

# LPMS-TTLAL2

## LPMS Waterproof Wired Motion Sensor / IMU / AHRS with UART(TTL) Connectivity

The LPMS-TTLAL2 is an innovative and high performance motion sensor with waterproof connector design. Using UART(TTL) as the communication interface, the LPMS-TTLAL2 perfectly fits machine motion measurements for industrial applications.

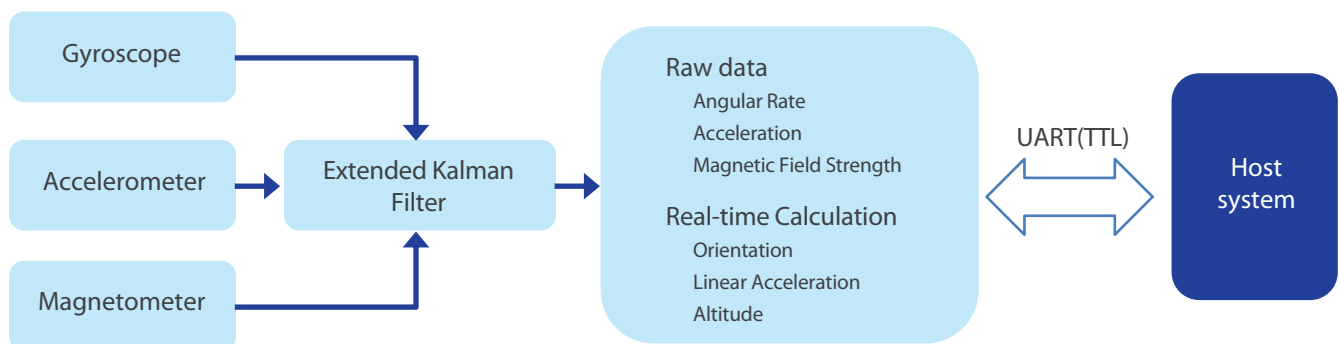


### Key Features

- 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
- Industrial standard interface: UART (TTL)
- Control application and SDK for Windows, Linux

### Applications

- Manipulator balance control
- Driving navigation
- Racing car status monitoring
- Robot arm control

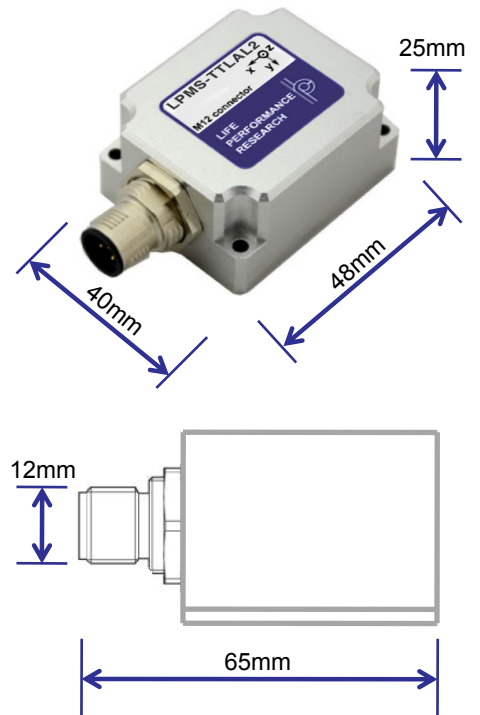




## Sensor Specifications

Wired interface	UART(TTL)
Max. baudrate	921.6 k bit/s
Communication protocol	LpBUS
Size	48 × 40 × 25 mm
Weight	66.2g
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, 16 bits
Gyroscope	3-axis, ± 125 / ± 245 / ± 500 / ± 1000 / ± 2000 dps, 16 bits
Magnetometer	3-axis, ± 4 / ± 8 / ± 12 / ± 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	< 160 mW @ 3.3V
Power supply	5 V ~15 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, LpmsControl software and Open Motion Analysis Toolkit (OpenMAT) for Windows.

## Mechanical drawing



## Package

- LPMS-TTLAL2 sensor x 1
- User guide card x 1
- Cable x 1
- Box x 1
- Warranty (1 year)



## LpmsControl Utility Software

