

Innalabs[®]

Inertial Measurement Unit

INN-301

Datasheet

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The **Innalabs**[®] **INN-301 Inertial Measurement Unit (IMU)** is a tactical strap-down avionics guidance systems based on fiber optic gyros (FOG) and micro-machined accelerometers. This advanced IMU combines high accuracy, compact design and low cost. It can be easily integrated into wide variety of systems due to digital inputs and outputs.

High bias stability and high angular rate capability make the **INN-301** the best choice for missiles, unmanned aerial vehicles, standoff weapons, smart munitions, and other stabilization, targeting, and motion compensation applications.

Features

- Gyro Bias Stability of ≤ 2 deg/h
- High angular rate capability, ± 1000 deg/sec
- Compact design, Small package
- High reliability, long life
- Engineering Support

Applications

- Camera Mapping
- Motion Compensation
- Tactical missile
- Guided weapons
- Unmanned Air vehicles & Target Drones
- Optronic systems stabilization and targeting
- Smart munitions

SPECIFICATIONS

#	Parameter	Unit	Value
1.	Gyro performance		
1.1	Input Range	deg/sec	±1000
1.2	Bias stability (1 σ) at normal temperature, 10 sec average	deg/h	≤2
1.3	Bias stability (1 σ) over temperature range	deg/h	10
1.4	Scale Factor Stability	ppm	100
1.5	Scale Factor Temperature Sensitivity	ppm/°C	30
1.6	Angle Random Walk	deg/√h	0.2
2.	Accelerometer performance		
2.1	Input Range	g	±50
2.2	Non-linearity	ppm	500
2.3	Bias Stability	μg	500
2.4	Bias Temperature Sensitivity	μg/°C	70
2.5	Scale Factor Stability	ppm/°C	70
3.	Electrical		
3.1	Interface		RS-422
3.2	Power Consumption	W	45
3.3	Input Voltage	V	±15, ±5
3.4	Digital output data rate	Hz	100/600
4.	Environment		
4.1	Operating Temp	°C	-40 ... +60
4.2	Storage Temp	°C	-45 ... +70
4.3	Vibration Survival	g ² /Hz	0.04 20Hz ~ 2kHz
4.4	Shock Survival	g	70g, 8-11 ms
5.	Physical		
5.1	Dimensions (L*W*H)	mm	∅ 132 * 110
5.2	Weight	kg	< 5

Note. INN-301 IMU is under development so the parameters are subject to change

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