**CEESCOPE™**

The next generation of ‘All in One’ complete portable survey solutions

**Compact**

This ‘All in One’ compact unit features integrated RTK GNSS positioning, a dual channel echo sounder, with full water column recording, internal data logging and a rechargeable NiMH battery.

**Rugged**

Encased in a virtually indestructible Pelican case the CEESCOPE™ has been designed and manufactured using high quality components to withstand harsh environments.

It can be easily deployed on small opportunistic platforms, including: kayaks, canoes, personal water crafts (jet ski) and other small vessels.

**CEESCOPE™ Advanced Features**

The echo sounder operates in automatic or manual mode and is capable of recording a high resolution (3200 spp) full water column acoustic envelope. This results in extremely detailed acoustic data for accurate post processing analysis.

Integrated with the latest GNSS receivers the unit utilises all known GNSS signals, this makes the unit a future proof investment.

Wireless connectivity makes it easy to link with external hardware, including: Tablet PC, PDA and Notebook PC.

A removable waterproof USB memory stick connects to the unit making it simple to log real time data and then transfer logged survey data to a PC. All data is internally PPS time stamped.

[Website: www.ceehydrosystems.com]
## General Specifications

### Physical
- **Dimensions**: 30.0 x 25.0 x 13.8 cm (L x W x D)  
  11.81" x 9.84" x 5.43"
- **Display**: 420 x 272 touch screen colour LCD
- **Weight**: 3.65 kg (8.05 lbs)*
- **Connectors**: LEMO 1K & 2K series, Industrial RJ45, TNC

### Environmental
- **Operating temperature**: 0°C – 50°C (32°F – 122°F)
- **Humidity**: 95% non condensing
- **Ingress protection rating**: IP67

### Power
- **Power consumption**: 7.2 watts (approx operating time 8 hours) - Eclipse L1
- **Internal battery**: Rechargeable high capacity NiMH battery 10Ah
- **Antenna voltage output**: 5.0 VDC (nominal)
- **External power supply**: Nominal 12.0 VDC @ 2A (9-30 VDC range)

### Connectivity
- **Network Ports**: 1, 2***
- **Bluetooth**: 0 – 50 m range**
- **Wi-Fi**: 0 – 1000 m range***
- **Internal UHF Rx modem**: 403 – 473 MHz (RTK only)

### Transducer Options
- **Standard 200 kHz**: 9° beam width @ -3dB
- **Narrow Beam 200 kHz**: 3° beam width @ -3dB
- **Dual 200/33 kHz**: 8°/19° beam width @ -3dB
- **Dual 200/24 kHz**: 4°/24° beam width @ -3dB

### Echo Sounder
- **Mode**: Auto Shallow, Auto or Manual
- **Depth range***: 0.15 – 200 m (0.6 – 650 ft) @ 200 kHz  
  0.75 - 200 m (2.5 - 650 ft) @ 24/33kHz
- **Ping rate**: 1 – 20 Hertz, depth dependent
- **Pulse length**: HF (1 – 35), LF (1 – 30)
- **TVG**: None, LOG 10, LOG 20
- **Manual gain**: 30 – 100%
- **Acoustic Velocity Range**: 1350 – 1750m (4,429 – 5,741 ft)
- **Draft**: 0 – 10 m (1 cm increments)
- **Accuracy**: 1 cm ± 0.1% of depth
- **Resolution**: 1 cm

### External Data Interfaces
- **RS-232**: NMEA 0183
- **Heave input**: TSS 1 (Heave Aiding)
- **Tide input**: CEETIDE
- **RTCM**: RS-232 UHF or Network
- **Compass input**: NMEA 0183, HDG or HDT

* series dependent  
** line of sight  
*** CEELINK-R varient

- Specifications are subject to change.  
- Visit www.ceehydrosystems.com for the complete list of specifications  
- v19329
CEESCOPE™

General Specifications

GNSS Receiver Options

<table>
<thead>
<tr>
<th>Receiver</th>
<th>Horizontal Accuracy (metres)</th>
<th>Constellations</th>
<th>Channels</th>
<th>Correction Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemisphere Eclipse L1</td>
<td>± 0.5 Atlas Basic (RMS DGNSS)</td>
<td>Multi-Constellation</td>
<td>372</td>
<td>RTCM v2.x (DGPS)</td>
</tr>
<tr>
<td></td>
<td>± 0.04 Atlas H10 (RMS DGNSS)</td>
<td></td>
<td></td>
<td>RTCM v2.x (DGPS) ± 0.008 (RMS RTK)</td>
</tr>
<tr>
<td>Hemisphere Eclipse L1/L2 RTK</td>
<td>± 0.008 (RMS RTK)</td>
<td>Multi-Constellation</td>
<td>372</td>
<td>RTCM v2.x (DGPS) ± 0.008 (RMS RTK)</td>
</tr>
<tr>
<td>NovAtel 729 L1/L2</td>
<td>± 0.6 SBAS (RMS DGPS)</td>
<td>GPS / GLONASS</td>
<td>555</td>
<td>RTCM v2.x (DGPS) ± 0.008 (RMS RTK)</td>
</tr>
<tr>
<td>NovAtel 729 L1/L2 RTK</td>
<td>± 0.05 TERRASTAR (RMS DGNS)</td>
<td>GPS / GLONASS</td>
<td>555</td>
<td>RTCM v2.x (DGPS) ± 0.008 (RMS RTK)</td>
</tr>
<tr>
<td>Trimble BD990 RTK</td>
<td>± 0.007 (RMS RTK)</td>
<td>Multi-Constellation</td>
<td>336</td>
<td>RTCM v2.x (DGPS) ± 0.008 (RMS RTK)</td>
</tr>
</tbody>
</table>

Features Summary:

- Internal data logging
- Bluetooth
- Industrial LAN
- RS232 connectivity via K series LEMO connectors
- High capacity internal rechargeable battery
- High bright touch screen LCD
- 20Hz position output
- L Band enabled
- Maximum Depth - 200m

Options:

- High frequency or dual frequency echo sounder with 20Hz ping rate
- RTK with internal UHF radio
- NovAtel, Hemisphere and Trimble GNSS receivers with multi-channel and multi-constellation GNSS

Universal Gunwale Bracket:

Connect 5/8 survey pole to 50mm/2" tube

Antennae:

Pole mounted GNSS and UHF antenna with UHF Antenna Bracket and 5/8 to 50mm/2" Pipe Adaptor.

Transducers:

High Frequency and Dual Frequency options with mounting hardware

Mounting Clamp:

50mm x 50mm @90°

Transit Case:

Custom foam insert in a Pelican 1560 Protector Case