

# 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.

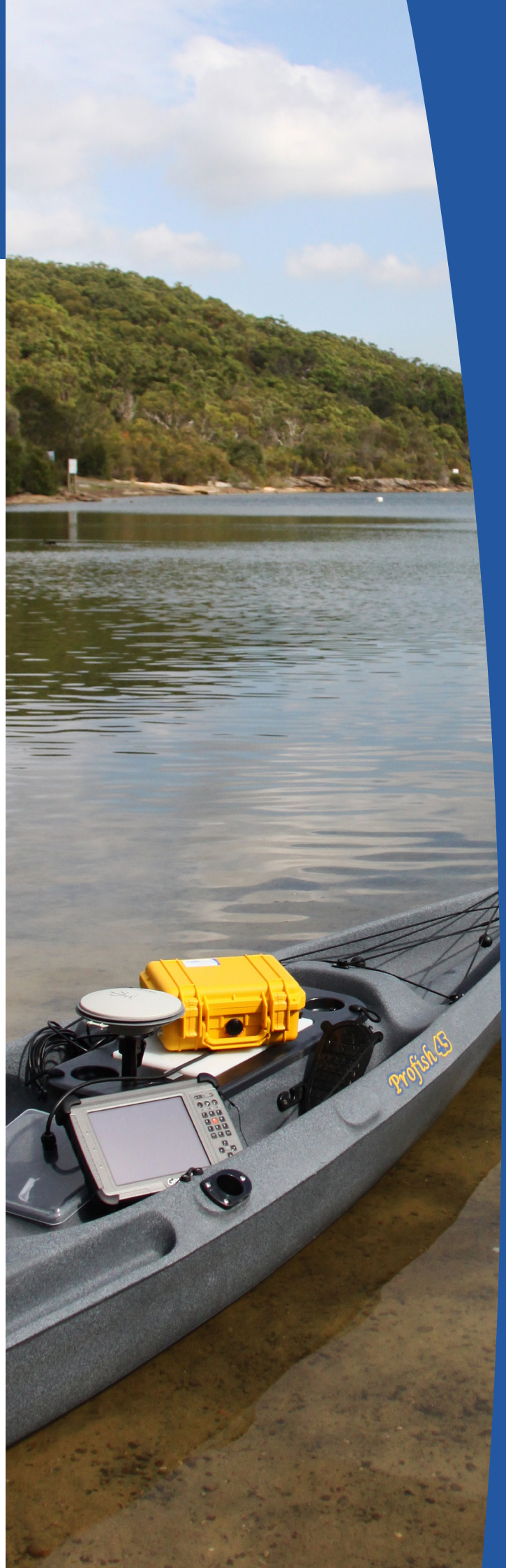
Integrated with the latest GNSS receivers the unit utilises all known GNSS signals, this makes the unit a future proof investment.

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.



[www.ceehydrosystems.com](http://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, 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) - Phantom 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

GNSS input	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 variant

- Specifications are subject to change.

- Visit [www.ceehydrosystems.com](http://www.ceehydrosystems.com) for the complete list of specifications

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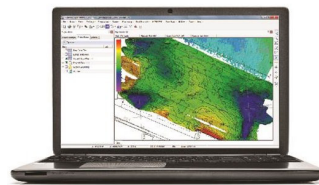
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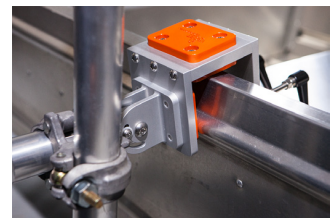
### GNSS Receiver Options

	Horizontal Accuracy (metres)	Constellations	Channels	Correction Inputs
Hemisphere Phantom L1	± 0.5 Atlas Basic (RMS DGNSS) ± 0.04 Atlas H10 (RMS DGNSS)	Multi-Constellation	800	RTCM v2.x (DGPS)
NovAtel 729 L1/L2 RTK	± 0.6 SBAS (RMS DGPS) ± 0.05 TERRASTAR (RMS DGNSS) ± 0.01 (RMS RTK)	GPS / GLONASS	555	RTCM v2.x (DGPS) RTCM v3.x/CMR/CMR+(RTK)
Trimble BD990 RTK	± 0.007 (RMS RTK)	Multi-Constellation	336	RTCM v2.x (DGPS) RTCM v3.x/CMR/CMR+(RTK) CRMx (Trimble RTK)

## CEESCOPE System Diagram



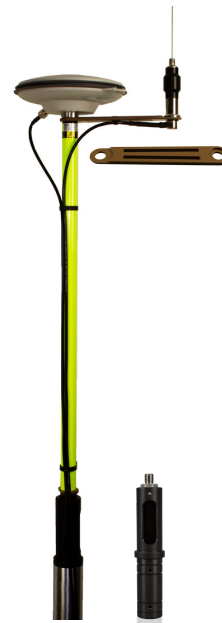
**Cable / Bluetooth Connection to:**  
Tablet, PC, PDA and Notebook PC



**Universal Gunwale Bracket:**  
Connect 5/8 survey pole to 50mm/2" tube



**Transducers:**  
High Frequency and Dual Frequency options with mounting hardware



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



**Mounting Clamp:**  
50mm x 50mm @90°



**Transit Case:**  
Custom foam insert in a Pelican 1560 Protector Case

### 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

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