

# GSS8000 Series GNSS Constellation Simulator Supports QZSS

*A powerful flexible choice for R&D applications*

Spirent's new GSS8000 GNSS simulator series has been designed to meet all the demanding requirements of research and development teams involved in satellite navigation and positioning systems.

Spirent Communications recently announced the world's first RF constellation simulator that supports the Japanese Quasi Zenith Satellite System (QZSS). **Spirent GSS8000 now supports QZSS system in addition to GPS, Galileo, GLONASS and SBAS.**



The QZSS system, currently under development, plans to offer three navigation satellites in high-altitude orbits to improve navigation performance in areas of Japan that prove difficult with GPS alone. Spirent will initially provides support for L1 C/A code and L1 SAIF QZSS signals and add other QZSS signals as the market develops. For the first time, developers of QZSS systems based receivers, systems and applications have a solution that provides controlled, repeatable test signals, essential for accurate testing.

“This announcement demonstrates Spirent’s commitment to continue to invest in support of the evolving test needs of the GNSS community”, commented John Pottle, marketing director at Spirent’s positioning technology division. “The first QZSS satellite is planned for launch in 2009. Our customers can now test receivers, systems and applications that will use the QZSS signals. In addition, Spirent’s systems will combine QZSS with GPS and, if required, Galileo and GLONASS to provide a complete GNSS test bed”.

Only laboratory simulation can ensure controlled repeatable testing that explores both nominal and off-design conditions. By following a structured test approach, our customers can test multi-GNSS receivers, systems and applications resulting in shorter development times and improved performance. **The Spirent GSS8000 simulation system design allows for a wide variety of configurations from GPS L1 right up to comprehensive multi-RF output and/or multi-constellation test systems.**

In a recent conversation with *Coordinates Magazine*, Mr. John Pottle, marketing director for positioning at Spirent Communications, highlighted some of the key points about the GSS8000 series as follows:

RF simulation is an essential part of satellite navigation receiver, system and application development. Only by providing controlled, repeatable signals to the system under test can development resources be properly focused and system performance properly optimized and assured. Due to its modular design, the GSS8000 can be readily adapted to the requirements of different applications. The GSS8000 includes GPS, Galileo and GLONASS signals, plus SBAS combined at one RF output. The same system is also capable of generating signals representing the planned Japanese Quasi-Zenith satellite system.

### **What is unique about GSS8000 series Simulators?**

We are moving into a world beyond just GPS testing, to a world of not only multi-signal but multi-constellation simulators. Spirent's GSS8000 supports GPS, Galileo and GLONASS today. It is also becoming the norm to combine GNSS with augmentation and other navigation systems or aids, for example inertial sensors or dead-reckoning sensors.

The GSS8000 is designed to work with all of Spirent's extensions and options in these areas including inertial, automotive and interference simulation.

### **Does GSS8000 support SBAS and all the other future signals including GAGAN?**

Yes. As well as existing SBAS (WAAS, EGNOS, MSAS), the GSS8000 is designed to support GAGAN and future GNSS such as the planned Compass system.

### **How cost competitive is GSS8000?**

Laboratory-based simulation is a very cost effective solution to GNSS testing. Compared to the costs and uncertainties of field-testing, where it is never possible to repeat the same conditions, laboratory testing provides flexibility under controlled, repeatable conditions. In addition to the GSS8000, which is our fully flexible system, Spirent has a wide range of systems for different applications, test needs and budgets.

### **How do Spirent simulators have an edge over others?**

We are very proud of our more than 20 years' heritage and deserved reputation for reliable systems with the highest fidelity signals in the industry. Each Spirent system comes with comprehensive software modeling capabilities as standard, and is backed up by regional support centers around the globe. We believe you can invest in Spirent with confidence that you will get the best test system to help you build the best products and systems for your customers.