

sUTP 5017

GNSS SIMULATOR

FOR INDIVIDUAL REAL-TIME SIMULATIONS



PRODUCT

Applications: Production Test Systems, Product Validation, Signal Simulation



sUTP 5017 GNSS AT A GLANCE

Our sUTP 5017 turnkey solution consists of a modular Skydel GNSS software simulation combined with high-end hardware components for running real-time individual signal simulations.

The integrated Scenario Editor allows free definition of trajectories in up to 6 degrees of freedom. It supports differential GNSS and multi-vehicle simulation, GNSS satellite orbit modification, unlimited pseudorange additive ramps and custom fixed positions.

It is equipped with 2 Software Defined Radios (SDR) with 4 RF channels in total.

- Including PC, high-end graphic card, Software defined radio
- 1000 Hz simulation update rate
- Integrated maps for flexible and intuitive scenario creation
- Import NMEA, KML (Google), or CSV Files
- High dynamics
- Open source remote API for easy automation in multiple programming languages
- Satellite orbit modification and custom fixed position
- Navigation message modification and corruption
- Interference generation and injection in GNSS signals
- Powerful automation & intuitive API (Python, C# and C++ open source client)
- Runs on Linux and Windows

TECHNICAL DATA

Power Supply

Input Voltage	100 - 240 VAC
Input Current	10.0 A (max.)
Input Fuse	RC/CB C16 30 mA

Input / Output Interfaces

Inputs	IEC Socket 3x USB 3.0 2x1 Gbit Ethernet 1x10 Gbit Ethernet (optional) 1x RF In (SMA jack connector, GNSS evaluation unit) 2x USB - JTAG (USRP A / USRP B) 2x USRP AUX I/O - 15 Pin 1x GPS Antenna / SMA-f 1x ext. 10 MHz signal / SMA-f 1x PPS Signal / SMA-f
Outputs	1x HDMI 2x RF DUT (SMA jack, identical signal) 2x GPS Antenna 2x USRP Reference signal / SMA-f 2x USRP Trigger signal / SMA-f 2x 10 MHz Signal / SMA-f 2x PPS Signal / SMA-f

Provided Signal Types

Basic Satellite Signals	GPS L1 C/A, L1 C, L2 C, L5, P-Code Glonass G1, G1/G2, CDMA Galileo E1, E1/E5/AltboC, E1 OS-NMA, E6 CS Beidou B1, B1/B2, Phase III SBAS, L1, L5
Signal Manipulation	Advanced Jamming, Interference/Jamming with CW, Chirp, Pulse, BPSK, BOC, AGWN, Spoofing, Multipath
Additional Signal Options	Multi Instance option Anechoic Chamber multi antenna installation
Simulation Possibilities	Single antenna, single vehicle Multi antenna, multi vehicle HIL, RTK

Physical Specifications

Dimensions	W 450 x H 318 x D 495 mm / 7U
Weight	20 kg