



Coda Octopus:3D

Real-Time Sonar Solutions

/Echoscope®



Benefits

- Improved situational awareness
- Highest definition of multibeam data output in the world
- Real time decision making
- Increased productivity
- Maintain subsea operations in zero visibility
- Enhanced safety
- Expert 24x7 Technical Support

Applications

- Port and harbour security
- Infrastructure inspection
- Underwater construction
- Dredging and rock dumping
- Mattress laying
- Cable laying, burial and pull-in monitoring
- Scour inspection
- Marine salvage
- Diver monitoring and identification
- Obstacle avoidance and ROV navigation
- Decommissioning
- Contraband detection
- Biological study (fisheries, marine mammals)

The most advanced real time 3D sonar in the world

The Echoscope® is the world's first and highest resolution real time 3D sonar. Built around unique patented technology, it generates a complete 3D model, composed of over 16,000 soundings, from each and every acoustic transmission. This 3D model is entirely refreshed up to twelve times per second with each new transmission.

With sounding densities far in excess of those generated by other sonars, the Echoscope® is able to take advantage of patented statistical rendering techniques to further enhance the clarity of the image, presenting the user with an intuitive and easy-to-interpret image.

When monitoring underwater activity, even when the target and the Echoscope® are moving independently of each other, the 3D imagery remains clear and accurate, giving the viewer an instant three-dimensional understanding of the underwater environment during operations.

In mapping and inspection tasks, the ping geometry of the Echoscope® will allow a target to be visualised many times in a single pass, with each view taken from a different angle. This allows complex subsea structures to be mapped out with a level of confidence and detail far beyond anything that can be achieved using alternative methods.

Whether deployed on inland waterway work or large scale offshore oil and gas projects, the Echoscope® real time 3D sonar will provide clear, high definition imagery of the underwater environment.

Features

- High definition 3D sonar image generated in real-time
- Mosaicing capability
- Displays complex moving structures accurately
- Accurate even in turbid water
- Suitable for installation on vessels, ROV, barge or crane
- Accurate geo-referenced data
- Versatile DTM output options
- Very easy to use even by non-sonar experts such as crane operators and law enforcement officers



Coda Octopus

Sound Underwater Intelligence

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Technical Specifications

Performance (by Model)	Single Frequency (375kHz)	Dual Frequency (375/610kHz)
Frequency	375kHz	375 and 610kHz software switchable
Number of beams	128 x 128 (16,384 total)	128 x 128 (16,384 total)
Maximum range*	120m (394ft)	120m (394ft) at 375kHz / 80m (262ft) at 610kHz
Minimum range	1m (3.3ft)	1m (3.3ft)
Range resolution	3cm (1.2")	3cm (1.2")
Update rate (ping rate)	Up to 12Hz	Up to 12Hz
Angular coverage	50° x 50°	50° x 50°, 50° x 25°, 25° x 50°, 25° x 25° software switchable
Beam spacing	0.39°	0.39° or 0.19° dependent on angular coverage

*The actual working range will depend on the target's size, reflectivity, and the level of detail required for the application.

Physical

Dimensions (h x w x d) (excluding connectors)	380 x 300 x 160mm (15" x 11.8" x 6.3")
Weight in Air	22 kg (48 lb)
Weight in Water	12 kg (26 lb)
Power Consumption	3 – 6A at 24Vdc
Depth Rating	600 m (1,968ft) with 3,000 m (9,840ft) option

Interfaces

Sonar head to control unit	Single cable for power, data and control
Control unit to top-end PC	Ethernet and RS232

