



KONGSBERG



HUGIN Edge

- HUGIN navigation performance
- Low logistics for uncrewed operations
- Goal-based mission Planning
- Adaptive autonomy
- Next gen obstacle avoidance sonar
- High speed acoustic modem
- Customisable sidescan and synthetic aperture sonar
- High Frequency Multibeam Echosounder
- Low light camera
- Sub bottom profiler
- Magnetometer

The HUGIN Edge is a next generation mid-size Autonomous Underwater Vehicle to join the HUGIN Family. Exceptional reliability, durability and performance has been drawn from the HUGIN, coupling ease of operations from uncrewed surface vessels to the most advanced AUV features on the market. Capabilities include truly autonomous missions making the system an optimal choice in applications from commercial survey to advanced defence operations.

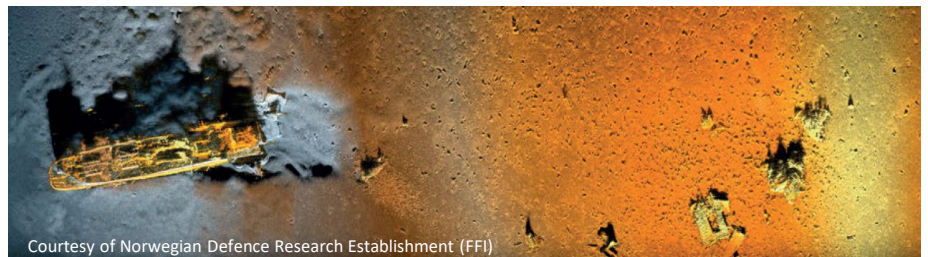
UNIQUE IN DESIGN

The smallest most lightweight member of the HUGIN family, a fresh low drag body at four metres in length using a wet flooded carbon monocoque design, unique in its class. It allows low logistics without compromise on sensor performance. The vehicle combines the latest advances in autonomy and operability with the exceptional navigation performance for which the HUGIN family is renowned. HUGIN Edge collects high resolution data without the need for in-mission supervision. No other vehicle provides this performance in this form factor.

AUTONOMOUS BY DESIGN

The HUGIN Edge solution is autonomous by design. That means that all parts of the system have been designed with full autonomy and remote operations in mind, all the way from autonomous launch and recovery, through to uncrewed charging and data offloading. Equally at home working from shore or over the horizon the HUGIN EDGE is always flexible and can be delivered with USV or uncrewed launch and recovery maximizing operational cycles.

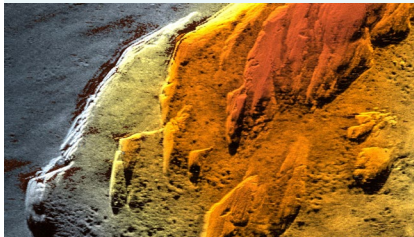
The goal-based mission planning employs Artificial Intelligence where missions are organized based on objectives rather than long lists of waypoints. EDGE takes full advantage of all any priori knowledge to plan and then using integrated on-board sensors adapts in mission to the most optimal solution removing human dependency.



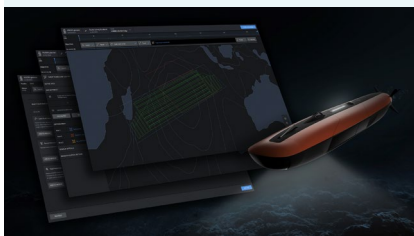
Courtesy of Norwegian Defence Research Establishment (FFI)



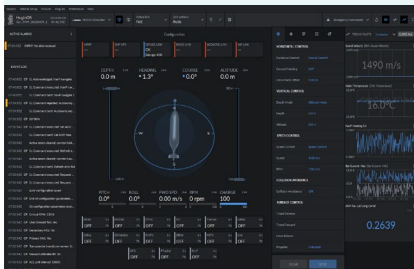
Integrated Automated Recovery Mechanisms



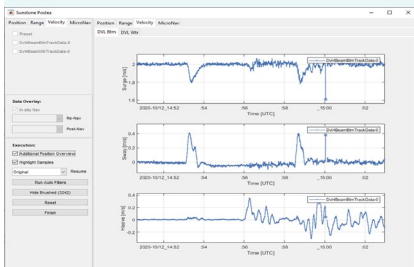
Ultra high-resolution SAS, fused Imagery and Bathymetry



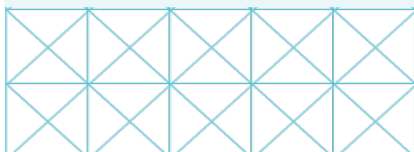
Goal Based Mission Planning



Advanced User Interface



Full Inertial Re-Processing using multiple references



PAYLOADS FOR ALL SCENARIOS

HUGIN Edge is equipped with side-scan sonar or next generation synthetic aperture sonar (upgradeable) for ultra high-resolution imagery and bathymetry. This combination provides the highest area coverage and performance from any AUV in this class.

With an ultra high-frequency multi-beam echo sounder providing clean, interference free, wide-swath bathymetry along with a magnetometer for precise magnetic mapping.

A flexible Payload Bay enables interchangeable options on low-light colour camera solutions (including strobe light) or sub-bottom profilers allowing tracking and classification, or geological work.

TECHNICAL DATA

Endurance	: 24 hours @ 4 knots, 85% payload usage
Depth rating	: 1000m
Speed range	: 2 - 5 knots
Dimensions	: Length 400cm; height 35cm
Weight	: 300kg in air*
Navigation	: Better than 0.04% of DT CEP50**

CONNECTIVITY

Hi-speed wireless download, cNode acoustic link, Iridium, 4/5G, long-range RF

NAVIGATION SENSOR SUITE

Sunstone INS, Seatex MGC, DVL, CT/P/SVT, multi-axes FLS

PAYLOADS

Sidescan	: Sidescan upgradeable to customizable high coverage high resolution Synthetic Aperture Sonar
MBES	: 0.7 - 1.4MHz, 140° of coverage
Magnetometer	: High-sensitivity magnetometer
Camera	: Low-light colour camera and strobe
SBP	: Lightweight wideband SBP

FEATURES

- Fully automated launch and recovery including provision for emergency recovery
- Goal-based mission planning
- Real-time adaptive mission replanning
- Terrain navigation
- Pipe and cable detection and tracking
- Target recognition software
- In-mission target reacquisition and classification
- Full post-mission analysis and inertial reprocessing
- Automated charging for uncrewed operations
- Mobile Mission System for low logistics, low infrastructure topside
- Fully encrypted security options

* Dependant on Payload specification

** Navigation performance options. Accuracy as a % of travelled distance in a straight line

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