



PROTECTING GPS/GNSS-RELIANT MILITARY SYSTEMS

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ABOUT OROLIA

A world leader in assured positioning, navigation and timing (PNT) solutions that improve the reliability, performance and safety of critical, remote or high-risk operations.

PNT Key Capabilities by Industry



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



Maritime

GMDSS
Vessel Monitoring Systems
Automatic Identification System (AIS)



Defense

Assured PNT
C4ISR
Combat SAR



Space

Atomic Clocks
Low-Noise Oscillators
Satcom



Transportation

Unmanned
Autonomous Systems

With locations in more than 100 countries, Orolia provides virtually failsafe GPS/GNSS and PNT solutions to support government and commercial applications worldwide.

GNSS Is Great...



...Until It's Gone.

PNT IS REQUIRED BY MANY CRITICAL SYSTEMS



PNT IN LAND OPERATIONS

Command and Control

- Individual navigation
 - Communications networking and security
 - Digital blue force tracking
 - Decisionmaker situational awareness
 - Synchronize operations
-



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- Identify critical decision points
- Outmaneuver the opponent



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Time Sensitive Targeting

- Locate high-value targets
- Engage before the target is lost
- Assessment
- Minimize collateral damage



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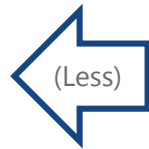
Assured **PNT** =

- Faster, better informed decisions
- Greater synchronization
- Force Multiplication

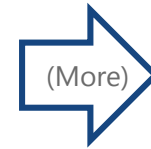
= Doing More With Less!

WHAT HAPPENS WITHOUT PNT?

Poor **PNT**
Availability



Military Effectiveness



Assured
PNT

- Non-secure Voice Communications
- Map and Compass
- Analog Map Tracking
- Information Gaps
- Slower Actions

- Secure Digital Communications
- Digital Navigation
- Digital Blue and Red Tracking
- Superior Awareness
- Faster Actions

TRUE RESILIENCE = DEFENSE IN DEPTH

INTERFERENCE

JAMMING

SPOOFING



GNSS

ANTI-JAMMING

DATA INTEGRITY

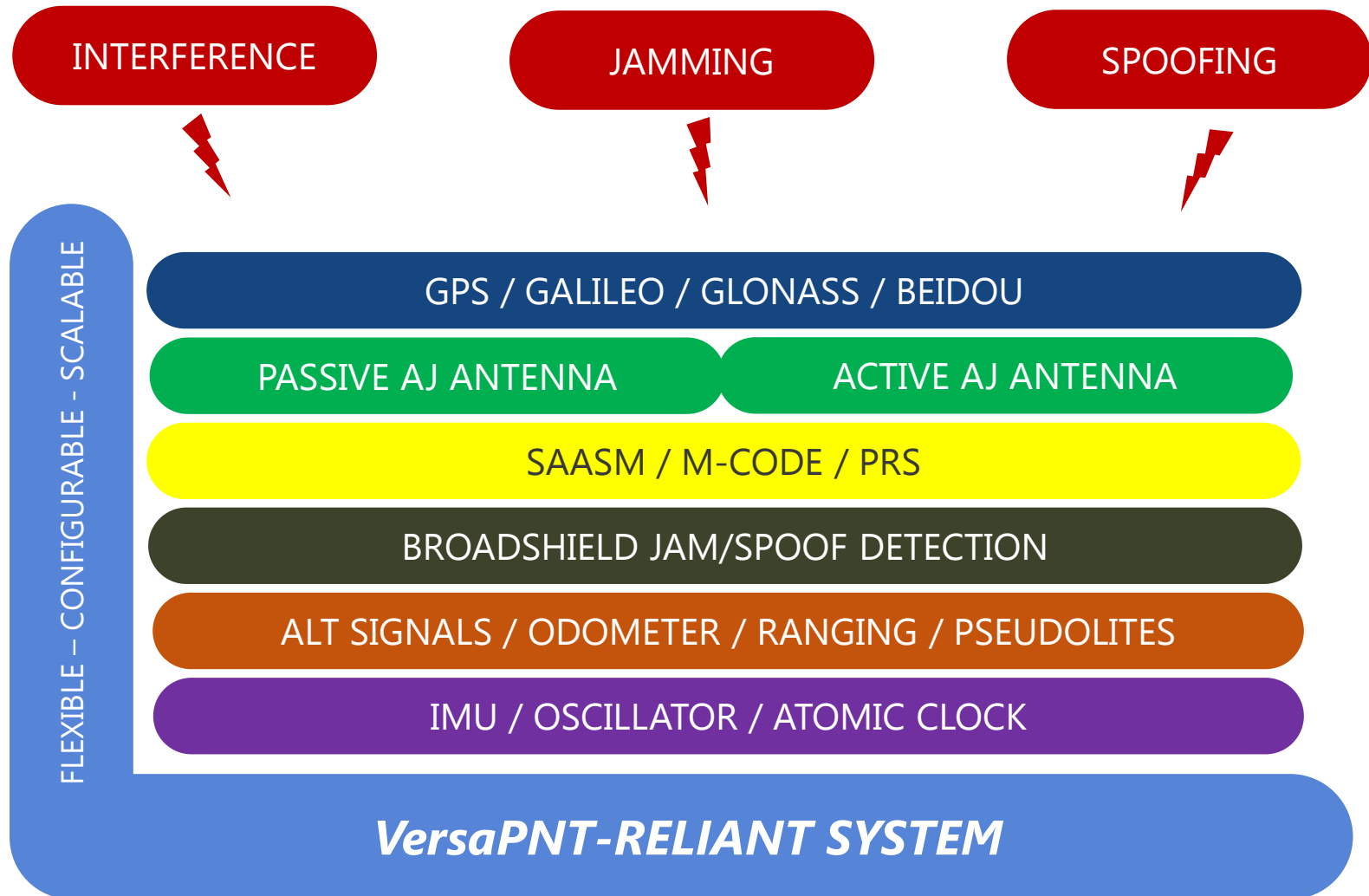
SPOOFING DETECTION

COMPLEMENTARY PNT SIGNALS

INTERNAL PNT REFERENCES

PNT-RELIANT SYSTEM

OROLIA PNT SOLUTIONS



THE REALM OF PNT POSSIBILITY

