

# Spirent **GSS6300**

## GNSS Signal Generator

### Key Features

- Single channel GPS/SBAS/QZSS L1 C/A and/or GLONASS L1 C/A and/or BeiDou-2 B1 and/or Galileo E1 signals in one chassis
- Easily field upgradable to add GLONASS and/or BeiDou and/or Galileo and/or QZSS to existing GSS6300 chassis
- IEEE-488, USB or RS-232 control interfaces
- Equivalent GPS performance to Spirent's proven GSS6100
- Alternative "instant start" continuous run mode
- Supplied with Spirent SimCHAN™ software
- Industry leading accuracy, fidelity and reliability
- A GSS6300 configured with GPS supports L1 SBAS messages
- Comprehensive remote command set for easy ATE integration
- Rack mount 2U chassis
- In-rack annual calibration
- Interactive run time control over power level, Doppler, PRN, GPS time and data message for each GNSS signal
- May be synchronized to external systems via 1PPS/Trigger, reference frequency input/output and 1PPS output

The GSS6300 GNSS Signal Generator from Spirent has been designed specifically for high volume production test applications for devices that use commercial GPS/SBAS/QZSS, GLONASS, BeiDou and Galileo receivers.

The GSS6300 GNSS Signal Generator can be configured with one channel of GPS only, or with multiple constellations. It is easily upgradable in the field to add QZSS and/or GLONASS and/or BeiDou and/or Galileo test capabilities to an existing GSS6300 unit. Typical configurations include:

- GPS only, GLONASS only, BeiDou only, Galileo only
- GPS and GLONASS
- GPS and BeiDou
- GPS and Galileo
- GPS and QZSS
- GPS, GLONASS and BeiDou
- GPS, GLONASS and Galileo
- GPS, QZSS, GLONASS, BeiDou and Galileo

To support varying test requirements, the GSS6300 can be controlled remotely via standard interfaces including

IEEE-488, USB or RS-232. Alternatively, Spirent SimCHAN™ software is provided to enable real-time user control of the GSS6300 as precision laboratory GPS/SBAS/QZSS, GLONASS, BeiDou and/or Galileo test equipment.

The GSS6300 GPS/SBAS performance is equivalent to Spirent's proven GSS6100 Single Channel Production Test System. In addition, the GSS6300 offers QZSS, GLONASS, BeiDou and Galileo test capabilities to support your evolving GNSS testing needs



## Specification

### Output Frequency

- GPS L1 1575.42MHz
- QZSS L1 1575.42MHz
- GLONASS L1 (Ch0) 1602MHz
- BeiDou-2 B1 1561.098MHz
- Galileo E1 1575.42MHz

### Signal Codes

- GPS L1 C/A PRN 1 - 63
- SBAS L1 C/A PRN 120 - 138
- QZSS L1 C/A PRN 193 - 202
- GLONASS L1 C/A Channels -7 to +6
- BeiDou-2 B1 PRN 1 - 37
- Galileo E1 CBOC PRN 1 - 50

### Signal Dynamics

- Relative Velocity (Max)  $\pm 15,000\text{m/s}$
- Velocity Resolution 0.01m/s

### Signal Level

- GPS/SBAS/QZSS L1 C/A -130dBm nominal
- GLONASS L1 C/A -131dBm nominal
- BeiDou-2 B1 -133dBm
- Galileo E1 -127dBm nominal

### Signal Level Control

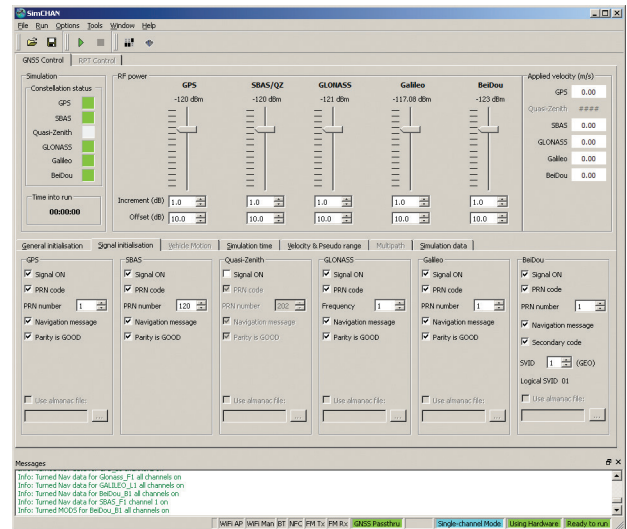
- Range +15/-20dB
- Resolution 0.1dB
- Linearity  $\pm 0.5\text{dB}$
- Accuracy  $\pm 1.0\text{dB RSS}$

### Signal Quality

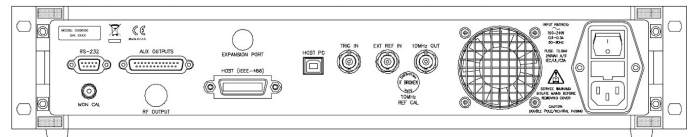
- Spurious  $< -30\text{dBc}$
- Harmonics  $< -40\text{dBc}$
- Phase Noise  $< 0.1\text{ Rad RMS}$
- Master Clock Stability  $< \pm 1 \times 10^{-9}$  over one day

### Signal Generator Unit

- Channel Type1 GPS L1 C/A and SBAS or QZSS L1 C/A and/or 1 GLONASS L1 C/A and/or BeiDou-2 B1 and/or 1 Galileo E1
- Size 449 x 386 x 89mm (W x D x H) (17.75 x 15.25 x 3.5in)
- Weight 6.5kg (14.5 lbs)
- Power 100 - 240 V AC 50 - 60 Hz



SimCHAN for Windows® User Interface



Typical Rear Panel Layout

### Contact Us

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

[www.spirentfederal.com](http://www.spirentfederal.com)

© 2018 Spirent Communications, Inc. All of the company names and/or brand names and/or product names and/or logos referred to in this document, in particular the name "Spirent" and its logo device, are either registered trademarks or trademarks pending registration in accordance with relevant national laws. All rights reserved. Specifications subject to change without notice.

Americas 1-800-SPIRENT  
+1-800-774-7368 | [sales@spirent.com](mailto:sales@spirent.com)

US Government & Defense  
[info@spirentfederal.com](mailto:info@spirentfederal.com) | [spirentfederal.com](http://spirentfederal.com)

Europe and the Middle East  
+44 (0) 1293 767979 | [emeainfo@spirent.com](mailto:emeainfo@spirent.com)

Asia and the Pacific  
+86-10-8518-2539 | [salesasia@spirent.com](mailto:salesasia@spirent.com)