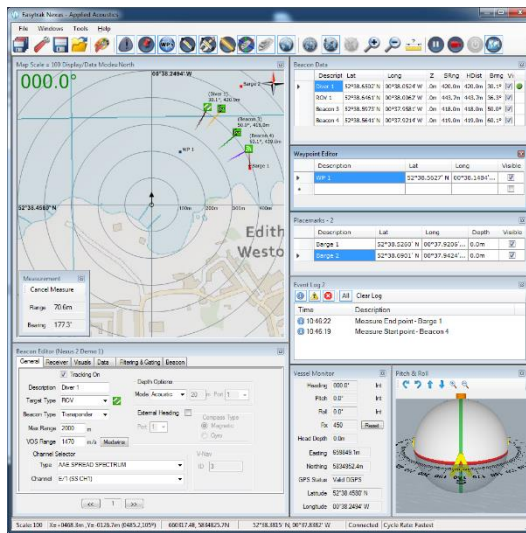


## Nexus 2, Advanced USBL System, Model 2692



**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.

### 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**



### 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 i5 board running embedded Win 7, 64GB 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	Stainless steel standard (optional aluminium silicon bronze)
Weight in air/water	16kg/11kg
Dimensions	152mm Ø x 432mm
Temperature	Operating: -10° to +40°C Storage: -20° to +50°C
Depth rating	30m
Electrical supply	48Vdc (from Nexus console)
Depth sensor (Pressure Sensor)	5 bar, accuracy 0.25% between -10° to +40° C
Temperature sensor	1° resolution between -10° and +40° C
Cable	50m standard (20-100m options) with connectors. 12.8mm Ø

### ACCURACY/PERFORMANCE

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

Position accuracy	0.25° at > 10° depression angle 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 - 32 kHz
Tracking beam pattern	180°
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	+/- 0.10° 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



**APPLIED ACOUSTICS**  
Underwater Technology

Due to continual product improvement specification information may be subject to change without notice.  
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