Coda Octopus
Sound Underwater Intelligence

/CodaOctopus® UIS
Underwater Inspection System

Benefits

Rapid deployment on small boat platform

Quick real-time scan for threat ID

Quick identification of target and maintaining visual custody of target

Real-time change detection using our baseline comparison feature

UIS Rapid Deployment System

The CodaOctopus® Underwater Inspection System (UIS) is the world's first and only fully integrated 3D/4D sonar system for specialized underwater applications such as maritime security, port and harbor maintenance, search and recovery, intruder visualization and classification, and ship hull inspection. The UIS can also be used to rapidly assess storm damage, locate sunken debris, and provide baseline maps of critical infrastructure.

"It's almost a picture quality image of what's going on down there. It's an unbelievable tool that can help keep the port safe."
Sergeant Dan Laval, San Francisco Police Department

The UIS is configurable with our range of sonars, including the Echoscope PIPE®, Echoscope PIPE® Surface, Echoscope PIPE® C500, and our standard Echoscope4G®.

Using Echoscope® Real-time 3D Volumetric Sonar Technology to deliver precise, intuitive, and instantaneous three-dimensional images, the UIS is the only system suitable for multiple applications, producing detailed GPS-referenced underwater scans in real time. This easy-to-use integrated solution allows non-experts to undertake rapid inspections of harbor walls, bulkheads, piers, bridges, pilings, and ship hulls, and to readily understand and interpret the underwater scene in real time. The system can also be utilized to inspect and clear shipping channels, as well as to image and classify divers and underwater vehicles.

Alongside the Echoscope PIPE® series sonar, the UIS delivers co-referenced above-waterline imagery via a real-time 3D volumetric Echoscope® AIR LiDAR for both day and night operations. Immediate GPS data referencing is provided by an pre-calibrated F280® series system, which simultaneously outputs heading and motion data. Each subsystem sensor is connected through a small and lightweight data integration unit, 3D Connect 5G, which acts as the hub for rapid deployment, to a mission control laptop running the dedicated and intuitive 4G USE® topside software.

Equipped with a rugged and easily deployable vessel pole mount, the UIS is currently used by law enforcement agencies, military organizations, and port security operatives to quickly access high-definition subsea data for decision-making purposes.

Applications

- Maritime Security
- Port and Harbor Maintenance
- Evidence Search and Recovery
- Intruder Visualization and Classification
- Ship Hull Inspection
- Storm Damage Assessment
- Sunken Debris Location
- Critical Infrastructure Mapping
- Baseline Comparison
- Live Monitoring of Operations
- Bulkhead Maintenance
- Berth Monitoring

Coda Octopus
Sound Underwater Intelligence

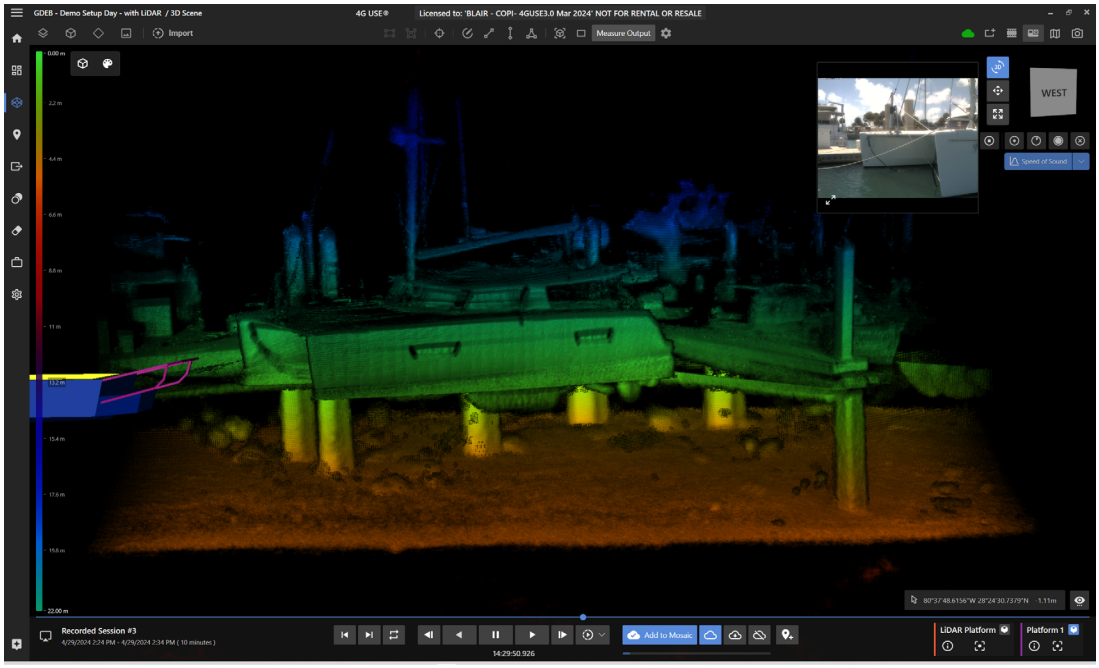
Sales Worldwide: +44 131 553 1380
Sales Americas:+1 407 735 2400
sales@codaoctopus.com
www.codaoctopus.com

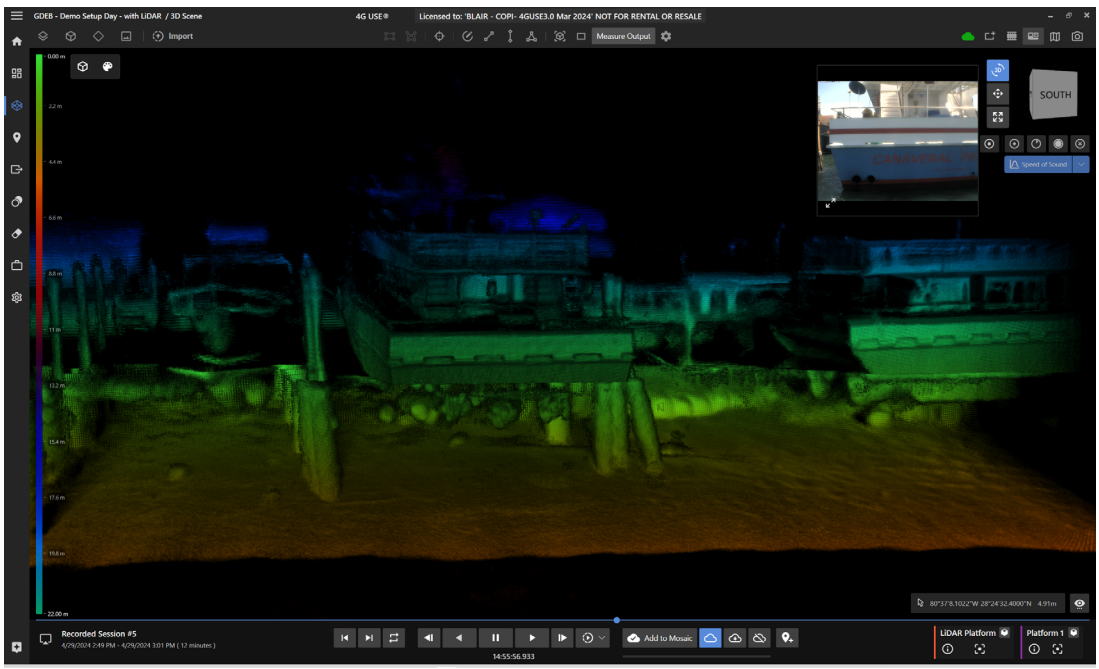
UIS Standard / UIS Surface / UIS C500

There are currently three types of UIS integration packages offered for various purposes. The UIS Standard includes an Echoscope PIPE® for most underwater applications; the UIS Surface includes an Echoscope PIPE® Surface for shallow water applications; and the UIS C500 includes a compact and lightweight Echoscope PIPE® C500.

The core of all UIS integration packages is the 3D Connect 5G, which integrates all Echoscope® real-time 3D sonars, single and dual-axis rotators, the above-water Echoscope® AIR LiDAR, a pre-calibrated F280 Series GPS-aided inertial navigation system, and various additional sensors to enhance the system's capabilities.

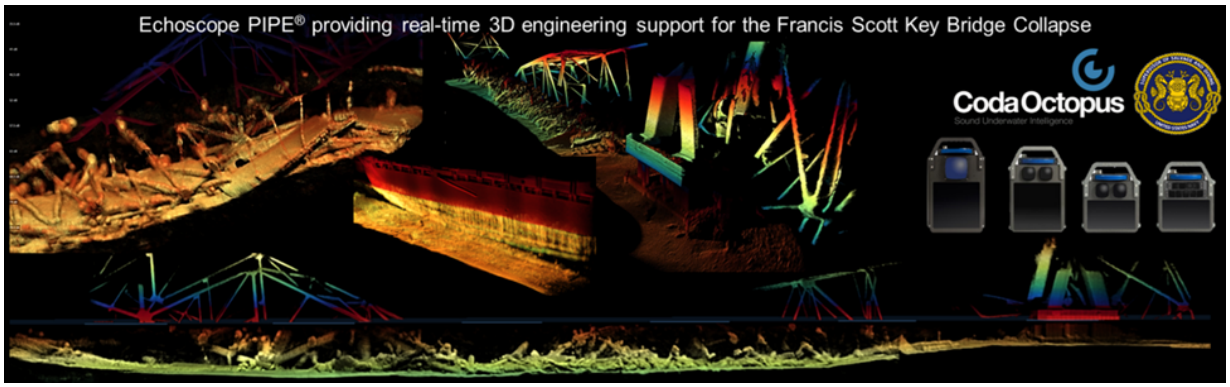
All UIS integration packages come with the 4G USE® software to manage and operate the entire UIS system from a laptop computer. The following is some example data captured from the UIS and displayed in the 4G USE®:

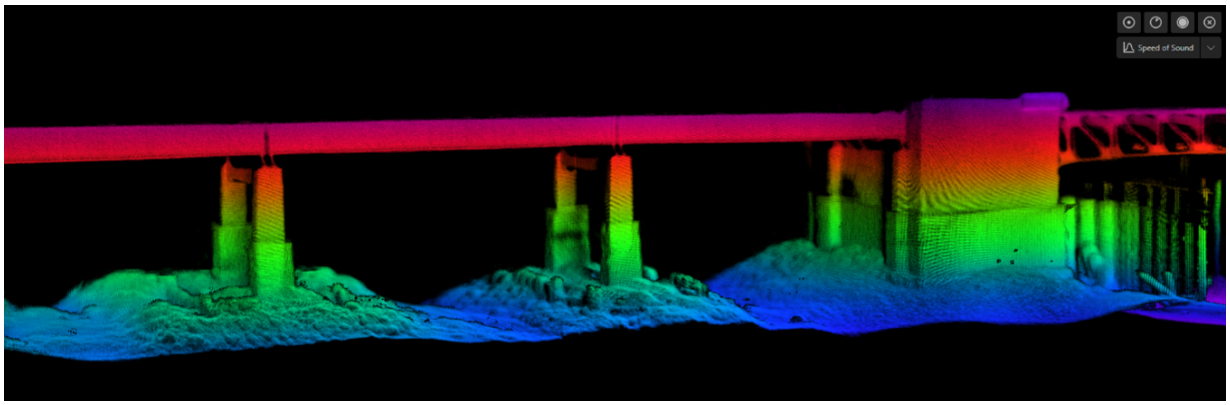


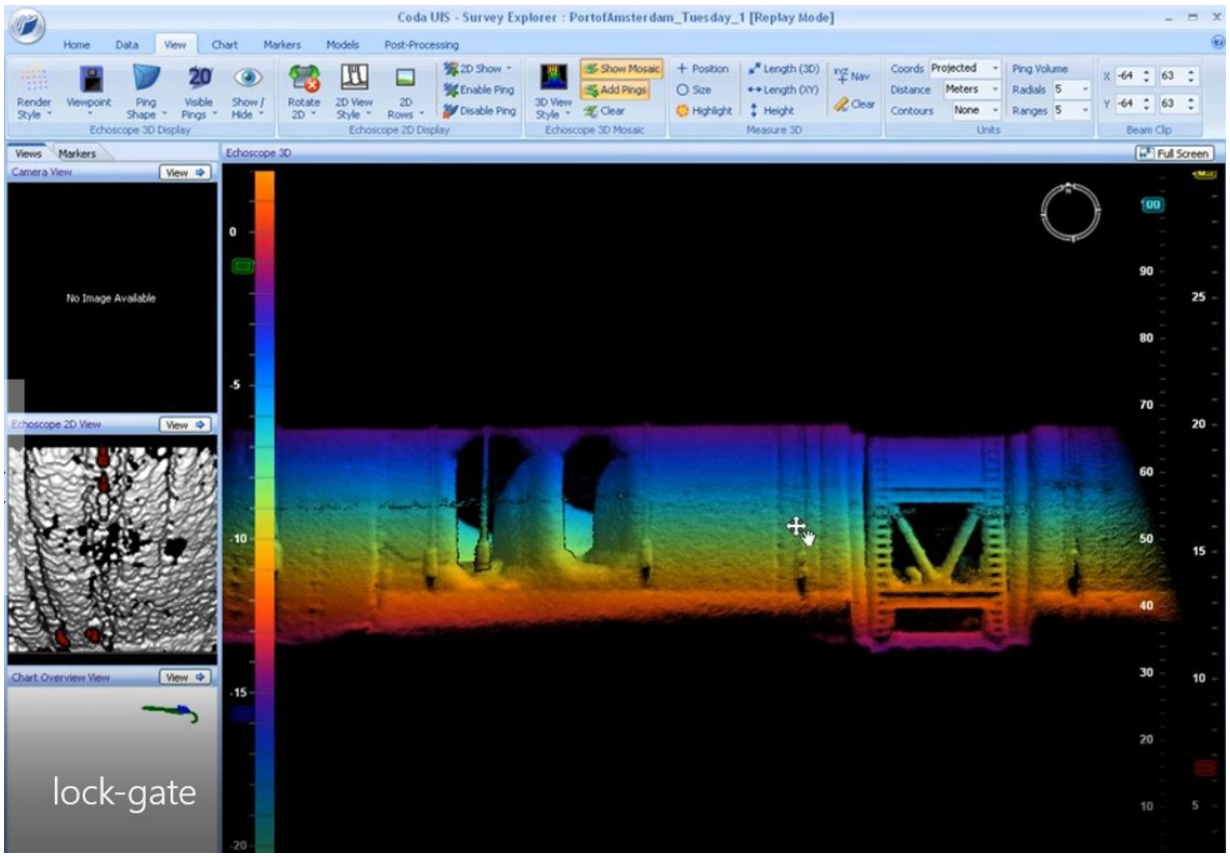


Sales Worldwide: +44 131 553 1380
Sales Americas:+1 407 735 2400
sales@codaoctopus.com
www.codaoctopus.com

Gallery of Screenshots

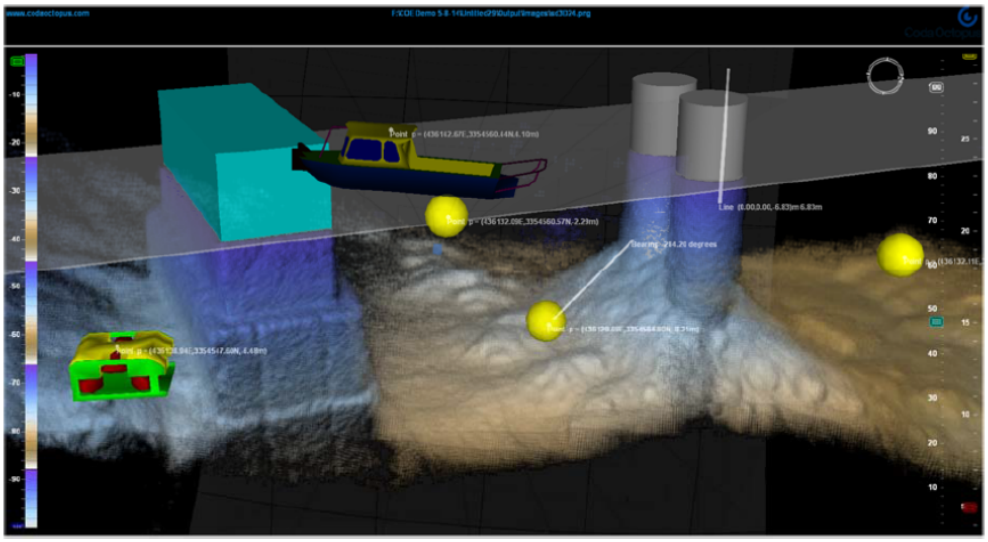


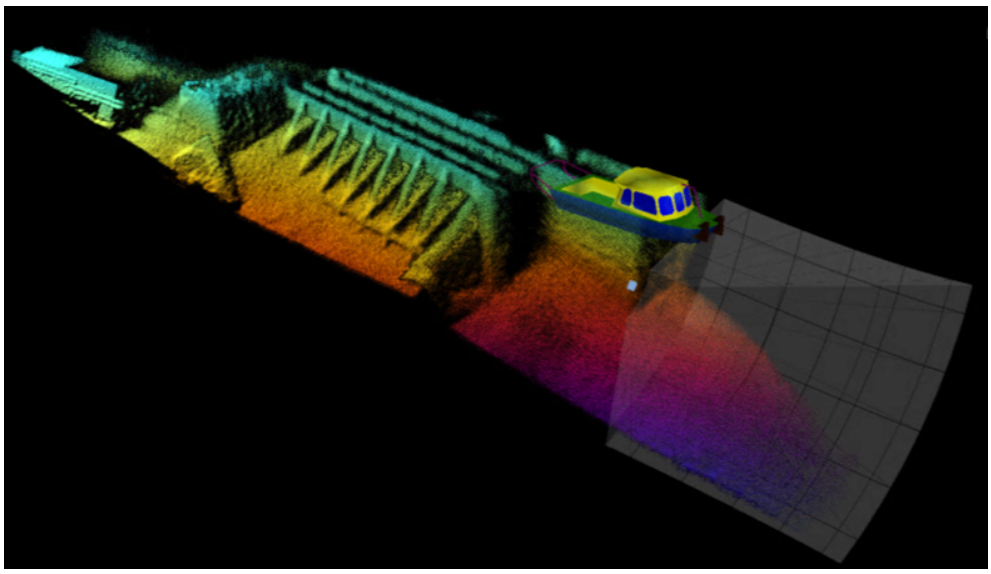


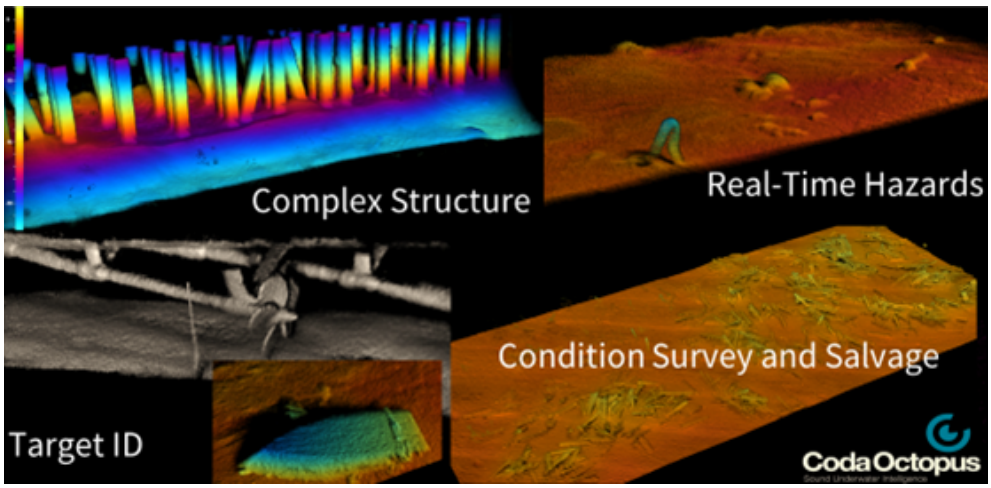


Sales Worldwide: +44 131 553 1380
Sales Americas:+1 407 735 2400
sales@codaoctopus.com
www.codaoctopus.com

Gallery of Screenshots







Sales Worldwide: +44 131 553 1380
Sales Americas:+1 407 735 2400
sales@codaoctopus.com
www.codaoctopus.com

Coda Octopus
Sound Underwater Intelligence

/CodaOctopus® UIS
Underwater Inspection System

Technical Specifications

Performance (by Model)	UIS Standard	UIS Surface	UIS C500
Real-time 3D Sonar			
Sonar Model	Echoscope PIPE®	Echoscope PIPE® Surface	Echoscope PIPE® C500
Adaptive Frequency Bands	240 kHz: 220 kHz – 280 kHz* 375 kHz: 315 kHz – 425 kHz 630 kHz: 550 kHz – 700 kHz		
Maximum Range	150 m (492 ft) at 240 kHz* 120 m (394 ft) at 375 kHz 80 m (262 ft) at 630 kHz		
Minimum Range	0.5m (1.64ft)		
Range resolution	3cm (1.2”)		
Update Rate (Ping Rate)	Up to 40Hz		
Imaging Field of View	220kHz – 280kHz: 100°x44° – 76°x33°* 315kHz – 425kHz: 54°x54° – 46°x46° 550kHz – 700kHz: 33°x33° – 25°x25°		
Depth Rating	250-400 m (820-13,323 ft)	Up to 20 m	250-400 m (820-13,323 ft)
Weight in Air	Dual Frequency: 21.7 kg (47.8 lb) Triple Frequency: 22.3 kg (49.2 lb)	Dual Frequency: 12.1 kg (26.7 lb) Triple Frequency: 12.7 kg (28.0 lb)	Dual Frequency: 15.1 kg (33.3 lb) Triple Frequency: 15.7 kg (34.6 lb)
* This option is only available with the Triple Frequency models.			
3D Connect 5G			
Power Input	24-30v DC Input (Available from Bundled 3D Connect PSU or Direct 24-30 VDC Power Source)		
Power Output	- Multi-output Power Supply Supporting All Connected Sensors - Additional 12 VDC Aux Power Output (2A)		
Data Input/Output	- Up to 2 x Echoscope® / Rotator Connectors and 2 x Camera Interface Connectors - 1 x Motion (F180® / F280®) Series Connector - 2 x RJ45 Ethernet Gb/s Ports for Network Communication - 3 x DB9 Serial Connectors for External Sensor Input - 1 x DB9 Serial GNSS Corrections I/O - 1 x BNC PPS TTL Signal Input - 1 x DB9 Serial Time Input Connector (ZDA)		
Pre-Cal F280® Series			
Positional Accuracy (CEP)	0.30 m with DGPS Correction, 0.30 m with SBAS Correction, or 1.20 m without Correction		
Roll and Pitch (1σ)	0.02°		
True Heading (1σ)	0.04° (2 m Baseline), 0.025° (4 m Baseline)		
Heave (1σ)	5cm or 5% (on-line), 3.5cm or 3.5% (iHeave)		
Velocity (1σ)	0.014 m/s		
Echoscope® AIR LiDAR			
Maximum Opening Angle	80° x 60° (Echoscope® AIR LiDAR 60) or 80° x 30° (Echoscope® AIR LiDAR 30)		
Mamium Range (2 fps)	25 m (Echoscope® AIR LiDAR 60) or 65 m (Echoscope® AIR LiDAR 30)		
Typical Range (10 fps)	10 m (Echoscope® AIR LiDAR 60) or 25 m (Echoscope® AIR LiDAR 30)		
Software	4G USE®, CodaOctopus® USE PIPE CORE		

Publication Date: 06.24
Version: 1.1.06.24

Sales Worldwide: +44 131 553 1380
Sales Americas:+1 407 735 2400
sales@codaoctopus.com
www.codaoctopus.com