![Greensea IQ — Intelligent Ocean Solutions]

IQNS

EDGE PROCESSING

SOFTWARE
// **INTEGRATED SYSTEMS**
NAVIGATION & AUTONOMY

greenseaIQ.com

Real World Navigation Accuracy

The building block for next generation autonomy subsea, the IQNS utilizes NVIDIA's latest edge processing solutions and Greensea IQ's mature software platform to combine navigation, vehicle control, and perception in a format optimized for small ocean robots.

IQNS
Edge Processing

- Builds on a legacy of intelligent Inertial Navigation and Edge Processing systems developed for Greensea IQ's underwater vehicle robot navigation and autonomy software.

- Can be easily "daisy chained" to increase processing power for additional payloads on the same navigation, control, and autonomy bus.

- Designed specifically to support Greensea IQ's defense software EOD Workspace and EOD Edge.

- Supports on-board perception processing, third party AI/ML systems, and Greensea IQ's ATR and obstacle avoidance software products.


IQNS installed on a Bayonet 250 AUGV.

Specifications subject to change without notice.

WEIGHT	1.6 kg (Air)
	0.9 kg (Water)
DEPTH RATING	1000 m
PROCESSOR	NVIDIA Orin NX, 16 GB
	• 100 TOPS
	• 1024-core NVIDIA Ampere architecture CPU with 32 Tensor Corec @ 918 MHz
	• DL Accelerator: 2x NVDLA v2
	• Vision Accelerator: 1x PVA v2
STORAGE	• Solid State Drive, 1 TB
	• Greensea IQ Vehicle Data Logging
HOST CONNECTION PORT	• 24V DC 1A Max (Excluding DVL)
	• Ethernet (100 Mbit/s)
	• MCLPIL9M on 20'' Cable
EXPANSION PORT	• 24V DC (Pass-though)
	• Ethernet (100 Mbit/s)
	• MCLPIL9M on 20'' Cable

DIMENSIONS
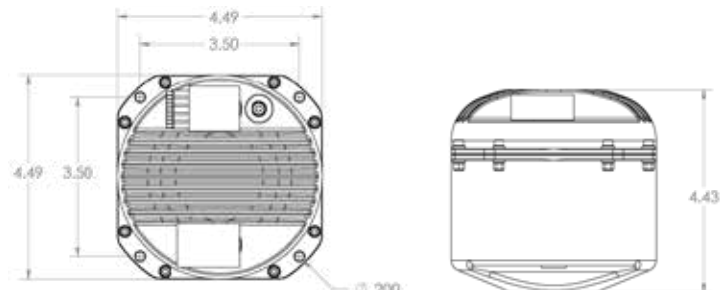
CONNECTIONS
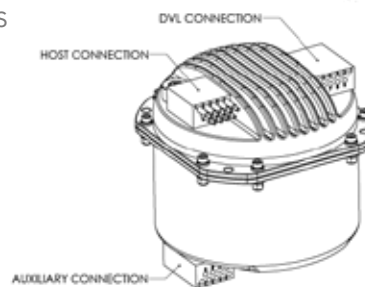
// NAVIGATION SYSTEM (OPENINS)

- Open Architecture
- Integrates additional aiding sensors:
  - DVL
  - GPS
  - Track Odometry/Velocimetry
  - Simultaneous Localization and Mapping

// OPTIONAL ACCESSORIES

- DVL Mounting Kit
- Vehicle Mounting Kit (vertical or horizontal)
- Maintenance Cable

// NAVIGATION SENSORS

- Pressure Sensor options:
  - 1000m, 100m, 40m, 10m
- Fiber-Optic Gyro:
  - Heading axis
  - <1 deg/hour bias
- Attitude Heading Reference System:
  - In-vehicle calibration
  - 0.2 deg RMS static heading accuracy
  - ±4g acceleration range