

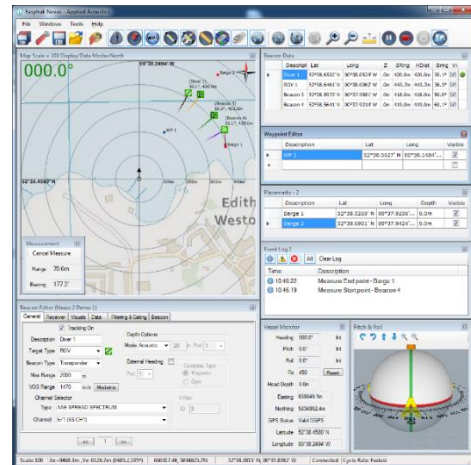
## Easytrak Nexus USBL, Model 2691



Easytrak Nexus is an advanced USBL positioning and tracking system that incorporates Spread Spectrum technology to provide a secure acoustic link. It determines the position of dynamic subsea targets through the transmission and reception of acoustic signals between the submerged transceiver and the target beacon. By incorporating Spread Spectrum technology the wide bandwidth transmissions reduce its susceptibility to interference and enables more accurate positioning. This technology also is better at rejecting unwanted reflected signals which improves operations in challenging locations.

### Key Features

- **Bi-directional Spread Spectrum acoustics**
- **MIL Specification EMC**
- **MIL Specification Environmental**
- **Serial Responder Operation**
- **10 target tracking**



### Technical Specification

#### EASYTRAK NEXUS CONSOLE, EZT-2691

Dimensions	19" Rack mount. 3U 483 x 132.5 x 441.5mm
Weight	10.0kg
Mounting	Chambrelan D466VD-450 Slide
Power requirements	210 – 240 VAC <sub>RMS</sub> . 2A <sub>RMS</sub> . (Following boot.) 7A Max Peak to Peak Inrush upon transceiver initialisation. Power on system boot.
Connection to transceiver	Rear-panel connector for transceiver
Built-in PC.	Intel I5 running embedded Windows 7 Solid state hard disk
Front panel indicators	LED indicators for power and serial status
Serial Communications	5 x RS-232. Selectable Baud rates
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 \$GPST, Pseudo \$GPGGA, KLEIN 3000 (Quick set) Multiple outputs available

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Compass Input	TCM-2.X, SGB-HTDS, SGB-HTDt, \$HEHDT, \$HDHDM, \$HDHDT, \$HDHDG
VRU Input	TCM-2.X, \$HCXDR, TSS1
GPS / DGPS Input	NMEA; GLL, GGA, RMC
Target Heading Input	NMEA HDM, HDT, HDG, PNI TCM2
Target Depth Input	NMEA DBT, DBK, DBS, DPT, AAE
Time in	GPS Time synch
Responder Output	Pulse: Positive 12V pulse 5ms long
USB	3 ports available
Ethernet	Rear panel standard RJ45 jack
Audio	Audible activity indicator

### EASYTRAK TRANSCEIVER, EZT-2682

Material	Aluminium silicon bronze
Size	510 mm long x 100 mm diameter
Weight in air/water	11kg/8.5kg
Depth rating	50 metres
Depth sensor (Pressure Sensor)	5 bar, accuracy 0.25% between -10° to +40° C
Temperature sensor	1° resolution between -10° and +40° C
Power requirements	Powered from Nexus console
Transducer	Multi-element transducer head moulded in polyurethane
Receiver	24 bit receiver capable of detecting Spread Spectrum and tone burst signals

### ACCURACY/PERFORMANCE

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

Slant range accuracy	10cm. Accuracy dependent on correct speed of sound
Position accuracy	0.60° drms. 1.04% of slant range. Acoustic accuracy excluding heading errors
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
Frequency band (MF)	Reception 22 - 30 kHz Transmission 17 - 26 kHz
Tracking beam pattern	> Hemispherical
Beacon types	Transponders and responders, digital depth transponders AAE Release and telemetry beacons
Interrogation rate	Internally set or external key
Transmitter	Nominally 190 dB SPL
System	Externally assessed for immunity and emissions; conforms to 89/336/EEC. RoHS compliant

### TRANSCEIVER CABLE, EZT-MC50

Diameter	12.8 mm nominal
Colour	Yellow
Length	50 metre standard length
Connectors	Supplied
SWL	20 kg. Allows transducer to be deployed from cable



# Easytrak Nexus Model 2691 Technical Specification

## ELECTRO MAGNETIC IMMUNITY (EMI)

MIL STD 461D tests: CE101, CE102, RE101, RE102, CS101, CS114, RS101, RS103 to an upper limit of 1GHz.

## ENVIRONMENTAL SPECIFICATION

High Temp Test (MIL-STD-810F. METHOD 501.4)

Storage 43°C  
Operational 30°C

Low Temp Test (MIL-STD-810F. METHOD 502.4)

Storage -20°C  
Operational 0°C

Humidity Test (MIL-STD-810F. METHOD 507.4)

**Vibration** DEF STAN 00-35 Part 3: Issue 4

M1: General Purpose Vibration Test: Deployed or installed in surface ships: Sine sweep

M1: General Purpose Vibration Test: Deployed or installed in surface ships: Sine dwell

Test Type	Region	Amplitude (mm pk)	Frequency (Hz)	Duration (mins)
Sine Sweep	Upper deck, Protected Compartment and Hull	0.125	5 to 33	60
Sine Dwell	All	1.250	14	20
		0.300	23	20
		0.125	33	20

**Shock** DEF STAN 00-35 Part 3: Issue 4

M7: Shock Testing for Warship Equipment & Armament Stores: Classical Shock Pulse

NCUE – Classical Shock Pulse

	Vertical	Lateral	Longitudinal
<b>Pulse Shape</b>	Half Sine		
<b>Pulse Width</b>	10ms		
<b>Acceleration</b>	45g	25g	25g
<b>Duration</b>	1 shock in each direction of each orientation (6 in total)		

See operational specification for testing methodology.

## COMPATIBILITY OPTIONS

- EZT-2686 Transceivers
- EZT-2780 Transceivers



**ENSIGN SUBSEA SYSTEMS**  
Maritime Defence  
An AAE Technologies Group Company

Due to continual product improvement, specification information may be subject to change without notice.  
Easytrak Nexus Model 2691 July 2019  
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