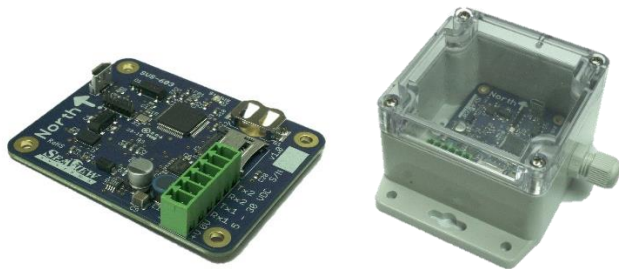




SVS-603 Wave Sensor

The SVS-603 Wave Height Sensor is a highly accurate MEMS-based sensor that reports heading, wave height, wave period and wave direction via RS-232 or logs to its on-board data logger. The SVS-603 represents a new generation in accuracy and completeness for wave sensing electronics whose features include:

- Very low power consumption; fits the smallest power budget
- Very small footprint; sold packaged or as bare PCB
- MEMS sensors account for 3-D motion, rotation and compass heading in all dimensions to cover nine degrees of freedom
- Sophisticated onboard electronics provide near-real-time wave statistics
- On-board temperature compensation for highest accuracy
- On-board data logger capable of logging as much as twenty years of wave data, depending on desired outputs.
- Easy configuration to match your exact sensing rate and output requirements
- Readily interfaced with transmitter using NMEA or other configurable data output
- Sampling rates up to 8Hz



The SVS-603 can be used to replace existing sensors, to upgrade existing buoys, or to add wave sensing capabilities to even the most compact buoys. Among the wave data that are available as outputs from the sensor are:

- Significant wave height in meters (H_s)
- Wave period in seconds
- Wave direction in degrees from north
- First-5 Fourier wave coefficients
- Maximum wave height (H_{max})
- Wave period at H_{max}
- Wave energy
- Spectrum (raw or processed)
- Heading in degrees
- Custom outputs as required

Other outputs or data manipulations can be incorporated via firmware updates or through calculations on the available data stream. The SVS-601 Power Controller (shown above) is also available.

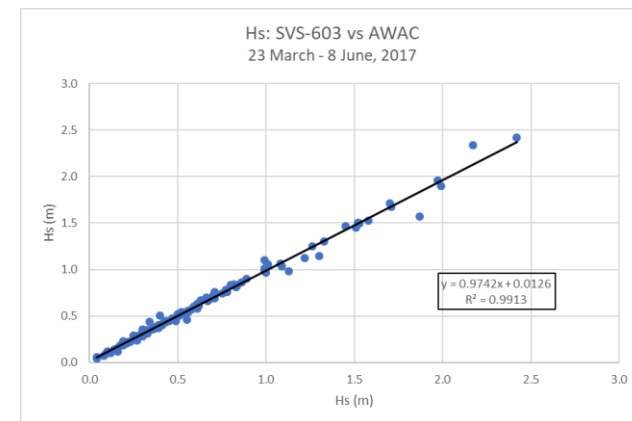
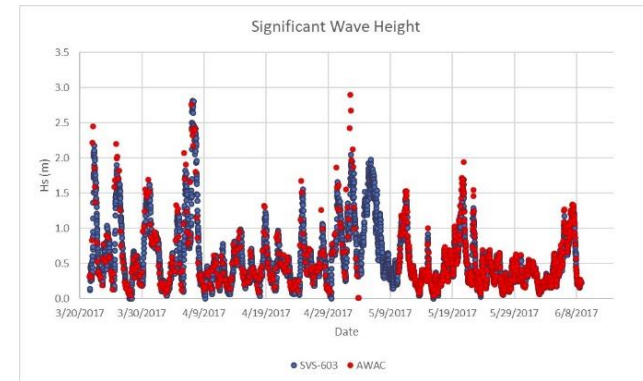


Output Formats:	Hex code defined output parameters
	NMEA
	First-5 Fourier coefficients
	Wave energy spectrum
Accuracy Metrics:	
Hs ±0.5cm	0.2 - 20m* Resolution 0.001m
Period <1%	1.5 – 20** sec. Resolution 0.001sec
Wave Direction ±4° ***	Range 0-360° Resolution 0.001°
Orientation Sensor:	
Accelerometer	±16g; Resolution 0.001m ² /sec
Gyroscope	±200°/sec Resolution 0.001°/sec
Magnetometer	±1300µT (x and y-axis); ±2500µT (z-axis) Resolution ~0.3µT
Available Ports and Slots:	RS232 Adjustable baud rate (2.4-115.2 kbps)
	USB Micro-B
	Micro-SD
Dimensions:	53.5mm length
	68mm width
	23mm height (w/connector)
Weight:	Bare board: 0.8oz/23g
	In enclosure: 6oz/170g
Power Requirements:	150mW@12V
	136mW@5V
	5-30VDC
Operating Temperature:	Operating: -30C to 80C
	Storage: -40C to 85C

* Based on platform size and response

** Longer waves may be detected depending on wave conditions

*** Dependent on orbital buoy motion



The above two figures show significant wave height (Hs) comparisons for the SVS-603 and AWAC sensors for waves measured in the Great Lakes over a 2.5-month period.