

Assured PNT military technology

It was recently announced from Washington, DC, that Orolia, a world leader in Assured Positioning, Navigation and Timing (PNT) solutions would be presenting a comprehensive suite of Assured PNT military technology devices and systems at the 2018 AUSA *Annual Meeting in Washington, DC, currently underway to 10 October. There will also be an introduction to Oriol's latest wearable battlefield communications equipment.

Orolia's comprehensive PNT technology devices are reported to deliver precise, secure battlefield communications, situational awareness and decision support for a wide range of mission applications.

Other exhibits will include the Orolia suite of mounted and dismounted Assured PNT solutions for mobile missions, networks and critical infrastructure. Global military operations rely on continuous, accurate positioning, navigation and timing information, even in GPS denied environments.

Orolia PNT devices are claimed to improve the reliability, performance and safety of clients' critical, remote or high-risk operations. In support of its Kannad, McMurdo, SARBE, Spectracom and Spectratime brands, Orolia has more than 425 employees and sales presence in over 100 countries. Leading organizations including Airbus, NASA, Thales, or Raytheon are claimed to rely on Orolia for fail-safe GNSS and PNT products and infrastructure for their mission critical needs.

Founded in 2006, Orolia has a global presence with offices in China, France, Russia, Switzerland, Singapore, India, the UK and the US.

Combat rescue beacon

One new Orolia product of the latest military technology innovation is the SecureFind™ Combat Rescue Beacon shown at the 2018 AUSA Annual Meeting.

In addition to protecting the US military's most critical assets and leaving no one behind, Combat Search and Rescue (CSAR) technology can significantly enhance military operations by avoiding the loss of sensitive information and technology, avoiding hostage situations, and helping to prevent conflict escalation.

SecureFind is based on Orolia's proven search and rescue technology suite, backed by more than 30 years' advanced innovation and selected by military forces for CSAR missions. The wearable base unit includes an open channel

search and rescue programme for military use in training or test mode. It can also be configured with a customer-defined, secure channel for covert operations. This versatile CSAR system operates with a silent, push-button functionality that does not require voice activation. SecureFind is said to enable military forces to precisely and safely execute CSAR missions, with optional Assured PNT technology that prevents GPS signal interference, spoofing and jamming.

In the words of Orolia VP Defense Programs Paul Zweers: *‘There is no greater need for urgency, stealth and precision than when military personnel are isolated in rugged environments or behind enemy lines. As the only end-to-end provider of Assured PNT technology, Orolia is proud to introduce SecureFind for covert military operations – even when GPS signals are unavailable.’*

‘Software-defined, wearable communications technology is now more important than ever on today’s air, land, sea and cyber battlefields,’ said Orolia CEO Jean-Yves Courtois who added: *‘CSAR missions are just the beginning of potential uses for this resilient military technology, which can ensure reliable positioning, navigation and timing data in any operating environment. Orolia’s solutions are tailored to support today’s soldiers, and engineered with a view toward the future of global military networks.’*

Atomic clocks

Earlier in the year Orolia announced that its atomic clocks have been selected for the Galileo GNSS. Under contracts totalling €26M Orolia will deliver what are claimed to be the most stable, accurate timing systems available. It has been reported that this latest initiative builds on Orolia’s long-standing role in providing the world’s most precise timing technology for satellite programmes.

Each satellite will carry two Rubidium atomic clocks and two passive Hydrogen Masers, the most stable clock in the world. Under these contracts, Orolia will supply its Spectratime Rubidium Atomic Frequency Standard and its Passive Hydrogen Masers physics package for an additional 12 Galileo satellites. These new satellites will reinforce Orolia’s world leadership position in the number of active atomic clocks in space, including more than 100 in the Galileo system.

In addition to serving as Europe’s independent PNT source, Galileo can also serve as a secondary signal source for systems such as GPS, GLONASS or BeiDou in the event of service disruption. Furthermore it has been reported that Galileo delivers the highest accuracy of any GNSS system in operation. The quadruple clock redundancy designed into each satellite ensures that even if a failure occurs, overall system performance will not be compromised.

Currently more than 150 Orolia Spectratime atomic clocks are in service to support Galileo, IRNSS, BeiDou, GAIA and other missions, some having been operational for more than ten years.

See also: www.oriola.com

*The Association of the United States Army. The annual meeting is reported as being the largest land warfare trade show in North America. See: www.ausameetings.org/2018annualmeeting