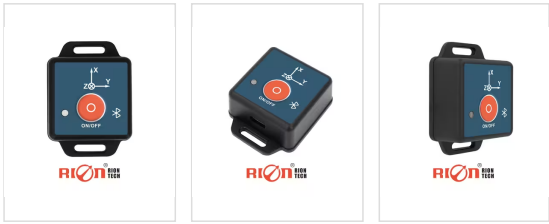




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IMU100-BL: Wearable 9-Axis Sensor AHRS with Bluetooth 5.1 and 100Hz Update Rate

Product Details

Place Of Origin: China

Brand Name: RION

Model Number: IMU100-BL

Document: [IMU100-BL AHRS IMU Gyroscop...Pe.Pdf](#)

Payment & Shipping Terms

Minimum Order Quantity: 1pcs

Price: \$39

Packaging Details: Carton Packing

Delivery Time: 3~5 Work Days

Payment Terms: T/T,Paypal

Supply Ability: 1000/Month

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Specifications

Description

Specifications

Highlight: 9-Axis Sensor IMU, Bluetooth 5.1 AHRS, 100Hz Update Rate Inertial Measurement Unit

Description

IMU100-BL: Wearable 9-Axis Sensor AHRS with Bluetooth 5.1 and 100Hz Update Rate

IMU100-BL: Wearable AHRS IMU Gyroscope with 9-Axis Sensor & Bluetooth 5.1

The IMU100-BL is a cost-effective Attitude and Heading Reference System designed for dynamic applications including model aircraft, drones, robots, agricultural machinery, and engineering vehicles.

Product Overview

This advanced IMU collects sensor data, integrates Kalman filtering, and outputs real-time attitude data. Utilizing three-axis accelerometers, gyroscopes, and magnetic sensors with temperature compensation, the device ensures excellent stability and real-time performance.

The IMU100-BL provides comprehensive attitude data along with 9-axis measurements (acceleration, gyroscope, and magnetic field). It supports both USB2.0 and Bluetooth 5.1 wireless output with a range up to 40 meters and maintains user settings after power loss through on-chip flash IAP technology. Additional features include adaptive frequency hopping for reliable communication and multi-device networking for flexible industrial deployment.

Key Features

- | | | | |
|--|--|-----------------------------------|------------------------------------|
| • Integrated nine-axis sensor and temperature sensor | • Bluetooth 5.1 wireless transmission | • Kalman filtering algorithm | • High performance drift stability |
| • DC 3.0-4.2V power supply | • Light weight design | • Long life with strong stability | • Excellent vibration performance |
| • 100Hz update rate | • Compact and lightweight construction | • USB2.0 output interface | • Wide temperature range operation |
| • Low noise performance | • Real-time 3D dynamic measurement | | |

Applications

- Medical rehabilitation equipment monitoring

- Limb rehabilitation monitoring
- Human body capture systems
- Posture angle monitoring

Technical Specifications

Parameter	Specifications
Azimuth	
Measuring Range	±180° (optional for gyro and magnetic azimuth)
Measurement Accuracy (RMS) @ 25°C	< 1.5° (without magnetic interference)
Resolution	< 0.1°
Inclination	
Measuring Range	Roll ±180°, Pitch ±90°
Measurement Accuracy (RMS) @ 25°C	< ±0.5° (dynamic), < ±0.2° (static)
Resolution	< 0.1°
Gyroscope	
Measuring Range	±500°/sec
Zero Deviation Stability @ 25°C	< 20°/hr
Resolution	< 0.1°/sec
Bandwidth	> 100Hz
Accelerometer	
Measuring Range	±8g
Resolution	< 10mg
Bandwidth	> 100Hz
Magnetic Field Meter	
Measuring Range	±8gauss
Resolution	< 2.5mgauss
Bandwidth	14-17Hz
Electrical Connection	
Supply Voltage	DC 3.0-4.2V
Power Consumption	50mA (typical)
Output Interface	USB2.0
Operating Temperature	-5°C to 55°C
Storage Temperature	-10°C to +55°C
MTBF	≥ 98,000 hours/time
Impact Resistance	100g @ 11ms, triaxial (half sine wave)
Vibration Resistance	10grms / 10-1000Hz
Waterproof Grade	IP65
Connector	Type-C connector
Weight	≤ 35g (excluding cable)

Product Images



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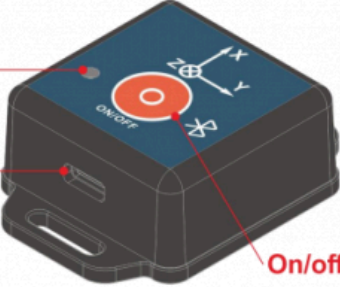
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► FUNCTION DESCRIPTION

Pilot Lamp

Type-c Charging Port

On/off



NO/OFF button: press the button to start the machine and press the button to shut down the machine;

1. Indicator status:

Red light flashes quickly: The red LED flashes quickly when the device is turned on, indicating that it is connected to the Bluetooth host.

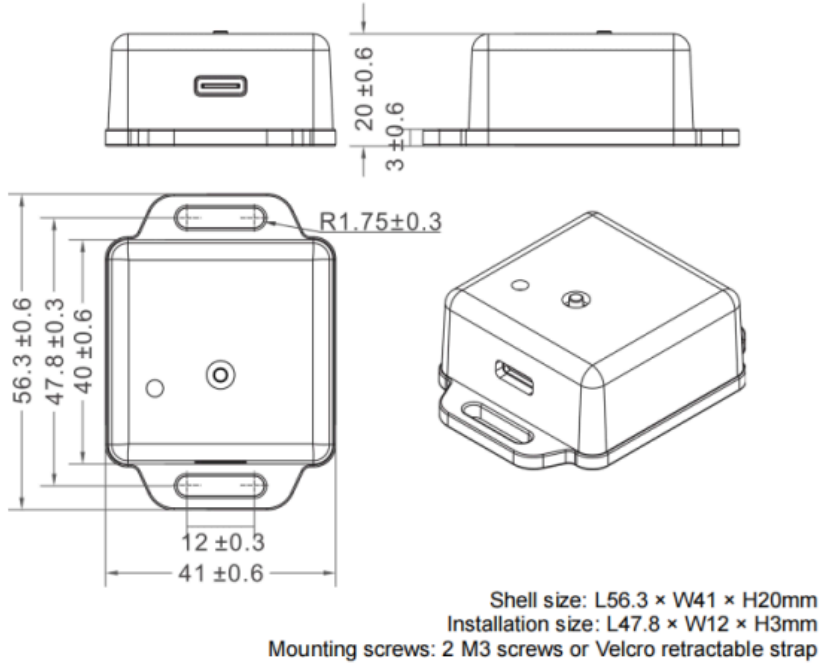
Red light is always on: The red LED is always on after connecting to the host.

Red light flashes slowly: The red LED flashes slowly when the battery is low, and the device automatically shuts down after 30 seconds.

Green light is always on: The green light is always on when charging.

2. Type-C charging port: It is recommended to use 5V charging plug. The charging time is about 4 hours, and the theoretical working time is 8 hours.

► DISIONAL DRAWING



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