

# Spirent **GSS6300M**

## Multi-Channel GNSS Simulator

### Key Features

- Multi-channel GPS/SBAS L1 C/A and/or QZSS and/or GLONASS L1 C/A and/or BeiDou-2 and/or Galileo E1 signals
- Simulate 3D position from GPS/SBAS, QZSS, GLONASS, BeiDou or Galileo constellations
- IEEE-488, USB, Ethernet or RS-232 control interfaces
- Supplied with Spirent SimTest™ software
- Comprehensive remote command set for easy ATE integration
- Rack mount 2U chassis
- Interactive run time control over power level, user position, date, time, atmospheric condition, Doppler, PRN and data message
- May be synchronized to external systems via 1PPS/ Trigger, reference frequency input/output and 1PPS output
- Fully supports GSS6300 single channel operation

The GSS6300M is the ideal entry-level multi channel GNSS simulator for busy production testing environments and receiver integrators. Its 36 channels of operation can simulate L1/E1 signals from GPS/SBAS, QZSS, GLONASS, BeiDou and Galileo to test the fundamental positioning capabilities of any GNSS device.

More features with software enhancement pack (optional)

- Select from range of trajectories including 3GPP TS 25.171 defined
- Generate route-matched trajectory data from Google Maps®
- Add realistic receiver antenna pattern and multipath effects
- Real-time visualisation of calculated position of device under test data with truth (simulation) data
- Add environmental effects including tropospheric (wet or dry) and ionospheric correction

The GSS6300M GNSS Signal Generator can be configured with 4 or 8 channels per constellation. It is easily upgradable in the field to add any constellation to an existing GSS6300M. Typical configurations include:

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

The GSS6300M is a “one-box” solution with everything required to start testing immediately and can be easily controlled from a tablet or smartphone, or via remote commands across multiple interfaces including USB, IEEE-488 or Ethernet.

The GSS6300M offers all of the flexibility, ease-of-use and reliability you expect from Spirent. Also including continuous run mode for efficient high-volume production testing and real-time user control, allowing you to create your own scenarios and modify parameters such as user position, date and time.



#### ISO/IEC 17025:2005

The GSS6300M is calibrated to the ISO 17025 standard at the time of delivery.

**Specification**

**Output Frequency**

- GPS/SBAS/QZSS 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
- GLONASS L1 C/A Channels -7 to +6
- BeiDou-2 B1 PRN 1 - 37
- Galileo E1 CBOC PRN 1 - 50
- QZSS PRN 182 - 202

**Signal Dynamics**

- Relative Velocity (Max) ±15,000m/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 ±0.5dB
- Accuracy ±1.0dB RSS

**Signal Quality**

- Spurious < -30dBc
- Harmonics < -40dBc
- Phase Noise < 0.1 Rad RMS
- Master Clock Stability < ±1 x 10<sup>-9</sup> over one day

**Signal Generator Unit**

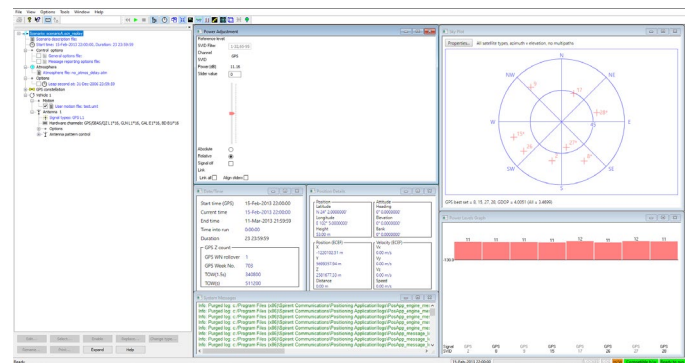
- 4 or 8 channels per constellation
- Size (W x D x H) 449 x 386 x 89mm (17.75 x 15.25 x 3.5in)
- Weight 7.0kg (15.5 lbs)
- Power 100 - 240 V AC 50 - 60 Hz

**Product Specification (MS3085) is available on request.**

Performance figures and data in this document are typical and must be specifically confirmed in writing by Spirent Communications plc. Before they become applicable to any particular order or contract.

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



SimTest™



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