SSR, Inc.

Science & Technology in a Marine Environment

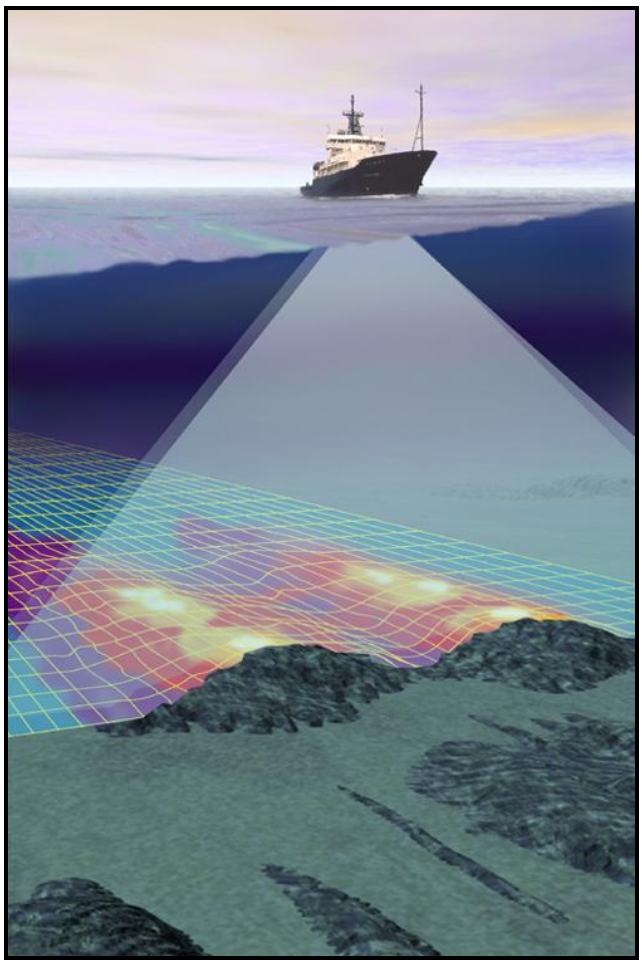
2853 S.E. St. Lucie Blvd. Stuart, Fl. 34997 • Tel: (800) 408-1234 • Fax: (772) 781-0103

SSR's Reson SeaBAT 8150 Multibeam System

SeaBat 8150 is a multibeam swath system with full ocean depth capability, operating in either 12 kHz or 24 kHz. The system also has a dual frequency configuration of 12/24 kHz to allow the optimal selection between swath coverage and resolution. The system allows collection of seamless high-resolution bathymetry data in water depths between 100m and 12,000m. The advanced signal processing techniques maximize performance in a wide range of operating conditions.

The SeaBat 8150 is modular in design and is intended for permanent or semi-permanent installation on, or recessed into, the hull of a suitable survey vessel. This modularity provides the user great flexibility and allows system configuration to optimize for particular vessels or tasks. The heart of the SeaBat 8150 is the RESON 81-P sonar processing unit, which is common to all new-generation RESON sonar systems. This approach has obvious logistic advantages and has been well field proven, with many units in current use worldwide.

The Reson 8150 deepwater multibeam system shall be utilized in water depths ranging from 300m to full ocean depth.



Reson 8150 Technical Specifications

Characteristic	Parameter
Operational Environment	Up to Sea State 6 Roll: up to ± 10º Pitch: up to ± -10º Heave: up to ± -5 m
Acoustic Center Frequency Range	12 kHz and 24 kHz, nominal frequency
Range	10 m to 15,000 m (slant range)
Number of beams	234 beams across swath
Transmit & Receive Beam	1º x 1º for 24 kHz 2º x 2º for 12 kHz
Bottom Detection Depth Resolution	100 – 2000 m range: 7.6 cm 2000 – 6000 m range: 19 cm 6000 – 15000 m range: 45 cm
Motion Correction	Beam stabilized in real time for roll and pitch
Calibration Mode	Automatic and manual calibration
Refraction	Real-time ray tracing correction for refraction through water column
Data Input	ASCII navigation data and sound speed at array gyro data
Data Output	All parameters over Ethernet using standard TCP/IP or UDP/IP protocols