



GeoSwath Plus

Low Cost Swath Bathymetry

Introduction

GeoSwath Plus is a PC based, shallow water, wide swath bathymetry system offering state of the art performance at low cost. Design emphasis has been placed on minimising overall cost to the user, not only in terms of initial purchase price, but in terms of ease of deployment, ease of use, reducing survey time, and “time to chart”. The market requirements for a high quality swath bathymetry system with a low total cost of ownership have at last been met.

All data acquisition, real time processing, post processing and chart generation can be accomplished on the GeoSwath Plus workstation with the software provided with the system.

Advantages of GeoSwath Plus

GeoSwath Plus offers significant advantages to users.

- Wide swath coverage, up to 12 times water depth, in shallow water.
- Integrated bathymetry and simultaneous true side scan.
- High depth resolution.
- Accuracy and repeatability
- Wide field of view provides the ability to collect data over very shallow features (or up to the shoreline) and to survey under vessels at berth.
- High data density up to the swath edge.
- Portable and easy to install on vessels of opportunity or for permanent installations.

Data Acquisition

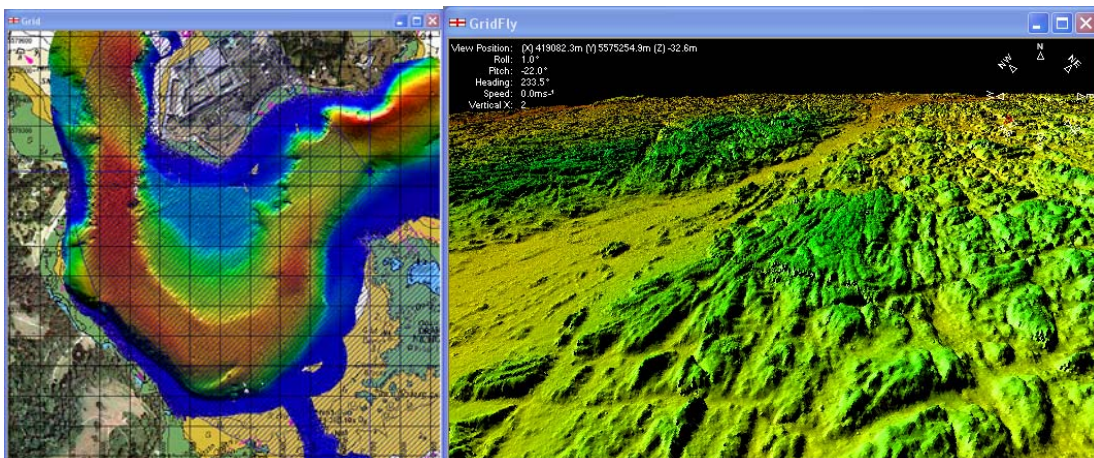
- Ethernet data streaming in real time facilitates simple ROV & AUV integration.
- Absolute time stamp with complete GPS 1PPS time stamp solution and automatically synchronised PC clock.
- Centimetric positioning is possible with RTK variable latency facility to cope with RTK/DGPS/GPS transitions with quality flags recorded in serial strings.
- Data format in line with IHO recommendations: *Range Angle Amplitude*.

Data Processing

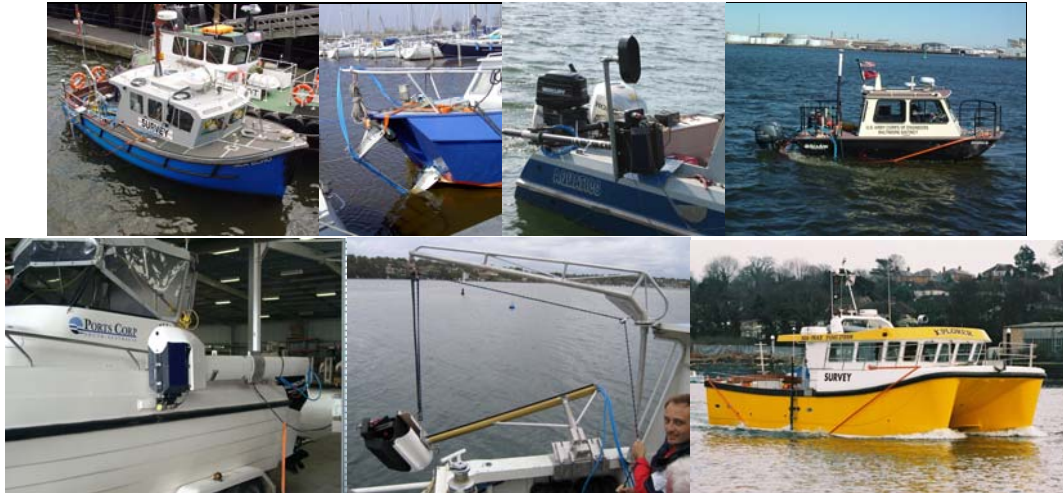
- Full suite of software provided.
- Audit trail: All data points are “tracked” through the processing sequence. Filters flag points rather than delete them.
- All peripheral data can be viewed and edited before processing.
- Bathymetry and side scan automatically created for each processing run of each raw file.

Calibration

- Grid based, accurate and repeatable.
- Graphical entry of vessel offsets in 3-D.
- Graphical selection of sections of calibration lines to be used.
- Profile view of any section of calibration data.



From the Plymouth Data Set acquired for the Shallow Survey 2005 Conference



Over the side mount, bow mount, temporary or permanent installation, large or small vessels, GeoSwath Plus is suitable for all eventualities

GeoSwath Plus Specifications

GeoSwath is available in three frequency versions, 125 kHz, 250 kHz and 500kHz. The system accuracy of all versions exceeds the Special Order specifications, as set out in *IHO Standards for Hydrographic Surveys, Special Publication 44, 4th Edition, April 1998*.

Sonar Frequency	125 kHz	250 kHz	500 kHz (ROV/AUV version)
Maximum Operating Depth Below Transducers	200 metres	100 metres	50 metres
Maximum Swath Width	600 metres	300 metres	150 metres
Range	Up to 12 x depth	Up to 12 x depth	Up to 12 x depth
Resolution (pulse width and bandwidth limited)	24mm	12mm	6mm
Slant range resolution	6mm	3mm	1.5mm
Spacing between across track data samples	12mm	12mm	12mm
Two Way Beam Width	0.9° Azimuth	0.5° Azimuth	0.3° Azimuth
Transmit Pulse Length	16 µS to 1mS	8 µS to 1mS	4 µS to 500uS
Swath Update Rate			
50m Swath Width	30 swaths per second	30 swaths per second	30 swaths per second
150m Swath Width	10 swaths per second	10 swaths per second	10 swaths per second
300m Swath Width	5 swaths per second	5 swaths per second	
600m Swath Width	2.5 swaths per second		

Specification sheet subject to change without notice.
(9-SwathPlus-6900/A 03/2006)



GeoAcoustics Asia Pacific Pte Ltd
30 Loyang Way, #07-12,
Singapore 508769
Tel: +65 6546 3687
Fax: +65 6546 3690
e-mail: singapore.sales@geoacoustics.com
www.geoacoustics.com



GeoAcoustics Limited
Shuttleworth Close, Gapton Hall Ind. Est.,
Gt. Yarmouth, Norfolk, UK, NR31 0NQ
Tel: +44 (0) 1493 600666
Fax: +44 (0) 1493 651100
e-mail: uk.sales@geoacoustics.com
www.geoacoustics.com



GeoAcoustics Inc
12626 William Dowdell Drive
Cypress, Texas 77429, USA
Tel: +1 281 894 5570
Fax: +1 281 894 7196
e-mail: us.sales@geoacoustics.com
www.geoacoustics.com