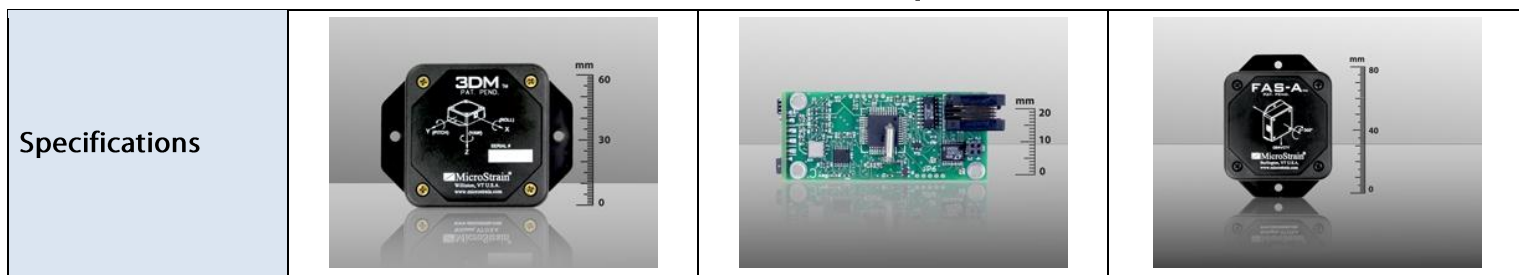


Orientation Sensors Comparison



Model	3DM®	3DM-DH®	FAS-A®
Application	automotive • marine • military • heavy equipment • virtual reality • antenna, satellite and camera pointing • biomechanics • robotics • container handling • tracking and control	downhole applications including drilling, geomechanics and civil engineering • automotive • marine • military • heavy equipment • virtual reality • antenna, satellite and camera pointing • biomechanics • robotics • container handling • tracking and control	automotive • marine • military • heavy equipment • virtual reality • antenna, satellite and camera pointing • biomechanics • robotics • container handling • tracking and control
Sensor suite	Accelerometers • Magnetometers	Accelerometers • Magnetometers	Accelerometers
Orientation range	360° about all axes	360° about all axes	360° about all axes
Accelerometer range	+/-1.7g	± 1.7 g	± 1.7 g
Accelerometer bias stability	± 0.003 g	± 0.003 g	± 0.003 g
Accelerometer nonlinearity	0.2%	0.2%	0.2%
Magnetometer range	± 6 Gauss	± 6 Gauss	
Magnetometer nonlinearity	0.4%	0.4%	
Magnetometer bias stability	0.85 Gauss	0.85 Gauss	
Filtering	infinite impulse response (IIR); user programmable weighted moving average	infinite impulse response (IIR); user programmable weighted moving average	infinite impulse response (IIR); user programmable weighted moving average
A/D resolution	12 bits	12 bits	12 bits
Orientation accuracy	pitch +/-0.7° typical, roll +/-0.7° typical, yaw +/-1.5° typical	pitch +/-0.7° typical, roll +/-0.7° typical, yaw +/-1.5° typical	+/-0.7° typical
Orientation resolution	<0.1° at most aggressive setting	<0.1° at most aggressive setting	<0.1° at most aggressive setting
Repeatability	pitch and roll 0.7° typical, yaw 0.26° typical	pitch and roll 0.7° typical, yaw 0.26° typical	pitch and roll 0.7° typical
Output modes	acceleration, magnetic fields, Euler angles (pitch, roll, yaw), orientation matrix	acceleration, magnetic fields, Euler angles (pitch, roll, yaw), orientation matrix	pitch and roll
Analog output		factory option; provides voltage linearly proportional to inclination; 0-5 volts full scale	included cable provides voltage linearly proportional to inclination; 0-4.096 volts full scale
Interface options	RS232	RS232	RS232
Data rate	angle mode up to 45 Hz sensor mode up to 70 Hz	angle mode up to 45 Hz sensor mode up to 70 Hz	40 Hz
Serial baud rate	1200, 9600, 19200 baud	1200, 9600, 19200 baud	9600 baud
Power supply voltage	+5.2 to +12.0 VDC	+5.2 to +12.0 VDC	+5.2 to +12.0 VDC
Power consumption	50 mA	50 mA	40 mA
Connector	RJ11 type	RJ11 type	8 pin DIN type
Operating temperature	-25°C to +70°C	-25°C to +70°C	-40°C to +70°C
Dimensions	64mm x 89mm x 25mm	28mm x 71mm x 18mm	64mm x 89mm x 25mm
Weight	62 g	11 g	62 g
Shock limit	500 g	500 g	500 g
Software	XP/Vista/Win7	XP/Vista/Win7	XP/Vista/Win7