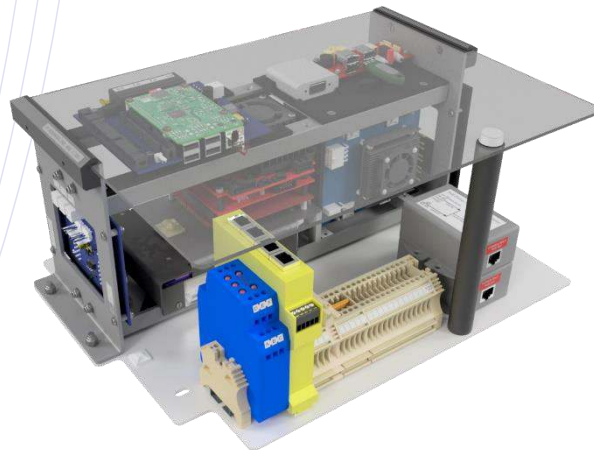


GeoSwath USV Module

GeoSwath Module for USV Installation



GeoAcoustics



Overview

GeoSwath 4 offers industry-leading simultaneous swath bathymetry and side scan sonar mapping for shallow waters. The USV module is a highly flexible solution and can be installed into any compatible USV, allowing for the efficient survey of inland or offshore bodies of water, including those which may be hazardous or inaccessible for conventional survey vessels.

The GeoSwath 4 dual transducer head delivers data accuracies that exceed IHO hydrographic survey standards with a 240° field of view from port to starboard waterline, enabling bottom coverage of up to twelve times the water depth. The transducers have a versatile range of mounting options and are available in frequencies of 125, 250 or 500 kHz, each varying in depth and data resolution to optimise performance for the individual survey task.

The latest GS4 software comes included and has been exclusively developed for the GeoSwath 4. The GS4 software which provides the complete project-based solution, and includes acquisition, storing and editing of sonar and ancillary data, data processing and advanced data gridding capabilities, side scan mosaicing and 3D data visualisation. The GeoSwath 4R can also be interfaced to third-party software for acquisition and processing.

Key Features

- Ultra-high resolution wide swath bathymetry
- 240° field of view up to the water line
- Bottom coverage up to 12 x water depth
- Fully featured GS4 software included
- Available in 125, 250 and 500 kHz
- Simple USV installation

Applications

- Hydrographic Surveys
- Dredging surveys
- Environmental surveys
- Rapid environmental assessment
- Inland waterway and seabed mapping
- Infrastructure inspection
- Ultra-shallow water surveys



Technical Specifications

GeoSwath Module	
Dimensions	386 mm (L) x 124 mm (W) x 174 mm (H) (GeoSwath module only) 388mm (L) x 290 mm (W) x 177 mm (H) (including baseplate)
Weight	3.4 kg (GeoSwath module only) 5.0 kg (including baseplate)
Power	28 W (Windows idle) 35 W (transmitting with transducers only) 65 W (peak power consumption)
Input Voltage	18 – 26 V _{DC}
Sensor Inputs	COM1 (for a GNSS) COM2 (for the MRU) COM3 (via USB, for a Sound Velocity Sensor) COM4 (via USB, for a Battery Voltage Monitor)
Embedded PC	Intel® Dual-core Kaby Lake, 2.8/3.9 GHz, 8GB DDR3L, 1TB SATA3 (6 Gb/s) solid state mSATA module, Microsoft Windows 10 Professional (64 bit)
Environmental	Temperature: Operating 0 °C – 40 °C, Storage -20 °C - 70 °C Humidity: Operating Maximum 95% non-condensing, Storage Less than 55%

Transducer	125 kHz	250 kHz	500 kHz
Max Water Depth Below Transducers	200 m	100 m	50 m
Max Swath Width	780 m	390 m	190 m
Max Coverage	Up to 12 x depth		
Range Resolution	6 mm	3 mm	1.5 mm
Angular Resolution	0.04° (all frequencies)		
Two-Way Beam Width (Horizontal)	0.85°	0.75°	0.5°
Max Swath Update Rate	30 pings per second		
Transducer Dimensions	550 mm (L) x 250 mm (W) x 190 mm (H)	468 mm (L) x 165 mm (W) x 125 mm (H)	362 mm (L) x 109 mm (W) x 75 mm (H)
Transducer Weight	18.5 kg	7 kg	2 kg

Specifications subject to change without notice. E&OE