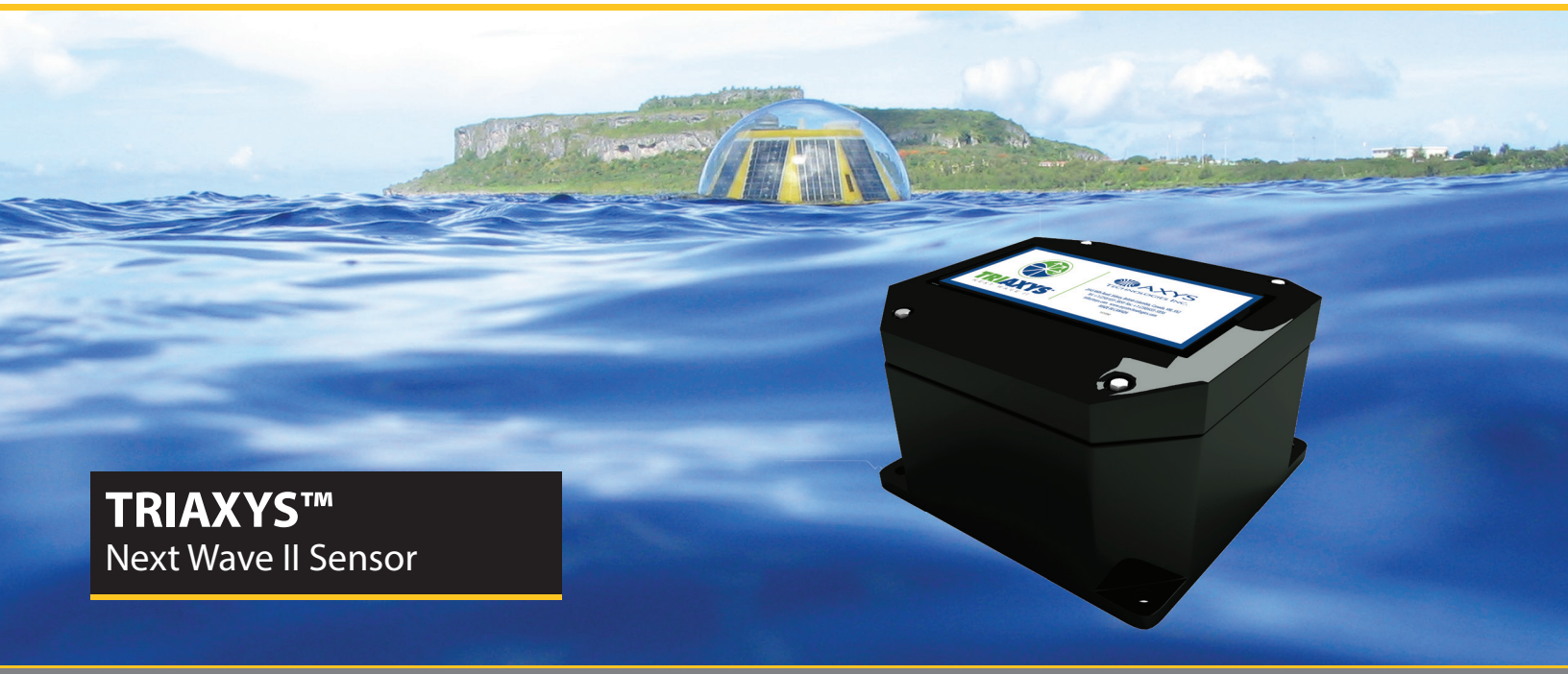
AXYS Technologies Inc.



TRIAXYS™
Next Wave II Sensor

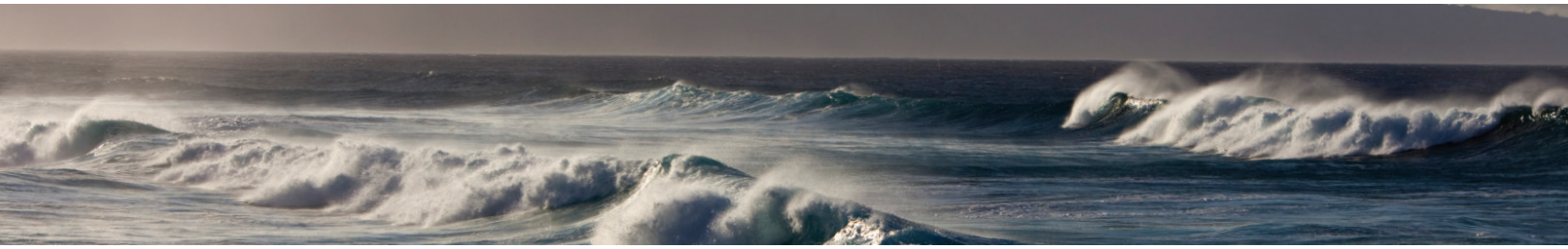
TRIAXYS™

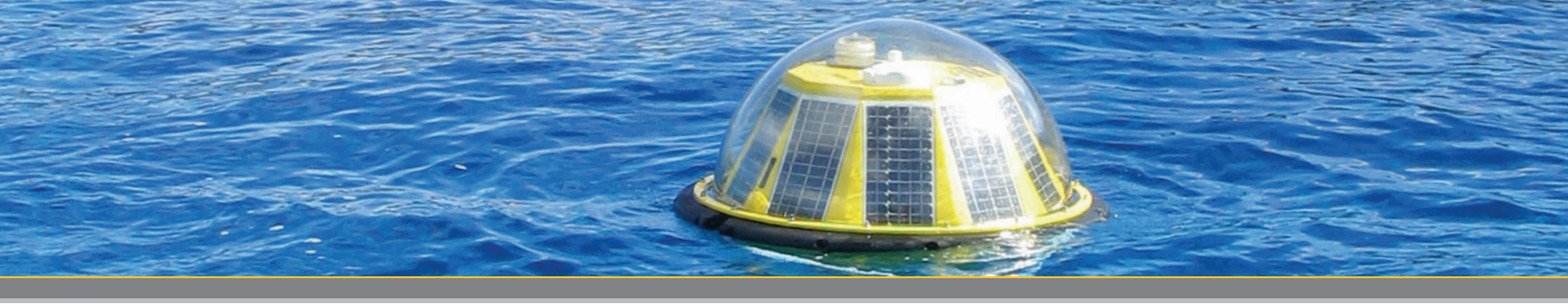
The TRIAXYS™ Next Wave II sensor is used to measure platform motion, waves and directional wave spectra.

The innovative design incorporates new technologies that makes them easy to use, rugged and the most reliable and most accurate sensors for measuring waves and directional wave spectra.

FEATURES & BENEFITS

- Designed for low power applications
- No moving parts, compact size
- Continuous wave sampling
- Configurable data outputs based on program requirements
- >5 years data storage capacity
- Available with built-in Iridium modem and serial interface for real-time output





TRIAXYS™ Sensor

The sensor is packaged in a small non-metallic IP 66 rated enclosure that needs only a single connector for power and data. The output from the sensor is fully processed wave data. Data is stored in the sensor on a compact flash card.

The sampling regime for the sensor is user-selectable, with sample lengths from 1 to 34 minutes (or continuous), and sample intervals from 5 to 1440 minutes.

TRIAXYS™ Next Wave II wave sensors can be located anywhere on the floating body to measure motion at a specific point or - using embedded software - to calculate the motion at another point on the body (e.g. the centre of gravity).

The TRIAXYS™ Next Wave II Directional Wave Sensor is comprised an inertial measurement unit (IMU) that ultimately measure the total displacement along the three orthogonal axes of the floating platform, x, y, z or HNE. In addition, this sensor is equipped with a gimballed fluxgate compass to measure true magnetic direction.

Software

The processor in the TRIAXYS™ Next Wave II Directional Wave Sensor uses the measured sensor motions to perform wave analyses which include:

- a zero crossing analysis of the wave elevation record to produce time domain wave statistics.
- a spectral analysis that computes the non-directional wave energy spectrum, which defines the distribution of wave energy as a function of frequency.
- a directional spectral analysis, using the wave elevation and the north and east velocity components, that computes the directional wave spectrum. This defines the distribution of wave energy as a function of frequency and direction of propagation.
- calculation of the mean wave direction and the directional spreading width as functions of frequency.
- first 4 Fourier coefficients which can be used to reconstruct the directional spectra for analysis by your software and algorithms.

Specifications

- PHYSICAL DESCRIPTION
  Size: 15cm x 15cm x 9cm
  Weight: 1.5 kg
  Enclosure Material: Fibreglass with graphite filler added, halogen-free, UV stabilized
- WAVE STATISTICAL OUTPUTS
  Max Wave Height/Period, Significant Wave Height/Period, Average Wave Height/Period, Peak Period, Wave Steepness, Mean Wave Direction, Mean Spread
- SAMPLING
  Sampling Frequency: Variable, default 4Hz (up to 50Hz)
  Frequency Range: 0.64Hz (1.56 seconds) to 0.030Hz (33.33 seconds)
  Frequency Spacing: Variable, default 0.005Hz
  Sample Duration: Variable (1 to 34 minutes) or continuous
  Sampling Interval: Variable (5 to 1440 minutes)
  Frequency Bands: Variable, default 123
- POWER SYSTEM
  Power Supply: 10 to 20 VDC
- DATA
  Input/Output: Power & data through single connector
  Communications: 19,200 baud, 8 bits, 1 stop bit, no parity
  Storage: Internal 8GB: >5 years with 4Hz for Motion Sensor. (expandable to 32GB)
- SATELLITE
  Embedded Iridium modem for satellite telemetry

Resolution/Accuracy

	RANGE	RESOLUTION	ACCURACY
HEAVE	±20 m	0.01 m	Better than 1%
PERIOD	1.5 to 33 sec	0.1 sec	Better than 1%
DIRECTION	0 to 360°	1°	3°