

LPMS-B2



LPMS Wireless Miniature Motion Sensor / IMU / AHRS with Bluetooth Connectivity

The LP-Research Motion Sensor Bluetooth version 2 (LPMS-B2) is a miniature wireless inertial measurement unit (IMU) / attitude and heading reference system (AHRS). The unit is very versatile, performing accurate, high speed orientation and relative displacement measurements. Through the use of three different MEMS sensors (3-axis gyroscope, 3-axis accelerometer and 3-axis magnetometer) drift-free, high-speed orientation data around all three axes is achieved. Additionally temperature and barometric pressure sensors allow accurate determination of the unit's altitude

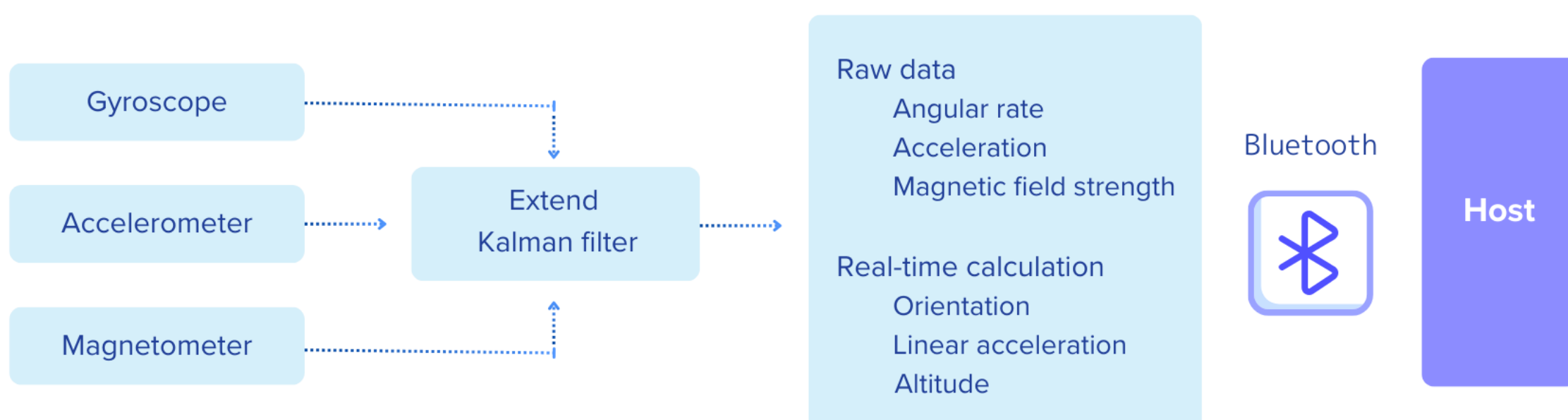


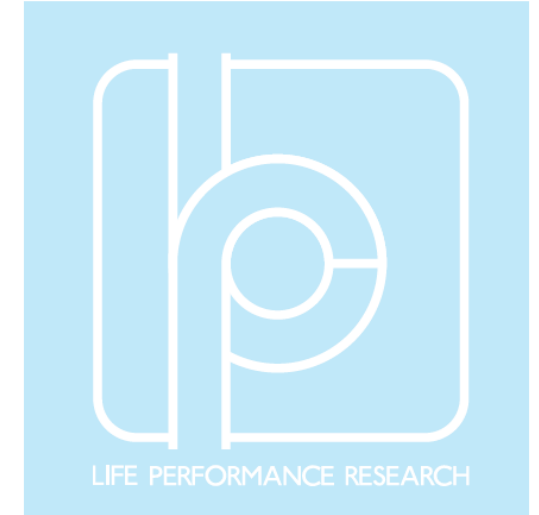
Key Feature

- MEMS miniature inertial measurement unit (IMU)
- Integration of 3-axis gyroscope, accelerometer, magnetometer, temperature and barometric pressure sensor in one unit
- Real-time, on-device calculation of sensor orientation, linear acceleration and altitude
- Data output rates of up to 400Hz
- Wireless communication via Bluetooth 2 and Bluetooth LE (Low Energy / 4)
- Capability to record measurement data on device flash memory
- Control application and SDK for Windows, Linux and mobile

Application

- Human motion capture
- Internet of Things (IoT)
- Sports performance evaluation
- Medical diagnosis

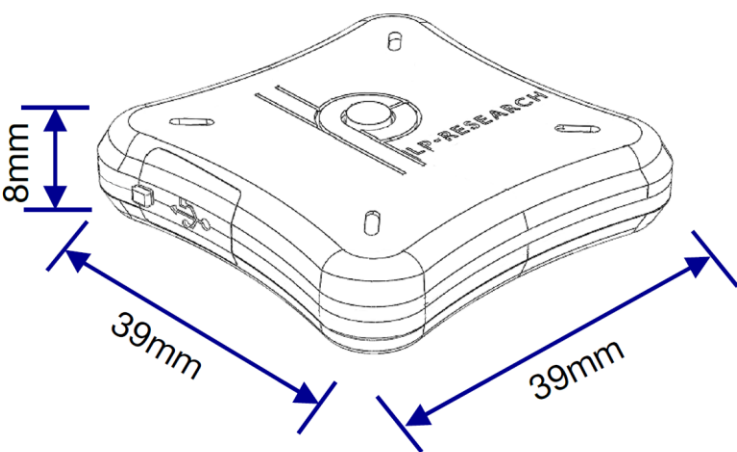




Sensor Specifications

Part Number	LPMS-B2
Size	39×39×8mm
Weight	12g
Communication Range	Bluetooth 2 / Low Energy (LE)
Maximum Communication Distance	< 20m
Orientation Range	Roll: ±180°; Pitch: ±90°; Yaw: ±180°;
Resolution	< 0.01°
Accuracy	< ±0.5° (static), < ±2° RMS (dynamic)
Accelerometer	3 axis, ±2 / ± 4 / ± 8 / ± 16 g, 16bits
Gyroscope	3 axis, ± 125 / ± 245 / ± 500 / ± 1000 / ± 2000 dps, 16bits
Magnetometer	3 axis, ± 4 / ± 8 / ± 12 / ± 16 gauss, 16bits
Pressure Sensor	300-1100 hPa
Data Output Format	Raw data / Euler angles / Quaternions / Linear acceleration
Data Output Rate	400 Hz
Power Consumption	< 132 mW @ 3.3 V
Power Supply	Lithium Battery > 6h (3.7 V / 230 mAh)
Operation Temperature	-20 °C to +60 °C
Communication Protocol	LPBUS
Connector	Micro USB, Type B
Certification	FCC, CE
Software & Driver	Windows C++ Library, Java Library for Android, LPMS Control (Data Analysis Software), Open Motion Analysis Toolkit (OpenMAT) for Windows.

External Dimensions



Package

- LPMS-B2 sensor× 1
- Instruction Manual× 1
- Cable × 1
- Warranty (1 year)



LpmsControl(Interface Software)

