



# LPMS-CANAL

## LPMS-CANAL Waterproof Wired Motion Sensor / IMU / AHRS with CAN Bus Connectivity

The LPMS-CANAL is an innovative and high performance motion sensor with waterproof connector design. Using CAN Bus as the communication interface, the LPMS-CANAL perfectly fits machine motion measurements for industrial applications.

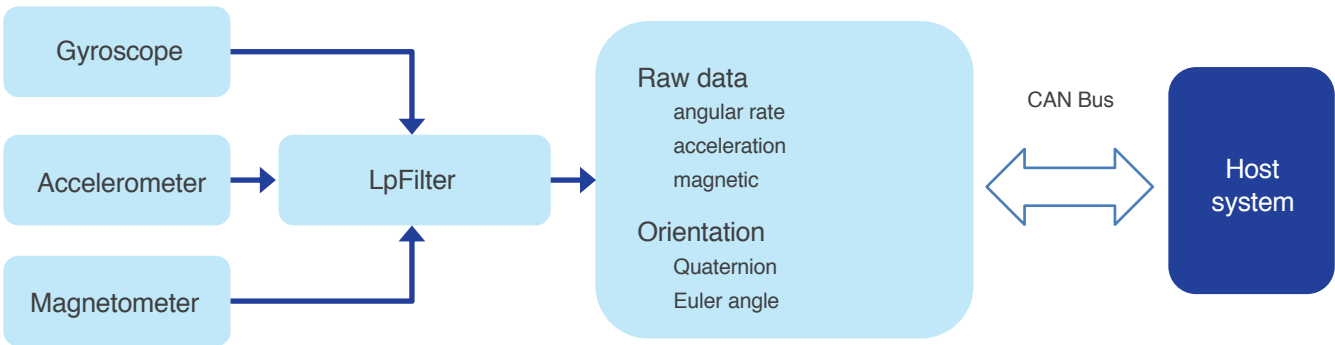


### Key Features

- 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.
- Industrial standard interfaces: CAN Bus
- SDK and programming libraries for Windows, Linux, Android, etc.
- Affordable price

### Applications

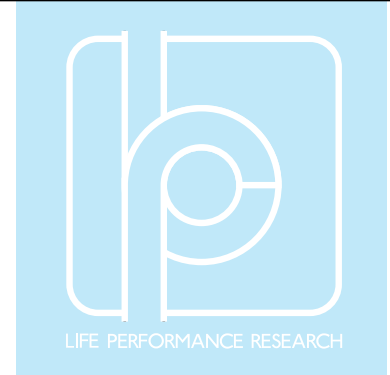
- Human motion capture
- Health care: health monitoring equipment, fitness devices, etc.
- Medical and sport skill training
- Vehicle monitoring
- Aerospace navigation
- Virtual reality



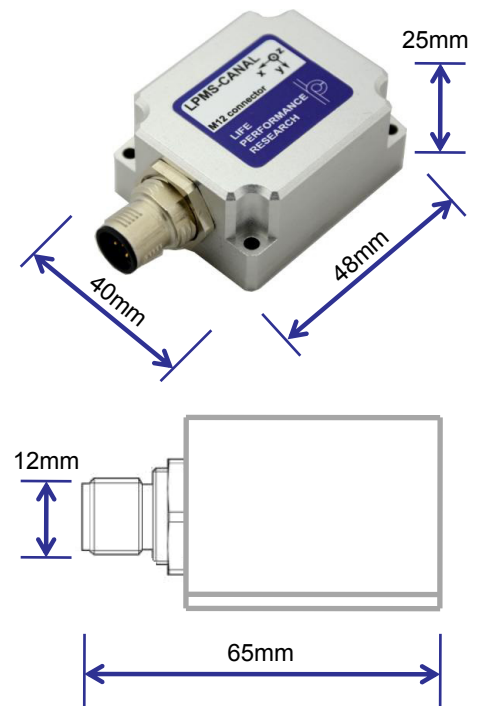
## Sensor Specifications

Wired interface	CAN Bus
Max. baudrate	1Mbit/s
Communication protocol	LpCAN / CANOpen
Size	48 x 40 x 25 mm
Weight	67.5g
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 <sup>2</sup> , 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	4 ~ 18 V DC
Connector	SACC-DSI-MS-5CON-PG 9/0,5 SCO, M12
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



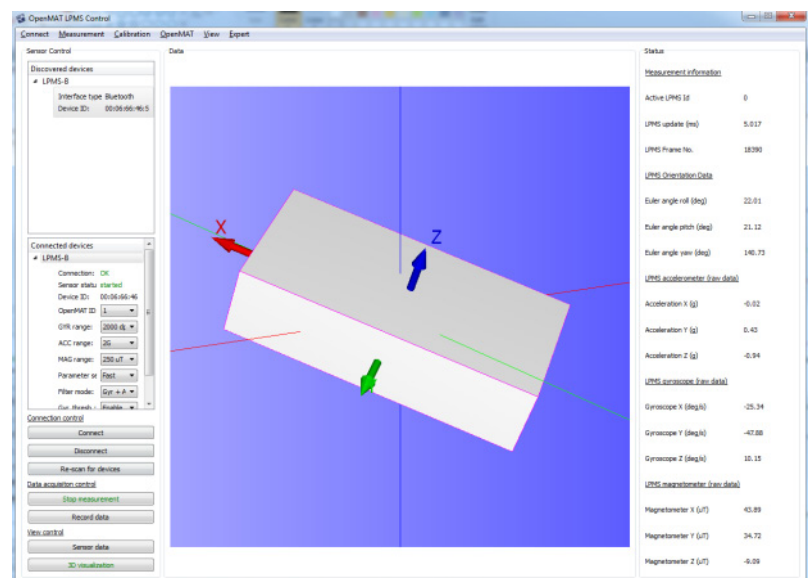
## Package

- LPS-CANAL 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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