

# Spirent SimSAFE™

## GNSS Spoofing Simulation & Monitoring

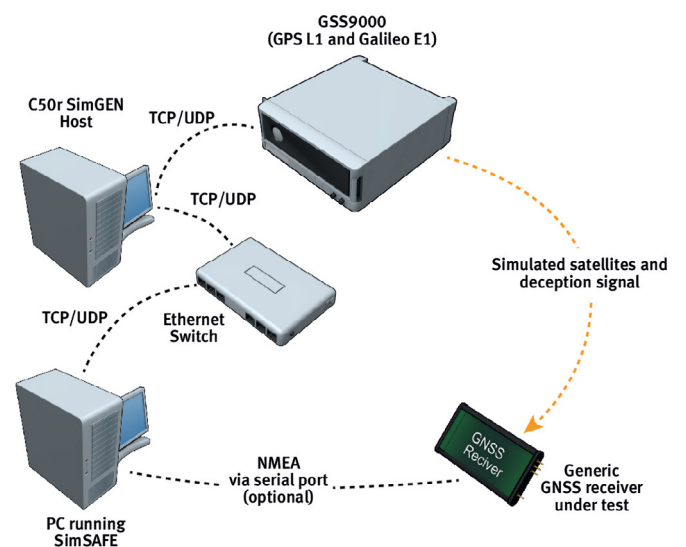
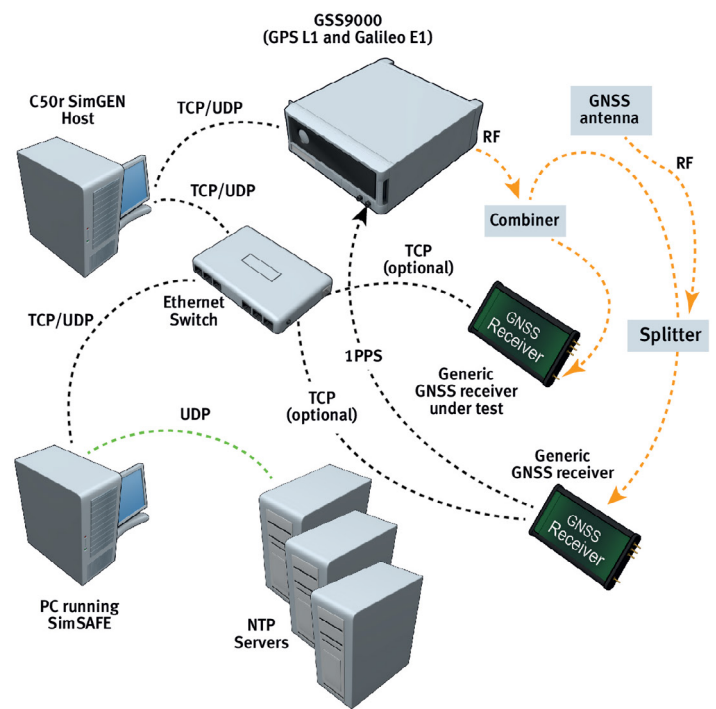
### Simulation Tool for GNSS Threat Analysis and Mitigation Techniques

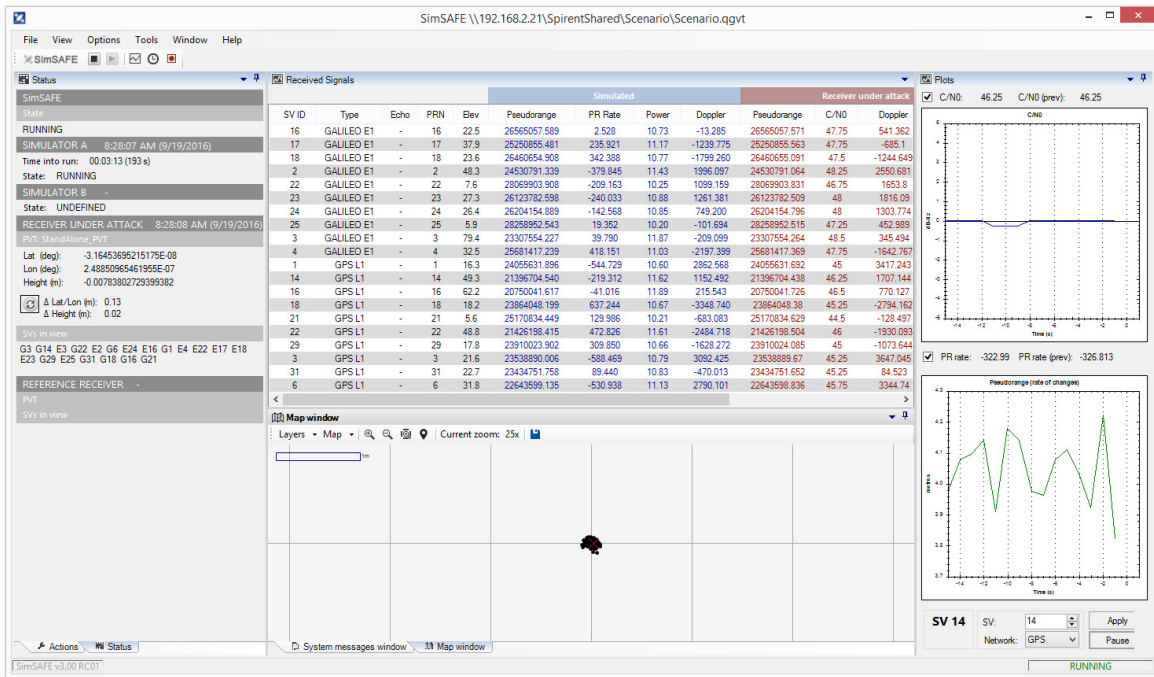
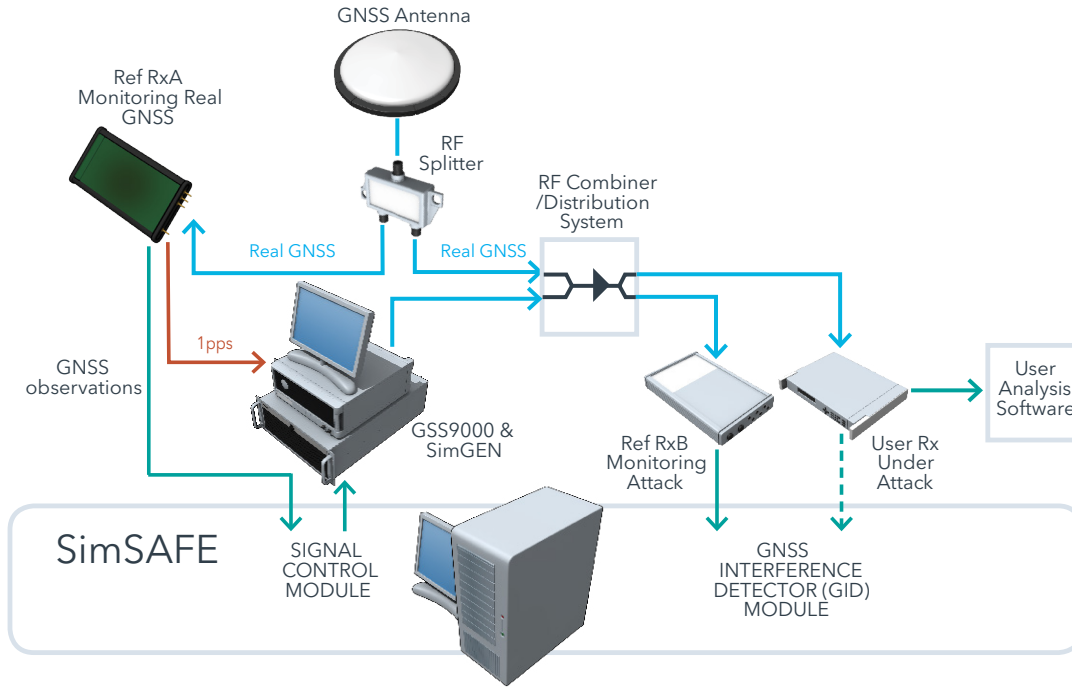
The SimSAFE software tool controls Radio Frequency Constellation Simulator (RFCS) hardware in order to emulate signal spoofing attacks and test receiver mitigation techniques. SimSAFE allows flexibility in the attack scenario definition and test of interference detection techniques. The tool can be integrated into existing radio navigation testing laboratories, in order to leverage existing hardware such as signal simulators, interference generators and hardware GNSS receivers.

The Spirent simulators are controlled by SimSAFE, and generate all the desired signal simulation scenarios. SimSAFE also monitors the output of attacked receivers and implements detection algorithms. Post-processing tools permit the evaluation of spoofing detection techniques based on observable signal parameters. The tool allows for scalable and flexible testing using techniques that could not, for example, be supported by existing hardware and software. SimSAFE represents an innovative approach to the simulation of spoofing attacks, and testing of anti-spoofing detection and mitigation techniques, and signal authentication schemes. SimSAFE permits maximum flexibility, minimum cost and risk, and the opportunity to leverage existing Spirent simulation equipment.

### Features:

- Accurate synchronization of simulator time with live sky GNSS time
- Generates single channel spoofer or multiple channel spoofer with desired dynamics
- Synchronization of falsified signal code, power and Doppler
- Supports replay attack via real-time replica of authentic GNSS navigation messages
- Supports analysis from different mass market and professional receivers
- Detection of false signals based on receiver observables





**Contact Us**

For more information, call your Spirent sales representative or visit us on the web at [www.spirent.com/ContactSpirent](http://www.spirent.com/ContactSpirent).

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

© 2019 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)