

Orolia Defense & Security

Advanced Position, Navigation, and Timing (PNT) Solutions for NAVWAR

GNSS Simulation Systems

BroadSim is a scalable software-defined platform developed to simplify the creation of advanced jamming and spoofing scenarios with Navigation Warfare (NAVWAR) testing in mind, and intuitive control using Orolia's Skydel simulation engine.

Simultaneously Simulate the Following Supported Codes

GPS OPEN L1-C/A, L1C, L1-P, L2-P, L2C, L5	GPS ENCRYPTED L1-Y, L2-Y, L1-M-AES, L2-M-AES, L1-MNSA, L2-MNSA			
GLONASS G1, G2	GALILEO E1, E5a, E5b	BEIDOU B1, B2	QZSS L1 C/A	SBAS WAAS, EGNOS, MSAS

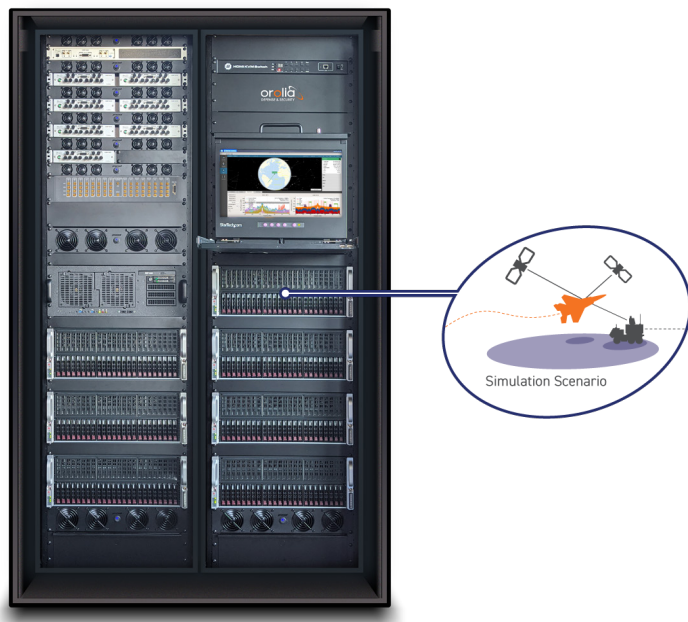
BROADSIM 4U



BroadSim 4U Key Features

Designed for NAVWAR testing
Integrated jamming, spoofing, and repeating
Simulate hundreds of signals simultaneously
Comprehensive API (C++, C#, Python)
Flexible licensing and upgradability

BROADSIM WAVEFRONT



BroadSim Wavefront Key Features

Designed for multi-element antenna testing like CRPA's
Scalable from 4-16 elements, ~1,000 signals/element
Calibrate each frequency in seconds!
Automated real-time phase compensation providing a phase coherency of $\pm 1^\circ$
Simulate multiple spoofers, repeaters, jammers, and alternate PNT sensor data simultaneously
Single computer operation using PXE (pixie)
Dynamic range of 130+ J/S

BROADSIM ANECHOIC



BroadSim Anechoic Key Features
Up to 32 RF Outputs
Drive 16 Dual Frequency Antennas
Automatic Antenna Mapping
Automatic Time Delay Calibration
Automatic Power Loss Calibration

PANACEA

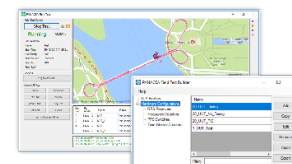


PANACEA Key Features
Autonomous PNT test suite
Assess performance and vulnerability
Simultaneously test up to 32 receivers
Time synced live sky test environment
Standardized data for easy analysis

PNT Testing Tools

PANACEA FIELD TEST

PANACEA Field Test (PANACEA FT) is a tool used to collect position, velocity, and timing (PVT) data from multiple GNSS receivers simultaneously.



VALIANT 153M

A Test fixture for GB-GRAM/GB-GRAM-M receivers. Has an integrated COTS (commercial off-the-shelf) receiver for simultaneous comparison / verification.



IDM (Interference Detection & Mitigation)

THREATBLOCKER



ThreatBlocker Key Features
In-line anti-jam protection device (up to 40dB)
L1 and L2 jamming detection, anti-jam (AJ) capabilities
Enables operations in GPS-disrupted environments
LED status indicators for real-time awareness
Intuitive Web UI for viewing real-time and historical data

BROADSHIELD

We integrate our jamming and spoofing detection software into your hardware platform to ensure Resilient PNT for your product.



BROADSENSE



BroadSense Nano Key Features
Jamming & spoofing detection
Low SWaP-C device
Sophisticated GNSS receiver
Integrated antenna
Patented algorithms
Provides real-time awareness