



JaiaBot HYDRO™ (Hydrographic Survey)

Lightweight, high-speed, and quickly deployable, the JaiaBot HYDRO delivers reliable aquatic data for surf zone characterization, bathymetry mapping, and wet-gap crossing decision support.

Feature / Specification	JaiaBot-HYDRO™
TRL	8
Weight	~6.3 lbs
Length	~41.2"
Range	~7 -10 miles (est.)
Max Speed	~10 knots
Sea State	5
Data Collection	~36 hrs
Loiter (Standby)	~1 week
Depth Rating	~60 m dives
Acoustic Monitoring	No
Camera	Optional
Iridium Comms	Optional
Key Sensors / Payloads	CTD (Conductivity, Temp, Depth)

Surf Zone Characterization:

Map currents, depth, and wave height to enable safe amphibious landings and littoral maneuver.

Bathymetry Mapping:

Generate real-time depth and bottom profiles for navigation and obstacle avoidance in nearshore operations.

Wet-Gap Crossing:

Characterize river width, current speed, and bottom type to ensure rapid bridging and mobility support.





JaiaBot PAM™ (Passive Acoustic Monitoring)

A passive acoustic monitoring platform for port security and subsurface threat detection, the JaiaBot PAM provides real-time anomaly awareness through integrated hydrophone sensing.

Feature / Specification	JaiaBot-PAM™
TRL	7
Weight	~7 lbs (est.)
Length	~41.2"
Range	~7 -10 miles (est.)
Max Speed	~10 knots
Sea State	5
Data Collection	~36 hrs
Loiter (Standby)	~1 week
Depth Rating	~60 m dives
Acoustic Monitoring	Yes (Passive)
Camera	Optional
Iridium Comms	Optional
Key Sensors / Payloads	Passive Acoustic Hydrophone - Alerting & Detection

Acoustic Tripwire Detection:

Establish passive acoustic perimeters for early warning of surface and subsurface threats.

Harbor & Port Security:

Detect, classify, and track underwater anomalies to protect high-value vessels and infrastructure

Force Protection ISR:

Provide persistent, low-signature acoustic monitoring to enhance situational awareness in denied environments.





JaiaBot BIO™ (Biology)

Purpose-built for environmental research, the JaiaBot BIO measures dissolved oxygen, pH, and water quality parameters to support marine biology and ecosystem monitoring.

Feature / Specification	JaiaBot-BIO™
TRL	6
Weight	~8 lbs (est.)
Length	~44.7"
Range	~3 miles (est.)
Max Speed	~10 knots
Sea State	3
Data Collection	~36 hrs
Loiter (Standby)	~1 week
Depth Rating	~60 m dives
Acoustic Monitoring	No
Camera	Yes
Iridium Comms	Optional
Key Sensors / Payloads	DO, Fluorometer, pH, CTD, Camera

Chemical Hazard Detection:

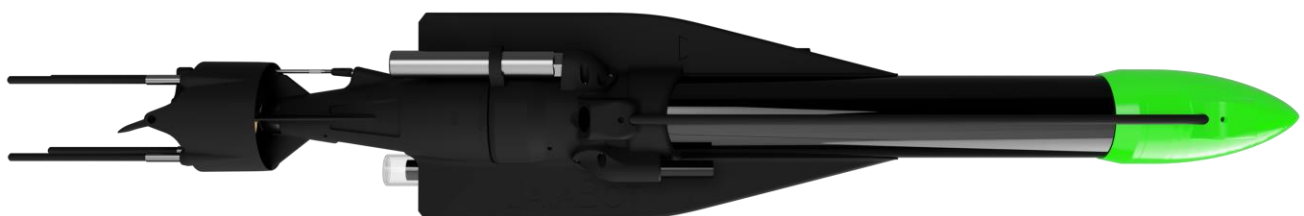
Identify dissolved contaminants and oxygen depletion that signal potential sabotage or spills.

Water Assessment:

Analyze pH and turbidity to assess dive safety, underwater maintenance, or port operations.

Response Mapping:

Deliver rapid, multi-parameter sensing to guide response efforts following environmental or kinetic incidents.





JaiaBot ER™ (Extended Range)

Extended-range and long-duration, the JaiaBot ER enables persistent maritime ISR, environmental monitoring, and wide-area survey operations.

Feature / Specification	JaiaBot-ER™
TRL	6
Weight	10 lbs
Length	~66.2"
Range	~20+ miles
Max Speed	~5 knots
Sea State	5
Data Collection	~115 hrs
Loiter (Standby)	~3 weeks
Depth Rating	~60 m dives
Acoustic Monitoring	Optional
Camera	Optional
Iridium Comms	Yes
Key Sensors / Payloads	Customer Defined

Extended Maritime ISR:

Enable long-range sensing, loitering, and data relay over 20+ miles for persistent domain awareness.

Station Keeping Overwatch:

Maintain 115-hour loiter positions for distributed sensing, overwatch, and comms relay.

Multi-Depth Reconnaissance:

Conduct 600 shallow or 100 deep dives for seafloor mapping, mine detection, or acoustic monitoring.





JaiaBot eDNA™ (Environmental DNA)

Designed for precision biological sampling, the JaiaBot eDNA autonomously collects environmental DNA for pathogen detection and to map bioagent presence.

Feature / Specification	JaiaBot-eDNA™
TRL	5
Weight	~8 lbs (est.)
Length	~41.2"
Range	~3 miles (est.)
Max Speed	~5 knots
Sea State	3
Data Collection	~36 hrs
Loiter (Standby)	~1 week
Depth Rating	~60 m dives
Acoustic Monitoring	No
Camera	No
Iridium Comms	Optional
Key Sensors / Payloads	eDNA Collection

Bioagent Detection:

Collect environmental DNA to identify harmful biological agents affecting force health.

Underwater Activity Tracing:

Detect biological residue linked to diver or vessel movement for subsurface threat attribution.

Bio-Surveillance Support:

Monitor operational waterways for biological anomalies that indicate covert activity or contamination.

