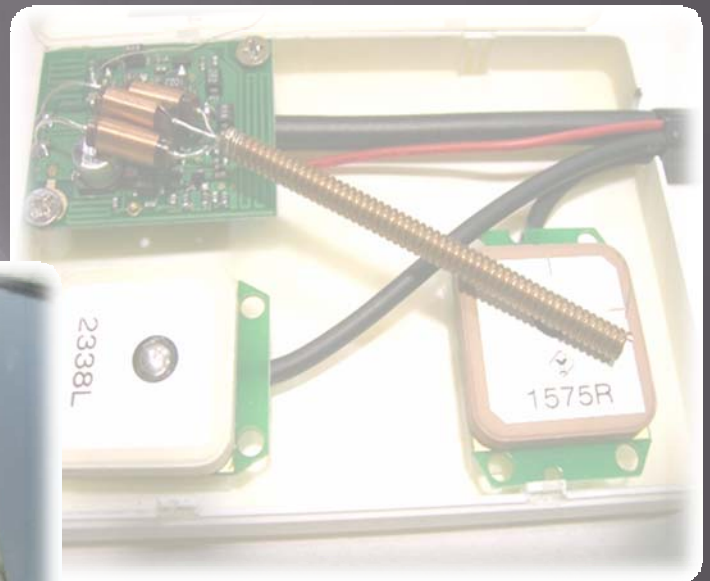


# EXC-1000

Cota International's EXC-1000 is an innovative antenna solution for the automotive and trucking industries. The EXC-1000 combines both the functionality of an AM/FM antenna together with a GPS antenna in a sleek, modern design.



**COTA International, Inc.**

# SPECIFICATIONS

## AM/FM Antenna

Frequency AM	535 - 1605 kHz
Frequency FM	88 - 108 MHz
Operating Current	46 - 52 mA (12V)
Operating Temperature	-30°C - 95°C
Storage Temperature	-40°C - 110°C
Output Impedance	75 Ω
AM Second Harmonic Distortion	Less 92 dBμV (110 dBμV Input)
AM Inter-modulation Distortion	Less 46 dBμV (110 dBμV Input)
AM Across Modulation Distortion	Upper 115 dBμV (110 dBμV Input)
FM Interference	Less 22 dBμV (110 dBμV Input)
FM Inter-Modulation Distortion	Less 50 dBμV (110 dBμV Input)
FM Gain	8 - 11 dB
Noise Figure	Under 4 dB

## GPS Antenna

Noise Figure	1.0 dB (max)
Operating Frequency Range	2332.5 - 2345 MHz
Total Active Gain (including cables)	19dB - 23dB
Input IP3	-10dBm (min)
Filter attenuation at $f_c + 230$ MHz	25 dB (min)
Filter attenuation at $f_c - 230$ MHz	25 dB (min)
Nominal Output Impedance	50 Ω
Output VSWR (at antenna connectors)	1.5:1 (max)
P1dB at 1850 - 1990 MHz	-10 dBm (min)
P1dB at 824 - 894 MHz	-4 dBm (min)
P1dB at 450 MHz	-0 dBm (min)
3 <sup>rd</sup> Order IMRR with respect to SAT1 signal (2333.465 MHz) equal to -100 dBm @ the LNA input.	-35 dBm
F1 = 1883.565 MHz, F2 = 1433.565 MHz, 3 <sup>rd</sup> Order tone = 2333.565 MHz	
Mixing IMRR Product with respect to SAT1 signal (2333.465 MHz) equal to -100 dBm @ the LNA input.	-35 dBm
F1 = 1883.565 MHz, F2 = 450.000 MHz, Mixing Product= 2333.565 MHz	

Elevation Angle, $\theta$ (deg)	Minimum Gain	Average Gain
20	0 dBic	+1.5 dBic
25	+0.5 dBic	+1.5 dBic
$30 \leq \theta \leq 60$	+2.0 dBic	+2.0 dBic
0		+2.0 dBIL

Antenna Gain Ripple at the horizon (max-min) = 7 dB.