



## Subsea LiDAR Solutions

### Kraken LiDAR Key Features



#### Unparalleled Precision

- Detailed 3D point clouds with millimetric resolution and clarity
- Measurement of vibration and frequency
- Operational depth of 4,000 meters with no external lighting required



#### Maximize Efficiency

- Rapid scans of complex geometries and features in minutes
- Real-time data processing enables informed decision-making in the field
- Compressed data for streamlined storage, manipulation, and onshore data transfer



#### Derisk Installations and Inspections

- Contactless measurements from 10+ meters away decreases risk of damage to infrastructure, assets, and the environment
- Inspections of subsea assets over time result in confident movement analysis
- Data provides actionable intelligence to reduce maintenance costs and downtime

## Advanced Subsea LiDAR for Rapid and Precise Measurements

Kraken Subsea LiDAR delivers high-precision inspection and monitoring of underwater assets and environments to support informed decision-making. Our solutions enable rapid, millimetric-accuracy seabed mapping, 3D digital twins, and infrastructure modeling from stationary or mobile platforms. Data collection is contactless at 10+ meters from assets, minimizing risk and disruption to operations. From subsea metrologies to creating CAD models of infrastructure at depths of 4,000 meters, Kraken Subsea LiDAR provides engineering-grade 3D data that reduces risk in underwater installations and inspections.



## Kraken Subsea LiDAR Specifications

Operational Parameters	
Deployment Methods	Tripod, Pole-mounted, ROV (Stationary or Dynamic), AUV, Diver
Measuring Method	Time of Flight (ToF) Pulsed
Pulse Repetition Rate	35kHz to 40kHz
Range	Min 1 m, Max 45 m (Turbidity dependent)
Operating Temperature	-5C to 35C
Pan and Tilt	Pan - 350° bi-directional; Tilt +/- 30 ° bi-directional
Field of View	360° Pan 90° Tilt, 30° x 30° Sectors
Ambient Lighting	Fully operational in bright sunlight and complete darkness
Single Sector Scan Speed	Minimum 52 Seconds
Laser Class	Class 1 (Air) to Class 3B (Underwater)
Power Supply	110V/220V AC PCI bottle included; 22V to 29V DC optional
Power Consumption	130W with Pan Tilt @ 120 VAC; 80W without Pan Tilt @ 120 VAC
Physical Properties	
Depth Rating	3,000 m4,000 m
Optical Canister Length	16.34 in (415 mm)16.6 in (422 mm)
Optical Canister Diameter	6.94 in (176 mm)6.94in (176 mm)
Optical Canister Weight	Air: 59 lb (26.9 kg) Water: 36.4 lb (16.5 kg)Air: 61.4 lb (27.9 kg) Water: 37.4 lb (17.0 kg)
Electronics Canister Length	14 in (355 mm)16.1 in (409 mm)
Electronics Canister Diameter	8.27 in (210 mm)6.6 in (168 mm)
Electronics Canister Weight	Air: 46 lb (20.9 kg) Water: 18 lb (8.16 kg)Air: 37.0 lb (16.8 kg) Water: 16.6 lb (7.53 kg)
Data	
Max Number of Points per Scan	Up to 14.4 million points per scan
Improved Range Precision	<2.5 mm single-point @2-40 m, 1σ; <0.5 mm multi-point @2-40 m, 1σ
Distance Measurement Point-to-Point	3 mm RMS proven subsea from a deep water project using a work class ROV
Angle Precision	<100μrad, horizontal and vertical (0.005°)
Beam Divergence, 1/e2, Full Width	0.025° Typical; Varies with water conditions
Beam Footprint, 1/e2, Full Width	@10 m = 4.5 mm, @20 m = 8.6 mm; Typical; Varies with water conditions
Pan and Tilt Resolution	0.088° Standard; Calibrated Pan and Tilt
Pitch and Roll Accuracy	0.03° RMS for Static Applications
Point Cloud Format	RIAAT (Proprietary data format) + Industry Standard (LAS, E57, XYZ)
Data Transfer	Ethernet 1Gbps or 100 Mbps LAN; Internal 1TB SSD

Performance specifications represent maximum sensor values and may vary due to environmental conditions, platform stability, and operational specifics.