



# LPMS-CU2

## LPMS Wired Miniature Motion Sensor / IMU / AHRS with CAN Bus and USB Connectivity

The LPMS-CU2 is an innovative and high performance miniature motion sensor. Integrating CAN Bus and USB interfaces into one unit, the LPMS-CU2 perfectly fits both machine and human motion measurements for size and cost sensitive applications.

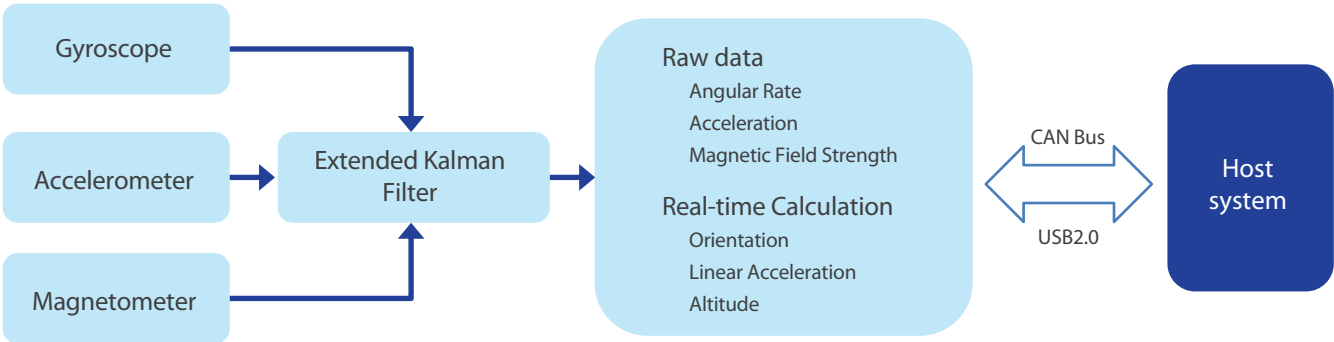


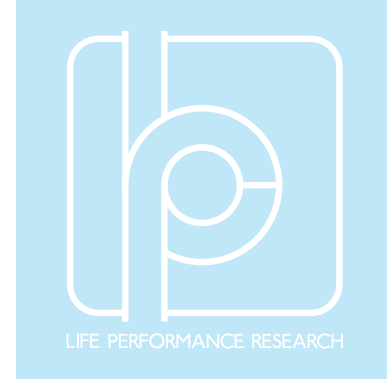
### Key Features

- MEMS miniature inertial measurement unit (IMU)
- Integration of 3-axis gyroscope, accelerometer, 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
- Variety of wired interfaces: CAN Bus and USB
- Control applications and SDK for Windows, Linux

### Applications

- Human motion capture
- Internet of Things (IoT) devices
- Sports performance evaluation
- Drone flight control

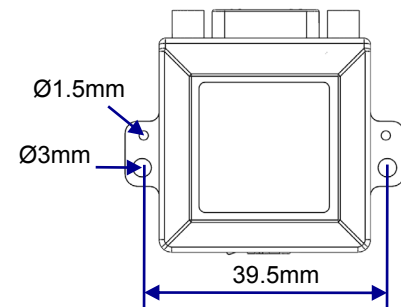
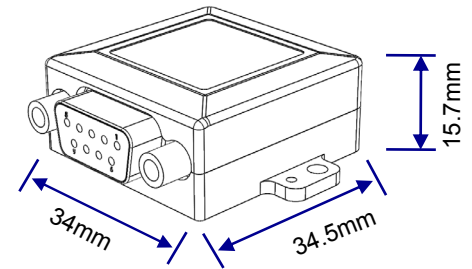




## Sensor Specifications

|                        |   |             |
|------------------------|---|-------------|
| Wired interface        | CAN Bus   | USB         |
| Max. baudrate          | 1Mbit/s   | 921.6Kbit/s |
| Communication protocol | LpCAN/<br>CANOpen   | LpBus       |
| Size                   | 34 x 34.5 x 15.7 mm   |             |
| Weight                 | 20 g  |             |
| Orientation range      | 360° about all axes   |             |
| Resolution             | <0.01°  |             |
| Accuracy               | < 0.5° (static), < 2° RMS (dynamic)   |             |
| Accelerometer          | 3-axis, $\pm 2 / \pm 4 / \pm 8 / \pm 16$ g, 16 bits   |             |
| Gyroscope              | 3-axis, $\pm 125 / \pm 245 / \pm 500 / \pm 1000 / \pm 2000$ dps, 16 bits                              |             |
| Magnetometer           | 3-axis, $\pm 4 / \pm 8 / \pm 12 / \pm 16$ gauss, 16 bits  |             |
| Pressure sensor        | 300-1100 hPa  |             |
| Data output format     | Raw data / Euler angle / Quaternion   |             |
| Data output rate       | up to 400Hz   |             |
| Power consumption      | 155 mW @ 3.3 V  |             |
| Power supply           | 5 V ~ 24 V DC   | 5 V DC      |
| Connector              | DB9 female  | Micro USB-B |
| Case material          | ABS Plastic shell   |             |
| Temperature range      | - 40 ~ +80°C  |             |
| Software               | C++ library for Windows, LpmsControl software and Open Motion Analysis Toolkit (OpenMAT) for Windows. |             |

## Mechanical drawing



## Package

- LPMS-CU2 sensor x 1
- User guide card x 1
- Cable x 1
- Box x 1
- Warranty (1 year)



## LpmsControl Utility Software

