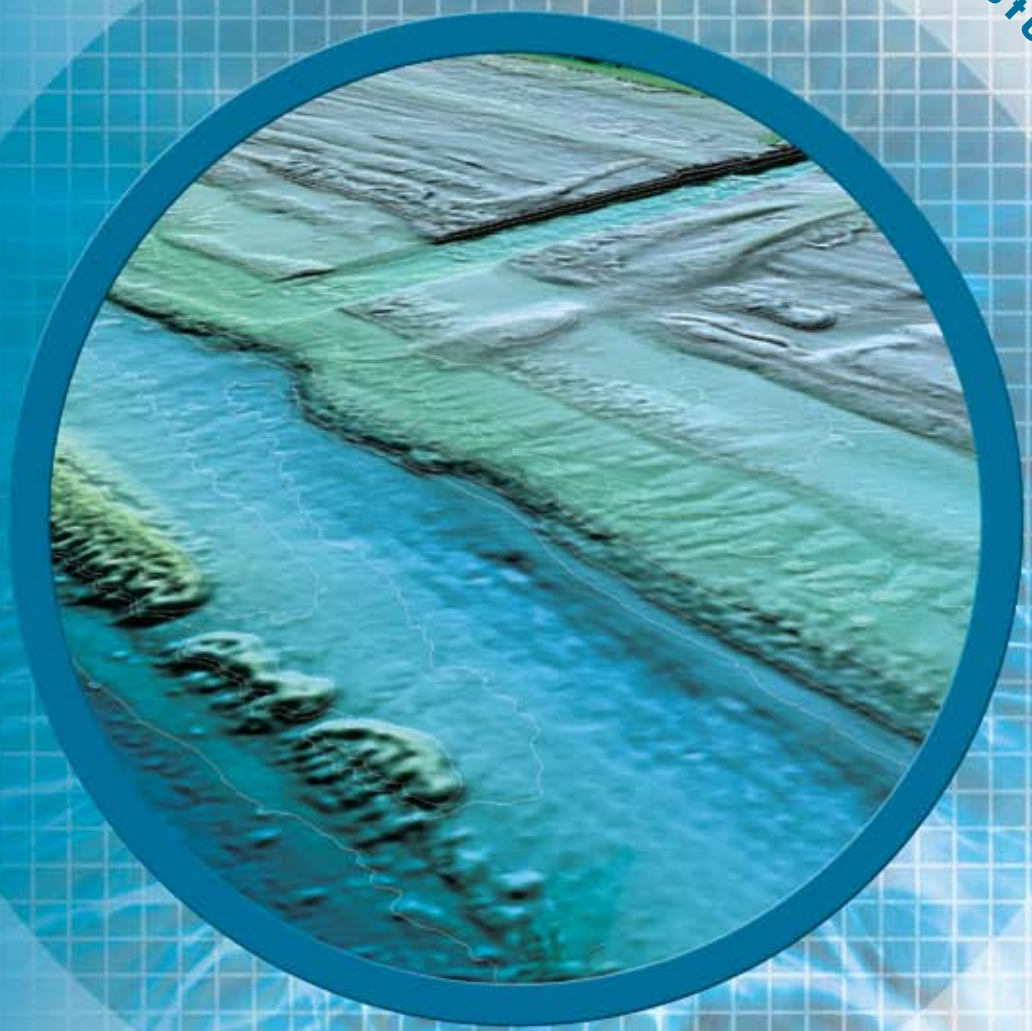
Optech

SHOALS-3000

HYDROGRAPHIC CHARTING and MORE...

Challenging scientific limits to meet future needs



SHOALS

SHOALS-3000 Specifications/Deliverables

Hydrographic Mode

Measurement rate	3,000 Hz
Operating altitude	300 – 400 m (for maximum depth)
Depth measurement accuracy	IHO Order 1 (25 cm, 1 σ)
Horizontal accuracy	IHO Order 1 (2.5 m, 1 σ)
Minimum depth	0.2 m
Maximum depth	50 m
Sounding density	2x2, 3x3, 4x4, 5x5 m
Swath width	Variable, up to 0.75 x altitude
Typical swath width	300 m (@ 4x4 m)
Typical aircraft speed	125 – 260 knots
Eyesafe altitude	150 m
Power requirements	70 A @ 28 VDC
Operating temperature	5 – 40°C
Storage temperature	-20 – 60°C
Humidity	0 – 95% non-condensing
Laser classification	Class IV laser product (US FDA 21 CFR 1040) (IEC 60825-1 Ed. 1.2)
Compliance	Airworthiness certified to RTCA DO-160D standard

Optional Topographic Mode

Measurement rate	20 kHz
Operating altitude	300 – 1000 m
Horizontal accuracy	2.0 m, 1 σ, DGPS 2/1,000 x altitude, KGPS
Vertical accuracy	25 cm, 1 σ

Airborne System Dimensions and Weights

Sensor	70 W x 60 D x 60 H cm; 77 kg
Operator rack	53 W x 73 D x 62 H cm; 55 kg
Chiller rack**	53 W x 65 D x 44 H cm; 40 kg
Laser rack**	53 W x 60 D x 49 H cm; 45 kg

Eyesafe for operators and surface observers with system at standard operational altitude.

SHOALS-3000 System Hardware

- Sensor sub-system
- Operator rack
- Spare laser head
- Transport cases
- GPS and DGPS aircraft antennas
- Laser racks
- All interconnect cables
- Spare sensor computer
- Planning and diagnostic laptop

SHOALS-3000 System Software

Ground Control System (GCS) data processing software (two permanent security keys or licenses) including:

MAPS - **M**anagement **a**nd **P**lanning **S**oftware: GCS module for creating flightlines, establishing data collection attributes for these lines and allocating flightlines to a SHOALS-3000 lidar mission

DAVIS - **D**ownloading - **A**utoprocessing - **V**isualization **S**oftware: GCS module for downloading, processing, viewing, cleaning, and editing data collected by SHOALS-3000

- **Fledermaus**® Embedded 3D, area-based data visualization and editing system
- **POS Post-Processing Package (POSPac)** including:
  POS Proc
  POS GPS

STARS - **S**tatistical **T**racking **a**nd **R**eporting **S**oftware: GCS module that generates project, mission, and flightline reports to track survey progress and system maintenance

Specifications subject to change without notice.

*** Chiller and laser racks can be stacked.*

Leader in Bathymetric Lidar Solutions for Shoreline Mapping

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