

## Portable Sidescan with true 16-bit resolution

The HMS-1400 System combines a portable digital sidescan towfish and sonar interface with true 16-bit processing in a Toughbox GeoDAS workstation for high-resolution survey imaging. Easy-to-use and low-cost, the HMS-1400 System provides single- or dual-frequency operation with depth, heading, and attitude sensors. Powerful GeoDAS software offers powerful capabilities common in more expensive systems, including display of real-time mosaicing of sidescan images on top of nautical chart data for effective image location and mission execution.



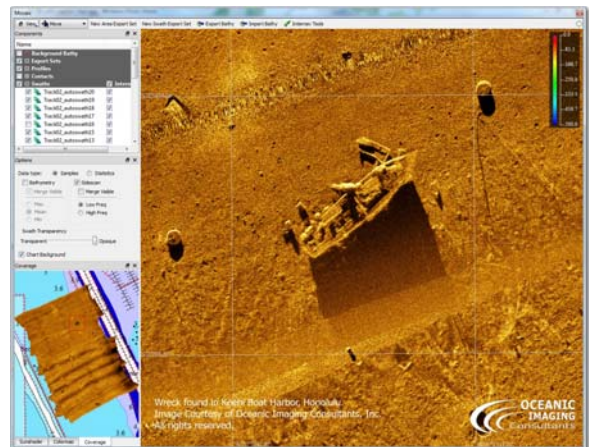
*The HMS-1400 Sidescan Sonar System is portable, powerful, and easy to use.*

### FEATURES/BENEFITS

- Single- or dual-frequency towed sonar sensor is easily transported, interfaced, and deployed
- True 16-bit processing provides 7-centimeter resolution of bottom features
- Powered by GeoDAS software by Oceanic Imaging Consultants (OIC):
  - Automatic bottom tracking
  - Automated processing/contrast enhancement
  - Advanced target analysis/databasing
  - Supports common navigation chart formats - BSB, DNC, S-57
  - Extensive planning, management, and execution tools
  - Real-time mosaicing with easy export to GIS and Google-Earth
  - Compatible with OIC CleanSweep and HarborScan software packages - Ideal for port-security/change-detection work

### APPLICATIONS

- Harbor security and harbor surveys
- Search and rescue operations
- Small-vessel surveys
- Target detection and hazard surveys
- Inspection surveys
- Rapid environmental assessment surveys



*Wreck found in Keehi Boat Harbor, Honolulu*

Image courtesy of Oceanic Imaging Consultants, Inc. All rights reserved.

# SPECIFICATIONS

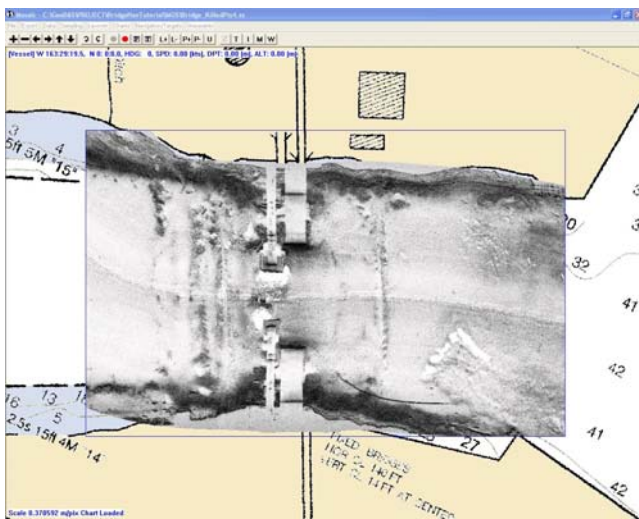
## Instrument

<b>Sonar:</b>	Single- or dual-frequency tow-fish
<b>Material:</b>	Stainless Steel (316 SS)
<b>Size:</b>	930 x ø89 mm (36.6 x ø3.5 in.)
<b>Operating Frequency:</b>	Dual: 100/400, 400/900, 400/1250 kHz Single: 400 or 1250 kHz
<b>Beam Angle:</b>	0.3 degree horizontal 40 degree vertical
<b>Depression Angle::</b>	20 degrees down
<b>Transmission Pulse:</b>	15 µs ~ 100 µs
<b>Range:</b>	22.5 m ~ 150 m per channel
<b>Across-track Resolution:</b>	7 cm
<b>Depth Sensor:</b>	0.25% full scale
<b>Temperature Sensor:</b>	±0.5 degrees
<b>Towing Speed:</b>	1 ~ 8 knots
<b>Operating Depth:</b>	100 m max.
<b>Weight in Air:</b>	15 kg (33 lbs)

## Toughbox

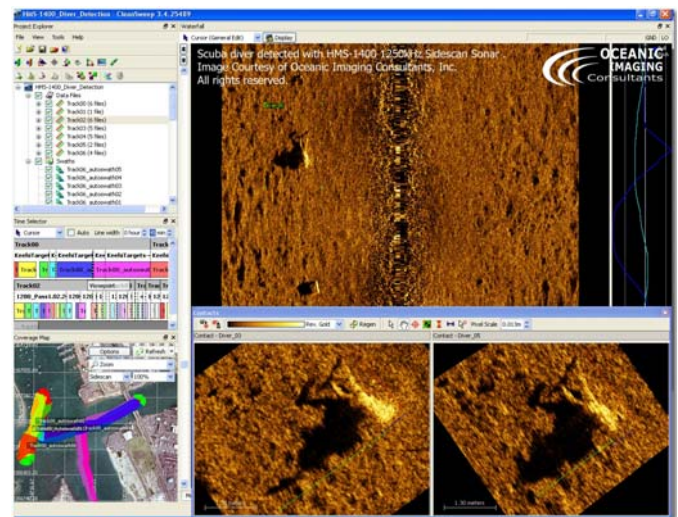
- Panasonic Toughbook laptop
- Waterproof ABS case
- Integrated GPS & sonar interface
- 110/220 VAC or 12 VDC power supply
- GeoDAS software

Specifications Subject to Change without Notice



**HMS-1400 sidescan image indicating bridge scour**

Images courtesy of Oceanic Imaging Consultants, Inc. All rights reserved.



**Scuba diver detected with HMS-1400 1250 kHz  
sidescan sonar**

March 2010 Rev -

Falmouth Scientific, Inc.

1400 Route 28A, PO Box 315, Cataumet, MA 02534-0315

Email: [fsi@falmouth.com](mailto:fsi@falmouth.com) • Tel: 508-564-7640 • Fax: 508-564-7643 • [www.falmouth.com](http://www.falmouth.com)