

4600-SBX

High Speed Swath Bathymetry & Side Scan Sonar

EdgeTech 4600-SBX sonar adds swath bathymetry to side scan sonar imagery to produce in real-time high resolution 3D map of the seafloor.

The 4600-SBX system combines high resolution 2D capabilities of the side scan with the 3D imagery of the multi-beam echo sounder. The result is an effective survey tool that is simple to use and cost effective.

The 4600-SBX measures in real-time depth precisely over the sonar swath by combining the resolved angle of arrival from the seafloor echo with the range derived from the two way travel time of the transmitted pulse.

The EdgeTech 4600-SBX Swath Bathymetry system uses eight receive element transducers and one discrete transmit element. These provide simultaneous transmission and reception for high speed operations and seven independent measurements of the angle and amplitude of each arrival. The high number of channels translates in high rejection of multi-path effects, reverberation and acoustic noise.

The 4600-SBX uses EdgeTech's Multi-Pulse technology which breaks the conventional range/ping period limitation, transmitting up to 60 times a second. This means an area can be covered at twice the speed or one can get double the bathymetric data density along track.

The 4600-SBX side scan sonar image continues the EdgeTech tradition of supplying sonars with superior imagery and longer ranges.

The sonar electronics and arrays are mounted onto a pressure housing that is deployed over-the-side of the survey vessel. Sonar data is transferred from the transceiver to the Processing unit on board via an Ethernet Network Interface.

The 4600-SBX default configuration includes an integrated motion and sound velocity sensors. The system interfaces with standard GPSs, MRUs, SVPs, CTDs, Altimeters and Gyros. Simple to use acquisition software is provided by Hypack and Eiva.

*Efficacy & Efficiency in
Shallow Water
Hydrographic Surveys*

Features:

- 230 kHz Frequency "CHIRP"
- Swath 12 Times Water Depth
- Simple Over-the-Side mounting
- Full Spectrum® Chirp Technology
- Multi-Pulse Technology for High Speed Surveys
- 8-Receiving Channels for increased detection
- Built-in Bathymetry gap filler
- Long arrays for high resolution imagery at range
- Co-registered Simultaneous Side Scan Sonar and Bathymetry
- Built-in Motion and Sound Velocity Sensors
- Plug n' Use interfaces to most industry auxiliary Sensors

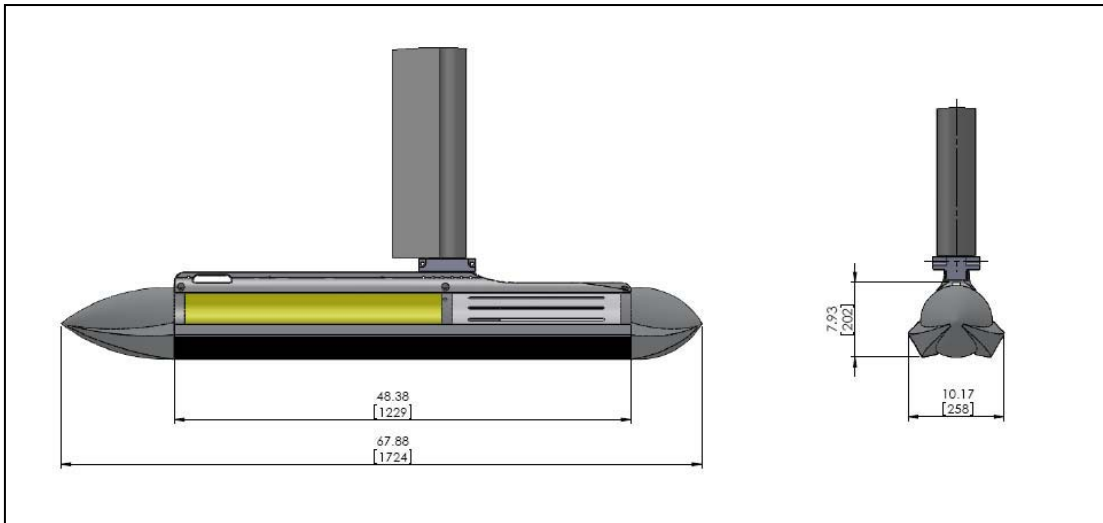
Applications:

- Shallow Water Hydrographic Surveys
- Benthic Habitat Mapping
- Nautical Charting
- Military Rapid Environmental Assessment (REA)
- Route Surveys
- Dredging Operations
- Marine Debris Search
- Port and Harbor Security

4600-SBX benefits:

- Better Spatial resolution than Multibeam
- Wide swath in shallow waters
- 8-element array configuration is able to resolve 7 separate concurrent arrivals
- Reduction of 'Speckle' and 'Glint' artifacts produced by side scan and interferometric Swath systems

4600-SX SWATH BATHYMETRY



| <i>System Specifications</i> | |
|---|--|
| Frequency | 230 kHz |
| Pulse Modulation | Full Spectrum® “CHIRP” frequency modulated pulse |
| Depression Angle | 30 degrees |
| Deployment Method | Over-the-side or Hullmount |
| Pulse Length | 2-8 ms (Chirp) |
| Pulse Bandwidth | 12-24 kHz |
| Power | 100 Watts, 48VDC |
| Dimensions | 173 x 26 x 21 cm |
| Auxiliary Sensors | DGPS, SVP or CTD, Heading, Motion, Altimeter and Pressure |
| <i>Swath Bathymetry Specifications</i> | |
| Maximum Swath for Bathymetry | 10-12 times water depth |
| Range Resolution | 6 cm |
| Vertical Resolution | 5 cm |
| Ping Repetition Rate | 25 m = 60 Hz, 50 m = 30 Hz, 100 m = 15 Hz |
| Bathymetric Data Output | Range/Angle/Amplitude/Quality Factor (compatible with most 3 rd party topside processors) |
| <i>Side Scan Sonar Specifications</i> | |
| Swath Range | 500 m |
| Range Resolution | 3 cm |
| Beam Width Along Track (2-way) | 0.5° |
| <i>Topside Processor</i> | |
| Operating System | Window XP Pro |
| Interface | 100 baseT Ethernet, Serial RS-232 |
| Display | Dual 21” LCD Monitors |
| Storage | 1 TB min hard drive & RW DVD |
| Power Supply | 110/220 VAC Auto sensing |

All specifications subject to change without notice



Sea and Land Technologies Pte Ltd

65 Tuas Avenue 1
Singapore 639508
Website: <http://www.sea-landtech.com.sg>

Tel : +(65) 6518 0777
Fax : +(65) 6563 0366
Email: enquiry@sea-landtech.com.sg