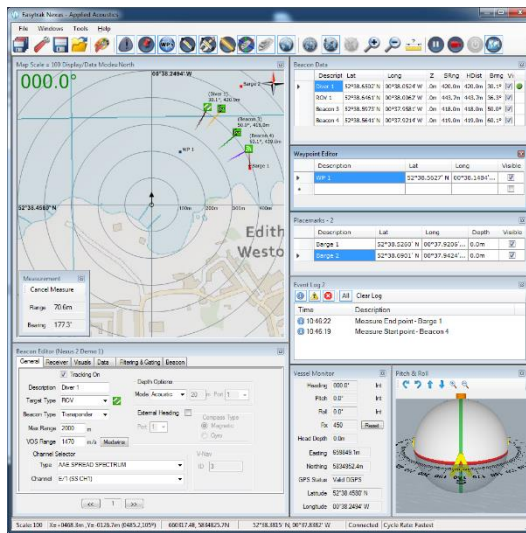


Nexus 2, Advanced USBL System, Model 2692



Key Features

- **Bi-directional Sigma 2 Spread Spectrum acoustics**
- **Improved positioning accuracy and stability**
- **Optimised beacon refresh rate**
- **16 target tracking**
- **Geographical navigation overlays**
- **EasyCal 2 embedded calibration tool with AutoCal Wizard**
- **Data telemetry options**

Easytrak Nexus 2 is the next generation of advanced USBL positioning and tracking system that incorporates Sigma 2 Spread Spectrum technology to provide a secure acoustic link. By incorporating AAE Sigma 2 technology the wide bandwidth transmissions reduce its susceptibility to interference and enables precise, reliable positioning over an extended operational range.

Easytrak Nexus 2 determines the position of dynamic subsea targets through the transmission and reception of acoustic signals between the submerged transceiver and the target beacon. Positions can be geographically referenced with chart overlays and internally logged for a complete solution.



Technical Specification

EASYTRAK NEXUS 2 CONSOLE, MODEL 2692 Provides DC power, high speed digital communications to the transceiver with an embedded graphical navigation interface. Supplied with monitor, keyboard and mouse.

Dimensions	19" Rack mount. 2U, 482 x 88 x 345mm
Weight	5.4kg
Power requirements	90 – 250 Vac at 250 VA maximum
Connection to transceiver	Rear panel connector for 2686 Transceiver
Built-in PC.	Industrial i3 board running embedded Win 7, 32GB HD
Temperature	Operating: -10° to +40°C Storage: -20° TO +50°C
Front panel indicators	LED indicators for power and serial status.
Serial communications	4 x RS-232 External Input Port. 3 x Data Out Ports

Nexus 2 Technical Specification continued...

Data Output	AAE format V1 and V2, TP-II2EC, TP-EC W/PR, Simrad 300P, Simrad 309, Simrad \$PSIMSSB, Pseudo \$GPRMC, NMEA \$GPGGA, NMEA \$GPVTG, NMEA \$GPTLL, Pseudo \$GPGGA, KLEIN 3000 (Quick set) Multiple outputs available
Compass Input	SGB-HTDS, SGB-HTDt, NMEA HDT,HDM, HDG
VRU Input	TCM-2.X, \$HCXDR , TSS1
GPS / DGPS Input	NMEA; GLL, GGA, RMC
Target Heading Input	Geo Referenced Graphical Overlay. GeoTiff, DXF
Target Depth Input	NMEA HDM, HDT, HDG, PNI TCM2
Time in	NMEA DBT, DBK, DBS, DPT, AAE
Responder Output	GPS Time synch
USB	Positive 12V pulse 5ms long
Ethernet	6 ports available, 2 on front panel
Audio	2 x 1Gbps standard RJ45 jack. Ethernet UDP Data Port
	Audible activity indicator

EASYTRAK TRANSCEIVER, TYPE 2686 Factory calibrated multi-element transceiver head complete with integral AHRS, depth sensor and temperature sensor.

Material	Aluminium silicon bronze
Weight in air/water	15kg/11kg
Dimensions	150mm reducing to 100mm x 495mm (W x L)
Temperature	Operating: -10° to +40°C Storage: -20° to +50°C
Depth rating	30m
Electrical supply	48Vdc
Depth sensor (Pressure Sensor)	5 bar, accuracy 0.25% between -10° to +40° C
Temperature sensor	1° resolution between -10° and +40° C

ACCURACY/PERFORMANCE

Accuracy is based on the correct speed of sound being entered, no ray bending and an acceptable S/N ratio

Position accuracy	0.2% of slant range, with external sensors Acoustic accuracy excluding heading correction errors
Range resolution	Calculated to 0.01m resolution

Max range	Up to 2500m, range limited version available (995m)
Frequency band (MF)	18 - 34 kHz
Tracking beam pattern	160°
Transmitter	Variable, typical max 192dB re 1μPa at 1m

Integrated AHRS:	
Bearing resolution	0.1° displayed. Internally calculated to 0.01°
Heading sensor accuracy	0.5° rms standard; +/- 0.1° resolution/repeatability
Pitch/Roll sensor accuracy	+/- 0.20° rms +/- 0.1° resolution/repeatability
Beacon types	AAE Sigma 1, Sigma 2 Digital Spread Spectrum and AAE Tone channels. AAE V-NAV channels. HPR 400 channels 1100, 1000, 1200A, 1300A Series Beacons, Digital Depth Transponders, AAE Release and Telemetry Beacons.
Interrogation rate	>2Hz refresh rate. Internally set or external key

System	Externally assessed for immunity and emissions; conforms to 89/336/EEC. RoHS compliant
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Provisional specification release, information may be subject to change without notice.
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