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EUR/USD (Bid), Ticks, # 300 / 300
23:35
23:40
23:46
Securing Your Critical Infrastructure with Orolia's Resilient PNT Solutions
The Global Leader in Resilient PNT
Providing the world's most critical applications real-time, accurate, reliable positioning, navigation, and timing data.
Safety, Security and Reliability

Resilient PNT Platform

Orolia provides the world's leading Resilient Positioning, Navigation & Timing Platform trusted for the most critical applications

Resilient PNT INDUSTRY SOLUTIONS

By integrating Orolia's Resilient PNT products and technologies with vertical market requirements, a number of industry-specific, mission critical solutions can be created. These industry solutions, whether existing or emerging, require highly accurate and robust positioning, navigation and timing functionality to operate successfully, efficiently and effectively on land, air or sea.

Resilient PNT PRODUCTS & TECHNOLOGIES

Products and technologies from Orolia's comprehensive portfolio are vital to a number of Resilient PNT-reliant application areas including search & rescue, tracking & monitoring and networks & mobility. Each of these applications depend on precise and reliable PNT data to streamline operations, to maximize productivity and to protect/save lives.

Resilient PNT CORE CAPABILITIES

At the core of the Resilient PNT platform are a set of PNT signal management capabilities that serve as the foundation for Orolia's PNT-enabled products, technologies and industry solutions. By generating, distributing, simulating and analyzing PNT signals throughout the product development, application creation or system integration process, the highest levels of PNT performance, stability and security is ensured.

Aerospace
Distress/Safety Systems (GADSS)
Air Traffic Mgt.
Emergency Mgt.

Enterprise
Network Timing
Financial Services
Energy/Telco Networks

Government
Emergency Management
Maritime Domain Awareness
Critical Infrastructure/911

Marine
GMDSS
Vessel Monitoring Systems
Automatic Identification System (AIS)

Military/Defense
Assured PNT
C4ISR
Combat SAR

Space
Atomic Clocks
Low-Noise Oscillators
Satcom

Transportation
Unmanned Autonomous Systems
Navigation Testing

Customer/Partner Integration

Tracking & Monitoring
- Coastal Surveillance
- Fleet Management
- Traffic Management
- M2M

Search & Rescue
- Rescue Coordination
- Mission Control
- Satellite Ground Stations
- Distress Beacons

Networks & Mobility
- Timing & Synchronization
- Inertial Navigation
- GNSS Simulation

PNT Signal Management

Interference Detection & Mitigation
Generation, Distribution, Test, Simulation, Validation, Augmentation, Substitution

Cybersecurity

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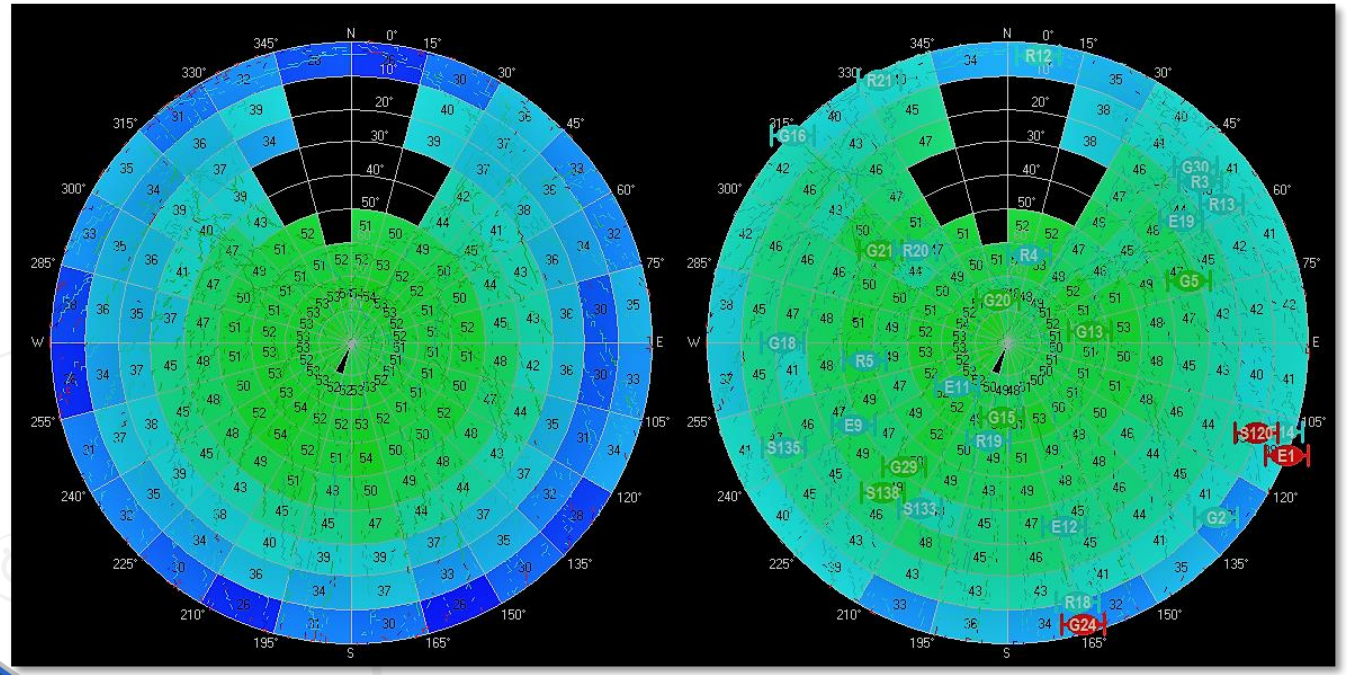
PASSIVE ANTI-JAM ANTENNA

- Attenuates signals below 30 degrees above the horizon where most interference comes from
- Drop in replacement for standard roof antenna
- Suitable for timing and stationary applications



AJ Antenna

Standard Antenna

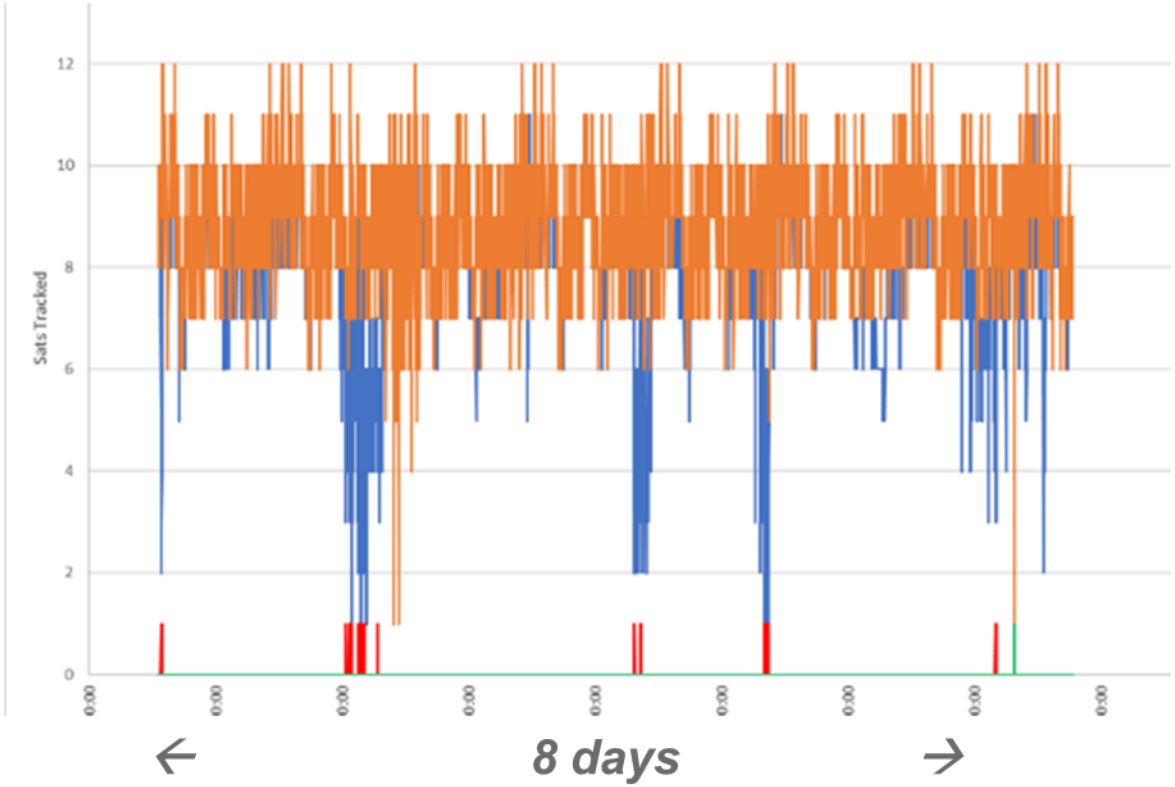
AJ ANTENNA: FIELD TEST DATA

Two GNSS Time Servers with internal Rb Holdover oscillators: side by side, one with Standard Antenna; the other with AJ Antenna

Experiencing suspected "Privacy Jammer" interference – next to a trucking company

AJ Antenna drastically reduced GNSS dropout (Holdover Events) over a one week period

	Standard Antenna	AJ Conical Antenna
Holdover events	40	4
Total time in Holdover	1 hour 32 minutes	41 seconds
Longest holdover event	14 minutes 26 seconds	17 seconds
Average holdover event	2 minutes 18 seconds	10 seconds
Satellite alarms	31	2



BROADSHIELD

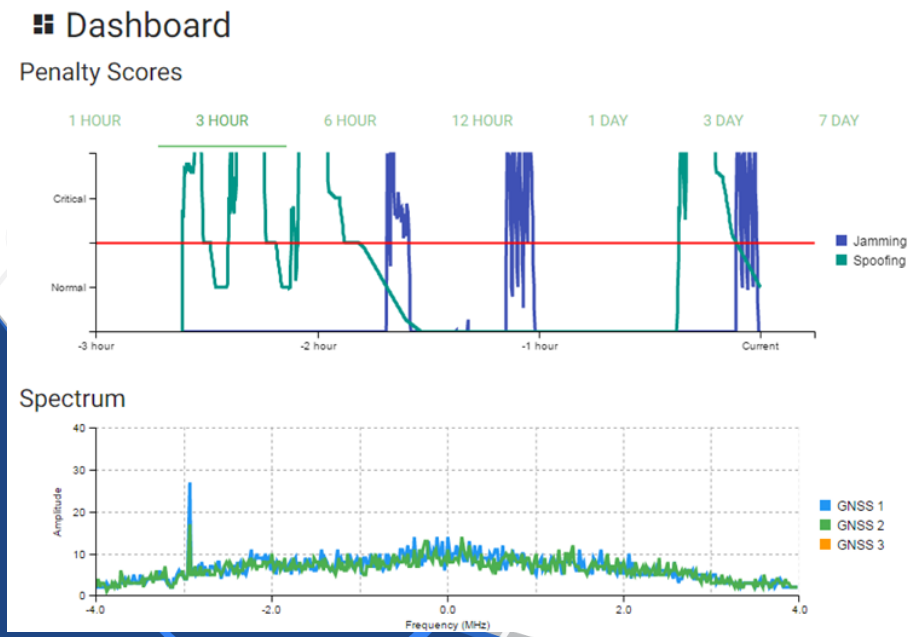
Embedded GPS Jamming and Spoofing Detection Software

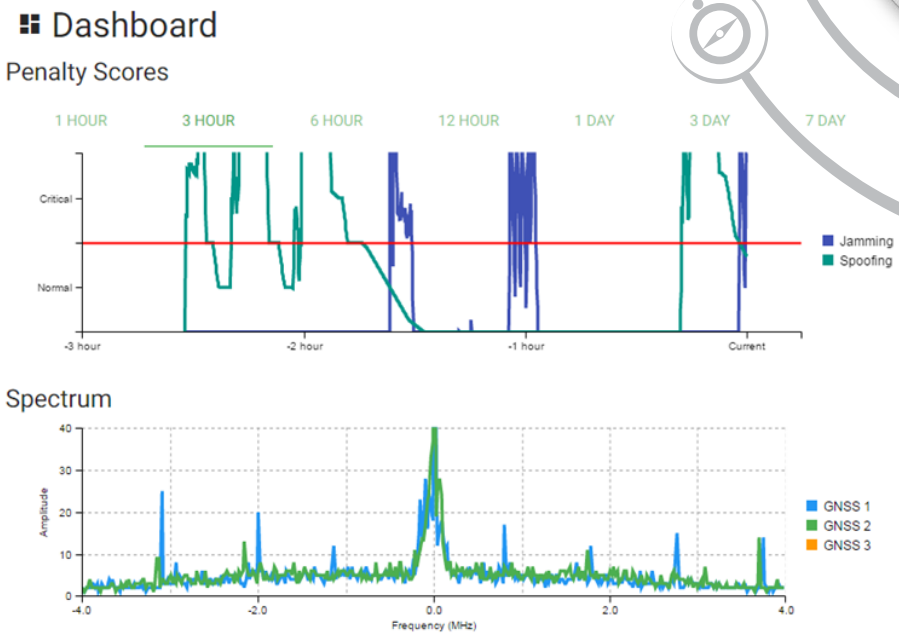
Detects **Jamming**

- Continuous Wave (CW)
- Swept CW
- Pulsed CW
- AWGN
- BPSK

Detects **Spoofing**

- GNSS simulators
- Anomalies in the GPS data
- Jumps in position and time
- And everything in between
- Alerts when jamming and/or spoofing is detected





STL ALTERNATIVE SIGNAL

Signal strength 1000x stronger than GPS

- High power satellite-based technology that penetrates through buildings and obstructions (works indoors)
- Resilient to jammers
- Encrypted signal with a license key specific to each receiver is virtually impossible to spoof
- An alternative secure signal to complement GPS and other GNSS satellite signals. Makes each application more accurate, secure and less prone to interference and attack.

PROFESSIONAL SERVICES: ENGINEERING & TESTING

Orolia's team of seasoned Resilient PNT professionals help you plan, deploy and maintain products, solutions, networks and systems

Engineering Services

- Timing network design & deployment
- Advanced system architecture
- TSN-focused system design & deployment

Testing

- GPS interference testing
- Performance testing

Training

- Operations/NOC team training
- Tailored product training

Security and Audit Services

- PNT network security audit
- PNT cybersecurity audit
- GPS spoofing and jamming vulnerability testing
- Timing system security optimization

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