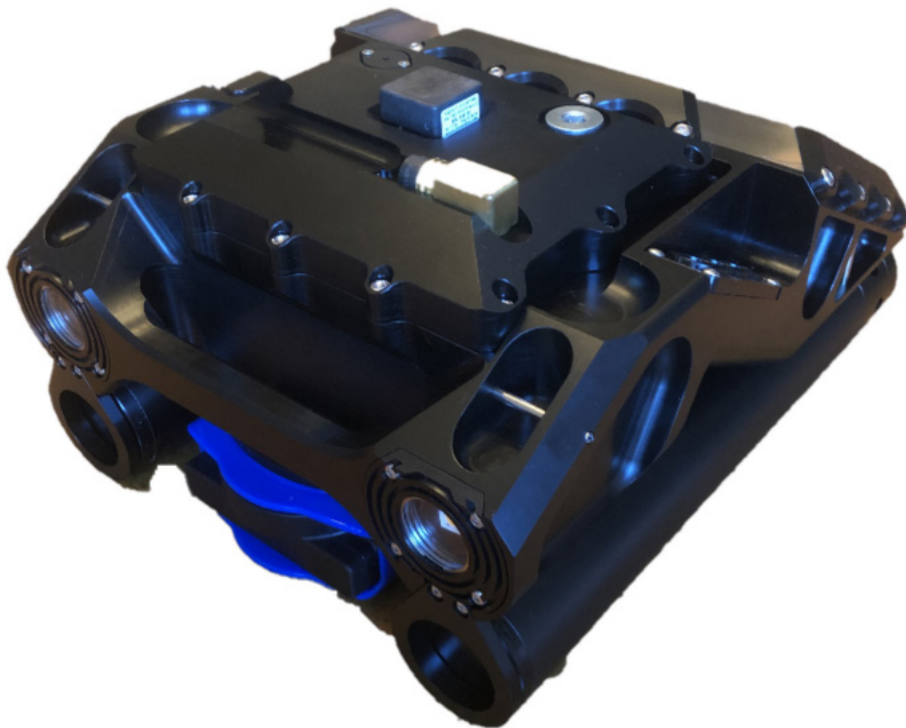


"DiNIS"TM

Diver Navigation and Imaging system



- Underwater Waypoint Navigation
- Underwater Reconnaissance and Bathymetry
- Sonar and Video Imagery
- Tactical Planning and Decision Making
- Military and Commercial Applications



Kenautics, Inc.
Let us be your Navigator

DiNIS™

Diver Navigation System

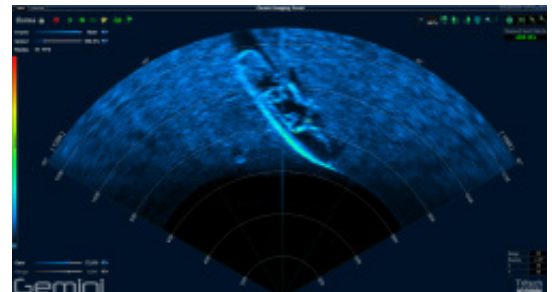
Kenautics' new D2 Diver Navigation and Imaging System (DiNIS), featuring the Tritech Gemini 720ik sonar, is a high-performance, highly integrated compact hand-held diver navigation unit, designed for the demanding needs of:

Users

- Military Special Forces
EOD, SEALs, Recon, Q-Routing
- Law enforcement
- Search and rescue
- Salvage
- Inspection
- Scientific research

Applications

- Waypoint Navigation
- Bathymetry
- Sonar Imagery
- Video Imagery



Tritech Sonar imagery courtesy of Tritech International Ltd

Purpose Built for Rugged Operations

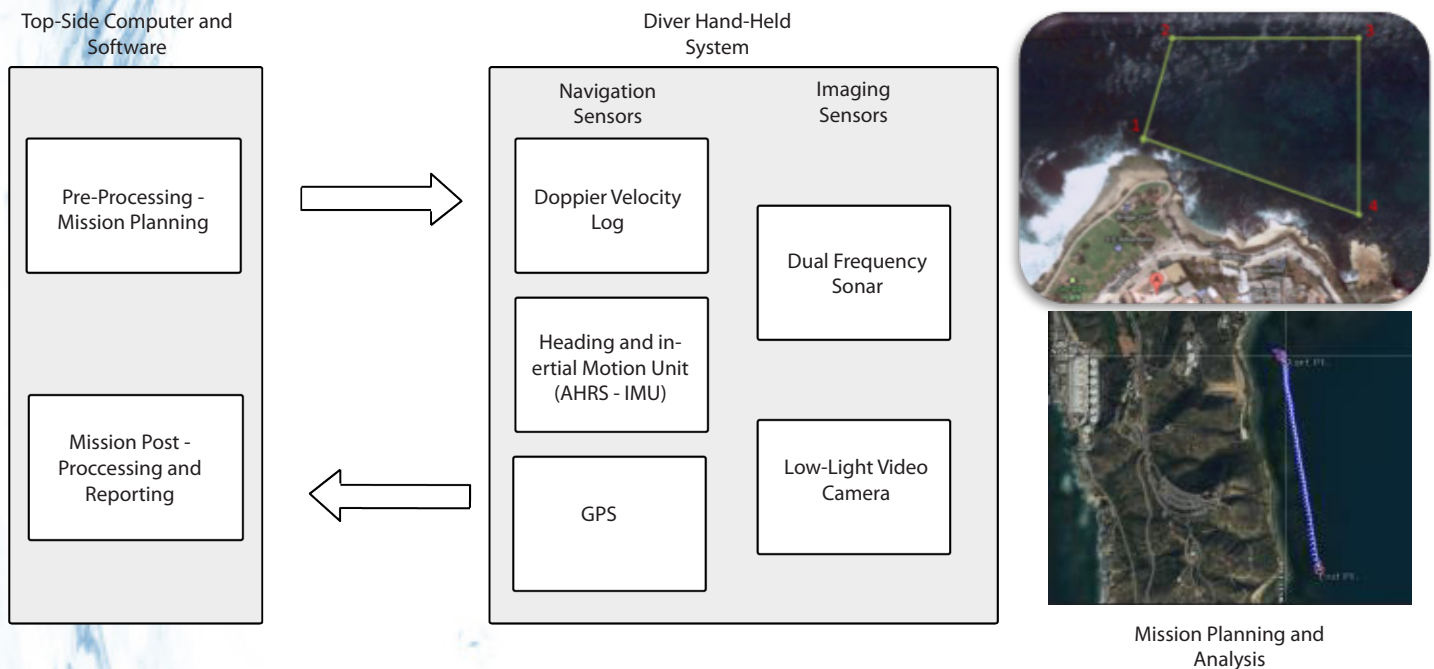
DiNIS is a rugged system built for the Military Special Operator, EOD, SOF, Search and Rescue, Salvage, and the Commercial Diver, with unique functionality for all applications. DiNIS stores Geo-referenced and time-stamped data to its removable subsea SSD disk drive, in native formats which are also US Navy "Common Operator Interface (COIN)", compatible. This allows for rapid situational awareness and mission planning and quick, post-mission analysis. Mosaicked sonar data can be overlaid on navigation data on top of charts or maps, with overlay of multiple missions simultaneously, all without requiring any data conversion or lengthy uploads.

With a removable and swappable solid-state disk and underwater USB memory stick, all mission data, navigation track, bathymetry, video, target marking, and other Intelligence, Surveillance, and Reconnaissance (ISR) data can be at your fingertips of within minutes of a diver surfacing.

DiNIS™

DiNIS™ provides the diver with a complete suite of commercial underwater sensors for the purpose of waypoint navigation and underwater reconnaissance:

- Single and dual-frequency sonar systems from Tritech International
- Complete navigation sensor suite including Teledyne RDI Doppler Velocity Log (DVL), GPS, inertial sensors and MEMS Gyro, Pressure sensor, and low magnetic influence heading sensors
- Low-light color video camera (Options available for Wide Dynamic Range (WDR) and Black & White/IR)
- Underwater USB memory stick and solid state data storage devices (1/2 TB) that can be swapped with top-side pre-and post-processing systems
- Deployable GPS Antenna for shallow water GPS fix while submerged (Optional)
- External video ports for HUD
- Additional sensor and I/O ports to allow for future system expansion
- Diver "Marking" & "Tagging" with automatic geo-referencing of targets of interest
- Easy Maintenance - Ethernet port for connectivity to top-side computer and for extensive system



DiNIS is differentiated from other diver systems by its unique architecture, integrating all sensors through a single central controller board and a single Graphical User Interface, allowing:

- Single point control of all sensors
- Interoperability of all acoustic sensors with minimal interference
- All data is correlated, tagged with common time-stamp and geo-referenced
- International Language Support, allowing divers to operate in their native language
- Operator defined tags to allow informative and dynamic target marking

Data Interaction with US Navy COIN Common Operator Interface) as well as OIC SAMM software, and can also be brought into SeeByte's SeeTrack Military™ mission planning and post-processing software, provides enhanced value to the military end user.

DiNIS™

DiNIS Component Specifications for DiNIS-SYS-001:

System Depth Rating: 100m

Navigation Components

Doppler Velocity log:

Frequency: 600iHz;

MEMS AHRS:

Sensor Roll Rate: 200°/S;

Max Heading Error: 0.7° (2° in magnetic environment)

Pressure sensor Depth:

Precision: 0.1m; Accuracy: 0.5m

GPS: Commercial Grade OEM with optional deployable antenna - SAASM possible

Low Magnetic Signature: System is designed for low Magnetic Signature. Meets Mil-Std 461F RE-101 and STANG 2897 Class B

Navigation accuracy (typical):

DVL only:

0.3% of distance +/-1m*

DVL aided inertial (best case):

0.25% of distance +/- 1m* +heading error

Pitch-roll sensor range:

With 2-D cal: up to +/-20 degrees

With 3-D cal: up to +/- 180 degrees

*Assumptions:

- ✓ Calibrated heading at start
- ✓ Initial position fix accuracy; 10com
- ✓ Circular or out-and-back swim path
- ✓ Ideal conditions (no drift, magnetic fields, constant pitch/roll attitude)
- ✓ Constant DVL Bottom Lock

Sensors and Batteries

Forward looking sonar:

Tritech Gemini 720ik – 720 kHz

Low-light video camera:

0.0001Lux Std. Other options available

LED Camera Lights

Battery Type: Lithium Ion (standard);

Battery Capacity: 12.2 Hrs of operation with 2 batteries. (Lithium)

Underwater swappable to allow extending mission time

Housing materials: Non-magnetic

Can be built upon request special request compliant to submarine off-gassing specifications

NAVSEA SS800-AG-MAN-010/P-9290

Display:

Backlit TFT LCD – Adjustable brightness

With Blackout Mode.

Resolution: 1080p

Display size: 10.1"

HUD Output option

Data storage capacity:

Solid-State Disc Drive* :

512GB (Std);

1 TB (optional)

* USB and solid state disc size subject to change

CONTACT

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