



LPMS-USBAL

LPMS Rugged Wired Miniature Motion Sensor / IMU / AHRS with USB Connectivity

The LPMS-USBAL is an innovative and high performance motion sensor in rugged housing pattern. With widely used USB interface for data communication, the LPMS-USBAL perfectly fits both machine and human motion measurements for size and cost sensitive applications.

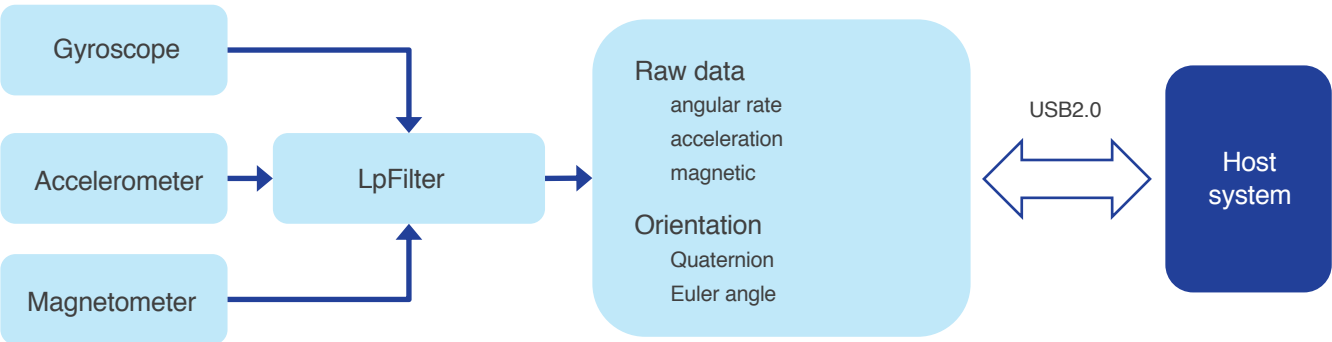


Key Features

- MEMS miniature inertial measurement unit (IMU)
- Integration of 3-axis gyroscope, accelerometer and magnetometer
- Accurate on -device orientation calculation using the LpFilter (based on an extended Kalman filter)
- High sampling rates of up to 300 Hz.
- Variety of wired interfaces:USB
- SDK and programming libraries for Windows, Linux, Android, etc.
- Affordable price

Applications

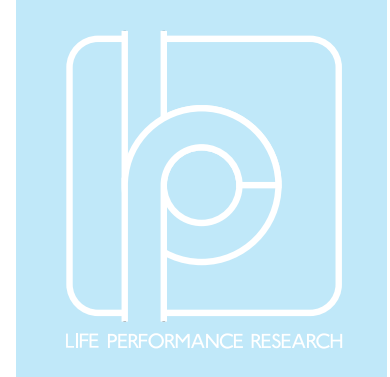
- Human motion capture
- Health care: health monitoring equipment, fitness devices, etc.
- Medical and sport skill training
- Vehicle monitoring
- Aerospace navigation
- Virtual reality



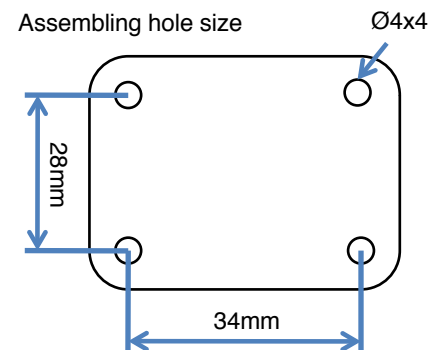
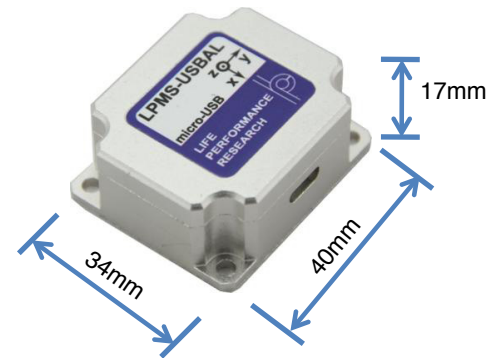
Sensor Specifications

Wired interface	USB 2.0
Max. baudrate	921.6kbit/s
Communication protocol	LpBus
Size	40 x 34 x 17 mm
Weight	36 g
Orientation range	360° about all axes
Resolution	< 0.05°
Accuracy	< 0.5°(static), < 2°RMS (dynamic)
Accelerometer	3-axis, ± 20 / ± 40 / ± 80 / ± 160 m/s ² , 16 bits
Gyroscope	3-axis, ± 250 / ± 500 / ± 2000°/s, 16 bits
Magnetometer	3-axis, ± 130 ~ ± 810uT, 16 bits
Pressure sensor	300 ~ 1100hPa*
Data output format	Raw data / Euler angle / Quaternion
Sampling rate	0 ~ 300 Hz
Power consumption	165 mW @ 5 V
Power supply	5V DC
Connector	Micro USB, type B
Case material	Aluminum
Temperature range	-40 ~ +80°C
Software	C++ library for Windows, Java library for Android, LpmsControl software and Open Motion Analysis Toolkit (OpenMAT) for Windows.

* An optional pressure sensor is available for altitude measurement.



Mechanical drawing



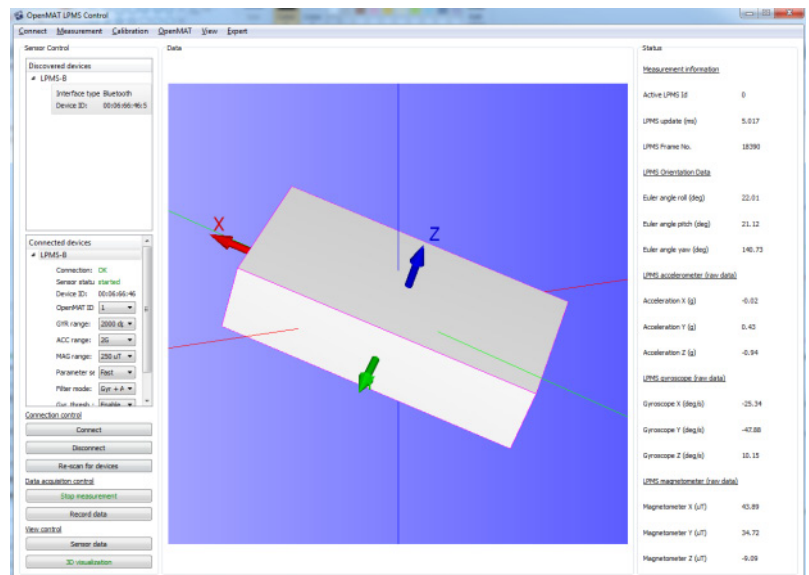
Package

- LPS-USBAL sensor x 1
- Cable x 1
- User guide card
- Warranty (1 year)



Multiple LPMS-CUs can be connected together while using CAN Bus interface.

LpmsControl Utility Software



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