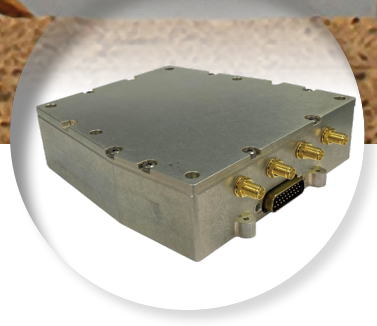


JaGuard

Enhanced Anti-Jamming GNSS Receiver/
Antenna Electronics Unit





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Enhanced Anti-Jamming GNSS Receiver/ Antenna Electronics Unit

Designed to counter GNSS jamming threats, the Jamming Guard (JaGuard) digital GNSS receiver and anti-jamming system, offers high-performance capabilities, supporting multiple configurations and GNSS constellations. The modular miniature unit is suitable for airborne, ground and maritime applications that require low power consumption, small size and a lightweight unit.

Advanced Anti-Jamming Technology

JaGuard incorporates advanced technologies for powerful anti-jam protection, with strong jamming suppression capability and high navigation accuracy. The system can operate as a standalone GNSS immune receiver or anti-jamming antenna electronics unit. JaGuard features a 4-element adaptive antenna array using active or passive antenna elements, employing null steering and other techniques to counter anti-jamming threats. The system can be used as an antenna electronics unit for GPS, GLONASS and Galileo, with optional provision for dual frequency (L1/L2) capability. The JaGuard Immune System includes RF output to reproduce clean GNSS L1 (with optional L2) signals for an external GNSS receiver in a jammed environment.

High Performance and Flexible Configurations

JaGuard's integrated, ultra-efficient processing unit receives input and performs simultaneous complex anti-jam and GNSS navigational calculations for a powerful, fast and accurate multi-constellation system. The JaGuard GNSS receiver supports GPS and GLONASS (model pending), with all-in-view satellite navigation and rapid satellite synchronization. Flexible channel configuration enables different antenna sizes and immunity levels.

Featuring advanced multipath mitigation capabilities, JaGuard delivers high performance in urban and naval environments for both high dynamic and stationary applications.



Usage and Flexibility

JaGuard is customizable to unique customer applications and requirements, including form factor, to meet the complex challenges of the modern battlefield.

Optional Configurations

4 Elements Antenna



Antenna Electronics Unit

4 Elements Antenna



GNSS immune receiver

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Technical Specifications

GNSS properties (model pending)

- GPS/GLONASS L1
- Optional:
GPS/GLONASS L2
- Galileo E1

Anti-jamming properties

- 4 antenna elements
- Null steering and other techniques
- Advanced algorithm capability for jamming suppression, STAP technique for overcoming multipath interference and improved Anti-jamming capabilities
- Interference immunity: up to 70db

Dynamics

- Max. velocity: 1600m/s
- Max. altitude: -1200ft to +100,000ft
- Max. acceleration: 15g
- Jerk range +/- 4g/sec

Accuracy

- Horizontal: 3m CEP @ PDOP < 3
- Vertical: 5m CEP @ PDOP < 3
Supports SBAS, QZSS, DGPS for improved accuracy
- Velocity: 0.05m/sec RMS

* Contact Elbit Systems Rokar for additional capabilities

Key Features

- Multiple antenna element inputs for anti-jamming capabilities
- All-in-view satellite navigation
- Multipath mitigation
- Fast satellite synchronization
- Differential GPS and SBAS capabilities
- Optional dual frequency

Key Benefits

- Small form factor
- Low power consumption
- Lightweight
- Flexible configurations
- Customizable
- Suitable for air, ground and naval applications



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