SPIRENT GSS6700
GNSS SIMULATOR

Flexible Multi-GNSS Constellation Simulator Systems

GSS6700 SERIES

The GSS6700 Multi-GNSS Simulator from Spirent offers simultaneous coherent GPS/SBAS, GLONASS, BeiDou and Galileo L1 signals from a single test scenario. 12 channels of each enabled constellation provide ample signals for a wide range of development and integration tasks. Spirent's GSS6700 is supported by a selection of software applications to suit your needs.

The GSS6700 Multi-GNSS Constellation Simulator from Spirent provides an easy-to-use but powerful solution for GNSS testing which can grow with your evolving needs.

Key Features

- GPS/SBAS, GLONASS, BeiDou and Galileo supported

- 12 independent channels of each constellation

- 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

    - SimREPLAY: Interactive run time control with assistance data extract

    - SimREPLAYplus: Import remote trajectory, edit time, date and position

    - SimGEN™: Comprehensive constellation, propagation and vehicle modelling with flexible data capture

The GSS6700 supports GPS/SBAS, GLONASS, BeiDou and Galileo L1 signals.

Users working in the development or integration of Multi-GNSS products are able to verify product performance under a range of real life conditions.

The GSS6700 offers exceptional repeatability, wide dynamic capability both in Doppler and power level, low phase noise and sufficient channels to support all-in-view and multipath environments.
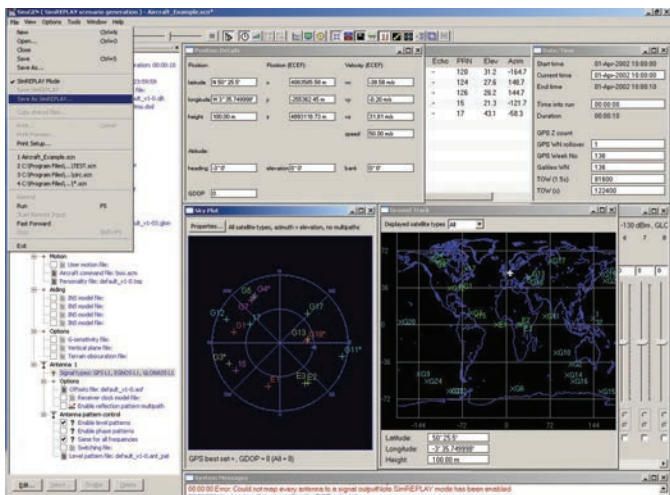
A full range of hardware integration signals are provided including 1PPS in / out, 10MHz in / out and hardware trigger.

The GSS6700 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 applications.
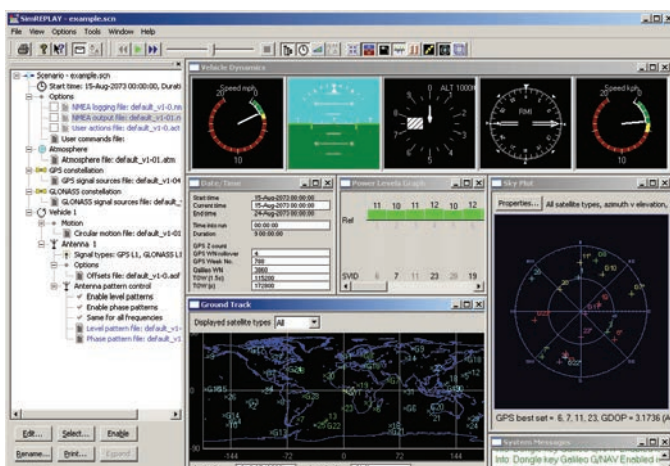
SimGEN™ offers a complete and flexible scenario generation capability including control of the constellations, propagation, terrain obscuration, antenna patterns, multipath, vehicle trajectory and a range of error models.

SimREPLAY supports operation of the simulator replaying pre-defined scenario and is ideal for repetitive comparative measurements. Scenarios for use with SimREPLAY can be obtained from a number of sources including an online scenario generation tool available at no additional charge to customers with a warranty or support contract.
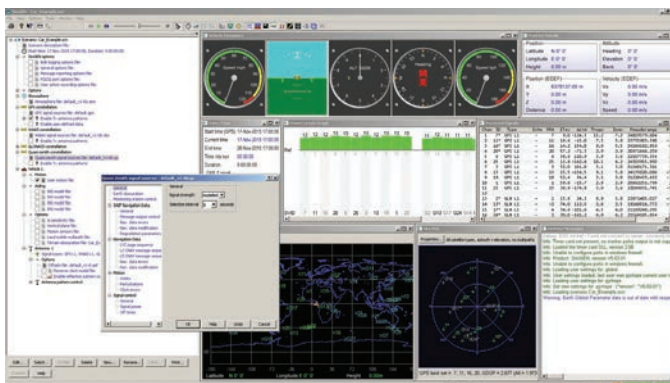
SimREPLAY*plus* enables the user to define vehicle motion remotely as well as adding the ability to edit the time, date and position. SimREPLAY*plus* allows users to generate scenarios locally with features comparable to the online tool available to supported SimREPLAY users.

SimGEN™ allows scenario to be saved for use by SimREPLAY and SimREPLAYplus.

SimREPLAYplus screenshot

QZSS file editor

SPECIFICATION

Output Frequency

- GPS L1 C/A   1575.42MHz
- GLONASS L1 C/A (Ch0)   1602MHz
- BeiDou-2 B1   1561.098MHz
- Galileo E1 OS CBOC   1575.42MHz

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

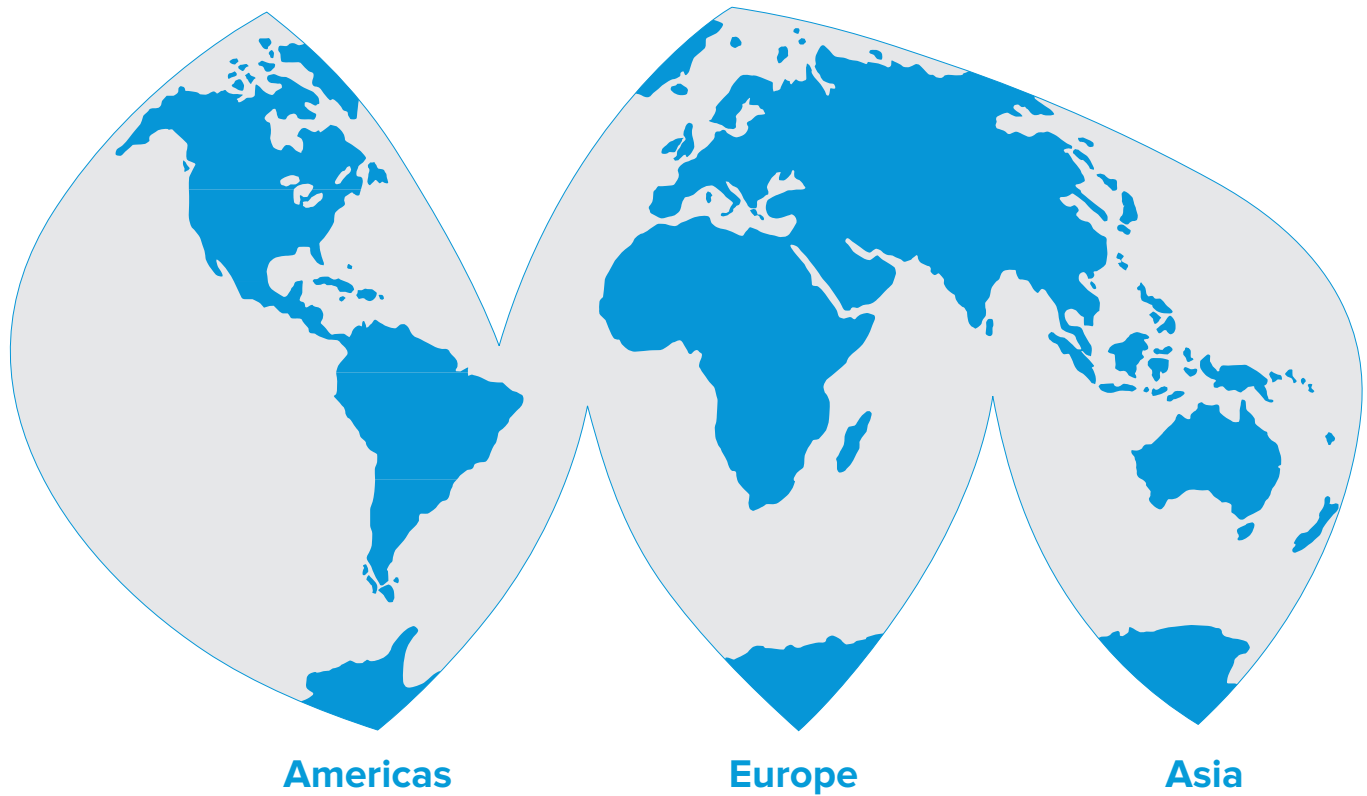- GPS/SBAS nominal   -130dBm
- GLONASS nominal   -131dBm
- BeiDou nominal   - 130dBm
- Galileo nominal   -128.5dBm
- Level control range   +15 / -20 dB
- Level control resolution   0.1dB
- Level control accuracy   ±0.5dB

Physical and Electrical (Signal Generator)

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

Global coverage

Americas   **Europe**   **Asia**

Documentation and Reference Table

Related Product, Option or System Extension	Brochure Title	Data-sheet / Specification Ref.
GSS6700 with SimGEN™	Datasheet	MS3067
GSS6700 with SimREPLAY	Datasheet	MS3066
GSS6700 with SimREPLAY*plus*	Datasheet	MS3068
SimAUTO	Brochure	MCD00114
	Datasheet	MS3023
GSS7765	Brochure	MCD00121
	Datasheet	MS3055
SimGEN™	Datasheet	MS3008

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