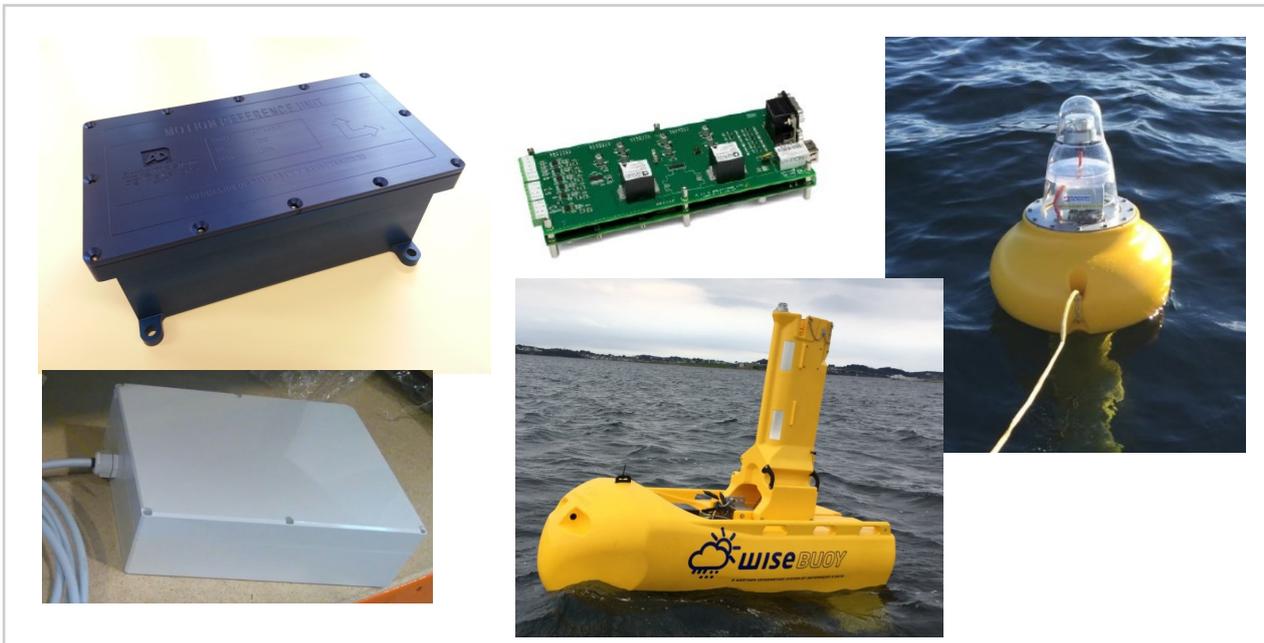


AIM-WAVE Sensor

Adaptive Inertial Matrix for Wave Measurement Applications



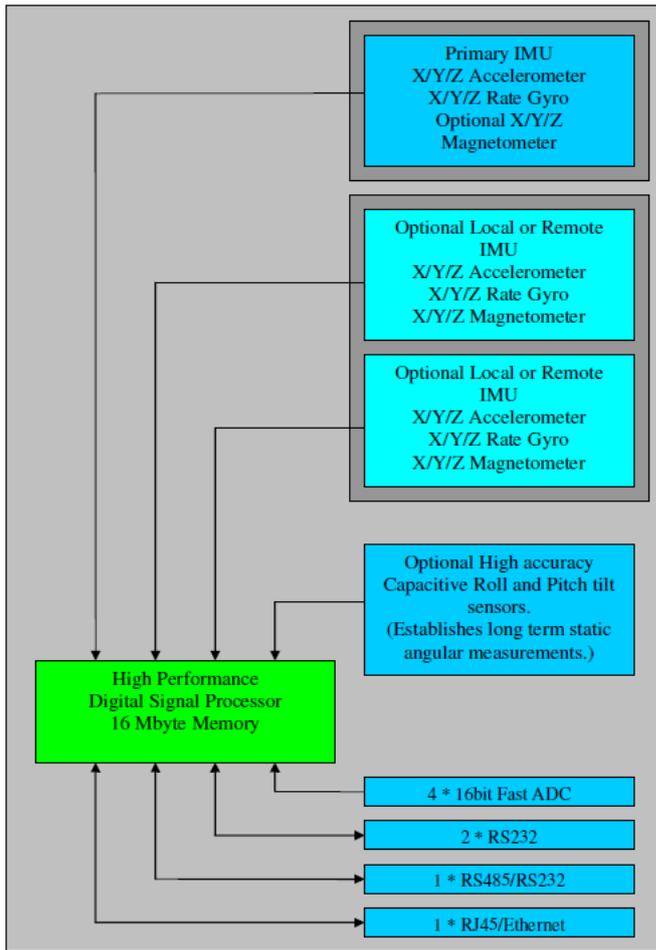
Adaptive Inertial Matrix (AIM) is a unique hardware and software development based around MEMS technology (Micro Electrical Mechanical Systems) digital Inertial Measurement Units (IMU). IMU units typically incorporate accelerometers, rate gyro sensors, and magnetometers. They have developed over a number of years and in so doing established a reliable and accurate measurement capability at an affordable cost. The AIM system also has available additional analogue signal interfacing plus RS232/RS485 and RJ45 Ethernet.

The AIM-WAVE sensor comes with a very powerful processor unit capable of doing a lot of pre-processing or wave data processing. All standard algorithms required for wave applications has been included in the sensor firmware and output formats can be configured to suit the application.

- ◆ Multiple IMU capability to establish greater accuracy and a wider dynamic range than can be achieved with a single sensor.
- ◆ A powerful built-in processor unit can do on-board wave data processing and can be configured to output data to suit specific applications.
- ◆ Remote mounting of magnetometer/compass if required.
- ◆ Multiple interfacing of additional instrumentation through ADC and serial interfaces, for example GPS, current meters, wind sensors, meteorological sensors.
- ◆ Proven reliability through years of operation in offshore environments.
- ◆ Proven accuracy through laboratory and field testing.

WISE Group—Automasjon og Data AS
 Vassbotnen 23
 4033 Stavanger, Norway.
 Tel.: +47 51 12 30 80
www.wisegroupsystems.com
post@automasjon.no

WISE Group—Muir Matheson Ltd.
 31 Abercrombie Court, Prospect Road, Westhill
 AB32 6FE Aberdeen, UK.
 Tel.: +44 (0) 1224 001960
www.wisegroupsystems.com
post@wisegroupsystems.com



Adaptive Inertial Matrix (AIM) is a family of unique hardware and software product modules that can be adapted to special customer needs where required.

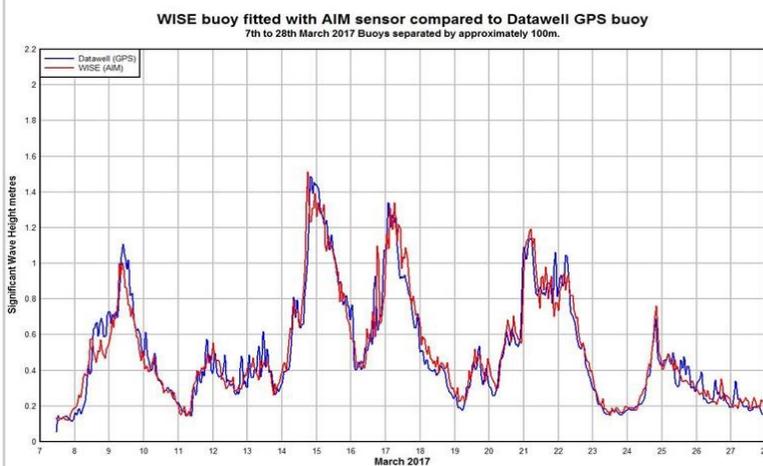
AIM-WAVE can be delivered as a standard wave sensor package or it can be tailor-made to fit with customer specifications for hardware and for software.

Local storage unit and analogue output can also be included as an option.

Encapsulations are available in hard-anodized aluminum or in plastic housing for integration into other systems or buoys.

Other materials or configurations are available on request.

Wave Parameter	Range	Resolution	Accuracy (std dev)
Resolution and Accuracy			
Wave Height	+/- 30 metre	0.001 metre	Better than 1.5%
Wave Period	1.5 to 33 seconds	0.1 seconds	Better than 1%
Wave Direction	0 to 360 degrees	0.3 degrees	Better than 1 degree



Comparison test between WISE Wave Buoy and Datawell GPS Buoy (above)
Testing at hexapod test facility at University of Agder (right)



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