

4200-SP SIDE SCAN SONAR SYSTEM



The *EdgeTech 4200-SP* is a dual simultaneous frequency side scan system that utilizes EdgeTech's Full Spectrum CHIRP technology to provide crisp imagery at ranges longer than conventional CW systems.

The 4200-SP is available with a choice of either 100/400 kHz 300/600 kHz or 300/900 kHz dual simultaneous frequencies depending on the application requirements.

A 4200-SP System consists of a towfish (choice of stainless steel or lightweight aluminium) and either a 19 inch rack mount topside processor, a portable splashproof topside processor with a splashproof laptop computer or an EdgeTech 701-DL telemetry link to interface with a user-supplied PC/laptop.

The 4200-SP uses EdgeTech's Full-Spectrum CHIRP technology to deliver wide band, high energy transmit pulses, coupled with high-resolution and superb signal to noise ratio echo data. The system employs wide band, low noise front end electronics which reduce system induced phase errors and drift to negligible levels. The sonar data is also optionally available as a complex, fully coherent data set suitable for advanced user applied post processing.

The 4200-SP Side Scan System offers dual simultaneous frequency operation and is designed to allow efficient integration of other optional sensors. The EdgeTech telemetry link allows the sonar signals that are digitized in the towfish to be transmitted over long coaxial cable lengths (6000m) with no loss of signal quality.

The 4200-SP sets new standards in the industry for seafloor mapping by integrating key performance and safety features, EdgeTech's Secondary Recovery System, Standard Heading, Pitch & Roll, optional Depth and Acoustic responder for accurate towing positioning at a price which is commercially sensitive.

*High Resolution
Dual Simultaneous
Frequency CHIRP
Side Scan System*



EdgeTech 701-DL Telemetry Link

Features:

- Choice of either 100/400 kHz, 300/600 kHz or 300/900 kHz dual simultaneous frequencies
- Choice of stainless steel or lightweight aluminum towfish
- Single coax tow cable up to 6,000 m
- Built-in Heading/Pitch/Roll Sensor
- Able to interface with customer-supplied PC and 3rd party software
- Magnetometer interface (optional)
- Pressure/depth sensor (optional)
- AUV/ROV power/Ethernet connection (option)

Applications:

- Mine Countermeasures (MCM)
- Geo-hazard surveys
- Geological/geophysical surveys
- Route surveys
- Search & recovery
- Archeological surveys and many more...

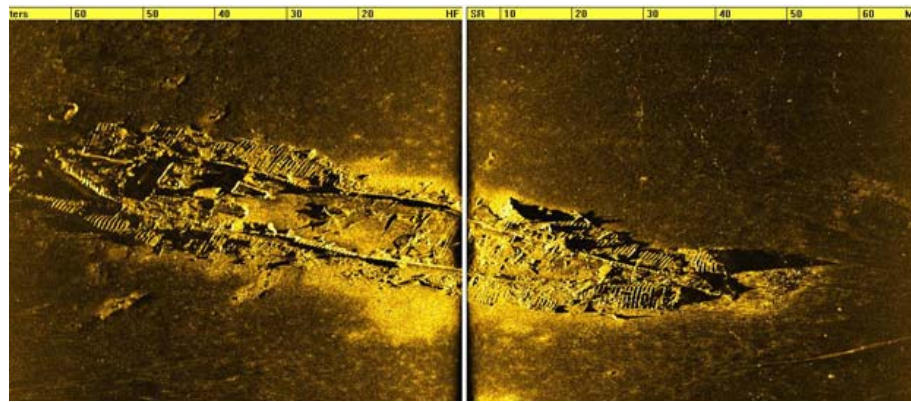
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Key Specifications

Sonar Specifications	
Frequency (dual simultaneous)	Choice of either 100/400 kHz, 300/600 kHz or 300/900 kHz
Modulation	Full Spectrum CHIRP frequency modulated pulse with amplitude and phase weighting
Operating Range (meters/side)	100 kHz: 500m, 300 kHz: 230m, 400 kHz: 150m, 600 kHz: 120m, 900 kHz: 75m
Towing Speed (max safe)	12 knots
Output Pulse Energy (joules)	100 kHz: 4 j, 300 kHz: 3 j, 400 kHz: 2 j, 600 kHz: 1 j, 900 kHz: 1 j
Pulse Length	100 kHz: up to 20 ms, 300 kHz: up to 12 ms, 400 kHz: up to 10 ms, 600 kHz up to 5 ms, 900 kHz: up to 3 ms
Resolution Across Track	100 kHz: 8 cm, 300 kHz: 3 cm, 400 kHz: 2 cm, 600 kHz: 1.5 cm, 900 kHz: 1 cm
Resolution Along Track	100 kHz: 5 m @ 200 m, 300 kHz: 1.3 m @ 150 m, 400 kHz: 0.6 m @ 100 m, 600 kHz: 0.45 m @ 100 m, 900 kHz: 18 cm @ 50 m
Horizontal Beam Width	100 kHz: 1.5°, 300 kHz: 0.5°, 400 kHz: 0.4°, 600 kHz: 0.26°, 900 kHz: 0.2°
Dynamic Range	24 Bits
Transducer Depression Angle	Tilted down 25°
Vertical Beam Width	50°
Operating Temperature	0°C to 45°C
Optional Sensor Port	Serial - RS 232C, 9600 Baud, Bi-directional
Options	Magnetometer, USBL Acoustic Tracking System, Depressor, Pressure Sensor, Power Loss Pinger, AUV/ROV Telemetry
Towfish Specifications	
Material	Choice of stainless steel or lightweight aluminum
Diameter	11.4 cm (4.5 inches)
Length	125.6 cm (49.5 inches)
Weight in Air/Saltwater	SS: 48/36 kg (105/80 pounds), Aluminum: 30/18 kg (66/40 pounds)
Max Tow Cable Length	6,000 meters typical
Tow Cable Type	Co-axial
Operating Depth (maximum)	Stainless Steel Towfish: 2,000 m, Aluminum Towfish: 300 m

Specifications subject to change without notice.



Other EdgeTech Products

✓ Side Scan, Sub-bottom, Integrated and Modular Imaging Systems for Deep Towed, AUV, ROV and Other Applications utilizing Full Spectrum, MultiPing or Synthetic Aperture Acquisition and Processing Techniques.



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