Spirent **GSS7000**

Flexible and Powerful Multi-GNSS Constellation Simulator System

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Flexible and Powerful Multi-GNSS Constellation Simulator System

The GSS7000 series of multi-GNSS, multi-frequency simulators from Spirent for GNSS testing which can grow with your evolving needs.

Key Features

- GPS, GLONASS, BeiDou, Galileo, QZSS and SBAS supported
- Up to 256 channels in a system, flexibly allocated across constellations
- Field upgrade minimises downtime as your needs grow
- Portable scenarios facilitate collaboration
- Class leading accuracy, fidelity and reliability
- Save and compare DUT data
- Receiver antenna pattern modelling
- Import motion from logged NMEA
- Selection of scenario generation and simulation control software available
  - SimGEN®: Comprehensive constellation, propagation and vehicle modelling with flexible data capture
  - SimREPLAYplus™: Import remote trajectory, edit time, date and position
  - SimTEST™: Test control with route-matched trajectory data from Google Maps®
  - Single Channel Utility: Simulate one channel per constellation with specified signal parameters. Switch signals and codes on/off via remote command

GSS7000 supports GPS, GLONASS, BeiDou, Galileo, QZSS and SBAS L1/E1/B1, L2/B2, L5/E5, and L6 signals

Users working in the development, integration or verification of multi-GNSS products for consumer device and precision civil PNT applications are able to verify product performance under a range of controlled, repeatable conditions.

The GSS7000 offers exceptional accuracy, fidelity and authentic GNSS signal emulation across the entire series ensuring true performance at every test stage.

A full range of hardware integration signals are provided including 1PPS in / out, 10MHz in / out and hardware trigger.

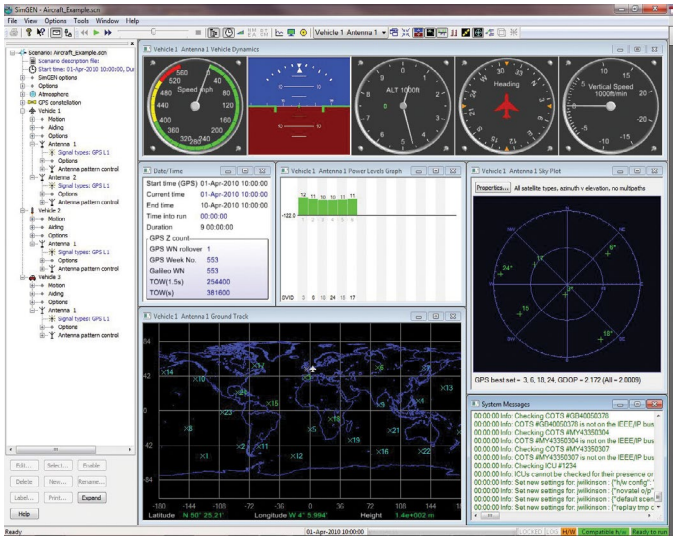
The GSS7000 Multi-GNSS Simulator is supported by a range of scenario generation and simulator control software packages including Spirent's feature-rich SimGEN. Each software package has a range of capabilities from the all-inclusive SimGEN to packages more suited to production or integration / verification test processes.

SimGEN offers a complete and flexible scenario generation capability including control of the constellations, propagation, terrain obscuration, antenna patterns, multipath, vehicle trajectory and a range of error models.

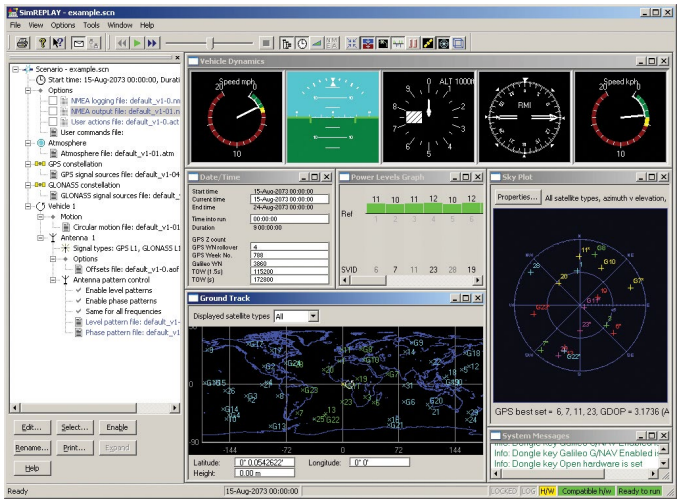
SimREPLAYplus enables the user to define vehicle motion remotely as well as adding the ability to edit the time, date and position. SimREPLAYplus allows users to generate scenarios locally.

SimTEST offers easy to use yet precise capabilities for general testing, including generation of route-matched trajectory data from Google Maps

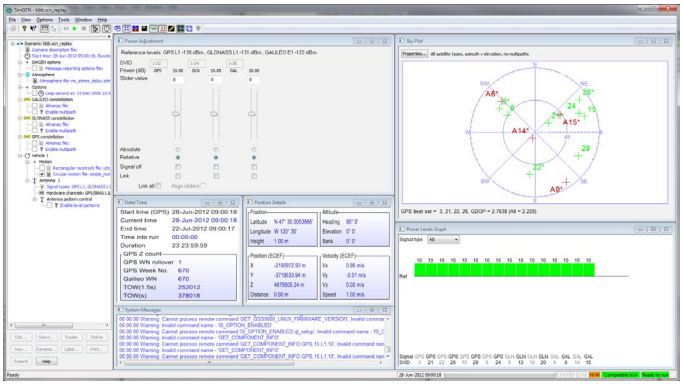
Single Channel Utility offers the capability to simulate one channel per constellation via either remote commands or the dedicated user interface. Perfect for many production test scenarios.



SimGEN allows scenarios to be saved for use by SimREPLAYplus



SimREPLAYplus



SimTEST

ISO/IEC 17025:2017
The GSS7000 is calibrated to the ISO 17025 standard at the time of delivery.

Specification

Output Frequency

Output	Frequency
GPS L1 C/A	1575.42 MHz
GPS L2 C/A	1227.6 MHz
GPS L5 I/Q	1176.45 MHz
GLONASS L1 C/A	1602 MHz
GLONASS L2 C/A	1245.781 MHz
GALILEO E1 OS	1575.42 MHz
GALILEO E5 a/b	1191.795 MHz
BeiDou-2 B1I	1561.098 MHz
BeiDou-2 B2I	1207.14 MHz
BeiDou-3 B1C	1575.42 MHz
BeiDou-3 B2A	1176.45 MHz
BeiDou-3 B3I	1268.52 MHz
QZSS L1	1575.42 MHz
QZSS L2	1227.6 MHz
QZSS L5	1176.45 MHz
QZSS L6	1278.75 MHz
IRNSS L5	1176.45 MHz

Signal Accuracy

Pseudorange	±0.002m
Pseudorange rate	±0.001m/s
Interchannel bias	zero

Signal Quality

Spurious (Max)	-30dBc
Harmonics (Max)	-35dBc
Phase Noise (Max)	0.02 rad RMS
Frequency Stability	±5 x 10-10

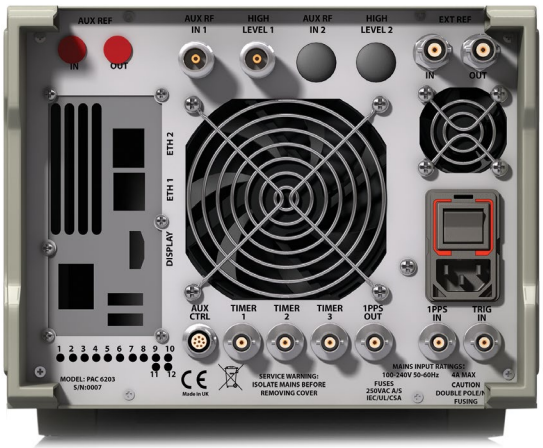
Signal Level

GPS/SBAS nominal	-130dBm
GLONASS nominal	-131dBm
BeiDou nominal	- 130dBm
Galileo nominal	-128.5dBm
Level control range	+15dB to -40dB
Level control resolutio	0.1dB
Level control accuracy	±0.5dB

Physical and Electrical (Signal Generator)

Size (mm)	176.95 x 235.2 x 555 *(HxWxD)*
Weight	<15kg *(configuration dependent)*
Power	110/240 V AC 50/60Hz

* *Specification subject to change.*



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Global Coverage

ACCREDITED CERT #3144.02
SOCOTEC ISO 9001 ISO 45001 ISO 14001 0063
INVESTORS IN PEOPLE | Platinum Until 2021

Contact Us

For more information, call your Spirent sales representative or visit us on the web at www.spirent.com/ContactSpirent.

www.spirent.com

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