

## REVOLUTIONIZING THE WAY YOU WORK WITH PNT SYSTEMS

Talen-X is an agile, innovative and fast paced organization with expertise in the field of Global Navigation Satellite System (GNSS) performance, requirements, testing, integration and threat mitigation.



**POSITION, NAVIGATION + TIMING**



**GNSS SOFTWARE + SYSTEMS**



**HARDWARE + INTEGRATION**

### BROADSIM

A scalable software-defined platform used for GNSS and Jamming simulation, and allowing for simultaneous interference and multi-constellation signal generation. Intuitive control using Skydel's SDX.

#### SIMULTANEOUSLY SIMULATE:

**GPS OPEN CODES** L1C/A, L1C, L1P, L2P, L2C, L5  
**GPS ENCRYPTED CODES** L1Y, L2Y, L1M, L2M, MNSA  
**GLONASS** G1, G2    **GALILEO** E1, E5a, E5b  
**BEIDOU** B1, B2    **SBAS** L1    **JAMMING**

#### ORIGINAL (4U)

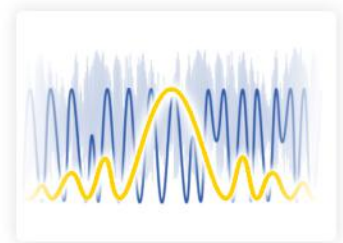
Rack-mounted 4U box leveraging 4 RF outputs.



- High-end power and performance
- Simulate hundreds of satellites in real-time
- Differential GNSS and multi-vehicle simulation
- Comprehensive and intuitive API
- Flexible licensing and upgradability
- No additional hardware needed to maintain

#### WAVEFRONT

- Phase coherent simulation system
- For use in testing CRPA systems
- Scale your system from 4 to 16 elements
- Supports jamming and spoofing



#### ANECHOIC

- 32 RF Outputs
- 16 Dual Frequency Antennas
- Automatic Antenna Mapping
- Automatic Time Delay Calibration
- Automatic Power Loss Calibration



## THREATBLOCKER

### JAMMING + SPOOFING PROTECTION DEVICE

- Detects and protects from jamming and spoofing
- Enables operations in GPS-disrupted environments
- Inline AJ solution for single element antenna systems

- L1 and L1/L2 options available
- Compatible with legacy and modernized down-stream PNT systems



*The goods, products and services incorporate technology based on intellectual property, technology and know-how developed by and licensed from The Aerospace Corporation in which the United States Government may have certain rights.*

## BROADSHIELD

### JAMMING + SPOOFING DETECTION IN YOUR DEVICE

We integrate our jamming and spoofing detection software into your hardware platform to assure the PNT of your product.



## BROADSENSE

### JAMMING + SPOOFING SENSOR

A jamming and spoofing detection sensor designed to detect GPS jamming and spoofing, utilizing sophisticated GNSS receivers and over 75 advanced algorithms.



## PANACEA

### PNT TESTING SIMPLIFIED

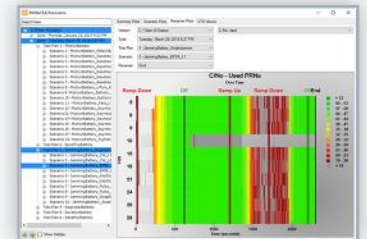
An autonomous PNT performance and vulnerability test suite. Simultaneously test up to 32 receivers, simulate multiple constellations, produce a time sync'd live sky test environment, and output standardized data for easy post-test analysis.



## PANORAMA

### MAKE DECISIONS, NOT PLOTS

An easy analysis tool that visualizes receiver data collected by PANACEA and RxStudio. Maximize your time by analyzing plots and making decisions, instead of tediously formatting data.



## VALIANT 153M

### MGUE RX TEST FIXTURE

A breakout card enabling users to easily power, communicate and control GB-GRAM / GB-GRAM-M receivers. All I/O pins are broken out to the test fixture. Integrated COTS receiver for simultaneous comparison / verification testing.



## RXSTUDIO

### 100+ RECEIVERS - ONE FORMAT

Real-time GNSS receiver data collection, control and display. Supports a growing list of receiver protocols, multiple serial interfaces and Ethernet communication from over 100 receiver manufacturers.

