Providing offshore solution for a powerful future

Nav Global Equipment Rental Pool

Navigating Beyond the Seas…

US Office: Houston TX 77076.

Nigeria Office: Port Harcourt

| www.navglobalng.com | +234 (0) 706.177.2136 | Info@navglobalng.com


NAV
GLOBAL
SYSTEMS

GNSS

MRU

HEAVE

HEADING

POS MV OCEANMASTER

Description

POS MV OCEANMASTER is proven in all conditions, and is the georeferencing and motion compensation solution of choice for the hydrographic professional.

POS MV blends GNSS data with angular rate and acceleration data from an IMU and heading from the GPS Azimuth Measurement System (GAMS) to produce a robust and accurate full six degrees-of-freedom position and orientation solution.

Key Features

- 0.01° roll and pitch performance
- IN-Fusion 2.0 ensures optimal GNSS aiding for any given
- conditions
- TrueHeave - no requirement to tune filter for specific conditions, no settling time so no run-in time
- High accuracy inertial measurement units featuring SmartCal
- Data time tagged to microsecond accuracy

POS MV
WaveMaster II

Description

POS MV WaveMaster II is a user friendly, turnkey system designed and built to provide accurate attitude, heading, heave, position, and velocity data of your marine vessel and onboard sensors.

POS MV is proven in all conditions, and is the georeferencing and motion compensation solution of choice for the hydrographic professional.

MV blends GNSS data with angular rate and acceleration data from an IMU and heading from the GPS Azimuth Measurement System (GAMS) to produce a robust and accurate full six degrees-of-freedom position and orientation solution.

Key Features

- Up to 0.02° roll and pitch performance
- IN-Fusion 2.0 ensures optimal GNSS aiding for any given conditions
- TrueHeave - no requirement to tune filter for specific conditions, no settling time so no run in time
- High accuracy inertial measurement units featuring SmartCal
- Data time tagged to microsecond accurac

iXblue Octans 3000

Description

OCTANS 3000 is a subsea survey-grade gyrocompass and complete motion sensor for water depths up to 3,000 m. Based on iXBlue's fiber-optic gyroscope (FOG) technology it outputs heading, roll, pitch, heave, rate of turn and acceleration. OCTANS 3000 can be easily upgraded to full INS mode (i.e. ROVINS).

Key Features

- Complete gyrocompass and motion sensor
- Smart HeaveTM
- Fiber Optic Gyroscope (FOG), unique strap-down technology
- Ethernet, Web-based Man-Machine Interface (MMI)
- Titanium made, small, portable plug and play system
- Optional full featured Inertial Navigation System
- High-performance real-time outputs of true heading, roll, pitch, heave, surge, sway, acceleration and rate of turn
- No spinning element hence maintenance free
- Lightweight corrosion free housing for water depth up to 3,000 m, easy to integrate and interface, saves valuable mobilization time

iXBlue Octans Surface 5th Gen

Description

The fifth generation of Octans Surface is an all-in-one product for diverse challenging applications. Octans raises the industry standard in measurement accuracy for roll, pitch, heave, IMO-HSC and certified. Octans Surface is built on iXblue's trusted and unique ultimate-performance Fiber Optic Gyroscope (FOG) technology with thousands of units manufactured).

Key Features

- Improved heading, Smart HeaveTM and real-time heave (30sec period)
- State-of-the-art iXBlue FOG (no spinning elements)
- Ethernet, web-based GUI compatible with survey software suites
- IMO and IMO-HSC certification
- ITAR free (CJ) and O&G license eligibility
- Highly accurate real-time output even in no GPS/GNSS environment
- Industrys best performance-value backed by 5 year warranty
- Ease-of-use and integration
- Robust heading performance for high-speed vessel with high rate-of-turn
- Ease of export

TELEDYNE TSS MERIDIAN

Description

The Meridian gyrocompass is a product suitable for the ever-changing needs of a modern integrated navigation bridge system. This includes highly accurate performance with low cost of ownership and system flexibility. Due to the Meridian's small size and fast settle time of less than 45 minutes, there are no limits to the type of vessel for which it is suitable.

The Meridian gyrocompass can be installed as a stand-alone unit or, together with any of the Meridian range of repeaters and ancillaries, it becomes a single or dual gyro system. The Meridian can also be used to replace many existing gyrocompasses as a retro fit unit.

Key Features

- Type approved to marine equipment directive
- Economic one-box solution
- Fast initial settle time
- Small, lightweight and versatile
- High dynamic heading accuracy
- Versatile range of repeaters and ancillaries
- Subsea variants also available

C-Nav3050

Description

The C-Nav3050 global navigation satellite system (GNSS) receiver provides 66-channel tracking with multi-constellation support for GPS, GLONASS, C-Nav, and SBAS (WAAS/EGNOS) signals, and accepts external RTCM input corrections via the internet. It also provides patented interference rejection and anti-jamming capabilities.

The C-Nav3050 is fully upgradeable, allowing users to go from a single-frequency receiver to multi-frequency with a simple software upgrade. A choice of data rates makes corrections via the CSS over-the-internet (OTI) delivery option a practical solution for reception at higher latitudes and in shadow zones

Key Features

- All-in-view parallel tracking with 66-channels
- Satellite-based augmentation system (SBAS) tracking (WAAS / EGNOS / MSAS / GAGAN)
- Built-in C-NavC1 and C-NavC2 L-Band receiver
- C-NavC2 operating mode with automatic failsafe to C-NavC1
- C/A, P1, P2, L2C, L5, G1, and G2 code tracking
- L1, L2, L5, G1 and G2 full wavelength carrier phase tracking
- C-Nav corrections over Internet
- High-sensitivity / low-signal level tracking
- Fast signal acquisition / re-acquisition
- Superior interference suppression (both in- and out-of-band) using custom tuned antennas
- Patented multipath rejection RTK Extend
- C-Nav over-the-air activation capabilities

Hemisphere GPS VS131

Description

Enhanced GNSS heading and positioning technology with GLONASS. Precise marine and land applications demand the heading and positioning performance of the Vector™ VS131™ receiver making it ideal for professional machine control and navigation applications in any environment.

The Vector VS131 utilizes all of the innovations of Hemisphere GNSS' Crescent® Vector technology, offering a series of features to the Vector VS131 including heave, pitch, and roll output.

Key Features

- L-band DGNSS/HP/XP capable
- Professional heading < 0.03° rms
- Differential position accuracy of < 30 cm rms
- Heave < 30 cm rms
- Pitch and Roll < 1° rms
- Simple menu operations
- Accurate heading up to 3 minutes during GPS outages
- COAST technology maintains differentially-corrected positioning for 40 minutes or more after loss of differential signal
- Integrated gyro and tilt sensors deliver fast start-up times and provide heading updates during temporary loss of GPS

Hemisphere GPS V1000

Description

The Vector™ VS1000 is Hemisphere GNSS' premiere multi-GNSS, multi-frequency receiver designed specifically for the professional marine market. Providing precise heading, Athena RTK positioning, and full Atlas capability, its rugged design is compliant to 60529:2013 IP67 and IEC 60945:2002 8.7 standards.

The VS1000 supports antenna separations up to 10 meters, offering heading accuracy to 0.01 degrees RMS in addition to RTK position accuracy and full support for Hemisphere GNSS' Atlas worldwide L-band corrections.

Key Features

- Athena™ RTK and Atlas® L-band capable
- Extremely accurate heading (to 0.01° RMS)
- Multi-frequency GPS/ GLONASS/BeiDou/Galileo/ QZSS/IRNSS
- Purpose-built for the most challenging environments
- Supports Ethernet, CAN, Serial, USB, Bluetooth, and Wi-Fi
- Powerful WebUI accessed via Wi-Fi plus a 128x64 display and 10 multi-color LED

Hemisphere VS101, VS111 GPS Compass

Description

Precise applications demand the heading and positioning performance of the VS111 GPS compass. Ideal for professional machine control and navigation applications, the VS111 delivers reliable accuracy at significantly less cost than competitors products or traditional methods. The Crescent Vector II technology brings a series of new features to the VS111 including heave, pitch and roll output, and more robust performance.

The VS111 receiver, with its display and user interface, can be conveniently installed near the operator. The two antennas are mounted separately and with a user-determined separation to meet the desired accuracy.

Key Features

- Affordable solution delivers 2D GPS heading accuracy better than 0.1 degree rms
- Differential positioning accuracy of less than 60 cm, 95% of the time
- Integrated gyro and tilt sensors deliver fast start-up times and provide heading updates during temporary loss of GPS
- Fast heading and positioning output rates up to 20 Hz
- Flexibility for easy integration into NMEA 0183 and 2000 Interfaces
- SBAS compatible (WAAS, EGNOS, etc.), integrated beacon (VS111 only), and optional external differential input
- COAST™ technology maintains differentially-corrected positioning for 40 minutes or more after loss of differential signal
- The status lights and menu system make the VS101 series easy to monitor and configure

Hemisphere GPS V123

Description

The Vector™ V123/133 is Hemisphere GNSS' all-in-one single-frequency, multi-GNSS smart antenna which provides Atlas decimeter-level position and precise heading. This rugged design is sealed for the harshest environments and is a great solution for professional marine and other challenging applications.

The all-in-one V123/133 combines simple installation with consistent and precise heading accuracy and decimeter positioning.

Key Features

- Sub-meter positioning
- DGNSS corrections from all SBAS constellations and over beacon
- Position accuracies of 30 cm horizontal RMS without the need of a base station by using Atlas L-band* (*Requires the purchase of a subscription)
- Heave of 30 cm RMS (DGNSS)
- Heading accuracy of 0.30º RMS
- Pitch and roll < 1° RMS
- Simple menu operations
- 1 PPS output
- Event marker input
- 1 full-duplex RS232, 1 full-duplex RS422, and 1 half-duplex RS422 serial ports for NMEA 0183 output and serial configuration
- Up to 50 Hz output
- Accurate heading up to 3 minutes during GNSS outages
- Integrated sensor delivers fast startup times and provide heading updates during temporary loss of GNSS

SUBSEA METROLOGY & WELL MARKING (ACOUSTICS)

VALOR (Versatile and Lightweight Observation ROV)

Description

The standard system has been built to 300m depth rated, however the unique design of this platform allows the vehicle to be extended up to 1000m with simple modifications. The versatility of VALOR is limitless given the significant payload, unrivalled power capability and available bandwidth allowing the ROV to manage complex tooling and sensor packages. Payload examples:

- Dynamic laser scanning skid with INS
- Dual electric manipulator skid
- Cavitation cleaning skid with onboard pump

Key Features

- The lightest ROV platform in its class
- The highest payload in its class
- System power beyond its class
- No power compromised for portability
- Ability to manage complex tooling and
- sensor packages
- Industry leading control software
- More thrust than any other vehicle in this class
- An extremely flexible and configurable platform
- Supports multiple 1Gbps Ethernet links
- Mid-water Station Keeping (MWSK)

H800 / ROV / REMOTELY OPERATED VEHICLE

Description

CA Group's H800 is an Observation and light duty Work Class ROV. Particularly suitable for subsea observation, inspection to light underwater works, ECA GROUP's H800 Remotely Operated Vehicles allows to carry out any subsea missions down to 1000 m sea depth.

Man portable, it is the most powerful ROV of its class.

This portable solution is designed with a configurable and modular architecture making it very easy to equip and maintenance. Offering high capabilities in both viewing and sonar system, it can be fitted with a wide range of sensors and manipulator arms to optimize underwater operations.

Embedded with powerful thrusters, this solution can operate by bad sea conditions or strong currents.

Key Features

- High performance viewing system
- Modular design, options simple to add
- Man portable
- Easy access for maintenance
- Wide range of additional sensors
- Wide range of manipulator arms
- USBL positioning system

Sonardyne Compatt 6+ USBL/LBL Transponder and Modem

Description

OVNav 6+ is a 6G® Wideband®3 and Wideband 2 ranging LBL ROV Transceiver and telemetry transceiver specifically designed for installation on work class ROVs. The support for Sonardyne Wideband 3 enables ROVNav 6+ to operate with our latest Compatt technology, Compatt 6+. In turn, it means ROVNav 6+ fully supports the latest Fusion 2 LBL and SPRINT INS software. Its compatibility with Wideband®3 and Wideband®2 telemetry commands, and support of high power Wideband 2 ranging protocols, proven for their accuracy and robustness, means the ROVNav 6+ offers improved range and acoustic performance in challenging conditions such as on noisy vehicles or in multipath environments.

Key Features

- Medium Frequency (MF) band utilising Sonardyne Wideband 2 and 3 telemetry protocols
- Sonardyne Wideband 2 and HPR 400 navigation compatible
- Faster and easier to set-up, calibrate and operate
- Robust performance
- Real time diagnostics available on ranges to enable quality control
- Multiuser support included
- Automatic power-down if not used for a programmable period
- Integrated modem mode with data rates from 100 to 9,000 bps
- Highly reliable release mechanism
- Omni or directional transducer
- Standard sensors – Temperature, pressure and MEMS inclinometer
- Optional sensors – DigiQuartz, inclinometer and sound velocity
- Battery disconnect fob allows quick battery disconnection

Sonardyne 6G Lodestar Gyro Compatt

Description

The Lodestar GyroCompatt (LGC) integrates Sonardyne's Wideband® acoustic positioning and Lodestar Attitude and Hearing Reference Technology (in one small, highly versatile and robust instrument). This provides high update rate wireless attitude, heading, heave, surge, sway, pressure, SV and acoustic positioning of any subsea object. Compatible with USBL and LBL positioning systems, the Lodestar GyroCompatt product family provides real time motion data for structure deployment via the integrated high speed acoustic modem.

Key Features

- Sonardyne Wideband® 2 acoustic positioning transponder and Lodestar AHRS unit in a single unit
- Rechargeable 28 hr internal battery pack; option for external power
- Acoustic, serial and manual ROV On/Off switch for Lodestar AHRS
- Sonardyne Wideband® and Kongsberg HPR 400 compatible
- Autonomous data logging mode (All sensor data and ranges)
- Faster command and configuration
- Simultaneous ranging and sensor data telemetry in one transmission
- Integrated sound speed & high accuracy pressure sensor with a port for additional auxiliary sensors
- Real time diagnostics on range measurements for quality control Depth rating 3,000 Metres Operating Temperature -10ºC to +50ºC

Sonardyne 6G Fusion LBL

Description

Fusion 6G continues to be the worlds most popular Long BaseLine (LBL) acoustic positioning system by providing the most accurate method for installing subsea structures, tracking ROVs and conducting acoustic metrology. The system operates by measuring acoustic ranges to a seabed array of transponders. The ranges are then passed through a least squares computation to precisely trilaterate a position. As the system utilises a fixed seabed array, the system precision remains the same regardless of water depth.

Key Features

- Survey accuracy tracking of targets in deepwater and over long laybacks
- Interfaces to most makes of DP system
- Builds on worldwide success of existing USBL and LBL systems from Sonardyne
- Efficient equipment utilization; allows for USBL and LBL using common vessel hardware
- Compatible with existing MF frequency transponder inventories – Sonardyne, Wideband, HPR and Hipap

Kongsberg cNODE Transponders

Description

Kongsberg cNODE is a family of transponders for underwater acoustic positioning and data link.

The transponders operate together with both HiPAP®, HPR and cPAP® transceivers. cNODE® utilises Cymbal® acoustic protocol and is compatible with the HiPAP®/HPR 400 channels and telemetry. cNODE® is designed to cover a large range of applications and this is made possible by the modular design and a variety of different transducers, internal and external sensors, housing materials and other add-on functions.

Key Features

- Operates together with HiPAP®, HPR and cPAP® transceivers.
- Compatible with both Cymbal® acoustic protocol for positioning and data link, and HiPAP®/HPR 400 channels and telemetry.
- SSBL positioning.
- LBL positioning.
- Range measurement between transponders (typical, 1 σ standard deviation): — Range accuracy: 0.02 m. — Repeatability: 0.01 m.
- Acoustic data link for command and data transfer.
- Both transponder and responder functions.
- Internal tilt sensor ± 90°. Accuracy ± 2°.
- Pressure relief valve and vent screw (safety devices).
- External connector for transponder configuration and software update via serial line (TTC30).
- Modular design such that the transducer, transponder electronics, battery pack and optional add-ons can be replaced individually

Kongsberg Mini SSBL Transponders

Description

The Mini SSBL transponders (MST) are medium frequency mini-transponders. The MST transponders are to be used with the following underwater positioning and navigation systems:

• HiPAP system

• HPR series It is to be used for applications where a small and lightweight unit is required. A MST transponder is delivered with a moulded protective plastic coating. Uncoated units are available as an option.

• All switches and connectors are recessed within the end cap for added protection.

• The transponder comes with a pigtail with connector.

Key Features

• External selection switches

• Channels for use with the: - HiPAP system / HPR 400 series - HPR 300

• Operator selectable source level to optimise battery life requirements

• Operator selectable sensitivity

• Fast battery charging

• Both transponder and responder function (external power supply)

• Expandability for the future addition of various sensors is built-in

• Fast battery charger (requires rechargable battery)

Kongsberg TTC 30

Description

The TTC unit is for on deck acoustic testing and configuration of the cNODE® transponders. The TTC can test all KM transponder channels including the latest Cymbal acoustic protocols. It can also test telemetry transponders with internal and external sensors. Two TTC models are available:

• TTC 30 (Medium frequency)

• TTC 10 (Low frequency) The TTC units come with:

• 1 x Test Transducer

• 1 x Serial Line Cable

• 1 x Mains Power Cable The TTC is a touch screen/trackball operated transponder tester set in a splash-proof portable case with carrying handle and shoulder strap. It has an internal rechargeable battery.

Key Features

TWO TTC MODELS ARE AVAILABLE:

- TTC 30 (Medium frequency)
- TTC 10 (Low frequency)

BOTH MODELS COMES WITH:

- 1 x Test Transducer
- 1 x Serial Line Cable
- 1 x Mains Power Cable

The TTC 30 & TTC 10 are touch screen/trackball operated transponder testers set in a splash-proof portable case with carrying handle and shoulder strap. It has an internal rechargeable battery.

ACOUSTIC TEST

The test transducer is used for acoustic test. The TTC 30 or TTC 10 communicates with transponder through the transducer. Acoustic test includes interrogation, read/set transponder parameters and reading internal and external transponder sensors.

CONFIGURATION

The serial line cable connects a cNODE® transponder to the TTC 30 or TTC 10 and is used for transponder configuration such as changing acoustic mode and default channels and SW download.

POWER SUPPLY

Mains power cable is used to connect the TTC 30 & TTC 10 to a standard 115/230 Vac mains supply to recharge the internal battery.

Spherical ADCP Buoy (multiple options)

Description

DeepWater Buoyancy understands the value of data recovery as well as ADCP technology, oceanographic operations and what it takes to supply products that ensure success. ADCPs manufactured by Teledyne RD Instruments are the tools of choice for the measurement of currents in both deepwater and coastal environments. While success begins with a great family of instruments, deployment products are a critical link in optimising data return.

Key Features

- Syntactic Composite Buoyancy Material
- Standard & Custom Instrument Frame Designs
- Unobstructed Transducer Beams (Doppler Profilers)
- High Strength, 5,000 & 10,000 lbs. (2,273 kg & 4,545 kg)
- Integral Pressure Case Clamping Bands
- Type 316 Stainless Steel Frame Construction
- Corrosion Resistant with Isolation Bushings & Anodes
- Electro-Polished Stainless
- Single Strength Members in Stainless or Galvanized Steel

ToughBoy Panchax 1.9 with 300kHz or 1200 kHz ADCP

Description

"This buoy is designed for real-time marine monitoring including (but not limited to) any type of wave and current measurement surveys. From harbour monitoring and subsea engineering pre-surveys to wave energy studies and environmental monitoring, the ToughBoy Panchax is the optimum choice – thanks to its robust design, remote configuration, online data display and low cost of ownership.

The ToughBoy Panchax comes in two sizes, 1.2 and 1.9 m in diameter, and in four models. The choice of model depends on which ADCP you wish to include in the solution – or if you wish to purchase the data buoy without an ADCP. This 1.9 m diameter model comes with a 1200 kHz ADCP. "

Key Features

Reliable data

... from an integrated ADCP and high-precision wave sensor

Perfectly matched requirements

... thanks to the possibility of tailoring the data buoy both in terms of equipment and data settings

Reduced risk of wave buoy suffering damages or being lost

... through a robust design with built-in buoyancy material

Long intervals between service inspections

... thanks to electronics with low power consumption and intelligent battery charging

Uncomplicated offshore service operations

... through a design facilitating servicing with fewest possible tools

Remote configuration and monitoring of the data collection buoy

... in web-based software where you get remote access to your data in near real time

Fusion 2
LBL and INS software

Description

Fusion 2 is our most powerful, most configurable and most efficient navigation and positioning software ever. One system from which you can control all of your subsea Long BaseLine (LBL), Sparse LBL and SPRINT Inertial Navigation System (INS) projects.

Key Features

- Our fastest, most capable survey and construction software system yet
- A single solution for your LBL and aided SPRINT INS projects
- Less vessel hardware and less interfaces
- Intuitive and customisable user interface; less training needed
- Supports real-time SLAM calibration of sparse LBL arrays
- Optimised for new 6G+ and Wideband 3

Gyro Compatt 6+ LBL transponder with integrated gyro

Description

Gyro Compatt 6+ is our combined LBL transponder and AHRS, supporting every stage of your structure installation project. The instrument provides wireless high update rates of attitude, heading, heave, surge, sway, temperature, pressure, SV and acoustic positioning of any subsea object. Deep water structure installation - made easy.

Key Features

- Medium Frequency (MF) band utilising Sonardyne Wideband 2 and 3 telemetry protocols
- Rechargeable 28 hr internal battery pack; option for external power
- Acoustic, serial and manual ROV on/off switch for Lodestar AHRS
- Sonardyne Wideband and Kongsberg HPR 400 compatible
- Autonomous data logging mode (al sensor data and ranges)
- Faster command and configuration
- Simultaneous ranging and sensor data telemetry in one transmission
- Integrated sound speed & high accuracy pressure sensor with a port for additional auxiliary sensors

Depth Rating 3,000 m Operating Temperature -5 to +40°C

OCEAN BOTTOM SCAN SONAR / SECTOR SCAN

Tritech Gemini 720id

Description

The Gemini 720id is a deep-rated multibeam imaging sonar. Utilizing an array of transducers, the 720id provides the operator with 120 degree constant swathe of the underwater scene ahead.

Key Features

- 4000m depth rating
- Real time imaging sonar
- Wide field of view
- Ethernet or VDSL communications
- Network all Tritech sensors in Seanet Pro
- Gemini SeaTec software upgrade available
- Software Development Kit available

Kongsberg Mesotech MS1000

Description

The MS 1000 is a PC-based sonar processor that allows the control and display unit for one or more sonar heads and sensors. The system works with several types of digital sonar heads and altimeters available from Kongsberg Mesotech Ltd. With the use of this system, a real-time sonar image can be seen on the screen and can also be recorded for later viewing. Furthermore, annotations can be made with the use of overlays. In addition to sonar data, the system can be connected and receive information from external sensors, such as GPS, MRU, etc

Key Features

- Simultaneous multiple scanning sonar head and altimeter operation, and sensor configurations
- Time-tagged recording of all sonar and sensor inputs to the PC's hard-drive or external recording device
- Advanced target measurement and annotation tools
- Track Plotter module allowing the user to pre-plot search and survey lines, and to geo-reference sonar targets
- Networking capability
- Target tracking (optional)
- Ping synchronization for multiple-head operation; fused data display for dual head profiling
- GeoTiff image format
- 3D profiling with pan device
- Plug-and-play USB keypad

Teledyne Blueview BV5000 3D Mechanical Scanning Sonar

Description

BlueView's BV5000-1350 and BV5000-2250 3D mechanical scanning sonar create high resolution imagery of underwater areas, structures, and objects. With the touch of a button, these new 3D mechanical scanning sonar create 3D point clouds of an underwater scene with minimal training required. The compact, lightweight units are easily deployed on a tripod or an ROV. The scanning sonar head and integrated mechanical pan and tilt mechanism generate both sector scans and spherical scan data. For the first time, get 3D laser-like scanning capabilities underwater, even in low and zero visibility conditions and seamless integration with traditional laser scan imagery.

Key Features

- Easy, one-touch scan function
- 3D mosaic imaging without position info
- Easily combined with laser scan imagery
- Compact size fits into tight spaces
- Operates in low and zero visibility conditions
- Two model options (1.35 and 2.25MHz)
- Standard Ethernet/RS485 interface
- Easy Windows-based software
- Leica Cyclone data compatible
- Sector and spherical scans

Teledyne Blueview M900 Deep Series

Description

BlueView's M900 deep series, rated to 4,000 m, has been engineered to provide deep sea operators with the most reliable deep water imaging sonar system on the market.

Applications: ROV Navigation, Obstacle Avoidance, Situational Awareness, Operations Monitoring, Area Survey/Site Clearance Survey, Touchdown Monitoring

Key Features

- Intuitive, easy-to-use interface
- Crisp, detailed real-time imagery
- On the fly point-to-point measurements
- Video synchronization
- Georeferencing
- Movie exports
- Track multiple targets simultaneously
- Streaming data for automated navigation & OAS
- Enables ROV dynamic positioning
- Easy movie exports

ProViewer Plus features the most advanced target tracking capabilities through exclusive data analytics developed by SeeByte.

Teledyne Blueview P450 Series

Description

BlueView answers the call for a longer range imaging sonar with a wide field-of-view – the all new P450 Series now with S2 electronics is available in five new models including two deepwater options. Each model has a maximum detection range of 300 meters (984 ft.), while delivering crisp, real-time imagery at medium to long ranges. These forward-looking systems are engineered to allow operators to detect, track, monitor, and navigate across extended distances, dramatically improving situational awareness and reducing reaction time. The P450 Series is available in three different field-of-view options including the ultra-wide 130° for the largest detection area available from a compact, portable system.

Key Features

- Video synchronisation and georeferencing
- Intuitively designed user-friendly interface
- Seamless movie exports
- Crisp, detailed real-time imagery
- Real-time, point-to-point measurements
- Specifications
- Operational frequency in the range of 450kHz
- The update rate is up to 12Hz
- Beamwidth is 1? x 10?
- Connector options including MKS, Burton, SeaNet
- Beam spacing is 0.18 degrees

Teledyne Blueview P900-2250 Dual Frequency

Description

The P900-2250-45 (Dual Frequency) sonar system combines the power of BlueView's medium range P900 navigation and inspection sonar with the identification capabilities of a higher frequency 2.25 MHz sonar head.

The P900-2250-45 provides both the medium and ultra-short range imaging required to perform complex tasks in zero visibility conditions. The P900-2250-45 is completely compatible with other BlueView ProViewer sonar making integration seamless for existing customers.

Key Features

- Operating Frequency 900 kHz 2250kHz
- Field-of View 130° 45° Max Range 100m (328ft) 10m (33ft)
- Optimum Range 2-60m (6.6-197ft) 0.5-7m (1.6-23ft) Beam Width (horizontal) 1° 1°
- Beam Width (vertical) 12° 20°
- Number of Beams (maximum) 768 256 Beam Spacing 0.18° 0.18°
- Range Resolution 1.3cm (0.54 inch) 0.6cm (0.25 inch) Update Rate* Up to 25Hz Up to 25Hz

Kongsberg
MS1071 High Res

Description

This version of the 1071-Series Sonar has been specifically designed to produce the highest resolution scanning sonar images possible with 675 kHz. Its design is targeted at bottom clearance, body recovery, underwater construction and applications where data clarity supersedes any other requirement.

The sonar head is compatible with the MS1000 and MS900D Surface Processors. To take full advantage of the advanced features and high resolution this head has to be operated with the MS1000 processor.

Key Features

- Operating Frequency 675 kHz
- Beam Width 0.9° X 30° Fan (nominal)
- Range 0.5 - 100 Metres typical; 150 Metres obtainable
- Range Resolution ≥ 19 mm (@ 1500m/sec speed of sound, 25 µs transmit pulse)
- Sampling Resolution ≥ 2.5 mm
- Scan Angle 360° continuous
- Mechanical Step Size ≥ 0.225°
- Scan Speed nom 11 sec/360° @ 10 m and 1.8° step size (@ 230 kbits/sec.)
- nom 36 sec/360° @ 100m and 1.8° step size (@ 230 kbits/sec.)

Tritech Gemini 720is – Multibeam Imaging Sonar

Description

The 720is is the latest generation from Tritech's renowned multibeam sonar range and offers a real-time, high frequency imaging solution. The Gemini 720is operates at 720kHz and this combined with Tritech's state-of-the-art processing electronics, produces images of superb clarity. This latest design is ideal for pan and tilt mounting on observation class ROVs.

With a 120° field of view and a fast update rate of 30Hz, the Gemini 720is is ideal for poor visibility environments.

Key Features

- 720kHZ operating frequency
- CHIRP processing for high resolution imagery
- Wide 120° field of view
- Real-time updates for video like imagery
- Integrated velocimeter for accurate ranging
- Ethernet or VDSL communications
- Software development kit available

GEOPHYSICAL
ENGINEERING SURVEY
&
ENERGY RENEWABLES

Innomar Compact Sub-Bottom Profiler

Description

The Innomar "compact" model was designed for inshore surveys in shallow-water down to 400 meters water depth, but can also be used in coastal areas.

Because of its small size and weight this system is convenient even on small boats. Controlled via Ethernet using any Windows based PC or laptop it is a user friendly and affordable design, too. For this SBP model there is a Sidescan Extension available.

The Innomar "compact" model acquires full-waveform data that can be processed with any seismic software (SEG-Y format). Innomar also provides the ISE post-processing software specialized on the Innomar SBP data.

Key Features

- water depth range: 0.5 – 400m
- penetration: up to 40m, depending on sediments
- layer resolution: up to 5cm
- motion compensation: heave
- beam width @ 3dB: ±2° / footprint < 7% of water depth for all frequencies

Innomar MED-100
Sub-Bottom Profiler

Description

The Innomar "medium-100" parametric sub bottom profiler is designed for offshore applications down to 2,000m water depth. The transducer can be either mounted over-the-side or in the hull. The Innomar "medium-100" SBP acquires full-waveform data (24 bit) that can be processed with any seismic software (SEG-Y format). Innomar also provides the ISE post processing software specialized on the Innomar SBP data.

Key Features

- Water depth range; 2- 2,000m
- Penetration: up to 70m, depending on sediments
- Layer resolution: up to 5 cm
- Motion compensation: heave, roll
- Beam width @ 3 dB: ± 1° /
- Footprint <3.5 % of water depth for all frequencies

EdgeTech 3400 Dual-Frequency Sub-Bottom Profiler

Description

The EdgeTech 3400 comes in a dual 2-16 kHz transducer configuration. The towfish is configured with new PVDF receiver arrays segmented for standard sub-bottom profiling operations or a unique "pipeliner" mode for optimal location and imaging of buried pipelines. The system offers Real-Time Reflection Coefficient Measurements. This unique ability of the EdgeTech Sub-Bottom Profiler system allows users the ability to collect complex 'analytic' data using linear system architecture to measure sediment reflection and analyze sediment type determination.

Key Features

- Enhanced Sub-bottom PVDF receivers
- Sub-bottom mode or pipeline mode
- Dual 2-16 kHz transducers
- Towed or Pole-mount options
- Digital receiver on towfish with Ethernet telemetry and power
- Reduced diameter tow cable
- Real-time pitch, roll, heave and depth sensors
- Surface echo attenuation
- Pulse library tailored for different survey applications
- Data display in multi-frequency bands

EdgeTech 3400 OTS Dual-Frequency Sub-Bottom Profiler

Description

.The 3400-OTS receiver array is segmented for standard subbottom profiling operations or "pipeline" mode for optimal location and imaging of buried pipelines or cables. The system offers real-time reflection coefficient measurements. This unique ability of the EdgeTech sub-bottom profiler system allows users the ability to collect complex 'analytic' data using linear system architecture to measure sediment reflection and analyze sediment type determination.

Key Features

- Three over-the-side mount configurations: Ultra-Lightweight Shallow Water Lightweight Shallow Water Low Frequency Deep Water
- Pipeline survey mode
- Digital receiver with Ethernet telemetry and power
- Real-time pitch, roll, heave and depth sensors
- Surface echo attenuation
- Pulse library tailored for different survey applications
- Dual frequency transmission

EdgeTech 4205: Tri-Frequency Towfish

Description

The Edgetech 4205 Tri-Frequency towfish allows surveyors the option to operate any two frequencies simultaneously from the tri-frequency system.The towfish and target positioning has been improved with the integration of a more accurate heading sensor that can be coupled with an optional USBL beacon.

Key Features

- Tri frequency side scan sonar • Motion tolerant mode • Improved target positioning
- Crisp, high resolution CHIRP images
- Increased towfish power to support a wider range of additional 3rd party sensors
- Single pulse high resolution mode

EdgeTech 4200 MP (Dual-Frequency Side Scan Sonar (300/900 kHz) ROV Enabled

Description

The 4200 Series is a versatile side scan sonar system that can be configured for almost any survey application from shallow to deep water operations. The 4200 utilizes EdgeTech's Full Spectrum® CHIRP technology to provide crisp, high resolution imagery at ranges up to 50% greater than non-CHIRP systems; thus allowing customers to cover larger areas and save money spent on costly surveys. One of the unique features of the 4200 is the optional Multi-Pulse (MP) technology, which places two sound pulses in the water rather than one pulse like conventional side scan sonar systems. This allows the 4200 to be towed at speeds of up to 10 knots while still maintaining 100% bottom coverage. In addition, the MP technology will provide twice the resolution when operating at normal tow speeds, thus allowing for better target detection and classification ability. The addition of the optional MP technology provides the operator with two modes of operation; either High Definition Mode (HDM) or High Speed Mode (HSM). This software-selectable mode of operation provides the operator the ability to select the best configuration for the specific job type

Key Features

- Optional Multi-Pulse (MP) technology for high speed surveys
- Crisp, high resolution CHIRP images
- Multiple dual simultaneous frequency sets to choose from
- Stainless steel towfish
- Easily integrates to other 3rd party sensors
- Meets IHO & NOAA Survey Specification

Teledyne Reson SeaBat 7125 200kHz or 400kHz (dual frequency available)

Description

The new generation SeaBat 7125 builds on the field experience and feedback from many users around the world and brings unparalleled resolution and installation flexibility. The system is a 6000m depth rated system for either ROV, AUV or vessel mount use. Each of these configurations utilise the same transducer set and provide identical high performance, superlative data quality, features and ease of use over a depth range from 0.5m to 500m. Special emphasis has been put on maximizing operational efficiency and features such as variable swath width and roll stabilisation combined with a high ping rate and excellent data quality. For deep-water use the ROV version of the SeaBat 7125 has a 6000m depth rating and includes a titanium interface bottle. The system performance and feature set is identical to the other members of the 7125 family thus providing commonality and ease of use.

Key Features

BEAM DENSITY Up to 512 beams in selectable modes optimizes operations for any survey type

ROLL STABILIZATION Real-time roll stabilization maximizing usable swath

DEPTH Dual frequency provides seamless coverage from 0.5 to 500m depth

IHO Compliance with IHO SP44Ed5 over entire depth range

DIAGNOSTICS Advanced diagnostics

HIGH SPEED High ping rate allows highspeed operations without compromising data density

WATER COLUMN DATA Allows collection of high density water column data for advanced processing

Teledyne Reson SeaBat T20-P & T50-P Multibeam System

Description

The SeaBat T50-P is the new addition to the leading SeaBat T-series product range, engineered from the ground up to evolve with your business. Combined with the Portable Sonar Processor, the SeaBat T50-P provides unprecedented survey data, providing faster operational surveys and reduced processing time. The SeaBat T50-P is fully frequency agile from 190 to 420 kHz, allowing for improved swath performance and reduced survey time under difficult conditions. The SeaBat T50-P is designed for fast mobilization on smaller vessels. The Portable Sonar Processor and sonar head form a compact system, securing minimal interfacing and low space requirements.

Key Features

- Unprecedented clean and ultra high data quality for faster operational surveys and reduced processing time
- Fullyf requency agile from 190 to 420 kHz, allowing for improved swath performance and reduced survey time under difficult conditions
- Designed for smaller vessel portable use. The compact system allows for fast mobilization, minimal interfacing and low space requirements
- Significantly reduced amount of data collected with the intelligent data reduction algorithms in the compressed water column feature

NORBIT Wideband Multibeam Sonar

Description

The WBMS-series are ultra compact sonars designed specifically for use on moving platforms. NORBIT's wideband multibeam technology allows long range real-time image updates, while simultaneously achieving high range resolution allowing you to explore more. The WBMS-series are based on a flexible sonar platform that utilises the latest in analogue and digital signal processing. With broad R&D expertise, NORBIT has developed, from the ground-up, exciting new technology that allows existing and new applications to benefit from the advantages offered by a compact wideband curved-array multibeam sonar

Key Features

✓ Long Range

✓ High Update Rate

✓ High Angular Resolution

✓ High Range Resolution

✓ Ethernet Interface

✓ Ultra Compact Single Unit Solution

✓ Standard Product Delivery Incl. Shipping Case and Sonar Interface Uni

NORBIT iWBMS Multibeam Sonar System

Description

This all-in-one tightly integrated broadband multibeam turnkey solution offers high resolution bathymetry over a wide swath. The high-end sonar with Applanix WaveMaster II (globally leading GNSS/INS system) embedded into the unit ensures fast and reliable mobilisation and highest quality sounding for surveys in all conditions.

The WBMS-series are based on a flexible sonar platform that utilizes the latest in analogue and digital signal processing. With broad R&D expertise, NORBIT has developed, from the ground-up, exciting new technology that allows existing and new applications to benefit from the advantages offered by a compact wideband curved-array multibeam sonar.

Supported by DCT (Data collection Tool) for data acquisition.

Key Features

✓ Multibeam Sonar with Integrated Inertial Navigation System & Integrated NTRIP Client

✓ 80kHz Bandwidth

✓ Roll-stabilisation

✓ Backscatter outputs (Intensity, Sidescan, Sidescan Snippets, Snippets, Water Column)

✓ Multidetect

✓ Simple Ethernet Interface

✓ Integrated Sound Velocity Probe

✓ Hydrodynamic Fairing

✓ Mounting Bracket Included

✓ FM & CW Processing

✓ Flexible Power

✓ Exceeds IHO Special Order, CHS Exclusive Order & USACE New Work

Geometrics G-882

Description

Geometrics' G-882 Marine Magnetometer is the leading marine system in the industry with over 1,000 systems sold! The G-882 is the only system that meets the standards for UXO clearance in the North Sea. The system directly interfaces to all major side-scan manufacturers for tandem tow configurations. Being small and lightweight, it is easily deployed and operated by one person. But add several streamlined weight collars and the system can quickly weigh more than 100 lbs for deep-tow applications

Key Features

- **Cesium Vapor High Performance** – Highest detection range and high probability of detecting all sized ferrous targets.
- **Streamlined Design for Tow Safety** – Low probability of fouling in fishing lines or rocks. Rugged fiber-wound fiberglass housing.
- **Sample at up to 20Hz** – Unparalleled data density while also covering larger areas per day.
- **Sensor can be Rotated for Optimal Signal** – Can be used worldwide.
- **Easy Portability and Handling** – No winch required. Built-in easy-carry handle. Operable by a single man; only 44 lb with 200 ft cable.
- **Combine Multiple Systems for Increased Coverage** – Internal CM-221 Mini-counter provides multi-sensor sync and data concatenation, allowing side-by-side coverage which maximizes detection of small targets and reduces noise.
- **Export Version Available** – Use anywhere in the world without need for an export license (except embargoed countries). See

Geometrics G-882 Transverse Gradiometer (TVG)

Description

The Geomatrix TVG frame is designed to support the standard G-882, with or without altimeter. The long A-frame arms permit wire line clevis to be connected directly to the frame removing the need for a soft umbilical cable. Trials have shown that there is minimal egress of noise induced into the data, <±0.2nT.

Key Features

- Traverse gradient: 1.5m Layback ratio: 10:1 Inline drag on the TVG frame: 4 knots= 40kg 8 knots = 70kg Clevis (tow point) to sensor distance: ≈3.3m Maximum tow cable length: 300m soft tow cable with 30V power supply 6km steel tow cable with Geometrics telemetry system Configurable as real time kinematic (RTK) base or rover
- Programmable output rates
- Event marker input / 1 pulse-per-second (PPS) output
- 2GB internal data storage
- C-Setup PC control software included

Teledyne TSS HydroPACT 660

Description

With HydroPACT 660 Teledyne Marine brings the world's smallest submarine, pulse induction pipe tracker to market. Built upon the already established, industry standard and world leading TSS HydroPACT 440 system, the HydroPACT 660 continues the legacy by bringing pipe tracking and UXO detection capabilities to small inspection and observation class ROVs, for applications that were previously only available on larger vehicles such as work class ROVs and trenchers. The new HydroPACT 660 sports a single small form factor coil array measuring 1200mm x 600mm, which, weighing in at

Key Features

Detection range (in a low noise environment)

- 2.5cm armoured cable depth and tracking at 1.0m
- 1cm unarmoured cable depth and tracking at 0.5m
- 15cm armoured cable depth and tracking at 1.5m
- 10" pipeline depth and tracking at 2.5m
- 4" pipeline depth and tracking at 1.8m
- 4" umbilical depth and tracking at 1.8m

Vertical measurement accuracy (in a low noise environment)

The greater of 5cm or 5% slant range.

Teledyne TSS 440

Description

The 440 provides a reliable and simple method for performing accurate submarine surveys on a conductive target such as a cable or pipe.

During surveying operations on submarine pipes and cables, the system measures, displays and records the position of the target on or beneath the seabed. The technology used gives the 440 the flexibility to detect any conductive target, whether the material is exposed or buried and the burial state of the target has no effect on system operation. The 440 system operates in real-time and provides accurate measurements at a rate that allows integration on faster ROVs. The measurement technology used also allows the 440 to operate out of water with no degradation in performance, range or accuracy.

Key Features

Detection range (in a low noise environment)

- 2.5cm armoured cable depth and tracking at 1.2m
- 1cm unarmoured cable depth and tracking at 0.6m
- 15cm unarmoured cable depth and tracking at 1.8m
- 10″ pipeline depth and tracking at 3.0m
- 4″ pipeline depth and tracking at 2.2m
- 4″ umbilical depth and tracking at 2.2m

Features & Benefits:

– Pulse induction technology for accurate survey regardless of vehicle heading
– Windows-based display and control software
– DSP techniques give quality control information
– Long range detection of buried subsea targets
– Fully integrated system with altimeter, mounting frame, field spares and documentation
– Pipe out of straightness measurement option
– Easy to operate
– Simple to install and service
– Target scaling service on request

Applied Acoustics Squid 501 Sparker

Description

The Squid 501 and Squid 2000 sparker seismic sound sources are used for high resolution applications with low electrical power input. The lightweight Squid 501 is used with direct attachment to a HV cable. The Squid 2000 is deployed from a catamaran, the Cat 200, and is easily configurable for array depth, spacing and power input. Different sparker tips can be used to increase resolution or penetration as required.

Key Features

- Squid 501 is a compact sound source affixed to high voltage cable
- Squid 2000 capable of significant penetration at 300-2000J range
- Fitted with RMK connectors as standard
- Lightweight, compact and easily deployed
- Field replaceable electrodes

Applied Acoustics AA251 & AA310 Boomer Seismic Sound Source

Description

"The AA251 and AA301 boomer plates are seismic sound sources that produce a sharp repeatable pulse from a floating position on the sea surface. The AA251, deployed on either a robust CAT100 or CAT200 catamaran, is ideal for inshore surveys from small craft.

The AA301 is designed for higher power applications and can also be used as a variable frequency boomer when combined with the CSP-D range of energy sources."

Key Features

- Stable pulse shape clarity with minimum reverberation
- Rugged mechanical design with weight kept to a minimum
- Supplied as individual product, or with a catamaran
- Supplied with RMK connectors and locking collars as standard.
- AA251 forms part of the Inshore Boomer System, ideal for coastal surveys
- AA301 ideal for nearshore and shallow water surveys (up to 120m) depending on geology

Applied Acoustics CSP-P Seismic Energy Source

Description

"Designed to be the lightest 350 Joule power source, the CSP-P utilises cutting edge power supply technology to produce a small unit with an exceptional power output.

Developed primarily as a power source for boomer plates, the CSP-P operates in excess of 300J at 3pps, the offshore industry standard specification, and as such is regarded as the power supply of choice throughout the world."

Key Features

- Incorporates dual-voltage technology for exceptional versatility
- Variable Input Power Circuitry for 'soft start'
- Proprietary pulse shaping circuitry for high resolution data
- Additional safety/protection features
- All settings externally selectable
- LED fault indicators
- High current and voltage solid state (semiconductor) discharge method
- Meets EC emissions regulations enabling interference-free field use
- Supplied in robust transit case, with HV junction box (HVJ2000), mains lead and HV connector plug

Geo-Source 200-400 Freshwater

Description

The electrode modules (100 tips each) are enclosed in flexible sleeves. Salt water is pumped through these sleeves to provide the saline environment which is needed to create a plasma bubble at the sparker tips. The circulating salt water also removes the gases generated at each discharge. The closed circuit comprises an onboard salt water reservoir and pump, supply and return hoses to and from the source, and a manifold system within the source frame.

Key Features

- The 200 tip version is specially designed for small vessel surveys, but there is also the 400 tip option or larger operations.
- Can be handled by one person.
- Water depths from 2 to 1500 m (with the 400 tip version).
- Penetration to 400 ms below seabed depending on geology.
- Vertical resolution of 10 - 30 cm.
- You don't need to trim tips during the survey - electrodes do NOT burn off.
- Successfully employed in inland water engineering, port surveys, lake and river surveys and others.
- The 400 tip version can be operated with energies up to 4,000 Joules.

Mini-Spark 1000 Portable HV Power Supply

Description

It integrates all unique features of the 2000 XF technology in a compact and lightweight design.

System status messages and operational parameters are displayed on comprehensive LCD.

All connections, command buttons, switches and status leds are intuitive and straightforward.

Key Features

- Completely portable - can be easily handled by one person.
- Negative discharge technology.
- Very user friendly and safe

Multi-Layer Sparkers

Description

The multi-layer sparkers are the very same equipment of the single-layer approach, so all the benefits from the maintenance free sparkers are kept. However, they are stacked one on top of the other to construct a broader band spectrum (tuned) or to increase horizontal resolution (Flip-Flop).

Key Features

- Real broadband and powerful signature.
- Two or Three layers of 200, 400 or 800 tip sparkers.
- Also applicable for 3D surveys.
- **Operation Depth (m)**5 to 2500

Mega-Spark 48 kJ

Description

The Mega-Spark 48 kJ has been developed using the fully proven HV charging technology of the 2000 X series. The system features a stunning charging capability of 15 kJ/ sec allowing to shoot at 48 kJ full power every 4 seconds. The system is very suitable for the LF Mode, where the towing depth of the Geo-Source is tuned to enhance the LF implosion pulse.

Key Features

- Revolutionary pulse shaping.
- Selectable capacitance in steps of 256 µF.
- Selectable charging voltage from 2 to 4 kV.
- 300 J to 48 kJ real power.
- No electrical oscillations.
- User-friendly & 100% safe.
- All subunits can be hand-carried.
- **Operational depth** up to 10,000 m

POSITIONING ENGINERING
MOORING
DIVE SUPPORT
ANCHOR HANDLING

FALL PIPE ROV - FLINTSTONE

Description

This fall pipe ROV, delivered in 2011 and deployed from rock installation vessel "the Flintstone," is one of the largest and most powerful ROVs that Seatools has ever built. Besides size and power ratings, its multi-functionality gives this ROV a distinct character. The fall pipe ROV can be equipped with a powerful mass flow excavation tool to facilitate high-volume excavation tasks. Moreover, a seabed grader for precision seabed grading can also be added. Thanks to its multi-functionality, our customer DEME performs multiple seabed tasks using the same piece of equipment, which results in highly economical operations.

Key Features

- HIGHLY RELIABLE ROV ARCHITECTURE

Highly redundant system architecture thanks to three hydraulic power packs.

- MULTI-FUNCTIONAL THROUGH MFE AND SEABED GRADING TOOLS

Instead of placing a liner pipe at the center, a powerful mass flow excavation tool can be deployed. Like this, the ROV is also capable of performing high-volume excavation tasks.

- HIGH DEGREE OF AUTOMATION FOR PRECISION ROCK-DUMPING

This fall pipe ROV's control system features advanced control algorithms to facilitate functions such as follow track line, tracking, speed control, and auto swing mode.

Magnum® Plus
Heavy work class ROV

Description

The powerful Magnum Plus ROV delivers enhanced flight control in a smaller package. Reliable and easily maintained, it provides a 170-hp, high-thrust, tophat- or cage-deployed system designed for subsea intervention and deepwater tooling.

The Magnum® ROV is a side entry cage deployed, dual manipulator ROV that operates in water depths up to 10,000 fsw and in severe weather conditions. The cage or tether management system (TMS) supplies an additional 85 hp, powers skids, and has thruster control and auto heading.

Key Features

- Depth rating 10,000 ft / 3,000 m (standard) 13,000 ft / 4,000 m (optional)

Sonardyne Mini Ranger 2 USBL

Description

Mini-Ranger 2 is a sixth-generation (6G) Ultra-Short BaseLine (USBL) underwater positioning system. It offers a standard operating range of 995 metres (extendable up to 4,000 metres with Extended Range pack) and the ability to simultaneously track up to 10 subsea targets (e.g. divers, ROVs and structures) at very fast update rates.

Mini-Ranger 2 calculates the position of an underwater target by measuring the range (distance) and bearing (heading) from a vessel-mounted transceiver to an acoustic transponder fitted to the target; a technique known as Ultra-Short BaseLine (USBL) positioning. One of the main advantages of the USBL technique is that no other in-water acoustic equipment has to be deployed before underwater operations can commence. Only the targets being tracked need to be equipped with a transponder.

Key Features

- Performance without the cost and complexity of a deep water USBL solution
- Perfect for nearshore operations; UXO surveys, search and recovery, structure inspection
- Portable and quick to mobilise; a great choice for small survey vessels, moored barges and uncrewed vessels
- 995 m operating range; extendable to 4,000 m (requires export license)
- Optional Marine Robotics software feature pack provides command and control of AUVs
- Works with a wide range of 6G transponders including RT 6 acoustic releases

Ranger 2 USBL Underwater tracking, DP reference and telemetry system

Description

Ranger 2 Standard. Track everything, in any depth, from any vessel. Track a towfish, position an ROV, dynamically position your vessel, communicate with an AUV – or do all of this simultaneously. It's anything but standard.

racks multiple targets to 11 km; ROVs, AUVs, deep towed bodies

Compatible with all makes of DP system – GE, Kongsberg, MT

System accuracy: when fully optimized it will deliver 0.04% of slant range

Works with a global inventory of pre-deployed Sonardyne 6G hardware

Configurations available for USV and temporary vessel installations

Valuable features included as standard; incorporates 30 years+ of USBL know-how

Key Features

- Simple, intuitive software
- Tracks an unlimited number of targets; ROVs, towfish, AUVs...
- Operating range beyond 7,000 metres
- Better than 0.1% system accuracy when optimized
- Up to 1 second position updates
- Compatible with all makes of DP system
- Automated setup reduces vessel delays
- Application packs available bringing extra features specific to your operations
- User training available worldwide
- Multi-user capable
- Track record of success on all types of vessels
- Support available globally 24/7

AvTrak 6 Tracking, communications and relocation transceiver

Description

The most versatile instrument you can fit to your AUV. Built for simple integration on medium to large AUV platforms, all-in-one functionality comes as standard with AvTrak 6. It allows your AUV to undertake simultaneous LBL ranging, USBL tracking via a surface vessel and robust telemetry for AUV to vessel and AUV-to-AUV communications.

Key Features

- Combines tracking, communications, and emergency pinger functionality in one instrument
- Track your AUV in USBL mode, localise it in LBL transponder mode
- Bi-directional acoustic modem with user selectable data rates; 200-9,000 bps
- Integrated outputs enable control of a release, burn-wire or drop-weight functions
- Worried about onboard power interruption? AvTrak's internal battery provides days of emergency vehicle relocation tracking
- Choice of hardware configurations to simplify vehicle installation

MRAMS
Marine Riser Angle Monitoring System

Description

MRAMS is a high-accuracy solution for monitoring the differential angle between a drilling riser and blowout preventer (BOP) to reduce excessive wear on wellheads.

Key Features

- Helps prevent costly damage to riser and BOP
- Provides clear information for users to maintain riser angles within operational limits
- Integrated USBL acoustic positioning for DP reference
- Designed for deep water operations
- Standalone system or integrated with Marksman LUSBL

HPT 5000 / 7000 USBL tracking and communications transceivers

Description

HPT 5000 / 7000 are acoustic and telemetry transceivers designed for use with Ranger 2 USBL and Marksman LUSBL systems. HPT 5000 enables targets offer wide range of water depths to be tracked; HPT 7000 is optimised for noisy DP drilling and construction vessels and in deep water.

Key Features

- Use with Ranger 2 USBL and Marksman LUSBL systems
- Can also be used to communicate and harvest data from Sonardyne sensors
- Hemispherical (HPT 5000) or directional (HPT 7000) arrays to suit your vessel and application
- Can be deployed other-the-side, through-tube or through-hull
- Suitable for new-build vessels or USBL/LUBL upgrade for your existing vessel

ROVNav 6
LBL ROV transceiver

Description

ROVNav 6 is a 6G Wideband 2 ranging LBL ROV Transceiver and telemetry transceiver specifically designed for installation on work class ROVs.

Key Features

- Use it with Fusion 6G
- Wideband 2 enabled
- High power, long range LBL transceiver
- 3,000, 5,000 or 7,000 m depth rated
- USBL mode for emergency ROV relocation
- Modem mode for harvesting data from Sonardyne sensors

Compatt 6
LBL and USBL transponder (6th generation)

Description

Compatt 6 is our Wideband 2 enabled transponder compatible with all 6G equipment and our latest LBL, INS and USBL systems, including Ranger 2 and Marksman.

Key Features

- Compatible with all 6G LBL, INS and USBL systems
- Wideband 2 enabled
- Versatile, flexible and cost-effective
- Over 3,600 different configurations available
- Choice of depth ratings to 7,000 m

Applied Acoustics 1035 Midi Beacon

Description

1000 Series Midi Beacons incorporate Applied Acoustics' proprietary Sigma acoustic protocols, proven for use with Applied Acoustics' USBL tracking systems, other manufacturers' USBL systems that operate with wide bandwidth transmissions as well as those using 'narrow band' tone signaling.

With an industry standard 5-pin connector, the beacons are quick and easy to configure using the 1082 Smart Switch or 1083 Multi-Charger that also activate and monitor the charging of the battery pack.

Key Features

- AAE proprietary Sigma bi-directional Spread Spectrum technology
- Quick, easy configuration
- Directional or omni-directional beam pattern, depending on application
- Externally configurable as transponder, responder or Pinger
- Optional high power model to operate longer ranges
- Options for use with remote transduce

Applied Acoustic 219 Micro Beacon

Description

200 Series Micro Beacons are ideal for use in shallow water environments, operation in a confined space or for applications not requiring a high level of power output. The 200 Series beacons combine small size with long battery life, enabling objects to be tracked in applications where the use of larger beacons would not be possible. For example, the Micro's slim profile makes it perfect for use by divers, or attached to eyeball ROV's, small side scan tow-fish or for taut wire applications.

Key Features

- Have easily available userreplacement 9v alkaline batteries.
- Are compatible with Easytrak and almost all industry tracking systems operating worldwide.
- Can be supplied with a remote transducer

Sonardyne Transponder Nano

Description

The Wideband Nano Transponder is specially designed for short duration acoustic positioning of divers or small underwater vehicles. The small lightweight wireless rechargeable transponder design allows for easy, unobtrusive attachment to a diver or vehicle. The Nano Transponder connector-less design is recharged and programmed via the Nano Docking Station. It takes around 12 hours to fully recharge the high capacity battery. The standard instrument is depth rated to 500 m and has an acoustic source level and beam-shape that is designed to operate over a 750 m slant range under normal conditions. The Nano Transponder operates in the Medium Frequency (MF) band so it is compatible with Sonardyne's Mini-Ranger 2 6G® Wideband USBL system

Key Features

- Miniature size for fitting on divers and small ROVs
- Variety of form factors
- Depth rated to 500 m
- Powerful acoustic transmission level
- Medium Frequency operation
- Compatible with Sonardyne Ranger 2 USBL systems
- Configuration using the Nano Docking Station wireless communications
- Battery disconnect storage mode
- Integrated pressure sensor for depth aiding
- >300 independent acoustic addresses
- Wide dc voltage input range
- Gainless for ease of use
- Common form factor with AvTrak 6 Nano so common transponders can be used across a fleet

Sonardyne iWand

Description

The iWand is a handheld acoustic transponder test and configuration device developed for use with Sonardyne's 6G® product range. Being small, rugged and splash proof means the iWand is ideal for setting up equipment in the workshop, on the back deck of a ship, or on ROVs and subsea structures before they are deployed. The simple to use interface and sunlight readable display makes it easy to test, gather and download configurations. The iWand has various PC connection options; Bluetooth, USB or Serial. The USB is used to recharge the internal battery.

Key Features

- Handheld battery powered highly portable design
- Splash-proof and rugged
- Sunlight readable display
- Multi-band operation: LMF, MF and HMF
- Automatically discovers the acoustic address of the instrument
- Back deck testing of sensors, acoustic levels, release mechanism, battery pack capacity etc.
- All communication via the easily accessible acoustic transducer and increase confidence in the instrument under test
- Simple to use software automatically synchronises when connected via Bluetooth, USB or serial
- Automatic instrument configuration based on the Unique ID of the transponder ensuring only the correct configuration is downloaded
- Simple transponder configuration based on the application, water depth and baseline range
- GPS time synchronisation
- Serial test capability via standard interface test leads
- Configuration export to other Sonardyne systems
- Test report generated for audit trail

Kongsberg cNODE Transponders

Description

Kongsberg cNODE is a family of transponders for underwater acoustic positioning and data link.

The transponders operate together with both HiPAP®, HPR and cPAP® transceivers. cNODE® utilises Cymbal® acoustic protocol and is compatible with the HiPAP®/HPR 400 channels and telemetry. cNODE® is designed to cover a large range of applications and this is made possible by the modular design and a variety of different transducers, internal and external sensors, housing materials and other add-on functions.

Key Features

- Operates together with HiPAP®, HPR and cPAP® transceivers.
- Compatible with both Cymbal® acoustic protocol for positioning and data link, and HiPAP®/HPR 400 channels and telemetry.
- SSBL positioning.
- LBL positioning.
- Range measurement between transponders (typical, 1 σ standard deviation): — Range accuracy: 0.02 m. — Repeatability: 0.01 m.
- Acoustic data link for command and data transfer.
- Both transponder and responder functions.
- Internal tilt sensor ± 90°. Accuracy ± 2°.
- Pressure relief valve and vent screw (safety devices).
- External connector for transponder configuration and software update via serial line (TTC30).
- Modular design such that the transducer, transponder electronics, battery pack and optional add-ons can be replaced individually

Satel Satelline -3AS(d)

Description

SATELLINE-3AS is compatible with the interface types RS-232, RS-422 and RS-485. Without changing the hardware all the parameter settings of the radio modem can be modified through the interface from a PC. The model SATELLINE-3ASd is equipped with a LCD display of its own, which facilitates programming of the radio modem. The SATELLINE-3AS software includes a selectable error correction, which improves the functioning of the radio modem under interference.

Key Features

TRANSCEIVER

- Frequency Range 868 ... 870 MHz
- Channel Spacing 25 kHz
- Frequency Stability ± 2.5 kHz
- Type of Emission F1D (Modulation 2-FSK)
- Communication Mode Half-Duplex

TRANSMITTER

- Carrier Power 5, 10, 25, 50, 100, 250, 500 mW / 50 ohm
- Carrier Power Stability + 0 dB ... - 1 dB (100 ...500 mW)
- + 0 dB ...-3 dB (5 ...50 mW)
- Adjacent Channel Power <-37 dBm

RECEIVER

- Sensitivity <-108 dBm (BER < 10 E-3)
- Adjacent Channel Selectivity > 45 dB
- Blocking (typical) > 75 dB @±1MHz, > 85 dB @±10MHz

ADL Vantage

Description

ADL Vantage is an advanced, high speed, wireless data link built to survive the rigors of GNSS/RTK surveying and precise positioning. This sophisticated 0.1-4.0 Watt radio modem utilizes Pacific Crest's next generation Advanced Data Link (ADL) technology while remaining backward compatible with existing Pacific Crest, Trimble and other products. ADL Vantage's full-function user interface streamlines field configuration and troubleshooting so you can maintain maximum productivity. For the most rugged and reliable digital data link, go with the Geomatics industry's new standard in lightweight wireless communications – ADL Vantage.

Key Features

- **Multi-function user interface** Allows radio configuration and troubleshooting in the field Change configuration to adapt to changes in field equipment
- **Heavy-Duty Construction** All metal construction for the ultimate in impact and EMI resistance Environmentally sealed to IP67 standard
- **High Over-the-Air Link Rate** 19,200 bps (both GMSK and 4FSK) Supports 1Hz RTK corrections for multi-GNSS receivers
- **Configurable Transmit Power** 0.1-2 W for longer battery life 4.0 W for longer range (where permitted)
- **Advanced 40 MHz Bandwidth** 390-430 and 430-470 MHz models Advanced Data Link design for high performance over the entire band
- **Software-Derived Channel Bandwidth** Compatible with both 12.5 and 25 kHz licenses

Kongsberg cNODE Micro Transponder

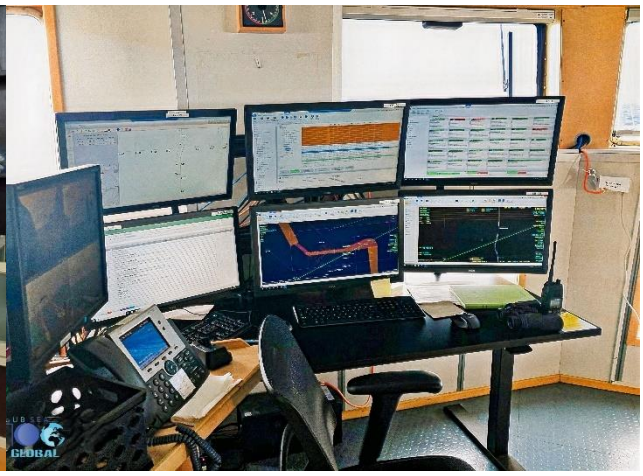
Description

"The cNODE® Micro is extremely flexible featuring Cymbal digital telemetry and both SSBL & Long Baseline positioning capabilities. With range accuracies of better than 2 cm achievable, measured baselines between transponders on the seabed provide capabilities for simple diver metrology or archeology. The telemetry capability allows the battery status to be read during operation and the integrated tilt sensor can be turned on and off with positioning updates. Multiple cNODE® Micro transponders can be interrogated simultaneously in SSBL positioning mode using the µPAP® and HiPAP® Fast track feature to ensure the fastest possible updates during operation."

Key Features

- Km Item Number 424770
- Dimensions (Length X Diameter) 245 X 55 Mm
- Weight In Air/Water 1 Kg/0.4 Kg
- Depth Rating 600 M
- Beam Width 180º
- Source Level - Max 170 Db
- Trigger Level < 85 Db

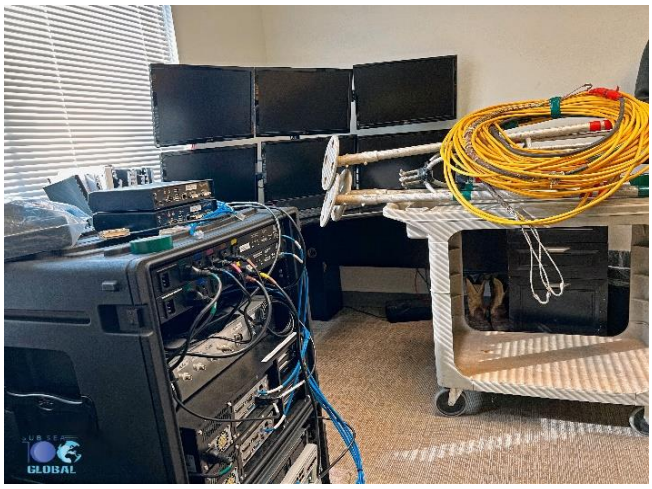
REMOTE NAVIGATION SPREAD



Description

You may now remotely manage your vessels in NaviPac, a new and improved version of our navigation and positioning software. This is an exceptionally exciting feature.

In Remote Supervision mode, you can remotely control every aspect of the configuration as well as make recordings, runlines and waypoints, background drawings, and event definitions.



Magnum® Plus
Heavy work class ROV

Description

The Rig Move and Anchor Handling option includes many capabilities for communicating with tug boats, managing the removal of anchors, runlines, draw, etc. from a central rig/barge, and a special NaviPac version is provided for tug boats taking part in such an operation.

Key Features

- **Live 3D display** with updated positions of all assets on site, including rig, tugs, other vessels, ROVs, anchors, anchor chains, risers, seabed, seabed constructions
- **Positioning** of rig/barge and tug boats
- **Runline definitions** for rig and tug boats
- Remote control of tug boats
- Specific functionality for anchor pick-up, drop etc
- Communication between rig and tug boats using radio, mesh or wifi technologies

SOUND VELOCITY, CTD & CURRENT METERS

AML-3 Sound Velocity Profiler (100 dBar)

Description

The AML-3 series of instruments is a highly configurable family of multiparameter sondes designed for a wide range of data collection applications. The '3' designation refers to the number of sensors that may be simultaneously installed on the instrument's endcap. One additional sensor may be connected externally, allowing up to 4 sensors in total. Typical Configurations include: • Sound Velocity Profiling (SVP) • Sound Velocity and Turbidity Profiling (SVP Tu) • Conductivity Temperature & Depth (CTD) • Sound Velocity / Conductivity Temperature & Depth

Key Features

• Three X2•Series Interchangeable Ports: Ability to custom configure a single instrument for multiple applications
• Magnetic On/Off Switch: Configure now, power and deploy later (LGR & XC version only)
• Integrated WiFi & GPS: Transfer data wirelessly (LGR 500 m version only)
• USB Connectivity: Recharge battery and connect via USB
• Integrated UV Biofouling: Maintain consistent data quality & decrease maintenance intervals (Optional on RT & XC 500 m version only)
• Sailfish Software: Configure, download, process, and export profiles automatically

Seabird SBE 19plus Profiler CTD

Description

The SBE 19plus V2 (Version 2) SeaCAT Profiler measures conductivity, temperature, and pressure (depth) and provides high accuracy and resolution, reliability, and ease-of-use for a wide range of research, monitoring, and engineering applications. The pump-controlled, TC-ducted flow configuration minimizes salinity spiking caused by ship heave and allows for slow descent rates without slowing sensor responses,

Key Features

- Conductivity, Temperature, Pressure, and up to seven auxiliary sensors.
- User-programmable mode: profiling at 4 Hz, or moored sampling at user-programmable intervals.
- RS-232 interface, internal memory, and internal alkaline batteries (can be powered externally).
- Pump-controlled, T-C ducted flow to minimize salinity spiking.
- Depths to 600, 7000, or 10,500 m.
- Seasoft© V2 Windows software package (setup, data upload, real-time data acquisition, and data processing).
- Next generation of the SeaCAT family, field-proven since 1987.
- Five-year limited warranty

Valeport MIDAS BathyPack Bathymetry Package

Description

The BathyPack is one of Valeport's premier MIDAS products, using state of the art sensors to generate precision Sound Velocity and Density profiles for highly accurate depth and height data. The simple top-end PC software, BathyLog, also allows all profile data to be used to monitor and correct multiple miniIPS pressure sensors, giving you the complete picture with one integrated sensor suite.

Key Features

- Robust, accurate inductive cell.
- Robust, accurate inductive cell.
- Depth Rating 6000m
- Frequency 500kHz
- Range 1375 – 1900m/s

Valeport MIDAS CTD+ Multimeter Profiler

Description

The MIDAS CTD+ is a revolutionary Multiparameter CTD, with a wide choice of standard sensors. Featuring Valeport's latest 400 Series electronics, the CTD+ will sample all fitted sensors at exactly the same instant, at up to 8Hz. Advanced setup software allows a variety of sampling regimes including burst modes, delay starts, and conditional sampling. With up to 64Mbyte memory and internal battery pack, as well as a selection of real time output formats, the CTD+ is perfect for both profiling or fixed mooring applications. In addition, the CTD+ may be used with Valeport own water bottle carousel.

Key Features

● Depth Rating: 6000m

● Sound Velocity
Range 1375 - 1900m/s
Resolution 0.001m/s
Accuracy ±0.02m/s

● Conductivity
Range 0 - 80 mS/cm
Resolution 0.003mS/cm
Accuracy ±0.01mS/cm

●Temperature
Range -5°C - +35°C
Resolution 0.005°C
Accuracy ±0.01°C

●Pressure
Range up to 600 Bar
Resolution 0.001% range
Accuracy ±0.01% range

Valeport Model 106 Lightweight Current Meter

Description

A low cost, lightweight alternative to larger flow meters, ideal for use in applications where the superior durability and depth rating of Valeport's larger meters is not necessary. Utilising the standard Valeport 125mm diameter impeller, the Model 106 features speed and direction parameters as standard, with further options of temperature and depth. Data (logged or real time) is compatible with Valeport's DataLog™ software. The instrument is manufactured from titanium and polymers, giving excellent resistance to corrosion, whilst maintaining a small size and low weight. These features make the Model 106 the ideal instrument for coastal and estuarine applications, and other light duty survey work.

Key Features

- Depth Rating: 500m
- Speed

Type: High Impact Styrene Impeller

Size: 125mm diameter by 270mm pitch

Range: 0.03 to 5m/s

Accuracy: ±1.5% of reading above 0.15m/s

±0.004m/s below 0.15m/s

- Direction

Type: Flux gate compass

Range: 0 to 360°

Accuracy: ± 2.5°

Resolution: 0.5°

- Temperature

Type: Thermistor

Range: -5 to 35°C

Accuracy: ± 0.2°C

Resolution: 0.01°C

- Pressure

Type: Strain Gauge Transducer

Range: 50, 100, 200 or 500 dBar

Accuracy: ± 0.2% Range.

Resolution: 0.025% Range