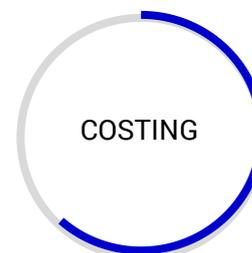
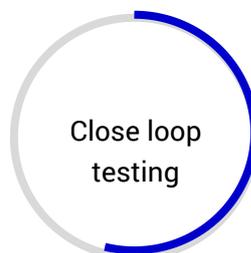
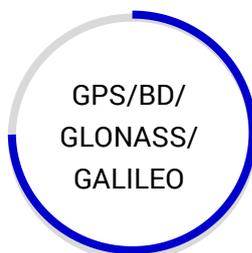




GNS8340 GNSS Simulator

Multi-constellation navigation signal

GPS/GNSS Simulation with Real-Time Trajectories



GNS8340 multi-constellation simulator is a multi-constellation multi-frequency analog source for GNSS, which is designed and developed for various user computers, production testing, teaching demonstration, equipment testing and routine testing applications.

GNS8340 simulator provides satellite navigation signal simulation for GNSS. 12 satellite signals per frequency, supports signal simulation output of BD/GPS/GLONASS/GALILEO constellations combined with arbitrary frequency points, provides high stability standard 1PPS pulse signal and 10MHz clock signal output. It meets the application needs of various types of integrated navigation user terminal equipment design & development, production testing, teaching demonstration, equipment testing and routine testing.

Functional characteristics:

1. Simulation function

Complete satellite orbit simulation;
Satellite clock error simulation,
Delay differential TGD simulation;
Ionospheric delay simulation;
Tropospheric delay simulation;
Earth rotation effect simulation;
Relativistic effect simulation;
Ground atmospheric parameter simulation;
User trajectory simulation.

2. Capabilities

Static and dynamic trajectory generation and testing capabilities;
Independent setting of pseudo-range, power and carrier initial phase for each channel;
Generating navigation message capability for constellation model;
Multi-path signal simulation capability;
Programmable signal scene generation capability;
Atmospheric layer and ionospheric model parameter setting capabilities;
As well as observation data and navigation message recording and output functions;

3. Setting Independently

Carrier frequency;
Code rate;
Information rate;
Pseudo range initial value;
Carrier phase of each channel.

4. GPS/GNSS Simulation with Real-Time Trajectories

Integrated INS+GNSS Receiver testing;
Hardware easy connecting, RF output, low jitter;
Close loop testing, normal mode testing(wireline and wireless);
Unlimited trajectory length;

Specifications:

Model	GNS8340 GNSS simulator
Optional Constellation and Carrier	GPS: L1C/A、L2 GLONASS: G1、G2
Signal scale	Channels of each signal: GPS/GLOASNS: 12 The number of multipath in each signal: 4
Signal dynamic parameters	Maximum speed: $\pm 10,000\text{m/s}$ The maximum acceleration: $\pm 1,000\text{ m/s}^2$ The maximum jerk: $\pm 3,000\text{ m/s}^3$
The precision of the signal	Pseudo range accuracy: $\pm 0.05\text{m}$ Change rate of pseudo range accuracy: $\pm 0.005\text{m/s}$ Channel consistency: 0.5ns
The signal quality	Spurious in band: -45dBc Harmonic power: -40dBc
Signal level	Standard value: -150dBm~-60dBm Resolution: 0.2dB Accuracy: 0.5dB
The external interface	The RF output (N type): 1 1PPS pulse signal (BNC type): input 1, output 1 10MHz clock signal (BNC type): input 1,output 1
External reference input	1PPS pulse : 1 10MHz clock signal: 1
Standard reference output	1PPS pulse signal: 1 10MHz clock signal: 1
Power supply	AC, 50 Hz $\pm 10\%$, 220 V-250V, DC ripple $\leq 3\%$ Automatic protection when power supply is abnormal
Working environment	Working temperature: -10 °C~55 °C Humidity: 10%-75% (22 °C), $\geq 90\%$ (45 °C)
Storage and transportation	Impact: $\leq 9\text{g/s}$ Vibration: $\leq 0.1\text{g}$ (10Hz-100Hz) Humidity: $\leq 98\%$ Storage temperature: -45 °C -75 °C
Size	Standard 4U case
APP software	Professional software