



A complete SAR data simulation system

GSS suite is an end-to-end SAR raw data simulation system. GSS allows to generate and to work with realistic SAR data before the real SAR system is in operations.

GSS suite is composed by four main components:

- **GSS engine**: the core simulation software, modelling the SAR data acquisition
- **GSS-distributed** : the extension for distributed scenes simulation, with interferometric capability
- **GSS-3D** : the module dedicated to model complex targets such as ships, planes
- **GSS-RT** : the real-time signal generator to generate analogic signals from the simulated data.

GSS suite main Features

- ✓ Fully configurable SAR acquisition geometry
- ✓ Multi-sensor simulation
- ✓ Realistic trajectory includes arbitrary flight path
- ✓ Radar parameters and antenna pulse-by-pulse
- ✓ Radar electronic chain modeling
- ✓ Realistic ground scene modeling

Real-time simulation system

GSS-RT is the GSS module that allows real-time analogic SAR data simulation.

GSS-RT main component is the **AWG-4k player**: the real-time signal generator able to generate analogic signals from the simulated data.

GSS-RT is able to simulate a SAR acquisition by “playing” the simulated data at the selected PRF rate, providing also the corresponding NAVI data.

GSS-RT main specifications

Parameter	Value
Central Frequency	Up to 4 GHz
Instantaneous Bandwidth	Up to 400 MHz
Signal level	-70 dBm to 0 dBm
Phase stability	< 0.4 degs
External Reference	10 MHz
External Trigger	Enables pulsed modulation
High precision DAC	1 GSPS
Digital outputs	Enables Navigation Data
On board memory	16 GByte
Available additional packages	<ul style="list-style-type: none"> - SAR Data processing and Focusing tools - SAR data viewers

