



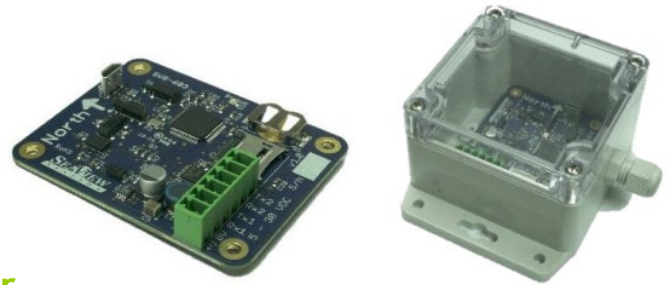
**OSIL**

Environmental Instruments  
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# 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 RS232 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



## Wave Data Available From the Sensor

- 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 available via firmware updates or through calculations on the available data stream.

## FOR FURTHER INFORMATION PLEASE CONTACT:

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

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