

Overall Specifications														
				static Heading Error (deg)	static Roll/Pitch Error	dynamic Heading Error (deg)	dynamic Roll/Pitch Error	Weight	Analog or Digital	Power (mW)	Cost (1 unit)	Temperat ure range	Update rate (Hz)	Notes and source
Mfg	Model	Typical Application	Size											
APS	Model 533	compasses, magnetic fuses, magnetic signatures	1.5" x .725" OD					18 g	Analog		300			Datasheet claims use as a compass can be as good as 0.1 deg (presumably after calibration). http://www.appliedphysics.com/products/magnetometers
APS	Model 536	compasses, magnetic anomaly detection, geomagnetism	1.5" x 1.5" x 2.775"					100 g	Analog		900			
Lord Microstrain	3DM-GX5-25	AHRS	36 mm x 24.4 mm x 36.6 mm	0.5	0.5			16.5 g	Digital		550 typ; 800 max	1590		Update rate is internal calculation update rate. Outputs 500 available at 1 to 500 Hz.
SBG Systems	Ellipse-A VN-100	AHRS	46 mm x 45 mm x 24 mm	0.8	0.1	0.8	0.1	45 g	Digital		460	2000	200 or 1000 Hz	Quoted via email.
Vectornav	Rugged	AHRS	36 x 33 x 9 mm	2	0.5	2	1	15 g	Digital		220	800		400 On board WMM and gravity model compensation.
PNI	SeaTrax	AHRS, streamers	70 x 11.8 x 10.3 mm	0.3	0.2			4.3 g	Digital		0.85	799		8 Maximum pitch angle of 65 deg. This is not a 360 deg sensor.
Sparton	AHRS-M2	AHRS	38.4 x 22.9 x9.1 mm	0.2	0.2	1	1	12.3 g	Digital		60	1850	10 or 100 Hz	Lists maximum dip angle at 80 deg. Internal WMM declination compensation. Price is for development kit. These are intended for integration not standalone.
Xsens	MTi-3	AHRS	12.1 x 12.1 mm	2	0.75	2	1		Digital		45	449	<= 100	
Xsens	MTi-30 AHRS	AHRS		1	0.2	1	0.5		Digital			1595	<= 2 kHz	
Xsens	MTi-100	AHRS												Cost anomalously high. Probably reflects quality of gyros but the specs are not significantly better than other units.
Xsens	AHRS	AHRS		1	0.2	1	0.3		Digital	675-950	3535		<= 2 kHz	Not intended for dynamic applications. Includes WMM. EP version has precision mount built in for extra \$75
Sparton	DC-4EP	Digital Compass	42 x 28 x 12 mm	0.3	0.2			16 g	Digital			675		10 version has precision mount built in for extra \$75
Sparton	AHRS-8	AHRS		0.2	0.2	1	1		Digital			1350	100	
Sparton	SP3004D	Digital Compass	1.5" x 1.5"	0.5	0.2			30 g	Digital		36			Obsolete. These are used on Seagliders and were used during the MIZ experiment.

Magnetometer														
Mfg	Model	Vector or Single Axis	Technology	Orthogonality between axes (+/- deg)	Alignment with external reference (+/- deg)	Linearity (% full scale)	Scale factor variation (%)	bias in-run stability (nT)	turn on bias (nT)	noise density nT/sqrt(Hz)	-3 dB Bandwidth h (Hz)	Resolution n	Range	Notes and source
APS	Model 533	Vector	fluxgate		2	2	0.1				0.3	400 n/a	+/- 4 V/G	For comparison only
APS	Model 536	Vector	fluxgate		0.2	0.2	0.2				0.03	400	+/- 10 V/G	For comparison only
Lord Microstrain	GX5	Vector	MEMS	0.05			0.3	0.1		300	10		+/- 2.5 G	Lists initial bias error of 0.003 G
SBG Systems	Ellipse-A VN-100	Vector	MEMS	0.1			0.1	0.5	150	100	300	22	+/- 50 G	
Vectornav	Rugged	Vector	MEMS	0.05			0.1				14	200	+/- 2.5 G	
PNI	SeaTrax	Vector	MEMS: magneto-inductive											More or less a fluxgate as opposed to magneto-resistive. 85 deg maximum dip angle. 80 deg maximum dip angle. Real-time hard/soft iron calibration. Internal WMM.
Sparton	AHRS-M2	Vector	MEMS										+/- 0.9 G	
Xsens	MTi-3	Vector	MEMS	0.05	0.3		0.1				20		+/- 0.8 G	
Xsens	MTi-30 AHRS	Vector	MEMS				0.1				20		+/- 80 uT	
Xsens	MTi-100 AHRS													
Xsens	AHRS	Vector	MEMS				0.1				20		+/- 80 uT	
Sparton	DC-4EP	Vector	MEMS										+/- 1.2 G	80 deg maximum dip angle. Real-time hard/soft iron calibration. Internal WMM.
Sparton	AHRS-8	Vector	MEMS										+/- 1.2 G	80 deg maximum dip angle. Real-time hard/soft iron calibration. Internal WMM.
Sparton	SP3004D	Vector	MEMS									0.2 mG	+/- 0.9 G	

