

LPMS-CURS3



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.

Please note that while all versions of LPMS-CURS3 support USB communication, additionally only one (either RS232, TTL serial or CANbus) interface is supported by the firmware. When ordering please let us know which communication mode you would like to use.

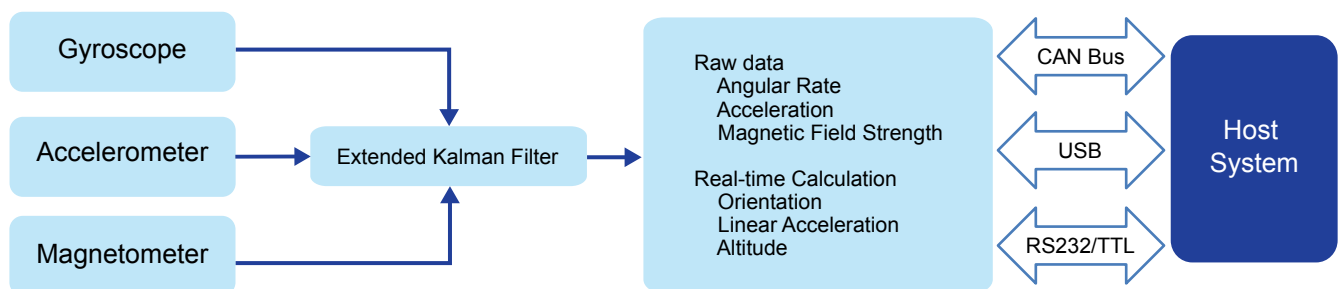


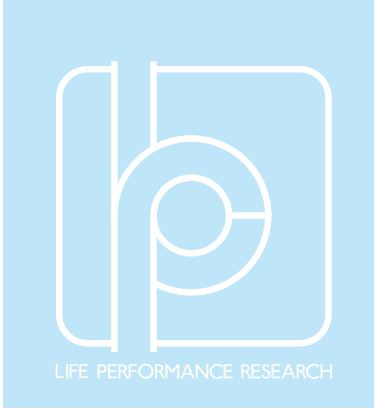
Key Features

- MEMS miniature inertial measurement unit (IMU)
- Integration of 3-axis gyroscope, accelerometer, magnetometer, temperature and barometric pressure sensor in one unit
- Maker edition PCB version without enclosure
- 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 Windows, Linux

Applications

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

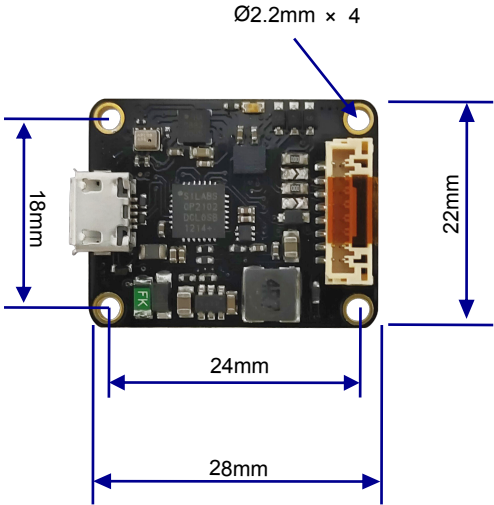




Sensor Specifications

Sensor Model	LPMS-CURS3	
Dimensions	22x28x7.65mm	
Weight	4g	
Communication Interfaces	CAN Bus	USB/RS232/TTL
Max. Baudrate	1Mbit/s	921.6Kbit/s
Communication Protocol	CANopen / Sequential CAN	LP-BUS
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, 16bits	
Gyroscope	3-axis, ± 125 / ± 250 / ± 500 / ± 1000 / ± 2000dps / ± 4000dps, 16bits	
Magnetometer	3-axis, ± 2 / ± 8 gauss, 16bits	
Pressure Sensor	300-1100 hPa	
Data Output Format	Raw & Calibrated data, Euler Angle, Quaternion, Linear Acceleration	
Data Output Rate	500Hz	
Current Draw	TTL: ~ 17mA RS232: ~22mA CAN: ~27mA	
Power Supply	5V ~36V DC	
Connector	Micro USB-B	BM08B 1.25mm
Case Material	Bare PCB	
Operating Temperature	-40~+80°C	
Software & Driver	LpmsControl2 interface software (Windows), Open source sensor driver for Windows and Linux (OpenZen, supports C, C++, Python, C#, Unity, ROS)	

Mechanical Drawing



Package

- LPMS-CURS3 Sensor x 1
- User guide card x1
- Cable x1
- Box x1
- Warranty (1 Year)



Interface Software

