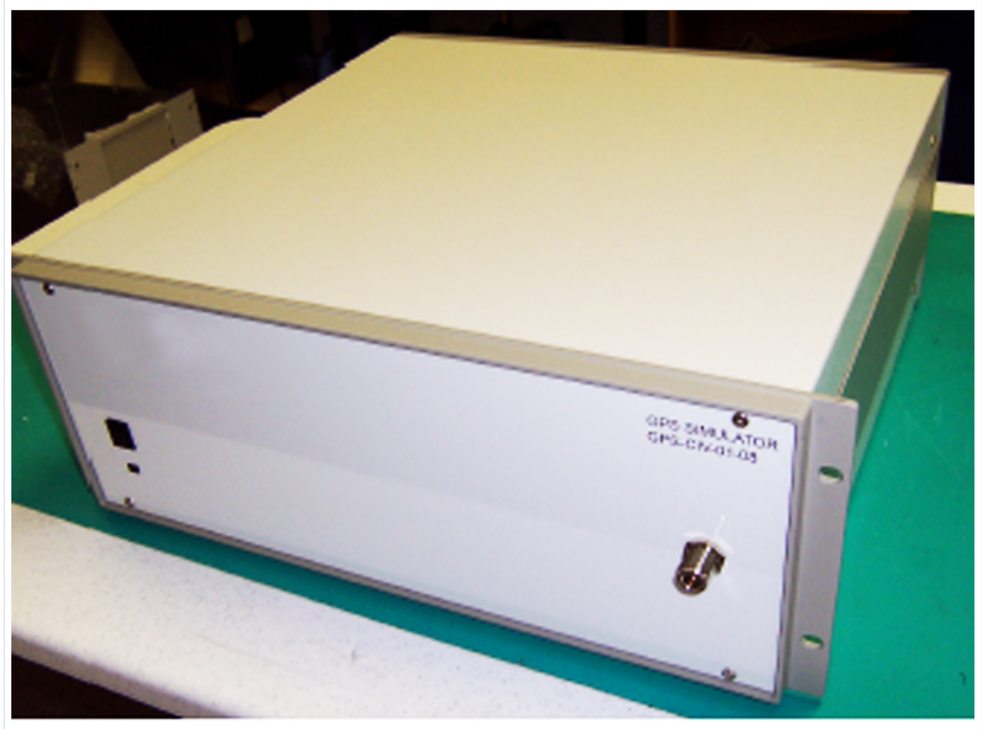
Core SSPL Core Scientific Systems Private Ltd.

GALILEO SIGNAL SIMULATORS

GALS-MF-009-06: E5AB, L_1, E_6, SINGLE ANTENNA
GALS-MFW-010-07: E5AB, L_1, E6, WAVEFRONT



Galileo signal simulators (for single antenna and multiple port wavefront generation) provide the same class of performance in terms of accuracy, flexibility, versatility, and user friendliness as in our GPS systems. The phase accuracy is held at the1 mm level.

These simulators provide RF signals in all the three bands. The RF ports are available separately. A combined RF output with reasonably high dynamic range is also available at the front panel (7 such outputs are provided in the wavefront generator).

Because of the evolutionary nature of Galileo waveform definition, flexibility in data rate, and other parameters are maintained to keep pace with time and requirements. The single antenna unit is developed for the testing of Galileo chips, receivers in the laboratory, and in the field. Performance under various environments can be easily characterized.

The wavefront simulator is useful for wavefront processing (such as multipath mitigation, anti-jam operation, differential, and kinematical operation, etc.). The high precision and versatility offered by these wavefront simulators allow them to be used for cutting-edge and high-ended systems.

The user motions, environmental models, etc. are very similar to those used in our advanced GPS simulators. This provides enabling technologies at modest cost, facilitating Galileo system development at various levels.

- Performance
  - Flexible Software-based Design
    - 12 to 24 independent channels

- High Accuracy
  - Code: < 1 cm
  - Differential Phase: < 1 mm

- Complex Scenarios
  - High Dynamics – suitable for EKV, satellite, projectiles, aircrafts (600 km/s; 20,000 g)
  - Arbitrary motion (6 DOF)
  - Wavefront Simulation
  - Independent controls over all aspects of antennas and platforms

- HWIL control – latency between 2 to 5 ms

- Comprehensive Models
  - Constellation
    - Full Control; definition and modeling
    - Navigation message bits, HOW, TLM, and sub-frame error data
  - Waveforms
    - Full controls (independent) over waveform errors, nav bits
    - Clock errors
  - Environment
    - Ionosphere/Troposphere/Scintillation

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GALILEO SIGNAL SIMULATOR

(DASR--HD--003--05)

- Antenna
  - Gain and Phase (3-D), Real-time, Lever Arms
- Multipath
  - Dynamic
- Terrain Obscuration
  - Dynamic
- Operation and Control
  - Manual
    - Menu-based
    - Script file based
    - Interactive (Real-time)
  - HWIL
    - Real-time execution (2 ms latency)
  - Remote Control
    - External control via Ethernet
- Real-time Display
  - Satellite Constellation
  - Ground Trajectory
  - User motion parameters (6 DOF)
  - Individual Antennas
- Other Facilities
  - Comprehensive Logging
  - Remote Control via Ethernet
  - Digital Output
  - 1 PPS in/out
  - 10 MHz / 10.23 MHz operation
  - Large Dynamic Range ~ 120 dB

THE MOST ADVANCED NAVIGATION SIMULATION

- Comprehensive
- Accurate
- Flexible
- Versatile
- User Friendly
- Modular

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SIGNAL DYNAMICS

- **Velocity:** ± 600 km/s
- **Acceleration:** ± 200 km/s^2
- **Jerk:** ± 200 km/s^3

RF OUTPUT

- -130 dBm at 50 ohms
- **Level Resolution:** 0.1 dB
- **Level Accuracy:** ± 0.1 dB RSS
- **Dynamic Range:** 80 dB
- **Spurious (max):** < -30 dBc
- **Harmonics (max):** < -35 dBc
- **Phase Noise (max):** < 0.02 Rad RMS
- **VSWR:** 1.5:1

CLOCK

- **Internal:** 1 X 10^{-10}/daye
- **External Input:** 10 MHz
- User definable messages
- Flexible ranging codes
- User Control: External PC via USB

OPTIONAL

- GPS – L_1, L_2, and L_5: all C/A, P(Y), M, and L2C signals
- SBAS – support at L_1, WAAS, EGNOS
- GLONASS – all signals in L_1
- Jammer – 24 independent jammer signals with selectable waveforms and dynamics
- LAAS

For pricing and more details contact
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