

Echo

Altimeter / Profiler /
Echo Sounder

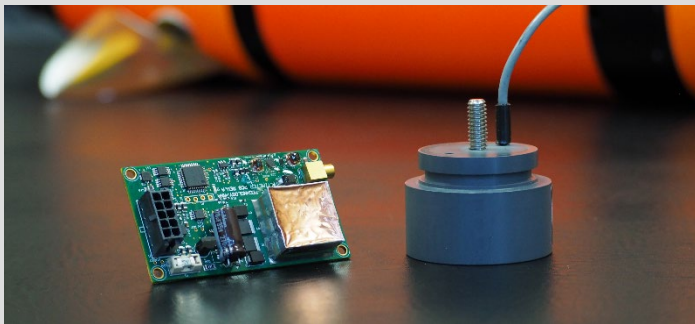
Marine Sonic Technology



Sea Scan® Echo

Ultra Compact Design | ROV & AUV Suitable | Altimeter & Profiler Options

The Echo is an ultra compact single beam sonar designed for small Autonomous Underwater Vehicles (AUVs) and Remotely Operated Vehicles (ROVs). The system's long range and high precision make it an ideal tool for underwater altitude and distance measurement. Further, an imaging version is available that can be utilized for simplified bottom profiling and obstacle avoidance. The modular design of the Echo minimizes the mechanical footprint needed for the system integration and its filtering capabilities reduces noise effects maximizing system performance while using less power. The Echo communicates with the host computer over a RS-232 serial connection in NMEA 0183 format using standard ASCII characters. Designed to complement the ARC Scout Side Scan Sonar, it can also operate independently from its host system.



Applications

- ROV & AUV Altitude Measurement
- Sub-Sea Ranging
- Touchdown Monitoring of Subsea Structures
- Under-Ice Measurement
- Infrastructure Inspection
- Obstacle Avoidance

Key Features

- Long Range & High Accuracy
- Compact & Lightweight, and Low Power Consumption
- Low Integration Costs
- Customized Transducers Tailored to Your Application
- Depth Ratings from 300 m to Full-Ocean Depth

Acoustic Specifications

Maximum Range	100 m / 328 ft
Minimum Range	0.5 m / 1.65 ft
Range Resolution	1.5 cm / 0.6 in
Frequency	540 kHz
Beam Width	6° (two-way)
Pulse Length	12 µs
Transmit Power	< 213 dB @ 1 m
Bandwidth	< 200 kHz
Ping Rate	1.0 to 5.0 Hz
Depth Rating	300 m to 10,000 m / 987 ft to 32800 ft

Interface Specifications

Control	Isolated RS232 @ 38400 bps (altimeter) or 460800 bps (profiler)
Format	NMEA 0183
Synchronization	Isolated TTL Input

Electrical Specifications

Input Voltage	12V – 30V DC
Isolator Voltage	3.3V DC – 5V DC
Power Consumption	0.5 W
Peak Current	500 mA

Mechanical Specifications

Electronic Dimensions	Length 6.9 cm / 2.72 in Width 3.8 cm / 1.50 in Height 1.6 cm / 0.63 in
Transducer Dimensions	Diameter 4.7 cm / 1.85 in Length 3.3 cm / 1.30 in
Weight in air	125 g / 0.275 lbs

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