



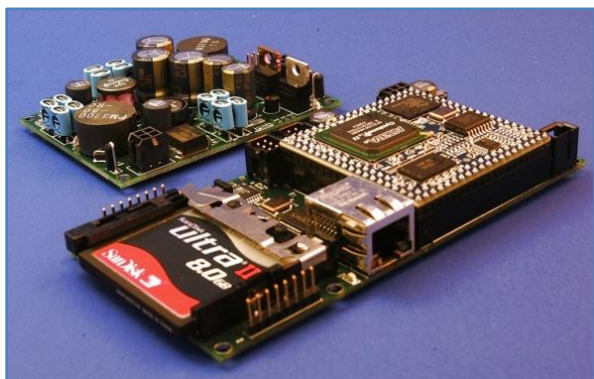
## Marine Sonic Technology, Ltd.

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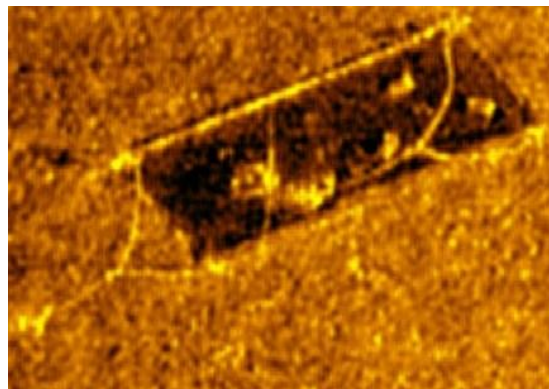
### Sea Scan® HDS Embedded Specifications

Frequencies	300, 600, 900, 1200, 1800 kHz (single frequency or in combination)
Transducer Dimensions	Dimensions vary based on frequency and transducer configuration. Transducers are custom designed for the specific platform (included in system cost). Please contact us for more information.
Operating Range (maximum*)	200m @ 300 kHz, 75m @ 600 kHz, 50m @ 900 kHz 25m @ 1200 kHz, 15m @ 1800 kHz
Data Collection Speed	5.28 knots max. (4.68 knots @ 100 meters range to meet NOAA Survey Standards)
Horizontal Beam Width	0.4° 300kHz and above (one-way), < 0.3° 300kHz and above (two-way)
Vertical Beam Width (one-way)	20° @ 300 kHz, 40° @ 600 kHz, 40° @ 900 kHz, 40° @ 1200 kHz, 40° @ 1800 kHz
Transducer Material	PVC (Standard – other materials available upon request)
Maximum Operating Depth	600 meters (1,968 ft.) Standard / 1000 meters (3,281 ft.) Optional (other depths available upon request)
Transducer Depression Angle	10° down from horizontal
Transmission Pulse	Tone Burst, 20us @ 300 kHz, 10us @ 600 kHz, 6.67us @ 900 kHz, 5us @ 1200 kHz, 4.44us @ 1800 kHz
Temperature	0°C to 70°C with Compact Flash Card, -40°C to 85°C without Compact Flash Card
Digital Across Track Resolution	~0.5 cm @ 5m range (1024 Samples Divided by Range)
Digital Along Track Resolution	~2 cm without Compact Flash Card, ~3.4 cm @ 5m range and 2 Knots SOG (range and SOG dependent)
Acoustic Across Track Resolution	3cm @ 300 kHz, 1.5cm @ 600 kHz, 1cm @ 900 kHz, 0.75cm @ 1200 kHz, 0.67cm @ 1800 kHz
Acoustic Along Track Resolution (two-way) @ end of near-field	30.5cm @ 300 kHz, 15.24cm @ 600 kHz, 10.16cm @ 900 kHz, 7.62cm @ 1200 kHz, 5.08cm @ 1800 kHz
End of Near-field	18.6 m @ 300 kHz, 9.3 m @ 600 kHz, 6.2 m @ 900 kHz, 4.6 m @ 1200 kHz, 3.1 m @ 1800 kHz
Power Consumption	< 10 Watts Max. @ highest ping rate (including CPU)
Interfaces	Ethernet 100BASE-T, Asynchronous Serial
Data Storage	Compact Flash using FAT-32
Aux. Data Inputs	NMEA-0183 (Latitude, Longitude, SOG, COG, Heading, Depth, Altitude)
Dimensions	See individual board specification sheets for detailed dimensions.

\* Maximum range in sea water. Other water types may yield greater ranges. Maximum range is defined as the ability to see soft bottom that yields definable targets and dark shadows.



**Pictured: Sea Scan HDS Embedded Sonar Acquisition Board and Embedded Power Supply Board.**



**Pictured: Mine Like Objects – 10 Meters Range @ 1800 kHz  
 Object dimensions: Target Platform 4' x 8' Targets 9" Diameter and 3"x6"**