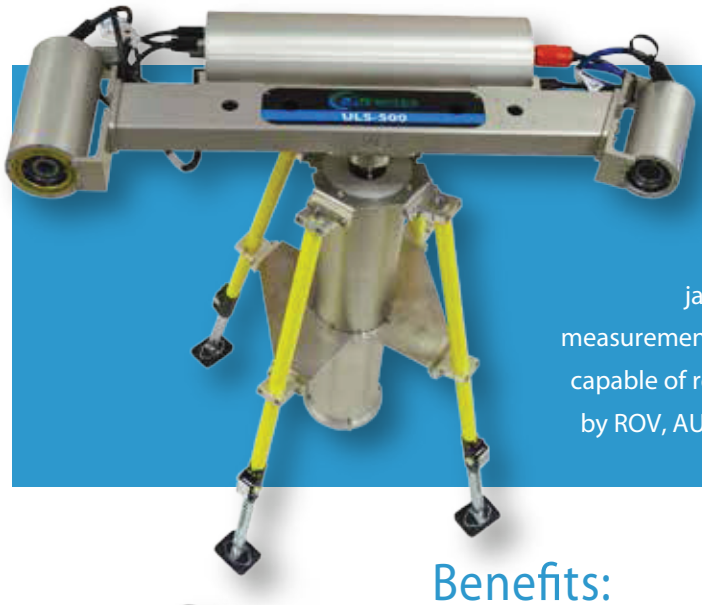
HBA
SYSTEM INTEGRATORS
High-tech solutions for defense industries

ULS-500

Underwater Laser Scanner for Long Range Scans



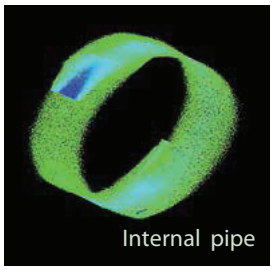
The ULS-500 Underwater Laser Scanner is a long-range measurement system that is ideal for capturing high-detail measurments in areas spanning from 1m to over 10m, in ideal conditions. The system is designed for inspection of offshore jackets, inland dam and bridges, pipeline surveys and ovality measurements. The laser scanner produces very high detail measurements, capable of resolving measurements of less than 1mm and can be easily deployed by ROV, AUV or diver.

Benefits:

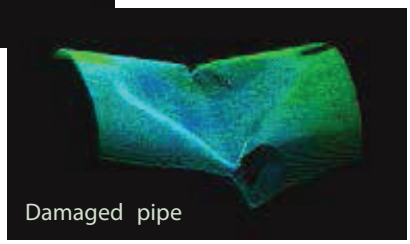
- Hundreds of times higher resolution than Sonar
- Modular Design
- Algorithms to Deal with Silt in the Water

Applications:

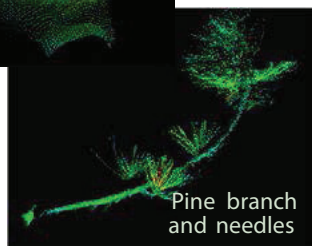
- Offshore Jacket Inspection
- Offshore Damage Assessment
- Offshore Pipeline Survey
- Piling Measurements
- Open Water Scanning
- Ship Hull & Propeller Inspection
- Water Treatment Plants
- Underwater Archaeology
- Shipwrecks
- Marine Biology



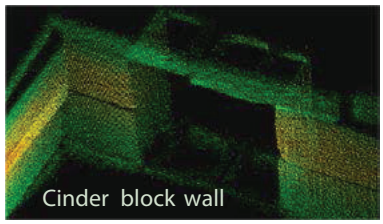
Offshore engineering



Unmatched precision



Inland inspection



DETAILS MATTER

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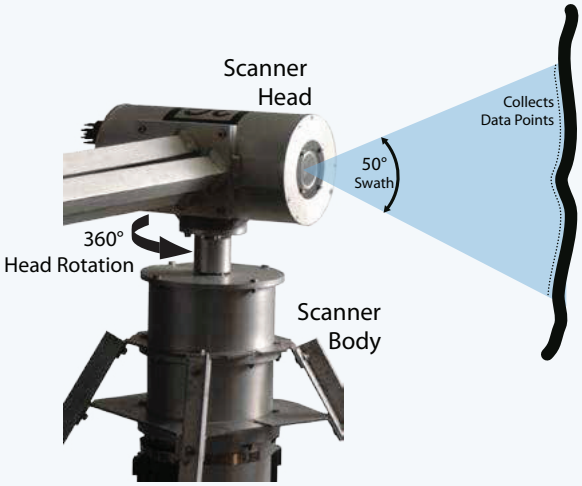
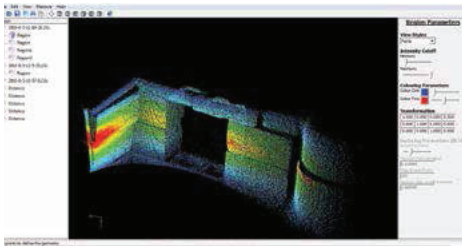


Software:

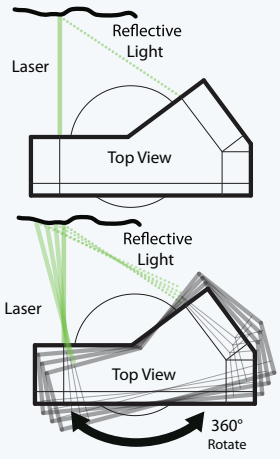


ULS-500 can be easily operated using the 2G Robotics ULScanSoft CAD package to collect and process the underwater point cloud data. Measurements can be taken directly from the point clouds, and the point clouds can be saved to .xyz files, which are commonly used file formats for point cloud data.

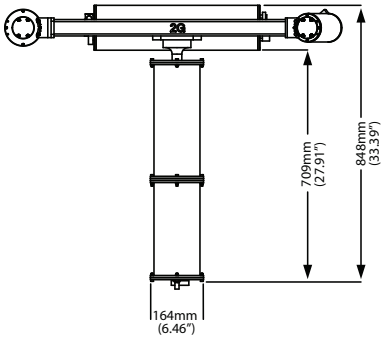
The point clouds can be imported into almost any CAD for advanced data analysis and overlay comparison. An API is also available for command and data collection through your own software program.

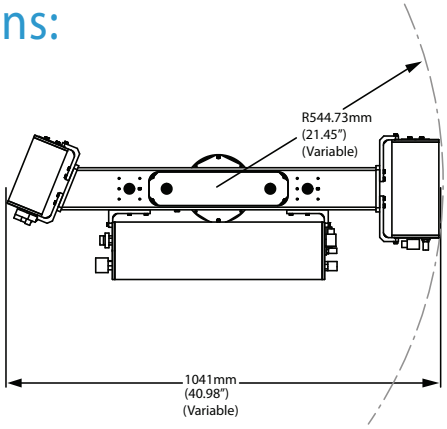
Operation:

The ULS-500 scan area is defined by the 50 degree fan beam emitted from the scanner and the rotation of the scanning arm, capable of scanning a full 360 degree circumference. The ULS-500 has an effective operating range from 1m to over 10m in ideal scanning conditions. These scans can produce point clouds with point spacings that are less than 3mm apart, resulting in very accurate measurements. Although scanning in the dark produces the best results, the ULS offers Ambient Light Filtration (ALF) technology, which will remove noise in the data caused by ambient light. In addition to ALF, the scanner also has algorithms to handle some silt in the water. The system captures data at a rate of up to 40,600 points per second, making for detailed and accurate scans.



Product Specifications:





ULS-500 Long Range			
Scan Performance		**Electrical**	
Scan Range:	Min: 1m (3.28') Ideal: <5m (16') Can Exceed 10m (32.8')	Power:	150 Watts (12-76 VDC)
Vertical Laser Angle:	50 deg	Data Interface:	10/100 MBit Ethernet
Vertical Resolution:	0.0357 deg	**Mechanical**	
Rotational Range:	360 deg Continuous	Depth Rating:	350m (1,148ft) DR 3000m (9,843ft)
Rotational Resolution:	0.0072deg	Weight in Water:	20.50kg (45.10lbs)
Laser Footprint:	3mm (0.118")	Size:	Height: 848mm (33.39") Head Length: 267mm (10.51")
Sunlight Filtering:	ALF Technology Adjustable By User	**Software**	
Silt Filtering:	Adjustable By User	ULScanSoft:	Included
Max Sample Rate:	Up to 40,600/ Sec.	Data	.xyz, LAS, CSV
Point Per Line:	1400	Integration:	API Available

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