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.

www.ceehydrosystems.com
# CEESCOPE™

## 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

### Environmental
- **Operating temperature**: -5°C – 50°C (23°F – 122°F)
- **Humidity**: 95% non condensing
- **Ingress protection rating**: IP67

### Power
- **Power consumption**: 7.2 watts (approx operating time 8 hours) – Crescent
- **Internal battery**: Rechargeable high capacity NiMH battery 10Ah
- **Antenna voltage output**: 5.0 VDC
- **External power supply**: Nominal 12.0 VDC @ 2A (9 - 26 VDC range)

### GNSS Receiver Options
- **Hemisphere Crescent L1 + MRB**: ± 0.6m (95% DGPS) GPS
- **Novatel OEMStar**: ± 0.5m (95% DGPS) GPS + GLONASS
- **Novatel OEM628 L1/L2**: ± 0.4m (95% DGPS) GPS + GLONASS
- **Novatel OEM628 L1/L2 RTK**: ± 0.01m (95% RTK) GPS + GLONASS

### Wireless Connectivity
- **Bluetooth Internal antenna**: 0 – 50 m range*
- **Wi-Fi**: 0 – 50 m range*
- **Internal UHF modem**: 403 – 473 MHz (RTK only)

### Echo Sounder
- **Mode**: Automatic or Manual
- **Depth range**: 0.2 – 200 m (0.6 - 650 ft) @ 200 kHz  
  0.75 – 200 m (2.5 - 650 ft) @ 33 kHz
- **Ping rate**: 1 – 20 Hertz, depth dependent
- **Pulse length**: HF (1 – 30 cycles), LF (1 – 20 cycles)
- **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

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

### External Data Interfaces
- **GPS input**: NMEA 0183
- **RTCM input**: RTCM v2.3 (DGPS) Crescent  
  RTCM v3.0, CMR+ (RTK), OEM628
- **Heave input**: TSS 1
- **Tide input**: CEETIDE

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* line of sight  
** series dependent  
- specifications are subject to change  
- visit www.ceehydrosystems.com for the complete list of specifications  
- v15124