

SYSTEM OVERVIEW

Real-time, Accurate, and Cost Effective.

sigma S6 WaMoS® II is a proven radar-based wave and surface current measurement system, accurate up to 4 km from a radar site. Connecting to most commercial X-Band radars, **WaMoS® II** measures and reports on all essential wave field parameters: 2D-directional wave spectrum, significant wave height (H_s), peak wave length (L_p or λ_p), and peak wave (O_p), as well surface current speed (U_s) and direction (U_d).

WaMoS® II highly accurate measurement tool with an intuitive graphical display that keeps the operator informed when assessing environmental risks and identifying safe operating windows. Unlike conventional wave buoys and current profiling devices, the radar covers a larger area, simultaneously measuring and reporting on multiple locations within the radar's field of view. **WaMoS® II** distinguishes between wind, sea, and swell and can automatically recognize up to three unique wave systems providing higher fidelity information and comparable accuracy – and at lower lifecycle costs than other wave and current measurement sensors.

WaMoS® II demonstrates value in offshore construction, diver support, safe helideck operations, navigation support, and research facilities.

WaMoS® II has recently been upgraded to include. **Speed Through Water (STW)**. **STW** is useful to better understand and get more insight about hull performance and ship efficiency including fuel consumption or CO2-emission.

WaMoS® II can be installed with a dedicated **Rutter 100S6 X-Band radar**, and also interfaces with most other commercially available marine radars. **WaMoS® II** is fully motion compensated and operates equally well from both fixed platforms and moving vessels.

The standard **sigma S6 WaMoS® II** output parameters are listed in the table below:

Wave Spectra	Resolution	Range	
2-dimensional frequency-direction spectrum [$S(f, \theta)$]	0.005 Hz 4°	0.02 Hz – 0.35 Hz 0 - 360°	
1-dimensional spectrum [$S(f)$]	0.005 Hz	0.02 Hz – 0.35 Hz	
Wave and Current Parameters	Resolution	Range	Accuracy
Significant Wave Height [H_s]	0.01 m	0.01 – 5 m	+/- 0.5 m
Significant Wave Height [H_s]	0.01 m	5 – 12 m	+/- 10%
Peak Period [T_p]	0.01 sec	4 – 16 secs	+/- 0.2 secs
Peak Direction [θ_p]	1°	0 - 360°	+/- 2°
Peak Wave Length [λ_p]	+/- 10 %	15 – 600 m	1 m
Current Speed [U]	0.01 m/s	0 – 10 m/s	+/- 0.2 m/s
Current Direction [U_d]	1°	0 - 360°	+/- 2°

Minimum environmental conditions are required to measure the sea state: minimum wind speed of 3 m/s, and a significant wave height of 0.5 m. The system detects wave lengths from 15 - 600 m and wave periods between 4 - 16 secs.

All data is available in ASCII format for further system integration or subsequent analysis and can be output to external systems via NMEA formatted messages. In addition, **WaMoS® II** comes standard with sigma S6 Connect, a web enabled interface, allowing 3rd party solutions to interface with the system to view radar imaging (GeoTIFF, PNG, JPEG formats) and receive wave, and surface current (GML, KML, DXF, ESRI formats). This feature allows easy integration into external systems such as Google Earth Pro, GIS, and decision support systems.

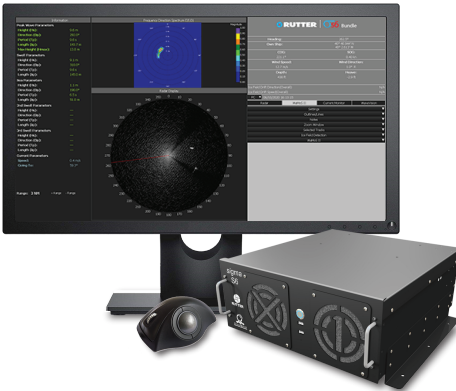
Os6 WaMoS II

WHAT IS INCLUDED:

sigma S6 WaMoS® II

- Marine Certified Hardware (IEC 60945 Ed. 4 (2002-08))
- **Rutter** Radar Data Processor (Desktop or Rack Mountable)
- 24" Marine Certified Rack Mountable/Desktop monitor (alternate sizes available)
- Trackball Unit (Desktop or Console Mountable)
- **sigma S6** Radar Processing and SeaView display software
- Automatic Screen Recording in selectable time intervals for evidence documentation
- Remote client capability
- Computer-Based Training (CBT) package
- **sigma S6 Connect**

Since 1998, **Rutter** has been leading innovation in radar image processing for the maritime industry worldwide. Our comprehensive **sigma S6** product suite, whether as individual systems or in combination, provides mariners with a full range of tools enabling them to go farther, faster, safer and more economically than ever before.



Os6 Suite

Current Monitor™
Ice Navigator™
Oil Spill Detection
Small Target Surveillance
WaMoS® II
WaveSignal™
WaveVision™

For more information on **Rutter** and our revolutionary products, please visit www.rutter.ca or talk to one of our sales associates. To arrange a call or meeting, please email sales@rutter.ca.



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