

# Multi-Channel Fully Flexible GPS/SBAS Simulation System Spirent GSS6560

The GSS6560 12 channel GPS/SBAS simulation system from Spirent offers full user control of scenario creation and data analysis, making it ideally suited to use in a development/verification environment.

## Key Features

- 12 independent channels GPS L1 C/A code
- Complete scenario generation capability using Spirent's SimGEN for Windows® software
- Class leading accuracy, fidelity and reliability
- All digital architecture
- High dynamic capabilities
- Full user control of GPS constellation, errors and atmospheric effects
- Control of vehicle motion, antenna modelling and terrain modelling
- Interactive run time control
- Comprehensive data capture, manipulation and presentation capabilities
- Up to 4 RF outputs to support differential and attitude testing
- Supports Space Based Augmentation System (SBAS) signal (WAAS/EGNOS/MSAS) as standard

The GSS6560 Multi-Channel GPS/SBAS signal generator is the solution of choice for developers and integrators wishing to reduce development and verification costs and improve product resilience and capability.

A full range of hardware integration signals are provided including 1PPS in and out, 10MHz in and out and hardware trigger. The generator also features a low-loss external RF Interference input. Simulation data is available for storage and subsequent processing. Graphing tools are included.

The GSS6560 is supplied pre-installed with Spirent's SimGEN for Windows® software suite. SimGEN offers complete flexibility and scenario definition capability in an intuitive Windows-based environment, including:

- satellite constellation definition and modelling
- atmospheric effects modelling (iono/Tropo)
- vehicle motion modelling for aircraft, cars and spacecraft
- vehicle motion trajectories from a user-supplied file or in real time via ethernet, including full remote control for 100Hz hardware-in-the-loop applications
- antenna and multipath modelling
- wide range of error models
- terrain obscuration modelling
- definition files sharable between scenarios
- real time data displays including tabulations and multiple graph plots

Please contact us for further information. We will be pleased to discuss your specific requirements and arrange a demonstration.



Multi-Channel GPS/SBAS  
Simulation System: Spirent GSS6560

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**Spirent GSS6560**

**SPECIFICATION**

**Output Frequency**

■ L1 @ 1575.42MHz

**Signal Dynamics**

■ Max Velocity ± 15000m/s  
 ■ Max Acceleration ± 450m/s<sup>2</sup>  
 ■ Max Jerk ± 500m/s<sup>3</sup>

**Signal Accuracy**

(RMS max over 1 minute)

■ Pseudorange uncertainty ±2mm  
 ■ Pseudorange rate uncertainty ±1mm/s  
 ■ Interchannel bias Zero

**Signal Quality**

■ Spurious (Max) <-30dBc  
 ■ Harmonics (Max) <-35dBc  
 ■ Phase Noise (Max) <0.02 Rad RMS  
 ■ Frequency Stability <±5 x 10<sup>-10</sup> over 1 day

**Signal Level**

■ L1 C/A Code -130 dBm nominal

**Signal Level Control**

■ Range + 15/-20dB  
 ■ Resolution 0.1dB  
 ■ Accuracy ±1.0dB nominal uncertainty

**Signal Generator Unit**

■ Generator Channels 12  
 ■ Channel type GPS C/A with data@50bps or SBAS with data @500sps (independent)  
 ■ Interference Input Type 'N', coupling loss, 1dB  
 ■ Size (HxWxD) 89 x 449 x 386mm (3.5 x 17.75 x 15.25inch) 480mm (19inch) desktop/rack mount case  
 ■ Weight 5.5kg (12lb)  
 ■ Power 100-250V ac, 48-62Hz

**Computer Specification**

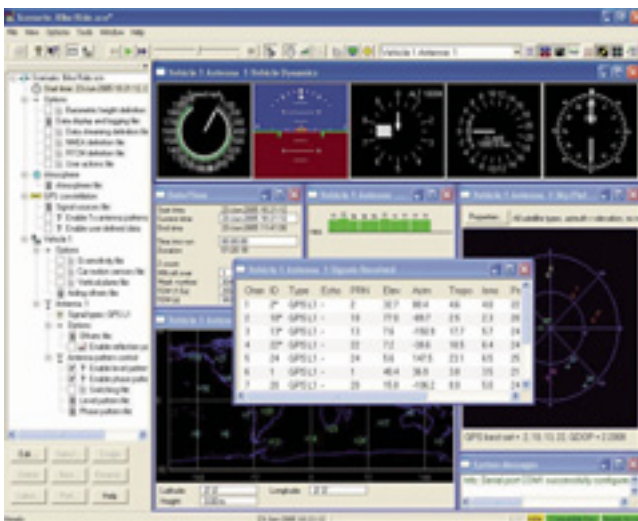
■ Operating System Microsoft® Windows® Professional  
 ■ Power 115v/230V,450V,50/60Hz  
 ■ Optional IEEE-488 PCI card and/or PCMCIA card (for alternative hardware-in-the-loop).

**Product Specifications (MS3003/MS3008) are available on request**

Performance figures and data in this document are typical and must be specifically confirmed in writing by Spirent Communications (SW) Ltd. before they become applicable to any particular order or contract.

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For current product data, visit the Spirent websites at [www.spirentcom.com](http://www.spirentcom.com) or [www.spirentfederal.com](http://www.spirentfederal.com)



SimGEN for Windows® User Interface

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