

# WISE AIM - Your Uncompromising Partner in Offshore and Marine Applications

Unlock unparalleled precision and adaptability with WISE AIM – our state-of-the-art Adaptive Inertial Matrix system. Built on cutting-edge MEMS (Micro Electrical Mechanical Systems) technology, our AIM system isn't just another IMU (Inertial Measurement Unit). It's a revolutionary framework that adapts to your specific needs, ensuring reliable, accurate measurements without compromising on cost.



#### Why Choose Multiple IMUs?

- Achieve greater accuracy with the reliability of multiple sensors.
- Benefit from continuous measurements across a broader dynamic range.
- Harness the power of spatial separation for enhanced motion identification and resolution.



### Workboat Application - Navigate with Confidence

Whether it's for personnel transfer within wind farms or other offshore operations, workboats can't afford to compromise on safety or efficiency. WISE AIM provides a bespoke three-IMU configuration: one for the primary system, a second at the bow, and a third at the personnel transfer point. This intelligent setup enables real-time acceleration and displacement measurements at crucial points, reducing seasickness incidents and enhancing transfer safety.

### **Motion Compensation Application - Precision Where It Counts**

Instruments mounted on a floating vessel require constant adjustments due to vessel movement. Whether it's simple wave surface measurements or complex devices like wind speed laser meters, WISE AIM ensures accurate compensation across all axes of motion. Even in extreme conditions, you can rely on our system's wide dynamic range for accurate, real-time data.

# Helideck Monitoring - Safety First, Always

Our AIM system complies with international Helideck Rules and Regulations, such as CAP 437, NORMAM 27, and Standard for HMS. In key regions like the North Sea and Brazil, our Helideck Monitoring Application serves as a crucial operational tool for real-time Helideck motion data. While adhering to international standards, the system also adapts to the specific needs of varying vessel and helicopter types, contributing to safer and more informed landing operations.

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, WesthillAB32 6FE Aberdeen, UK. Tel.: +44(0)1224001960 www.wisegroupsystems.com post@wisegroupsystems.com



# **Tailor-Made Solutions**

AIM doesn't believe in a one-size-fits-all approach. Choose from our array of hardware and software modules to create a bespoke solution that suits your specific requirements. Whether you need hard-anodised aluminium encapsulations or custom configurations, we've got you covered.

# **Key Components**

- Primary IMU: X/Y/Z Accelerometer, X/Y/Z Rate Gyro, Optional X/Y/Z Magnetometer
- Optional Remote IMU: Same features as the primary IMU
- High-accuracy Capacitive Roll and Pitch tilt sensors: For long-term static angular measurements
- High-Performance Digital Signal Processor: Equipped with 16 Mbyte Memory
- Multiple Connectivity Options: Including 4\* 16-bit fast ADC, 2\* RS232, and 1\* RS485/RS232

# AIM Specifications: AIM 3/3+

echnical Specification	AIM 3 (Standard)	AIM 3+ (Standard)
ccelerometer X/Y/Z	Yes	Yes
eave	Yes	Yes
urge/Sway	Yes	Yes
ngular Rate	Yes	Yes
oll/Pitch/Yaw	Yes	Yes
erformance		
ngle Accuracy Static	0.02° RMS	0.02° RMS
ngle Accuracy Dynamic	0.05° RMS	0.05° RMS
esolution Angle	0.005°	0.005°
ngle Range Roll/Pitch	±30°	±30°
eave Accuracy	5 cm or 5%	3 cm or 3%
urge/Sway Accuracy	5 cm or 5%	5 cm or 5%
eave Accelerometer Range	±50 m/s2	±30 m/s2
leave Accelerometer Static Accuracy	0.005 m/s2	0.001 m/s2
urge/Sway Accelerometer Range	±50 m/s2	±50 m/s2
urge/Sway Accelerometer Static Accuracy	0.005 m/s2	0.005 m/s2
ngular Rate Range	±75°/sec	±75°/sec
ngular Rate Static Accuracy	0.05°/sec	0.05°/sec
ommunications		
* RS232 Serial	Baud Fixed at 115200	
* RS232/RS485 Serial	Baud Fixed at 115200	
* RJ45 Ethernet	Configurable IP and Port	
* 16bit ADC	+/-5V	
* 16bit ADC (Normally Reserved)	+/-2V	
utput	Various/Configurable	
oftware	Field Upgradeable	
hysical and Environmental		
/eight	7 kg	
imensions	322 x 204 x 115 mm	
Prating	IP66	
perating temperature	-10 to +70	
lounting Orientation	Factory Set	
ower Supply	16 -30V	
urrent Drain at 24V	200 Milliamps (mA)	
laximum Acceleration Unpowered	1000g	

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