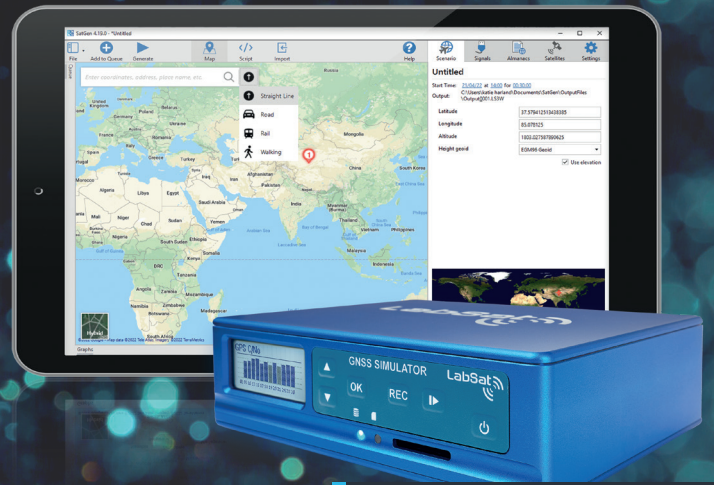# SatGen Software

SatGen GNSS Simulation Software creates custom scenarios to simulate a test anywhere in the world, with position, route, speed, date, and time all defined by the user.

- Single, dual, triple and multi-constellation
- Wideband GNSS signals in the upper and lower L-Band
- Compatible with all **LabSat** systems

Discover the new range of **SatGen** features

Create your own bespoke GNSS scenarios

SatGen software allows you to create a GNSS RF I&Q or IF data file based on a user-generated trajectory that can be replayed on a **LabSat** GNSS Simulator. This allows you to simulate almost any kind of test at a set time and date, anywhere in the world.

SatGen compliments the **LabSat** range of GNSS simulators and is available in single, dual, triple and multi-frequency/multi-constellation versions.

Latest Developments

The upcoming release of **SatGen** includes a range of exciting new features including:

- Improved route drawing with road, pedestrian, rail and straight-line routing
- Route drawing and static point using Google Maps, Bing Maps, OpenStreetMap or AMAP
- Location search by name or address for quick navigation
- New User-Interface with intuitive navigation and controls
- Advanced script editor including syntax prompt

- L1C and B1C signals now available for selection
- Queue and automatically run consecutive scenarios
- View almanac contents and easily edit the satellites used
- Change visible satellites and attenuation in a location at the initial waypoint

Why use SatGen software?

Generating scenarios in **SatGen** is a perfect resource when you need to test your receiver or device in locations you are unable to visit due to travel restrictions, a hostile environment, or the simple economic inefficiency of multiple field-tests. It also provides the ability to test at a point in time in the past or future.

Scenarios can be created to test specific product attributes such as geofencing and you can even add timed stops within a scenario to simulate multi-stop routes.

How does it work?

Creating a scenario with **SatGen** is easy. A relatively complicated route can be defined in just a few clicks, leaving the software to automatically generate a fully realistic scenario.

If you have an NMEA or KML file of your route, you can simply import this directly into the software. Alternatively, you can create a scenario from scratch, either by creating a route in one of the in-built mapping solutions (Google Maps, Bing Maps, OpenStreetMaps), building a unique trajectory with simple user-defined commands, or by using the pre-defined, editable scenario examples provided.

Once defined, the software creates the scenario for replay on a device under test (DUT) using a **LabSat** simulator.
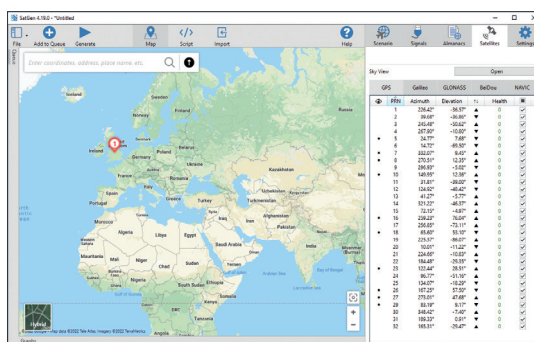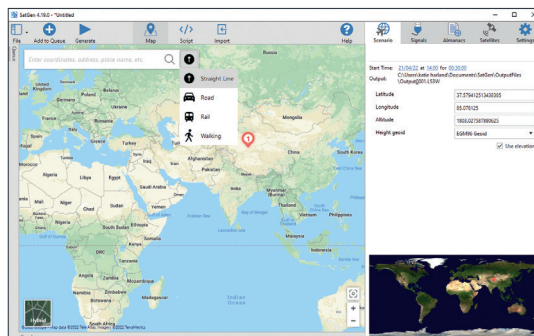
SatGen variants

Single Constellation (Up to 1 at a time)	Dual Constellation / Real-Time (Up to 2 at a time)	Triple Constellation (Up to 3 at a time)	Wideband (All of the below)
GPS L1	GPS L1	GPS L1	GPS L1 C/A, L1P, L1M*, L1C, L2C, L2P, L2M*, L5
Galileo E1	Galileo E1	Galileo E1	Galileo E1, E5a, E5b, E6
GLONASS L1	GLONASS L1	GLONASS L1	GLONASS L1OF, L2OF
BeiDou B1	BeiDou B1	BeiDou B1	BeiDou B1I, B2I, B3I, B1C
			NavIC L5 & S-Band

*Noise only