

# **Innalabs<sup>®</sup>**

## **Inertial Measurement Unit**

### **INN-303**

#### **Datasheet**

**November, 2009**

This document contains information proprietary to Innalabs<sup>®</sup>

The Innalabs<sup>®</sup> **INN-303** Inertial Measurement Unit (IMU) is a tactical strap-down high accuracy avionics guidance systems based on Fiber Optic Gyro (FOG) technology. It can be easily integrated into wide variety of systems due to digital inputs and outputs.

This advanced IMU combines high accuracy, compact design and low cost which make the **INN-303** the best choice for flight control applications (target drones, unmanned aerial vehicles) as well as stabilization and targeting (standoff weapons, smart munitions), and other motion compensation applications.

### Features

- Gyro Bias Stability of  $\leq 2$  deg/h
- Compact design, Small package
- High angular rate capability,  $\pm 600$  deg/sec
- 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

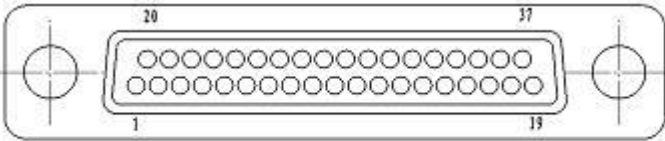
#	Parameter	Unit	Value
<b>1.</b>	<b>Gyro performance</b>		
1.1	Input Range	deg/sec	±600
1.2	Bias Stability (1σ), T = 25°C, 10 sec averaging time	deg/h	≤2
1.3	Bias Stability (1σ) over temperature range	deg/h	≤3
1.4	Angle Random Walk, T = 25°C	deg/√h	≤0.2
1.5	Scale Factor Non-linearity	ppm	≤300
1.6	Scale Factor Stability, day-to-day	ppm	≤150
1.7	Bandwidth	Hz	≥50
<b>2.</b>	<b>Accelerometer performance</b>		
2.1	Input Range	g	±50
2.2	Bias (1σ)	mg	≤2
2.3	Bias stability (1σ), T = 25°C, 10 sec averaging time	μg	≤200
2.4	Scale Factor accuracy (1σ)	ppm	≤200
<b>3.</b>	<b>Environment</b>		
3.1	Operating Temperature	deg C	-40 ... +60
3.2	Storage Temperature	deg C	-45 ... +70
3.3	Vibration (random)	g <sup>2</sup> /Hz	0.04 g <sup>2</sup> /Hz, 10 ~ 2000 Hz
3.4	Shock	g, ms	50 g, 11 ms
<b>4.</b>	<b>Electrical</b>		
4.1	Input Voltage	VDC	±15 and ±5 or 28
4.2	Power Consumption	W	45 (At Ultimate Temperature)
4.3	Digital Output Format		RS-422
<b>5.</b>	<b>Physical</b>		
5.1	Dimensions (L*W*H)	mm	Ø 132 * 120
5.2	Mounting Ring	mm	Ø 162
5.3	Weight	kg	≤2.5

Note. The INN-303 IMU is under redesign so the parameters are subjects to change

**Dimensions drawing (mm):**

*Under redesign*

**Connector pin description:**



PIN	Signal	PIN	Signal
1	+28V	21	+28V
2	RS422-R+	22	RS422-R+
3	RS422-R-	23	RS422-R-
4	RS422-T+	24	RS422-T+
5	RS422-T-	25	RS422-T-
6	GND	26	GND
7 - 20	Used	27 - 37	Used

**For more information please contact us:**

**Innalabs Holding Inc.**

Address: 10 Pidgeon Hill Dr, Suite 80, Sterling, VA 20165, USA  
 Tel: +1 (703) 596-0276, +1 (703) 880-4222, Fax: +1 (703) 935-8377  
 E-mail: [contact.sales@innalabs.com](mailto:contact.sales@innalabs.com)  
 Website: [www.innalabs.com](http://www.innalabs.com)

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