

Spirent **GSS7000**

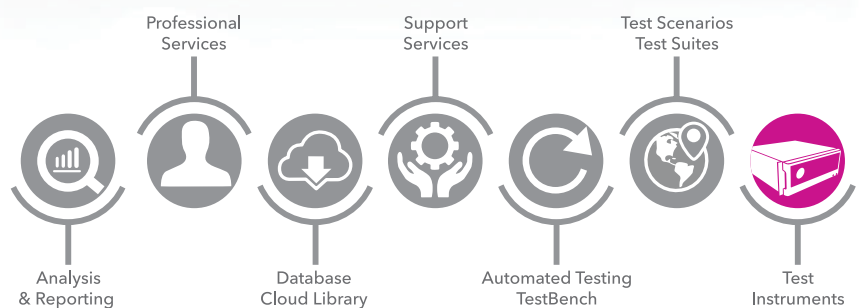
Multi-GNSS Constellation Simulator Systems

GSS7000 Series

The GSS7000 Series of Multi-GNSS, Multi-frequency Simulators from Spirent offers simultaneous coherent GPS, GLONASS, BeiDou, Galileo, QZSS, NavIC (IRNSS), and SBAS signals from a single test scenario. Up to 256 channels provides ample signals for a wide range of development, integration and verification tasks. Spirent's GSS7000 series is supported by a selection of software applications to provide true performance at every test stage and every level of test need.



True Performance at Every Test Stage



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

Key Features

- GPS, GLONASS, BeiDou, Galileo, QZSS, NavIC (IRNSS), and SBAS supported
- Up to 256 channels in a system, flexibly allocated across constellations
- Field upgrade minimizes 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 multi-constellation (GPS, GLONASS, BeiDou, Galileo, QZSS, NavIC (IRNSS), and SBAS), multi-frequency (L1.E1/B1I/B1C, L2/B2I/B3I, L5/E5/B2C, 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.

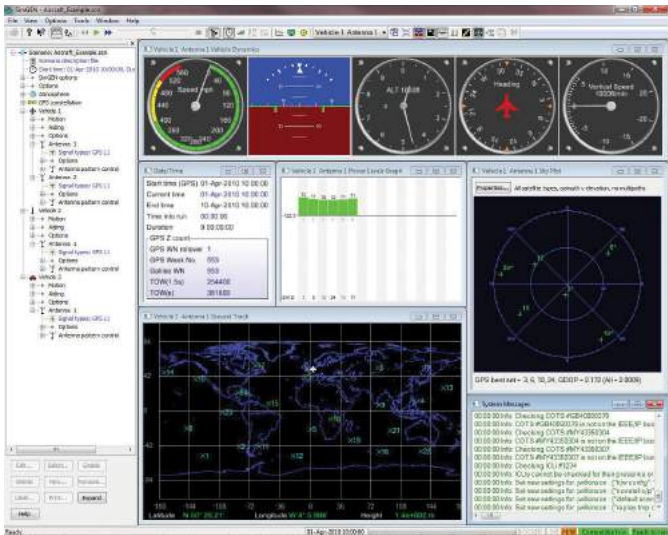
SimGEN offers a complete and flexible scenario generation capability including control of the constellations, propagation, terrain obscuration, antenna patterns, multipath, vehicle trajectory and a range of error models.

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.

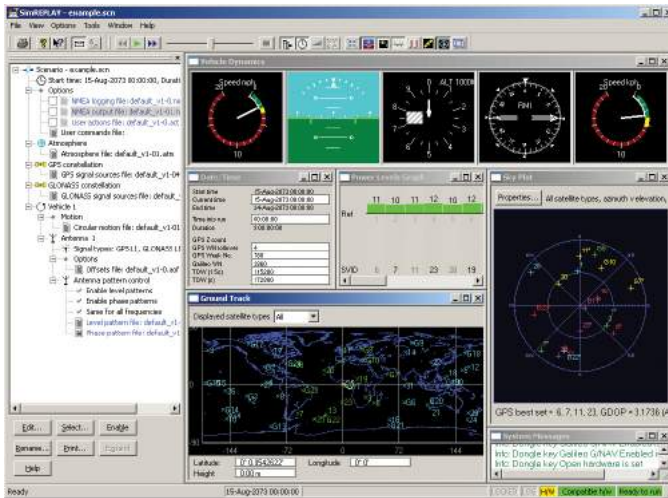
SimTEST offers easy to use yet precise capabilities for general testing, including generation of route-matched trajectory data from Google Maps

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

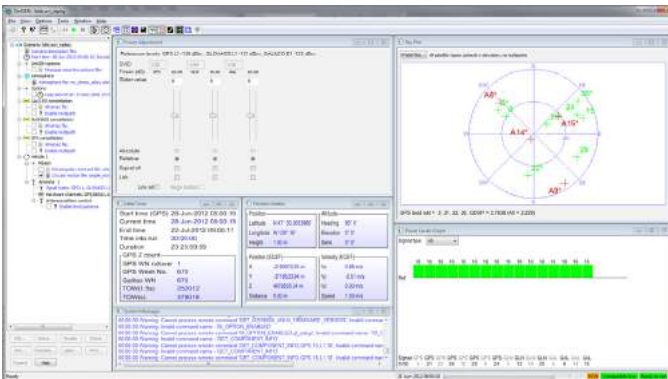




SimGEN allows scenarios to be saved for use by SimREPLAYplus



SimREPLAYplus



SimTEST

Specification

Output Frequency

Output

- GPS L1 C/A
- GPS L2 C/A
- GPS L5 I/Q
- GLONASS L1 C/A
- GLONASS L2 C/A
- GALILEO E1 OS
- GALILEO E5 a/b
- BeiDou-2 B1I
- BeiDou-2 B2I
- BeiDou-3 B1C
- BeiDou-3 B2A
- BeiDou-3 B3I
- QZSS L1
- QZSS L2
- QZSS L5
- QZSS L6

Frequency

- 1575.42 MHz
- 1227.6 MHz
- 1176.45 MHz
- 1602 MHz
- 1245.781 MHz
- 1575.42 MHz
- 1191.795 MHz
- 1561.098 MHz
- 1207.14 MHz
- 1575.42 MHz
- 1176.45 MHz
- 1268.52 MHz
- 1575.42 MHz
- 1227.6 MHz
- 1176.45 MHz
- 1278.75 MHz

Signal Accuracy

- Pseudorange
- Pseudorange rate
- Interchannel bias

- ±0.002m
- ±0.001m/s
- zero

Signal Quality

- Spurious (Max)
- Harmonics (Max)
- Phase Noise (Max)
- Frequency Stability

- 30dBc
- 35dBc
- 0.02 rad RMS
- ±5 x 10-10

Signal Level

- GPS/SBAS nominal
- GLONASS nominal
- BeiDou nominal
- Galileo nominal
- Level control range
- Level control resolution
- Level control accuracy

- 130dBm
- 131dBm
- 130dBm
- 128.5dBm
- +15 / -20 dB
- 0.1dB
- ±0.5dB

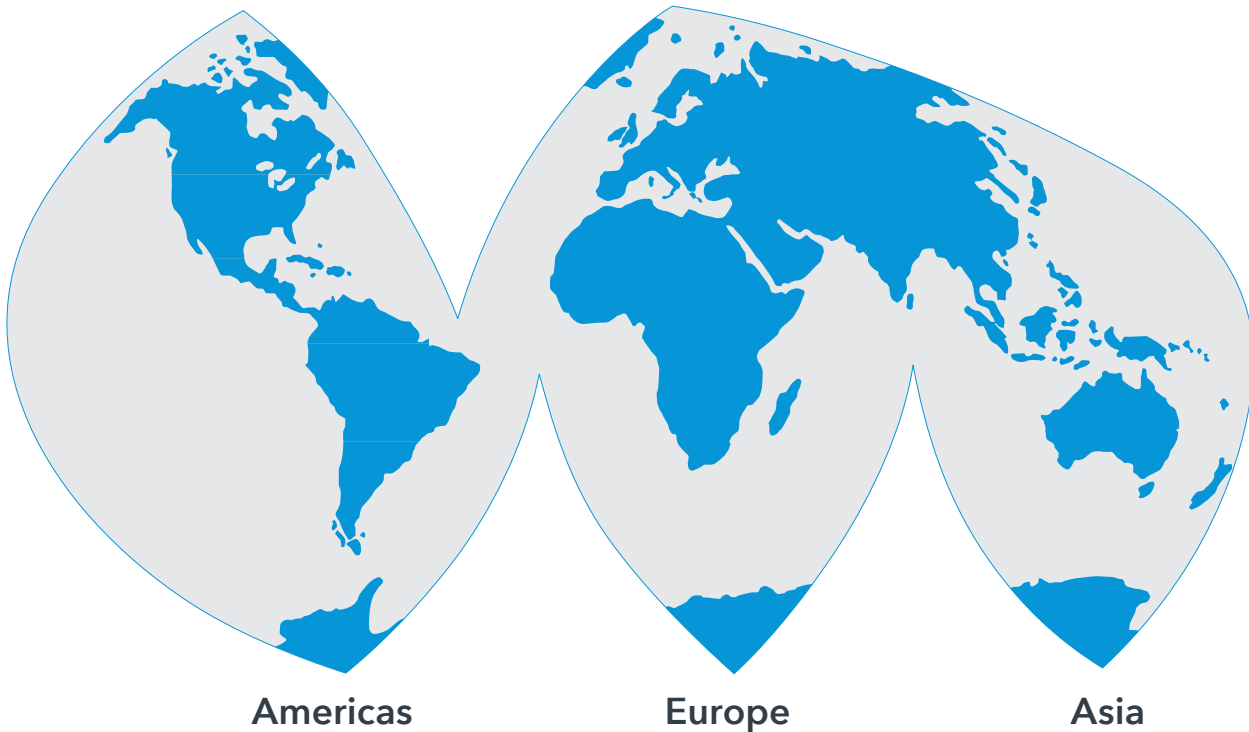
Physical and Electrical (Signal Generator)

- Size (mm) 449x383x89 (WxDxH)
- Weight 6.5Kg
- Power 110/240 V AC 50/60Hz

* Specification subject to change.



Global Coverage



Documentation and Reference Table

Related Product, Option or System Extension	Brochure Title	Data-sheet / Specification Ref.
GSS7000 series	Datasheet	MS7000
SimAUTO	Brochure Datasheet	MCD00114 MS3023
GSS7765	Brochure Datasheet	MCD00121 MS3055
SimGEN™	Datasheet	MS3008

Contact Us

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

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