JSW Shield AI

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JSW Shield AI

A JSW Defence Initiative

JSW GROUP FORAYS INTO AEROSPACE DOMAIN

Partners with Shield AI, USA to manufacture world's best-in-class Unmanned Aerial System V-BAT with Artificial Intelligence capability in India

The US$24 billion JSW Group is one of the fastest growing conglomerates in India with its businesses spanning across multiple sectors, including steel, energy, infrastructure, cement, paints, automobiles, e-commerce, sports, realty and venture capital, contributing significantly to India's economic progress. Over the past three decades, JSW Steel – the flagship company of the Group - has grown from a single manufacturing unit to become India's leading integrated steel company with consolidated crude steel capacity of 35.7 MTPA. With nearly 40,000 employees across India, the USA, Europe, and Africa, JSW is powered by a culturally diverse workforce. The Group is equally dedicated to social development, focusing on empowering communities near its plant and port locations.

JSW Group has established 'JSW Defence' reciprocating the Indian Government's initiative to provide impetus through private sector participation in building indigenous defence capabilities. JSW Defence is committed to delivering cutting-edge, state-of-the-art equipment to the Indian Armed Forces and establish itself as a prominent player in the global defence landscape.

JSW Defence has partnered with Shield AI, USA to manufacture Unmanned Aerial Systems (UAS) VBAT, with Artificial intelligence capability. V-BAT is a fixed-wing, vertical take-off and landing (VTOL), long endurance ISR platform, currently deployed by multiple armed forces around the world, including the United States' Marine Expeditionary Units. It provides cutting-edge ISR functionality in a highly tactical system, capable of being forward deployed in complex and adversarial territory in order to provide a range of flexible solutions to special forces, front-line infantry, armoured and artillery units. V-BAT has a unique patented ducted design with the advantage of a small logistics foot print and ease of rapid deployment.

JSW Defence through its subsidiary 'JSW Gecko Motors' also manufactures Specialist Mobility Vehicles (SMVs) namely 'ATOR N1200' at Chandigarh. The vehicles have been inducted by the Indian Army and are currently deployed in various terrains.

Unassisted Launch + Land

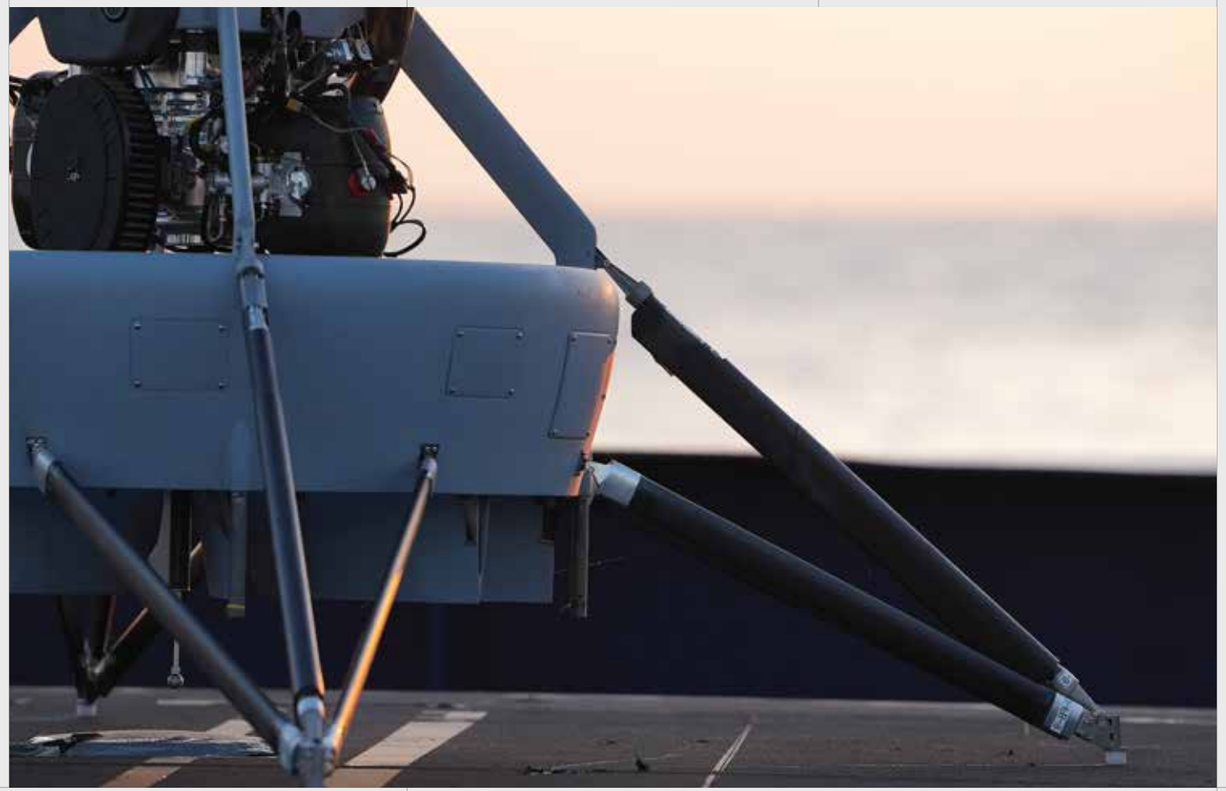
Precision launch and land capability in the safest and smallest tactical footprint imaginable. True expeditionary capability enables missions from small boats to rooftops with the highest degree of safety, in the toughest environmental conditions.

[FEATURES]

01/	No Exposed Blades
02/	Reinforced Carbon Fiber Legs
03/	Rapid Landing Sequence
04/	Expeditionary Footprint

[OPERATIONAL ENVELOPE]

Sea state	up to 4
Max Winds	25 kts
Ship Speed	10 kts



ISR + Targeting Done Differently

V-BAT delivers combat-proven, expeditionary, strategic and tactical-level ISR and targeting at a fraction of both the cost and logistical footprint of larger Group 4 and 5 drones with similar capabilities. Designed, tested, and deployed for the - electronic warfare battlefield, V-BAT has demonstrated real-world mission impact in GNSS- denied and comms-contested environments.

Highlight Overview

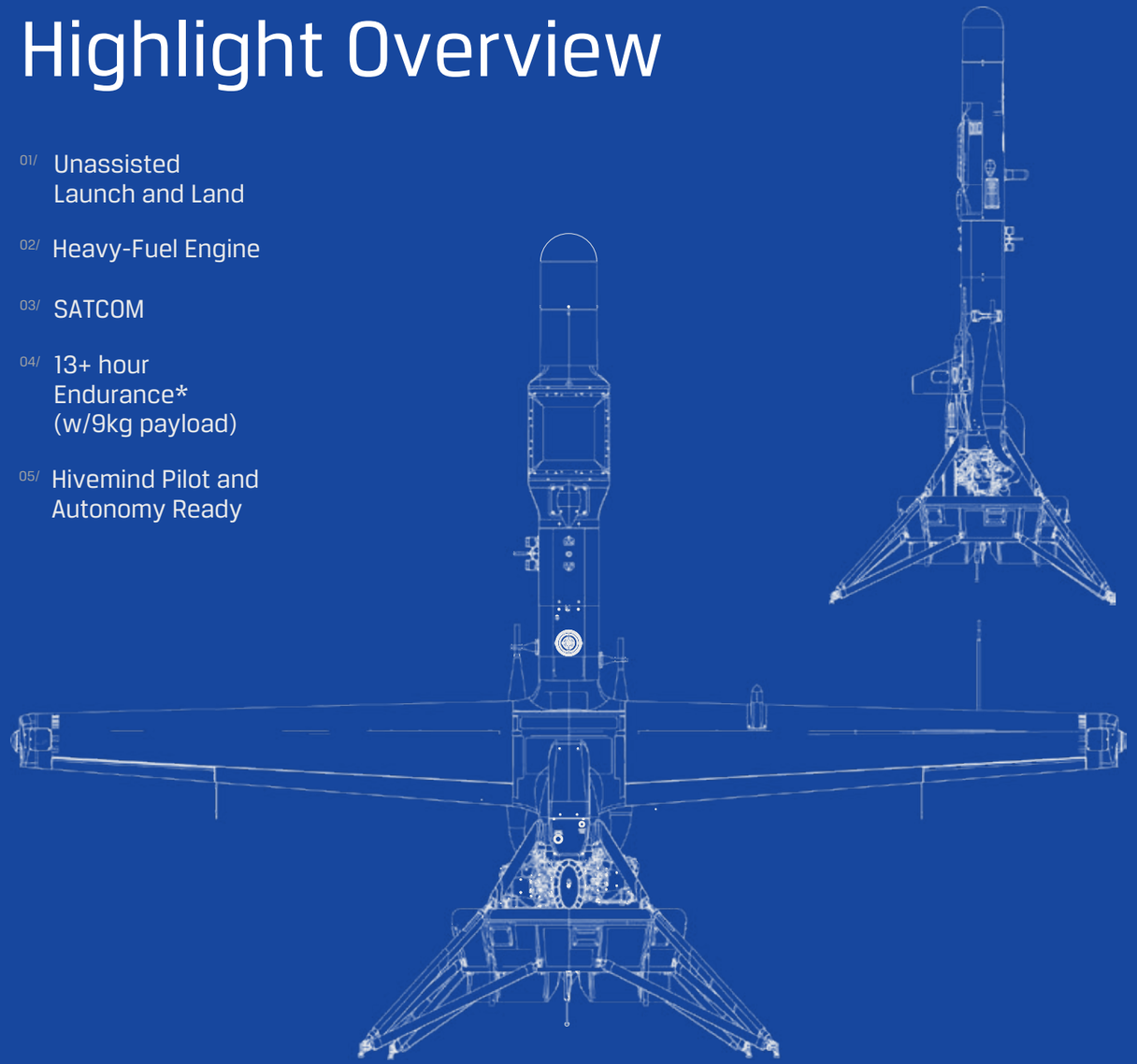
01/ Unassisted Launch and Land

02/ Heavy-Fuel Engine

03/ SATCOM

04/ 13+ hour Endurance* (w/9kg payload)

05/ Hivemind Pilot and Autonomy Ready



*Performance varies with system configuration and environmental conditions

SATCOM

Beyond Line of Sight (BLOS) capability with V-BAT SATCOM

01 /

Unmatched Mission Reach

Leverages a vast Low Earth Orbit (LEO) satellite constellation. Available in most regions worldwide.

02 /

Streamlined User Experience

BLOS real-time C2 and FMV streaming offer seamless operations from anywhere in the world.

03 /

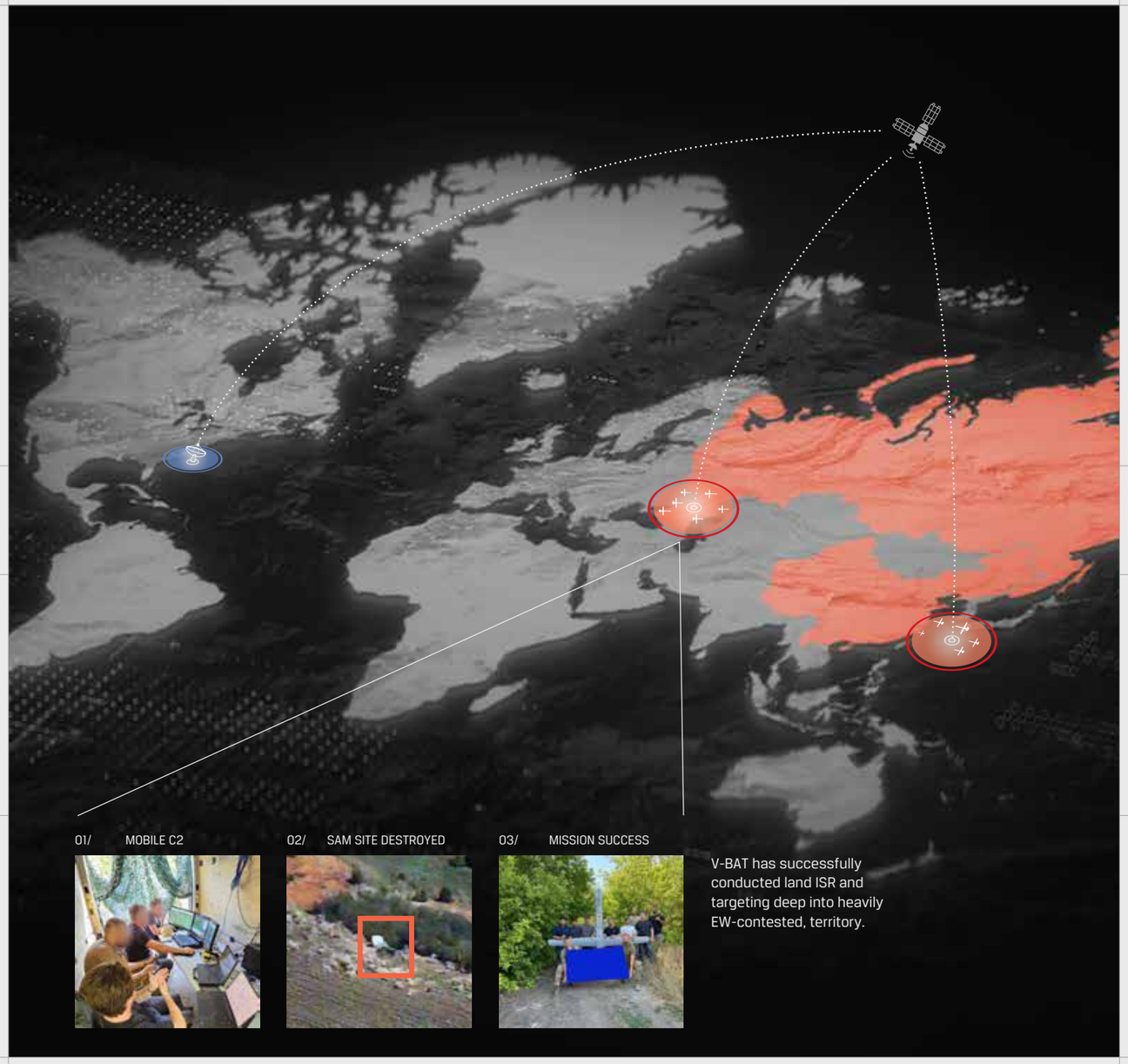
Cost-Effective Excellence

Offers advanced SATCOM capabilities at a fraction of the cost of traditional solutions.

04 /

High Bandwidth

Delivers 2-10Mbps speeds, depending on location, for robust data transmission.



GNSS-Denied + Comms Contested

One of the Only Group 3 UAS to Perform in EW-Contested Battlefields

01 /

Seamless GNSS-Denied Operation

Intuitive UI to find and localize targets in GNSS-denied environments.

02 /

Secure, Long-Range Communications

Delivers resilient comms up to 180 km, reducing vulnerability to jamming.

03 /

Comprehensive Protection

Phased-array antennas provide a highly focused C-band RF beam to reduce detection and increase range.

04 /

Precise Navigation + Targeting

Hivemind Pilot GNSS-Denied State Estimator provides real-time state estimates, ensuring accurate navigation and target acquisition.

Heavy Fuel Engine

01 02

Maritime-ready with JP-5

V-BAT operates seamlessly from vessels with JP-5 military fuel, ensuring safe, efficient missions and simplified global logistics.

01 02

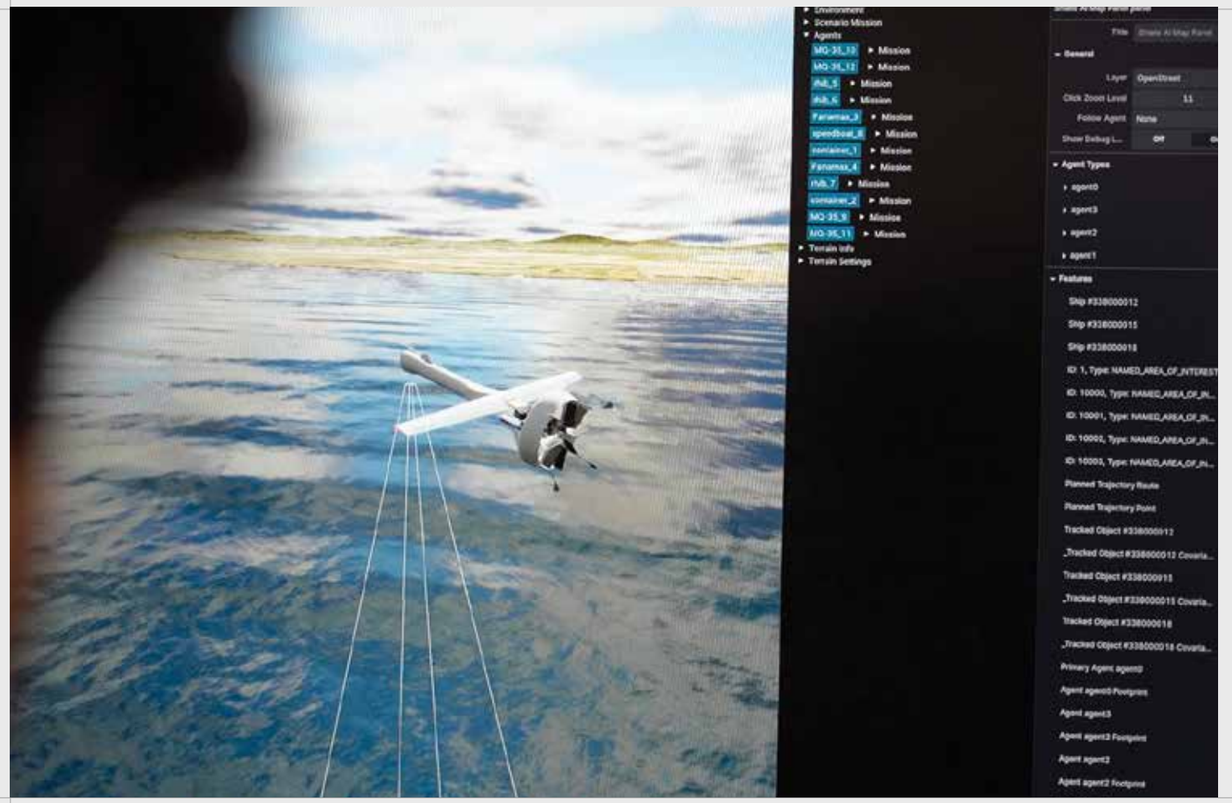
Extended endurance

V-BAT's high-efficiency heavy-fuel engine maximizes fuel capacity, thrust, and economy, delivering longer flight times for persistent ISR and targeting.

Ducted-Fan Design

V-BAT's patented ducted-fan design makes it the only Group 2 or 3 UAV with enclosed blades, ensuring unparalleled safety. Its duct increases thrust by 80%+, enabling takeoff and landing with a single power plant and maximizing payload efficiency. Thrust vectoring provides rock-solid stability in harsh weather. The enclosed duct eliminates operator safety zones, expanding the tactical employment envelope. With unassisted launch and landing, V-BAT requires no hands-on operator, further simplifying deployment and operations.

Hivemind Pilot Ready



01 02 03

Autonomous Operations in Denied Environments

Layered sensors, M-Code GNSS, and visual-based navigation enable reliable operations near jammers and in adverse conditions.

01 02 03

Maximize Operational Reach

Operators can expand their capacity to command multiple vehicles, monitor payloads, and disseminate intelligence with Hivemind at the pilot seat.

01 02 03

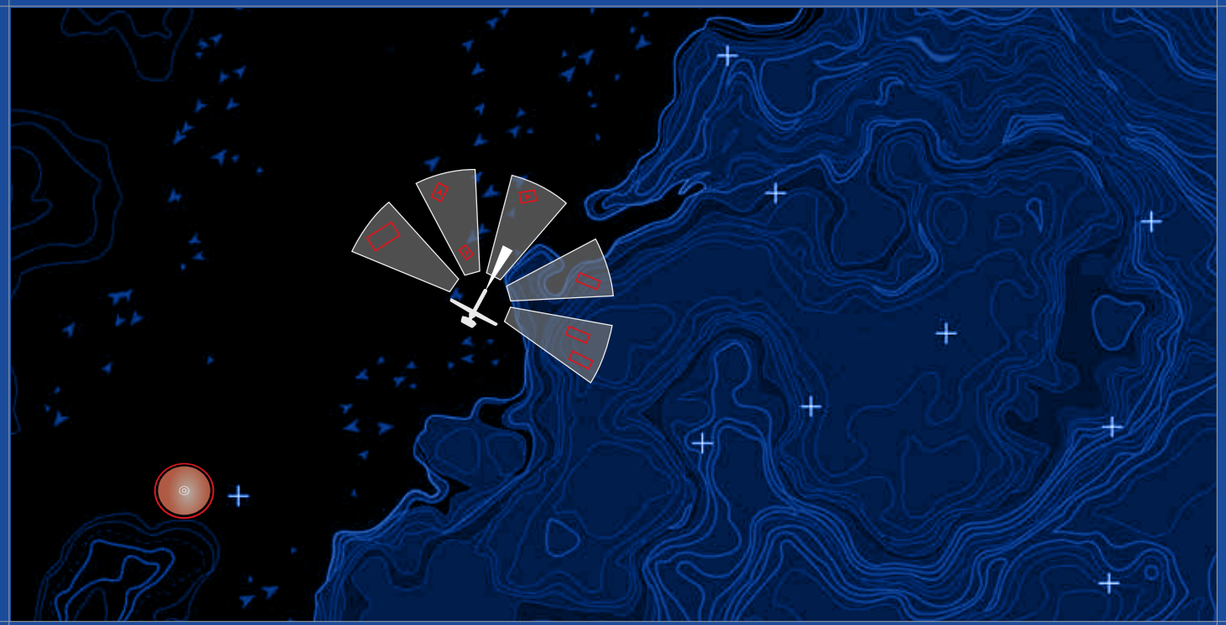
AI-Driven Decision-Making & Swarm Coordination

Real-time decision-making, adaptive sensing, and swarm collaboration reduce operator workload while maximizing coverage and detection.

ViDAR: Passive, Proven and Persistent Wide-Area Search

Redefining ISR with the first passive, multi-domain AI-enabled optical sensor designed for use over sea and land.

ViDAR provides unparalleled situational awareness with a 3,140 NM^2/hr coverage rate—over 2.5 times that of the nearest competitor. Using an integrated EO sensor array and advanced AI, it autonomously detects and tracks targets, delivering real-time geo-located data for precise decision-making.



01 02 03

Mission Flexibility

V-BAT's integrated ViDAR system features a camera array that seamlessly operates in both land and maritime environments, providing versatile mission capabilities.

01 02 03

Operator Workload Reduction

Our deep learning software automatically detects and tracks targets quicker and more accurately than the naked eye.

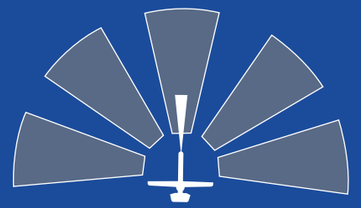
01 02 03

Maximized Capability

With superior coverage, ViDAR performs wide-area coverage and maintains target tracks, freeing up the primary payload for cross-cued inspection.

Search Coverage

[OBJECT TYPE]	[EO (NM^2/HR)]
Land Vehicle	400 (741 km^2/hr)
Fishing boat	1550 (2870 km^2/hr)
Patrol boat	2620 (4852 km^2/hr)
Frigate	3140 (5817 km^2/hr)



Payloads + Sensors

Mix and match payloads across V-BATs and change team size to get the perfect sensor packages for your mission. V-BAT's modularity enables rapid integrations of various payloads to meet mission requirements. V-BAT offers 600W of power for payload integration.

01/	Hivemind Pilot	07/	Aircraft Transponder
02/	Synthetic Aperture Radar	08/	GNSS
03/	Moving Target Indicator	09/	VHF/UHF Comms Relay Package
04/	AIS	10/	Laser Target Designator / LRF
05/	SOCOM Mod Payload	11/	Kinetic Munitions Capable
06/	SATCOM		

Pictured below: Hoodtech and Trillium payloads ready for integration.

No Runway Required

Industry-Leading Design with Ultra-Expeditionary Logistics Footprint

V-BAT operates without a runway or bulky launch/recovery equipment. Its VTOL design enables takeoff and landing from small clearings, tactical ships, or rooftops.

Crew size	2
Assembly time	<30 min
Launch diameter	4.6 m

[2 V-BAT SYSTEMS]

Maritime UAS of Choice

V-BAT won the United States Navy and SOCOM MTUAS Increment 2 Program of Record through a highly competitive selection process. Its unique design and controls enable take-off and landing in high winds, on crowded flight decks, and aboard moving vessels with landing zones as small as 4.6 m x 4.6 m.

Selected through a rigorous competition for the U.S. Coast Guard ISR program of record and chosen by Japan's Maritime Self-Defense Force as the country's first-ever ship-based ISR platform, V-BAT is leading the shift toward affordable, intelligent drones for maritime missions. V-BAT has completed more than 20 deployments with the U.S. Navy, Marine Corps, and partner nations.

Features + Specifications

Airframe

Propulsion	Heavy Fuel Engine (JP5)
Height	3.8 m
Wing Span	2.9 m
Max Gross Takeoff Weight	73 kg

Operating Performance

Max Endurance*	13+ hrs (w/ 9kg payload)
Max Payload Capacity	18.1 kg
Max Range (MPU5)	130 km
Max Range (SATCOM)	Fuel Dependent
Flight Ceiling*	5,486 m
Normal Cruise Speed	45 - 55 kts
Landing Zone	4.6 m x 4.6 m
Min / Max Operating Temps	-20°C / 49°C
Max Winds	25 kts
Max Precipitation	6.35 mm/hr

*Performance varies with system configuration and environmental conditions