Hydro INTERNATIONAL

THE GLOBAL MAGAZINE FOR HYDROGRAPHY
WWW.HYDRO-INTERNATIONAL.COM

geomares PUBLISHING

NOVEMBER/DECEMBER 2015 | VOLUME 19 NUMBER 9

# Buyers Guide 2016

## SOURCE FOR PRODUCTS AND SERVICE COMPANY PROFILES

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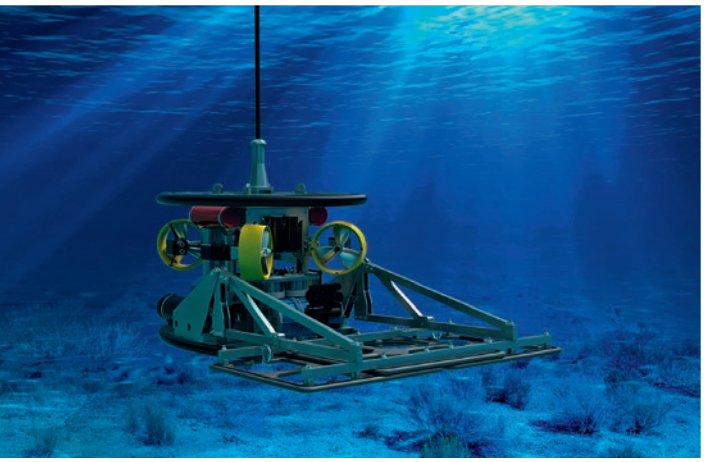

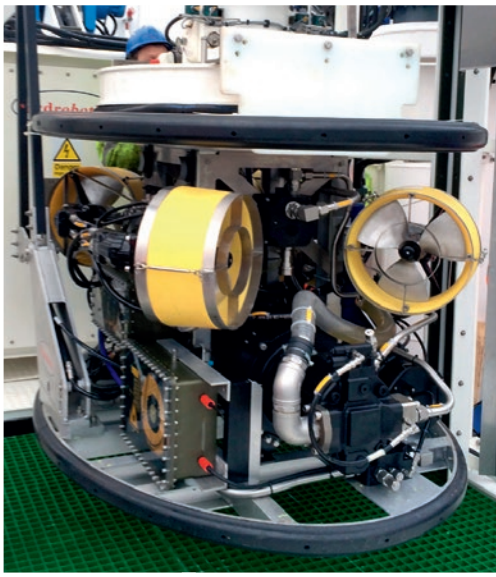
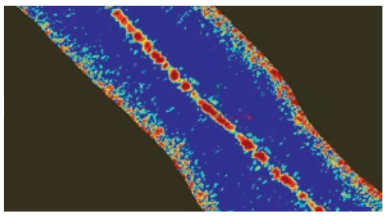
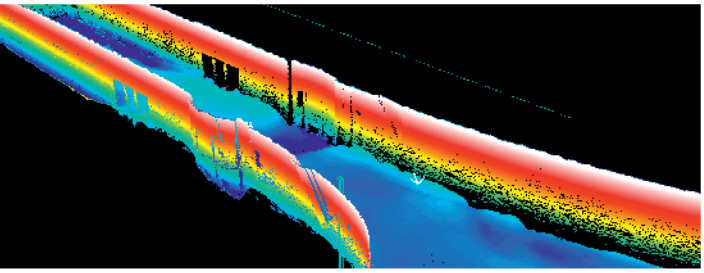

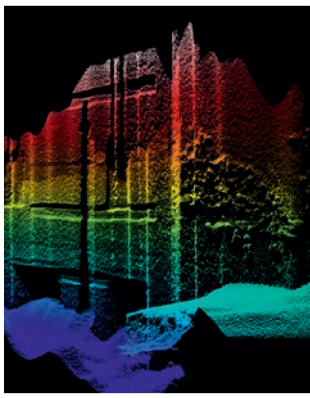

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*Hydro International* is an independent international magazine published 8 times a year by Geomares Publishing. The magazine and related e-newsletter inform worldwide professional, industrial and governmental readers of the latest news and developments in the hydrographic, surveying, marine cartographic and geomatics world. Hydro international encompasses all aspects, activities and equipment related to the acquisition, processing, presentation, control and management of hydrographic and surveying-related activities.

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# Support

I regularly write about the opportunities hydrography holds for manufacturers, service providers and also professionals: many new developments that we have seen over the last few years will come to maturity sooner or later – and the pace of this process may depend on the need for new technologies or new business. I think that we are in need of both, simply because it's a rough sea for many of us out there with a shaky economy, low oil prices and conflicts all over the globe that are having their impact on trade. Working with satellite bathymetry, deploying unmanned vehicles and putting crowdsourcing in place are all ways of doing more difficult jobs in difficult circumstances in a more cost-efficient and fast way – often with better results. Being able to deliver in a faster, more accurate way for a lower price should – following economic principles – result in a greater need for hydrography. This greater need will not come at once and for nothing. Companies will have to invest, among others, in sales and marketing, to show and convince people in other fields of their added value. We are offering help, not just in our regular issues of *Hydro International*, but also in this *Buyers Guide,* and increasingly in complementary features on our newly (a few months ago) launched website www.hydro-international.com. In this *Buyers Guide* you will find information on hundreds of companies, both manufacturers and service providers, but also academic institutes and organisations. A large number of companies have highlighted their products or services. In the Companies section on the website you will find links to the websites of those companies and more. As in the past, this *Buyers Guide* will go out to 40,000 professionals at tradeshows and conferences and offices and homes. The number of companies in this guide and on the website hopefully underpin our strong belief that there are plenty of opportunities, despite the headwind we may be currently experiencing. Use it for inspiration, as a business directory or simply to find that one contact you can't come up with when you need it. But also use it as a way of finding opportunities and making connections with those who can make the opportunities work for you and your business.

**Durk Haarsma** durk.haarsma@geomares.nl


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| Aqua-Fact | www.aquafact.ie | | x | | x | x | | | | x | | | | | | | | | | | |
| Aquamap Hydrographic Services | www.aquamap.com.au | x | | | x | x | x | x | x | x | | x | | x | | | | | | | x |
| Aquamarine Power | www.aquamarinepower.com | | | | | x | | | | x | x | x | | | | | | | | | |
| Aquamec | www.aquamec.fi | x | | | | | | | | | | | | | | | | | | | |
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| Aquatec Group | www.aquatecgroup.com | x | | | | x | | | | x | | | | | | | | | | | |
| Aquatic BioTechnology | www.aquaticbiotechnology.com | | | | | x | | | | x | | x | | | | | | | | | |
| Arab Academy for Science & Technology | www.aast.edu | | | | x | x | | | | x | x | | x | x | | | | | x | x | |
| Arc Surveying & Mapping | www.arcsurveyors.com | | | | x | | | | | | | | | x | x | | | | | | |
| Archirodon Hellas | www.archirodon.net | x | | | x | | | | | | x | | | x | | | | | | | |
| Ard Geographics | www.ardglobal.com | | x | | x | | x | x | | | | | | x | | | | | | | x |
| ARGUS | www.argusnet.de | | | | | | | | | | | | | | | | | x | | | |
| ARKeX | www.arkex.com | | | | | x | x | | | | | | | | x | | | | | | |
| Armelsan | www.armelsan.com | | | | | | | | | | | | | x | | x | | x | | | |
| Armon Shipyards | www.astillerosarmon.com | | | | | | | | | | | | | | | | | | x | | |
| ASB Systems | www.asbsystem.com | x | | | x | | | | | | | | | | | | x | x | | | x |
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| ASI Group | www.asi-group.com | | | | x | x | | x | | | | | x | x | | x | | x | | | x |
| ASL Environmental Sciences | www.aslenv.com | | | | | x | | | | x | | | | | x | | | x | | | |
| ASP Rope Access | www.aspropeaccess.com | | | | | | | | | | | x | x | | | | | | | | |
| Aspect Land & Hydrographic Surveys | www.aspectsurveys.com | x | x | | x | x | x | | | x | x | x | x | x | | | x | | | | x |
| ASR | www.asrltd.co.nz | | x | | | x | | | | x | | | | x | | | | | | | |
| Associated British Ports | www.abports.co.uk | x | | | x | | | x | | | | | | x | | | | | | | |
| Association pour la Promotion de l'Hydrographie (APHY) | www.cetmef.developpement-durable.gouv.fr/aphy | | | | x | | | | | | | | | | | | | | | x | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

# Bibby **HydroMap**

Bibby HydroMap (formerly Osiris Projects) specialises in the acquisition, interpretation and presentation of highly accurate seabed and subseabed data. The company has worked with clients from the oil and gas, offshore renewables, submarine cables, ports and harbours, aggregates and utilities industries since 1997 to provide efficient and cost-effective survey services, with quality at the core.

Operating throughout the UK and northern Europe, the company provides services applicable from the early planning stages through to O&M and decommissioning. 115 permanent professional personnel provide expertise ranging from hydrographic and geophysical survey, to geotechnical sampling and engineering, to ROV survey and inspection.

Bibby HydroMap owns and operates five specialist survey vessels ranging from 14-27m, each equipped with the latest equipment and survey sensors from industry leading suppliers. With the launch of their new survey ROV d'ROP® designed specifically for remote survey and inspection in dynamic sea conditions, the company is ideally positioned to provide a complete service.
Despite challenging conditions, the company continues to grow with ambitious plans for the future.

For further information on the services offered, please visit www.bibbyhydromap.com or contact enquiries@bibbyhydromap.com.

BIBBY HYDROMAP
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# CARIS

CARIS™, established in 1979, is a developer of geospatial software designed to cater to the marine GIS community and has been built on decades of hydrographic experience. CARIS is a privately held company with its headquarters in Fredericton, Canada, with satellite offices in the Netherlands, USA, Australia and the UK.

CARIS software offers a comprehensive level of support, training sessions, consulting, as well as multilingual technical support. CARIS software is selected by national mapping and charting agencies, survey companies, port and waterway authorities, oil and gas companies and academic institutions worldwide.

The CARIS Ping-to-Chart™ solution is designed to deliver an integrated and seamless solution for the entire workflow of hydrographic information from processing the echo sounder ping to the production and distribution of the chart. The CARIS Ping-to-Chart solution includes products that address the need to manage bathymetric datasets containing billions of soundings, to support the development of multiple chart types from a single source and to be able to distribute and interrogate high-density bathymetry over the internet.

CARIS Onboard is the newest package in the CARIS suite of products. This is a near real-time and autonomous data processing package that has been developed with AUVs and USVs in mind, but is also a force multiplier when used on survey vessels. CARIS believes that by automating the repeatable steps in the data processing workflow the focus of the professional can be to ensure that top quality data is being collected. CARIS Onboard utilises the latest internet technologies where processes can be initiated and tracked and data quality assessed.

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| Atlantas Marine | www.atlantasmarine.com | x | x | | x | | | x | | x | | | x | x | | x | | x | x | | |
| ATLAS Elektronik | www.atlas-elektronik.com | | | | | | | | | | | | | | | | | x | | | |
| Atlas GeoSolutions Limited | www.atlaseosolutions.net | | | | x | | | x | | | | | | | | | | | | | x |
| Atlas Interactive | www.atlasinteractive.com | | | | | | | | | | | | | | | | x | | | x | |
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| **Atlas Professionals** **See Page 5, 67** | **www.atlasprofessionals.com** | **x** | | **x** | | | | | | | **x** | | | | | | **x** | | | **x** | |
| ATR Group | www.atrgroup.co.uk | | | | | | | | | | | x | | | | | x | | | | |
| Aurora Trust | www.auroratrust.com | | | | | x | | x | | x | | | | | | x | | | | | |
| Australasian Hydrographic Society (AHS) | www.ahs.asn.au | | | | | | | | | | | x | | | | | | | | | |
| Australasian Network of Maritime Training & Education | www.anmet.com.au | | | | | x | | | | | | | | | | | | | | x | |
| Australian Bureau of Meteorology | www.bom.gov.au | | | | | | | | | x | | x | | | | | | | | | |
| Australian Defence Force Academy | www.defence.gov.au/adfa | | | | | | | | | | | x | | | | | | | | x | |
| Australian Hydrographic Service | www.hydro.gov.au | | | | x | | | x | | | | | | | | | | | | | |
| Australian Marine Science & Technology | www.amsat.com.au | | | | | x | | | | | | x | | | | | | | | | |
| Autonav | www.autonav.com | | | | | | | | | | | x | | | | | | | | | x |
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| AW-Energy | www.aw-energy.com | | | | | | | | | x | x | | | | | | | | | | |
| AWS Ocean Energy | www.awsocean.com | | | | | x | | | | x | x | x | | | | | | | | | |
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| Bangladesh Inland Water Transport Authority | www.biwta.gov.bd | x | | | x | | | x | | | | | | | | | | | | | |
| Bangladesh Navy, Directorate of Survey | www.bangladeshnavy.org/survey.html | | | | x | | | | | | | | | | | | | | | | |
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| Bastiaens OnderWaterWerken (BOWW) | www.boww.be | | | | | | | | | | | x | | | | x | | | | | |
| Batimetrica | www.batimetrica.pt | | | | x | | | | | x | | x | | x | | | | | | | |
| Battley Marine | www.battleymarine.com | | | | | | | | | | | x | | | | | | | | | |
| BBE Moldaenke | www.bbe-moldaenke.de | | | | | x | | | | x | | | | | | | | x | | | |
| Beijing Ocean Seeker Technical | www.ocean-seeker.com | | | | | | | | | | | | | | | x | | x | | | |
| Beijing Tek Meridian System Solution | www.tekmarine.com.cn | | | | x | x | | x | | x | | | x | x | | x | x | | | | x |
| Beijing UniStrong | www.unistrong.com/English | | x | | x | | x | | | x | x | | x | x | x | x | | | x | | |
| Bennex | www.bennex.no | | | | | | | | | x | x | | | | | x | x | | | | |
| Benthic Sciences | www.benthicsciences.co.uk | | | | | | | | | | | | | | | | x | | | | x |
| Benthowave Instrument | www.benthowave.com | | | | | | | | | | | | | | | | | x | | | |
| Bentley Systems | www.bentley.com | | x | | | | | | | | | | | | | | | | | | |
| Bentos Chile | www.bentos.cl | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| BHC Nav | www.bhcnav.com | | | | | | | | | | | | | | | | | | | | x |
| **Bibby HydroMap** **See Page 2, 7** | **www.bibbyhydromap.com** | | **x** | | **x** | **x** | **x** | **x** | | **x** | | | **x** | **x** | | **x** | | | | | |
| Bintang Subsea | www.bintangsubsea.com | | | | | | | | | | x | | | | | | x | | | | |
| BioSonics | www.biosonicsinc.com | | | | | x | | | | | | | | | x | | | | | | |
| Bird Seismic Services | www.birdseismic.com | | | | | | | | | | | | | | | | x | | | | |
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BIRNS, Inc. has been serving the subsea industry since 1954, and is an ISO 9001:2008 certified global leader in the design and manufacturing of high performance connectors, custom cable assemblies and lighting systems. The company's quality certifications and manufacturing capabilities meet or exceed the most exacting requirements, along with a world-class cable facility that is SUBMEPP-certified to NAVSEA S9320-AM-PRO-020. All BIRNS QA personnel and production technicians are certified to both J-STD-001 and WHMA-A-620-A Class 3, and BIRNS holds ABS Product Design Assessment Certification for all of its man-rated submarine and SAT-system penetrators. Plus, BIRNS provides the industry's highest volume of cost-effective hydrostatic and helium pressure testing.

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| Bundesamt für Seeschiffahrt & Hydrographie (BSH) | www.bsh.de | | x | | x | x | x | x | | x | | | | | | | | | x | | |
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| Canadian Hydrographic Association | www.hydrography.ca | | | | x | | | | | | | | | | | | | | | | |
| Canadian Hydrographic Service | www.chs-shc.gc.ca | | x | | x | | x | x | | x | | | | x | | x | | x | x | | x |
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| China Maritime Safety Authority | www.ngd.goc.cn | | x | | x | | | x | | | | | | x | | | | | | | |
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| Choubey Consultants | www.choubeyconsultants.com | | | | | | | | | | | | | | | | | | x | | |
| Chris Ransome & Associates | www.crahouston.com | | | | x | | | x | | | | x | | x | | | | | | | |
| Christian Pröber Unterwassertechnik | www.cpu-bremen.de | | | | | x | | | | | | | | | | | | | | | |
| Chukar Waterjet | www.chukarwaterjet.com | | | | | | | | | | x | | | | | | | | | | |
| CIRIA | www.ciria.org | x | | | | | | | | | | | | | | | | | | | |
| CISCREA | www.ciscrea.com | | | | | | | | | x | | x | | | | x | | | | | |
| Clark Labs | www.clarklabs.org | | x | | | | | | | | | | | | | | | | | | |
| Class Instrumentation | www.classltd.com | | | | | x | | | | | | x | x | | | | | x | | | |
| Clearpath Robotics | www.clearpathrobotics.com | | | | | | | | | | | | | | | x | | x | | | |
| Cledirsa | www.cledirsa.com | x | x | | x | | | x | | | | x | | | | | | | | x | |
| ClipCard | www.clipcard.com | | x | | | | | x | | | | | | | | | | | | | |
| CLS | www.cls.fr | | | | | | | | | x | | | | | | | | | | | |
| Clydeside Surveys | www.clydeside-surveys.ltd.uk | | | | x | | | x | | x | | | | x | | | | | | | |
| C-MAP USA | www.jeppesen.com | | x | | | | | x | | | | | | | | | | | | | |
| C-MAX | www.cmaxsonar.com | | | | | | | | | | | | | | | | | x | | | |
| CMS Geotech | www.cms-geotech.co.uk | | | | x | | | | x | | x | x | x | x | | x | | | | | |
| **C-Nav** **See Page 13** | **www.cnavgnss.com** | | | | | | x | | | | | | | | | | | | | | x |
| Coastal Science | www.coastalscience.co.uk | | | | | x | | | | x | | x | | | | | | | | | |
| Coastal Systems International | www.coastalsystemsint.com | | | | x | x | | x | | | | x | | x | | | | | | | |
| Coda Octopus Martech | www.martechsystems.co.uk | | | | | | | | | | | x | | | | | | | | | |
| CodaOctopus Products | www.codaoctopus.com | x | | | x | | | x | | | x | x | x | x | | | x | x | | | x |
| CODAR Ocean Sensors | www.codar.com | | | | x | x | | | | x | | | | | x | | | x | | | |
| Codevintec Italiana | www.codevintec.it | x | | | x | | x | x | x | x | x | | x | x | | | x | | | | |
| Colex International | www.colexint.com | | | | | | | | | | | x | | | | | x | | | | |
| Comark Corporation | www.comarkcorp.com | | | | | | | | | | | x | | | | | | | x | | |
| Commonwealth Scientific and Industrial Research Organisation (CSIRO) | www.csiro.au | | | | x | x | | x | | x | | | | | | x | | | | | |
| ComNav Marine | www.comnavmarine.com | | | | | | | | | | | x | | | | | | | | | |
| Concept Systems | www.csl.co.uk | | | | | | x | | | | | | | | | | x | | | | |
| Control Signal | www.control-signal.com.tw | | | | | | | | | | | x | | | | | | | | | |
| Contros Systems & Solutions | www.contros.eu | | | | | x | | | | x | x | | x | | x | x | x | | | | |
| Cortland Fibron BX Limited | www.thecortlandcompanies.com | x | | | x | | | | x | x | x | x | x | | | x | x | | | | |
| Council for Geoscience, Marine Geosciences Unit | www.geoscience.org.za | x | x | | x | x | | | x | | | x | | | | | | | | | |
| CP Cases | www.cpcases.com | | | | | | | | | | | x | | | | | | | | | |
| C-Products Europe | www.c-products.co.uk | | | | | | | | | | | | | | | | x | | | | |
| CREOCEAN | www.creocean.fr | | x | | x | x | | x | | x | | | | x | | | | | | | |
| CSA Ocean Sciences | www.csaocean.com | x | | x | x | x | | x | | x | x | | | | x | x | | | | | x |
| CSIP | www.csip.co.uk | | | | | | | | | | x | | | | | | | | | | |
| CSIR | www.csir.co.za | | | | | | | | | x | | | | | x | | | | | | |
| CSnet International | www.csnetintl.com | | | | | | | | | | x | | | | | | | | | | |
| CT Systems | www.ctsystems.eu | x | x | | | | | x | | | x | x | | | x | | | x | | | x |
| C-Tecnics | www.c-tecnics.com | | | | | | | | | | | x | x | x | | x | | | | | |
| Ctruk | www.ctruk.com | | | | | | | | | | | | | | | | | | x | | |
| Cwamas Citra Prakarsa | www.cwamas.com | | x | | x | | x | x | x | x | x | | x | x | | | | | | | x |
| Cybernetix | www.cybernetix.fr | | | | | | | | | x | | | | | x | | | | | | |
| Cygnus Instruments | www.cygnus-instruments.com | | | | | | | | | | | | x | | | | | | | | |
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| Damen Dredging Equipment | www.damendredging.com | x | | | | | | | | | | | | | | | | | x | | |
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| Datema | www.datema.nl | | x | | | | | x | | | | | | | | | | | | | |
| Dawson & Associates | dawsonassociates.com | | | | | | | | | | | x | | | | | | | | | |
| DC Servicios Ambientales | www.dcserviciosambientales.es | | | | | x | | | | x | | | | | | | | | | | |

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C-Nav is the pioneer in satellite positioning services, having delivered the first commercial Precise Point Positioning (PPP) service over a decade ago. C-Nav offers two independent positioning solutions, namely the C-NavC1 and C-NavC2 services. These services allow users to enjoy the benefits of both GPS and GLONASS constellations, two sources of corrections, algorithms, and at least two delivery satellites.

The cutting edge positioning services are all backed by C-Nav's world-renowned service and support network, providing customers 24/7 support on a global scale. C-Nav's number one focus is to bring success to its clients to whom C-Nav aims to be not just a supplier, but a partner for positioning.

The C-NavC2 GNSS service provides centimetre-level positioning, not just horizontally but also in height, to a consistent level of accuracy and independent of a costly or vulnerable shore-based infrastructure.

C-Nav offers a broad range of receiver options with a variety of subscription services. An expansive toolkit of hardware and software products are available to support any navigation and positioning requirement. These include C-Monitor, C-Nav's QA/QC system used for viewing and documenting system performance; C-Mariner, a ring laser gyro inertial navigation system; and C-Tides, a Mean Sea Surface (MSS) tide application, which leverages on C-Nav's exceptional vertical precision and accuracy.

Intuitive graphical interfaces and touch-screen displays are incorporated with these tools for simplicity of monitoring and control.

C-Nav

**More information**
730 East Kaliste Saloom Road,
Lafayette, LA 70508,
USA
Phone: +1 3372100000
www.cnav.com

| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| De Regt Marine Cables | deregtcables.com | x | | | x | | | | x | x | x | x | x | | | x | x | | x | | |
| Debex - Engenharia e Sistemas | www.debex.pt | | | | | | | | | x | | | | | | | | | | | |
| Deep | www.deepbv.nl | | | | x | x | | x | | x | x | | x | x | | | x | | | | |
| Deep Ocean Engineering | www.deepocean.com | | | | | | | | | | | | | | | x | | | | | |
| Deep Sea Diving | www.deepseadive.com | | | | | | | | | | x | x | x | | | | | | | | |
| Deep Trekker | www.deeptrekker.com | | | | | | | | | | | | | | | x | | | | | |
| DeepOcean Subsea Services | www.deepocean.no | | x | | x | | | | | | | | x | | | | | | | | x |
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| Defence Forces Technical Research Centre | www.mil.fi/laitokset/pvtt/ | | | | | | | | | | | | | | | | | | | | |
| DegUsan | www.degusan.com | | x | | x | x | | x | | x | | | | x | x | x | | x | x | | |
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| Deltares | www.deltares.nl | x | | | x | x | x | | | x | x | x | x | x | x | | | x | | x | |
| DenAr Ocean Engineering | www.den-ar.com | x | x | | x | x | x | x | | x | | | x | x | | x | | | | | x |
| Denialink | www.denialink.com | x | | | | | | | | | | x | | x | | | | | | | |
| Desert Star | www.desertstar.com | | | | | | | | | | | | | | | | | | | | x |
| Design Projects | www.design-projects.com | | | | x | x | | | | | | x | | | | | x | | | | |
| Desmar | www.desmar.cl | x | x | | x | x | x | x | | x | | | | x | | | | | | | x |
| DETEK Marine Offshore Technology | www.detek-tr.com | x | | | | x | | | | | | | | x | | | | | | | |
| Deutsche Hydrographische Gesellschaft (DHyG) | www.dhyg.de | | | | | | | | | | | x | | | | | | | | x | |
| **Develogic** See Page 19 | **www.develogic.de** | | | x | | x | | | x | x | | x | | x | x | | | x | | | |
| DGPS Argentina | www.dgpsargentina.com.ar | | x | | x | | | x | | | | x | | x | | | | | | x | x |

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| DOF Subsea | www.dofsubsea.com | | | | | | | x | | x | | | x | | | x | | | | | x |
| Dolphin Geo | www.dolpingeo.com | | | | | | | | | | | | | | | | x | | | | |
| Dolphin Interconnect Solutions | www.dolphinics.com | | x | | | | | | | | | | | | | | x | | | | |
| dotOcean | www.dotocean.eu | | | | x | | | | | | | | | | | | | x | | | |
| Douglas Westwood | www.douglas-westwood.com | | | | | | | | | | x | x | | | | | x | | | | |
| DPS Offshore | www.dps-offshore.com | | | | | | | | | | x | | | | | x | | x | | | |
| Draaicentrum - DC Engineering | www.dc-engineering.nl | x | | | | | | | | | x | | | | | | | | | | |
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| DTI Telecom | www.dti.qc.ca | | x | | | | | | | | | | | | x | | | | | | |
| Dutch Dredging | www.dutchdredging.nl | x | | | | | | | | | | | | | | | | | | | |
| DWTEK | www.dwtekmarine.com | | | | | | | | | x | | | x | x | | x | x | | | | |
| Dyk & Bygg | www.dykobygg.se/ | x | x | | | | x | x | | | x | | x | x | | x | | x | x | | |
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| EarthNC | www.earthnc.com | | x | | | | | x | | x | | | | | x | | | | | | |
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| European Wind Energy Association (EWEA) | www.ewea.org | | | | | | | | | | x | x | | | | | | | | | |
| EvoLogics | www.evologics.de | | | | x | | | x | | x | | | | | | x | | x | | | x |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Exocetus Technologies | www.exocetus.com | | | | | | | | | | | | | | | x | | | | | |
| Exploratech Service | www.xploratech.com | | | | | | | | | | | | | | | | x | | | | |
| Exploration Consultants Australia | www.rpsgroup.com/energy | | | | x | | | | | | x | | | | | | | | | | x |
| Explorer Marine SBoSS | www.explorermarinesboss.com | | x | | x | x | x | x | | x | x | | x | x | | | | | | x | x |
| Exprodat Consulting | www.exprodat.com | | x | | | | | | | | x | | x | | | | | | | x | |
| Eye4Software | www.eye4software.com | | x | | | | x | x | | | | | | x | | | | | | | |
| F. W. Breithaupt & Sohn | www.breithaupt.de | | | | | | | | x | | | | | x | | | | | | | |
| F.A.R.O. | www.faromarine.com | | | | x | | x | | | x | | | x | x | | | | | | | |
| Fagerman Technologies | www.lidarusa.com | | | | | | | | | | | | | | x | | | x | | | |
| Falmouth Scientific (FSI) | www.falmouth.com | | | | | | | | | x | x | | | x | x | | x | x | | | |
| Far Eastern Federal University | www.dvfu.ru | | | | | x | | | x | | x | | x | x | x | x | | x | | x | |
| Fastwave Communications | www.fastwave.com.au | | | | | | | | | | | x | | | x | | | | | | |
| Fathoms | www.fathoms.co.uk | | | | x | x | | x | | | | | | | | | | | x | | |
| Fédération Internationale des Géomètres (FIG) | www.fig.net | | | | x | | | x | | | | | | | | | | | | | |
| Field Surveyors | www.fieldsurveyors.co.uk | | | | x | | | | | | | | | | | | | | | | x |
| Fintry Marine | www.fintry-marine.com | | | | | | | | | | | | | | | | | | x | | |
| Fiomarine | www.fiomarine.com | | | | | | | | | | | x | | | | | | | | | |
| First Institute of Oceanography | www.fio.org.cn | | | | x | | x | x | | | | | | | | | | | | x | |
| Flotation Technologies | www.flotec.com | | | | | | | | | x | x | | | | | x | x | | | | |
| Floyd & Associates | www.floyd-assoc.co.uk | | | | x | | x | | | | x | | x | | | | x | | | | x |
| Fluid Imaging Technologies | www.fluidimaging.com | | | | | x | | | | x | | | | | | | | x | | | |
| FMC Technologies | www.fmctechnologies.com | | | | | | | | | | | | x | | | | x | | | | |
| Force Dredging Systems UK | www.fdsukltd.com | x | | | | | | | x | | x | | x | | | | | | | | |
| Force3 Offshore | www.f3offshore.com | x | | | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | | |
| Forsberg Services | www.forsbergservices.co.uk | | | | | | | | | | | x | | | | | | | | | x |
| Foundocean | www.foundocean.com | | | | | | | | | | x | | | | | | | | | | |
| Fugro | www.fugro.com | | x | | x | | x | x | | x | | | x | x | x | | x | | | | x |
| Fugro (Aberdeen) | www.fugrosurvey.co.uk | | | | x | | x | x | | x | x | | x | x | x | | x | | | | x |
| Fugro Aerial Mapping | www.fugro.com | | | | | | | | | | | | | | x | | | | | | |
| Fugro Chance | www.fugrochance.com | | | | | | | | | | | | | | | | | | | | x |
| Fugro EMU | www.fugroemu.com | | x | | x | x | | x | | x | | x | x | x | x | x | x | x | | | |
| Fugro Engineers | www.fugro.com | | | | | | | | | | x | | | | | | | | | | |
| Fugro France SA | www.fugro.fr | | | | x | | | x | | | | | | | | | | | | | |
| Fugro General Robotics | www.fugrogrl.com | | | | | | | | | | | | | | | x | | | | x | x |
| Fugro Geoconsulting | www.fugro.co.uk | | | | x | x | | | x | | | x | | | | | | | | | |
| Fugro Geodetic | www.fugro.com.pk | | | | | | x | | | | | | | | | | | | | | x |
| Fugro GEOS | www.geos.com | | | | | x | | x | | x | | x | | | | | | x | | | |
| Fugro GeoServices (Alaska Division) | www.fugrogeoservices.com | | | | x | | x | x | | | | | x | x | x | x | | | | | x |
| Fugro Japan | www.fugro.co.jp | | | | x | | | | | | | | | | | | | | | | x |
| Fugro LADS Corporation | www.fugrolads.com | | x | | x | | | x | | | | | | x | x | | | x | | | |
| Fugro Oceanor | www.oceanor.com | | | | | x | | | | x | | | | | | | | x | | | |
| Fugro OSAE | www.fosae.de | | | | x | | | x | | | | | x | | | | | | | | x |
| Fugro Pelagos | www.fugro-pelagos.com | | | | x | | | x | | x | | | | x | | | | | | | |
| **Fugro Satellite Positioning - Marinestar** **See Page 21** | **www.fugromarinestar.com** | | | | | | | | | | | | | | | | | | | | **x** |
| Fugro Seacore | www.seacore.com | | | | | x | | | | x | x | | | | | | | | | | |
| Fugro Seastar | www.fugroseastar.no | | | | | | | | | | | x | | | | | | | | | x |
| Fugro Survey | www.fugro.com | | | | x | | x | x | | | | | x | | | x | | | | | x |
| Fugro Survey Africa | www.fugro-africa.com | | | | x | | | x | | | | | | | | | | | | | |
| Fugro-Inpark | www.fugro-nederland.nl | | | | | | | | | | | x | | | x | | | | | | |
| Fugro-Rovtech | www.rovtech.co.uk | | | | | | | | | | x | | x | | | x | | | | | |
| Fugro-Topnav | www.fugro-africa.com | | | | | | x | | | | | | | | | | | | | | x |
| Fugro-TSM | www.tsmarine.net | | | | | | | | | | x | | x | | | | | | | | |
| Furness Mapping Services | www.furnessmapping.co.uk | | | | x | | | | | | | x | | x | | | | | | | |
| GABRI | www.seastick.it | | | | | | | | | | | | | | | x | | | | | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

# **develogic** subsea systems

develogic subsea systems is a German-based company with a focus on developing and manufacturing turn-key customised data-acquisition and telemetry solutions for marine monitoring applications.

To be able to deliver cost-effective systems with short turnaround times the company has developed a building block system containing all necessary elements for collecting data anywhere in the ocean and transporting it to the customers office. Available technology ranges from modular pressure housings, data loggers and acoustic telemetry solutions to seafloor landers, large sensor- and telemetry buoys.

The end-to-end design and manufacturing process integrates electronic and 3D mechanical design, multi-physics and structural simulation, 3D CAM and computer-aided inspection in order to provide consistent high quality to our customers.

In addition, extensive in-house manufacturing capabilities for both mechanical and electronic systems support the creation of highly integrated, unique solutions.

In 2013, develogic invested close to EUR1M in state of the art CNC machinery as part of the extension of its mechanical workshop. Pick-and-place machines, a vapour phase soldering oven and related inspection, test and measurement equipment allow prototyping of highly integrated customised PCBs with shortest turnaround times.

In addition to the custom solutions business, develogic also specialises in marine acoustic solutions: acoustic telemetry systems with proven ranges up to 30,000m, passive acoustic recording systems with continuous recording capabilities up to 3 years and RAFOS sound sources for underwater navigation are part of the standard product portfolio.

Customers are well-known international research institutes, navies and companies in the sectors renewable energy, construction and offshore oil and gas.

develogic
subsea systems

**More information**
Eiffestraße 598,
20537 Hamburg,
Germany
Phone: +49 4098262513
Email: info@develogic.de
www.develogic.de

| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gardline Environmental | www.gardlinemarinesciences.com | | | | x | x | | x | | x | x | | x | x | | x | | x | | | x |
| Gardline Geosurvey | www.gardline.co.uk | | | | x | | | | | | | | | | | | | | | | |
| Gardline Hydro | www.gardlinemarinesciences.com | x | | | x | x | | x | | x | | | | | | | x | | x | | |
| Gas Survey | www.gas-survey.com | | | | x | x | | x | | | x | | | | | | x | | | | x |
| GBT | www.gbtoffshore.com | | x | x | x | x | x | x | | x | x | | x | x | x | | x | | x | x | |
| Gdynia Maritime University | www.am.gdynia.pl | | x | | x | | x | x | | | | | | | | | | | x | | |
| Gehym | www.gehym.es | | | | x | x | | x | | x | | x | x | | | | x | | | | |
| GEM Elettronica | www.gemrad.com | x | x | | x | | | x | x | x | x | | x | x | x | | x | x | x | | x |
| GENEQ | www.geneq.com | | x | | | | x | x | | | | | | | | | | | | | |
| General Acoustics | www.generalacoustics.com | | | | x | | x | x | | x | x | | x | x | x | | x | x | | | |
| Genrov | www.genrov.com | | | | | | | | | | | | | | | x | | | | | |
| GEO | www.geo.dk | | x | | x | x | | x | | | | x | | x | | | x | | | | |
| Geo Plus | www.geoplus.nl | | | | x | | | x | | | x | | x | | | | | | x | | x |
| GEO TAG Engenharia & Consultoria, Projetos e Serviços. | www.geotagbatimetria.com.br | x | x | | x | x | x | x | x | x | x | x | x | x | | | x | x | | x | x |
| GEO.xyz | www.geoxyz.be | | | | x | | | | | | | x | | x | | | x | | | | |
| Geocean | www.geocean.fr | x | | | | | | | | x | x | | x | | | | x | | | | |
| Geocom | www.geocom.cl | | | | x | | | | | | | | | | | | | | | | |
| Geocomp | www.geocomp.com | | | | | | | | x | x | x | x | | | | | | | | | |
| GEOCON | www.geocon.co.uk | | | | | x | x | | | | | | | | | | x | | | | |
| Geodat | www.geodat.nb.ca | | x | | | | | | | | | | | | | | | | | | |
| Geo-Development Services | www.gds2000.com | | | | x | | | x | | x | | | | x | x | x | x | | | x | |
| Geo-Exp Geophysical Consulting | www.geo-exp.com | | | | | | | | | | | | | | | | x | | | | |
| Geoforce Group | www.geoforcegroup.com | x | | | x | x | | x | x | x | | | x | x | | | x | | | | |
| Geographic Resource Analysis & Science | www.geogr.ku.dk | | | | | x | | x | | x | | | | x | x | | | | | | |
| Geohydrocean & Services | www.geohydrocean.com | | | | x | | | x | | x | | | | | | | | | | | |
| GeoLimits Consulting | www.geolimits.com | | x | | | | | x | | | | x | | | | | | | | | |
| Geolocation | www.geolocation.ca | | | | | | x | x | | | | | | | | | | | | | |
| Geology & Water Research Office | www.gwro.net | | x | | x | x | x | x | x | | | x | | x | x | | x | | | | |
| **Geomares Publishing** **See Page 16, 17** | **www.geo-matching.com** | | | | | | | | | | | **x** | | | | | | | | | |
| GeoMares S.A.S. | www.geomares.com | | x | | x | | | x | | x | | | | x | | | | | | | x |
| Geomarine Associates | geomarineassociates.com | | | | | | | | | | x | | | | | | | | | | |
| Geomatics Centre | www.geomatics.ru | | | | | | | | | | | | x | | | | | x | | | |
| Geomatics Data Solutions | www.GeomaticsDataSolutions.com | | | | x | | | x | | | | x | | x | x | | | | | | |
| GEOmatx Surveying and Mapping | www.geomatx.com | | | | x | | | | | | | | | x | | | | | | | |
| Geomax Positioning | www.geomax-positioning.com | | x | | | | | x | | | | | | | | | | | | | x |
| Geometius | www.geometius.nl | | x | | | x | x | x | | | | | | | x | | | x | | x | x |
| Geometra International | www.geometra.com.sg | | | | x | | | | | | | | | x | | | | | | | x |
| Geometrics | www.geometrics.com | | | | | | | | | | | x | | | | | x | x | | | |
| Geomorph Instruments | www.geomorph.gr | | | | x | | | | | x | | x | | | | | x | | | | |
| Geonautical Sciences | www.geonautical.com | | | | x | | | | | | | | | | x | | | | | | |
| GeoNet Technologies | www.geonet-tech.com | | x | | | | | x | | | | | | | x | | | | | x | |
| Geopolaris | www.geopolaris.it | | | | x | x | | x | | | | | | | | | x | | | | |
| Geo-resources Consulting | www.geo-resources.com | | | | | | | | | | | | | | | | | x | | | |
| Geosense Surveys | geosensesurveys.com | | | | x | | x | x | | x | | | x | x | | | | | | x | x |
| Geosoft | www.geosoft.com | | x | | x | | | x | | | | | x | | | | | | | | |
| GeoSpectrum Technologies | www.geospectrum.ca | | | | | | | | | x | | x | | | | | x | x | | | |
| Geosystem Research | www.geosr.com | | | | | | | | | x | | | | | | | | | | | |
| Geoteam | www.geoteam.biz | x | | x | | x | x | x | | x | x | | x | x | | x | x | | | | x |
| Geotek | www.geotek.co.uk | | | | | | | | x | x | | | | | | | x | | | | |
| Global Geomatics Consultants | www.globalgeomaticsnigeria.com | x | x | x | x | x | | x | | | | x | | x | x | | | | | | |
| Global Navigation Software Company | www.globenav.com | | x | | | | | x | | | | | | | | | | | | | |
| Global Remote Sensing | www.grsensing.com | | | | | | x | x | | x | | | | | x | | | | | | |
| Global Seas | www.globalseas.com | | | | x | | | x | | x | | | | | | x | x | | | | |
| Global Teamwork | www.gtitec.com.my | | x | | | x | | | | | | | | | | | | | x | x | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

# Fugro **Marinestar**

Marinestar is market leader in the development and operation of worldwide satellite-based positioning. The service operates using four constellations: GPS + BEIDOU + GLONASS + GALILEO to achieve more precision, more redundancy & safety. The quality of service shows an accuracy in X and Y of <5cm and in Z <8cm.

**Operational features**

- 8 Commercial L-band beams enable dual beam delivery
- 2 x 2 network control centres and Uplink Stations
- Back-up corrections via internet and options for usage in Polar areas

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Marinestar offers a range of services tailored to the particular applications to ensure a cost-effective solution under every circumstance (except oil & gas), such as: Navy & Coastguard, Deep-sea Trading & Passenger/ Cruise (trim, berthing), Oceanographic Research, Hydrographic Survey, Dredging and Wind Farm installation, Cable lay, Salvage, Yachting and Icebreaking.

MARINESTAR®

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Dillenburgsingel 69,
2263 HW Leidschendam,
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marinestar@fugro.com
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**ACCURACY WORLDWIDE AND 365 DAYS A YEAR AVAILABILITY**

Multi constellation for more precision, more redundancy and more safety.

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- 9 commercial beams
- Back-up corrections via internet (NTRIP)
- Polar options

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- High Resolution
- Highly Robust and User Friendly
- Highly Cost-Effective Swath Bathymetry System

## EchoSweep Multibeam Echosounder

- ► Number of Beams: 140
- ► Range: up to 280 m
- ► 140° Swath Coverage
- ► Free Software for Real-time Operation and Post-processing

- Highly Robust and Accurate Acoustic Doppler Technology
- Significantly Longer Range
- Highly User Friendly And Cost Competitive

## FlowQuest Acoustic Current Profilers

- ► Range: up to **900 m**
- ► Depth: up to 6,000 m
- ► Accuracy: up to 0.25% ± 2.5 mm/s
- ► Data Fusion and Acoustic Modem Options

- The World's Smallest DVL
- Ideal For Underwater Precision Navigation
- Significantly Longer Range
- Smallest Minimum Altitude

## NavQuest Doppler Velocity Logs (DVL)

- ► Range: up to **300 m**
- ► Minimum Altitude: 0.3 m
- ► Depth: up to 6,000 m
- ► Accuracy: up to 0.2% ± 1 mm/s

- The Best Selling USBL Systems In The World
- Broadband Acoustic Spread Spectrum Technology
- Highly Accurate, Robust and Cost Effective

## TrackLink USBL Tracking Systems

- ► Range: up to 11,000 m
- ► Depth: up to 7,000 m
- ► Targets: up to 16
- ► Accuracy: up to 0.15 degree
- ► Price: from $15,000

- The Best Selling Acoustic Modems In The World
- Broadband Acoustic Spread Spectrum Technology
- Transport 95% of The World's Acoustic Communication Data

## High Speed Underwater Acoustic Modems

- ► Data Rate: up to 38,400 baud
- ► Bit Error Rate: < $10^{-9}$
- ► Range: up to 10,000 m
- ► Depth: up to 7,000 m


**LinkQuest Inc.** www.link-quest.com

Tel: (858) 623-9900, 623-9916 Fax: (858) 623-9918
6749 Top Gun Street, San Diego, CA 92121, USA
Email: sales@link-quest.com


No. 3723

# Hydroid

Located in the US and a subsidiary of Kongsberg Maritime, Hydroid, Inc. is a trusted science and technology leader in the field of advanced Autonomous Underwater Vehicles (AUVs).

The company designs, manufactures and markets state of the art AUVs for use in marine research, defence, hydrographic and offshore energy markets, harbour security, environmental monitoring, fishery operations and search and salvage missions. Together, Hydroid's REMUS and Kongsberg's HUGIN AUVs represent the most advanced, diversified and field-proven family of AUVs and AUV support systems in the world.

REMUS AUVs can glide along the surface, dive to depths of 6,000 metres, explore shallow waters or hover in hazardous areas where navigation is difficult. These unmanned, undersea robots have reduced the high costs of ocean exploration and sampling while increasing the availability, quality and quantity of scientific marine data. REMUS AUVs involved with undersea mine reconnaissance have helped save lives by eliminating human divers from mine fields, and the customisable vehicles have helped solve plane and ship disaster mysteries (including locating wreckages such as Air France Flight 447 and generating 3D mapping of the *Titanic*). REMUS AUVs also offer scientists a new view on pressing global issues including climate change, the world's declining fish population and environmental disasters. Developed by a veteran team of engineers, the innovations of Hydroid and Kongsberg Maritime provide a safe and reliable answer to the challenges that have hampered ocean exploration and security.

The company offers world-class engineering design and expert manufacturing facilities for producing state of the art undersea robots, and is dedicated to revolutionising undersea robotics technology as well as advancing oceanography and undersea engineering.

HYDROID
A KONGSBERG COMPANY

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www.hydroid.com

| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
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| Gmantis Solutions (P) | www.gmantis.com | | x | | | | | | | | | | | | | | | | | | |
| GMT Titanium | www.gmttitanium.com | | | | | x | | | | x | x | | | | | x | x | x | | | |
| GNOM ROV | www.gnomrov.com | | | | | | | | | | | | | | | x | | | | | |
| GNSS Research & Applications Centre of Excellence (GRACE) | www.grace.ac.uk | | | | | | | | | | | x | | | | | | | | | x |
| Gourdie Fraser | www.gfa.tc | | x | | x | | | x | | | | x | | x | | | | | | | |
| Governo da Região Adm Especial de Macau | www.marine.gov.mo | | | | x | | | x | | | | | | | | | | | | | |
| Greenaway Marine / SeaPro UK | www.greenawaymarine.com | | | | | x | | | | | | x | | | | | | | | | |
| Greenbay Marine | www.greenbay.com.sg | | | | | x | | | | | x | | | | | | | | | | |
| Groove Associates | www.groove-ltd.com | | | | | x | | | | | | x | | | | | | | | | |
| Groupe Desgagnes | www.groupedesgagnes.com | | | | | | | | | | | | | | | | | | x | | |
| GSE Rentals | www.gserentals.co.uk | | | | x | x | | x | | x | | | | x | x | | | | | | x |
| GSS Marine Services | www.gssplant.co.uk | | | | x | | | | | | x | | x | x | | | | | | | |
| G-Tec Marine Environment | www.g-tec.eu | x | | | | | | | x | | x | | x | x | | | | | | | |
| Habit Research | www.habitresearch.com | | | | | x | | | | | | | | | x | | | x | | | x |
| HafenCity University (HCU) Hamburg - Department of Geomatics | www.hcu-hamburg.de/geomatik | | | | | | | x | | | | x | | | | | | | | | x |
| Hagtak | www.hagtak.is | | | | | | | | | | x | | | | | | | | | | |
| Hallin Marine Systems | www.hallinmarine.com | | | | | | | | | | x | | | | | x | | | x | | |
| hamburgeo. | www.hamburgeo.de | x | | | x | | | | | | | | | x | | | | | | | |
| HARPHA SEA | www.harphasea.si | | x | | x | x | x | | | | | x | | x | | x | | | | | x |
| Harvey-Lynch | www.harvey-lynch.com | | | | x | | | | | | | | | | | x | | x | | x | x |
| HCTech | www.hctech.eu | | | | | x | | x | | x | | | | | x | | | x | | | |
| Headway Marine Technology | www.headwaytech.com | | x | | | | | | | | | | | | | | | | | | |
| Heavens International | heavensintl.com | x | x | | x | x | x | x | | | | | | x | x | | x | | | x | |
| Heerema Marine Contractors Nederland | www.hmc-heerema.com | | | | | | | | | | x | | x | | | x | | x | | | |
| Hegg Marine Solutions | www.heggmarine.com | | | | x | | | | | | | x | | | | | | | | x | |
| Helica | www.helica.it | | | | | | | x | | | | | | | x | | | x | | | |
| Helyx | www.helyx.co.uk | | x | | | | | | | | | x | | | | | | | | | |
| Helzel Messtechnik | www.helzel.com | | | | x | x | | | | x | | | | | x | | | x | | | |
| Hemisphere GNSS | www.hemispheregnss.com | | x | | x | x | x | x | | x | | | | | x | | | x | | | x |
| Hercules Control | www.herculescontrol.com | | | | x | | x | x | | x | | | | x | x | | | | | | |
| HF Jensen | www.hfjensen.dk | | | | | | | | | | | | | | | | | x | | | |
| HidroMap | www.hidromap.com | | x | | x | | | x | | | | | | x | x | | | | | | |
| HidroMares | www.hidromares.com.br | | | | | x | | | | x | | x | | | | | | | | | |
| Highland Geo | www.highlandgeo.net | | x | | x | | | x | x | | | | | | | | | | | x | |
| Hispanova Vigo | www.hispanova.com | | | | | x | | x | | | | x | | | | | | x | | | |
| Historical Wreck Research | www.oceantreasures.org | | | | | | | x | | | | x | | | | | | | | x | |
| HITT | www.hitt.nl | | x | | x | x | | | | | | | | x | | | | x | | | |
| HL Technologies | www.hl-tech.net | | | | | | | | | | | x | | | | x | x | | | | |
| Hoi Tung Communuication & Navigation | www.hoitung.com.hk | | | | | x | | | | | | | | | | | | | | | |
| Holland Marine Technologies | www.hollandmt.com | x | | | | | | | | | | | | | | | | | x | | |
| Holmatro | www.holmatro.com | | | | | | | | | | | x | | | | | | | x | | |
| Hong Kong Marine Department, Hydrogaphic Office | www.hydro.gov.hk/eng | | | | x | | | x | | | | | | x | | | | | | | |
| Horizon Geosciences | www.horizon-geosciences.com | | x | | x | x | x | x | | x | x | x | x | x | x | x | x | | | | x |
| Horizon International Trade & Contract Co. | www.horizonint.com.tr | | | | | | | | | | | | | | | | x | | | | |
| Horizon Marine | www.horizonmarine.com | | | | x | | | | | x | | | | | | | | | | | |
| HPR UK | www.hpruk.com | | | | | | | | | | | | | | | x | | | | | |
| HR Wallingford | www.hrwallingford.com | | x | | x | | | | | | | x | | | | | | | | | |
| Hrvatska Hidrografski Institut, Croatia | www.hhi.hr | | x | | x | x | x | x | | x | | | | | | | | | | | x |
| Hydramotion | www.hydramotion.com | x | | | | | | | | | | x | | | | | | x | | | |
| Hydraulic & Maritime Research | www.ucc.ie/research/hmrc | | | | | | | | | | | x | | | | | | | | | |
| Hydro Geo | www.hydrogeo.org | x | | x | x | x | x | x | | x | x | | x | x | | x | | x | | x | x |
| Hydro Group | www.hydrogroup.plc.uk | | | | | | | | | x | x | x | | | | x | | | | | |
| Hydro Products | www.hydro-products.co.uk | | | | x | | | | | x | | | x | x | | x | | x | | | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

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HYPACK, a Xylem brand and part of YSI, has been a world leader in software development for the hydrographic and dredging industry since 1984. HYPACK® is now the most popular hydrographic software in the world, with close to 10,000 users in 100 countries. Here's why: HYPACK® provides all of the tools necessary to complete your hydrographic, side-scan and magneto meter survey requirements. It provides tools to design your survey, collect your data, apply corrections to soundings, remove outliers, plot field sheets, export data to CAD, compute volume quantities, generate contours, create side-scan mosaics and create/modify electronic charts. Whether you are collecting hydrographic survey data or environmental data or just positioning your vessel in an engineering project, HYPACK® provides the tools needed to complete your job. With users spanning the range from small vessel surveys with just a GPS and single-beam echo sounder to AUV systems, HYPACK® gives you the power needed to complete your task in a system your surveyors can master. HYSWEEP®is our powerful multibeam module that provides for the calibration, data collection and data processing of multibeam sonar and laser scanner data inside the HYPACK® package. HYSWEEP® has been integrated to almost all multibeam, inferometric systems in the market. With over 3,000 HYSWEEP® users on six continents, HYSWEEP® has proven to be powerful, cost effective and easy to learn. DREDGEPACK® is our real-time dredge management system. It is designed to save you money. It keeps your crew working in the dredge cut and prevents them from wasting time and money by digging too deep or outside the channel. DREDGEPACK® is designed to work with cutter suction, hopper, clamshell and excavator operations.

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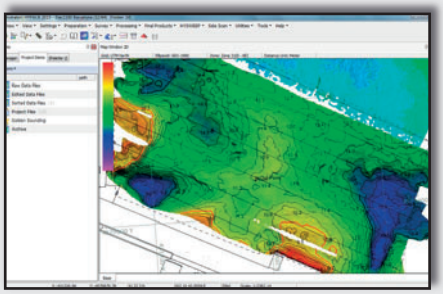

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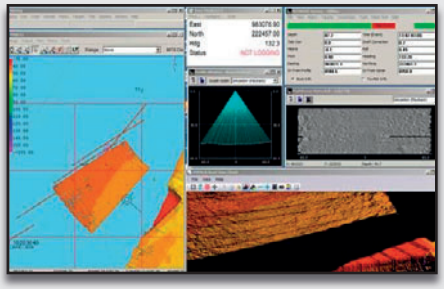

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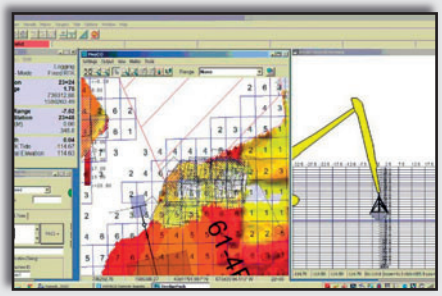

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| Hydro Projects | www.hydroprojects.com | | | | x | | | | | | | | | | | | | | | | |
| Hydro Software Solutions | people.zeelandnet.nl/prblom | x | | | | | | | | | | | | | | | | x | | | x |
| Hydroacoustic Technology | www.HTIsonar.com | | | | | x | | | | | | x | | | | | | x | | | |
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| HydroCharting | www.hydrochart.dk | | x | | x | x | | x | | | | x | | x | | x | | | | x | |
| Hydroconsult | www.hydroconsult.fr | | | x | x | x | | | | | x | | | x | | | | | | | |
| Hydrographic & Oceanographic Department of Japan | www1.kaiho.mlit.go.jp/jhd-E.html | | x | | x | | | | | x | | | | x | | | | | | | |
| Hydrographic Department - Pakistan Navy | www.paknavy.gov.pk/hydro | x | x | | x | x | x | x | | x | | | | x | | | x | | | | x |
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| Hydrographic Office, Finland | www.fta.fi | | | | x | | | x | | | | | | | | | | | | | |
| Hydrographic Society Benelux (HSB) | www.hydrographicsocietybenelux.eu | | | | | | | | | | | x | | | | | | | | x | |
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| Hydro-Lek | www.hydro-lek.com | | | | | | | | | | x | x | | | | x | | | | | |
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| Hydropixel | www.hydropixel.com | | | | | | | x | | | | | | | | | | | | | |
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| Ibercisa | www.ibercisa.es | | | | | | | | | x | | | | | | | | | x | | |
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| ICAN | www.icanmarine.com | | x | | | | | | | | | | | | | | | | | | |
| ICM-CSIS | www.icm.csis.es | | | | | x | | x | | | | | | | | | | | | | |
| Ictineu Submarins | www.ictineu.net | | | | | | | | | | | | | | | x | | | x | | |
| ID.SCOPE | www.id-scope.mc | | | | | x | | x | | x | | | | | | | x | x | | | |
| IEEE | www.ieee.org | | | | | | | | | | | x | | | | | | | | | |
| Igeotest Marina | www.igeotest.com | x | | | | | | x | | | | x | | x | | | | | | | |
| IGP Ing. Buro G. Pinnow | www.igp.de | | | | | x | | | | x | | x | | | | x | | x | | | x |
| IHC Engineering Business | www.engb.com | x | | | | | | | | | x | | x | | | x | | | | | |
| IHC Merwede | www.ihcmerwede.com | x | | | x | | | | | | | x | | | | | | x | x | | |
| IHS | www.ihs.com | | | | | | | | | | x | x | | | | | | | | | |
| IIC Technologies | www.iictechnologies.com | | | | | | | x | | | | | | | | | | | | | |
| IJC (International) | www.ijcinternational.com | x | | | | | | | | | | | | | | | | | | | |
| Imagenex Technology | www.imagenex.com | | | | | | | | | | | | | | | | | x | | | |
| Imbros | www.imbros.com.au | | | | | | | | | x | | | | | | x | | | | | |
| Imtech Marine Netherlands | www.imtech.eu/marine | | | | | | | | | | | x | | | | | | | x | | |
| IN VIVO | www.invivo-environnement.com | | x | | x | x | x | x | | x | | x | | x | | | | | | | |
| Indepth-International | www.indepth-international.com | x | x | x | x | x | x | x | x | x | x | | x | | x | x | x | x | | | x |
| industries-marine-subsea | | | | | | | | | | x | | | | | | | x | | | x | |
| Infield Systems | www.infield.com | | | | | | | | | | x | | x | | | | x | | | | |
| Infomar | www.infomarcompany.com | | | | | | | | | x | | x | | | | | | | | | |
| Infoterra | www.infoterra.co.uk | | | | | | | | | | | | | | x | | | | | | |
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# INNOMAR Technologie GmbH

Innomar Technologie GmbH has been developing and producing efficient acoustic underwater systems for nearly 20 years. The main product line is the SES-2000 series of parametric sub-bottom profilers with echo sounder functionality for shallow waters (0.5m to 500m) and deepwater areas (up to full ocean depth). Two receiver channels (HF and LF) are recorded digitally, but analogue outputs are also available.

The narrow-beam SES-2000 sub-bottom profilers are perfectly suited for exploring the sub-seafloor at high resolution with a sediment penetration of up to 200 metres. Range resolution of up to 1cm, layer resolution of up to 5cm and high ping rates of up to 60Hz ensure outstanding data quality.

Applications include the detection of fluid mud layers and sediment structures for dredging and geological surveys as well as searching buried objects like pipelines and cables or archaeological artefacts. Centre frequency and bandwidth can be adjusted over a wide range by user-friendly data acquisition and control software. All data can be stored in industry standard formats. Optimised and user-friendly post-processing software is also available.

Transducers can be hull-mounted or mounted over-the-side to fit specific user requirements. There are also shallow-water models incorporating a narrow-beam parametric sub-bottom profiler and a dual-channel side-scan sonar for simultaneous operation.

New product launches in 2015/2016 include an improved deepwater model for water depths down to 11,000 metres, a towed parametric SBP for highest resolution sub-seafloor data in shallow water and a USV for operating in extremely shallow waters or remote areas.

Innomar's quality management has been certified by ISO 9001 since January 2000.

**More information**
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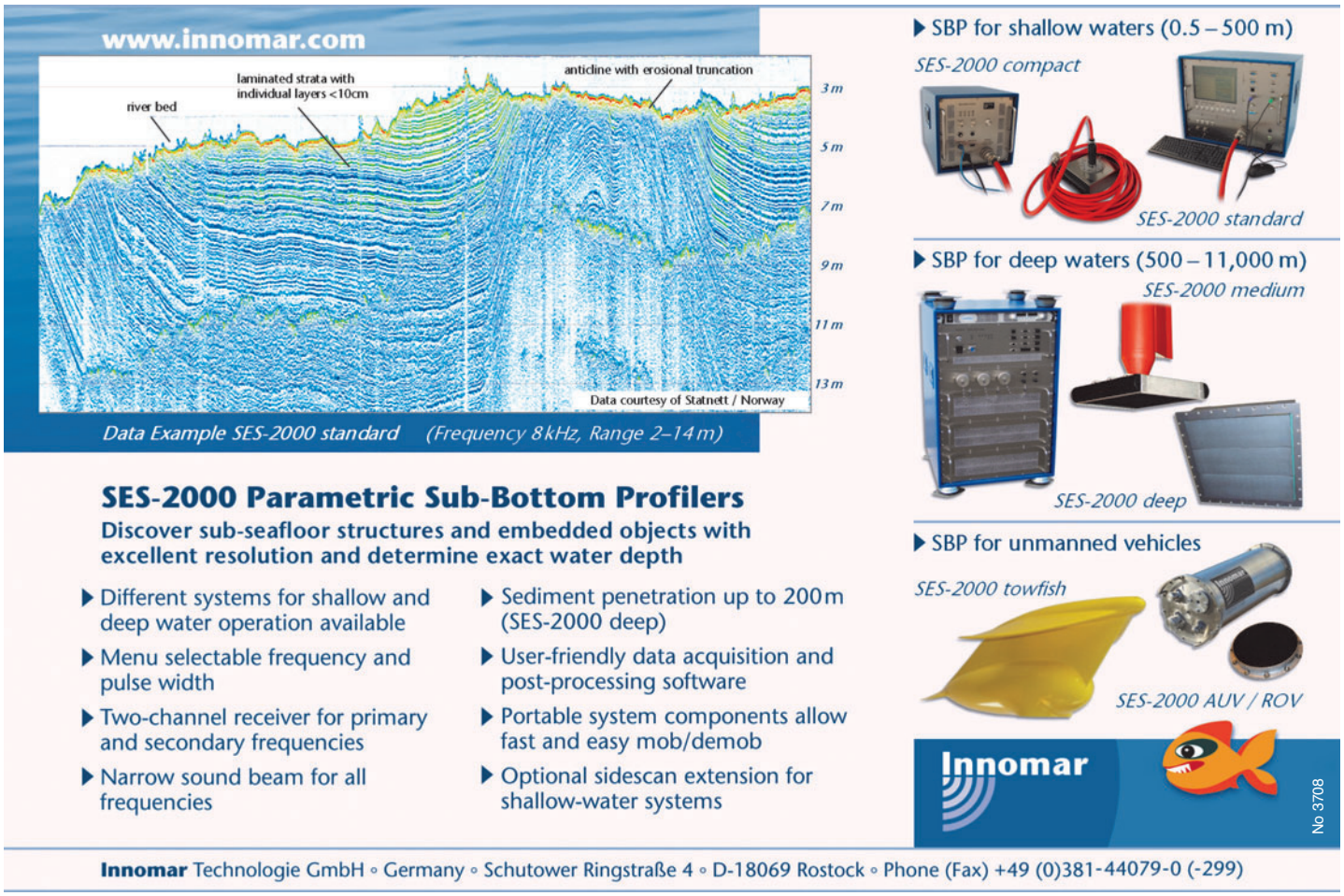
18069 Rostock,
Germany
Phone: +49 381 44079 0
Fax: +49 381 44079 299
info@innomar.com
www.innomar.com



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| Ingcosta | www.ingcosta.com | | | | x | | | | | x | | | | | | | | | | | |
| Ingenieurbuero Dr. Ing V. Patzold | www.vpconsult.de | x | | | x | | | | | | | | | x | | | | | | | |
| Ingeo | www.bathymetrie.fr | | | | x | | | | | | | | | | | | | | | | |
| **Innomar Technologie** **See Page 27** | **www.innomar.com** | | | | **x** | | | | | **x** | | | | **x** | | | **x** | **x** | | | |
| Innova | www.innova.no | | | | | | | | | | | | | | | x | | x | | | x |
| INNOVA Oceanografia Litoral SL | www.oceanografialitoral.com | | | | | | | | | x | | | | | | | | | | | |
| Innovatum | www.innovatum.co.uk | | | | | | | | | | | | x | | x | | | | | | |
| INO | www.ino.ca | | | | | | | | | | | | | | x | | | x | | | x |
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| Insight Marine Projects | www.insight-marine.co.uk | | | | x | | | | | | x | | | x | | | | | | | x |
| Inspektions Systems | www.inspektionssystem.se | | | | | | | | | | | | x | | x | | | | | | |
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| Institute of Acoustics | www.ioa.org.uk | | | | | | | | | | | | | | | | | x | | x | |
| Institute of Geodesy & Navigation, University FAF Munich | www.ifen.unibw-muenchen.de | | | | | | x | x | | | | | | | | | | | | | x |
| Institute of Marine Engineering (IMarEST) | www.imarest.org | | | | | | | | | | | x | | | | | | | x | | |
| Institute of Navigation | www.ion.org | | | | | | | x | | | | x | | | | | | | | | x |
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| International Hydrographic Bureau (IHB), International Hydrographic Organization (IHO) | www.iho.int | | x | | x | | x | x | | | | | | x | | | | | | | |
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| iRov Underwater Services | www.irov.it | | | | x | x | x | x | x | x | x | x | x | x | x | x | | x | | | |
| Irtisaal Enterprises | www.irtisaalgroup.com | | | | x | | | | | | | x | | | | | | | | | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

# iXBlue

iXBlue is a leading global provider of innovative solutions and services for navigation, positioning and imaging. Civil and defence customers rely on our systems, operations, and services for the challenges they face at sea, on land, in the air or in space.

iXBlue aims to help its end-users involved in oceanography, hydrography, geophysics, offshore and deep-sea mining together with search and recovery activities. iXBlue's portfolio is as follows:

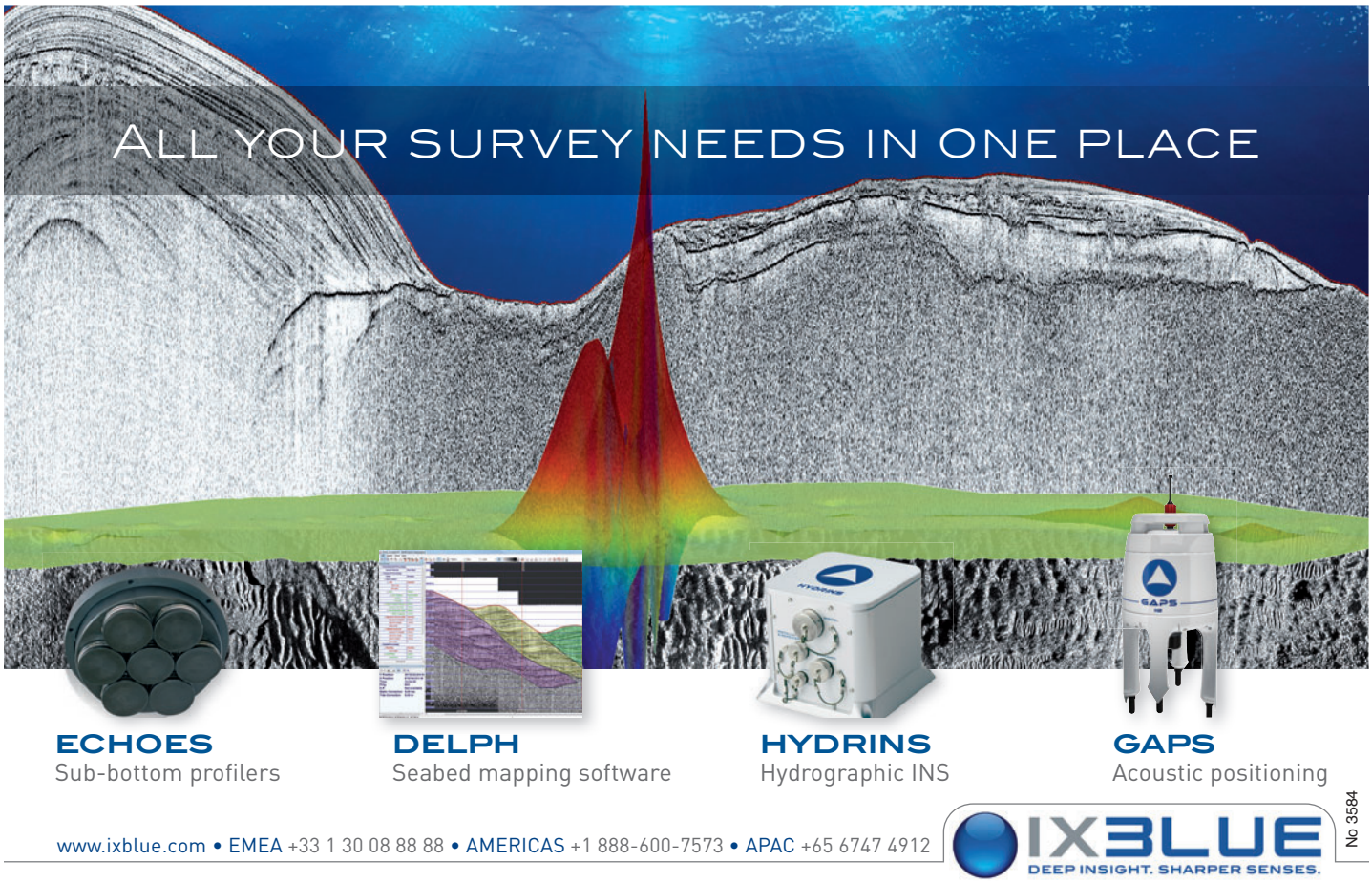
**Subsea Acoustic Systems:**
iXBlue offers USBL and synthetic LBL positioning and tracking, and inertial-acoustic metrology solutions for civil and defence oceanographic applications.
**GAPS**: 4th generation pre-calibrated USBL acoustic positioning system, integrated high-grade INS, 4,000m depth
**POSIDONIA**: ultra-long range USBL, 10,000m depth
**RAMSES**: synthetic acoustic positioning system
**OCEANO**: oceanographic and heavy duty acoustic releases

**High-productivity Seabed Mapping & Sub-bottom Profiling Sharpness:**
iXBlue was the forerunner in bringing synthetic aperture sonar technology to civil end-users.
**SAMS-DT6000**: high-productivity seabed mapping sonar up to -6,000m.
**ECHOES**: high-class wide band, flat spectrum sub-bottom profilers
**DELPH**: multi-sensor processing and mapping software suite (Sonar/Seismic/ Mag Locator)

**Inertial Products Leadership:**
iXBlue is recognised as the world leader in high-performance navigation systems.
**OCTANS**: gyrocompass and motion sensor
**QUADRANS**: high-performance gyrocompass and attitude reference system
**PHINS**: inertial navigation system
**HYDRINS**: hydrographic inertial navigation system
**ROVINS**: inertial navigation system for subsea vehicles (ROV/AUV/DT)
**MARINS**: M Series, very high-performance inertial navigation system
**ATLANS-C**: geo-referencing and orientation system for airborne mapping applications.

IXBLUE
DEEP INSIGHT. SHARPER SENSES.

**More information**
34 Rue de la Croix de Fer,
78100 Saint Germaine en Laye,
France
Phone: +33 130088888
www.ixblue.com



| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isocean SL | www.isocean.es | | | | | | | | | x | x | | | | | x | | | x | | |
| ISPTEL | www.isptl.com.pt | | | | | | | | | | x | | x | x | x | x | | | | | |
| iSurvey | www.isurvey-group.com | | x | | x | | | x | | | x | | | | | | | x | | | x |
| IT Power | www.itpower.co.uk | | | | | x | | | | | x | | | | | | | | | | |
| Italian Navy Hydrographic Institute | www.marina.difesa.it | | x | | x | x | x | x | | x | | | | | | | | | | | x |
| Italian Space Agency (ASI) | www.asi.it | | | | | | | | | | | | | | x | | | | | | |
| ITOCHU Aviation Co. | www.iaj.co.jp | | | | | | | | | | | x | | | | | | | | | |
| **iXBlue** See Page 29 | **www.ixblue.com** | **x** | | | **x** | | | **x** | **x** | **x** | **x** | | **x** | **x** | **x** | | **x** | **x** | | | **x** |
| iXsurvey | www.ixsurvey.com | | x | | x | x | | x | | x | | | | | | | x | | | | x |
| Jacobs University Bremen | www.jacobs-university.de | | | | | x | | | | x | | | | | | x | x | x | | | |
| JANELCO | www.janelco.nl | | | | | | | | | | | x | | | | | | x | | | |
| Jason Electronics | www.jason.com.sg | | | | | | | | | | | x | | | | | | x | | | x |
| Javad Navigation Systems | www.javad.com | | | | | | | | | | | | | | | | | | | | x |
| Javaneh Bahari | www.jb-co.com | | | | | x | | | | | x | | | | | x | | | | | |
| JCL - J. Ciesielski SP | www.jcl.com.pl | | x | | x | | | | | | | | | | | | | | | | x |
| JDR Cable Systems | www.jdrcables.com | | | | | | | | | | | x | | | | x | x | | x | | |
| Jeppesen | www.jeppesen.com/marine | | x | | | | | x | | | | | | | | | | | | | |
| JEX | www.jex-it.fr/en/navtrax-asset- | | | | | | | | | | | | | | | | | | | | |
| Jex Plant UK | www.jexplantukltd.co.uk | x | | | | | | | | | | x | | | | | | | | | |
| JNCC (Joint Nature Conservation Committee) | www.jncc.gov.uk | | | | | x | | x | | | | | | | | | x | | | | |
| John Barrett & Associates | www.jba-surveys.com | | | | x | | | | | | | | | | | | | | | | x |
| John Nurminen Marine | www.troilmarin.com | | x | | | | | x | | | | | | | | | | | | | |
| Jumbo Shipping/ Kahn Scheepvaart | www.jumboshipping.nl | | | | | | | | | | | | | | | | | | x | | x |
| Juniper Systems | www.junipersys.com | | | | | | | | | | | x | | | | | | | | | x |
| JW Fishers | www.jwfishers.com | | | | x | | | x | | x | | | x | x | | | | x | | | |
| K&W Trans | www.kwtrans.nl | | | | | | | | | | | | | | | | | | x | | |
| KAT | www.kat.fi | | | | x | | | | | | | | | | | | | | | | |
| KD Marine | www.kdmarine.com | | | | | | | | | | x | | x | | | x | x | | | | |
| Keel Marine | www.keelmarine.com | | | | | | | | | | | | | | | | | | x | | |
| Kelvin Hughes | www.kelvinhughes.com | | x | | | | | x | | | | | | | | | | | | | |
| Kertau Resources | www.kertau-safa.com | | | | x | | | | | | | x | | | | | | | | x | |
| Kirk Petrophysics | www.kirkpetrophysics.com | | | | | | | | | | x | | x | | | | x | | | | |
| Kito Enterprises | www.kitoenterprises.com | x | | | x | | | | | x | x | | x | x | | x | | | | | x |
| Knudsen Engineering | www.knudsenengineering.com | | | | x | | | | | | | x | | | | | | x | | | |
| KOAC-NPC | www.koac-npc.com | | | | | | | | | | | x | | | | | | | | | |
| Kongsberg Defence & Aerospace AS | www.kongsberg.com | | | | | | | | | | | | | x | | | | x | | | |
| Kongsberg GeoAcoustics | www.km.kongsberg.com/geoacoustics | | | | x | | | x | | x | | | | x | | | | x | | | |
| **Kongsberg Maritime** See Page 31, 68 | **www.kongsberg.com** | | **x** | | **x** | | | | | **x** | **x** | | | | | | | **x** | | | |
| Kongsberg Mesotech | www.kongsberg-mesotech.com | | | | x | | x | | | x | | | | | | | | | | | |
| Kongsberg Seatex AS | www.kongsberg.com | | x | | x | | | x | | | x | | x | | | | x | x | x | | x |
| Kongsberg Underwater Technology | www.kongsberg.com | | | | x | | | | | | | | | | | | | x | | | |
| Koninklijke Boskalis Westminster | www.boskalis.com | x | | | | | | | | | | | | | | | | | | | |
| Kordil International Surveying Services | www.kordil.com | x | x | | x | x | x | x | x | | x | | | x | x | | x | | | | |
| Korea Hydrographic and Oceanographic Administration (KHOA) | eng.khoa.go.kr | | | | x | | | x | | | | | | | | | | | | | |
| Korea Ocean R&D Institute | www.kordi.re.kr | | | | | x | | | | x | | | | x | | | | x | | | |
| Korean Institute of Ocean Science and Technology (KIOST) | eng.kiost.ac/kordi_eng/main/ | | | | | | | | | | | | | | | | | x | | x | |
| Kraken Sonar Systems | www.krakensonar.com | | | | | | | | | | | | | | | | | x | | | |
| Krichsov | krichsovbg.com | x | x | | x | | | x | | | | | x | x | x | | | x | | x | x |
| Kvichak Marine | www.kvichak.com | | | | | | | | | | | | | | | | | | x | | |
| Kystdesign | www.kystdesign.no | | | | | | | | | | | | | | | x | | | | | |
| L3 Communications - Klein Associates | www.l-3klein.com | | | | x | | | | | | | | | | | | | x | | | |
| L-3 Nautronix | www.l-3com.com/nautronix | | x | | | | | | | | | | | | | | | x | | | x |
| Land & Marine Surveys | www.lmsurveys.co.za | x | | | x | x | x | x | x | x | x | x | x | x | x | | x | | | | x |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

# Kongsberg Maritime — Subsea

Kongsberg Maritime Subsea is an established technology provider for the oil & gas exploration, scientific research and maritime engineering sectors with an extensive portfolio of cutting-edge hydroacoustic survey equipment. This ranges from sonar, single and multibeam echo sounders, positioning technology and sophisticated underwater vehicles to data analysis tools and subsea cameras, sensors and instruments. In addition to developing vital technology for the subsea industry, Kongsberg Maritime Subsea also works closely with leading research institutes and organisations to create advances in the fields of hydrography and underwater positioning for scientific and commercial applications. The company is also committed to leveraging its subsea expertise to develop new solutions for environmental monitoring; and to supporting the oil & gas industry to minimise the impact of operations in environmentally sensitive locations.

All Kongsberg Maritime Subsea deliveries are tailored to exact customer requirements and benefit from high-quality design and manufacturing. Kongsberg Maritime Subsea solutions cover all aspects of technology on the seabed, in the water, and on a wide variety of vessels involved in hydrographic and seismic survey, offshore support applications and maritime construction.

Maximising performance by providing the FULL PICTURE.

KONGSBERG

**More information**
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NO-3183 Horten,
Norway
Phone: +47 33034100
subsea@kongsberg.com
www.km.kongsberg.com

# LinkQuest

LinkQuest Inc. is a leading manufacturer of precision acoustic instruments for offshore oil exploration, construction, drilling, survey, environmental study and other oceanographic applications. Our innovative Broadband Acoustic Spread Spectrum (BASS) technology sets new standards for acoustic communication and positioning.

LinkQuest is the dominant supplier of Underwater Acoustic Modems in the world. Its SoundLink high-speed acoustic modems transport more than 95% of the world's acoustic communication data. These systems have set a series of technical performance records in field deployments all over the world. The SoundLink acoustic modems have formed the world's largest underwater acoustic communication networks with hundreds of nodes. LinkQuest's line of TrackLink USBL Acoustic Tracking Systems provides the world's most robust, accurate and cost-effective Ultra Short Baseline (USBL) solutions. The TrackLink systems are the world's bestselling USBL tracking systems.

LinkQuest manufactures highly accurate, robust and cost-effective FlowQuest Acoustic Current Profilers and FlowScout acoustic flow metres for measuring currents, discharge and waves in oceans, harbours, lakes, rivers and open channels and NavQuest Doppler Velocity Logs for precision navigation and positioning of underwater vehicles and divers.

LinkQuest's EchoSweep 300 Multibeam Echosounder is a high-resolution, highly robust and cost-effective swath bathymetric system for mapping of sea floor, inland waterways and reservoirs.

LinkQuest also manufactures PinPoint LBL acoustic positioning systems and Precision Marine Geodetic Systems used for tsunami and earthquake monitoring and prediction.

LinkQuest

**More information**
6749 Top Gun Street,
San Diego,
CA 92121,
USA
Phone: +1 8586239900
sales@link-quest.com
www.link-quest.com

| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Information New Zealand | www.linz.govt.nz | | x | | x | | x | | | | | | | x | x | | | | | | |
| Landsverk | landsverk.fo | | | | | | | x | | | | | | x | | | | | | | |
| Langlois Gaudreau O'Connor | www.lkd.ca | | | | | x | | | | | | | | | | | | | x | | |
| LAPP Muller SAS | www.mullercables.com | | | | | | | | | x | x | | | | | x | | x | x | | |
| Laser Technology | www.lasertech.com | | | | | | | | | | | | | | | | | | | | x |
| **Leica Geosystems** See Page 33 | **www.leica-geosystems.com** | | | | **x** | | | | | | | | | | **x** | | | | | | |
| Lievense | www.lievense.com | | | | | | | | | | | x | x | x | | | | | | | |
| Life Support Engineering | www.lifesupportengineering.com | | | | | | | | | | x | x | x | | | | | | | | |
| **LinkQuest** See Page 22, 31 | **www.link-quest.com** | | | | | **x** | | | | **x** | **x** | **x** | | | | | **x** | | | | |
| Liquid Robotics | www.liquidr.com | | | | | | | | | | | | | | | x | | | | | |
| LizardTech | www.lizardtech.com | | x | | | | | | | | | | | | | | | | | | |
| Lloyd's Register | www.lr.org | | | | | x | | | | | | | | | | | | | x | | |
| LMV | www.lmvsa.com | | | | | | | | | | | x | | | | | | | | | x |
| Lockheed Martin | www.lockheedmartin.com | | | | | | | | | | | x | | | | | | | | | x |
| Loho Mechincal & Electronic Equipment | www.lohocorp.com | | | | | x | | | | | x | | | x | | | | x | | | |
| Lorienne | www.lorienne.com | | | | | | | x | | | | x | | | | | | | | | |
| LUNUS | www.lunus.com.br | | | | x | | | | | x | | | | x | x | | | | | | |
| Lusk Hydrographic Expertise | www.hydrographicexpertise.com | | x | | x | | x | x | | | | | | x | | | | | x | | |
| M.A.R.E.E. | www.maree.fr | | | | | x | | x | | | | | | | x | | | | | | |
| MacArtney Group | www.macartney.com | x | | | x | x | | x | x | x | | | x | | | x | x | x | | | |
| MacDonald, Dettwiler and Associates (MDA) | www.mdacorporation.com | | | | | | | | | | | x | | | x | | | | | | |
| Macfarlane Shipping | www.macfarlaneshipping.com | | | | | | | | | | | | | | | | | | x | | |
| Macoora | www.macoora.org | | | | | x | | | | x | | | | | | | | | | x | |
| Main Source Offshore People (MSOP) | www.offshoremm.com | | | | x | x | | | | x | x | | x | | | | | | | x | |
| Maptek | www.maptek.com.au | | x | | | | | x | x | | | | | | x | | | | | | |
| Marac Electronics | www.marak.gr | | | | | | | | | | | x | | | | | | | | | |
| Marcom-Watson Group | www.marcomwatson.com.au | | | | x | | | | | | | | | | | | | | | | |
| Marimeter | www.marimeter.spb.ru | x | | | x | | | x | | | | | x | x | | | | | | | |
| Marin Miljöanalys | www.marin.se | | | | x | x | | x | | x | | | | x | | | | | | | |
| Marinatec LLC | www.marinatec.net | | | | x | x | x | x | | x | x | | x | x | | x | | x | x | x | |
| Marine Bridge & Navigation Systems | www.mns.spb.ru | x | x | | x | | x | x | | x | x | | x | | | | | | x | | x |
| Marine Current Turbines (MCT) | www.marineturbines.com | | | | | x | | | | | x | x | | | | | | | | | |
| Marine Ecological Surveys | www.mesltd.co | | | | x | x | | | | | x | | | x | | | | | | | |
| Marine Electronics | www.marine-electronics.co.uk | | | | | | | | | | | | | | | | | x | | | |
| Marine Equipment Supply B.V. | www.mestrading.com | | | | | | | | | | | x | | | | | | | | | |
| Marine Geodesy | www.m-geo.ru | | x | | x | | x | | | | | | x | x | | x | | | | x | x |
| Marine Geological Institute | www.mgi.esdm.go.id | | | | x | x | | | | x | | | x | x | | x | x | | | x | |
| Marine GeoSolutions (MGS) | www.marinegeosolutions.com | | | | x | | | | | | x | x | | x | | | x | | | | |
| Marine Information Service (MARIS) | www.maris.nl | | | | | | | | | | | x | | | | | | | | | |
| Marine Institute, School of Ocean Technology (SOT) | www.mi.mun.ca/sot | | | | | x | | x | | | | | | | | x | | | | x | x |
| Marine Offshore Designers (Aberdeen office) | www.modgy.co.uk | x | | | x | | | x | | | x | | | | | | | | | | x |
| Marine Renewable Energy Center (MREC) | www.mrec.umassd.edu | | | | | x | | | | | x | | | | | | | | | | |
| Marine Sampling Holland | www.marinesamplingholland.nl | | | | | x | | x | | | | x | | x | | | | | | | |
| Marine Simulation | www.marinesimulation.com | | | | | | | | | | | | | | | x | | | | x | |
| Marine Sonic Technology | www.marinesonic.com | | | | | | | | | | | x | | | | x | | x | | | |
| Marine Tech | www.marinetech.fr | x | | | x | x | x | x | x | x | x | | x | | x | x | | | | | |
| Marine Technical & Development Services | www.pomaritime.ie | | | | | | x | | | | | | | | | | | | x | | |
| MarineNav | www.marinenav.ca | | | | | | | | | | | x | | | | x | | | | | |
| Mariner Underwater Electronics | www.mariner.gr | | | | | | | | | | | | | | | x | | x | | | |
| **Marinestar Positioning Services** See Page 21 | **www.fugromarinestar.com** | | | | | | | | | | | | | | | | | | | | **x** |
| Marinexplore | www.marinexplore.com | | | | | | | | | x | | x | | | | | | | | | |
| MARiNMET | www.marinmet.com | x | | | x | x | x | x | | x | x | | x | x | | | x | | | | |
| Maris Subsea | www.marissubsea.com | | | | x | x | x | | | x | x | | x | | | x | x | | | | x |
| Mariscope Meerestechnik | www.mariscope.de | | | | | | | | | | | x | | | | x | | | | | |
| Maritime & Coastguard Agency | www.mcga.gov.uk | | x | | x | | | x | | | | | | x | | | | | | | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

# Leica Geosystems

Leica Geosystems develop and sell airborne LiDAR survey systems for complex topography and hydrography. The product line includes Leica HawkEye III and Leica Chiroptera II for combined bathymetry and topography. The Leica DragonEye and the Leica ALS80 are for corridor mapping, high-altitude topography and urban area 3D modelling.

By integrating multiple sensors into the survey systems, Leica Geosystems has optimised the survey efficiency and performance. For everyday nearshore surveys, the Chiroptera II will collect seamless data from water depths of 15m and onto land. It also serves as a standalone topography system for increased survey production. By combining the Leica Chiroptera with the Leica HawkEye III deep bathymetry module, depths down to 50m can be surveyed with the highest possible efficiency and water penetration.

The Leica ALS80 and the Leica DragonEye are 1MHz high-resolution LiDAR systems for advanced topography. The Leica DragonEye is, thanks to its Oblique Scan Technology, optimal for city modelling, urban areas and infrastructure surveys. The Leica ALS80 sensor family offers low to high altitude capability and selectable scan pattern for maximum efficiency and accuracy at all altitudes.

All Leica Geosystems airborne sensors are equipped with the Leica RCD30 high-resolution (80 megapixel) camera for 3D imaging and documentation. This also enables RGBN colouring of the LiDAR point clouds.

The Leica LiDAR Survey Studio (Leica LSS) software allows to simultaneously review all sensor data. This enables users to quickly get an overview and process data from the four sensors (two bathy channels, topography and camera) without stitching, and in the same software, therefore saving time. Manage projects, analyse data, create and view point clouds and images without leaving Leica LSS. Tools such as automatic calibration, seabed characterisation, water refraction correction, etc. are integrated. So are tools for cleaning data, turbid water enhancement, quality assurance, getting coverage plots and more, all in one package.

Leica Geosystems is the only provider building airborne imaging and LiDAR solutions based on a common platform of systems, peripherals and software. Contact us to find out how you can save costs and benefit from a more efficient workflow and reduced training.

Leica Geosystems

**More information**

***Leica Geosystems / Geospatial Solutions Division***
***c/o Airborne Hydrography AB***
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553 03 Jönköping,
Sweden
Phone: +46 36196680
info@airbornehydro.com
www.leica-geosystems.com

**Leica Chiroptera II and HawkEye III**

Combined topographic and bathymetric sensors for nearshore surveys

**Leica ALS80 and DragonEye**

Advanced topographic surveys, such as infrastructure and urban area 3D modelling

Leica Geosystems AG
www.leica-geosystems.com

- when it has to be **right**

Leica Geosystems

No 3705

| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maritime & Port Authority of Singapore | | | | | | | | | | | | | | | | | | | | | |
| Maritime Administration of Latvia Hydrographic Service | www.lja.lv | x | x | | x | | | x | | | | | | x | | | | | | | |
| Maritime Authority Suriname | www.mas.sr | | | | x | | | | | | | x | | x | | | | | | | |
| Maritime Hydrographic Directorate Romania | www.dhmfn.ro | | x | | x | x | x | x | | x | | | | x | | x | | x | | | x |
| Maritime Robotics | www.maritimerobotics.com | | | | | | | | | | | | | | | x | | | x | | |
| Maritime Technology Society | www.mtsociety.org | | | | | | | | | | | x | | | | | | | | x | |
| Maritime Way Scientific | www.maritimeway.ca | | x | | | | | x | | x | | | | | | | | x | | x | |
| Marix | www.marix.co.jp | | x | | | x | | | | | | | | | | | | x | x | | |
| Marlink AS | www.marlink.com | | | | | | | | | | | x | | | | | | | | | |
| Marport C-Tech | www.c-techltd.com | | | | | | | | | | | | | | | | | x | | | |
| Marport Deep Sea Technologies | www.marport.com | | | | | | | x | | | | | | | x | | | x | | | x |
| MarTech | www.martech.it | | | | | | | | | | | | | x | | | | | | | |
| Martech Tunisia | www.martechtunisia.com | | x | | x | | | | | x | | x | | x | x | | | | | | x |
| Martek Marine | www.martek-marine.com | | | | | | | | | | | x | | | | | | | | | |
| Mass Consultants | www.mass.co.uk | | | | | | | | | | | x | | | | | | | | | |
| Massa Products | www.massa.com | | | | | | | | | | | | | | x | | | x | | | |
| Masterconnect | www.masterconnect.pt | x | | | x | | | | | x | | x | | x | | | | | | | x |
| MATE Center | www.marinetech.org | | | | | | | | | x | | | | | | x | | | | x | |
| Materials Systems | www.matsysinc.com | | | | | | | | | | | | | | | | | x | | | |
| MBT | www.m-b-t.com | x | | | x | x | | x | x | x | | | x | | | x | x | x | | | |
| McGregor GeoScience | www.mcgregor-geoscience.com | | | | x | x | x | x | | x | | | | x | | | x | | | | |
| McLane Research Labs | www.mclanelabs.com | | | | | | | | | x | | | | | | | | | | | |
| McMurdo | www.mcmurdo.co.uk | | | | | | | | | | | x | | | | | | | x | | x |
| McNair Engineering | www.mcnair-engineering.co.uk | | | | | | | | | | x | | | | | | | | | | |
| McQuest Marine Sciences | www.mcquestmarine.com | x | | | x | | | | | | | | | x | x | | | x | | | x |
| MCS | www.mcs.com | | | | | | | | x | | x | | x | | | x | x | | | | |
| MCS | www.mcsoil.com | | x | | | | | | | | | x | x | | | x | | | | x | |
| Measurement Devices (MDL) | www.mdl.co.uk | | | | | | | | | | | | | | | | | | | | x |
| Measutronics | www.measutronics.com | x | | | x | | | | | | | | | | x | x | | | | x | x |
| MECCO | www.meccoinc.com | | x | | | | | | | | | | | | | | | x | | | x |
| Medins Havs och Vattenkonsulter | www.medinsab.se | | | | | x | | x | | x | | | | | | | | | | | |
| Medusa Explorations | www.medusa-online.com | | x | | x | x | | x | x | | | | | x | x | | | x | | | |
| MEP Systems | www.mepsystems.com.sg | | | | | | | | | | x | | x | | | | x | | | | |
| Meridian Surveying Engineering | www.meridiansurvey.com | x | | | x | | | | | | | | | x | | | | | | | |
| MERIDIAN+ | www.agpmeridian.com | | | | x | | x | x | | | | | x | x | x | | | | | | |
| Merinorpat | www.merinorpat.com | | | | | | | | | | | | | | | x | | x | | | |
| Meritaito | www.meritaito.fi | x | | | x | | | | | | | | | x | | | | | | | |
| Mermaid Maritime | mermaid.listedcompany.com | | | | | | | | | | x | | x | | | | x | | | | x |
| Merrick & Company | www.merrick.com | | | | | | | x | | | | | | | x | | | | | | |
| Mesuris Bathymetrie | www.mesuris.com | | | | x | | | | | | | | | x | x | | | | | | |
| Metaldec Holding | www.metaldec.nl | | | | x | | | | | | | x | x | x | x | x | | x | | x | x |
| MetOcean Data Systems | www.metocean.com | | | | | x | | | | x | | | | | | | | | | | |
| Metocean Services International | www.metoceanservices.com | | | | | | | | | x | | | | | | | | | | | |
| Micrel | www.micrel.fr | | | | | x | | | | x | | | | | | | | | | | |
| Middle East Dredging Company (Medco) | www.medcodredging.com | x | | | | | | | | | | | | | | | | | | | |
| Military Survey Department, Hydrogaphic Service United Arab Emirates (UAE) | www.uaesurvey.ae | | x | | x | | | x | | | | | | | | | | | | | |
| Minesto | www.minesto.com | | | | | | | | | | x | x | | | | | | | | | |
| MiniB | www.mini-b.com | | | | | | | | | | x | x | | | | | | | x | | |
| MIROS | www.miros.no | | | | x | x | | | | x | x | | | x | x | | | x | x | x | |
| MK Services | www.mkservices.co.uk | | | | | | | | | x | | | | | | x | | x | | | x |
| MMT UK | www.mmt.se | | | | x | x | x | x | | | | | x | x | | x | | | | x | |
| **MMT** **See Page 35** | **www.mmt.se** | | | | **x** | | | | | | **x** | | **x** | **x** | | **x** | | | | | **x** |
| Mobilarm | www.mobilarm.com | | | | | | | | | | | x | | | | | | | | | |
| Model Maker Systems Cape | www.mmsdesign.co.za | | | | | | | x | x | | | x | | x | | | | | | x | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

# MMT

Specialising in high-resolution seabed mapping, MMT offers multi-sensor solutions to a wide range of clients in the offshore industry, primarily within oil & gas, renewable energy and marine cable and hydrography. We collect, process and visualise the conditions of the seabed and the targets on it and beneath. Our services include pre-lay and route surveys for cables and pipelines, site surveys for platforms and wind farms and pipeline and cable inspections. We also offer IMR services with our trusted partners.

MMT possesses the only Survey ROV capable of collecting high-quality data at up to 8 knots. Due to its high speed capacity, the time span needed to carry out the survey will dramatically be reduced. With its high-resolution camera and sensor capacity and the much improved lighting system it will secure sharp data images for important decision making on pipeline or cable projects.

An increased expansion of offshore installations has required a new and innovative approach to UXO detection and clearance, from possible minefield to ALARP certification. As part of the risk assessment for all submarine installations, we offer detection, verification, excavation and clearance services for UXOs in a cost-effective combination with our geophysical, geotechnical and environmental services that is conducted from MMT´s vessels, state of the art equipment and marine survey specialists.

We always have your needs in mind when delivering accurate survey data, safe offshore operations and reports on time. We work closely with you, with expert dedication, every step of the way.

MMT

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info@mmt.se
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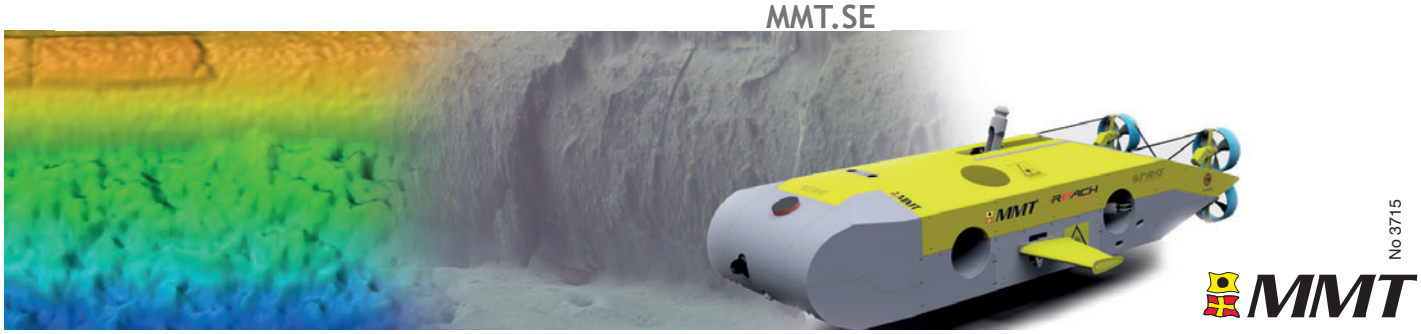
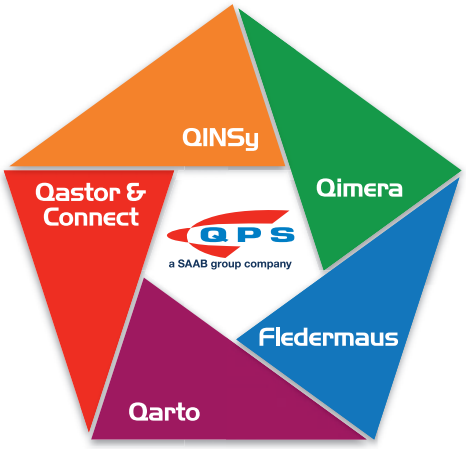
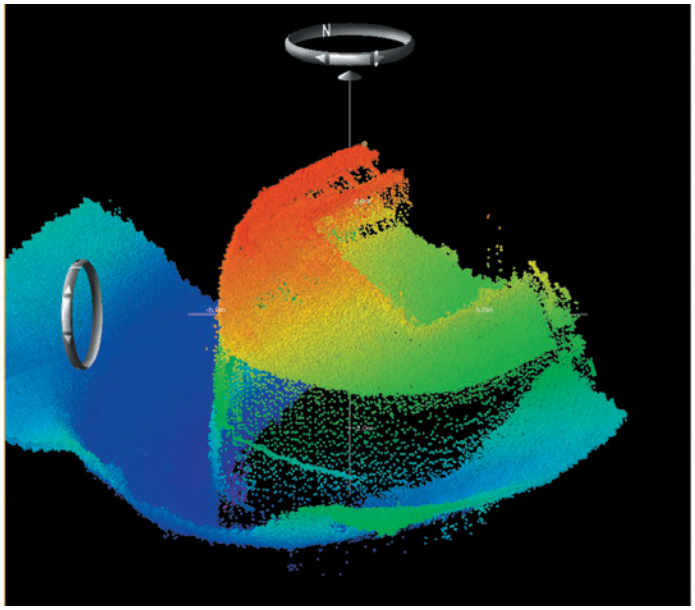
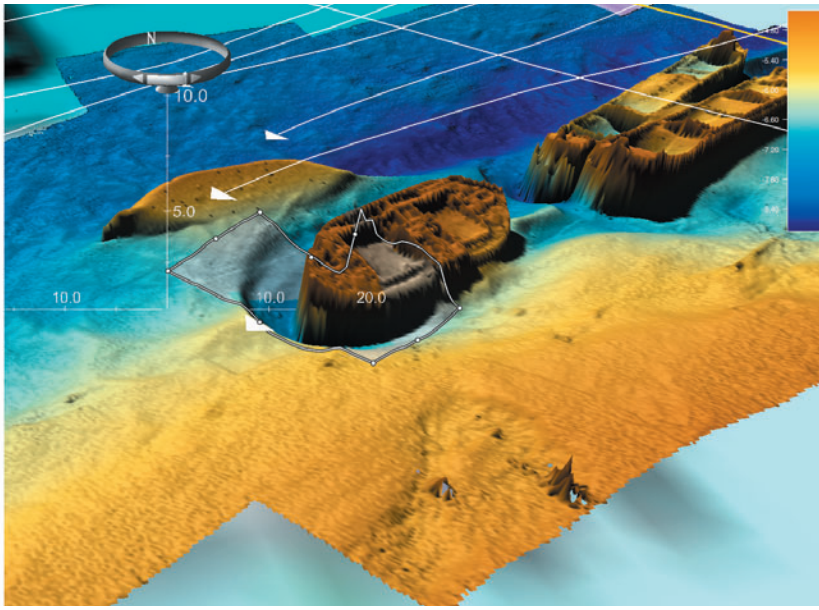





# SPECIALISTS IN **MARINE SPATIAL DATA**






Globally, our spatial data software tools are being used by those engaged in projects to have seamless systems that meet the needs for integrated tools to improve effectiveness in data collection, management and production.
***Collect once and use many times.***
The modern marine geomatic business process starts with data collection and input, through validation and visualisation, to producing and sharing data deliverables.

**Acquire** – QPS QINSy is modular and user friendly. QPS QINSy is equally well suited to less complex bathymetric surveys as it is to highly complex multi-vessel and multisensory offshore construction projects.

**Process** – QPS Qimera is our new multibeam sonar data processing platform, built on the core technologies of QINSy and Fledermaus.

**Visualise** –QPS Fledermaus is a true 4D geospatial processing and analysis tool that is used by commercial, academic and government organizations to interact with their geospatial datasets.

**Sharing** – Our bundle of QPS Composer/Qarto makes very rapid ENC production possible. Plus, GIS is gaining in popularity as the tool for activities like; vessel monitoring and traffic analysis, port operations, environmental data and coastal zone management.

### Marine Spatial Data more than just a chart!

## QPS DELIVERS PRODUCTS TO **ACQUIRE, PROCESS, VISUALIZE, SHARE**

The solutions for your maritime geomatics data and maritime projects
Contact: sales@qps.nl or sales@qps-us.com

www.qps.nl or www.qps-us.com

SAAB TECHNOLOGIES SAAB

No. 3714

# QPS bv

QPS bv has been making industry leading software for collection, post-processing and visualisation of marine spatial data for nearly 30 years. QPS has offices in the Netherlands, the USA, Canada and the UK, and a global network of partners. In 2012, QPS became a member of the SAAB (Sweden) group of companies.

Marine Spatial Data Specialists: Our products QPS QINSy, QPS Qimera, QPS Fledermaus and QPS Qarto seamlessly partner ArcGIS for Maritime, to solve problems and gain efficiencies for maritime-related businesses. We offer a complete software products solution - data collection through to electronic charts or GIS data deliverables. QPS QINSy is our software suite used for many types of marine surveys and marine positioning projects, ranging from simple single-beam surveys to laser/multibeam surveys, to very complex offshore construction works. QPS Qimera is an evolution in hydrographic data processing and it combines the core technologies of QINSy and Fledermaus. QPS Fledermaus is a powerful tool used by commercial, academic and government clients worldwide to interact in 4D with geographical datasets. QPS Qarto's main strength is fast and automated ENC production, by making possible a very short turn-around time from survey to chart that is necessary for the safe operation of today's busy waterways.

Our QPS Qastor is an ECS that enables navigation, piloting and precise docking, as well as several other applications, such as Oil & Gas FPSO/ SPM mooring, patrol vessel and tugboat operations. Using wired or wireless methods, Qastor interfaces to most devices outputting NMEA data strings to AIS units, and to the QPS Qastor Connect Server which supplies meteorological data, VTS targets and ENC updates to Qastor users.
For all our products, we offer training sessions, consulting and technical support services.

QPS
a SAAB group company

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# Valeport Limited

Valeport are the UK's leading manufacturer of Hydrographic and Oceanographic instrumentation, which includes the world's most accurate sound velocity probes / sensors, altimeters, radar level sensors, current metres, tide gauges, fluorometers, wave recorders, CTDs, multi-parameter CTDs and GPS echo sounders.

Supporting Hydrographic surveys with the latest in technology is always our prime aim and our latest SVP, the SWiFT does not disappoint. Designed from the outset with the intention of a seamless workflow, the SWIFT SVP has integral GPS to geo-locate every profile. This new compact unit features high-accuracy sound velocity, pressure, temperature, salinity & density measurement, plus integral GPS, re-chargeable battery and LED status indications for GPS, battery and communications. A 'twist and go' action ensures data can be easily and quickly downloaded, reviewed and translated to common SVP formats wirelessly via Bluetooth Smart using the SWIFT APP on iOS devices where data can be instantly shared via FTP, email and cloud services. Valeport's DataLogX2 software is supplied for those wishing to use a PC.

Valeport's work with MBES manufacturers and OEMs has allowed interesting interfaces of SV sensors and Valeport's new ultraSV is designed for simple integration and easy exchange where required for both shallow and deep water transducer applications. 2016 will see new monitoring challenges and Valeport will be at the forefront innovating and ready to pursue them.

VALEPORT

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| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODUS SI | www.mosud-ltd.com | | | | | | | x | | x | | | x | x | | x | | | | | |
| Mooring Systems | www.mooringsystemsltd.com | | | | | | | | | | x | | | | | x | | | | | |
| Moray First Marine | www.moraymarine.com | | | | | x | | | | | | x | | | | x | | | | | |
| Morintech | www.morintech.com | | x | | | x | | x | | | | x | | | | | | | | | |
| Mosaic Hydrographic Services | www.mosaichydro.com | | x | | | | | | | | | | | | | | | x | | | x |
| MOST (Autonomous Vessels) | www.autonautusv.com | | | | | | | | | | | | | | | x | | x | | | |
| Motion Smith | web.singnet.com.sg/~motsmith | | x | | | | | | | | | | | | | | | | x | | |
| Moxa Europe | www.moxa.com | | x | | | | | | | | | x | | | | | | | | | |
| Mozambique | www.cfm.co.mz | | | | x | | | x | | | | | | | | | | | | | |
| MultiField Geophysics | www.multifield-geophysics.com | | | | | | | | | | | | x | | | | x | | | | |
| Munsys | www.munsys.com | | x | | | | | | | | | | | | | | | | | | |
| Mustang Marine Wales | www.mustangmarine.com | x | | x | | | | | | | | x | | x | | | | | x | | |
| MVGeoscience | www.mvgeoscience.com | | x | | | | | x | | | | x | | | | | | | | | x |
| NAMTEC Manufacturing Forum | www.namtec.co.uk | | | | | | | | | | x | | | | | | | | | | |
| Narval Brakewater Technology | www.narvaltech.com | | | | | x | | | | | | | | | | | | | | | |
| NASA HQ Science Miss. Directorate | www.nasa.gov | | | | | | | | | x | | x | | | x | | | | | | |
| National Hydrographic Centre | www.hydro.gov.my | | | | x | | | | | | | | | x | | | | | | | |
| National Hydrographic Office, India | www.hydrobharat.nic.in | | x | | x | | x | | | x | | | | | x | | | | | | |
| National Hydrographic Office, Royal Navy of Oman | rno.gov.om/English/Topics/Divisions/Survey.php | | | | x | | | x | | | | | | | | | | | | | |
| National Hydrographic Office, Sri Lanka | www.nara.ac.lk | | | | x | | | x | | x | | | | x | | | | | | | |
| National Hyperbaric Centre | www.nationalhyperbariccentre.com | | | | | | | | | | | x | | | | | | | x | | |
| National Institute of Ocean Technology (NIOT) | www.niot.res.in | | | | x | | | | x | x | | | | | | | x | | | | |
| National Mapping and Resource Information Authority, Philippines | www.namria.gov.ph | | | | x | | | x | | | | | | | | | | | | | |
| National Marine Electronics Association (NMEA) | www.nmea.org | | | | | | | | | | | x | | | | | | x | x | | |
| National Maritime Safety Authority | www.nmsa.gov.pg | | | | | | | | | | | x | | | | | | | x | | |
| National Oceanography Centre Southampton | www.noc.soton.ac.uk | | | | x | x | | x | | x | | | | | | | | | | x | |
| Nautikaris | www.nautikaris.com | | x | | x | x | x | | | x | | x | | | | x | | x | | x | x |
| Nautilus Marine Service | www.nautilus-gmbh.de | | | | | | | | | | | x | | | | | | | | | |
| Nautilus Minerals | www.nautilusminerals.com | | | | | | | | x | | | | | | | x | | | | | |
| Nautronix | www.nautronix.co.uk | | | | | | | | | | x | | | | | | | x | | | x |
| Nautronix Group | www.nautronix.com | | | | | x | | | | x | x | | | | x | | x | | | | x |
| Naval Meteorology and Oceanography Command (CNMOC), Hydrographic Service USA | www.cnmoc.navy.mil | | x | | x | | | x | | | | | | | | | | | | | |
| Naval Oceanographic Office | www.navo.navy.mil | | | | x | | | x | | x | | | | x | x | x | | | | | |
| Navcontrol | www.navcontrol.fr | | | | | | | x | | x | | | | x | | x | | | x | | |
| Navgeocom | www.navgeocom.ru | x | | | x | | x | | | | x | | | x | | | | | | | x |
| Navigation Solutions Europe | www.navigationsolutions.eu | | | | | | | | | | | | | | | | | | | | x |
| navigational-charts | | | | | | | x | | | | | | | | | | | | | | |
| Navionics | www.navionics.it | | x | | | | | | | | | | | | | | | | | | |
| Navis Group | www.navisincontrol.com | x | | | x | | | | | | x | | | | | x | | | | | |
| Navtor | www.navtor.no | | x | | | | | | | | | | | | | | | | | | |
| Navtron | www.navtron.ro | x | | | x | x | | | | x | | | | x | | | | x | x | | x |
| NCS Subsea | www.ncs-subsea.com | | | | x | | | | | | x | | x | | | | x | | | | x |
| Neotek | www.neotek-web.com | | | | | | x | | | x | | | | x | | | | | | | |
| Neptune EHF | www.neptune.is | | | | x | x | | x | | | | | x | | | | x | | | | |
| Neptune Marine Services | www.neptunems.com | | | | x | | | x | | | x | | x | | | x | | | | | x |
| Neptune Oceanographics | www.neptune.gb.com | | | | | x | | | | x | | | x | | | | x | | | | |
| NEREIDES | www.nereides.fr | | | | | x | | x | | x | | | | x | | x | | | | | |
| NesscoInvsat Limited | www.nesscogroup.com | | | | | x | | | | x | | | | | x | | | x | | | |
| Netherlands Institute for Sea Research (NIOZ) | www.nioz.nl | | | | | | | | | x | | x | | | | | | | | | |
| NETmc Marine | www.netmcmarine.co.uk | | x | | | | | x | | | | x | | x | | | | | | | |
| Newton Research Labs | www.newtonlabs.com | | | | | | | | | | | | | | | | | x | | | |
| Nexans Italy | www.nexans.com | | | | x | x | | x | | x | x | | | | | x | x | x | | | |
| NKE Instrumentation | www.nke.fr | | | | | | | | | | | x | | | | | | | x | | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

# **RIEGL** Laser Measurement Systems

The Austrian based RIEGL Laser Measurement Systems is a performance leader in research, development and production of terrestrial, industrial, mobile, airborne, and UAS-based laser scanning systems. RIEGL's innovative hard- and software products provide powerful solutions for multiple applications in surveying.

For combined hydrographic and topographic surveying RIEGL offers the fully integrated airborne laser scanning system VQ-880-G. Providing a measurement range of 1.5 Secchi depths it is ideally suited for coastline and shallow-water mapping, river bed profiling, measurement of aggradation zones, hydro-archaeological surveying, etc.

The system includes high-end IMU/GNSS and cameras and is fully calibrated off-factory. An optionally integrated infrared laser scanner complements the data from the green laser scanner and supports the detection of the water surface. The compact and robust housing is compliant with typical hatches in aircrafts and with stabilised platforms. The VQ-880-G provides sophisticated RIEGL laser scanning technology including echo digitisation and online waveform processing with multiple-target capability as well as multiple-time-around processing for high-accuracy ranging.

In addition to the fully integrated turn-key solution VQ-880-G, RIEGL offers the topo-hydrographic airborne laser scanner engine VQ-820-G especially for customers preferring the small form factor and/or flexibility of integration.

In September 2015, RIEGL presented the new BathyCopter, the world's first Small-UAV-based surveying system capable of measuring through the water surface, ideally suited for generating profiles of rivers or water reservoirs. The robust and reliable platform design integrates the topo-bathymetric green laser rangefinder, an IMU/GNSS unit with antenna, a control unit and a digital camera.

RIEGL®

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office@riegl.com
www.riegl.com

| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No Limit Ships | www.nolimitships.com | | | | | | | | | | | | | | | | | | x | | |
| NOAA | www.noaa.gov | | x | | x | x | | x | | x | | | | | x | x | | x | | | x |
| NOAA (Office of Coast Survey) | chartmaker.noaa.gov | | | | x | | | x | | | | x | | | | | | | | | |
| NOAA (Office of Ocean & Coastal Resource Management) | coastalmanagement.noaa.gov | x | | | x | x | | x | | | | | | | | | | | | | |
| NOAA (UNH Joint Hydrographic Center) | www.ccom-jhc.unh.edu | | x | | x | x | | x | | | | | | x | | | | | | x | |
| Norbit | www.norbit.com | | | | | | | | | | | | | | | | | x | | | |
| Norcom Technology | www.norcom-technology.co.uk | | x | | | | | | | | | | | | | | | | | | |
| Nordic Martime | www.nordic.com.sg | | | | | | | | | | | | x | | | | x | | x | | |
| Nordseetaucher | www.nordseetaucher.de | | | | x | | | | | | | x | x | | | | | | x | | |
| Norsk Hydro ASA | www.hydro.com | | x | | | | x | | | | x | | x | | | | | | | | |
| Nortek AS | www.nortek-as.com | | | | | x | | | | x | | | | | | | | x | | | |
| Nortek BV (The Netherlands) | www.Nortek-BV.nl | | | | x | | | | | x | | | | | | | | x | | x | |
| North Star Shipping | www.craig-group.com/North_Star_Shipping | | | | | | | | | | | | | | | | | | x | | |
| Northport Systems | www.fugawi.com | | x | | | | | | | | | | | | | | | | | | |
| Northrop Grumman Sperry Marine | www.sperrymarine.northropgrumman.com | | x | | | | | | | | | | | | | | | | | | |
| Northwestern Michigan College | www.nmc.edu | | | | x | | | | | | | | | | | | | | | x | |
| Norwegian Hydrographic Service | www.statkart.no | | | | x | | | x | | | | | | x | | | | | | | |
| Norwegian Polar Insitute | www.npolar.no | | | | | | | | | x | | | | | | | | | | | |
| Novacavi | www.novacavi.it | | | | x | | | | x | x | x | | x | x | | x | x | x | | | |
| Novatel | www.novatel.com | | | | | | | | | | | | | | | | | | | | x |
| NOVELTIS | www.noveltis.com | | x | | | | | x | | | | | | | | | | | | | |
| NOWPAP RCU (Toyama Office) | www.nowpap.org | | | | | x | | | | x | | | | | | | | | | | |
| NPower Renewables | www.npower-renewables.com | | | | | | | | | | x | | | | | | | | | | x |
| N-Sea | www.n-sea.com | | | | x | | | | | | x | | x | | | x | x | | | | |
| Nymphea Environnement | www.nymphea.fr | | | | x | | | x | | x | | | | x | | | | | | | |
| Observator Instruments | www.observatormeteohydro.com | x | | | | x | | | | x | | | | | | | | x | | | |
| Ocean Aero | www.oceanaero.us | | | | | | | | | | | | | | | x | | | | | |
| Ocean Applied Acoustic-Tech | www.caat.cc | | | | | x | | x | | x | | | | x | | | x | x | | | |
| Ocean Caraibes | www.oceancaraibes.com | | | | x | x | | x | | x | x | x | x | x | | x | | | | x | |
| Ocean Edge | www.oceanedge.biz | | | | | | | | | | | x | | | | | | | | | |
| Ocean Floor Geophysics | www.oceanfloorgeophysics.com | | | x | | | x | x | x | | | | x | | x | x | | x | | | |
| OCEAN Industries BC | www.oceanmarinespace.com | | | | | | | | | x | | x | | | | | | | | | |
| Ocean Installer | www.oceaninstaller.com | | | | | | | | | | x | | x | | | | x | | | | |
| Ocean Instruments | www.oceaninstruments.co.uk | | | | | | | | | | | x | | | | | | x | | | |
| Ocean Marine Industries | www.oceanmarineinc.com | | | | | x | | | | x | | | | | | | | | | | |
| Ocean Net | www.ocean-net.info | | | | | x | | | | x | | | | | | | | x | | | |
| Ocean Optics | www.oceanoptics.eu | | | | | | | | | | | | | | | | | x | | | |
| Ocean Scan Geo-Solutions | www.oceanscangeosolutions.com | | x | x | x | x | x | x | | x | | | | x | | | x | | | x | x |
| Ocean Scientific International (OSIL) | www.osil.co.uk | | | | | x | | | | x | | | | x | | | | x | | | |
| Ocean Signal | www.oceansignal.com | | | | | | | | | | | x | | | | | | | x | | |
| Ocean Sonics | OceanSonics.com | x | | | | x | | | | x | x | x | x | | | x | | x | x | | |
| Ocean Technix | www.oceantechnix.com.au | | | | | x | | | | | | x | x | | | x | | | | | |
| Ocean Therapy Solutions | www.ots.org | | | | | x | | | | | x | | | | | | | | | | |
| Ocean Treasures | www.oceantreasures.org | | | x | | | | x | | | | x | | | | | | | | x | |
| OceanCosmos Corporation | www.OceanCosmos.Com | x | | | x | | x | x | | x | x | x | x | x | x | x | x | | | x | x |
| Oceaneering International | www.oceaneering.com | x | | | | | | | | | x | | x | | | x | x | | | | |
| Oceanfix International | www.oceanfix-international.co.uk | | | | x | | x | | | | | | | | x | | | | | | x |
| OceanGate | www.opentheoceans.com | | | | | | | x | | x | | x | | | | | | | | | |
| Oceanic Imaging Consultants | www.oicinc.com | | | | x | | | | | | | | | | | | | | | x | |
| Oceanic Platform of the Canary Islands (PLOCAN) | www.plocan.eu | | | | | | | | | x | | | | | | | | | | | |
| Oceanic Research and Recovery (ORRV) | www.orrvweb.com | | | | | | | x | | | x | x | | | | | | | | | |
| Oceanlab, University oferdeen | www.oceanlab.abdn.ac.uk | | | | | | | | | x | | x | | | | | | | | x | |
| Oceanscan | www.oceanscan.co.uk | | | | x | | | | | | | x | | x | | | | | | | |

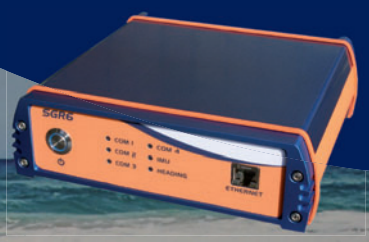
**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OceanServer Technology | www.iver-auv.com | | | | | | | | | | | | | | | x | | | | | |
| OCEANSNELL | www.oceansnell.com | | | | x | x | | x | | x | | x | | x | | | | | | | |
| Oceantech Co | www.oceantech.co.kr | | | | x | | | | | x | | | | | | | | | | | |
| OceanTools | www.oceantools.eu | | | | | | | | | | | x | | | | | | x | | | x |
| Oceanum | www.oceanum.be | x | | | x | x | | x | | | x | | | x | | x | | | x | | x |
| OceanWaveS | www.oceanwaves.de | | | | | | | | | x | | | | | x | | | x | | | |
| OceanWise | www.oceanwise.eu | | x | | | x | x | x | | x | | x | | | x | | | | | x | |
| Octopus Maritime Archaeology Research Association | www.deepresearch.hu | | | | | | | | | x | x | x | | | | x | | | | | |
| OEA Technologies | www.oeatech.com | | | | | x | | | | x | | | | | x | | | x | | | |
| Offshore Analysis & Research Solutions (OARS) | www.oarsolutions.com | | x | x | x | | | x | | | | | | | | | | | | x | |
| Offshore Hydrocarbon Mapping plc (OHM) | www.ohmsurveys.com | | | | x | x | | x | | | x | | x | | | | | | | x | |
| Offshore Marine Management (OMM) | www.offshoremm.com | | | | x | | | | | | x | | x | | | | | | | | |
| Offshore Surveys | www.offshoresurveysltd.com | x | | x | | | x | x | | x | x | | x | x | | x | | | | x | x |
| Ohmex | www.ohmex.com | | | | x | | | x | | | | | | | | | | x | | | |
| Oil and Gas UK | www.oilandgasuk.co.uk | | | | | | | | | | x | | | | | | x | | | x | |
| ONS Foundation | www.ons.no | | | | | | | | | | | x | | | | | | | | | |
| Open Geospatial Consortium (OGC) | www.opengeospatial.org | | | | | | | x | | | | | | | | | | | | | |
| OpenHydro | www.openhydro.com | | | | | | | | | | x | | | | | | | | | | |
| OPITO - The Oil and Gas Academy | www.opito.net | | | | | | | | | | | | x | | | | x | | | x | |
| O-Power | www.o-power.com | | | | | | | | | | x | | | | | | | | | | |
| OPTIMARE Sensorsysteme | www.optimare.de | | x | | x | x | | | | x | | | | | x | | | x | | | |
| Ordnance Survey | www.ordnancesurvey.co.uk | | x | | | | | x | | | | x | | | | | | | | | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation


# Seabed inertial measurement units

www.seabed.nl



The Seabed-IMU-S family are submersible inertial measurement units. An inertial measurement unit, or IMU, is an electronic device that measures and reports a vessel/vehicle's velocity, orientation, and gravitational forces, using a combination of accelerometers and gyroscopes, sometimes also magnetometers. When integrated with SPAN technology, the SBD-IMU-S family is ideal for maritime, airborne and ground applications that require accurate 3D position, velocity and attitude (roll, pitch and azimuth) data.

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mems based

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Getting to the bottom of things

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ORE Offshore | www.edgetech.com/ore-offshore | | | | | | | | | | | | | | | | | x | | | x |
| OSBIT Power | www.osbitpower.com | | | | | | | | | | x | | | | | | | | | | |
| Ostend Marine Services | www.omsshipsupport.be | | | | x | | | | | | x | | | x | | | | | x | | |
| Otronix | www.otronix.com | | | | x | x | | | | x | | | x | x | | x | | x | | | x |
| OTTEN research-vessels | www.research-vessels.de | | | | | | | | | | | | | | | | | | x | | |
| Outland Technology | www.outlandtech.com | | | | | | | | | | | x | | | | x | | | | | |
| Owen International | www.owenint.com.au | | | | | | | | | | | x | | | | | | x | | | |
| Oxley | www.oxleygroup.com | | | | | | | | | | | x | | | | | | | | | |
| P & O Maritme Sevices Ireland | www.pomaritime.ie | | | | | | | | | x | | | | | | | | | x | | |
| P.P. Shirshov Institute of Oceanology | www.ocean.ru | | | | | x | | | | x | | | | | | | | | | x | |
| Pacific Crest | www.pacificcrest.com | | | | | | | | | | | x | | | | | | | | | x |
| Pageo Utama | www.pageo.co.id | | | | x | | x | | | x | | | x | | | x | | | | | x |
| Pan Geo Subsea | www.pangeosubsea.com | | | | | | x | | | | | x | x | | | | | | | | |
| Pan India Electromech | www.panindiagroup.com | | | | x | | | | | x | | | | x | | | | | | | |
| Papua New Guinea Hydrographic Service | www.nmsa.gov.pg/new/ | | | | | | | | | | | | | | | | | | | | |
| Parker Maritime | www.parkermaritime.no | | | | x | | x | | | | x | | | | | | | | | | x |
| Parsian Offshore Gulf Survey (PGS) | www.parsiansurvey.com | | | | x | | | | | | x | | | | | | x | | | | x |
| PARTRAC | www.partrac.com | x | | | | x | | | | x | | | | | | | | | | | |
| Paul Clasper & Associates | www.paulclasper.com | x | | | x | | x | | | | x | | x | | | | | | | | |
| Pelamis Wave Power | www.pelamiswave.com | | | | | | | | | x | x | | | | | | | | | | |
| Pelorus Surveys | www.pelorus-survey.com | | | | x | x | | | | x | | | x | x | | | | | | | |
| Penta Offsore and Marine | www.pentaoffshore.com.sg | | | | | | | | | | | x | | | | | | | x | | |
| Perry Slingsby Systems | www.perryslingsbysystems.com | | | | | | | | | | | | | | | x | | | | | |
| Petrobras | www.petrobras.com.br | | | | | | | | | | | | | | x | x | x | x | | x | |
| Petroleum Geo-Services | www.pgs.com | | | | x | | | | | | x | | | | | x | x | | x | | |
| Phoenix International | www.phnx-international.com | | | | | | | | | | x | | | | x | x | | x | | | |
| Pickworth Cartography | www.pickworthcartography.com | | x | | | | | x | | | | | | | | | | | | | |
| Piezo Composite Transducers | www.pct-ltd.co.uk | | | | | | | | | | | | | | | | | x | | | |
| Ping DSP | www.pingdsp.com | | | | | | | | | | | | | | | | | x | | | |
| Pioneer Pump | www.pioneerpump.co.uk | x | | | | | | | | | | x | | | | | | | | | |
| Pixalytics | www.pixalytics.com | | | | | x | | | | x | | x | | | x | | | x | | | |
| Planet Electronics | www.planet-electronics.co.uk | | | | x | | | | | | | | x | x | | | | | | | |
| Planet Ocean | www.planet-ocean.co.uk | | | | | x | | | | x | | | | | x | | | x | | | |
| PLSM | www.plsm-instrumentation.com | | | | | | | | | | | | | | | | | | | | x |
| PMSS Limited | www.pmss.co.uk | | | | | | | | | | x | x | | | | | | | | | |
| PNI Corporation | www.pnicorp.com | | | | | | | | | | | | | | | | | x | | | x |
| PNT-HYDRO | www.pnt-hydro.com | | | | x | | | | | x | | | x | x | x | x | | x | | x | x |
| Podvoddiagnostika | podvoddiagnostika.ru/en | | | | x | | | | | | | | x | | | | | | | | |
| Polarcus DMCC | www.polarcus.com | | | | | x | | | | | x | | | | | | x | | | | |
| Positioneering | www.positioneering.com | | | | | | x | | | | x | | | | | | | | | | x |
| Powel | www.powel.com | | x | | x | | | | | | | | | | | | | | | | |
| Prairie Ocean Technologies | www.prairieoceantech.com | | | | | x | | | | x | | | x | | | | | x | | | |
| Precise Consultants | www.preciseconsultants.co.uk | | | x | | | | | | | | | | | | | | | | | |
| Precision Hydrographic Services | www.precisionhydrographic.com.au | x | | | x | x | | | | | | | | x | | | | | | | |
| Precision Subsea Servces | www.precisionsubsea.co.uk | | | | | | | | | | x | x | | x | | x | | | | | |
| Predator ROV | predator-rov.com | | | | | | | | | | | | | | | x | | | | | |
| Presens | www.presens.com | | | | | | | | | | | | | | | | | x | | | |
| PrimeGPS | www.primegps.eu | x | | | x | | x | | x | x | | | | x | | | x | | | | x |
| Princetel | www.princetel.com | | | | | | | | | | | | | | | | | x | | | |
| ProCaptura | www.procaptura.no | | | | | | | | | | | x | | | | | | | | | |
| Prolec | www.prolec.co.uk | x | | | | | | | | | | | | | | | | | | | |
| Proteus FZC | www.proteusgeo.com | | | | | | | | | | | | | | x | | | | | | |
| Prove Systems | www.prove.demon.co.uk | | | | | | | | | | | | | | | x | | | | | |
| PS Survey | www.ps-survey.be | | | | x | | | | | | | | | | | | | | | | |

**Dr** Dredging | **ECG** Electronic Charting & GIS | **HS** Human Resources | **HYD** Hydrographic Surveys | **ME** Marine Environments | **MG** Marine Geodesy | **MMC** Marine Mapping & Cartography | **M** Mining | **Oce** Oceanography | **OC** Offshore Construction | **OA** Other Activities | **PIC** Pipeline Inspection & Construction | **PHS** Port & Harbour Surveying | **RS** Remote Sensing | **UUV** ROV, AUV | **SHE** Seismic & Hydrocarbon Exploration | **ST** Sensor Technology | **Sh** Shipping | **Tr** Training | **XYZ** X-Y-Z Position and Specialist Navigation

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SBG Systems is a leading supplier of compact, high performance & cost-effective MEMS-based inertial motion sensing solutions. Our Motion Sensors and Inertial Navigation Systems are ideal for hydrographic applications, ship motion monitoring, Lidar and Buoy orientation and positioning; ROV & AUV control; camera stabilisation and antenna tracking.

Every SBG product includes a MEMS-based Inertial Measurement Unit (IMU) and runs an enhanced Extended Kalman Filter (EKF) that fuses inertial and GNSS data to provide highly reliable data even during GPS outages (bridges, trees, mountains, etc.)

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The Ekinox Series is a line of survey-grade compact inertial sensors integrating a data logger and a web interface for easy configuration. The product line includes a Motion Reference Unit (MRU) that provides Roll and Pitch accurate to 0.05°, Heading and Heave (5cm) as well as several models of Inertial Navigation Systems, embedding or connecting to an RTK GNSS receiver. Ekinox products come with a surface enclosure (IP68) or a titanium-made subsea enclosure (10 metres, or 6,000 metres).

**Apogee Series, The Most Accurate MEMS INS/GNSS Affordable to all Surveyors**

Apogee Series is the most accurate line of inertial navigation systems based on the robust and cost-effective MEMS technology. It provides Roll and Pitch accurate to 0.005° in real-time, Heading and Heave (5cm). The Apogee integrates or connects to a tri-frequency GNSS receiver that receives RTK, Marinestar, OmniSTAR, TerraStar, Veripos, etc. It also provides raw data for even higher performance with post-processing.

SBG SYSTEMS

**More information**
3bis, Chemin de la Jonchère,
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pulsar Measuring Systems | www.pulsarmeasuring.co.uk | | | | | | | | | | | | | x | | | | x | | | |
| Pythagoras | www.pythagoras.net | | x | | | | | | | | | | | | | | | | | | |
| **QPS** See Page 36, 37 | **www.qps.nl** | x | x | | x | | x | x | | x | x | x | x | x | x | | x | | | | x |
| Qstar | www.rovs.es | | | | | | | | | | | | | | | x | | | | x | |
| Quest Geo Solutions | www.qgsl.com | | | | | | | | | | | x | | | | | | | | | |
| Quest Marine Services | www.questmarineservices.com | | | | x | | | | | | | | | | | | | | | | |
| Quest Offshore Resources | www.questoffshore.com | | | | | | | | | | x | x | x | | | | x | | | | |
| Quester Tangent Corporation | www.questertangent.com | | | | x | x | x | x | | | | | | x | x | | | | | | |
| R2Sonic | www.r2sonic.com | | | | | | | | | | | | | | | | | x | | | x |
| Radio Technical Commission for Maritime Services (RTCM) | www.rtcm.org | | x | | | | | | | | | x | | | | | | | x | | |
| RapidEye | www.rapideye.de | | | | | | | | | | | | | | x | | | | | | |
| Rapp Hydema US | www.rappus.com | | | | | | | | | x | x | x | x | | | x | x | | | | |
| Ratelmak Ithalat Ihracat | www.ratelmak.com | | | | | x | | | | | | | | | | | | | x | | |
| RBR | www.rbr-global.com | | | | | | | | | x | | | | | | | | x | | | |
| RC International | www.rcinternational.com.ar | | | | x | | | | | | | | | | | | | | | | |
| RCOM Bremen University | www.rcom-bremen.de | | | | | x | | | | x | | | | | | | | | | | |
| Reflex Marine | www.reflexmarine.com | | | | | | | | | | x | | x | | | | x | | | | |
| Regent Industrial Specialties | www.regentindustrial.com | | | | | | | | | | x | x | | | | | | | x | | |
| REMED | www.remed-italy.com | x | | | x | x | | x | | x | x | | x | x | | x | | x | | | |
| Remote Ocean Systems | www.rosys.com | | | | | | | | | x | | x | | | | | | | | | |
| Remote Ocean Systems UK | www.rosys-uk.com | | | | | x | | | | | | x | x | | | x | | | | | |
| Republic of Singapore Navy | www.mindef.gov.sg/navy | | | | x | | | | | | | x | | | | | | | | | |
| Results Marine - ICL International | www.resultsmarine.com | x | | | x | | | x | | x | | | x | x | x | x | x | | x | | |
| RGL Consulting | www.rocklandocean.com/rgl | | | | | | | | | x | | | | | | | | | | | |
| **RIEGL Laser Measurement Systems** See Page 39 | **www.riegl.com** | | | | | | | | | | | | | | x | | | x | | | |
| RIHMI-WDC | www.meteo.ru | | | | | x | | | | | | | | | | | | | | | |
| RMS Submarine | www.rmssubmarine.com | | | x | | | | | | | | x | | | | | | | | | |
| Robomarine | www.robomarine.com | | | | | | | | | | | | | | | x | | | | | |
| Rochester Corporation | www.rochestercables.com | | | | x | | | x | x | x | | | | x | x | x | x | x | | | |
| Rock Seven | www.rock7.com | | | | | | | | | | | | | | | | | | | | x |
| Rockland Oceanographic Services | www.rocklandocean.com | | | | | | | | | x | | | | | | | | | | | |
| Roland Institute of Technology | www.roland.ac.in | | | | | | | | | | | | | | x | | | | | x | |
| Rolls-Royce Canada | www.brooke-ocean.com | x | | | x | | | x | x | x | | | | x | | | x | | x | | |
| ROMOR | www.romor.ca | x | | | x | | | x | | x | | | | | | x | | x | | x | |
| Roosnek Research & Development | www.roosnek.nl | | | | | | | | | | | x | | | x | | | | | | |
| Roper Resources | www.roperresources.com | | | | | | | | | x | | | | x | | x | | | | | |
| Rosenstiel School of Marine & Atmospheric Science | www.rsmas.miami.edu | | | | | | | x | | x | | | | | x | | x | | | | |
| Ross Laboratories | www.rosslaboratories.com | | | | | | | | | | | x | | | | | | x | | | |
| Rotech | www.rotech.co.uk | x | | | | | | | | | | | | | | | | | | | |
| ROV AS | www.rovas.no | | | | x | | | | | | | | | | x | | | | | | |
| Roving Eye Enterprises | www.orkneyrovspecialist.co.uk | | | | x | | | | | | | | | | | x | | | | | |
| ROVOP | www.rovop.com | | | | x | | | x | | | x | | x | | | x | | | | | |
| Roxar | www.roxar.com | | | | | | | | | | | | | | | | x | | | | |
| Royal Boskalis Westminster | www.boskalis.com | x | | | | | | | | | x | | | | | | | | | | |
| Royal Dutch Shell plc (Headquarters) | www.shell.com | | | | | | x | | x | | x | | x | | | | x | | | | |
| Royal HaskoningDHV | www.rdhv.com | x | | | | | | | | | x | x | | x | | | | | | | |
| Royal Institute of Chartered Surveyors (RICS) | www.rics.org | | | | x | | | x | | | | | | | | | | | | x | |
| Royal Institute of Navigation (RIN) | www.rin.org.uk | | x | | | | | | | | | | | | | | | | | | x |
| Royal Netherlands Navy, Hydrographic Office | www.hydro.nl | | | | x | x | | x | | x | | | | x | | x | | | | | x |
| RPS | www.rpsgroup.com/energy | | | | | | | | | | | | | | | | x | | | | |
| RS Aqua | www.rsaqua.co.uk | | | | | x | | | | x | | | | | | | | | | | |
| R-Systems | www.r-systems.ee | | x | | x | | | x | | | | | | | | | | | | | |
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WÄRTSILÄ

**More information**
Wärtsilä ELAC Nautik GmbH
Neufeldtstrasse 10,
24118 Kiel,
Germany
Phone: +49 431 883 0
elac.marketing@wartsila.com
www.elac-nautik.com

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| RWE Innogy Essen | www.rwe.com | | | | | | | | | x | | x | | | | | | | | | |
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| S+H Systemtechnik | www.sh-systemtechnik.de | | | | x | | x | x | | | | | | x | | | | | | | x |
| Saab Seaeye | www.seaeye.com | | | | | | | | | | | | | | | x | | | | | |
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| SAIC | investors.saic.com | | x | | x | x | | | | x | | | | x | | | | | | | |
| Saildrone | www.saildrone.com | | | | | | | | | | | | | | | x | | | | | |
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| Saipem | www.saipem.eni.it | | | | | | | | | | | | x | | | | x | | | | |
| Saipem UK, Sonsub Division | www.sonsub.com | | | | x | | x | | | | x | | x | | | x | | | | | x |
| Saiv | www.saivas.no | | | | | | | | | x | | | | | | | | x | | | |
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| San Lien Technology Corporation | www.sanlien.com.tw | | x | | | x | | x | | x | | | | | | | x | x | | | |
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| Saudi Arabia Hydrographic Office | gcs.gov.sa/Geospatial-Information/Hydrographic-Survey.aspx | x | x | | x | x | x | x | | x | | | | x | x | | | | | | |
| Saudi Geological Survey | www.sgs.org.sa | | | | x | | x | x | | x | | | | | x | | | | | | x |
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| Scottish and Southern Energy Group | www.scottish-southern.co.uk | | | | | | | | | | | x | | | | | | | | | |
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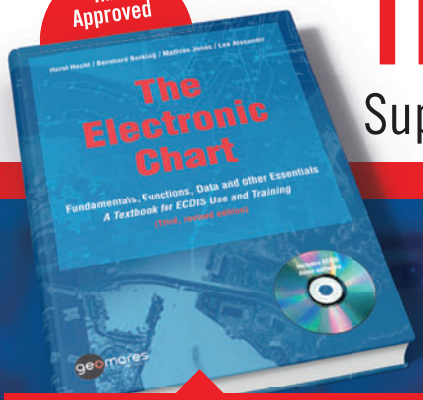


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| Tritech International | www.tritech.co.uk | | | | | | | | | | | | | | | x | | x | | | |
| Tritex NDT | www.tritexndt.com | | | | | | | | | | | | x | x | | | | x | | | |
| Triton Group | www.tritongrouponline.net | | | | | | | | | | | x | | | | | | | | | |
| Triton Imaging International | www.tritonimaginginc.com | | | | | | | | | | | x | | | | | | | | | |
| True North Technologies | www.tntc.com | | | | | | | | | | | | | | | | | x | | | x |
| TSMarine | www.tsmarine.net | | | | x | x | | | | | x | x | x | | | x | | | x | | x |
| Tsurumi Seiki | www.tsk-jp.com | | | | | | | | | x | | | | | | | | | | | |

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| Company | Website | Dr | ECG | HS | HYD | ME | MG | MMC | M | Oce | OC | OA | PIC | PHS | RS | UUV | SHE | ST | Sh | Tr | XYZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TTS | www.ttsurveys.com | | | | x | | | | | | | | | | | | x | | | x | |
| Turkish Hydrographic Service | www.shodb.gov.tr | | | | x | | | | | | | | | | | | | | | | |
| Turner Designs | www.turnerdesigns.com | | | | | x | | | | x | | | | | | | | x | | | |
| Turo Technology | www.turo.com.au | | | | | x | | | | x | | | | | | | | | | | |
| Tyco Telecommunications | www.tycotelecom.com | | | | x | | | | | | | | | | | | | | | | |
| UABL | www.uabl.net | | | | | | | | | | | | | | | | | | x | | |
| U-Boat Worx | www.uboatworx.com | | | | | | | | | x | | | | | | | | | x | | |
| UEK Corporation | www.uekus.com | | | | | x | | | | | | | | | | | | | | | |
| UKHO (UK Hydrographic Office) | https://www.gov.uk/government/organisations/uk-hydrographic-office | | x | | x | x | | x | | x | | | | | | | | | | x | |
| UKPS Offshore | www.ukpsoffshore.com | | | | | | | | | | | | | | | x | | | | x | |
| Ulstein Group | www.ulsteingroup.com | | | | | | | | | | | | | | | | | | x | | |
| Umbilicals International (UI) | www.umbilicals.com | | | | | | | | | x | x | | x | | | x | x | | | | |
| UMI SAN | www.umi.com.br | x | | | x | x | x | x | | | x | | | x | | | | | | | |
| UNCTAD | www.unctad.org | | | | | | | | | | | x | | | | | | | | | |
| Undersea Explorer Maroc | www.nautica-maroc.com | | | | | | | | | | | x | | x | | | | | | | |
| Underwater Observation | www.underwater-observation.com | | | | x | | | | | | x | | x | x | | x | | | | | |
| Underwater Services International | www.hullcleaning.com | | | | | | | | | | | x | | | | x | | | | | |
| Underwater Surveys | www.underwatersurveys.com | | | | x | | | | | | | | | | | | | x | | | |
| Underwater Systems | www.underwatersystems.com | | | | x | | | | | | | | | | | | | | | | |
| Underwater Video Systems | www.uvs.com.au | | | | | | | | | x | | | | | | | | | | | |
| Unique Maritime Group | www.uniquegroup.com | x | x | x | x | x | x | x | x | x | x | | x | x | | x | x | x | | x | x |
| Unique System | www.uniquegroup.com | | | | x | | x | x | | | x | | x | x | | | | | | | x |
| Unmanned Survey Solutions | www.unmannedsurveysolutions.com | x | | | x | | | x | | | x | | x | x | | | | | | | |
| URS | www.ursglobal.com | | | | | x | | | | | | x | | | | | | | | | |
| URS Italia- Divisione CEOM | ursitalia.it | | x | | x | x | | x | | x | | | x | x | | | | | | | |
| US Arctic Research Commission | www.arctic.gov | | | | x | x | | | | | | | | | | | | | | | |
| US Geological Survey (USGS) | www.usgs.gov/water | | | | x | | | | | | | x | | | x | | | | | | |
| US Navy | www.navy.mil | | x | | x | | | x | | x | | | | x | | | | | | x | x |
| US Underwater Services | www.usunderwaterservices.com | x | | | | | | | | | x | | x | | | x | | x | | | x |
| UTEC | www.utecsurvey.com | | x | | x | | x | x | | x | x | x | | | | x | | | | | x |
| UTEC NCS Survey | www.utecsurvey.com | x | | | x | | | x | | x | x | | x | x | | x | | | | | x |
| V. Ships Switzerland | www.vships.com | | | | | | | | | | | | | | | | | | x | | |
| **Valeport** **See Page 37, 44** | **www.valeport.co.uk** | | | | **x** | | | | | **x** | **x** | | | **x** | | | **x** | **x** | | | |
| Van Oord Dredging & Marine Contractors | www.vanoord.com | x | | | x | | | | | | x | | | | | | | | | | |
| Van Reenen HydrographX | www.hydrographx.nl | | | | x | | | | | | | | | | | | | | x | | |
| Van Stee Survey & Supply | www.vanstee.com | | | | x | | | | | | | | | | | | | | | | |
| Van Steenis Geodesie | www.vansteenis.nl | | x | | x | | | | | | | | | | | | | | | | x |
| Vectory Sensor Systems | www.vectory.com | | | | x | | | | | | x | | | | x | | | x | | | x |
| Veecraft Marine | www.veecraft.com | | | | | | | | | | | | | | | | | | x | | |
| Vehicle Control Technologies | www.vctinc.com | | | | | | | | | | | | | | | x | | | | | |
| Veripos | www.veripos.com | | | | | | | | | | | | | | | | | | | | x |
| Vernadskiy Institute | www.geokhi.ru | | | | | x | | | | | | | | | | | | | | | |
| Via Donau | www.via-donau.org | | x | | | | | | | | | | | | | | | | | | |
| Videoray | www.videoray.com | | | | | | | | | | | | | | | x | | | | | |
| VIETNAV | www.vietnav.com | x | x | | x | x | x | x | | | | | | x | x | | | x | x | | |
| Visser & Smit Marine Contracting | www.vsmc.co.uk | | | | | | | | | | x | | | | | | | | | | |
| VisSim | www.vissim.no | | | | | x | | | | | | | | | | | | | x | | |
| Visual Technology Services | www.pdf3d.co.uk | | x | | | | | x | | | | x | | | | | | | | | |
| VisualSoft | www.visualsoft.ltd.uk | | x | | | | | | | | x | | x | | | | | | | | |
| Vlaams Instituut voor de Zee (VLIZ) | www.vliz.be | | x | | | x | | x | | x | | | | | | | | | | x | |
| Vlaamse Hydrografie / Flemish Hydrography | www.vlaamsehydrografie.be | | x | | x | | | x | | x | | | | | | | | | | | |
| VMax Technologies | www.vmaxsimulator.com | | | | | | | | | | | | | | | x | | | | x | |
| Vortice Equipamentos Cientificos | www.vortice-lda.pt | | | | x | x | | | | x | | x | | x | | | | x | | | |
| VOSTA LMG | www.vostalmg.com | x | | | | | | | | | | | | | | | | | | | |

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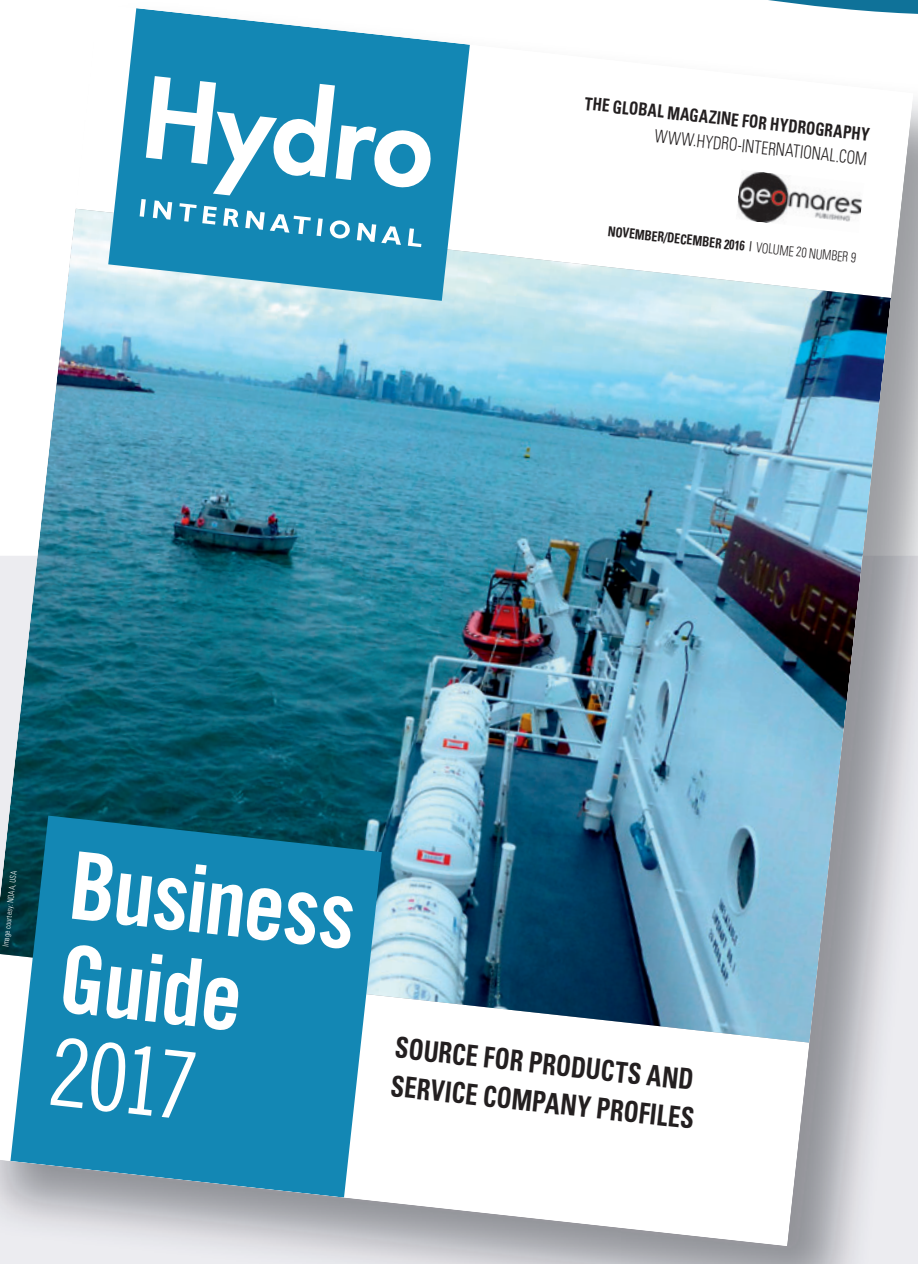


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| Wardle Marine Services | www.wardlemarineservices.co.uk | | | | | | | | | | | x | | | | | | | x | | |
| **Wärtsilä ELAC Nautik** **See Page 47** | **www.elac-nautik.de** | | | | **x** | **x** | | | | **x** | | | | | | | | **x** | | | |
| WASSP | www.enl.co.nz | | | | | | | | | | | x | | | | | | x | | | |
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| WNL Marine Electronics | www.wnl.nl | | x | | | | | | | | | | | | | | | x | x | | |
| Woods Hole Group | www.whgrp.com | | | | | x | | | | x | | | | x | x | | | | | | |
| Woods Hole Oceanographic Institution (WHOI) | www.whoi.edu | | | | x | x | | | | x | | | | | | x | | | | x | |
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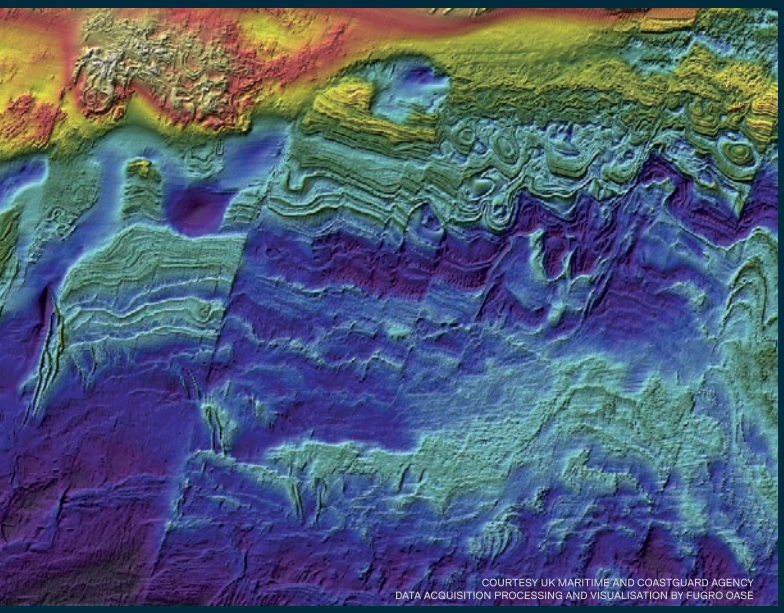

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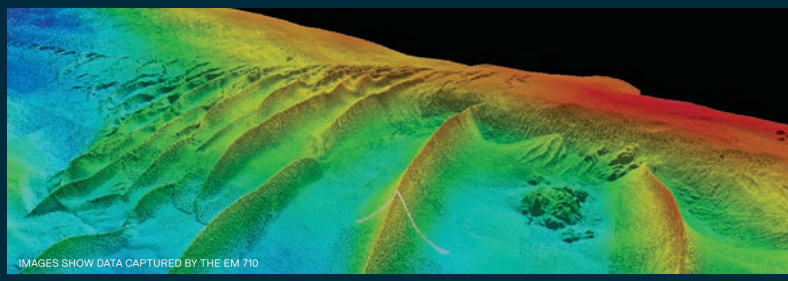

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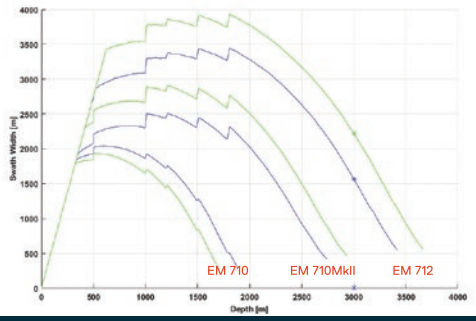


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