

IMU

Simulate accelerometer, gyroscope, and magnetometer sensors.

The block outputs sensor measurements based on device motion. The inputs are in the local navigation frame. The outputs are in the local sensor body frame. The parameters on the Accelerometer, Gyroscope and Magnetometer tabs can be set to match values on a sensor datasheet.

- Parameters
- Accelerometer
- Gyroscope
- Magnetometer

Maximum readings (m/s²):	<input type="text" value="19.613"/>	⋮
Resolution ((m/s²)/LSB):	<input type="text" value="0.0023928"/>	⋮
Constant offset bias (m/s²):	<input type="text" value="[0.19 0.19 0.19]"/>	⋮
Axes skew (%):	<input type="text" value="[0 0 0]"/>	⋮

Noise

Velocity random walk ((m/s²)/√Hz):	<input type="text" value="[0.0012356 0.0012356 0.0012356]"/>	⋮
Bias instability (m/s²):	<input type="text" value="[0 0 0]"/>	⋮
Bias instability filter numerator coefficients:	<input type="text" value="fractalcoef().Numerator"/> 1	⋮
Bias instability filter denominator coefficients:	<input type="text" value="fractalcoef().Denominator"/> [1,-0.5]	⋮
Acceleration random walk ((m/s²)*√Hz):	<input type="text" value="[0 0 0]"/>	⋮
Noise type:	<input type="text" value="double-sided"/>	▼

Temperature Effects

Bias from temperature ((m/s²)/°C):	<input type="text" value="[0 0 0]"/>	⋮
Temperature scale factor (%/°C):	<input type="text" value="[0 0 0]"/>	⋮