The Kraken SeaVision™ system is a revolutionary new take on subsea 3D laser imaging.

Designed to operate in a twin scanning configuration, with adjustable baseline, SeaVision can generate very high resolution 3D scans in full color. This is due to one of the unique features of SeaVision which uses a Tri-Color laser system to produce full color imagery. Each unit has a low-light underwater camera, a high power LED light, and steerable RGB-line lasers.

Innovative on-board processing techniques developed for Kraken’s Synthetic Aperture Sonar uses internal motion compensation to produce a full 3D scan of 1.2 million points in 4 seconds, even on moving platforms. An external INS is not required and integral motion data can be exported to the vehicles control software.

An auto-calibration systems allows for flexible mounting options to fit a variety of platforms including small ROV’s, Hovering Vehicles, and AUV’s.

In field calibration can be accomplished quickly in air, on deck, making it ideal for fly away, or temporary applications.

No longer limited to black and white scans, SeaVision brings subsea laser imaging into vivid color.
SeaVision™ - Performance Characteristics

- **Color camera**: Quad VGA (1280 x 960)
- **Field of view - camera / twin tube system**: 65° x 50° / 80° x 50°
- **Steerable line lasers**: Class 3R - Red / Green / Blue
- **Integrated light**: 1300 lm LED
- **3D scan rate (80° x 50°)**: 0.1 Hz - 1 Hz
- **3D scan performance**: 300 K points / sec
- **Scan resolution @ 2 m**: 0.1 - 3.0 mm
- **Scan resolution @ 5 m**: 1.0 - 10.0 mm
- **Working Range**: 0.5 - 8 m
- **Values per point**: X/Y/Z, RGB - Color, Quality est.
- **Operational modes**: Single scan / Continuous profiling
- **Mounting Baseline**: 20 - 60 cm
- **Ethernet**: (2) GB / Daisy Chain
- **Serial**: (1) RS 485
- **Onboard storage**: Up to 2 TB
- **Processing**: Onboard, real time
- **Real time capability**: Live 3D scan preview / Live video
- **Output formats**: xyz, png, jpeg, mp4
- **User Interfaces**: Web based, Control / Data export

SeaVision™ - System Physical Characteristics

- **Dimensions**: 460 mm x 113 mm
- **Single tube weight 1000 m - air / water**: 7.0 kg / 2.0 kg
- **Power supply**: 24 VDC
- **Power draw per tube**: 20 W
- **Max sea water temperature**: 40˚C
- **Min start up temperature**: -5˚C
- **Calibration**: In field, computer aided

### Range FOV Swath Area Resolution

<table>
<thead>
<tr>
<th>Range (m)</th>
<th>FOV (deg)</th>
<th>Swath width (m)</th>
<th>Swath height (m)</th>
<th>Area (m²)</th>
<th>Resolution (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80° x 50°</td>
<td>1.68</td>
<td>0.93</td>
<td>1.57</td>
<td>&lt; 1</td>
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<tr>
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<td>3.36</td>
<td>1.95</td>
<td>6.55</td>
<td>~1</td>
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<tr>
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<td>80° x 50°</td>
<td>5.03</td>
<td>2.93</td>
<td>14.73</td>
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<td>4.88</td>
<td>40.93</td>
<td>~6</td>
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<tr>
<td>6</td>
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<td>5.85</td>
<td>58.93</td>
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