

Airborne Bathymetric LiDAR Solutions

Proven productivity



- when it has to be **right**

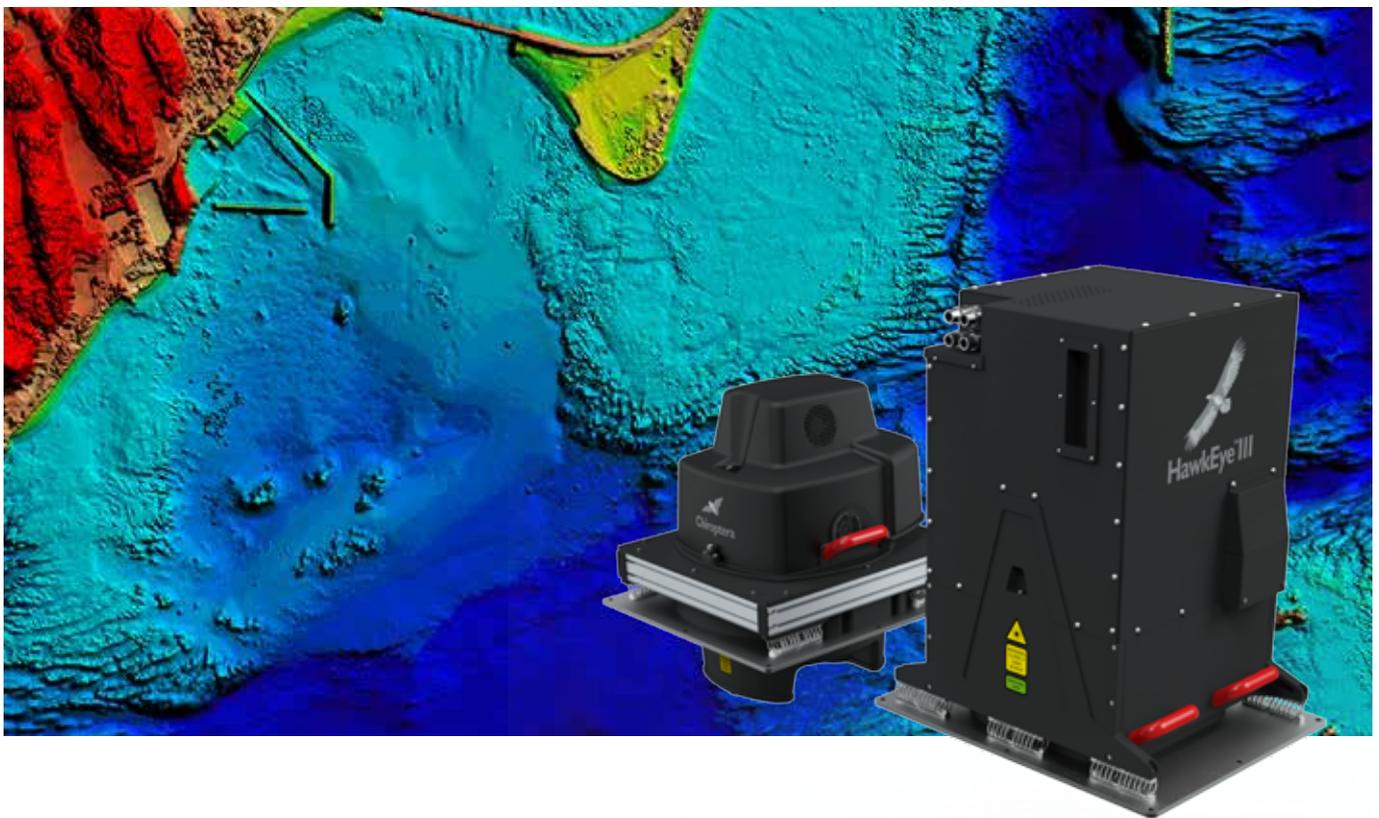


Leica Chiroptera II & HawkEye III

– for deep & shallow water surveys

The Leica Chiroptera II and HawkEye III are combined airborne bathymetric and topographic multi-sensor LiDAR systems providing full seafloor coverage and topographic data from onshore. The data delivered by the sensors is completely seamless from the seabed (bathymetry) onto land (topography). Both systems use the unique oblique LiDAR technology that illuminates the seafloor and objects from multiple angles, maximising coverage. The oblique LiDAR technology is superior for object detection and vertical coverage on land and in water.

Leica Chiroptera II is equipped with one bathymetric channel for nearshore surveys down to approximately 25 m depth and has one 500 kHz topographic channel. The Leica HawkEye III doubles the performance of the Leica Chiroptera II with an additional bathymetric channel for depth penetration to approximately 50 m. Both systems include an 80 MP Leica RCD30 camera (RGBN).



Most efficient method for coastal surveys

Perform topographic and hydrographic data collection at the same time. Leica Chiroptera II and HawkEye III incorporate scanners optimised for their respective applications: high-pulse rate topographic scanning for maximum detail and powerful bathymetric scanning to maximise water penetration and obstruction detection. Use Leica Chiroptera II for nearshore and inland waters and Leica HawkEye III for ultimate penetration in deeper waters.



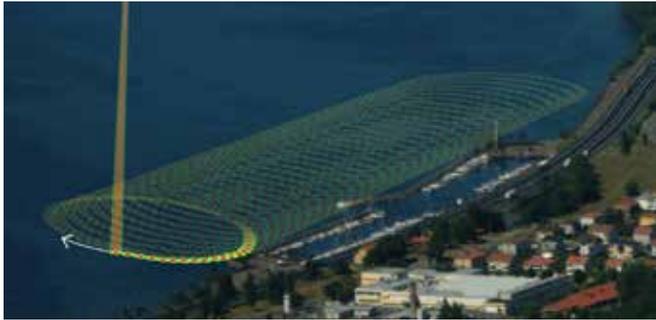
Poor visibility? No problem.

The Leica Chiroptera II and HawkEye III provide industry-leading maximum depth as well as the ability to punch through water with less than optimal visibility. The LiDAR sensor family is field-proven in applications around the world in a variety of water conditions, including nearshore, at sea and turbid inland waters. Ultimate depth penetration is only possible if both hardware and workflow come together to overcome the challenges of poor water clarity.



World's most complete & competitive workflow

Process waveforms and position data, perform calibrations, extract the water surface, correct for refraction, and incorporate four-band camera data, all with one software – the Leica LiDAR Survey Studio (LSS). Increase your work efficiency by incorporating all phases of your project, from mission planning and execution to data delivery in a variety of formats, including fused images, seabed reflectance, classified point clouds and RGB/CIR images.



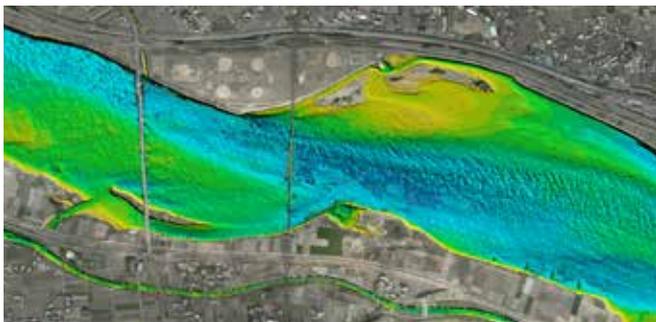
NEARSHORE CHARTING

- Charting according to S-44 standards
- Onshore, shoreline and seamless data down to the seabed
- Obstruction detection with oblique LiDAR
- Maximum depth penetration in turbid water conditions



SEABED CLASSIFICATION

- Reflectance and intensity data available
- Seabed and substrate classification
- Geology and geomorphology
- Coastal processes and erosion



RIVER SURVEYS AND INLAND WATERS

- Flood mapping and prediction
- Disaster management
- Geomorphology studies



ENVIRONMENTAL MONITORING

- Marine ecology
- Submerged vegetation and habitat mapping
- Aquaculture: area selection and monitoring
- Hydrodynamics

Cost-saving common sensor platforms

Leica Geosystems is the only provider offering imaging and LiDAR solutions based on a common sensor platform of system peripherals and software. Users can share components and common operator and pilot interfaces between systems for simple, consistent installation across all airborne sensors, providing synergies in ground handling and operator training regardless of the array of systems employed. Likewise, common mission planning makes it efficient for a small workforce to plan for a wide variety of missions, all from a familiar planning interface. This results in efficient workflow, reduced training and cost savings.



OC60 operator console and PD60 pilot display with FlightPro flight navigation and sensor control software



PAV100 gyro-stabilised mount



MissionPro mission planning software

Revolutionising the world of measurement and survey for nearly 200 years, Leica Geosystems creates complete solutions for professionals across the planet. Known for premium products and innovative solution development, professionals in a diverse mix of industries, such as surveying and engineering, safety and security, building and construction, and power and plant, trust Leica Geosystems to capture, analyse and present smart geospatial data. With the highest-quality instruments, sophisticated software and trusted services, Leica Geosystems delivers value every day to those shaping the future of our world.

Leica Geosystems is part of Hexagon (Nasdaq Stockholm: HEXA B; hexagon.com), a leading global provider of information technologies that drive quality and productivity improvements across geospatial and industrial enterprise applications.



Visible and invisible laser radiation, avoid eye or skin exposure to direct or scattered radiation. Class 4 laser product in accordance with EN/IEC 60825-1:2007.

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Leica Chiroptera II
The most cost-efficient nearshore LiDAR sensor



Leica HawkEye III
The most efficient nearshore bathymetric LiDAR sensor



Leica RCD30
80 MP camera Multispectral RGBN imagery



Leica LiDAR Survey Studio
Complete processing for airborne LiDAR sensors

Leica Geosystems AG
leica-geosystems.com

