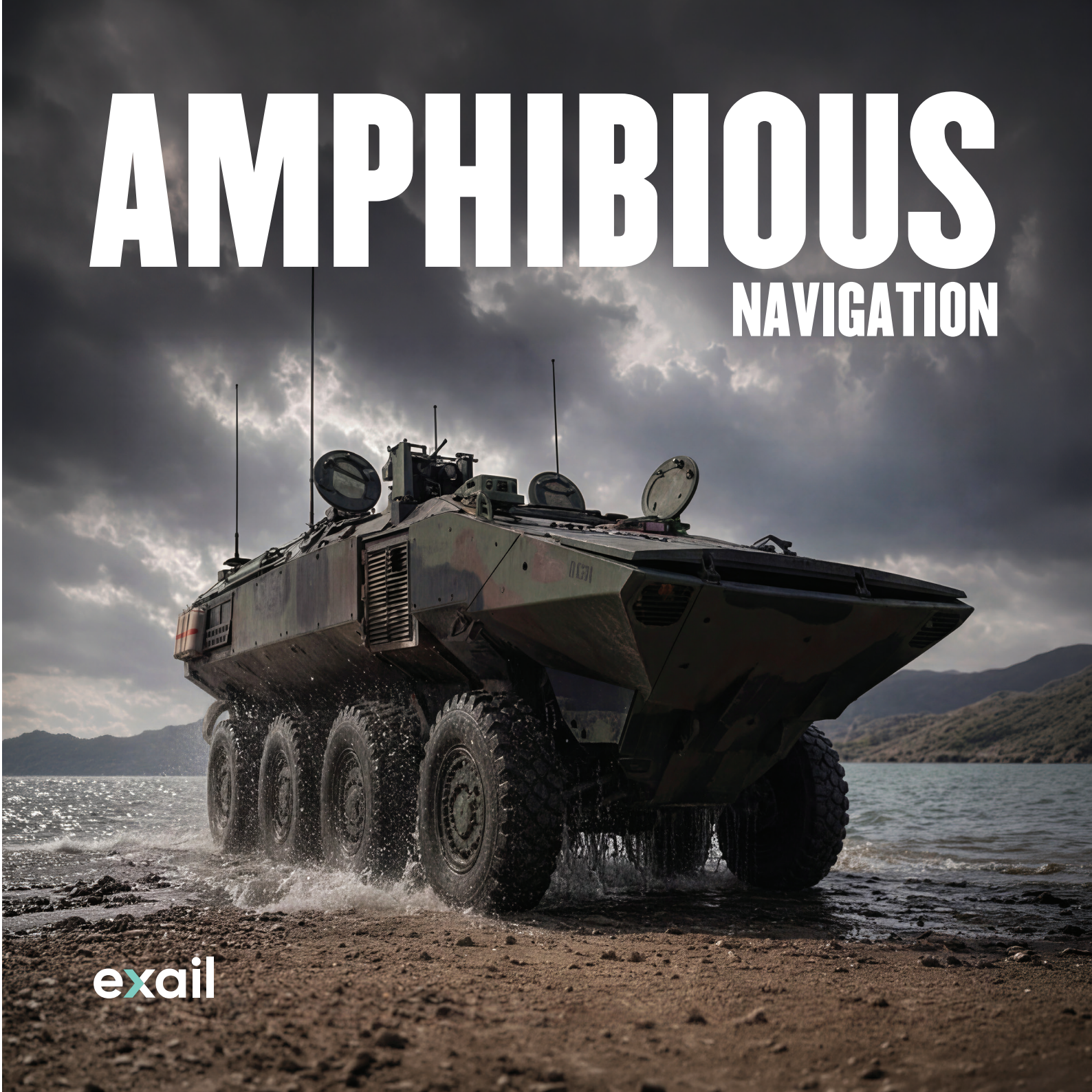
AMPHIBIOUS
NAVIGATION



exail

HIGH-GRADE NAVIGATION
FOR AMPHIBIOUS ASSAULT OPERATIONS

GNSS jamming and spoofing threaten littoral zones when vehicles are most vulnerable. The Advans Vega SL is a purpose-built amphibious Inertial Navigation System (INS), delivering uninterrupted navigation across the full sea-to-land amphibious sequence, including in the surf zone, without external aiding.

NAVIGATION RESILIENCE DURING SWIM PHASE

Full accuracy under jamming and spoofing, no GNSS dependency, no emission

No situational awareness gap during sea-to-land transition

0.05° heading, 0.5 Nm/h position accuracy, zero external input

Harsh environment readiness Operational from −46°C to +71°C, IP67 & MIL-STD-810 saltwater resistant, and qualified for 75 g shock

UNINTERRUPTED MISSION EFFECTIVENESS

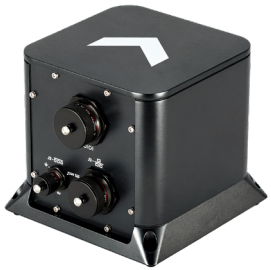
Heading and pointing ready from onboard alignment, before hitting the shore

Fire control operational from the first metre ashore, no GNSS acquisition delay

Seamless sea-to-land transition via manual or optional automated control

0.1% DT position accuracy sustained once on land

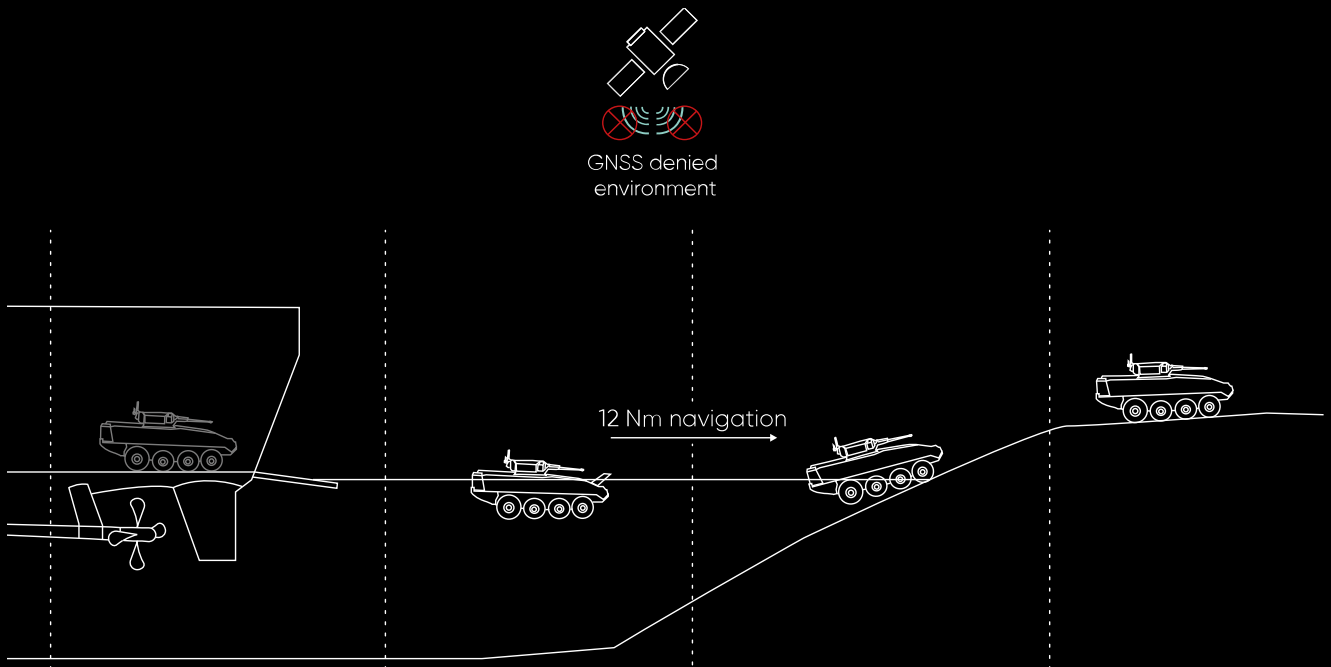
ADVANS VEGA SL DUAL SEA-LAND CAPABILITY



	Sea	Land
Heading accuracy	0.05° RMS	0.5 mils RMS
Roll & Pitch accuracy	0.5 Nm/h	0.1% DT
Dimensions	178 × 178 × 162 mm	
Power	20–33 VDC | <18 W	
Environmental	IP67 | 75 g | −46/+71°C	

TACTICAL CONTINUITY
FROM SEA TO LAND

The Advans Vega SL manages mode transitions across the entire amphibious sequence. By adapting its internal processing between marine dynamics and terrestrial constraints, the INS guarantees uninterrupted navigation from ship to land while minimizing crew workload.



Onboard alignment

Alignment is performed during transit on the mother ship using GNSS or GNSS-like navigation data. A precise position fix is entered at launch.

Sea-mode navigation

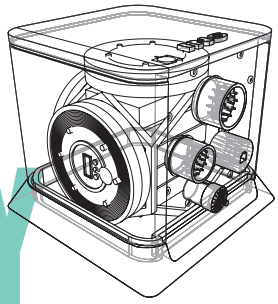
Upon launch, the INS switches to sea mode. It delivers high-accuracy maritime navigation with a drift of < 0.5 NM/hr and a heading accuracy of 0.05°.

Change to land

The transition from sea to land mode is seamless and flexible, adapted to operational requirements. It can be performed through automated Vehicle Management System (VMS) integration or manual input.

Land-mode navigation

Once on shore, full land performance is achieved at the very first stop exceeding 30 seconds, locking in a precise land drift of 0.1% DT and a heading accuracy of 0.5. mil.



WHY CHOOSE FIBER OPTIC GYROSCOPES?

1

Globally combat-proven heritage

Exail's inertial systems are trusted by over 70 armies and navies worldwide. The Advans Vega SL integrates this dual naval and land operational expertise.

2

GNSS independence

Delivers complete navigation data entirely free from external aiding. Unaffected by littoral jamming or spoofing threats.

3

No preventive maintenance

Solid-state technology with no moving parts. No periodic calibration or servicing required, reducing lifecycle costs.

4

Sea-to-land switch

Proprietary algorithms transition navigation profiles between marine and terrestrial constraints inside a single, compact housing.

5

24/7 worldwide support

Backed by Exail's global technical support network to ensure maximum system availability and continuous fleet readiness.