

## WR-G39DDCi Specifications

Receiver type	Dual DDC software-defined receiver with up-converter superheterodyne front end
Frequency range	9 kHz to 3500 MHz
Tuning resolution	1 Hz
Mode	AM, AMS, CW, LSB, USB, ISB, DSB, FMN, FMW (stereo), FSK, UDM (user-defineable mode), DRM (optional)
Image Rejection	90 dB (< 50 MHz) 75 dB (50 - 500 MHz) 77 dB (> 500 MHz)
IP3	+6 dBm typ. (< 50 MHz) @ 5 kHz spacing +1 dBm typ. (> 50 MHz) @ 10 kHz spacing (preamp off)
SFDR	90 dB typ. (< 50 MHz) 87 dB typ. (> 50 MHz) (preamp off) 86 dB typ. (> 50 MHz) (preamp on)
Noise figure	15 dB typ. (< 50 MHz) 15 dB typ. (> 50 MHz) preamp off 6 dB typ. (> 50 MHz) preamp on
MDS	-129 dBm / 500 Hz typ. (< 50 MHz) -129 dBm / 500 Hz typ. (> 50 MHz) preamp off -138 dBm / 500 Hz typ. (> 50 MHz) preamp on
Internal spuri	Below -100 dBm, typ. less than -115 dBm of equiv. antenna input
RSSI accuracy	2 dB
RSSI sensitivity	-140 dBm
Processing and recording bandwidth	20 kHz - 4 MHz (selectable in 24 steps)
Demodulator processing bandwidth	20 kHz - 320 kHz (selectable in 13 steps)

Demodulation bandwidth (selectivity)	1 Hz - 320 kHz (continuously variable in 1 Hz steps within current demodulator processing bandwidth)			
Spectrum analyzer	16 MHz wide real-time spectrum, 1.5 kHz resolution bandwidth			
ADC	16 bit, 100 MSPS			
Search speed	Up to 1 GHz/s			
Scanning speed	Up to 80,000 ch/s (12.5 kHz channel separation)			
Sensitivity	Mode	< 50 MHz typ. (@ 14 MHz)	50 MHz (preamp off) typ. (@ 800 MHz)	> 50 MHz (preamp on) typ. (@ 800 MHz)
	AM <i>AM: 30% mod., 10 dB S+N/N</i>	-102 dBm  (1.8 μV)	-103 dBm  (1.6 μV)	-110 dBm  (0.7 μV)
	SSB <i>SSB, CW: 10 dB S+N/N</i>	-114 dBm  (0.45 μV)	-114 dBm  (0.45 μV)	-123 dBm  (0.16 μV)
	CW <i>FM: 3 kHz dev., 12 dB SINAD</i>	-122 dBm  (0.18 μV)	-122 dBm  (0.18 μV)	-130 dBm  (0.07 μV)
	FM <i>FMW: 50 kHz dev., 12 dB SINAD</i>	-112 dBm  (0.56 μV)	-112 dBm  (0.56 μV)	-120 dBm  (0.22 μV)
	FMW	not specified	-106 (1.1 μV)	-113 dBm (0.5 μV)
	Note: Below 500 kHz and above 3.3 GHz, the sensitivity gradually drops. Typical figures (CW, 500 Hz BW, 10 dB S+N/N) are as follows:			
	500 kHz	-121 dBm	3.5 GHz	-115 dBm
200 kHz	-118 dBm	3.4 GHz	-118 dBm	

	100 kHz	-112 dBm	3.3 GHz	-122 dBm
	50 kHz	-106 dBm		
	20 kHz	-98 dBm		
	10 kHz	-90 dBm		
Intermediate frequencies	IF1: 3910 MHz (BW=30 MHz) IF2: 70 MHz (BW=16 MHz)			
Tuning accuracy	0.5 ppm @ 25 ° C			
Tuning stability	0.5 ppm (0 to 50° C)			
Antenna input	50 ohm (SMA connector)			
Interface	PCI Express (1x)			
Power consumption	20 W max. (powered via the PCI-e bus)			
Operating temperature	0°C to 50°C			
Dimensions	Length: 217.6 mm (8.57") (excluding mounting bracket) Height: 98.4 mm (3.87") (excluding edge connector) Thickness: 14.5 mm (0.57") (incl. components on either side)			