

# SonTek HydroSurveyor™

## Software and Hydrographic Surveying ADCP

THE PRACTICAL SOLUTION TO VELOCITY, POSITION, AND DEPTH MEASUREMENT

**Skip the complicated set-up, expensive equipment and complex software packages. With the new HydroSurveyor, enjoy access to today's most sophisticated bathymetric technology in a single package, and at a fraction of the cost.**

**Flexible and Fast.** Water sound speed corrections are interpolated in both space and time with the fully integrated CastAway™ CTD, delivering agility and accuracy to your surveys.

**All Inclusive.** Full water column velocity mapping, exclusive 5-beam depth sounding and acoustic bottom tracking (for speed over ground when GPS is lost) provide comprehensive data for a complete solution within a single package.

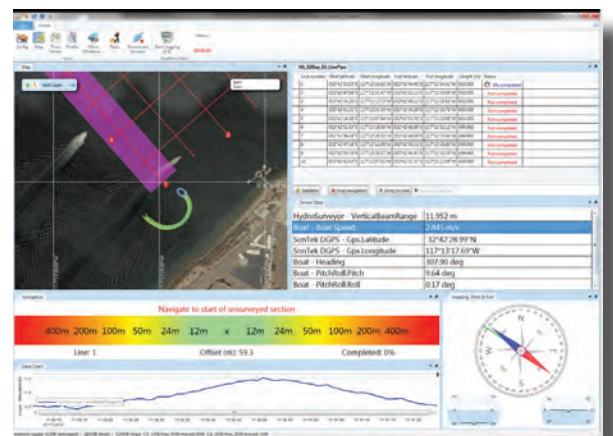
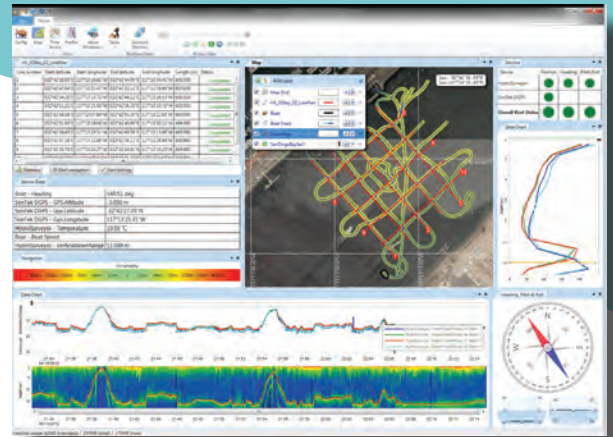
**Software Centric.** With built-in automatic data gridding and interpolation, even intricate surveys won't require specialized complex software, saving you time and money.

### Additional Features Include:

- Sound speed integration and interpolation (with CastAway-CTD)
- Speed over ground (Acoustic Bottom Tracking)
- 5-beam depth soundings (50° swath)
- Water column velocity mapping
- Automatic data gridding and interpolation
- 360° compass and two-axis tilt sensor
- Interface for customer-supplied GPS and/or heading sensor

### Additional options:

- CastAway-CTD
- Upgrade for existing RiverSurveyor M9 systems
- SonTek RTK GPS or DGPS
- Delrin/aluminum boat mount
- Bluetooth/spread spectrum telemetry



# HydroSurveyor HYDROGRAPHIC SURVEYING SOFTWARE AND ADCP



The addition of the SonTek RTK-GPS or DGPS makes the HydroSurveyor a complete package.



Seamless integration with the CastAway-CTD, allows sound speed corrections to be done right in the field.



Custom designed Delrin/aluminum fixture to facilitate mounting the HydroSurveyor over the side of a boat.

<sup>1</sup>Depends on multipath environment, antenna selection, number of satellites in view, satellite geometry, and ionospheric activity.  
<sup>2</sup>Contact SonTek for details about RTK GPS performance and specifications.

## Depth Measurement

- Range (Vertical Beam): 0.2m to 80m
- Range (Slanted Beams): 0.2m to 40m
- Accuracy: 0.02m (sound speed corrected)
- Resolution: 0.001m
- Vertical Beam Angle: 8°
- Velocity Beam Angle: 3°
- Swath Width: 50°

## Velocity Measurement

- Profiling Range (Distance): 0.06m to 40m
- Profiling Range (Velocity): ± 10 m/s
- Accuracy: Up to ± 1.0%, ± 0.2 cm/s
- Resolution: 0.001 m/s
- Number of Cells: Up to 128
- Cell Size: 0.02m to 4m

## Acoustic Bottom Tracking

- Range: ± 10 m/s
- Altitude: 0.2 - 40m

## GPS Options

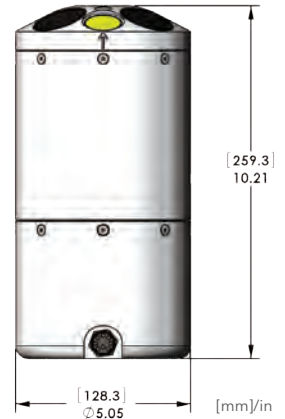
- SonTek RTK GPS: (Base-Rover Distance 2km)
- Horizontal Precision<sup>1,2</sup> (Repeatability): <0.03m

## SonTek DGPS:

- SBAS GPS Horizontal Accuracy<sup>1</sup>: <1.0m

## Other

- Transducer Configuration: 8-beam Janus (4 x 1MHz; 4 x 3MHz) and 1 Vertical Beam (0.5 MHz)
- Temperature Sensor Resolution: ± 0.01°C
- Temperature Sensor Accuracy: ± 0.1°C
- Compass Type: Solid State type, with Built-in Inclinometer
- Compass Range: Full 360°
- Compass Heading Accuracy: ± 2°
- Compass Tilt Accuracy: ± 1°
- Power: 12-18 vdc
- Operating Temperature: -5 °C to 45 °C
- Storage Temperature: -10 °C to 70 °C



Founded in 1992 and advancing environmental science globally, SonTek manufactures acoustic Doppler instrumentation for water velocity measurement in oceans, rivers, lakes, harbors, canals, estuaries, industrial pipes and laboratories. SonTek's sophisticated and proprietary technology serves as the foundation for some of the industry's most trusted flow data collection systems. SonTek is headquartered in San Diego, California, and is a division of Xylem Inc.

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