

3DM-DH™



Range	Yaw: $\pm 180^\circ$
	Pitch: $\pm 180^\circ$
	Roll: $\pm 70^\circ$
A/D Resolution	12 bits
Digital Filter	Infinite Impulse Response (IIR) User programmable weighted moving average
Angle Resolution (no digital filtering)	Pitch: 0.30° (typical)
	Roll: 0.25° (typical)
	Yaw: 0.50° (typical)
Angle Resolution (most aggressive digital filtering)	Pitch: $< 0.1^\circ$
	Roll: $< 0.1^\circ$
	Yaw: $< 0.1^\circ$
<i>Resolution specs taken during static motions.</i>	
Accuracy	Pitch: $\pm 0.93^\circ$ typical (yaw from $0 - 360^\circ$ and roll = 0°)
	Roll: $\pm 0.33^\circ$ typical (yaw from $0 - 360^\circ$ and pitch = 0°)
	Yaw: $\pm 1.0^\circ$ typical (pitch and roll = 0°)
<i>Accuracy is defined as the square root of the sum of the errors squared (non-repeatability, temperature coefficients and nonlinearity).</i>	
Angle measurement nonlinearity (pitch and roll)	$\pm 0.23\%$ F.S.
Angle measurement repeatability	Pitch: 0.07° (typical)
	Roll: 0.07° (typical)



	Yaw: 0.26° (typical)
Update rate (angle mode)	45 Hz/3 channels (maximum) 30 Hz/3 channels (typical)
<i>Update rate is specified with a maximum and typical value since it depends on how many points the A/D converter averages.</i>	
Update rate (raw mode)	70 Hz/6 channels
Output modes	Raw: ax,ay,az accelerometer
	Raw: bx,by,bz magnetic field
	Units: pitch, roll, and yaw in degrees
Output format	RS-232 serial
Transmission Rate	9600 bits/sec
Supply voltage	+5.2 VDC min., +12 VDC max.
Supply current	50 milliamps/node @ standard speed
Connectors	Sensor: RJ11 type power: min. coaxial jack
Operating Temperature	- 25°C to 70°C
Temperature Drift (%/° C) (mean, std.dev.)	Pitch: 0.009 ± 0.008
	Roll: 0.033 ± 0.025
	Yaw: 0.019 ± 0.019
Module size	2.8cm wide, 6.7cm long, .8cm thick
Weight	10.8 gr. without enclosure