Orolia Defense & Security

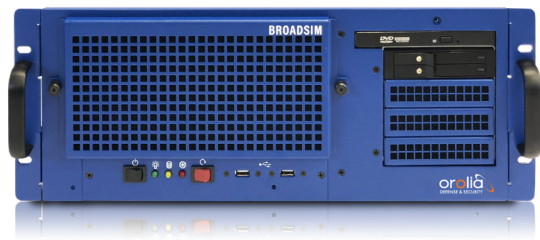## Advanced Position, Navigation, and Timing (PNT) Solutions for NAVWAR

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 Keatures
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 Keatures
Designed for multi-element antenna testing like CRPA's
Scalable from 4-16 elements at 600+ signals per element
Calibrate GNSS frequencies in a matter of seconds
Automated real-time phase compensation providing a phase coherency of ±1° 1σ
Simulate multiple spoofers, repeaters, jammers, and alternate PNT sensors with just a few clicks
Single computer operation using PXE (pixie)
1000 Hz simulation iteration rate
All-in-view simulation

The Global Leader in
Resilient PNT

BROADSIM ANECHOIC

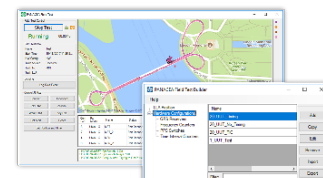| BroadSim Anechoic Key Features |
| --- |
| Up to 32 RF Outputs |
| Drive 16 Dual Frequency Antennas |
| Automatic Antenna Mapping |
| Automatic Time Delay Calibration |
| Automatic Power Loss Calibration |

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 (commericial 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.

PATENTED

BROADSENSE

NANO FORM FACTOR

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

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