

C500 Defender Survey Skid

Seamless Integration with VideoRay Defender

Unprecedented Precision and Control for Subsea Exploration with Integrated Manual Panning and Tilting.

The Echoscope® C500 Defender Survey Skid has been designed by Coda Octopus for seamless integration of its real time 3D imaging solutions onto the VideoRay Defender. This robust and versatile assembly is compatible with the Echoscope® C500 Surface series including Echoscope PIPE® CIVS Surface renowned for high-resolution real-time 3D sonar imaging capabilities. The Defender Survey Skid provides balanced mounting support for a range of DVL aided INS systems providing precise positioning allowing users to navigate complex environments and provide real-time 3D mapping and inspection data without post-processing.

The Echoscope® C500 Defender Survey Skid offers intuitive manual control, allowing operators to pan and tilt the Echoscope® for optimal viewing angles. This hands-on approach, combined with unparalleled imaging and seamless integration, sets a new standard for underwater surveying technology. From routine inspections to marine research and search and rescue operations, this fully integrated innovative platform empowers users to explore the depths with unmatched clarity and precision.



The C500 Defender Survey Skid presents many key benefits:



Seamless Integrations

Specially designed for integration with the VideoRay Defender ROV, with full mounting compatibility for GreenSea GS4 INS, Nortek DVLs and Sonardyne Sprint-NAV Mini Navigation systems



Adjustable Angles

Adjustable Pan and Tilt angles allow for optimised seafloor visualisation. Sonar can be mounted to port (-90°), forward (0°) or starboard (90°) pan, and tilted in steps from 0° to 90°



Practical Handling

Base allows unit to be set down while protecting the sonar, and with built in quick release pins, you can easily remove the sonar from the platform assembly for easy deployment/packing



Echoscope PIPE® C500 Surface

Available in both Dual or Triple Frequency Options, with a cable that takes data back to the topside for display.

Echoscope PIPE® C500 Surface Dual Frequency			Echoscope PIPE® C500 Surface Triple Frequency		
Acoustic Projectors	Mid-Frequency (375 kHz)	High-Frequency (630 kHz)	W/A/M (345 kHz)	Mid-Frequency (375 kHz)	High-Frequency (630 kHz)
Adaptive Frequency Band	315 kHz - 425 kHz	550 kHz - 700 kHz	315 kHz - 375 kHz	315 kHz - 425 kHz	550 kHz - 700 kHz
256 x 256			640 x 128	256 x 256	
Number of Values per Beam	2,500 (Dependent on Features Purchased)				
Maximum Range*	120 m (394 ft)	80 m (262 ft)	120 m (394 ft)	120 m (394 ft)	80 m (262 ft)
Minimum Range*	0.5 m (1.64 ft)				
Angular Resolution (ERSA)	Up to 0.1°				
Range Resolution	3 cm (1.2")				
Update Rate (Ping Rate)	Up to 50 Hz				
Angular Beamwidth	Up to 0.6°x 1.2°				
Imaging Field of View (User Selectable)	54° x 54° – 46° x 46°	33° x 33° – 25° x 25°	Up to 125° x 25°	54° x 54° – 46° x 46°	33° x 33° – 25° x 25°
Power Consumption	2 - 4 A at 24 V DC **An up to 10 A inrush for less than 20µs may occur on start-up.				
Dimensions	670 mm x 412 mm x 403 mm (26.5" x 16.2" x 15.9")				
Weight in Air	Sonar & Skid: 18.4 kg (40.6 lbs) Sonar: 9.6 kg (21.2 lbs)		Sonar & Skid: 19.0 kg (41.9 lbs) Sonar: 10.2 kg (22.5 lbs)		
Power Consumption	2 - 6 A at 24 V DC 10 A inrush for less than 20 µs may occur on start-up				
Depth Rating	Rated up to 50m (164 ft)				

Echoscope PIPE® CIVS

Center Frequency

1 MHz

Adaptive Frequency Band

900 kHz - 1150 kHz

Maximum Number of Beams

128 x 128 for each tile
384 x 384 for a full 3x3 tiled field of view

Maximum Range*

35 m (115 ft)

Minimum Range

0.1 m (0.33 ft)

Range Resolution

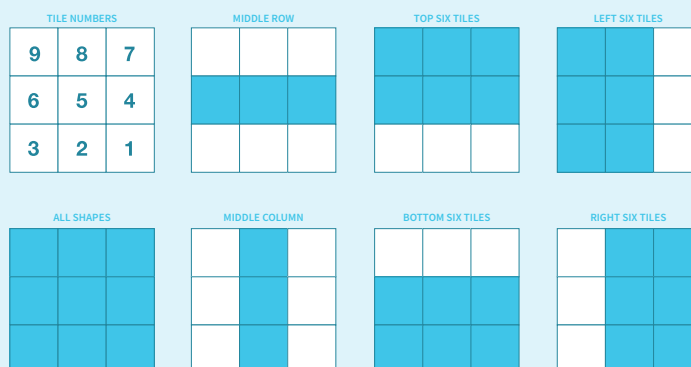
1.6 cm (0.6")

Update Rate (Ping Rate)**

Up to 50 Hz

Angular Coverage (User Selectable)

15° x 15° per image tile, with tiles arranged in a 3x3 grid to provide a complete 45° x 45° for full 3x3 tiled output. Other shape options include:



Beam Spacing Density

Up to 0.11° x 0.11°

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

** The maximum achievable ping rate is dependent on the maximum range requested and the number of tiles per tile image. A complete 45° x 45° image can be generated at up to 5 Hz, whereas the Middle Row or Middle Column can be images at rates over 15 Hz, and are therefore capable of capturing high-resolution close-up motion of moving targets.

Dimensions (H x W x D) (Excluding connectors and handles)

232 mm x 301 mm x 154 mm
(9.13 in x 11.85 in x 6.06 in)

Weight in Air

Sonar & Skid: 18.4 kg (40.6 lbs)
Sonar: 9.6 kg (21.2 lbs)

Power Consumption

2.0 A at 24 V DC
An inrush current of up to 10 A for less than 20 µs may occur on start-up

Depth Rating

40 m (131 ft) 250 m (820 ft) 600 m (1968 ft) 3000 m (9842 ft) 4000 m (13123 ft)