



SWATHplus Specifications

[> Home Page](#) [> Products](#) [> Survey](#) [> SWATHplus](#) [> SWATHplus Specifications](#)

SWATHplus - Wide Swath Bathymetry & Sidescan



A low cost, high performance bathymetry and sidescan system, suitable for a portable or fixed hull installation.

SWATHplus is a pole or hull-mounted swath bathymetry survey sonar that can achieve swath widths of over 12 times the water depth. Fully flexible and very compact, a pole mounted SWATHplus can be used from almost any vessel of opportunity, for surveying in water depths between zero and 300 metres.

SWATHplus is easily integrated into a survey suite, and produces a uniquely high data density and resolution at an accuracy that meets the requirements of hydrographic applications. It also provides integrated bathymetry and sidescan imaging from the same sonar system, with a variety of real time displays and processing options. Operating in Microsoft Windows and with full on line help/manual, the system is easy to operate and robust.

During the survey the sonar stores all raw data output from the transducers while the real time displays allow processing and QA. Data processing abilities include swath generation with speed of sound profile and motion correction, swath gridding and fairsheet plots. Final data sets consist of correct positional xyz and a (amplitude) data. These xyza DTMs can be interrogated, viewed, exchanged and printed by SWATHplus software and third party charting and DTM display software. Processing may be carried out on the survey workstation or another PC running Microsoft Windows XP or Vista

Specifications

SWATHplus is available in three frequency versions, 117 kHz and 234 kHz and 468 kHz. The system accuracy of both versions exceeds the latest IHO specifications, as set out in IHO Standards for Hydrographic Surveys, Special Publication 44.

Performance Parameters*

	SWATHplus-L	SWATHplus-M	SWATHplus-H
Sonar Frequency	117 kHz	234 kHz	468 kHz
Recommended Depth to*	300m	100m	50m

Aerospace

- MEMS/SIREUS

Defence

- Mobile Data Node
- Network Interface Unit
- VIBRAtrak
- Brahan-SAR

Transport

- ROADflow

Simulation

- DECKsim
- CSF

Communications

- Mobile Data Node

Maximum Swath Width	600m	300m	100m		
Swath Width*	Up to 15 times depth, up to maximum swath width (typically 7-12 times, depending on water conditions and bottom type)				
Azimuth	1.7°	1.1°	1.1°		
Resolution Across Track	5cm	2cm	1cm		
Transmit Pulse Length	17µs to 1 ms	8.5 µs to 500 µs	4.3 µs to 250 µs		
Dimensions*					
Transducer	Height (mm)	Width (mm)	Depth (mm)	Weight in Air (kg)	Weight in Water (kg)
SWATHplus-L	235	550	90	13	1.6
SWATHplus-M	160	350	60	6	0.9
SWATHplus-H	100	215	42	1	0.1

*Parameters are given for guidance only and may vary according to survey conditions. All specifications subject to change without notice.

Technical Specification

Universal Mounting System

- Permits bow or side mounting
- Readily deployed on vessel of opportunity

System Transducers

- Compact and lightweight system
- 3 frequency options 468 kHz, 234 kHz and 117 kHz

Transducer Interface Unit

- Real time sonar data acquisition to PC
- 2 SWATHplus transducer connectors: MIL-C-26482
- 2 USB connections to PC computer
- 2 signal ground connections: screw terminal
- Sync port; supports trigger pulse output to echosounders
- 1 Pulse Per Second port for precise timing: BNC
- 230 V mains in: IEC connector 100-240 V AC mains, < 20 W
- Size 120 mm H x 290 mm W x 285 mm D

System Computer and Software

SWATHplus interfaces to high performance Laptop or Desktop PC running Microsoft Windows XP and Vista Laptop may be supplied or user selected for best utilisation of off-the-shelf interface solutions to suit survey system requirements.

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