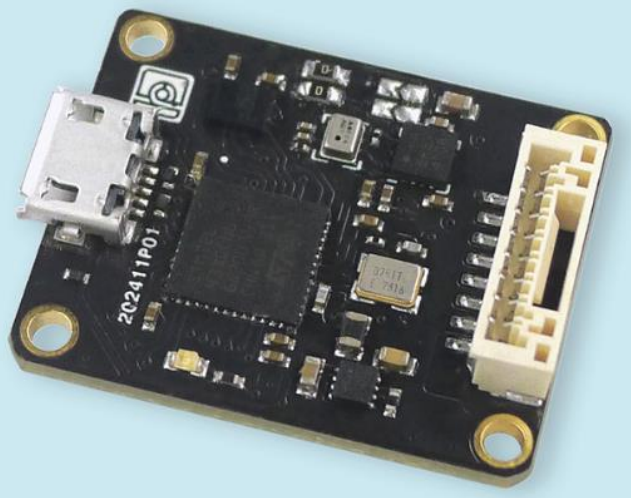
LPMS-CURS3

LIFE PERFORMANCE RESEARCH

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

LPMS-CURS3 is a high-performance miniature inertial measurement unit (IMU) with multiple communication interfaces. Integrating CAN Bus, USB and UART, the LPMS-CURS3 perfectly fits both machine and human motion measurements for size and cost sensitive applications. LPMS-CURS3 is shipped without housing and is ideal for integration with your own device.

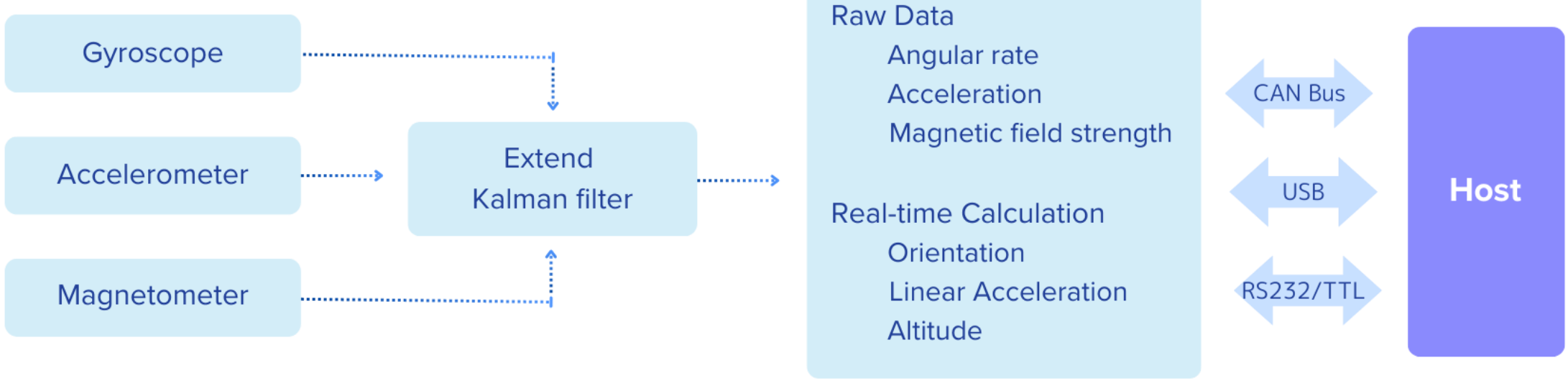


Key Feature

- MEMS miniature inertial measurement unit (IMU)
- Maker edition PCB version without enclosure
- 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 500Hz
- USB Interface + CAN Bus or serial interface (RS232, TTL) options
- Control applications and SDK for Window, Linux

Application

- Robotic manipulator forward kinematics control
- Automatic dead reckoning
- Object orientation tracking for VR/AR
- AGV/AMR navigation
- IOT application



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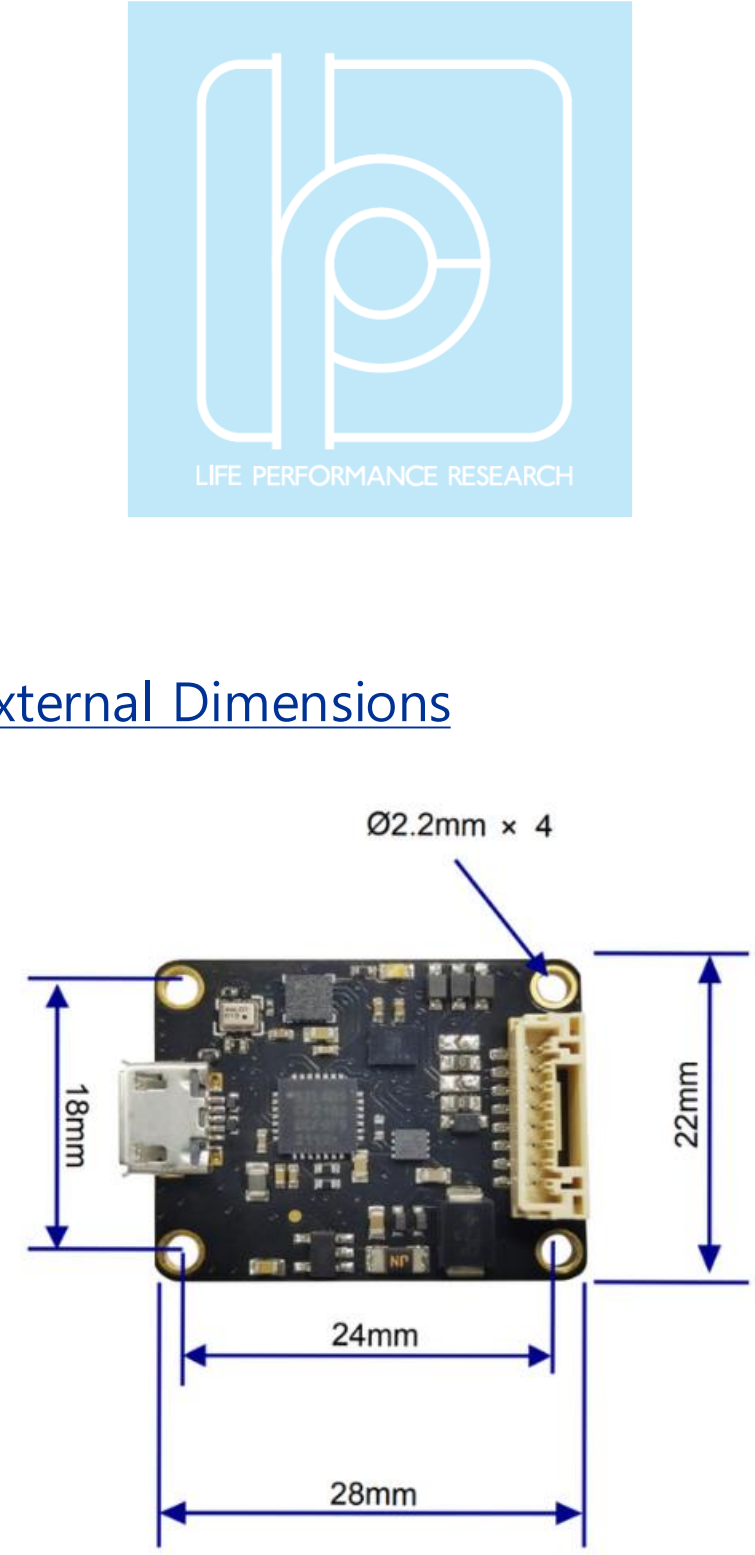
Sensor Specifications

Part Number	**LPMS-CURS3-CAN**	**LPMS-CURS3-RS232**	**LPMS-CURS3-TTL**
Communication Interface	CAN Bus	RS232	TTL(UART)
Max. Baudrate	1 Mbit/s	921.6 Kbit/s	921.6 Kbit/s
Communication Protocol	CAN Open / SequentialCAN	LPBUS/ASCII	LPBUS/ASCII
Orientation Range	Roll: ±180°; Pitch: ±90°; Yaw: ±180°		
Size	22 x 28 x 7.65 mm		
Weight	4 g		
Resolution	0.01°		
Accelerometer	3-axis, ±2 / ± 4 / ± 8 / ± 16 g, 16bits		
Gyroscope	3-axis, ± 125 / ± 250 / ± 500 / ± 1000 / ± 2000dps / ± 4000dps, 16bits		
Gyroscope Noise Density	0.005dps/√Hz		
Magnetometer	3-axis, ± 2 / ± 8 gauss,16bits		
Accuracy	< 0. 5° (static), < 2° RMS (Dynamic)		
Data Output format	Raw data/Euler/Quaternion/Linear acceleration/ Air pressure/Temperature		
Data Output Rate	500 Hz		
Power Consumption	<135mW@5V	<110mW@5V	<90mW@5V
Power Supply	5V ~ 18V DC		
Connector	BM08B 1.25mm | Micro USB-B		
Pressure Sensor	300-1100 hPa		
Operation Temperature	-20 to +80 °C		
Software & Driver	LpmsControl2 interface software (Windows), Open source sensor driver for Windows and Linux (OpenZen, supports C, C++, Python, C#, Unity, ROS)		

* Performance parameters are measured at +25°C. Other temperatures may result in varying reference values.
※Please refer to the product manual for more detailed specifications.

External Dimensions

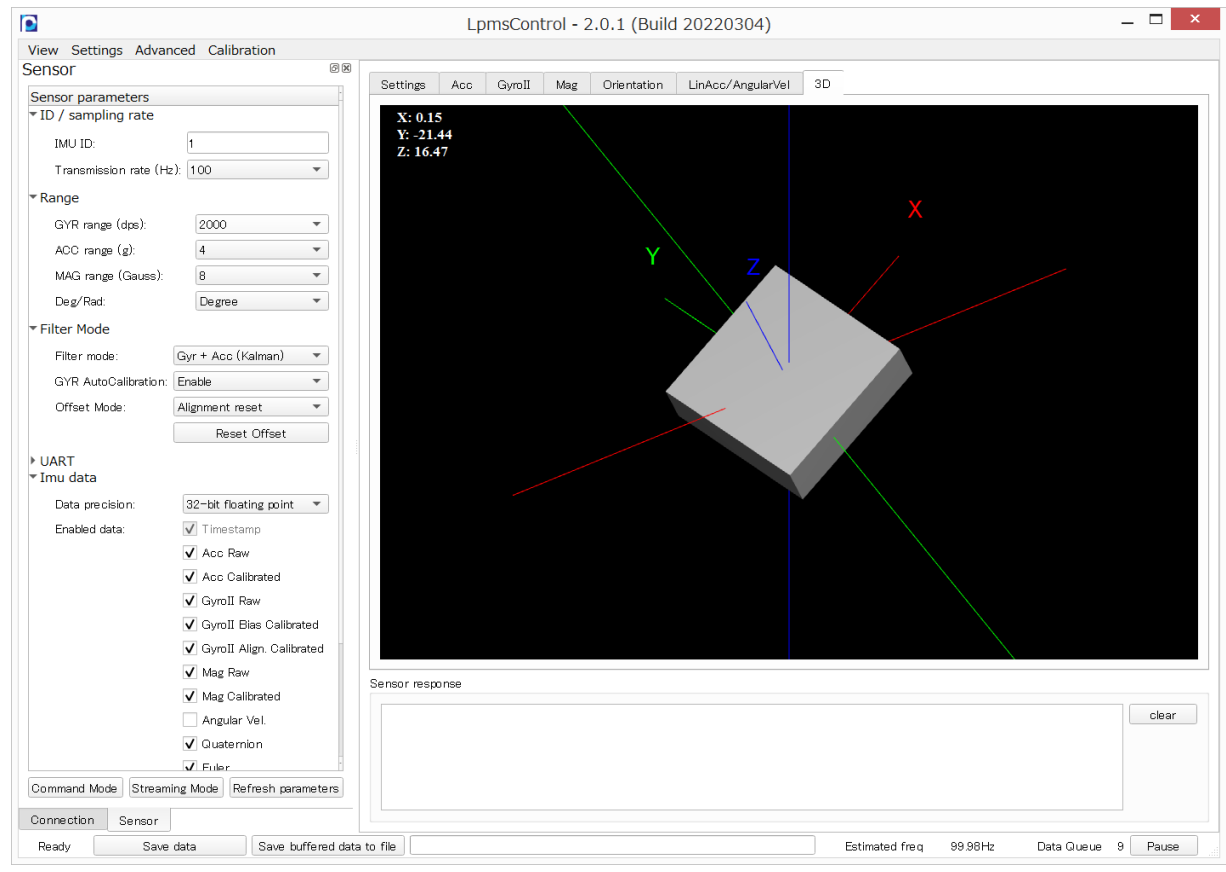


Package

- LPMS-CURS3 Sensor × 1
- Cable × 1
- Box x 1
- User guide card × 1
- Warranty (1 Year)



LpmsControl (Interface Software)



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