



orolia

POSITIONING | RESILIENT
NAVIGATION | TOGETHER
TIMING

PNT

HEEDRA

Orolia Defence Capabilities

D S E I

The World Leading
Defence & Security Event

Meet us today

Booth #H6-201

About Orolia

Orolia is the world leader in Resilient Positioning, Navigation and Timing (PNT) solutions that improve the reliability, performance and safety of critical, remote and high-risk operations, even in GPS/GNSS denied environments. Orolia provides virtually fail-safe GNSS and PNT solutions for military and commercial applications worldwide.

Trusted by the World's Leading Companies

From the world's fastest growing companies to local businesses, we place customers at the heart of everything we do.



- Timing & Synchronization
- Atomic Clocks & Oscillators
- Testing & Simulation
- Search & Rescue
- Custom Engineering

Time and Location
You Can Trust™

- Aerospace
- Ground Forces
- Military Aircraft
- Commercial Aviation
- Critical Infrastructure/ICS
- Naval Operations

HEEDRA®

About HEEDRA

Interference or natural phenomena can cause errors in your PNT solution, our Robust-PNT products will help by monitoring the local environment and reporting problems.

From fully featured GPS/GNSS Simulators through to sophisticated RF Record and Replay systems, HEEDRA provides best in class GPS/GNSS Test Equipment to meet your requirements.

Trusted by the World's Leading Companies

From the world's fastest growing companies to local businesses, we place customers at the heart of everything we do.

GPS/GNSS Simulators

Need a GPS/GNSS multi-constellation, multi-frequency simulator? You won't find a more comprehensive or cost-effective solution.

RF Record & Replay

Want to record real world conditions, to replay in your Lab? Check out the Saphyrion Signal Record and Replay GDARS™ Platform.

Robust PNT

Got a problem with Interference? Take a look at the Griffin Detection and Location system, or the SCORPion warning and monitoring systems.

The HEEDRA team combines many years of experience in the GPS/GNSS industry



GNSS Services

Our staff have years of experience working in the GNSS research, testing and sales & marketing environment. We are well placed to provide the consultancy and professional services your business needs in a complex, fast-moving marketplace.

We also provide a range of support services including GPS/GNSS consultancy and technical training to engineers, researchers and staff across multiple industry sectors.

Our Office

Our facilities include a conference suite where we host meetings and a seminar area where we carry out training courses which comfortably hosts up to 30 people.



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About Orolia Defence Capabilities

For over 50 years, Orolia has been supplying Resilient Position, Navigation and Timing (PNT) solutions across multiple mission critical programs for defence and federal government. As a global leader in PNT technologies, we understand the need to maintain continuous operations in harsh and contested environments, and we are committed to ensuring that military forces have precise, reliable and rugged PNT solutions.

Resilient Timing

Orolia has been at the forefront of the industry's most advanced timing solutions, with the first and longest standing DISA approved Timing & Sync Device for defence network security and interoperability.

Interference Detection & Mitigation (IDM)

With the growing threat to GPS signal integrity from adversarial jamming and spoofing, Interference Detection and Mitigation (IDM) has become a critical requirement for electronic warfare countermeasures.

GNSS Simulations

Resilient PNT includes vulnerability testing with robust GPS simulation solutions, to ensure that warfighters are prepared to respond confidently to GPS disruptions on the battlefield for mission continuity.

Capabilities Statement

- Orolia is an experienced contractor for many leading businesses and government agencies across the UK, Europe and globally, with thousands of PNT devices deployed across key sectors including defence, security, energy, commerce, justice, and transportation.
- We have contributed as a subcontractor to all major primes as a core Resilient PNT expert.
- Applications include:
 - Critical Infrastructure
 - Intelligence, Surveillance and Reconnaissance (ISR)
 - Electronic Warfare & Anti-Jamming/Spoofing
 - Communications Networks
 - First Responder Systems
- First DISA Approved Timing and Synchronization Device on Department of Defence Information Network (DoDIN) Approved Products List (APL).



Today on Orolia's Booth H6-201



SecureSync®

The SecureSync is built on a platform of configurable capability components, either by hardware, software or system integration, to offer precisely what you need at the lowest cost of ownership.



Skydel GSG-8

The Most Advanced Software-powered Turnkey Simulation supporting multi-constellation, multi-frequency, and hundreds of signals with a 1000 Hz iteration rate. Ideal for space trajectories, custom PNT signals, hardware-in-the-loop, and more.



Spectratime mRO-50

Miniature, Low SWaP-C, ultra-portable high precision & performance Atomic Frequency Source



GPSdome: Industry's Only Non-ITAR GPS Anti-Jammer

GPSdome is a small-sized, add-on device that provides protection against GPS jamming, ensuring continuity of autonomous navigation and operation during jamming conditions.



VersaSync

A low SWaP, high performance GPS masterclock and network time server that delivers accurate, software configurable time and frequency signals.



VersaPNT IDM Suite

Orolia's VersaPNT with IDM Suite serves as a resilient Positioning, Navigation and Timing (PNT) hub, sensor fusion aggregator, and GNSS jamming/spoofing detector – all in a single compact solution that is rugged, flexible, configurable, and scalable.



SARBE G2R Evo

The most advanced product ever to bear the famous SARBE name brings a new level of performance to the Personal Locator Beacon.



GPS/GNSS Interference Detection

A GPS-based interference detection suite that protects your critical infrastructure from vulnerabilities caused by jamming and spoofing.





**SATCOM
Time Stamp**



**Surveillance
Camera Pod**



Missile Defence



**CRPA An
Testing**



**Test Range
Data Sync**

Airborne Applications

- Data Link Network
- Terrestrial & Satellite Comm.
- ISR, Electronic Warfare
- Deployable Air Traffic Control

Ground Applications

- Missile Defence, Ground Radar
- Mobile Network & Test Range Sync
- Countermeasure Systems Sync
- Critical Infrastructure Networks

Sea Applications

- Positioning & Navigation
- Comm. Networks, Radar Systems
- Oceanographic Sensor Sync
- Submarine Master Clock



Oceanographic Sensor Sync

Antenna

Military Comms

Naval Radar

Ground Radar

About SecureSync

SecureSync harnesses Orolia's leading PNT technology into one flexible, modular platform designed to synchronize critical military and commercial infrastructures that require extreme reliability and security.

- Multi-GNSS configurations (GPS, Galileo, GLONASS, BeiDou)
- Internal precision time-keeping via TCXO, OCXO or Rubidium oscillator
- Secure network management and control
- Built-in high-performance NTP server; PTP options
- Ruggedized shock and vibration-tested chassis (1RU)
- Low phase noise frequency options
- DISA DoDIN Approved Products List
- Supports M-CODE, SAASM



SecureSync Applications

Sophisticated Military Operations.

With its M-CODE/SAASM support, built-in security, interface flexibility, and complimentary Interference Detection and Mitigation (IDM)suite, the SecureSync Platform is ideal for defense applications, including Radars, test ranges and Intelligence Surveillance Reconnaissance (ISR) applications.

Datacenters and Fintech.

SecureSync's sophisticated networking capability and scalability, and available hot swappable power supplies are especially well-suited to datacenters and fintech applications, where reliability, speed and accuracy are essential.

Power and Automation.

SecureSync's flexible networking capability and flexible interface are excellent options for power authorities, utilities, and process control industries.

Transport and Air Traffic Management.

SecureSync's built-in IDM suite provides an extra level of security and protection, and its flexible networking capability and available hot swappable power supply are ideal for the transport and ATM industries.

Broadcast and Telecom.

As you move into a 5G world, SecureSync's networking capability and available hot swappable power supply will keep your systems up and running accurately, precisely and reliably.

Public Safety.

Powered by NetClock, SecureSync is fully NENA-compliant and the #1 recommended time synchronization platform for public safety, used in over 90% of US 911 call centers. Trust SecureSync to deliver precise, reliable, legally traceable time that will stand up in court and protect you from potential litigation.

SecureSync Platform: Key Features



Built-In Security

SecureSync incorporates a high level of operational security with advanced cybersecurity protection.

Networking

- Access Control Lists (ACLs)
- iptables firewall support

Login

- Login banner support

SSH

- Public/private key support

Passwords

- Configurable password policy
- Password expiration

HTTPS

- Signed certificate support (SHA256 default)
- Configurable cipher usage
- TLS v1.1 and 1.2

Military Encrypted Signals

- M-CODE
- SAASM

NTP

- Symmetric keys



Reference Resilience

Reinforced with alternate signals of opportunity to GPS to improve resilience.

- Multi-GNSS configurations (GPS, Galileo, GLONASS, BeiDou)
- STL Option (GNSS backup)
- Interference Detection Mitigation Suite
- Internal precision time-keeping via TCXO, OCXO or Rubidium oscillator



Easy Monitoring

SecureSync provides local and distant access to useful operational data.

- Local and remote syslog
- SNMP (Simple Network Management Protocol)
- Email notifications
- Advanced REST API



Scalability

SecureSync provides high networking capability and scalability for NTP and PTP deployment.

- Available dual GbE
- RJ-45 and available SFP (copper or fiber)
- IPv4/IPv6 stack
- Available VLAN support
- NTP and available PTP
- GbE expansion option cards



Versatility

SecureSync can be configured to fit your specific application and is field upgradeable to align with future requirements.

- Multiple oscillator options including low g-sensitivity for harsh environments
- Available low phase noise, high stability frequency outputs
- Available software-configurable I/O
- Additional signal diversity and density through dozens of option cards
- Available AC, DC power in fixed and hot-swap options

Press Corner



Orolia's GNSS Simulators Now Support an Ultra-Low Latency of Five Milliseconds



Orolia Selected to Deliver the Next Generation Galileo GNSS Simulator



Orolia to Provide Galileo PRS Enabled Solutions for European Defence



