

WR-G33DDC 'EXCALIBUR Pro' Specifications

Receiver type	Direct-sampling, digitally down-converting software-defined receiver				
Frequency range	9 kHz to 49.995 MHz				
Tuning resolution	1 Hz				
Mode	AM, AMS, LSB, USB, DSB, ISB, CW, FMN, FSK, UDM (user-defined mode) DRM mode optional				
Image Rejection	100 dB				
IP3	+31 dBm (preamp off) +21 dBm (preamp on)				
Attenuator	0 - 21 dB, adjustable in 3 dB steps				
SFDR	107 dB min. (preamp off) 103 dB min. (preamp on)				
Noise figure	14 dB (preamp off) 10 dB (preamp on)				
MDS	-130 dBm @ 10 MHz, 500 Hz BW (preamp off) -134 dBm @ 10 MHz, 500 Hz BW (preamp on)				
Phase noise	-145 dBc/Hz @ 10 kHz				
RSSI accuracy	2 dB typ.				
RSSI sensitivity	-140 dBm				
Processing and recording bandwidth (DDC bandwidth)	20 kHz - 4 MHz (selectable in 24 steps)				
Demodulation bandwidth (selectivity)	1 Hz - 62.5 kHz (continuously variable in 1 Hz steps)				
Spectrum analyzers	Input spectrum/waterfall, 30 or 50 MHz wide, 1.5 kHz resolution bandwidth DDC spectrum/waterfall, max 4 MHz wide, 1 Hz resolution bandwidth Channel spectrum, max 62.5 kHz wide, 1 Hz resolution bandwidth Demodulated audio, 16 kHz wide, 1 Hz resolution bandwidth				
ADC	16 bit, 100 MSPS				
Sensitivity (@ 10 MHz, with preamplifier)	<table border="1"> <tr> <td>AM</td> <td>-106 dBm (1.12 μV) @ 10 dB S+N/N, 30% modulation</td> </tr> <tr> <td>SSB</td> <td>-121 dBm (0.20 μV) @ 10 dB S+N/N, 2.1 kHz BW</td> </tr> </table>	AM	-106 dBm (1.12 μ V) @ 10 dB S+N/N, 30% modulation	SSB	-121 dBm (0.20 μ V) @ 10 dB S+N/N, 2.1 kHz BW
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Tuning accuracy																												
Tuning accuracy	0.5 ppm @ 25 °C																											
Tuning stability	0.5 ppm (0 to 50 °C)																											
MW filter	Cut-off frequency 1.8 MHz @ -3 dB Attenuation 60 dB min @ 0.5 MHz																											
Preselection filters	119 filters available in automatic or manual mode (14 high pass, 14 low pass and 91 bandpass) + bypass																											
Antenna input	50 ohm (SMA connector)																											
Output	24-bit digitized I&Q signal over USB interface																											
Interface	USB 2.0 High speed																											
Power supply	11-13 V DC @ 510 mA typ. (preamp off) 11-13 V DC @ 620 mA typ. (preamp on) 11-13 V DC @ 55 mA typ. (power save)																											
Operating temperature	0 to 50 °C																											

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