DiNIS™ D2

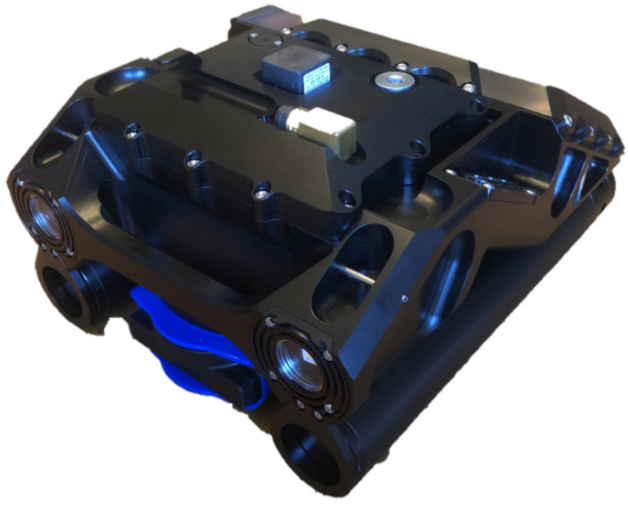
Diver Navigation and Imaging system

The DiNIS™ has been designed as a fully integrated, high-accuracy diver navigation system utilising industry leading subsea sensors. All of the sensors operate seamlessly within a single software environment, while the DiNIS™ mechanical design has been optimised to ensure there is no external cabling.

Multiple sensor configurations are available with the DiNIS™, while the DiNIS™ D2 is supplied as standard with industry leading primary sensors including the Tritech Gemini 720ik imaging sonar and Teledyne Pathfinder Doppler Velocity Log. Multiple camera options are available to extend the capability of the DiNIS™, while the system can also be configured for navigation only operation.

The DiNIS™ system is supplied with topside software for mission planning and post processing. Data is fully compatible with the US Navy's, "Common Operator Interface for Navy (COIN)", allowing the user to perform mission planning and post-mission analysis in a collaborative manner with mission data from AUV's and ROV's, and to store mission results in a common database.

Layering of maps, charts, previous mission data, and new mission planning can all be performed in one software environment built on top of the world's leading tactical analysis and situational awareness software in use by the US and many NATO countries.



All mission data is stored in real-time to the DiNIS™ removable SSD/USB memory stick in a geo-reference and time-stamped format for immediate analysis on the topside PC.

Kenautics can also provide the DiNIS™ to meet the NAVSEA SS800-AG-MAN-010/P-9290 standard by utilising off-gassing compliant materials for use in submersibles.

With a "Screen Blackout" and "Emergency Kill" function, along with batteries that are underwater swappable, the DiNIS™ is designed to be operated covertly with no need to surface to replace the batteries. Batteries are also UN 38.3 certified for IATA air transportation/compliance.

To achieve a high level of navigation accuracy the DiNIS™ utilizes multi-variable, stochastic, variable weighting Kalman navigation filters. This allows the DiNIS™, when fitted with the DVL, to achieve 0.3% CEP v's distance +/-2m*; 0.5% std. With DVL aided inertial the level of accuracy of the DiNIS™ that can be achieved is 0.25% CEP v's distance +/- 1m* + heading error.

*Assumptions: Calibrated heading at start, initial position fix accuracy within 10 cm, circular or out-and-back swim path, no external magnetic field influence, controlled pitch/roll attitude of +/- 25 degrees and continuous DVL bottom lock

Kenautics, Inc.

Let us be your Navigator

DiNIS Detailed Specifications:

DiNIS Display & Data Storage	
Backlit Display	10.1"TFT LCD, 1080p, adjustable brightness and blackout
HUD output	800 line resolution
Removable solid-state	512 GB (standard), 1 TB (optional)
Internal USB	256 GB (optional)
Motion Sensors	
GPS	Integrated Commercial Grade OEM (optional deployable antenna)
Heading accuracy	0.7 deg
Pitch & Roll response	200 deg/sec
Pitch & Roll range	+/- 20 deg (2D Cal), +/- 180 deg (3D Cal)
Depth Precision	+/- 0.1m
Depth Accuracy	+/- 0.5m
Sonar Specifications	
Type	Tritech Gemini 720ik
Frequency	720kHz
Detection range	0.2m to 125m (1m object)
Classification range	0.2m to 65m
Vertical beam width	120 deg
Horizontal beam width	20 deg
Doppler Velocity Log Specifications	
Type	Teledyne RDI Pathfinder
Frequency	607.2 kHz
Range	89m (typical in ideal conditions)
Number of beams	4-phased array
Beam angle	30 deg (nominal)
1 Way beamwidth	2.2 deg
2-way beamwidth	1.8 degrees
Battery Specifications	
Type	Lithium Ion
Capacity per battery	328 Watt-Hour (5-6 hours typical operation, 10-12 hours with 2 batteries)
Re-charge rate	6.5 Amps (2-3 hours to full charge)
Weight	2.2kg (5 lbs) per battery
Camera Specifications (optional)	
Types available	Low-Light Color, Wide Dynamic Range Color, Monochrome/IR
Resolution	Adjustable to 800 TVL
Field of view	90 deg (in air), 70-83 deg (in water); dependent on camera type
LED	450 Lumen LED lights with On/Off, and 5 level Intensity control
Physical Specifications (DiNIS c/w standard sensors)	
Depth Rating	100m (330ft)
Dimensions	39.2 x 28 x 19.7 cm (15.4 x 12 x 7.8 inch)
Weight in air	9.3 - 12.5 kg (20.4 - 27.4 lbs) without batteries
Weight in water	0.1-0.5 kg (0.2 - 0.9 lbs)
Temperature rating	0 to +45^{0}C (operating), -20 to +60^{0}C (storage - no battery), -20 to +50^{0}C (storage - with battery)
*Weight, buoyancy, and dimensions may vary according to configuration.	
**Specifications herein are typical values based on use of all sensors	

CONTACT

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