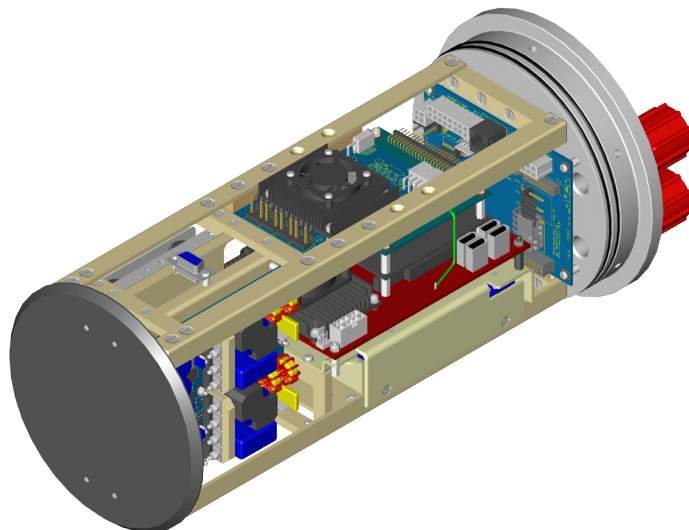
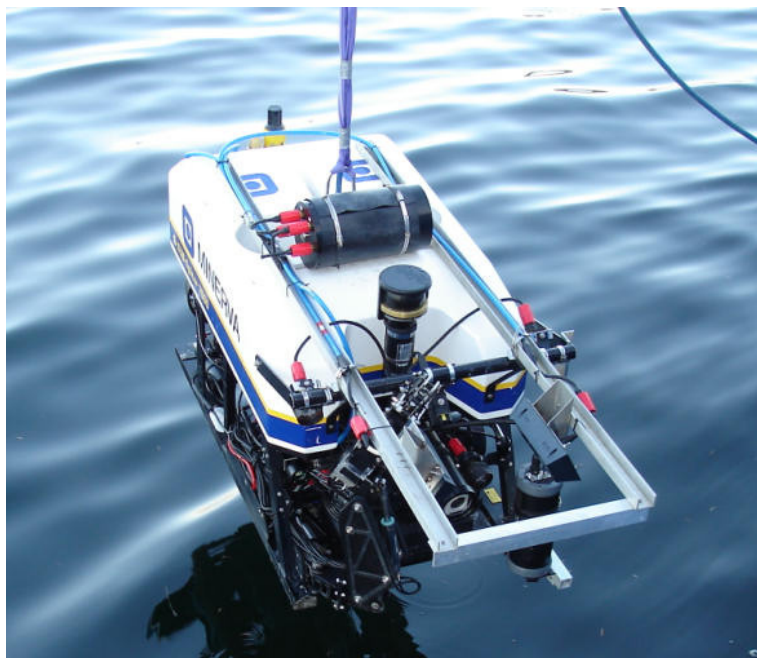


GEOSWATH PLUS ROV



KONGSBERG



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WIDE SWATH BATHYMETRY AND SIDE SCAN FOR ROVS

The GeoSwath Plus phase measuring bathymetric sonar offers simultaneous swath bathymetry and side scan seabed mapping from a payload module readily integrated into any Remotely Operated Vehicle (ROV). With a bathymetry data coverage of up to 12 times the vehicle's fly height and its low power consumption it offers unsurpassed efficiency for all survey applications. Depth ratings of up to 4000 m are available.

System Components

The GeoSwath Plus ROV module contains the sonar electronics together with a high-spec small form factor PC, including local data storage, which is interfaced to either a laptop PC or a deck unit onboard the survey vessel via a transparent Ethernet connection. Peripheral sensors can be interfaced either to the module or to the deck unit. The small size port and starboard transducers are mounted on flying leads onto the platform, giving full flexibility to allow choice of a low noise environment. The included software package provides full acquisition, calibration and data processing capabilities for producing the final bathymetry map and side scan mosaic data products.

Transducers

The rugged, passive, light weight and streamlined port and starboard transducers are attached on flying leads to the ROV optimising their acoustic environment. They are available in three frequency options (125, 250, 500 kHz).

Sonar module

The compact module contains the sonar electronics as well as a high spec small form factor PC including a local hard drive for data storage. It is pressure rated to 4000 m. Ancillary sensors can be interfaced to the module or to the deck unit. The system clock can be synchronised using an available 1pps pulse.

Deck unit

The system can be operated wether from a laptop computer running the GeoSwath Plus software for online control and acquisition or alternatively from the compact GeoSwath Plus deck unit, which also allows interfacing of ancillary sensors on the top side of the system in addition or alternative to interfacing to the ROV module.

Software

GS4 replaced the GS+ software in 2015. The newly developed package provides a complete project based solution, including acquisition, storing and editing of sonar and ancillary data, grid-based patch test calibration, data processing with audit trail, advanced bathymetry data gridding and side scan mosaicing, data visualisation including 3D fly-through capability.

FEATURES

- Ultra high resolution swath bathymetry
- Co-registered geo-referenced side scan
- Frequency versions: 125, 250, 500 kHz
- Up to 12 times fly height coverage
- Compact and light weight module
- Low power consumption (50 W full operation, 20 W standby)
- Easy interfacing using Ethernet and Serial communications
- Full software solution included: data acquisition, processing, presentation
- Interfaces to all customary peripheral sensors
- Interfaces to all customary software packages

OPTIONS

- Increased depth ratings
- AUV and USV modules

TECHNICAL SPECIFICATIONS

| GeoSwath Plus ROV | 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 depths | | |
| Depth Resolution | 6 mm | 3 mm | 1.5 mm |
| Two Way Beam Width (Horizontal) | 0.85° | 0.75° | 0.5° |
| Transmit Pulse Length | 128 µs to 896 µs | 64 µs to 448 µs | 32 µs to 224 µs |
| max Swath Update Rate | 30 per second (range dependant) | | |
| Transducer Dimensions | 540 x 260 x 80 mm | 375 x 170 x 60 mm | 255 x 110 x 60 mm |
| Transducer Weight | 11.6 kg (in air) 3.3 kg (in water) | 3.8 kg (in air) 1.8 kg (in water) | 1.5 kg (in air) 0.5 kg (in water) |
| Power Requirements | 24 VDC, 50 W (at max ping rate), 20 W (standby). | | |
| Max Depth Rating | standard 1000 m optional up to 4000 m | | |
| Electronic Module Size | 20 cm OD x 36.6 cm long. | | |
| Electronic Module Weight | 12 kg (in air), 3 kg (in water). | | |
| Data Storage/Retrieval | 120 GB hard drive in module, 10/100/1000 BaseT Ethernet link | | |

Specifications subject to change without any further notice.

