

# SEA-READY GNSS TECHNOLOGY

JAVAD GNSS designs and manufactures high-precision GNSS receivers with over 20 years of field-proven performance across demanding applications where long-term stability is mission-critical.

**Hydrographic Survey & Mapping**

**Defense & Maritime Security**

**Commercial & Autonomous Marine**

## PARTNER WITH US

With full end-to-end control of design through manufacturing, our engineers work closely with you throughout integration.



Manufactured in California in a JAVAD-owned world-class facility with end-to-end control of design and manufacturing.

### J-Shield Anti-Jamming/Spoofing

Patented detection and protection against signal falsification and interference

### End-to-End Control

Full control from design to manufacturing and support

### IBIR

Improved reliability through In-Band Interference Rejection

### COTS (Commercial Off-the-Shelf)

Readily available with optional customization



## CONTACT US

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Image: NOAA

OEM GNSS+INS

# USV & MARITIME SOLUTIONS

High-precision position, velocity, and orientation for unmanned and autonomous marine platforms operating in demanding waters.

- ▶ Patented anti-jamming and anti-spoofing
- ▶ Tightly Coupled GNSS+INS
- ▶ Proprietary TRIUMPH ASIC technology

[www.javad.com](http://www.javad.com)

# GNSS+INS PLATFORMS

- ▶ Continuity through GNSS outages, including bridges, quaysides, harbor structures, and contested environments
- ▶ OEM-ready form factor for flexible integration
- ▶ In-Band Interference Rejection - up to 30 dB
- ▶ Multi-constellation, multi-frequency
- ▶ Tightly coupled GNSS + INS for maximum robustness
- ▶ True heading and attitude, even at low speed
- ▶ Built for hydrographic survey, defense, port security, and advanced operations



43 x 71 x 24 mm

Variants:

- ▶ **TR-2S INS** - base GNSS+INS navigation core
- ▶ **TR-2S AJ INS** - enhanced, patented anti-jamming for contested waters



60 x 100 x 31 mm

- ▶ **Dual-antenna heading** - accurate even at low speed or dead-stop station-keeping

## TR-2S INS

A complete GNSS + INS navigation core designed for autonomous surface vessels and payload integrators.

Robust positioning and navigation for smooth, stable trajectories through wave motion and GNSS gaps.

## TR-3S DUO INS

Engineered for platforms demanding robust heading, attitude stability, and uncompromised navigation integrity in the most challenging RF and operational environments.



## J-SHIELD

Anti-Spoofing + Anti-Jamming

## PATENTED PROTECTION BUILT-IN

JAVAD OEM solutions are equipped with J-Shield, our patented spoofing and jamming detection and protection.

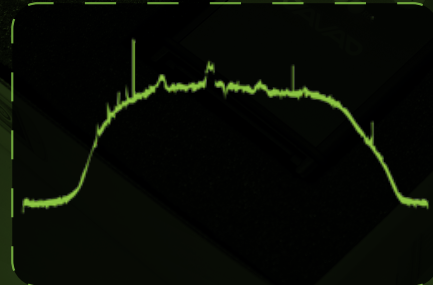
J-Shield is a robust filter that blocks out-of-band interference. See all satellites tracked, used, spoofed, blocked, faked, and replaced.

## IN-BAND INTERFERENCE REJECTION

IBIR (In-Band Interference Rejection) is the receiver's ability to suppress unwanted signals that fall within the same frequency band as the desired GNSS signal.

IBIR: Up to 30 dB

J/S Ratio: Up to 90 dB



## THE JAVAD ADVANTAGE

Meet your needs, without compromise.

- ▶ Position accuracy & smooth trajectories
- ▶ Precise heading at any speed
- ▶ Attitude & heave for survey-grade motion compensation
- ▶ Compact footprint
- ▶ Long-endurance and over-the-horizon autonomy
- ▶ Patented spoofing & jamming protection
- ▶ In-Band Interference Rejection (IBIR)

## CUSTOM ASIC AT THE CORE

JAVAD OEM solutions are powered by our custom ASIC at the core for enhanced performance and control.

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