ADA
GNSS ANTI-JAMMING SYSTEM

IAI

Where Courage Meets Technology

ADA

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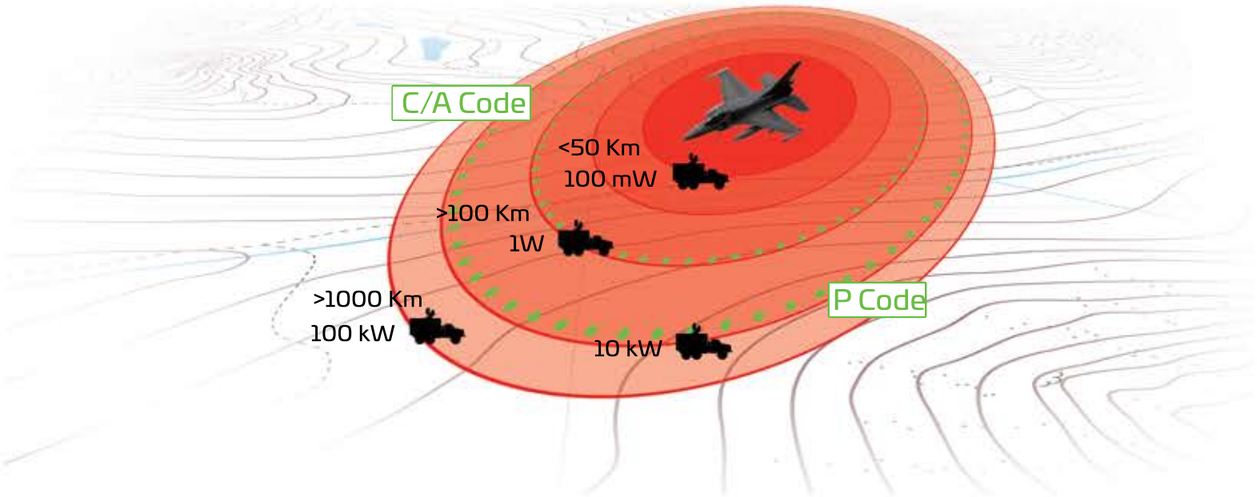
Modern navigation, communication, and EW systems critically depend on continuous availability of GNSS or an equivalent system for Position, Navigation and Timing (PNT). GNSS jamming or interference, whether intentional or unintentional, can seriously degrade or totally cripple PNT-dependent applications and assured PNT is therefore a critical requirement. Since the nominal GNSS signal power is very weak, even a low-cost GNSS jammer can disrupt the operation of these systems and jeopardize the successful completion of their mission. For instance, as could be seen in the illustration below, a simple jammer that transmits a jamming signal of 1 Watt can disrupt GNSS receivers within a radius of 40 km.



Therefore, there is a clear need for a robust GNSS Anti-Jamming solution that would enable continuous operation of these systems in a jammed environment.

Over the years, Israel Aerospace Industries (IAI) has developed excellence in the NAVWAR domain, including with its ADA portfolio of digital GNSS Anti-Jamming (GNSS AJ) solutions that enable Assured PNT.

ADA Top-Notch AJ Performance

The ADA approach to Assured PNT involves the use of advanced digital processing techniques that provide a high-level of immunity in severe and dynamic multi-jammer scenarios. ADA's 3rd generation of products provides high accuracy and simultaneous multi-band jamming immunity. The ADA system performance was rigorously tested and validated in the laboratory and in field tests and is in use in a variety of operational systems.

Versatility - Airborne, Surface, Munitions

The ADA product-line includes units in different sizes and performance levels that are based on in-house know-how and that were designed for a variety of application - airborne (fixed-wing, rotary-wing, UAS), surface and munitions applications.

Multi-GNSS and GPS m-Code

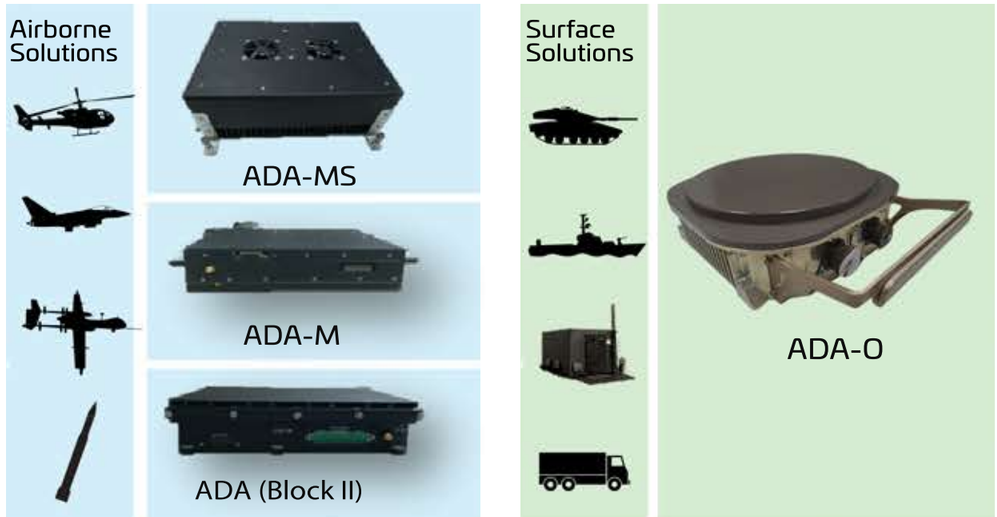
ADA modular architecture supports Multi-GNSS as well as GPS M-Code.

Flexible Configuration – Integrated GNSS Receiver or "RF Add-On"

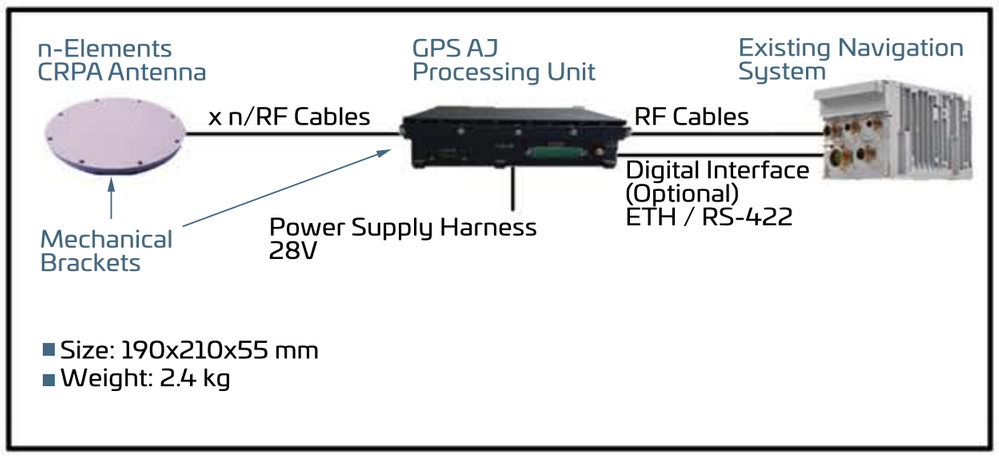
The ADA system can be provisioned as either an integrated immune GNSS receiver or as a completely independent add-on by RF connection to any 3rd-party GNSS receiver. The "RF add-on" configuration allows for plug-and-play installation on top of existing GNSS receivers.

Superior SWaP & Reliability

ADA units employ rugged design which offers high reliability (high MTBF) and low Life-Cycle-Cost (LCC).



Typical Integration Block Diagram



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MCAST - Dedicated Simulation & Testing Suite

The ADA suite includes a complete end-to-end simulation and validation environment which allows our customers to rigorously test their solution performance in challenging GNSS-jammed scenarios.

E2E Simulation & Testing Environment

One Stop Shop – Design, Integration, Installation, Validation

Being a world-recognized leader in platform MRO, IAI offers a complete turnkey Assured PNT solution which includes design (conformal antenna and processing unit), integration, installation, validation and airworthiness. Over the years, IAI has gained vast experience in integrating immune navigation and anti-jamming solutions into various platforms. Our stringent procedures and MIL-STD compliance enable high overall quality and reliability.

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