Easytrak Nexus Lite, Model 2695

**Key Features**

- Bi-directional Sigma Spread Spectrum acoustics
- Full hemispherical tracking
- 8 target tracking
- Internal data logging
- USB connected console
- Optional graphical overlay
- Optional calibration software

**Easytrak Nexus Lite** is an advanced USBL positioning and tracking system that determines the position of dynamic subsea targets through the transmission and reception of acoustic signals between the submerged transceiver and a target beacon. It incorporates Sigma 1 Spread Spectrum technology to provide a secure acoustic link. By incorporating Sigma 1 technology the wide bandwidth transmissions reduce the system’s susceptibility to interference.

Designed for ease of installation in a vessel’s operations room, the surface console has been mounted within a rugged 1U enclosure for connection to a laptop or tablet PC.

Easytrak Nexus Lite retains legacy compatibility with tone beacons.

**Technical Specification**

**EASYTRAK NEXUS LITE CONSOLE, MODEL 2695** provides DC power, high speed digital communications to the transceiver with a USB interface to user PC running Easytrak Nexus Lite software.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>1U, 254 x 54 x 260mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1.0kg</td>
</tr>
<tr>
<td><strong>Power requirements</strong></td>
<td>48Vdc / Vac Adapter Input: 90Vac – 230Vac 47-63Hz typically 3A</td>
</tr>
<tr>
<td><strong>Connection to transceiver</strong></td>
<td>Rear panel connector for 2683 Transceiver</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>Operating: -10° to +40°C</td>
</tr>
<tr>
<td></td>
<td>Storage: -20° TO +50°C</td>
</tr>
<tr>
<td><strong>Front panel indicators</strong></td>
<td>LED indicators for power and serial status.</td>
</tr>
<tr>
<td><strong>Serial communications</strong></td>
<td>4 x Console RS-232 Data Ports. System utilises PC ports if available</td>
</tr>
</tbody>
</table>
2695 Nexus Lite Technical Specification

Data Output
- AAE format V1 and V2, TP-I12EC, TP-EC W/PR, Simrad 300P, Simrad 309, Simrad $PSIMSSB, Pseudo $GPRMC, NMEA $GPVGA, NMEA $GPTLL, Pseudo $GPVGA, KLEIN 3000 (Quick set)
- Multiple outputs available

Compass Input
- SGB-HTDS, SGB-HTD, NMEA HDT/HDM, HDG

VRU Input
- TCM-2.X, $HCRDX, TSS1

Calibration
- Optional EasyCal 2 USB Calibration tool.

GPS / DGPS Input
- NMEA; GLL, GGA, RMC
- Optional Geo Referenced Graphical Overlay. GeoTiff, DXF

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
- Positive 12V pulse 5ms long

Audio
- Audible activity indicator

EASYTRAK TRANSCEIVER, TYPE 2683 Factory calibrated multi-element transceiver head complete with integral AHRS and temperature sensor.

Material
- Stainless Steel

Weight in air/water
- 11kg/8.5kg

Dimensions
- 100mm x 500mm (Ø x L)

Temperature
- Operating: -10° to +40°C
- Storage: -20° to +50°C

Depth rating
- 30m

Electrical supply
- 48Vdc

Temperature sensor
- 1° resolution between -10° and +40° C

Cable
- 30m 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
- 1.0% of slant range, with external sensors
- Acoustic accuracy excluding heading correction errors

Range resolution
- Calculated to 0.1m resolution

Frequency band (MF)
- 18 - 30 kHz

Tracking beam pattern
- Hemispherical, 180°

Transmitter
- 190dB re 1µPa at 1m

Integrated AHRS:
- Bearing resolution
  - 0.1° displayed. Internally calculated to 0.01°
- Heading sensor accuracy
  - 0.8° rms standard; +/- 0.1° resolution/repeatability
- Pitch/Roll sensor accuracy
  - +/- 0.2° rms +/- 0.1° resolution/repeatability

Beacon types
- AAE Sigma 1 Digital Spread Spectrum and AAE Tone channels. AAE V-NAV channels. HPR 400 channels

Interrogation rate
- Internally set or external key

System
- Externally assessed for immunity and emissions; conforms to 89/336/EEC. RoHS compliant