Coda Octopus:3D
Real-Time Sonar Solutions

/Echoscope4G®

Lighter/Smaller/Reduced Cost
Upgraded to the 4G Performance Engine
More Accurate, More Dynamic, Easier to Integrate

250-4000m Depth Rating

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

The most advanced real time 3D sonar in the world.

The Echoscope4G® is the latest of our fourth-generation real-time 3D imaging sonar platform. The Echoscope4G is lighter, smaller and uses less power than our third-generation systems. It deploys our 4G performance pack to include our new beamformer that supports industry standard 100mb ethernet capability, increased ping rate to 20Hz, and reduced range resolution to 2cm.

The Echoscope4G offers two different models with three different depth ratings with a wide range of flexible applications:

- Dual Frequency (375/630kHz) Real-Time 3D imaging & mapping system
- XD Triple-Frequency (240/375/630kHz) Real-Time 3D imaging & mapping system

The Echoscope4G is the world's 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 20 times per second with each new transmission.

With sounding densities far in excess of those generated by other sonars, and with the new increased 20Hz ping rate, the Echoscope4G presents unrivaled clarity of dynamic operations and moving objects in video-like data format in low-visibility water conditions. All the Echoscope4G range 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.

In mapping and inspection tasks, the ping geometry of the Echoscope4G will allow a target to be visualized many times in a single pass, allowing a target to be viewed from many different angles. This allows complex subsea structures to be mapped with fewer shadows and 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 projects, the Echoscope4G real-time 3D sonar will provide clear, high definition imagery of the underwater environment.

New Features

- Lighter/Smaller/Reduced Power/Lower Cost
- Latest 4th Generation Processing Engine
- Increased Ping Rate Now 20Hz
- Reduced Minimum Range Now 0.5m
- Programmable TVG
- Standard 100Mb Ethernet for ROV/AUV applications

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Technical Specifications		
Performance (by Model)	Dual Frequency	XD Triple Frequency
Frequency	375 and 630kHz software switchable	240/375 and 630kHz software selectable
Number of beams	128 x 128 (16,384 total)	128 x 128 (16,384 total)
Maximum range*	120m (394ft) at 375kHz 80m (262ft) at 630kHz	From 150m (492ft) at 240kHz 120m (394ft) at 375kHz 80m (262ft) at 630kHz
Minimum range*	0.5m (1.64ft)	0.5m (1.64ft)
Range resolution	2cm (0.8in)/ 3cm (1.2in)*	2cm (0.8in)/ 3cm (1.2in)*
Update rate (ping rate)	Up to 20 Hz software selectable	Up to 20 Hz software selectable
Angular coverage	50º x 50º, 24º x 24º	90º x 44º, 50º x 50º, 24º x 24º
Beam spacing	0.39º or 0.19º	0.70º to 0.19º
*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 and handles)	328mm x 300mm x 145mm (12.9in x 11.8in x 5.7in)	328mm x 300mm x 156mm (12.9in x 11.8in x 6.1in)
Weight in Air	20.6 kg (45.5 lbs)	21 kg (46.3 lbs)
Weight in Water	10.9 kg (24 lbs)	10.9 kg (24 lbs)
Power Consumption	3 - 6A at 24Vdc	3 - 6A at 24Vdc
Depth Rating	250m (820ft), 600m (1,968ft), 3,000m (9,840ft), with 4,000m (13,123ft) option*	250m (820ft), 600m (1,968ft), 3,000m (9,840ft), with 4,000m (13,123ft) option*
Interfaces		
Sonar head to PSU	Power: 24V DC Control: RS232 Serial Cable Data: 100Mb Industry Standard Ethernet Single cable for power, data, and control	Power: 24V DC Control: RS232 Serial Cable Data: 100Mb Industry Standard Ethernet Single cable for power, data, and control
Applications		
Port and harbor 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)		
*Depending on operating mode		
**Available upon request		

Echoscope® Features

- High definition 3D sonar image generated in real-time
- Mosaicking capability
- Displays complex moving structures accurately
- Accurate even in turbid water
- 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

Sales Worldwide: +44 131 553 1380 Sales Americas: +1 863 937 8985 Sales Australasia: +61 894 308 045
More Information: sales@codaoctopus.com salesamericas@codaoctopus.com www.codaoctopus.com
Technical Support Worldwide: +44 131 553 7003 Technical Support Americas: +1 888 340 2632