



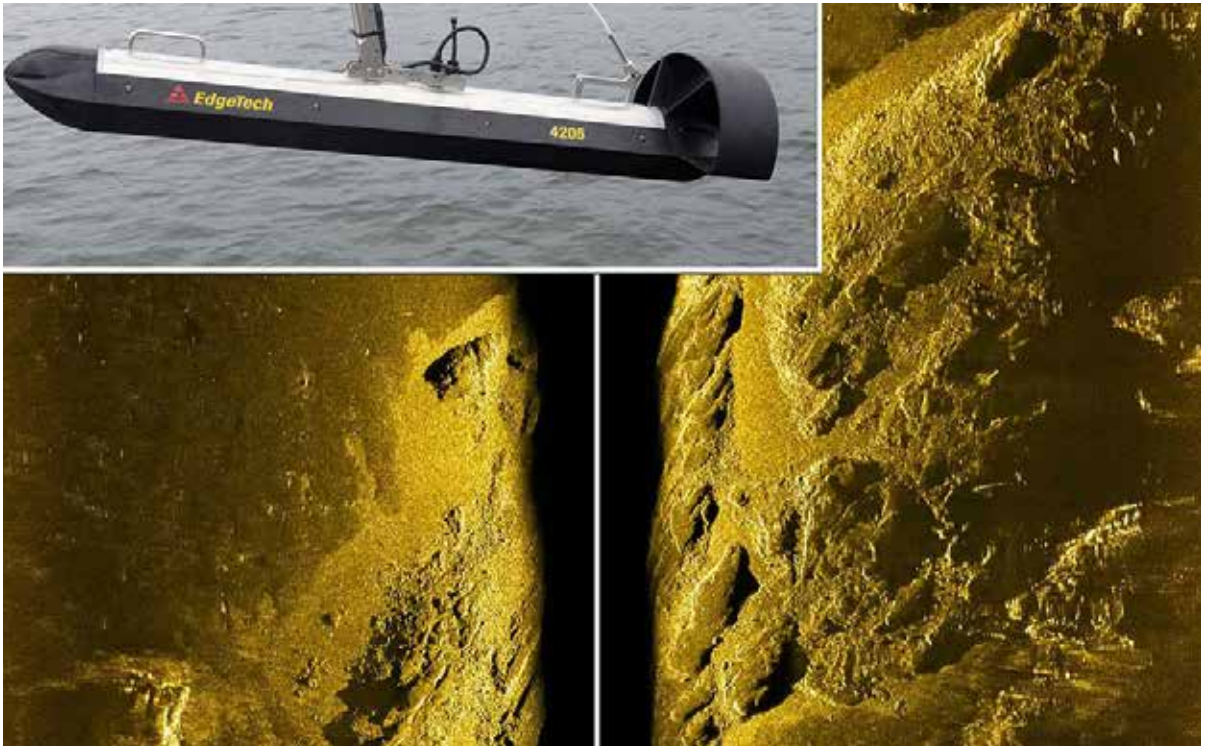
**CODEVINTEC**

Tecnologie per le Scienze della Terra e del Mare

45° 27' 39.384" N  
9° 07' 30.145" E

## 4205

# Tri-frequency / Motion Tolerant Side Scan Sonar System



The next generation 4205 is a versatile side scan sonar system that can be configured for almost any survey application from shallow to deep water operations.

### Features

- > Tri frequency side scan sonar
- > Motion tolerant mode
- > Improved target positioning
- > Crisp, high resolution CHIRP images
- > Increased towfish power to support a wider range of additional 3rd party sensors
- > Single pulse high resolution mode



## 4205 Tri-Frequency / Motion Tolerant Side Scan Sonar System

The 4205 utilizes EdgeTech's Full Spectrum® CHIRP technology to provide crisp, high resolution imagery at ranges up to 50% greater than non-CHIRP systems; thus allowing customers to cover larger areas and save money spent on costly surveys.

In addition to the high-resolution imagery that EdgeTech is known for, **the 4205 comes with a number of new features which makes the system even more flexible and powerful in offshore operations.**

The 4205 is available in either a tri-frequency side scan sonar configuration or motion tolerant and multi-pulse configuration.

The tri-frequency version allows surveyors the option to operate any two frequencies simultaneously from the tri-frequency system.

Long range operations for example can be achieved with a selection of 230/540kHz combination.

Then, **on-demand the system can be changed to a 540/850kHz system for an even higher resolution survey.**

The 4205 motion tolerant configuration with multi-pulse provides surveyors the ability to operate either at faster survey speeds or in more adverse weather conditions while still obtaining high quality underwater imagery.

Additionally, this configuration can be operated in a single pulse high-resolution mode for those operations that require an even more finite view of the seafloor.

In both the tri-frequency and motion tolerant/multi-pulse configurations, **towfish and target positioning has been improved with the integration of a more accurate heading sensor that can be coupled with an optional USBL beacon.**

Additionally, all systems now come with Increased towfish power to support a wider range of additional 3rd party sensors.

**All EdgeTech 4205 systems are comprised of a top-side system and a reliable stainless steel towfish.**

Topside processors are rack mountable and come with easy-to-use GUI software that can be installed on the optional industrial workstation, laptop, or customer provided PC.

### Applications

- > Cable & pipeline surveys
- > Geological/geophysical surveys
- > Mine countermeasures (MCM)
- > Geohazard Surveys
- > Channel clearance
- > Search and recovery
- > Archaeological surveys



Motion Tolerant Mode Sonar example:  
During turbulent conditions, the data on the left of side of this image was recorded using the EdgeTech 4205 Motion Tolerant mode. The right side of the image, depicting motion induced striping was captured without the Motion Tolerant mode for comparison.



## Technical specifications

Sonar specifications	4205 Tri-Frequency	4205 Multi-pulse / Motion tolerant (MP/MT) and Hight definition mode	
Frequency	Choice of either 120/410/850 kHz or 230/540/850 kHz	Choice of either 120/410 kHz, 230/540 kHz, or 230/850 kHz	
Operating Range (meters/side)	120 kHz: 600m, 230 kHz: 350m, 410 kHz: 200m, 540 kHz: 150m, 850 kHz: 90m		
		MP/MT	HDM
Horizontal Beam Width	120 kHz: 0.7°	120kHz: 0.95°	0.7°
	230 kHz: 0.44°	230kHz: 0.62°	0.44°
	410 kHz: 0.28°	410kHz: 0.40°	0.28°
	540 kHz: 0.26°	540kHz: 0.36°	0.26°
	850 kHz: 0.23°	850kHz: 0.33°	0.26°
		MP/MT	HDM
Resolution Along Track	120 kHz: 2.4m @ 200m	120kHz: 3.3m @ 200m	2.4m @ 200m
	230 kHz: 1.2m @ 150m	230kHz: 1.7m @ 150m	1.2m @ 150m
	410 kHz: 0.5m @ 100m	410kHz: 0.7m @ 100m	0.5m @ 100m
	540 kHz: 0.45m @ 100m	540kHz: 0.6m @ 100m	0.45m @ 100m
	850 kHz: 0.20m @ 50m	850kHz: 0.26m @ 50m	0.20m @ 50m
Resolution Across Track	120kHz 8cm; 230KHz 3cm; 410kHz 2 cm; 540kHz 1.5cm; 850kHz 1cm		
Vertical Beam Width	50°		
Depression Angle	Tilted down 25°		

Towfish	Stainless steel
Diameter	12 cm (4.75 inches)
Length	140 cm (55 inches)
Weight in Air	52 kg (115 pounds)
Depth Rating (Max)	2,000m
Standard Sensors	Heading, pitch & roll
Optional Sensor Port	(1) Serial – RS 232C, Bi-directional & 28 VDC +/- 4%
Options	Pressure Sensor, Magnetometer, Integrated USBL Acoustic Tracking System, Built-in Responder Nose, Depressor, Power Loss Pinger and Custom Sensors

Topside processor	4205 interface
Hardware	19" rack mount interface (150 watt or 400 watt)
Display & Interface	Optional industrial workstation, laptop, or customer provided PC
Power Input	115/230 VAC
File Format	Native JSF or XTF
Sensor Interfaces	Ethernet, RS 232

Tow cable
Coaxial Kevlar or double-armored up to 6,000m, winches available

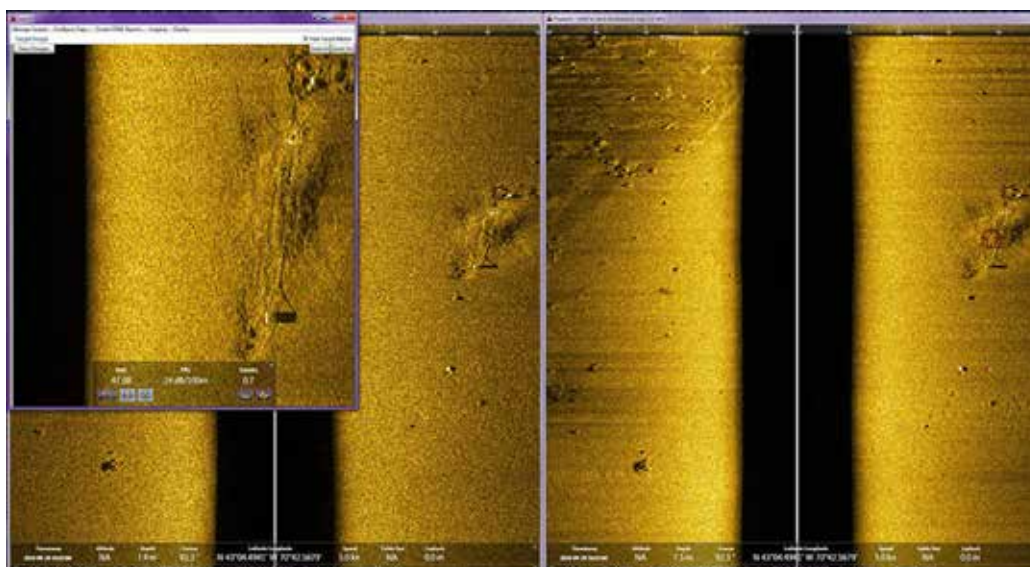


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## 4205 Side Scan Sonar System



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