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.
### 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): ±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^-9 over one day

### Signal Generator Unit
- Channel Type
  - 1 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
  - (W x D x H): 449 x 386 x 89mm
  - (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