

NCS NOVA

GNSS RF Simulator Portfolio

2024



Specification

2024

RF Simulator Type	NCS NOVA	NCS NOVA+
Channels, RF Bands and Frequencies		
RF Frequency Range	Center frequency ranging from 1.125 GHz to 2.5 GHz	
RF Modules	1 RF module (with 1 or 2 RF outputs)	Up to 2 RF modules (with 1, 2 or 4 RF outputs)
RF Bands (signal chains) per RF Module	4 RF bands per RF module (with 50 MHz bandwidth of each band and selectable frequency per SW licence)	
RF Band 1 Signal Coverage (1,559 - 1,610 MHz)	GPS L1 CA & L1C Galileo E1 with OSNMA GLONASS L1 BeiDou B1C & B1I QZSS L1 SBAS L1 new NavIC L1	
RF Band 2 Signal Coverage (1,164 - 1,214 MHz)	GPS L5 Galileo E5ab AltBOC BeiDou B2a & B2I NavIC L5 QZSS L5	
RF Band 3 Signal Coverage (1,217 - 1,260 MHz)	GPS L2C GLONASS L2 QZSS L2C	
RF Band 4 Signal Coverage (1,261- 1,300 MHz)	Galileo E6 (unencrypted) with HAS	Galileo E6 (with encryption) with HAS
RF Band 5 Signal Coverage (2,483 - 2,500 MHz)	NavIC S-Band	
Signal Channels and GNSS Signals	Up to 60 channels up to 7 signals simultaneously	Up to 160 channels up to 16 signals simultaneously
Multipath Channels per Signal Channel	Not limited (as generated in SW)	
Multipath Capability	From simple ground reflection up to complex LMS Narrow- / Wide-Band models	
Power Levels		
RF Signal Power	- 40 dBm to -155 dBm	
Dynamic Range	115 dB	
Resolution	0.1 dB	
Linearity (over total Dynamic Range)	< 0.1 dB	
Absolute Accuracy	± 0.3 dB	
Run-to-Run Repeatability	± 0.1 dB	
Signal Accuracy		
Simulation (Iteration) Rate	10, 20, 50, 100 Hz	10, 20, 50, 100 Hz (up to 250 Hz optional)
Pseudorange Accuracy	< 0.1 mm RMS	
Pseudorange Rate Accuracy	< 0.1 mm/s RMS	
Optional Signal Generation		
Noise Generation	-170 dBm/Hz to -110 dBm/Hz	
Interference & Spoofing	CW, AWGN Trajectory spoofing	CW, AWGN, Chirp Trajectory spoofing
Signal Dynamics		
Max. Velocity (LoS)	± 1,460,000 m/s	
Max. Acceleration (LoS)	± 667,000 m/s ²	
Max. Jerk (LoS)	± 6,600,000 m/s ³	
Angular Rates (at 1.5 m and 0.5 m lever arm)	> 15π rad/s and > 60π rad/s	
Spectral Purity		
Harmonics	< -40 dBc	
In-band Spurious	< -70 dBc	
Phase Noise	< 0.005 rad RMS	
Signal Stability	Short term stability (ADEV 1 s) < ± 1 * 10 ⁻¹⁰ Long term stability (1 day) < ± 4 * 10 ⁻⁸	Optional: Short term stability (ADEV 1 s) < ± 6 * 10 ⁻¹³ Optional: Long term stability (1 day) < ± 1.5 * 10 ⁻¹⁰
Inter-Carrier Phase Coherence		
Carrier Phase Coherence (@ Rf Output)	< 0.5°	

Additional Tools

Supporting Tools

Trajectory Generator, Antenna Pattern Editor



Disclaimer:
All specifications subject to change
without prior notice

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