:

