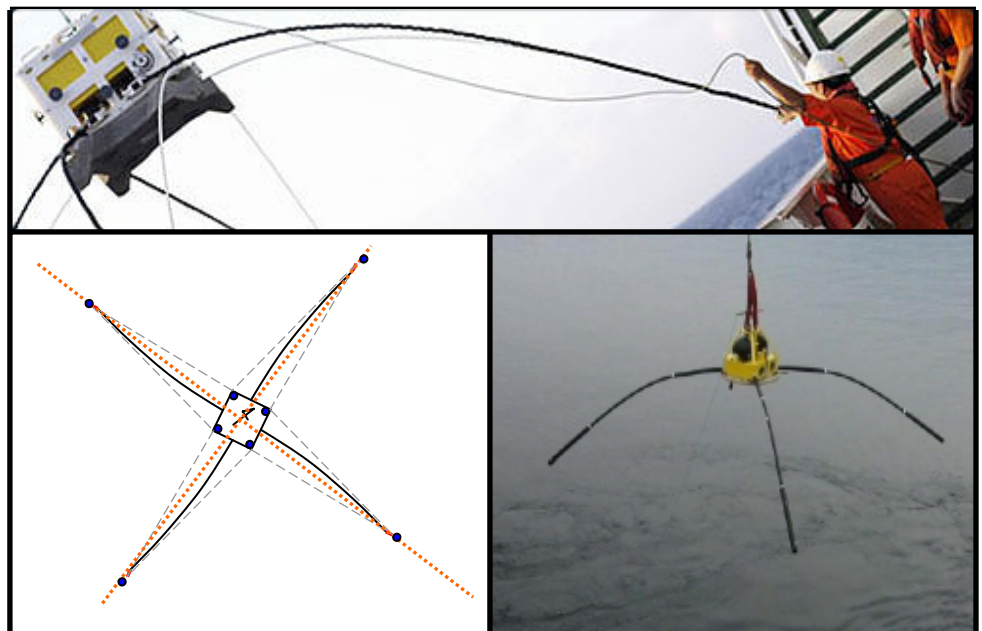




**Solutions - Service - Support**

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***Electromagnetic Attitude Heading  
Reference Sensor  
EM-AHRS***



**Zupt delivers operationally aware inertial technologies to improve the productivity associated with high cost operations for oil and gas exploration and field development. These capabilities are offered and supported worldwide.**

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# Electromagnetic Heading Reference Sensor EM-AHRS

A new generation of Electromagnetic (EM) survey equipment is being used extensively to assist in the delineation of oil and gas reservoirs. To optimize the resolution from this method of survey the precise heading and attitude of the EM measurement sensor is required. Zupt's EM-AHRS delivers this through the use of combined inertial and acoustic sensors.

Upon configuration and deployment at the surface the EM-AHRS system operates fully autonomously collecting the required measurements and processing heading and attitude (pitch, roll) of the EM components.

**This combined system is the first system to provide a cost effective solution based on state of the art inertial and acoustic navigation sensors.** The **EM-AHRS** system does not use magnetic sensors for heading or attitude and as such can provide very high resolution heading and attitude data deployment after deployment with no loss of accuracy.

The subsea packaging has been designed to fit into a small volume.

**EM-AHRS** is a fully integrated system and includes:

- High-performance inertial sensors
- High range resolution acoustic ranging system
- Extensive configuration software for varied deployment scenarios.
- Simple user interface software
- I-O hardware with multiple output options
- Raw and processed data logging capability
- Audit trail for operator history logging

**EM-AHRS** delivers both high resolution processed data as well as all of the raw observations for QC purposes.

- EM baseline heading** +/- 0.9° (Secant Lat)
- Node heading +/- 0.5° (Secant Lat)
- Node attitude data +/- 0.05°
- Node depth +/- 0.5% water depth
- Acoustic range resolution +/-1.5mm

Data can be configured for any format for direct interface into EM survey software.

	Diameter	Height	Weight (air)
Prototype Unit	200mm	345mm	16kg
Production Unit	150mm	390mm	9kg
Depth (pressure) rating		4,000m	

Power: 24Vdc—internal battery -up to 90 day deployments  
 Communications: RS232/RS485

Housings dimensions and weights shown above are for 4,000m Rated, aluminum hard anodized unit.

Core components can be accommodated into clients housings if required.

Connector options are Seacon Brantner, Subconn or Client supplied.



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The information given herein is believed to be reliable. Zupt, LLC makes no warranties as to its accuracy and completeness. These specifications are subject to change without notice.

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