

HUGIN Edge



KONGSBERG



The next generation shallow water Autonomous Underwater Vehicle

HUGIN Edge integrates the experience and features of the HUGIN family into a compact logistics package, ideal for shallow water operations. The system design allows for flexibility. It can be supplied in a highly mobile configuration that may be shipped by air and operated from small vessels, it can be configured to operate autonomously from a USV or it can be set up in a standard 20-foot container.

State of the art sensor performance

HUGIN Edge is equipped with a next generation synthetic aperture sonar for ultra high-resolution imagery and bathymetry. The SAS is specifically designed for a more robust performance in shallow waters, with better multipath suppression and tolerance to nominal trajectory deviation than conventional SAS systems. SAS Bathymetry, when combined with an ultra high-frequency multi-beam echo sounder, provides the highest area coverage and performance from any bathymetric mapping AUV in this range.

HUGIN Edge is also equipped with a 4-axis imaging forward looking sonar, allowing it to plan ahead and decide on best actions for obstacle avoidance.

Payload options include a magnetometer for precise magnetic mapping, high-res colour camera, sub-bottom profiler and interchangeable environmental sensors with more than 12 variations.



A new way of working

HUGIN Edge features a low drag body at four meters in length, with a wet flooded design. The tail section can be detached from the main body, allowing for air freight alongside the Mobile Mission System, ensuring a minimal operational footprint.

HUGIN Edge is designed for ease of use, both in handling and operation, lowering the threshold for achieving successful missions and high-quality data. The system is available in different configurations and supports future upgrade with optional payloads.

A new level of autonomy

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 automatic subsurface vehicle recovery, through to uncrewed charging and data offloading. It is designed for use with small USVs and can be part of a system of systems.

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.



Technical specifications

Endurance¹	24 hours at 3 knots
Typical turnaround time	Battery swap: 2-3 hours Charging: 8 hours
Operational depth	5 to 1000 meters
Speed	2-5 ² knots
Weight (base vehicle)	350-390 kg in air
Dimensions	Length 410 cm, height 43 cm, width 52 cm Conformal to 21-inch launch and recovery
Navigational performance straight line	Sunstone, with options of 0.08% and 0.05% travelled distance ³
Communications	Encrypted storage and communications, high speed wireless download, cNODE



¹ Using primary payloads

² Nominal speed: 3.5-4 knots

³ Accuracy as % of travelled distance in a straight line CEP50 1 sec lat

Payloads

(Available options/upgrades*)

HISAS2020 ACR80 HISAS2020 ACR160	Imagery resolution	1 × 1 cm Full swath
	Ground range @ 3 kts	150 m 300 m
	ACR overlapped @ 3 kts	1.2 km ² / hr 1.6 km² / hr
	ACR gap filled @ 3 kts	2.4 km ² / hr 3.4 km² / hr
	Bathymetry cell size streaming	<20×20×20@100m
	SAS bathy gridding	<10×10 cm
KONGSBERG FL25	4 Axis Imaging Forward Looking Sonar with up to 200 m range	
KONGSBERG M3HF MBES	0.7 - 1.4 MHz, 140° of coverage and range up to 100 m	
OFG Magnetometer	Self compensating high sensitivity magnetometer	
Still camera	High resolution colour camera	
AML SV/P	Direct measurement Sound Velocity, high accuracy pressure sensors and a wide selection on exchangeable environmental sensors	

* HUGIN Edge is prepared for all sensor from build to allow simple upgrade

Specifications subject to change without any further notice.