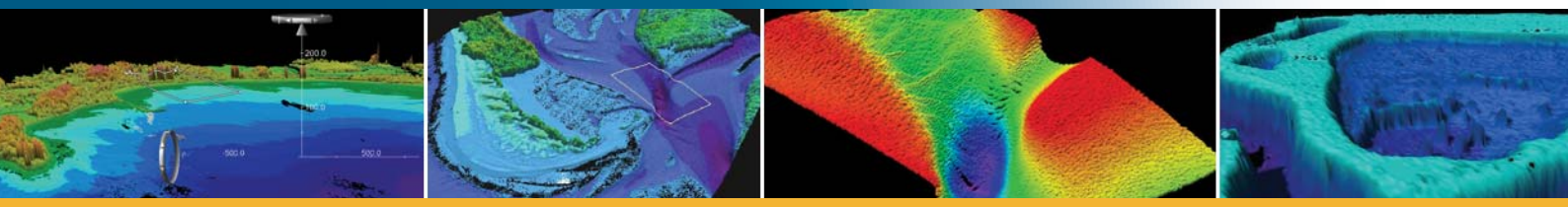
Bathymetric LiDAR



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Bathymetric LiDAR is revolutionizing near shore surveys, offering substantial efficiency gains verse traditional MBES surveys.

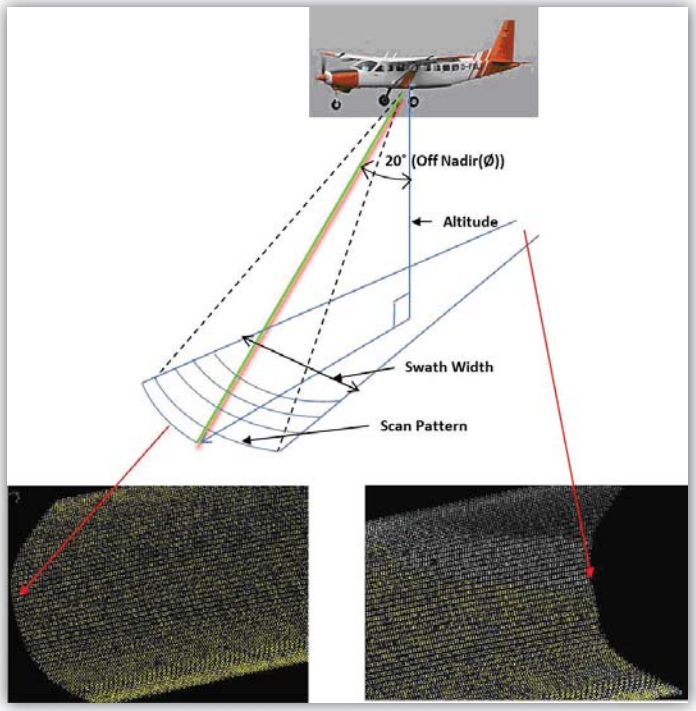
AAM offers a unique combination of leading LiDAR technology and the skills of the most experienced experts in this field. The proposed solution is revolutionising the speed and economy of coastal and shallow water survey, providing high quality data to clients all over the world.

Solution Highlights:

- Measures 2.5 to 3x secchi depth
- Measures depths from 0.3m to over 40m
- Vertical accuracy 0.15m topo and 0.25m bathy
- 4,000 bathy and 64,000 topo soundings per second
- Bathy sounding density from 1.7m to 3.5m separation
- IHO Oder 1b

AAM offers a bathymetric LiDAR service that incorporates:

- Low risk with proven solutions;
- State-of-art bathymetric LiDAR equipment, with specifications and capabilities superior to those previously deployed in the Region;
- Sensor that enables simultaneous capture of topographic and bathymetric LiDAR, ensuring the full definition of the intertidal zone;
- Ability to simultaneous measure the sea surface and the sea bed, removing the reliance on tide models or gravity models;
- Seamless integration with other datasets;
- Generous refly allowances to densify the seabed in areas of reduced definition due to sea conditions, ATC, shipping or turbidity;
- Well planned and well researched project design to ensure no surprises.



Bathymetric LiDAR

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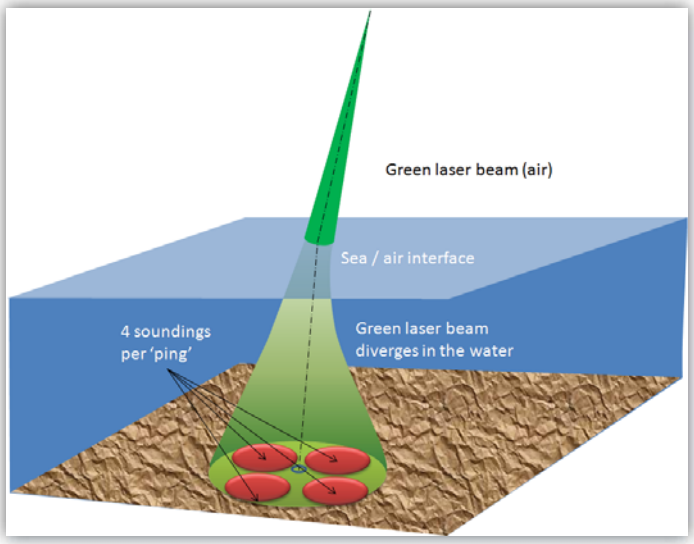
Multi-Pixel Technology

Improves data density and increases the contrast dramatically. System receivers are divided in four areas, looking at four spatially separated segments of the laser beam. The ratio of the area of any target becomes much larger within the area observed.

This means that object detection and object discrimination are improved. The multi-pixel technology also dramatically suppresses the effect of the angle of incidence of incoming light, therefore the time difference within each segment is around half of the total beam.



Hi-Speed Receivers

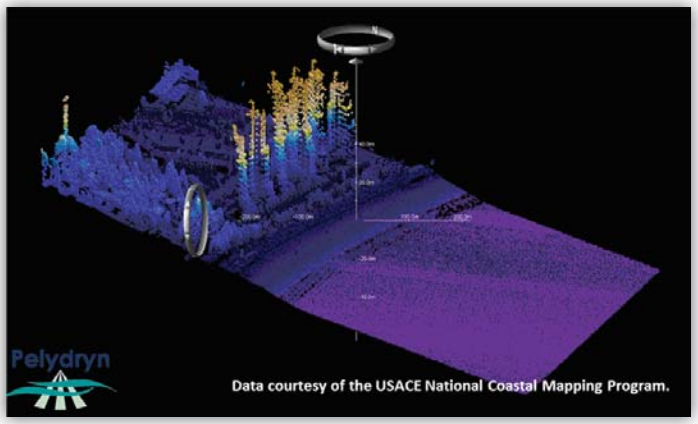
Improve depth resolution which provides the capability to distinguish an object from the seafloor.

Variable Gain Technology

To yield good detection of small pulses in the backscatter wave, instead of logarithmic amplifiers which tend to suppress weak pulses.

Simultaneous Topo and Bathy LiDAR

To ensure better definition of the coastal zone.



Short Pulse Length

Just 5 ns, which further improves contrast since the pulse length has an impact on the equivalent reflectance from the water backscatter.

Raman Channel

The system utilises both the polarisation of IR light (the IR channel) and the Raman shift (the Raman channel) for water surface detection.