



GNSS INTERFERENCE SIMULATOR

OVERVIEW:

LOKI GNSS interference simulator is a highly flexible, high-end, powerful, but easy-to-use testing and R&D device which supports currently jamming, meaconing and spoofing applications on GPS L1 and Galileo E1 services. The user-friendly GUI of LOKI provides the possibility for the user to easily define the configurations and scenarios. For instance, the user can control the victim receiver and the intended trajectory by different map applications either online or offline.



FEATURES:

1. Jamming
 - a. Flexible software-based jammer
 - b. Different jammer types
2. Meaconing
 - a. Time synchronized record and replay system
3. Sophisticated Spoofing
 - a. Real-time transmission of spoofing signals.
 - b. Time synchronized spoofing attacks (PPS and 10MHz time synchronization).
 - c. Navigation-Bit prediction for sophisticated spoofing attacks.
 - d. Jamming+Spoofing attack (forcing attacked receiver into re-acquisition).
 - e. GPS L1 C/A and Galileo E1 OS signals can be spoofed.
 - f. Dynamical intended (forced) trajectory via map applications (offline, online, and Google-Maps).
4. Graphical User Interface

JAMMING*

Signal	GPS L1 CA, GAL E1 OS
Bandwidth	2.5 or 5 or 10 MHz I/Q
Signal Type	Noise, Sinus, Chirp
Transmission power	up to - 10 dBm

MEACONING*

Signal	GPS L1 CA, GAL E1 OS
Sample-Rate	2.5 or 5 or 10 MHz I/Q
Transmission power	up to - 10 dBm
Time Synchronization	Yes

SPOOFING*

Signal	GPS L1 CA, GAL E1 OS
Position	Via File or Maps (online, offline, and Google-Maps)
Sample-Rate	2.5 or 5 or 10 MHz I/Q
Transmission power	up to - 10 dBm
Time Synchronization	Yes
Satellite Position	Via broadcasted ephemeris

TRANSCIVER HARDWARE

Connections	1 TX, SMA Connection 1 RX, SMA Connection 1 Type-B USB 3.0 connector DC Input 12V (incl. power cable)
Dimensions (L;B;H)	330; 330; 60 (plus SMA - Front ca. +5) mm
Weight	≈ 3.0 kgs

CONTROLLER UNIT

OS	Microsoft Windows 10 Pro (inkl. License und Inst)
Display	1x 17.3" Full HD IPS 144 Hz Thin Bezel
Graphics Card	1x NVIDIA GeForce GTX 1650 4 GB GDDR6
Processor	1x Intel Core i7-9750H
Power supply	1x Power cord C6 EU
Dimensions (L;B;H)	395; 260; 35/280 mm (closed/open)
Weight	≈ 2.5/3.2 kgs (net/with USB and power cables)

Optional HW**	<ol style="list-style-type: none"> 1x Omnidirectional reference antenna 1x Directional transmitting antenna 1x RF cable (transmitting antenna to LOKI) 1x GNSS variable-gain amplifier 2x tripods for the two antennas
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* Additional Jamming signals and frequencies can be ordered according to the antenna specifications.

** Optional Hardware is included on request only. LOKI: [all data subject to change]