Block Parameters: IMU

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 (rad/s): | 4.3633 |
| Resolution ((rad/s)/LSB): | 0.0011 |
| Constant offset bias (rad/s): | [0.0545 0.0545 0.0545] |
| Axes skew (%): | 1.5 |
| Bias from acceleration ((rad/s)/(m/s²)): | [0 0 0] |

Noise

| | |
|---|---|
| Angle random walk ((rad/s)/√Hz): | [0.00043633 0.00043633 0.00043633] |
| Bias instability (rad/s): | [0 0 0] |
| Bias instability filter numerator coefficients: | fractalcoef().Numerator 1 |
| Bias instability filter denominator coefficients: | fractalcoef().Denominator [1,-0.5] |
| Rate random walk ((rad/s)*√Hz): | [0 0 0] |
| Noise type: | double-sided |

Temperature Effects

| | |
|---|---|
| Bias from temperature ((rad/s)/°C): | [0 0 0] |
| Temperature scale factor (%/°C): | [0 0 0] |

OK | Cancel | Help | Apply