

CZMIL SUPERNOVA Topo / Bathy Lidar

Supernova is the next generation topo / bathy lidar system from Teledyne, Optech, Inc. Equipped with the most powerful green laser on the market, Supernova provides maximum depth penetration, superior coverage in turbid waters, and up to 8 ppm² point density in shallow water.

SUPERNOVA Specifications:

Highest bathymetric depth performance

Deep channel = 4.4 / K_d

Shallow channels = 2.9 / K_d

Highest point density in its class*

Shallow water point density up to 8 ppm²

Deep water point density ≥ 1 ppm²

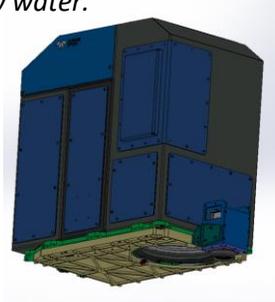
SmartSpacing point distribution for uniform and consistent point distribution across the full swath.

Selectable optimized configurations for maximum performance in shallow, mixed or deep water environments.

Onboard waveform extraction and processing for reduced post-processing time.

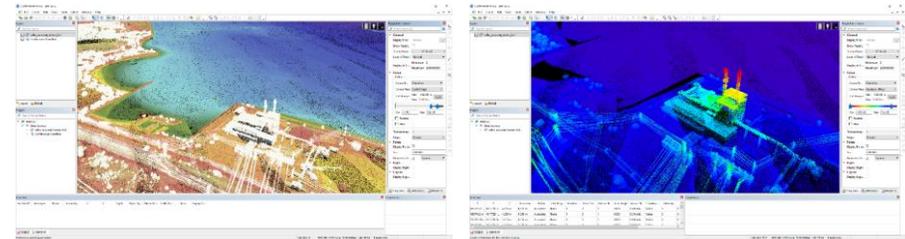
Circular scan for 2x coverage of surfaces and objects.

- Applanix POS AV V6 for positioning and navigation
- 150 MP metric frame camera(s), RGB and NIR options.
- Hyperspectral options (VNIR, TIR, SWIR) available for one step integration



SUPERNOVA Processing in CARIS BASE Editor

Merging Teledyne Optech's unrivaled bathymetric lidar processing algorithms with the powerful ubiquity of CARIS' bathymetric processing software Bathy DataBASE. Produce 2D and 3D data and information products.



Deep Learning algorithm for land / water detection and production of seamless topo / bathy maps

Deep Learning algorithms for automated noise detection and removal for cleaner datasets and less editing time.

Full waveform visualization, analysis and editing of 3D point cloud.

Special algorithms for turbid and shallow water mapping.

Production of 2D information products: seafloor reflectance, water attenuation.

Integration into the CARIS Ping-to-Chart™ workflow for point cloud creation, editing, and product generation. Generate full range of cloud, grid and vector products.

Export to a range of industry exchange formats, including LAS, TIFF, ESRI grid, BAG, SHP, DXF.

**aircraft speed 60 m/s, aircraft altitude 400m AGL, 30 kHz PRF, bottom reflectivity ≥15%*