

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 highprecision inspection and monitoring of underwater assets and environments to support informed decision-making. Our solutions enable rapid, millimetricaccuracy 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

Deployment Methods Tripod, Pole-mounted, ROV (Stationary or Dynamic), AUV, Diver	Operational Parameters		
Measuring Method 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 1100/220V 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 m 4,000 m Optical Canister Length 16.34 in (415 mm) 16.66 in (422 mm) Optical Canister Weight Air: 59 Ib (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 44 in (355 mm) 46.1 in (409 mm) Electronics Canister Weight Air: 48 lb (20.9 kg) Water: 18 lb (8.16 kg) Pata Max Number of Points per Scan Improved Range Precision 2.5 mm single-point @2-40 m, 10; <0.5 mm multi-point @2-40 m, 10 Distance Measurement Point-to-Point ROV Angle Precision <100 m = 4.5 mm, @20 m = 8.6 mm; Typical; Varies with water conditions Pan 30 mm, Typical; Varies with water conditions Pan 400 m = 4.5 mm, @20 m = 8.6 mm; Typical; Varies with water conditions		Trip od Dolo movetod DOV (Stationa	THE OF DESIGNATION ALIVED
Pulse Repetition Rate Style to 40kHz		·	
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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 Popth Rating Depth Rating 3,000 m Optical Canister Length 16.34 in (415 mm) Optical Canister Diameter 6.94 in (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: 35.4 lb (16.5 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) Air: 37.0 lb (16.8 kg) Water: 18 lb (8.16 kg) Water: 16.6 lb (7.53 kg) Data Max Number of Points per Scan Up to 14.4 million points p			
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Water: 18 lb (8.16 kg)Water: 16.6 lb (7.53 kg)DataMax Number of Points per ScanUp to 14.4 million points per scanImproved Range Precision<2.5 mm single-point @2-40 m, 1σ; <0.5 mm multi-point @2-40 m, 1σ	Electronics Canister Diameter	8.27 in (210 mm)	6.6 in (168 mm)
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PointROVAngle Precision<100μrad, horizontal and vertical (0.005°)	Improved Range Precision	<2.5 mm single-point @2-40 m, 1σ; <0.5 mm multi-point @2-40 m, 1σ	
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Beam Footprint, 1/e2, Full Width @10 m = 4.5 mm, @20 m = 8.6 mm; Typical; Varies with water conditions	Angle Precision	<100µrad, horizontal and vertical (0.005°)	
	Beam Divergence, 1/e2, Full Width	0.025° Typical; Varies with water conditions	
Pan and Tilt Resolution 0.088° Standard: Calibrated Pan and Tilt	Beam Footprint, 1/e2, Full Width	@10 m = 4.5 mm, @20 m = 8.6 mm; Typical; Varies with water conditions	
ן מוז מוזמ דווג דוכססומנוסוו ביי ביי ביי סיים ויי סיים ויי ביי ביי ביי ביי ביי ביי ביי ביי ביי	Pan and Tilt Resolution	0.088° Standard; Calibrated Pan and Tilt	
Pitch and Roll Accuracy 0.03° RMS for Static Applications	Pitch and Roll Accuracy	0.03° RMS for Static Applications	
Point Cloud Format RIAAT (Proprietary data format) + Industry Standard (LAS, E57, XYZ)	Point Cloud Format	RIAAT (Proprietary data format) + Industry Standard (LAS, E57, XYZ)	
Data Transfer Ethernet 1Gbps or 100 Mbps LAN; Internal 1TB SSD	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.