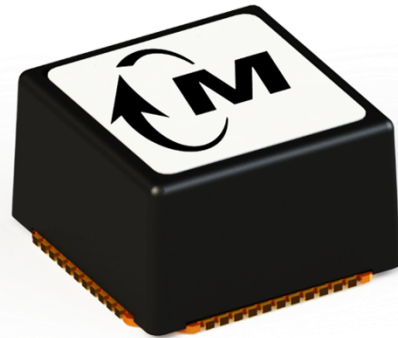


MEMSENSE

Customer Focused Inertial Solutions

SMD **IMU**



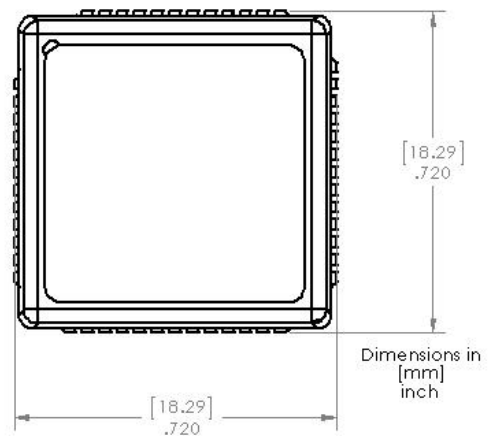
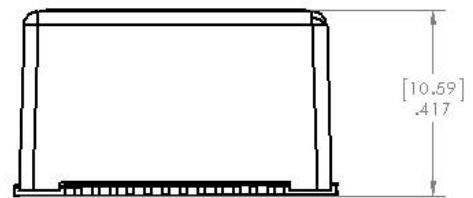
The SMD is a robust inertial sensor providing analog outputs of triaxial acceleration and triaxial angular rate. The packaging employed encapsulates the gyroscopes and accelerometers making the sensor extremely robust. Configured versions of the SMD can be ordered with mixed gyro dynamic ranges in the 3 axis enabling a perfect fit for specific applications. The SMD is provided in a surface mount package measuring 0.7 in. x 0.7 in. x 0.4 in.

Key Features

Accel Dynamic Range	± 5 g
Gyro Dynamic Range	± 300 °/s
Mixed Gyro Dynamic Ranges Available	

Applications

Platform Stabilization
Gimbal Pointing
Antenna Pointing



ACCELERATION		UNITS		NOTES
Dynamic Range	± 5	g		Minimum
Bias Instability	75	μg		Typical
Nonlinearity	± 0.4	% of FS		Typical
Velocity Random Walk	0.050	$\text{m/s/h}^{-1/2}$		Typical
Noise Density	156	$\mu\text{g/Hz}^{-1/2}$		Typical
Scale Factor	400	mV/g		
Bandwidth	50	Hz		-3dB point

ANGULAR RATE		UNITS		NOTES
Dynamic Range	± 300	$^{\circ}/\text{s}$		Minimum
Bias Instability	20	$^{\circ}/\text{h}$		Typical
Nonlinearity	± 0.1	% of FS		Typical
Angle Random Walk	2.0	$^{\circ}/\text{h}^{-1/2}$		Typical
Noise Density	0.05	$^{\circ}/\text{s/Hz}^{-1/2}$		Typical
Scale Factor	5.0	$\text{mV}/^{\circ}/\text{s}$		
Bandwidth	50	Hz		-3dB point

PHYSICAL		UNITS		NOTES
Dimensions	0.72 x 0.72 x 0.42	in.		(L x W x H)
Mass	5	grams		
Supply Voltage	4.75 to 5.25	VDC		
Supply Current	21	mA		